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Research Article

To Ensure Patient Safety In Bhaktivedanta Hospital & Research Institute By Continuous Quality Improvement Project To Reduce Medication Error At All Wards

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ABSTRACT

Objective:
The Consistent daily Prescription Audit along with quality improvement project activity by clinical pharmacist in clinical areas and its regular monitoring, has been beneficial to all patient Health-care.

Method:
During a 1 year 7 months period, a clinical pharmacist was assigned to review medication order sheets and drug orders on daily basis at all wards as on random basis. When an error was detected, intervention was made at the time of audit & error was informed to respective department head , medical admin & nursing incharge for further training to respective staff.

Results:
Quality Improvement Project was implemented in the month of April-22 to Nov-23. In Defined parameters we mainly found Medication errors root cause because of Incorrect drug order , strength of medicines not mentioned properly , wrong indent & incorrect administration of medicines. Overall Medication error declined from 9.07% to 3.39%.

Conclusion:
This quality improvement project at the all ward helps in early detection of prescription errors, aadministration error and dispensing error, therefore there is continuous improvement in prescribing, administration & dispensing pattern of medicine & it helps to improve patient safety during the treatment.

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Impact on Practice:

1. Good practices to be identified and implemented for patient safety.
2. To ensure right drug goes to right patient .
3. Improving the professional practices while meeting with Quality Standards.
4. Improving Staff-skill sets through continuous Training.
5. Poor or deficient practices to be identified and eliminated on continuous basis.

INTRODUCTION

Prescription audit is an important process that checks for quality improvement in patient health care by Quality Improvement Project.[1,2] . Patient-Care-Quality improvement has been implemented through prescription audit of in-patients. Prescription audit is most important part of health-care system whereby the right dose- of - the right medicine - to- the right patient - at- right time -with right-route of administration is delivered.3-5. Patient safety gets challenged whenever there is an error e.g. prescription errors like therapeutic duplication, incorrect strength/ frequency/ dosage form; administration errors e.g. incorrect dilution/ dose, wrong route of administration, wrong indent, and dispensing error. Prescription writing assessment is the most important technique to ensure patient safety by rational use of medicines.[6,7]

Aim :

The main aim of the study was poor or deficient practices to be identified and eliminated on continuous basis & to reduce patient harm by early detection or prevention of medication error in all the wards by daily prescription audit round.

METHODOLOGY:

During a six-month period, a clinical pharmacist was assigned to review medication order sheets and drug orders on daily basis at all wards as on random basis. When an error was detected, intervention was made at the time of audit and error was informed to respective department head, medical admin, and nursing incharge for further training to respective staff. After that we focused this project on following three Phases as follows,

Phase 1 (problem identification)

Clinical pharmacist was assigned to review Randomly medication order sheets and drug orders on daily basis at all wards following checklist Parameters to ensure that right drug was given to right patient,

A. Prescription auditing for improving patient care:

i. Patient information: Name, Age, Sex, Weight.
ii. Doctors Information: Name, Registration number, and Signature.
iii. Medicine Information: Prescription written in capital letters, route of administration, strength, frequency, time of administration, therapeutic duplication, and legibility of the prescription.
iv. Adjusting drug dose for Patient having High creatinine-clearance-level.
v. Drug-Drug interaction and spacing-out the dose depending on half-life of drugs.

B. Administration auditing for improving patient care:

i. Wrong Route
ii. Wrong Indent
iii. Wrong dose
iv. Wrong Dilution
v. Wrong Administration
vi. Physical checking actual Prescribed Medicine

A. Dispensing auditing for improving patient care:

i. Stock was In-adequate
ii. Near expiry product
iii. Dispensing Medicine to right patient.
iv. Incorrect labeling of medicine.
v. Lack of Good drug Knowledge

All above sub types of medication errors were classified according there severity of the

consequence it caused, using the definitions provided by Hartwig, Denger, and Schneider8. The severity of the Medication error could range from a potential error that did not reach the patient (level A), up to an error that resulted in patient death (level I). Prescription error % was determined as the ratio of the number of prescription errors to the total number of audited medication orders.

Phase 2 (problem elimination)

a. Assign members of the departments heads to review the error-prone area.
b. Streamline different medication errors Parameters through continuous Training sessions.
c. Standardization of practice with proper corrective and preventive actions.

Phase 3 (Assure sustainability)

To conduct regular Clinical Prescription audit rounds by clinical pharmacist ; and to establish checking and review system for to improve patient safety through this quality improvement Project.

RESULT & DISCUSSION:

Over Twenty Three thousand prescriptions were audited by Clinical Pharmacist from April 2022 to Nov 2023. Errors in audit findings are classified as per NCC MERP (National Coordinating Council for Medication Error Reporting and Prevention). Errors are categorised as prescription, administration, and dispensing errors. Improvement observed due to daily audits, and we could improve in overall Medication Errors from 9.07% to 3.39%.

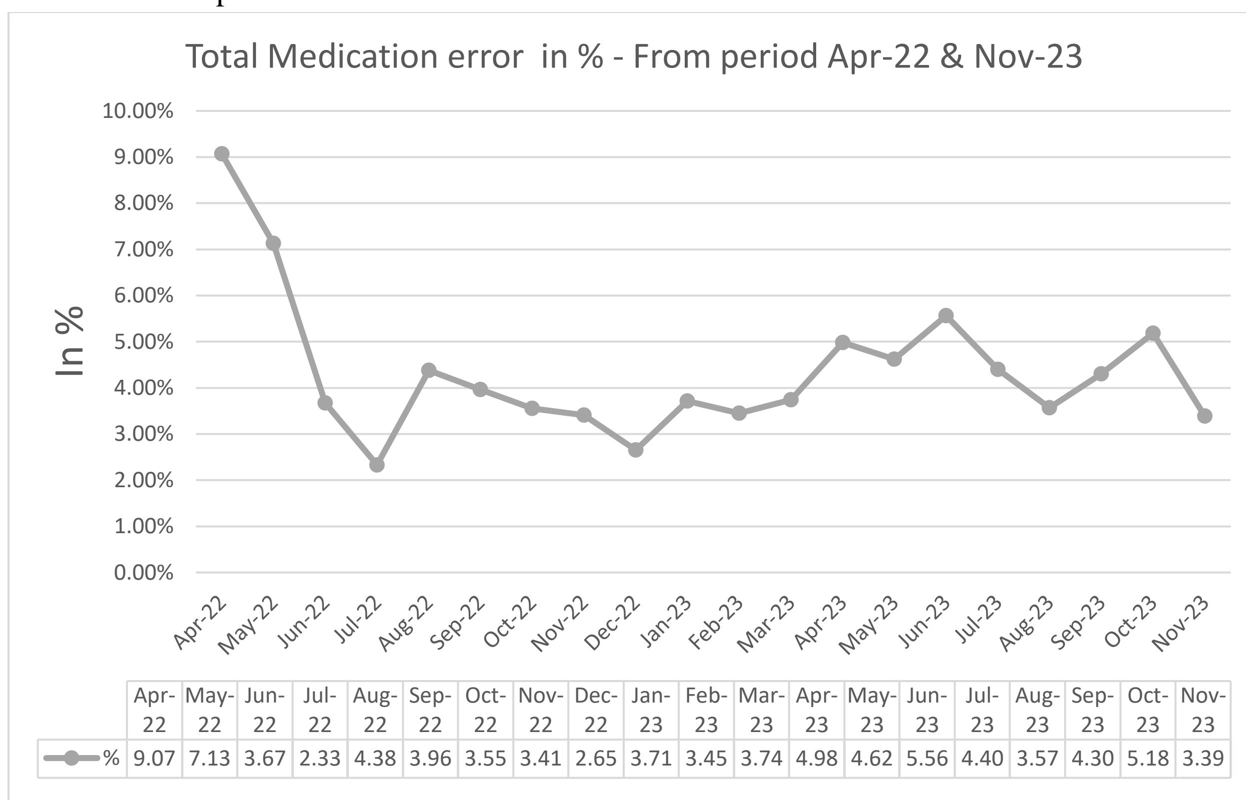

Fig.1- Graph Overall Medication error

Fig.2 report concluded that Prescription Medication Errors were improved by 4.96% to 2.78%. For Quality improvement project we started checking patient final discharge paper in that most common root cause of error was Incorrect strength of medicines & incorrect order of medicines. Medical admin team informed to all RMO Doctor to strictly follow the safe practices at the time of prescribing medicine. For further

improvement continues training session is going on regularly basis.

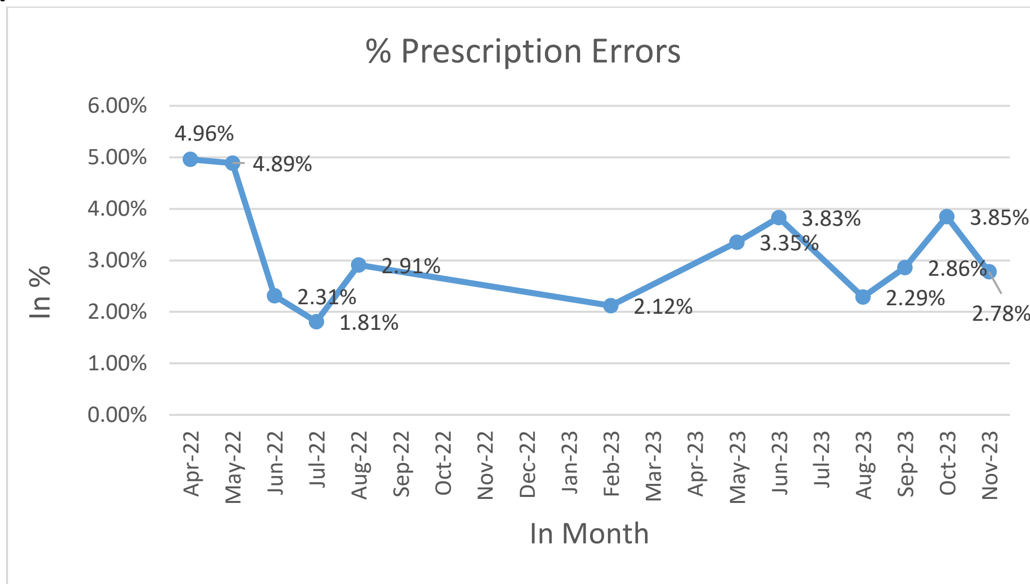

Fig.2- Graph Prescription Medication error

Fig.3 mentioned report concluded that Administration Medication Errors were Improved by 4.10% to 0.5%. For Quality improvement project we started physically checking medicine box with actual prescribed medicines. In that we find out Incorrect indent and incorrect administration of medicines. Also find out after administration sister forget to sign at patient fresh order sheet. Respective ward head Nursing in charges informed to all sisters to strictly follow the 7-Rights of administration of medicines. For further improvement continues training session is going on regularly basis.

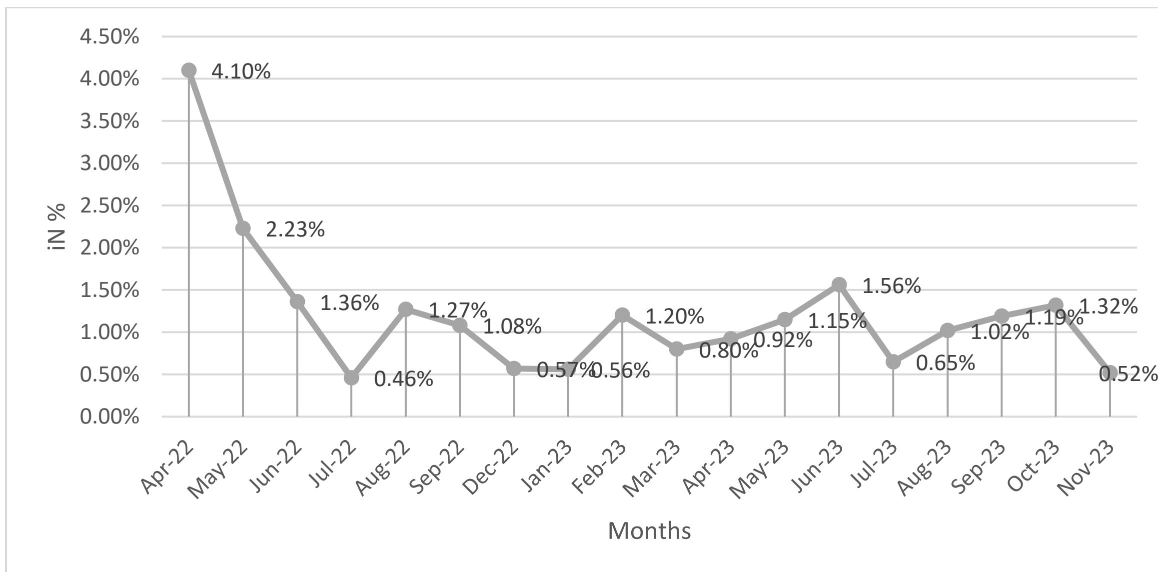

Fig.3- Graph Administration Medication error.

In Defined parameters we mainly found Medication errors root cause because of Incorrect drug order , strength of medicines not mentioned properly , wrong indent & incorrect administration of medicines. In this Study overall Medication Errors improved from 9.07% to 3.39%. Prescription error declined from 4.96% to 2.78%, Administration error declined from 4.10% to

0.5%. Dispensing errors were improved from 0.32% to 0.08 %. Corrective & preventive actions Done on same day of error observed With each medication error, the clinical pharmacist inform the nursing incharge, RMO, Consultant and Medical Admin, HOD Pharmacy. Numerous studies have found that clinical pharmacists can improve patient safety by rational Prescription audit.(9-20)

CONCLUSION:

The improvement is seen in prescribing, administration due to audits, measurement and continuous sensitization and communication. We could achieve our Project objective. Daily prescription audit helps in early detection of prescription errors, administration error and dispensing error, therefore there is continuous improvement in prescribing, administration and dispensing pattern of medicine and it helps to improve patient safety during the treatment. Errors found during the prescription audit round, are to be taken in the right spirit, without playing blame game, for ultimate patient care. This kind of Quality improvement Projects has developed "Do-it-Right" attitude among all the healthcare professional working in Bhakti Vedanta hospital & Research Institute.

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