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Analysis of medication errors by RCA method and implementation of reducing strategies to improve patient safety in Hujjat Kuh-Kamari Hospital in Marand - 2017

Tayyebeh Rezaei [a,*]

[a] Tabriz University of Medical Sciences, Tabriz, Iran.

Abstract:

Background: Medical errors are one of the major challenges which threaten patient's safety. Meanwhile, medication errors are common types of medical errors that have attracted the attention of many people. It is known as the eighth cause of death in USA. It has also caused many different injuries, death, or increase in medical costs in other countries. Regarding the importance of patient's safety and reduction of medical errors, this study was conducted to evaluate and analyze of medication errors and implementation of strategies to reduce errors in Hujjat Kuh-Kamari Hospital in 2017.

Methods: This research is an analytical and interventional study. All reported errors in 2017 were summed up by personnel and patient safety staffs at monthly medical units and analyzed using the RCA (Root Cause Analysis) by medical error analysis team and were ultimately analyzed in Ishikawa diagram. Then, by identifying CPD (Caring Problem Delivery) and the SPD (System Problem Delivery) factors, the main causes of these errors were evaluated from the moment of prescribing and filing until giving the medication; then appropriate strategies were provided and approved to reduce these errors by the Error Analysis Team. These strategies were then provided to the treatment units. Finally, a reassessment of medication errors was performed again in 2018 and compared with the results obtained in 2018 to determine the strategies effectiveness.

Results: The results of the study showed that the errors were in different forms, such as incorrect dose, incorrect registration of the drug, lack of registration of the drug, incorrect entry at list, failure to implement it, and wrong implementation of medication order. According to the analysis of the errors, the causes of the occurrence of these errors were the cases such as incorrect checking of the orders (20%), the problem with readability of the order (15.5%), the similarity of the medication in terms of the name, form and appearance (14%) the incomplete written name of medication by the doctor (7.8%) the incomplete written name of medication by the nurse (8.7%), and other errors. Ultimately, solutions were provided to the units as follows:

• Checking the orders again by the next person in the next shift and matching it with the orders in patient's list.

• Matching the medications in patient's list and records by the secretary of the unit at the time of registration in HIS system.

• Sending letter to doctors to write the medication orders better and in a readable way.

• Separating similar medications and identifying the risky and similar medications with yellow and red labels.

These errors were assessed in 2018 again, and all errors were reduced by an average of 8.35%. However, the errors related to doctors' handwriting were increased up to 0.4%.

Conclusion: Considering the importance of patient safety and receiving safe services in hospitals, it is important to identify errors and its causes, examine the strengths and weaknesses of reporting errors, share errors and find ways to reduce or eliminate these errors for improving patient safety in the hospital. Therefore, it is necessary to create

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organizational culture and patient safety culture in order to feel responsible for the system and patients in the medical staff. In this regard, encouraging staff to report errors, contributing them to the analyze errors, using staff comments, considering the management's responsibility about patient safety, reporting errors, and encouraging staff who are pioneer in patient safety advancement can be very helpful.

Keywords:

Patient safety, Medication errors, Root cause analysis

* ***Corresponding Author at:***
Tayyebeh Rezaei: *Master of Nursing, Tabriz University of Medical Sciences, Tabriz, Iran. Email: tayebe.rezayi86@gmail.com* ***(Rezaei T.).***