CHAPTER: 01

GAP-ANALYSIS FOR THE COMPLIANCE FOR BLOOD DONATION PROCESS TO THE NABH STANDARDS IN BLOOD BANK

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INTRODUCTION

According to the Central Drugs Standard Control Organization (CDSCO), in 2015, the country boasted a total of 2,760 blood banks, out of which 2,626 were functional across the nation (excluding 46 military blood banks). The cumulative annual blood collection from these banks, reported between January and December 2015, reached 11,645,791 units. Notably, 71.9% of these units were procured through voluntary donations, while the remaining units were sourced from replacement donations. The blood transfusion process, involving various critical steps such as donor selection, collection, processing, and testing of both donor and patient samples, as well as the issuance of compatible blood, presents inherent risks. However, the implementation of a meticulously designed and executed quality system, encompassing internal and external quality assessments, along with staff education and training, holds the potential to significantly alleviate the associated risks in the blood transfusion process [1].

Generally, the predominant use of blood collected for medical purposes involves transfusions into patients undergoing trauma, surgical procedures, or therapeutic treatments for diverse diseases. Blood components are stored under varying temperature conditions, where red blood cells (RBCs) are preserved at temperatures ranging from 2 to 6 degrees Celsius, with a shelf life of 42 days (35 days for pediatric red cells). Platelets are stored at temperatures between 20 and 24 degrees Celsius, with a shelf life of 5 days, while fresh frozen plasma is maintained at or below -25 degrees Celsius, with a shelf life extending to 12 months [2].

To precisely evaluate their performance against established standards and consistently enhance their capabilities, healthcare organizations employ a process involving both self-assessment and external peer assessment. Numerous national and international accreditation bodies play a pivotal role in guaranteeing quality assurance, minimizing medical errors, and upholding standards [3].

RESEARCH OBJECTIVES

1. To gain insight into the operation of the blood donation process and identify issues through root cause analysis, implementing corrective and preventive actions routinely.
2. To evaluate the adherence of blood donation process standards to those established by NABH for blood banks.
3. To propose necessary improvements based on the identified findings to meet the requirements effectively.
4. To analyze the satisfaction of blood donors with the existing donation process.

RESEARCH METHODOLOGY

The research approach guided data collection, analysis, and potential conclusions, with this study having employed a descriptive approach. The study focused on blood donors at PD Hinduja Hospital in Mumbai, and the location where the study took place was PD Hinduja Hospital, Mumbai. A total of 265 blood donors from PD Hinduja Hospital were included in the study. The sampling technique utilized was non-probability purposive sampling, involving the tracking of blood donors from 10 am to 5 pm in February (71 donors), April (91 donors), and May (103 donors). Donors were observed from reception to post-donation counseling.

The sampling criteria encompassed the inclusion of donors present during data collection,3hile exclusion criteria involved those unwilling to participate and donations on Sundays, at camps, and holidays. Primary data was collected from all scheduled donations in February, April, and May 2019, and the data collection occurred at PD Hinduja National Hospital and Medical Research Centre.

RESULTS & DISCUSSION

A total of 70 blood donation cases were recorded in February, with 55 males and 15 females participating. The distribution of gender revealed that 78.5% were males and 21.4% were females. Among the

total donations, 14.2% were voluntary, and 85.71% were replacement donations. The number of deferral cases accounted for 7.12%, while adverse donor reactions were observed in 27.12% of cases, with 36.84% occurring during donation and 47.36% post-donation. In March, there were 91 blood donation cases, with 67 males and 24 females. The gender distribution showed that 73.62% were males, and 26.37% were females. Voluntary donations constituted 12.08%, and replacement donations were 87.91%. Deferral cases represented 7.69%, while adverse donor reactions occurred in 14.2%, with 53.84% during donation and 38.46% post-donation. For April, 103 donation cases were recorded, with 74.75% males and 25.24% females. Voluntary donations constituted 16.50%, and replacement donations were 83.49%. Deferral cases were 12.62%, and adverse donor reactions occurred in 25.24%, with 53.84% during donation and 38.46% post-donation.

The average time spent by blood donors in the donation room varied, with 1 hour and 15 minutes in February, 1 hour and 2 minutes in March, and 1 hour and 10 minutes in April. Regarding donor satisfaction, at the reception desk, 40% were satisfied and 36% were strongly satisfied. During blood donation, 48% were satisfied, and 36% were strongly satisfied. In pre-screening, 28% were satisfied, 14% were strongly satisfied, and 42% were dissatisfied. Post-donation, 20% were satisfied, and 16% were strongly satisfied, while 44% were dissatisfied.

CONCLUSION

A comprehensive understanding of research findings goes beyond the mere presentation of results; it involves ascribing significance and meaning to the outcomes. The discussion section assumes a crucial role in providing a thoughtful and insightful analysis of the findings, delving into their clinical and theoretical implications. This chapter focuses on the discussion portion, aligning the results obtained from statistical analysis, the reviewed literature, and the hypotheses formulated for the study. The primary objective of this research was to evaluate the compliance of the blood donation process at PD Hinduja Hospital. To accomplish this, a descriptive approach was employed, and a non-experimental correlational design was chosen.

Primary data was gathered through direct observation. The discussion of the study's findings is contextualized with respect to the predefined objectives, hypotheses, and the relevant findings from other studies.

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