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General Practitioners, Nurses and Clinical Laboratory Responsibility in Blood Transfusion Monitoring Care Plan and Early Intervention: Review

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Abstract

The objective of this analysis was to assess the responsibilities that physicians, nurses, and clinical laboratory staff play in the process of transfusions of blood and blood products, as well as their ability to intervene promptly in the event that difficulties arise during blood transfusions.

It is possible for educational programs concerning blood transfusion to have a favorable impact on the knowledge and performance of physicians, nurses, and clinical laboratory personnel. There is a pressing need to enhance the knowledge and competence of nurses on the unintended consequences that can result from receiving a blood transfusion. An knowledge of the ethical and legal concerns that are involved, the provision of thorough medical management, the utilization of prohaemostatic drugs, and the utilization of essential interventions and strategies to limit blood loss and, as a result, the risk of a subsequent need for blood transfusion are all necessary components of the management of such patients by medical professionals.

Keywords*: blood, nurses, transfusion.*

Introduction

Blood transfusions are an important part of the medical care that is provided in modern times. There are around 80 million units of blood that are collected annually, and it has been stated that a blood transfusion is carried out every second across the entire world [1].

The provision of healthcare services has as its primary goals the protection and improvement of the health of both individuals and the community as a whole, the treatment of those

who are ill, and the provision of as many resources as possible to ensure a healthy human life. Patients should be approached by healthcare professionals who are accountable for providing services while keeping in mind the concept of "First, do no harm." Errors that take place during the delivery of medical care have the potential to directly lead to the death of a patient or the deterioration of their condition [2]. Through the implementation of best practices, errors can be prevented. The protection of patients is a problem that is of the utmost significance in terms of enhancing the quality of healthcare services. Important errors that have a negative impact on patient safety include insufficient confirmation of the patient's identity, a lack of effective communication with the patient, prescription errors, nosocomial infections, premature termination of the patient's treatment, patient falls, the development of pressure sores, failure to evaluate risk factors, and surgery performed on the incorrect side [3]. There is a possibility that the patient will suffer negative consequences as a result of inappropriate behavior on the part of healthcare personnel, a lack of professional skill, and negligence while they are doing their tasks. Despite the fact that healthcare services are beneficial to society, there is also a risk associated with the complicated merging of procedures linked to the provision of healthcare services, technological advancements, and human aspects [4].

When it comes to the process of a blood transfusion, practitioners, nurses, and clinical laboratory teams all take on a variety of tasks and responsibilities throughout the entire procedure. Additionally, it is essential for the nurse to keep a careful eye on the patient in order to identify any potential issues that may arise. Vital signs must be examined before, during, and after any transfusion at suitable intervals. The early detection of a problem developing during transfusion and fast beginning of treatment are crucial safety factors [5].

The clinical status of a large number of patients can be improved by the use of blood and blood products, which can also save lives. In most cases, human errors that interfere with the correct execution of blood transfusions are the result of a failure to comply with the protocols that are pertinent to blood transfusions [6].

Review:

In every region of the world, there are millions of people who require transfusions of blood and blood supplements. One definition of blood transfusion describes it as the procedure of injecting the blood of one individual into the circulation of another individual for the goal of providing medical treatment. Blood transfusions were a contributor to a variety of unfavorable side effects during the beginning of the twenty-first century; however, these consequences are now prevented through the education of medical care professionals and the screening of blood and blood products [2]. For many individuals, receiving a blood transfusion is an essential requirement; nonetheless, if it is not performed with caution, it can be a potentially fatal procedure [4]. It is estimated that one error happens in every thirteen thousand instances of blood transfusion, the majority of which are caused by human errors. These errors can be avoided by implementing adequate education and reforms in the procedures that govern blood transfusions [6]. It is essential for nurses to develop their knowledge and abilities in order to fulfill the significant role that they play in ensuring that blood transfusions are both safe and effective [1]. Blood transfusion is a complicated process that consists of five phases, and nurses are involved in four of those stages. These stages include activities related to patient safety monitoring, activities related to preparing blood units, collecting blood packs, and activities connected to before and after the transfusion [7]. The transfusion of blood is a significant medical procedure that calls for a high level of expertise and knowledge [2]. In the field of blood transfusion, numerous research have been carried out to investigate the level of knowledge and awareness that nurses and physicians possess [7]. However, in light of the growing demand for blood transfusions in hospitals and the fact that they play a role in

preventing the loss of life for patients, it appears that it is necessary to enhance the level of knowledge and performance of nurses in order to guarantee the safety of this intervention.

Before the intervention, there was a substantial correlation between age, department, and nurses' performance score, according to the findings of a recent study. The study concluded that the intervention was successful. On the other hand, following the intervention, this difference did not yield any significant results. On the other hand, there was no significant correlation between gender and performance score either before or after the intervention. Both Watson et al. and Abdullahi and et al. conducted research that demonstrated that there was no significant correlation between performance and factors such as gender, marital status, involvement in school courses, or years of job experience [8]. A blood transfusion is a medical intervention that can save a person's life; but, if it is deemed a simple medical operation, it can become potentially life-threatening or even fatal. One of our goals within the framework of the medical care system is to enhance the efficiency of blood transfusions. In line with the findings of other studies, our investigation revealed that the correlation between the performance score of nurses and factors such as gender, age, years of experience in the workforce, and department of occupation was not statistically significant both before and after the intervention [9]. According to Lee and colleagues' findings, there is a substantial correlation between the performance score of nurses and their demographic features, such as their age, years of experience in the workforce, and so on [9]. It was found in a number of studies that nurses who participated in educational courses had a greater level of understanding regarding blood transfusions. In light of the significant part that nurses play in the processing of patients, it would appear that educational programs should be developed in order to enhance the level of knowledge and practice that nurses possess.

In a study that was carried out by Silva and colleagues, more than two thirds of the participants were females who held a Bachelor of Science degree [10]. According to a recent study, prior to the educational intervention, the majority of the nurses exhibited intermediate levels of performance and required insufficient knowledge. Nevertheless, there was a satisfactory rise in both their knowledge and their performance as a result of this intervention. An investigation conducted in Turkey found that the majority of nurses had an intermediate level of performance, and their knowledge scores ranged from fifty to one hundred [11]. On the other hand, a study conducted in France found that the level of knowledge and performance of nurses regarding transfusion was low. There were 54% of occasions in which the nurses had knowledge about the patients and the relevant blood products as well. Twelve. According to the findings of a study conducted in Iran, the level of knowledge regarding blood transfusion among medical care providers was found to be inadequate in 26.2% of cases, intermediate in 22.1% of cases, and satisfactory in 51.6% of cases. For the purpose of enhancing the degree of knowledge possessed by personnel, this study highlighted the significance of drafting a guideline [13]. The results of the current study demonstrated that there was a substantial disparity in the scores on knowledge and performance measurements taken before and after the intervention. The results of this study were consistent with those of earlier research [14]. The influence of education on nurses' performance was shown to be connected with other aspects, such as the method of education and the nurses' motivation to develop themselves, according to research that were conducted in the past [15]. Given the significant part that nurses, clinical laboratories teams, and physicians play in ensuring the safety of transfusions, it would appear to be required to devise an adequate educational program in order to enhance the level of knowledge and quality of performance that these individuals possess [10, 14]. Our findings demonstrated a substantial change in the level of knowledge and performance in veteran nurses before and after the intervention [15]. These findings are similar to the findings of previous studies that have been conducted based on similar research. On the one hand,

elder nurses have more experience in their employment, but on the other hand, they have attended a greater number of educational courses concerning transfusion.

Conclusion:

There is a potential for educational programs about blood transfusion to have a favorable impact on the level of knowledge and performance of nurses. Every member of the medical staff needs to have a thorough understanding of the proper procedures for storing blood, administering injections, and responding to adverse reactions that may occur as a result of receiving blood or blood products through a transfusion. It would appear that it is vital to produce standard guidelines and instructional courses about transfusion for nurses in order to improve their level of knowledge and practice. The literature that pertains to this subject demonstrates that the likelihood of these medical personnel making a mistake in relation to blood transfusions is relatively low. It is possible that this outcome was influenced by the quality assurance work that is now being done in the hospital where this research was carried out, as well as by the in-service training that is targeted at decreasing errors and ensuring the safety of patients. The review of the results led to the formulation of the following suggestions, which are intended to give medical professionals with sufficient information regarding blood transfusions and to ensure that this information is put into practice. In-service training that is well-planned, helpful, and ongoing should be provided to medical professionals, nursing staff, and laboratory personnel. Additionally, regular evaluations of the success of these training sessions should be carried out. It is recommended that the transfusion technique be standardized in order to reduce the number of errors that occur, as well as to make in-service training more efficient and easier to implement. Standardization of transfusion procedure training should include graphics that illustrate the correct manner of administering blood transfusions and explain the potential adverse effects that may occur. Additionally, blood transfusion committees should be responsible for ensuring that these recommendations are properly implemented.

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