Right Blood Right Patient (RBRP) n=227

8

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Definition:

Incidents where a patient was transfused correctly despite one or more serious errors that in other circumstances might have led to an incorrect blood component transfused (IBCT).

Key SHOT message

- It is a professional responsibility for all laboratory and clinical staff to adhere to the correct identification practice in every part of the transfusion process (Bolton-Maggs et al. 2016)

In 2016 227 cases were reported compared to 187 in 2015 (Bolton-Maggs et al. 2016). Laboratory errors accounted for 90/227 (39.6%) and clinical errors for 137/227 (60.4%), Figure 8.1. It is interesting that last year's percentages for clinical and laboratory errors have reversed.

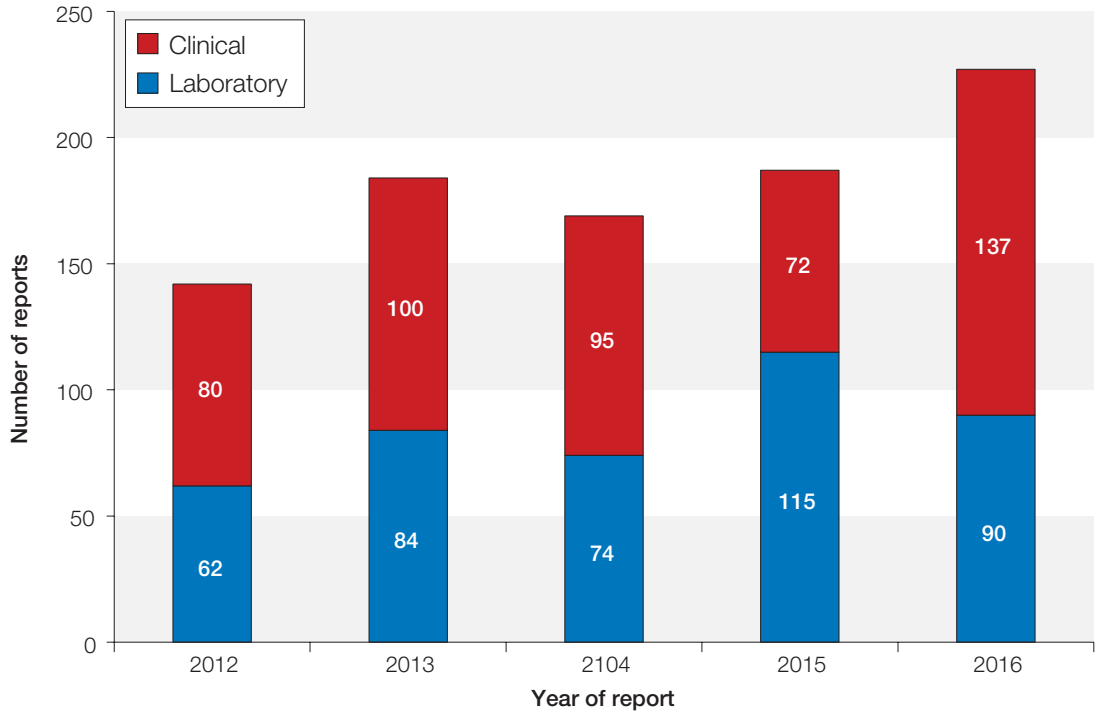


Figure 8.1: Breakdown of clinical and laboratory RBRP data 5-year trend

Figure 8.2: Overview of RBRP data n=227

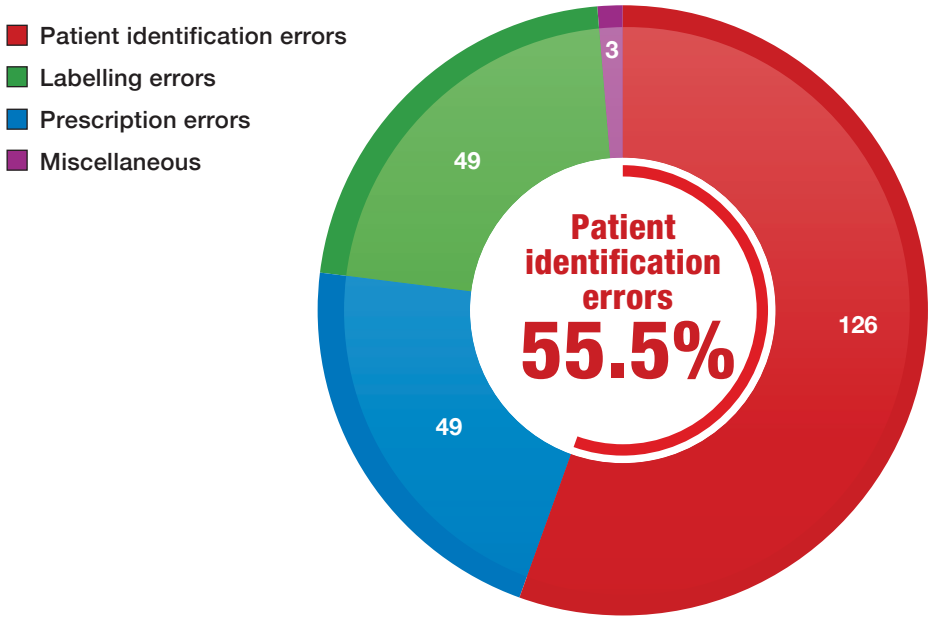
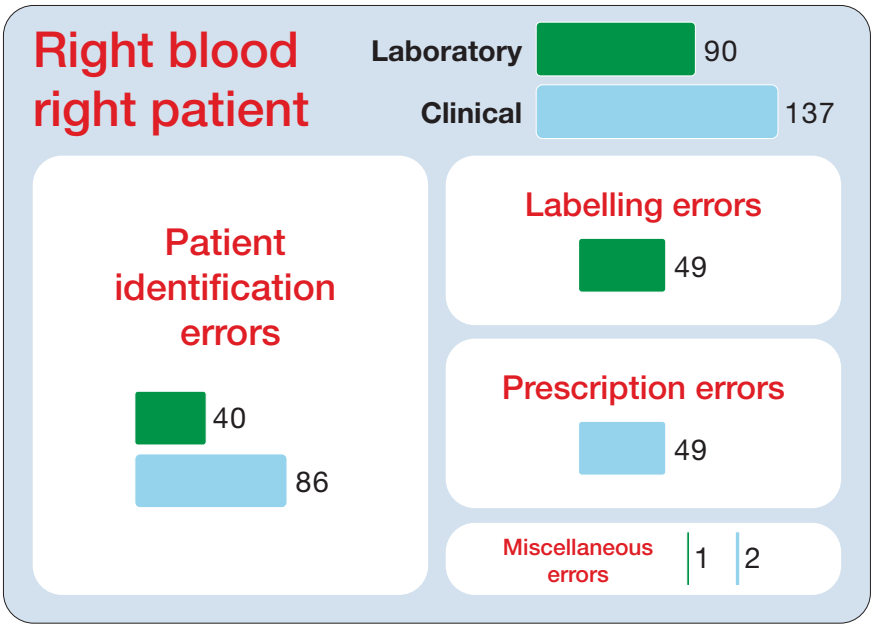


Figure 8.3: Breakdown of clinical and laboratory RBRP data n=227



Patient identification (ID)

Failures in patient identification occurred in both laboratory and clinical settings:

- Laboratory
  - Demographic data entry errors during the booking-in of samples
  - Transpositions of labels
- Clinical
  - Incorrect patient ID on the request form/sample associated with the 4 key identification dataset (BSH Harris et al. 2017)
  - Absence of an ID band
  - Prescriptions were either completed incorrectly or had missing data

All staff supporting the transfusion process are reminded of the four key patient identification criteria; these consist of **first name, surname, date of birth** and a **unique patient ID number** (and **first line of the address** if in Wales) (BSH Milkins et al. 2013).

These patient ID errors occur at all stages of the transfusion process. Examples include clinical staff incorrectly transcribing or missing vital patient demographics during the completion of the request form and sample labelling, laboratory staff not transcribing and inputting data accurately into the laboratory information management system (LIMS) during booking-in of a sample.

There were 49 prescription errors; this is more errors than the total in the preceding four years (n=42). Analysis of these 49 errors highlights several areas of failure; clinical staff not completing the prescription correctly, for example providing inaccurate or incomplete identification criteria; the prescription not being signed, or no prescription being available.

Case 8.1: Administration error

A unit of red cells was wrongly recorded in the electronic blood management system (BloodTrack) as transfused before the unit was connected to the patient. As a result of this, the secure electronic checking process was bypassed (no final bedside check was performed) by the clinical staff. Furthermore although two nurses checked the unit manually there was no documented evidence of this in the patient's case records.

Case 8.2: Sample error

The laboratory received a request for crossmatch of four units of red cells. The crossmatched blood was made available. The following day a biomedical scientist (BMS) noticed that the sample tube appeared to have been pre-labelled as the staff signature had been crossed out and another signature added. The clinical area confirmed that the patient had been transfused two units, and the other two units were recalled by the laboratory. Investigation confirmed that one staff member had pre-labelled the sample tube and another member of staff took the sample then crossed this out and added their signature.

Cases 8.1 and 8.2 demonstrate that even when there is a robust information technology (IT) vein-to-vein checking system and appropriate policies are in place, staff may not use these effectively or appropriately.

Learning points

All staff have a professional and personal responsibility to:

- Use information technology (IT) solutions which are available to enhance patient safety. In the absence of this a manual check is appropriate
- Ensure that they follow policy and procedures to ensure patient safety

Staff are accountable for ensuring that the relevant documentation is completed and the correct hospital policy is followed every time. **The administration identification check at the patient's bedside is the final opportunity to ensure that the right blood is being given to the correct patient** (see main recommendation for a checklist in Chapter 4).

Near miss RBRP cases n=121

Point in the process	Type of error made	Number of cases	%
Sample labelling	Sample labelling error	29	24.0
Sample receipt	Wrong identifiers entered in LIMS	18	14.9
Component labelling	Transposition of labels for same patient	47	60.3
	Incorrect patient information on label	26	
Administration	Patient had wrong wristband	1	0.8
Total		**121**	**100**

Table 8.1: Near misses that could have led to RBRP n=121

IT-related RBRP cases n=57

Failure to consult historical record or link two records n=6

If there are incorrect details on the request form or sample, the historical computer record on the LIMS may not be accessible and this led to a situation where blood was transfused with incorrect demographic details in six cases.

Discrepancy between LIMS and the patient administration system (PAS) n=28

In 12 cases blood should not have been given because there was a discrepancy in the demographic details between the LIMS and PAS and in a further 6 cases, the wrong record was selected on the LIMS or PAS. In 10 cases blood was issued against the wrong patient ID (sample or request form). These errors resulted in one or more core identifiers being different between the compatibility tag (printed from the LIMS) and the sample, request form or wristband (printed or hand-written from the PAS information).

Incorrect result or data entered or accessed manually n=19

In these cases, at some stage an incorrect name or date of birth or address has been entered either onto the PAS or LIMS. On one occasion the wrong information from a reference laboratory was entered into the LIMS.

Case 8.3: Vigilant clinical staff query a laboratory error

Blood was crossmatched for a patient by the reference laboratory and then issued by the hospital transfusion laboratory BMS via the LIMS as 'uncrossmatched' on the basis that they had not performed the crossmatching themselves. Prior to transfusion the ward staff queried why the paperwork said the blood was 'uncrossmatched' when they knew this was not an emergency and the patient had red cell antibodies. It was confirmed that the blood was fully suitable for the patient.

Case 8.4: LIMS does not prevent issue of the wrong pack of apheresis platelets

The transfusion laboratory held two units of apheresis platelets from the same donation - packs 1 and 3. Pack 3 was taken from the platelet incubator to issue but pack 1 was allocated to the patient who was transfused before the error was realised. Although this was a low harm incident it led to problems of reconciliation between stock and issued/transfused units. It was suggested that the LIMS system should be able to prompt whether the correct unit has been selected for components with multiple pack numbers i.e. paediatric blood bags, apheresis platelet donations e.g. 'You have selected pack 1, are you sure it is pack 1? Yes or No?'

IT systems and equipment failure n=3

There were three examples and two are presented in detail below. In the other case plasma was issued with a wrong number on the handwritten label when the IT system was down.

Case 8.5: Blood collected with patient details messaged to a handheld device

Contrary to hospital policy, which requires full documentation containing patient ID to be brought to the refrigerator when collecting blood, a porter collected a unit of red cells using a handheld electronic device used to inform him about the job required, with the patient's name and unique identification number but not the details of the component.

Case 8.6: Blood administered despite printing error

A unit of platelets was issued, collected and administered without full details on both sides of the traceability label because it had been printed incorrectly. The patient's details only appeared on one half of the label and not in the section that includes the legal declaration that the blood has been transfused. The person administering the blood completed this part of the label by hand with the patient details, but not the details of the unit transfused so full traceability could not be recorded.

Incorrect use of an electronic blood management system n=1

Case 8.7: Incorrect use of remote issue labelling

The transfusion laboratory received a completed traceability tag to confirm transfusion but in the LIMS it appeared that the unit had already been transfused to someone else on a different day. On investigation it was discovered that the patient had been transfused with a different but correct unit of blood and the correct donation number had been entered onto the prescription chart. This unit had been collected using remote issue from a satellite refrigerator where the remote issue label had been printed but not attached to the unit. At the bedside, an old duplicate label for a different unit had been completed and returned to the laboratory.

Learning point

- New ways of working may improve patient safety but if incorrectly implemented they may pose a risk. Electronic devices are increasingly used in healthcare and the example of collection of blood using a handheld device which receives and displays messages on the screen rather than a handwritten or printed form could be appropriate providing this is carefully planned, risk-assessed with a robust policy and associated training in place

Commentary

There has been little change in the overall findings compared to previous years apart from an increase in prescription errors and an increase in the clinical errors with a corresponding reduction in laboratory errors. These errors indicate that ALL staff participating in the transfusion process must adhere to correct identification practice in all steps of transfusion.

For further laboratory-related errors please see Chapter 7, Laboratory Errors.

References

Bolton-Maggs PHB (Ed), Poles D et al. (2016) **The 2015 Annual SHOT Report.** www.shotuk.org [accessed 26 April 2017]

BSH Harris AM, Atterbury CL et al. (2017) **Guidelines on the administration of blood components.** Transfus Med submitted

BSH Milkins C, Berryman J et al. (2013) **Guidelines for pre-transfusion compatibility procedures in blood transfusion laboratories.** Transfus Med 23(1), 3-35