

## A retrospective study of donor blood availability and patterns of use in a tertiary care teaching hospital

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### Introduction

Blood is a vital healthcare resource used in a broad range of hospital procedures. It is also a potential vehicle for harmful, and sometimes fatal, infectious diseases, such as HIV, hepatitis B and C. Every year, millions of people are exposed to life-threatening risks through the transfusion of unsafe blood which is completely avoidable. Optimizing blood collection and processing would reduce the rate of discard of blood and improve the efficiency of blood transfusion services and make available safe blood for the needy, also preventing potentially deadly iatrogenic infections.

### Methodology

A retrospective study of donor blood availability and patterns of use from January 2011 to December 2011 was conducted in a 680-bed tertiary care teaching hospital in Bellary by extraction of data from the master registers from blood donors and recipients. Objectives were to know the commonest indications for blood transfusion, and to know the wastage of blood and blood components at blood collection and storage facility. Along with demographic profile, data was collected regarding: number of blood-bags collected, need for transfusion, number of blood-bags discarded, reasons for wastage of blood and blood components.

### Results

The total number of blood units collected in year 2011 was 6715 (5419 voluntary & 1375 replacement donors) from which 12897 units of components were prepared, and 2429 used as whole blood. The total number of discarded whole blood units and its components was 230(3.42%), 3137 packs were used as Packed-cells, 1343 as Fresh-Frozen-Plasma, & 2575 as Platelets. 43.29% blood requirement was from medicine department, followed by pediatrics (19.12%). Commonest indication for blood transfusion in our study was anemia (1,360-19.28%) followed by Dengue (1301-18.44%) and other Infectious Diseases (1,010-14.32%). Major reasons for discard of blood were HBsAg (202-87.82 %), leakage (13-5.65%). Other infectious diseases & managerial issues remained reason for rest.

### Conclusions

The results are a reflection of the problem of unnoticeable infections in healthy looking members of the general population. Transfusion Transmissible Infections (TTI) were prevented in 230 cases by screening of blood donors which is the corner stone in assuring the safety of blood transfusion. Only continuous improvement and implementation of donor screening can ensure a decline in the risk of acquiring TTIs. Commonest indication for blood transfusion in our study was anemia.