



Investigating the Rate and Reasons of Wastage and Return of Blood Products to the Blood Bank at an Academic Hospital

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INTRODUCTION

Blood and its components are considered as one of the rare and precious human resources that should be administered wisely for clinical use and in accordance with international standards. Millions of people around the world need blood and its products transfusion. Blood transfusion is a life-saving process by injecting blood products into patients for therapeutic purposes. Blood transfusion has increased from 85 million in 2012 to 112.5 million in 2016. This rate in Iran is about 3 million units per year, so there is a need for blood and blood products every three seconds. Blood transfusions are often used in surgical and non-surgical procedures. Despite the benefits of blood and its products transfusions, if this process is not performed properly, it can cause early or delayed complications and blood-borne infections including HIV, hepatitis, syphilis, malaria, and Chagas disease. This shows the importance of accurate knowledge of blood transfusion and its management. Studies show that in developed countries and developing countries such as our country, the rate of blood and its products wastage are approximately 1-9% and 30-70% respectively. Reasons for blood products wastage include incomplete physicians' knowledge of blood request standards, increased requests to ensure adequate supply just in case during surgery, lack of efficient hospital committees, blood transfusion specialists and blood product delivery and return rules. A very useful strategy to determine the supply and demand of blood products, the reasons for the change in trend and loss is regular and periodic review of the amount of blood and blood products transfusions in hospitals, the establishment of blood transfusion medicine and training

laboratory specialists in this field. Considering the importance of blood and blood products, as well as the high rate of wastage expressed in other studies and paying less attention to the reasons of blood products return to the blood bank so far, the present study aims to investigate the extent and the reasons for the loss and return of blood and blood products at an academic hospital. Limitations include Lack of cooperation of specialists in checking the indications of request. Lack of blood bank cooperation in the field of blood product information. Failure to record blood transfusion documents in Patients' files. And due to the less referral of trauma and orthopedic patients because of the presence of a trauma center, these cases may be less estimated. The low rate of waste and return of blood products in this study compared to other studies in the country is very valuable and shows the continuous effort and careful and efficient planning in this field. Due to the increasing number of patients referring to academic hospitals and according to the results of this study, in order to reduce the rate of blood products wastage, the following strategies can be mentioned: Supervision of senior resident or faculty on blood requests. Creating a hospital protocol and monitoring the amount of blood request in elective surgeries. Accurate registration of the reasons for requesting blood products and the applicant, Careful monitoring of the way of request, transfer and track consumption or non-consumption of the product by the blood bank, Accurate registration of the reasons for returning the product to the blood bank and giving feedback to the relevant ward. It is suggested that future studies examine the rate of blood products waste and return as well as other relevant factors in different time periods.

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