

Introduction

- Unused blood and blood components should be returned to the Blood Centre immediately (within 30 minutes of issue), if a transfusion is not performed.
- Improper handling of returned components can lead to wastage and risk the safety of future recipients.

Aims

- This study aimed to evaluate the return of blood and blood components across various hospital departments, identify reasons for returns, and propose preventive strategies.

METHODS

- **Study design:** Retrospective Observational study
- **Study Period:** 2 months (August to September 2024)
- **Study site:** Department of Transfusion Medicine (DTM)
- Following data was captured:
 - ✓ Blood components issued
 - ✓ Blood components returned
 - ✓ Reasons for return
 - ✓ Site of return
- **Data collection:** From departmental records and the Blood Center's software

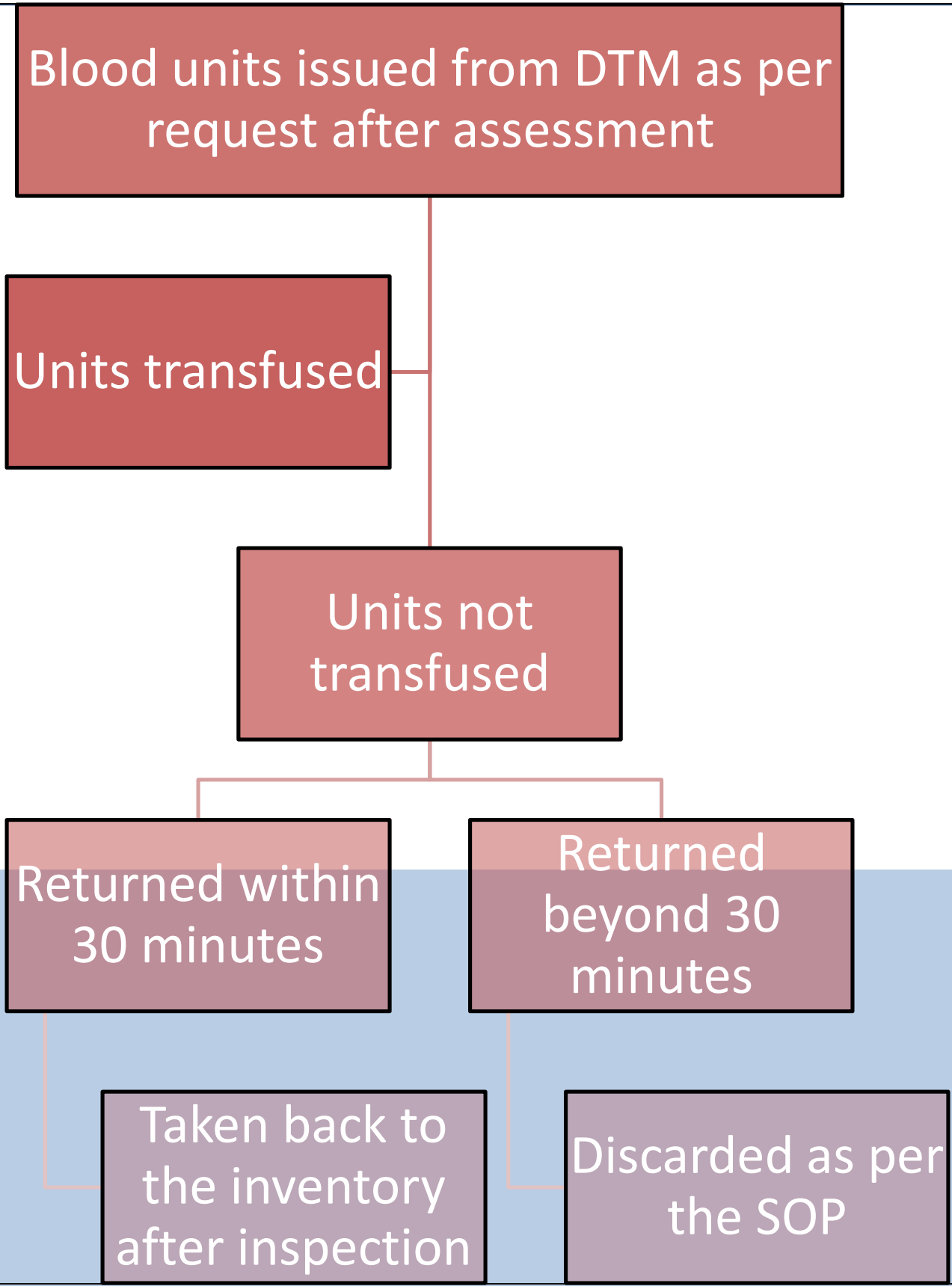


Figure1: Procedure for issuing blood and blood components

Results

- During the study period, a total of 9989 blood components were issued.
- Of which 121 units (1.2%) returned to the Blood Centre on 81 occasions.
- Of the 121 returned units, 44.6% (54/121) were packed red cells, 21.5 % (26/121) were random donor platelets, 14.0% (17/121) were fresh frozen plasma, 9.9 % (12/121) single donor platelets and 9.9 % (12/121) were cryoprecipitate.
- Total 17.4 % (21/121) units were discarded due to being returned after 30 minutes.
- The most common reason for return was patient related (patient having fever, breathlessness and chest pain), followed by patient not present at transfusion site and transfusion not required any more.
- The primary site for returns was general day care, followed by Intensive Care Unit and pediatric ward.
- Figure 1 shows procedure for issue of blood components.
- The analysis of blood component returned is shown in Figure 2, 3, 4 and 5.

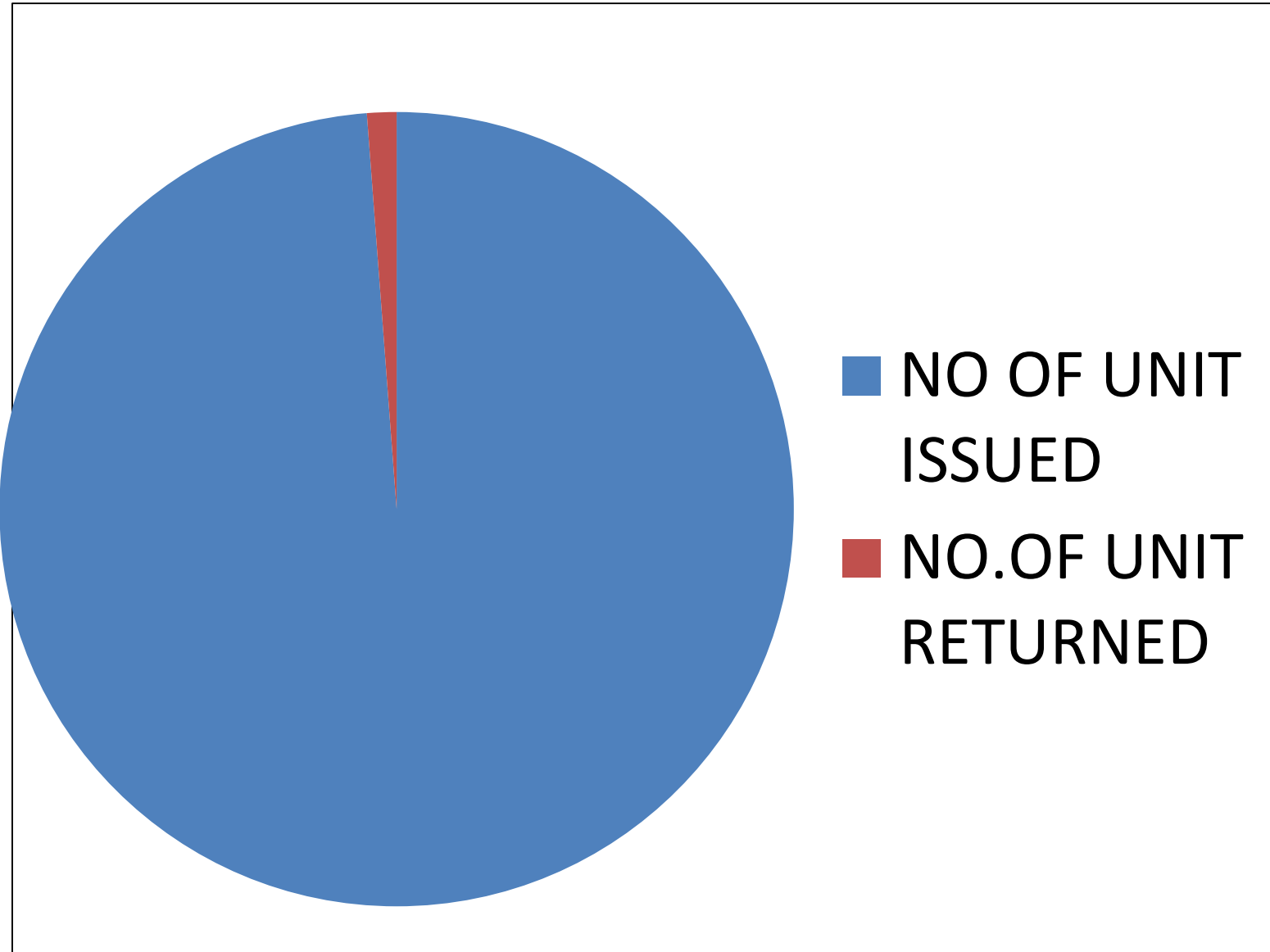


Figure 2: Issued vs Returned blood components

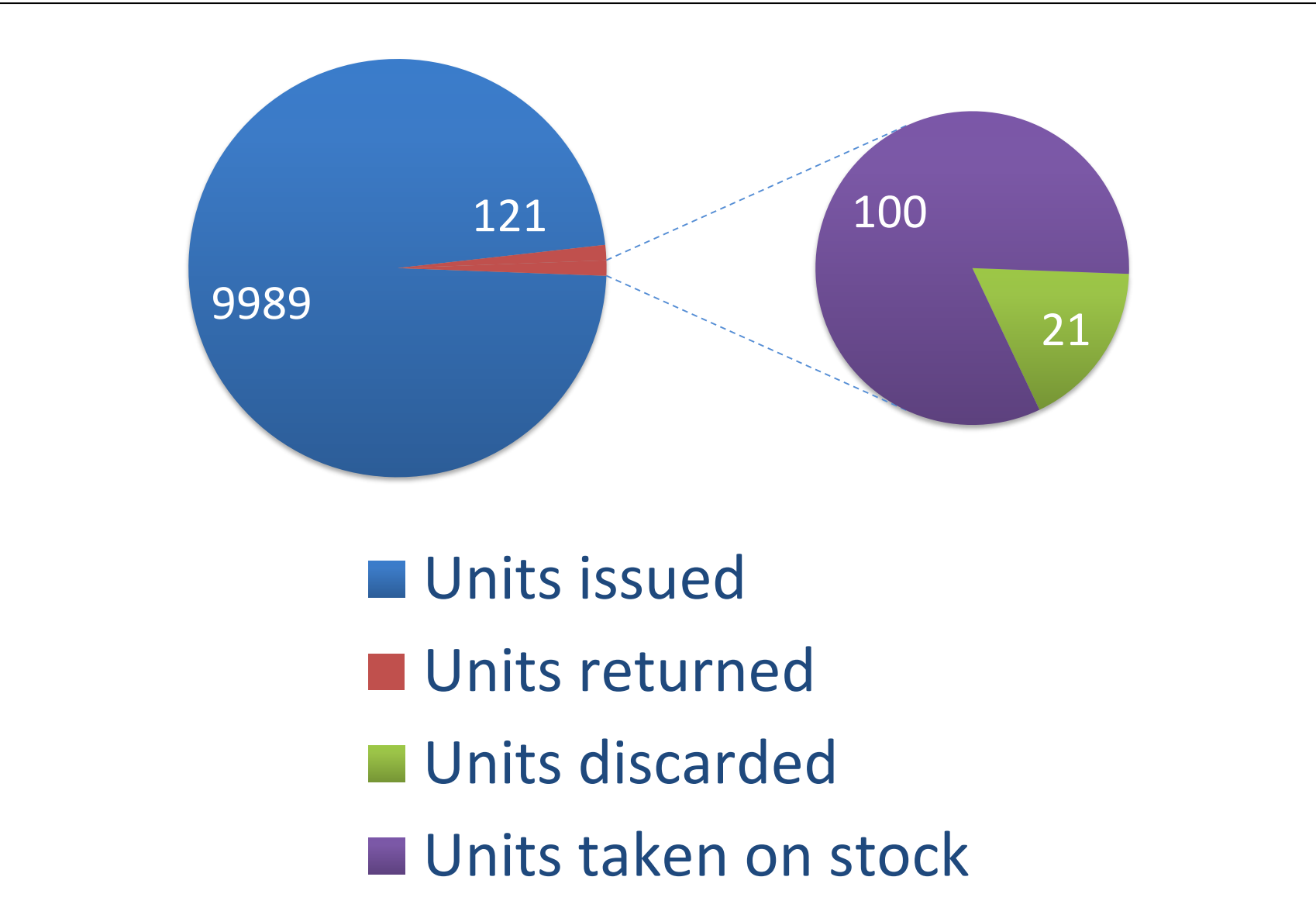


Figure 3: distribution of reasons of blood components

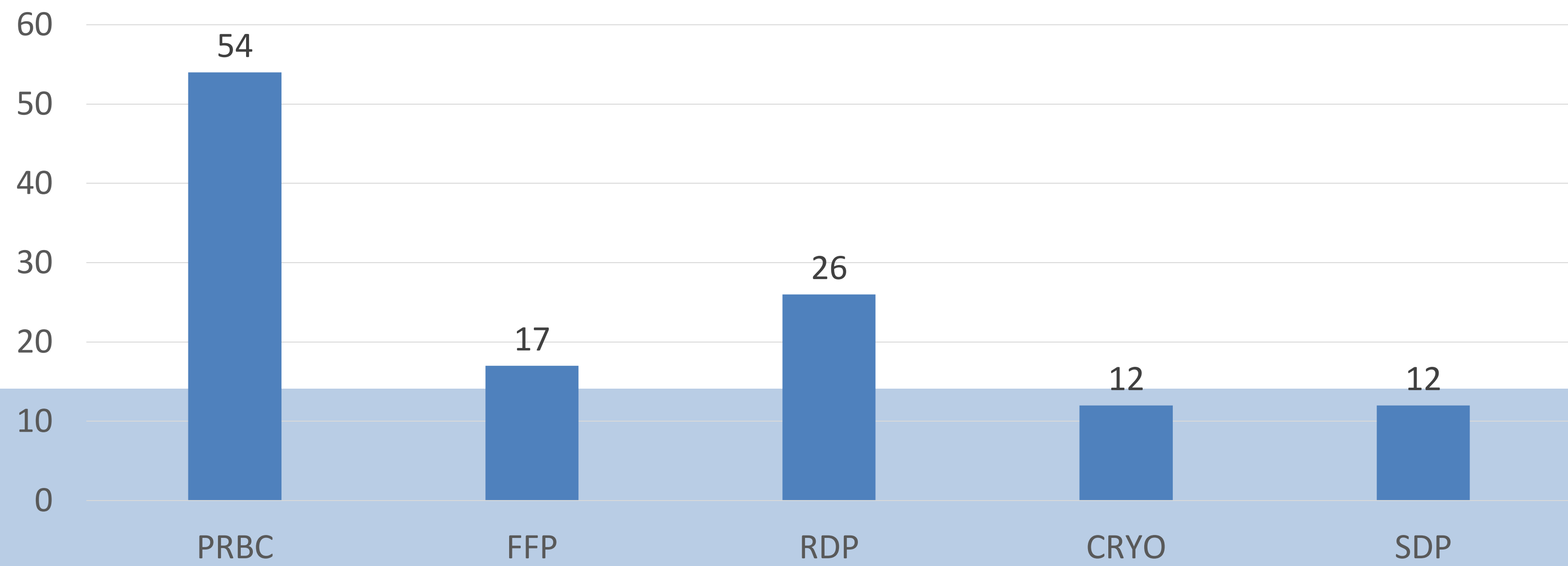


Figure 4: Analysis of blood components returned

PRBC - PACKED RED BLOOD CELLS, FFP- FRESH FROZEN PLASM, RDP- RANDOM DONOR PLATELET, CRYO- CRYOPRECIPITATE

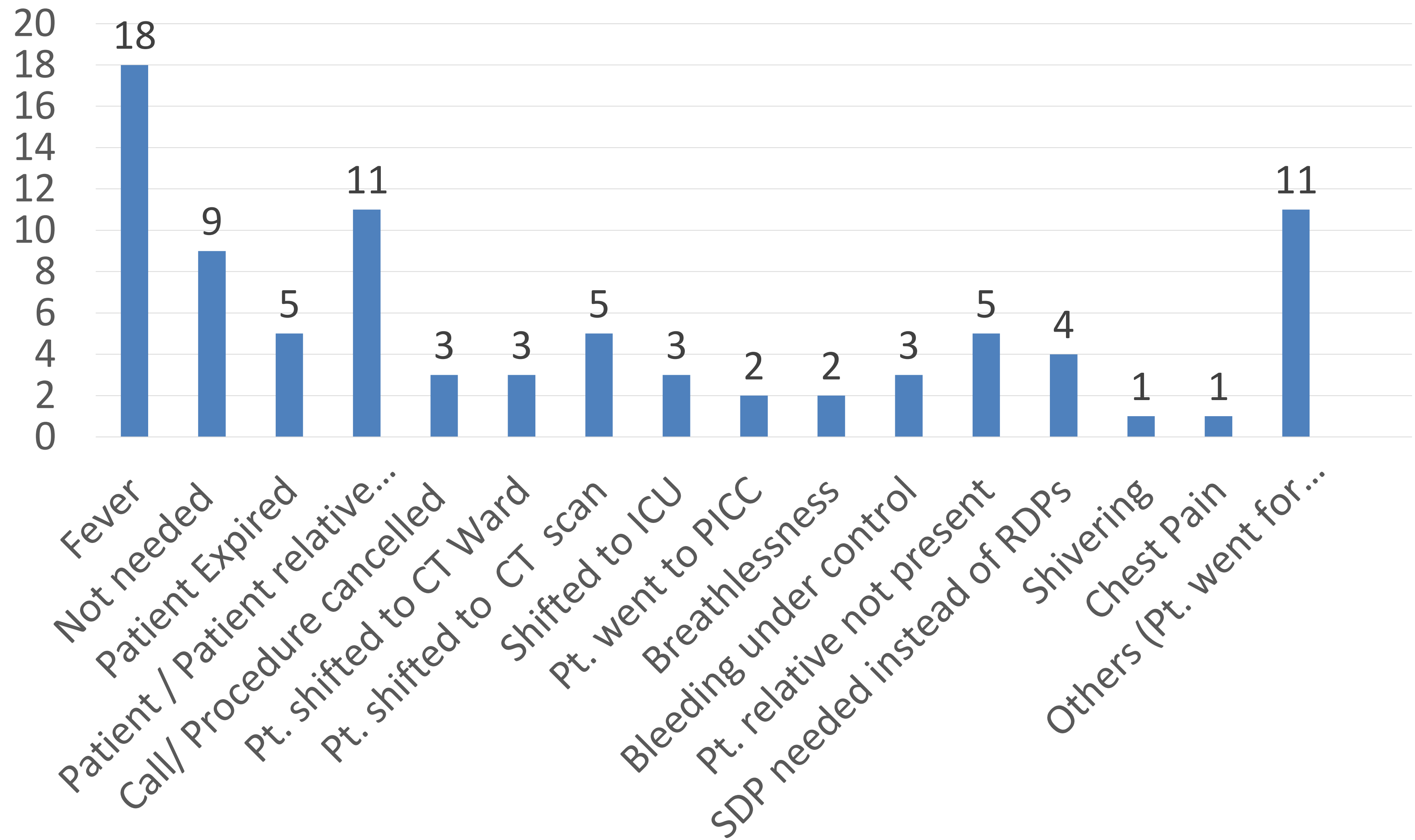


Figure 5: Patient related factors for return of blood components

Discussion

- Reasons for returned should be discussed in hospital transfusion committee and proactive measures to taken to minimize waste.
- Each returned occasion was analyzed for component type, number of units returned, site of return, duration outside controlled temperature, and reasons for return

Conclusions

- This study shows effective utilization of issued units (as only 1.2 % were returned) but also revealing areas for improvement.
- Majority of returned units were due to patient related factors. Implementing preventive strategies like staff education improved coordination can reduce the occurrence of unnecessary returns.

REFERENCES

- 1.An Analysis of the Unused Blood Components Return at the Teaching Hospital in North Eastern Malaysia Returned of unused blood component Mohd Nazri Hassan,Noor Haslina Mohd Noor,Marini Ramli et al. <https://doi.org/10.37231/ajmb.2023.7.1.609>
2. The volume of returned red blood cells in a large blood salvage program: where does it all go? (CME) [Jonathan H. Waters, Robert M. Dyga, Janet F.R. Waters, Mark H. Yazer https://doi.org/10.1111/j.1537-2995.2011.03111.x](https://doi.org/10.1111/j.1537-2995.2011.03111.x)