

Blood Transfusion Practices in a Teaching Hospital – A Case Study

Ashutosh Kumar Singh
Blood Centre
SSH,IMS,BHU

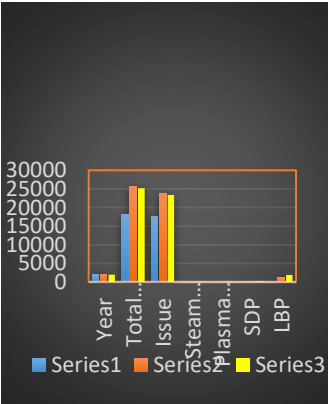
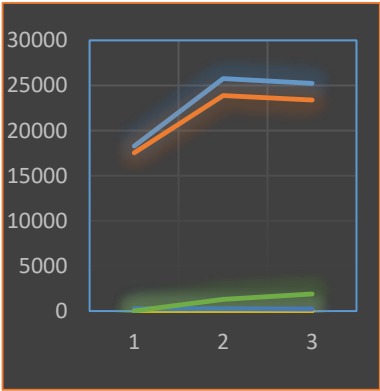
Introduction
Blood transfusion is a critical component of modern medicine, widely used in the management of various medical and surgical conditions. Blood transfusion practices in a teaching institute i.e. Sir Sunder Lal hospital, IMS, BHU, Varanasi were analyzed through retrospective study of blood bank records for the three years 2021 ,2022, 2023. It was found that the total blood donation of 18256, 25757 ,25217 in 2021 to 2023.Blood center SSH, IMS BHU done so many special activities done in last three years like that components preparation, platelet apheresis, plasmapheresis, Leucoreduced Blood Products, The This case study explores blood transfusion practices in a teaching hospital to highlight key findings, challenges, and recommendations.

- Study Objectives**
- Evaluate Current Practices:** Assess the protocols and procedures followed during blood transfusions.
 - Identify Challenges:** Highlight potential gaps, including administrative, clinical, and patient-related issues.
 - Ensure Safety and Efficacy:** Examine the hospital's adherence to international standards and guidelines.
 - Provide Recommendations:** Suggest ways to optimize blood transfusion practices.

- Methodology**
- Study Design:** Retrospective and observational.
 - Setting:** A multi-specialty teaching hospital.
 - Participants:** Data collected from medical records, staff interview.

- Key Metrics:**
- Number of transfusions performed.
 - Indications for issue blood special blood components transfusion
 - Number of therapeutic plasma exchange

Y e a r	Total Donatio n	Issue	Steam Cell	Plasma Apheres is	SDP	LBP
2 0 2 1	18256	17515	Nil	42	249	18
2 0 2 2	25757	23872	Nil	42	277	127 5
2 0 2 3	25217	23375	5	23	211	190 4



- Findings**
- Indications for Transfusion:**
Majority were for anemia management followed by surgical procedures. A big proportion were for other conditions, including heamoglobinopathie and obstetric emergencies
- Challenges Identified:**
- Lack of adequate training for junior staff.
 - Inconsistent documentation of adverse events.
 - Limited resources for blood storage and inventory management.

- Recommendations**
- Training and Education:**
Conduct regular workshops for staff on blood transfusion protocols.
- Include simulation-based training for special blood components process
- Minimizing Wastage:**
- Implement robust inventory management software

Conclusion

The case study highlights the strengths and areas for improvement in blood transfusion practices at the teaching hospital. While adherence to safety protocols is high, challenges such as training gaps and inventory mismanagement persist. Addressing these issues through targeted interventions can significantly enhance patient outcomes and resource efficiency.

- Future Scope**
- Expand the study to include a comparative analysis across multiple hospitals.
- Assess the long-term impact of implemented recommendations on clinical outcomes.

References

- AABB Standards, WHO Blood Transfusion Safety Guidelines. <https://www.researchgate.net>
- **Research Journals:** Search for relevant academic articles on PubMed or Google Scholar using keywords like "blood transfusion practices," "teaching hospital,"