14 Right Blood Right Patient (RBRP) n=207

Authors: Terrie Perry and Victoria Tuckley

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 messages

- Staff must utilise a pre-administration bedside checklist as recommended by the Department of Health in 2017. It is concerning that some sites are yet to implement these or are not consistently using them

- Accurate patient identification must be adhered to throughout the transfusion process

- The laboratory exit check (Narayan et al. 2020) is a useful guide for laboratory staff issuing blood components and may reduce component labelling errors

- Collection of blood components is a critical step in the transfusion process and robust procedures should be in place to ensure that necessary checks are made (Narayan et al. 2020)
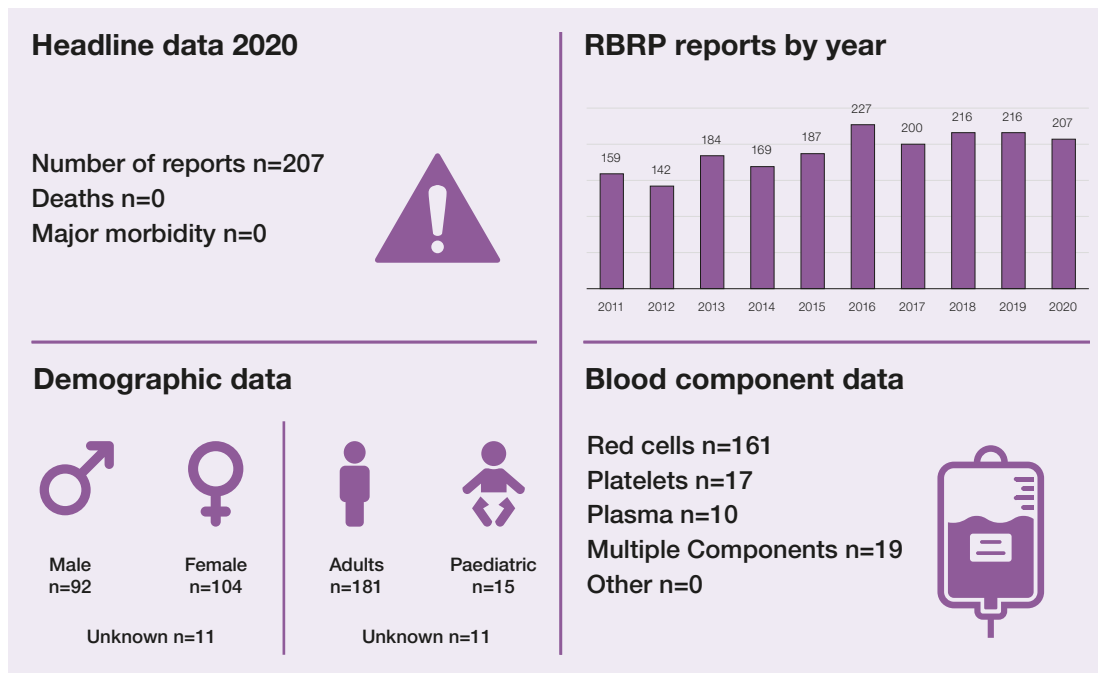
Abbreviations used in this chapter

BSH	British Society for Haematology	**IT**	Information technology
CAS	Central alerting system	**LIMS**	Laboratory information management system
DOB	Date of birth	**PID**	Patient identification
ED	Emergency department	**RBRP**	Right Blood Right Patient
IBCT	Incorrect blood component transfused	**SOP**	Standard operating procedure
ID	Identification		

Recommendations

- The PLEDGE aide memoire detailed in the chapter could be incorporated in blood component collection procedures

- Regular audit of blood collection and administration could help identify potential errors and identify opportunities for learning

Action: Hospital transfusion teams

Headline data 2020

Number of reports n=207
Deaths n=0
Major morbidity n=0

RBRP reports by year

Demographic data

Male
n=92

Female
n=104

Unknown n=11

Adults
n=181

Paediatric
n=15

Unknown n=11

Blood component data

Red cells n=161
Platelets n=17
Plasma n=10
Multiple Components n=19
Other n=0

Introduction

There were 207 cases reported in 2020, slightly lower than the 216 in 2019. Clinical errors accounted for 142/207 (68.6%), and laboratory errors 65/207 (31.4%). Transposed compatibility tags were implicated in 62 cases and 21 cases mentioned wrong names, transposed names, wrong DOB on component documentation. Pressures due to COVID-19 were mentioned in 15 reports, mainly related to reduced staffing and organisational/workspace reconfiguration.

Deaths n=0

There were 13 deaths in this patient group, none related to the transfusion.

Major morbidity n=0

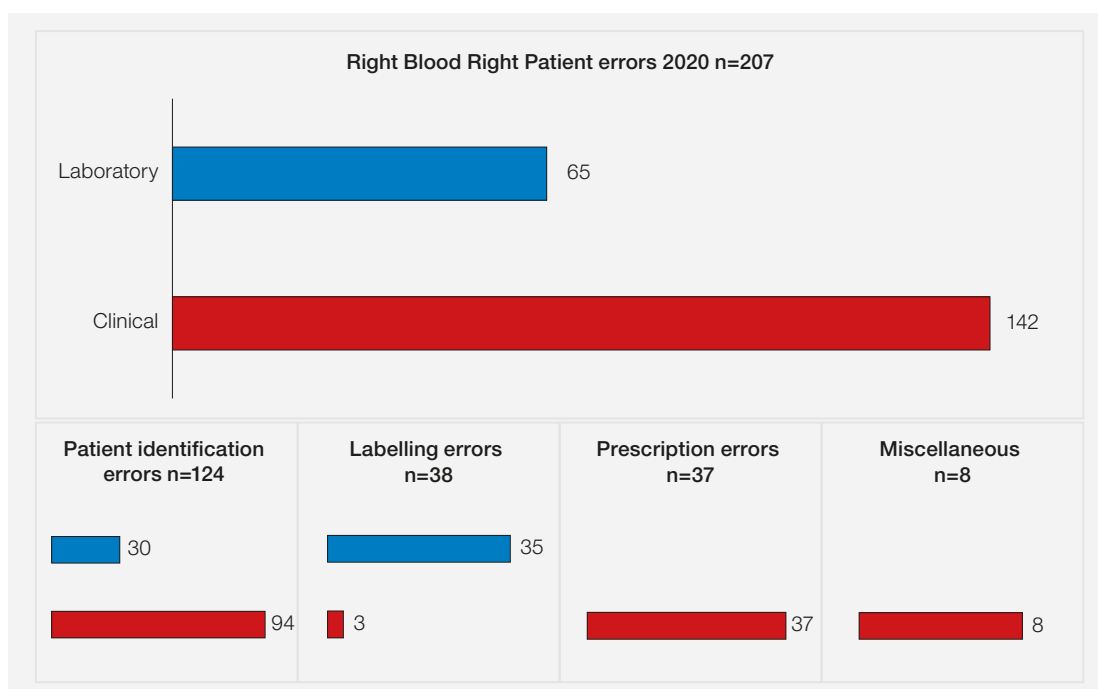No patient suffered major morbidity as a result of these errors.

Figure 14.1:
Breakdown of
2020 RBRP
reports (n=207)

Sampling errors accounted for 45/207 (21.7%). Errors in prescribing accounted for 44/207 (21.3%) of which 32/44 (72.7%) involved an error in prescribing the components correctly, and 12/44 (27.3%) PID errors on prescriptions (Figure 14.2).

**Figure 14.2: RBRP classified by the transfusion step in which the primary error occurred (n=207)**
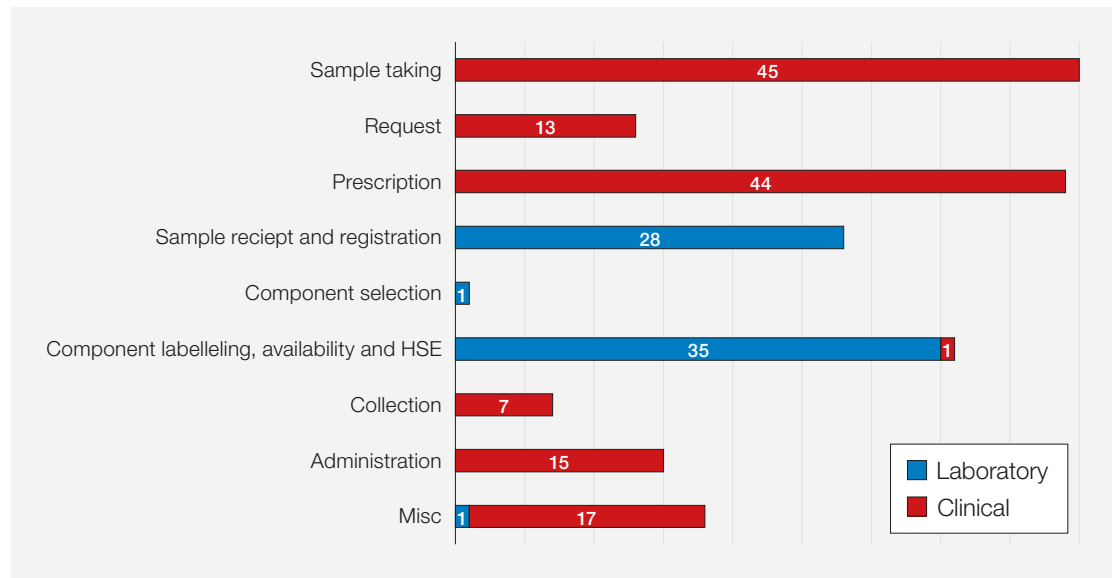
HSE=handling and storage errors

Patient identification (PID) errors n=124

PID errors 124/207 (59.9%) occurred in all parts of the transfusion process. These included patient details wrongly transcribed onto request forms and sample tubes, and laboratory staff not entering data correctly onto the LIMS during the booking in process (Figure 14.3).

Figure 14.3: Details of patient identification errors (n=124)
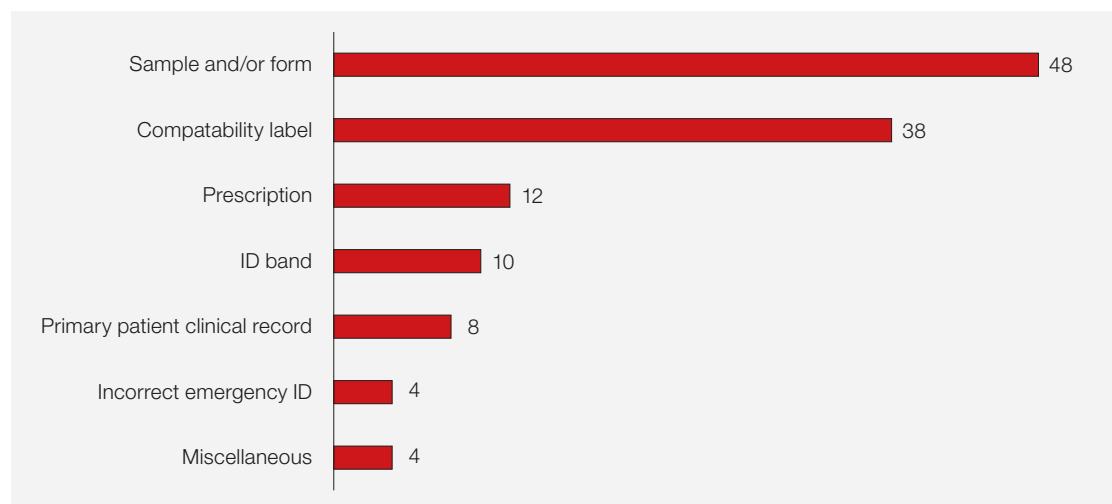
ID= identification

Most transfusion samples are labelled correctly. SHOT data demonstrate that many RBRP errors occur at the sample labelling step. Many RBRP investigations only address laboratory errors at sample receipt and registration, but this may not be the primary cause. Reporters should look back to the original error (the oversight at sample taking, and why this occurred) to help identify the primary cause and prevent these errors recurring.

Case 14.1: Incorrectly labelled emergency components transfused due to clerical error

During core hours a major haemorrhage protocol was pre-activated on unknown Patient 1 (a male

in his 50s) who was issued with the next emergency ID (ID X) on the list of ID used for unknown patients. This was not entered onto the system immediately as the member of staff was not aware of the full procedure but was trying to help. Before Patient 1's arrival in the ED, an unknown Patient 2 was issued with ID X and this was entered on the system. When Patient 1 arrived, a new ID had to be issued (ID Y) but the required blood components had been issued using ID X. The error was recognised but the patient was peri-arrest and medical staff felt that the delay caused by re-labelling would be detrimental to the patient's outcome.

There should be a clear, defined procedure for allocation of emergency identifiers in all hospitals. For hospitals in England, this should be in accordance with patient safety alert NHS/PSA/RE/2018/008 'Safer temporary identification criteria for unknown or unidentified patients' (NHSI 2018). All staff members involved in clerking patients should be competent in this procedure. Whilst the instinct to help is commendable, all members of hospital staff should be aware of their limits of responsibility.

Case 14.2: Patient 2 appears to have had Patient 1's unit of red cells

Two patients on the same ward were to receive blood. Patient 1 was prescribed two units on the transfusion documentation but only one was recorded as given. Patient 2 was prescribed one unit on the transfusion documentation, but it was recorded that two had been given. The second unit documented as given to Patient 2 was one issued for Patient 1. A two-person independent checklist was completed but the compatibility tag was applied to the transfusion documentation retrospectively away from the bedside at the nurses' station. This was a documentation error; the patients did receive the correct units.

Checking and completion of the transfusion documentation must occur at the time of transfusion at the patient side.

Pre-administration checklists

The CAS alert: 'Safe Transfusion Practice: Use a bedside checklist' (Department of Health 2017) was issued in response to SHOT recommendations. A pre-administration checklist was used in 131/207 (63.3%) RBRP cases. In 26/207 (12.5%) cases a checklist was available but not used. In 30/207 (14.5%) cases no bedside check was available, and only half of these reports stated an intention to implement one (Figure 14.4) however, some sites were represented more than once. Pre-administration checklists help guide safe transfusion and must be used prior to every component transfusion. They are of particular use for inexperienced staff and conversely for extremely experienced staff who may fail to identify errors due to cognitive bias.
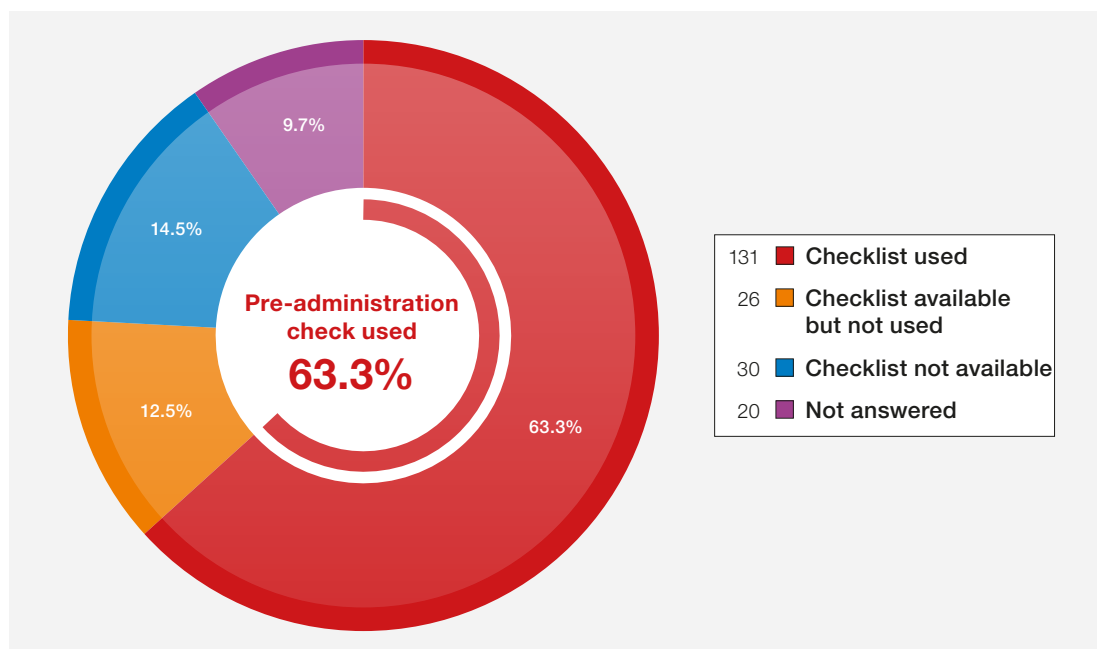

Figure 14.4:

The presence of a pre-administration check in RBRP errors (n=207)

Pre-administration check - one or two person

In the 131 reports which stated a pre-administration checklist was used, most had a two-person check 101/131 (77.1%) and the majority of these 75/101 (74.3%) used a two-person independent check (Figure 14.5). Data regarding dependency of checks was not consistently reported.

Figure 14.5:
Type of
pre-administration
check used in
RBRP incidents
(n=131)
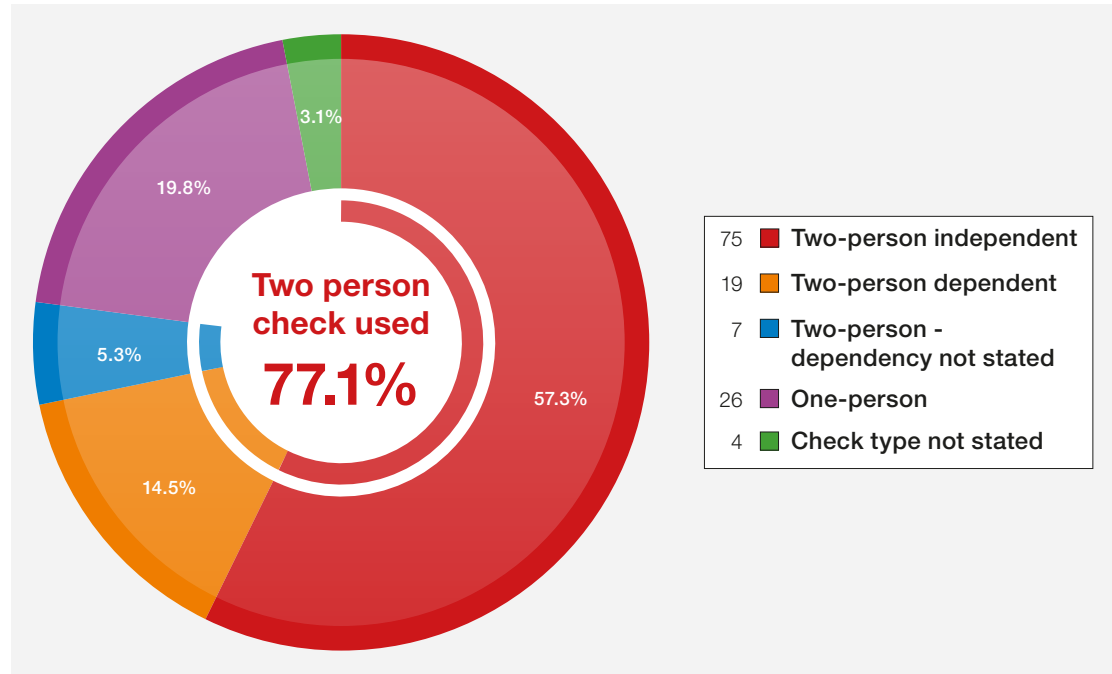
SHOT recommends local blood transfusion policies reflect national guidelines and where this requires a two-person checking procedure, each person should complete all the checks independently (double independent checking) (BSH Robinson et al. 2018).

Learning points

• Use of a checklist at the collection of the blood component from the refrigerator/storage area can prevent most right blood right patient (RBRP) errors from reaching the patient

• A pre-administration checklist can pick up most remaining RBRP errors and near misses

• Get it right first time, every time – while checklists are important, they may not pick up all errors

Near miss cases n=93

There were 93 near miss RBRP incidents, 11/93 (11.8%) originating in the clinical area and 82/93 (88.2%) originating in the laboratory. There is a noticeable decrease year on year, and this is most evident in the clinical cases. The main laboratory errors were labelling errors, most of them transposed tags.

Most near misses 78/93 (83.9%) were detected by qualified nurses, healthcare assistants and operating department practitioners when collecting blood or at the patient side, and 65/93 (69.9%) using a formal electronic (n=4) or paper-based pre-administration checklist (n=61). The checklist is a vital tool in transfusion safety and must be implemented in all Trusts/Health Boards.
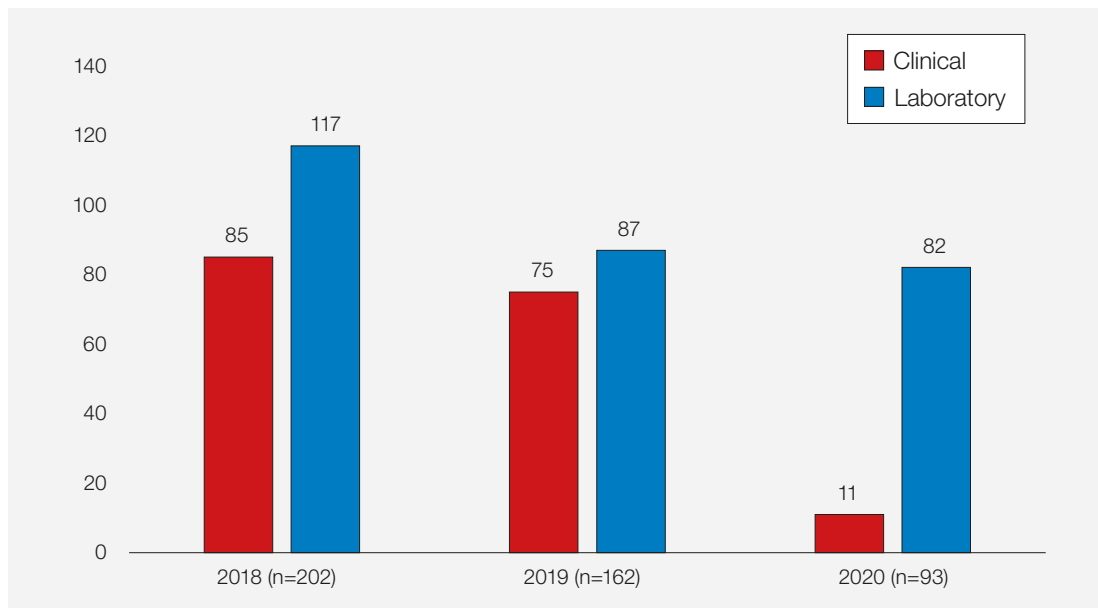
Figure 14.6:
RBRP near misses
2018-2020

A collection check provides the opportunity to detect any errors prior to the blood being transported to the patient. The fact that most errors are detected at the bedside may indicate that the collection check is not as robust as it could be. The following aide memoire may help identify any errors at the time of component collection.
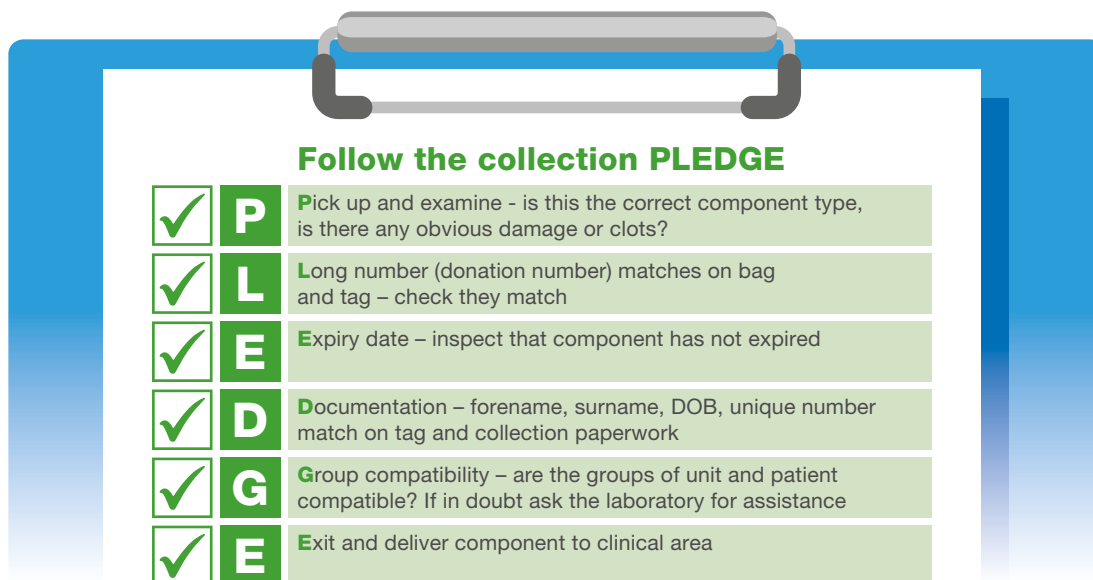

Figure 14.7:
The PLEDGE
aide memoire

Follow the collection PLEDGE

✓ **P** **P**ick up and examine - is this the correct component type, is there any obvious damage or clots?

✓ **L** **L**ong number (donation number) matches on bag and tag – check they match

✓ **E** **E**xpiry date – inspect that component has not expired

✓ **D** **D**ocumentation – forename, surname, DOB, unique number match on tag and collection paperwork

✓ **G** **G**roup compatibility – are the groups of unit and patient compatible? If in doubt ask the laboratory for assistance

✓ **E** **E**xit and deliver component to clinical area

Conclusion

Thorough investigation of RBRP and near miss-RBRP incidents is vital as findings from these investigations will provide 'free' learning opportunities. All staff must be trained, and competency assessed prior to performing tasks related to transfusion.

Although the collection process may vary between organisations, there are basic checks that should be made at this point which could greatly reduce the number of RBRP (and IBCT) incidents. BSH guidelines (BSH Robinson et al. 2018) state that the checks required when collecting blood components are correct component, expiry date and matching of four patient identifiers with collection paperwork. When performed in combination with a check of the donation number on the bag with the compatibility label, and a check of the ABO-compatibility of the component with that of the patient, the number of RBRP events could be reduced considerably.

A very small number of incident investigations reported that a change in policy or SOP was required. This would indicate that processes are in place to prevent RBRP errors, although a lack of incident investigation in some cases misses opportunities to identify the initial error. There is a misconception that IT solutions may be the only way to prevent RBRP errors - however some of the reports highlight that, unless there are integrated IT systems in use from patient registration to administration, errors are still possible. Overreliance on IT systems has the potential for error and staff should be aware of downtime procedures.

References

BSH Robinson S, Harris A, Atkinson S, et al. The administration of blood components: a British Society for Haematology Guideline. *Transfus Med* 2018;**28(1)**:3-21. http://onlinelibrary.wiley.com/doi/10.1111/tme.12481/full [accessed 25 March 2021].

Department of Health. Safe transfusion practice: use a bedside checklist (CAS) CEM/CMO/2017/005 (2017). https://www.cas.mhra.gov.uk/ViewandAcknowledgment/ViewAlert.aspx?AlertID=102663 [accessed 28 April 2021].

Narayan S (Ed), Poles D, et al. on behalf of the Serious Hazards of Transfusion (SHOT) Steering Group. The 2019 Annual SHOT Report (2020). https://www.shotuk.org/shot-reports/ [accessed 28 April 2021].

NHS Improvement (2018) Patient Safety alert NHS/PSA/RE/2018/008: Safer temporary identification criteria for unknown or unidentified patients. https://www.england.nhs.uk/wp-content/uploads/2019/12/Patient_Safety_Alert_-_unknown_or_unidentified_patients_FINAL.pdf [accessed 21 April 2021].