

Optimizing Blood Component Utilization: A Study on Returned Bags

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INTRODUCTION

The return of issued blood component bags to blood centres poses significant challenges as they may have been exposed to temperature fluctuations, handling errors or contamination which necessitates thorough inspection and documentation.

Effective management of returned blood components is important to ensure patient safety and also to reallocate resources resulting in improved utilization and in reducing the frequency of such incidents

OBJECTIVES

The objective of this study is to identify the most common reason for return of the blood component bags and thereby improve the blood supply chain's efficiency and safety

MATERIALS AND METHODS

A prospective observational study carried out from January to June 2024 on the number of blood components issued and returned to the Blood Centre; to determine the reasons for return, component types, storage, transportation and handling

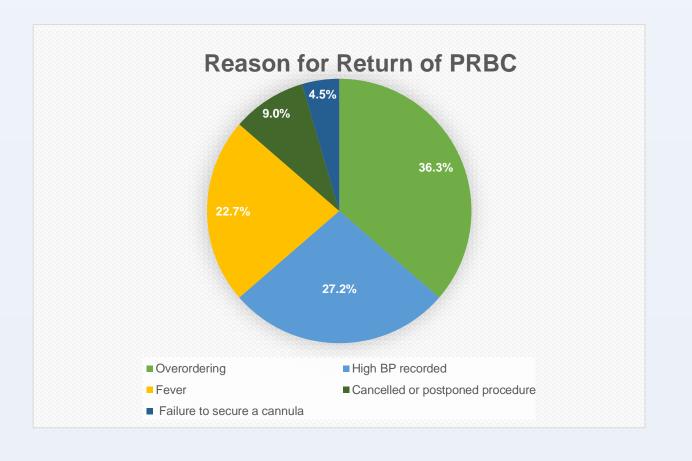
RESULTS

A total of 2022 components were issued of which 1135 were PRBC (56.1%), 307 were FFP (15.1%), 166 SDP (8.2%) and 414 RDP (20.47%). The number of components returned were 22 PRBC (1.93%) and 2 FFP (0.65%) 4 RDP (0.96%), 1 SDP (0.60%). The main reasons for return were, clots in the bag when the component issued was FFP 2(100%), miscommunication in case of RDP 4(100%) and SDP 1(100%).

Return rates varied significantly with PRBC being the most frequently returned component. The temperature of the components returned when checked was maintained in 21 PRBC (95.4%) 4 RDP (100%)1SDP (100%); percentage hemolysis was calculated for returned PRBC which was 0.8% in 21 PRBC (95.45%). Of the components that were returned 21 PRBC(95.4%), 1SDP (100%), 4RDP (100%) were reissued while 1 PRBC unit(4.54%), 2FFP(100%) were discarded. Additionally the time of issue and return was checked if the component was PRBC,1 PRBC unit discarded was due to delay in return

In case the component was returned due to high blood pressure or fever we made sure to find out that the vitals were checked before the component was issued from blood centre.





CONCLUSION

Our study identifies areas for improvement in blood distribution and transfusion, including inventory management, storage, transport protocols and staff training.

Addressing these issues can enhance patient safety, reduce waste and optimize the blood supply chain

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