CHAPTER: 13

FAILURE MODE EFFECT ANALYSIS OF MEDICATION MANAGEMENT PROCESS

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INTRODUCTION

The use of medications is a fundamental component of medical care in hospital settings [1,2]. Managing medications typically requires a collaborative and well-coordinated effort among different staff members, incorporating effective process design, implementation, and improvement principles across the entire medication usage process. This process encompasses selection, procurement, storage, ordering/prescribing, transcribing, distribution, preparation, dispensing, administration, documentation, and monitoring [2]. When a consultant prescribes a medication, it triggers a complex series of interconnected supply chain and workflow processes with the goal of delivering the medication to the patient swiftly, efficiently, accurately, and cost-effectively. Any breakdown at any stage in these processes can lead to delayed, omitted, or incorrect medication therapy [3]. Issues related to medications often arise during transitions, resulting in patient harm, increased use of healthcare resources, and higher costs [4].

AIM

To assess various risk points existing in the medication management process of the hospital and analyse the causes and effect of those failure modes with the help of Failure mode effect analysis (FMEA) tool.

RESEARCH OBJECTIVES

1. To review the medication management process that is the process mapping.
2. To identify the possible failure modes in the process along with their severity and frequency.
3. To analyse the causes and effects of various failure modes.
4. To propose recommendations to eliminate the failures in the process so as to minimize medication errors.

RESEARCH METHODOLOGY

An observational analytical study was conducted at Medanta-The Medicity hospital in the In-patient department in Gurgaon over a two-month period. A convenient sampling method was employed, involving the examination of 300 inpatient records. The study utilized the Failure Mode Effect Analysis (FMEA) tool and comprised four stages: process mapping, identification of failure modes, prioritization of failure modes based on severity and frequency, and the formulation of recommendations to minimize or eliminate these failures. Both routine and urgent medications, including various drug forms such as tablets, suppositories, mixtures, and injections (intravenous, intramuscular, and subcutaneous), were considered. Patients with specific existing medications were included to assess the status of these medications, determining whether they were to be continued during the hospital stay or not.

RESULTS & DISCUSSION

The pharmacy must appropriately label dispensed drugs, providing information such as the name, manufacturing date, and expiry date. In cases where a drug with the same name but a different dosage form is dispensed instead of the ordered medication, this discrepancy should be communicated in writing to the nursing station. Communication breakdown is a frequent cause of harm to patients, and addressing this issue is essential at multiple levels.

Fostering motivation among the staff by ensuring open and non-punitive environment for reporting medication errors. Organising training sessions regarding the existing medication safety policies for RMO's evidence-based practices. Addressing the language barriers among the nursing staff. Vigorous training sessions for the nursing staff with strict follow-up.

Additionally, a skill assessment could be carried out every two months or quarterly to gauge the staff's understanding of policies and procedures. This approach would aid in identifying areas where knowledge is lacking and in developing subsequent action plans.

Rewarding system (scoring or giving points) for those who report errors.

CONCLUSION

Several factors in each stage of the patient care process play a role in medication errors. Special emphasis should be placed on the prescription and administration phases, where a notable proportion of errors are detected. While policies and procedures are in place, strict adherence to them is pivotal. Prompt attention should be given to training and motivation, recognizing their crucial role. The implementation of FMEA can occur progressively, with clearly outlined recommended actions and assigned responsibilities. This iterative process evaluates the impact of implemented actions, ultimately aiming to decrease the risk priority number.

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