Medication Errors Are Major Public Health Issue Can Be Resolved by Proper Analysis of Prescription

Shubhangi Kadu*, Rakesh Kumar Gupta, Nadira Khan

Lecturer, NCRD's Sterling Institute of Pharmacy, Nerul, India.

Student. S.Y. D. Pharm, NCRD's Sterling Institute of Pharmacy, Nerul, India

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ABSTRACT

INTRODUCTION:- A Prescription is a written or electronic medical order issued by the licensed healthcare professional such as physician ,Dentist or Veterinary doctor to the pharmacist for dispensing of medication or medical devices to the patients .Currently medication error are major public health issue affecting people in India focusing on this issue for improvement is to address this critical issue. **OBJECTIVE: -** The review is aimed to get readability with comprehensiveness of prescription received at the community hospital and hospital pharmacies. **MATERIALS AND METHODS: -** In this review, we have taken data from some articles to find observational cross sectional studies. These prescription were convened from different hospital and clinics with other healthcare professional. The prescription were analyzed for its Legality ,Completeness and Legibility such as physician information along with information of the Prescribed medicine which include its potency, refill information, specific dose, route of administration ,Instruction on how to use, date of consultation. **RESULT: -** By scrutinizing all result we found that most of the prescription were handwritten and very few were computerized and some prescription were lacking with complete information. **CONCLUSION: By addressing** medication error by implementing a comprehensive strategy that combines technology standardization, education, and continuous improvement, healthcare organizations can effectively reduce the occurrence of medication errors.

INTRODUCTION: -

A Prescription is a written or electronic medical order issued by the licensed healthcare professional such as a physician, Dentist or Veterinary doctor to the pharmacist for dispensing of medication or medical devices to the patients. According to WHO a legal prescription must contain all the information related to prescriber and patient such as name, address, degree, phone number, the signature of the prescriber and Name address age weight, gender of the patient. In many hospital, clinic drug prescription and their administration still rely on handwritten entries in medical chart. But recently due to pandemic the government has allowed AYUSH doctor to prescribe Allopathic medicine due to that the medication error get increase due to the lack of allopathic medicine information. There are two types of prescription error such as omission error and commission error where omission error is the error related to missing of any drug details while the commission error means the drug detail which is provided is incorrect. A medication error is any preventable drug event that may cause or lead to inappropriate or irrational medication use which leads to patient harm. The core cause of medication error includes incorrect duration, preparation, strength, rate, timing, and dose of the drug therapy or expired product. Medication error can be made by doctors, pharmacists, nurses and patient also. Hence our review focused on assessing the clarity and thoroughness of prescriptions received at community pharmacies that cater to rural & suburban areas In India, the prescription has developed into a valuable, important linkage between the patient and prescriber mediated by a well-trained pharmacist. The data related to prescription analysis is very scarce in India, preferably on the aspects of legibility and accuracy. Prescription faults and errors are responsible for maximum number of medication errors which may lead to disagreeable adverse outcomes. a huge amount of mortality rate has been reported because of unintended medication errors. The enormous cost spent for treating medication errors are estimated to be above 3 billion USD per annum and most common reasons of iatrogenic injuries in hospitalization. The incidence of prescription errors differs between 39% and 74% of all medication errors in precise settings 1.

[2]In the United States, medication errors are estimated to affect 1.5 million patients every year. Moreover, 80,000 hospital admissions in the United Kingdom and for approximately 5% of hospital admissions in Spain was due to medication errors. Nearly half of the errors occur during the prescribing stage, and the main factors that lead to increased medication

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171

error are illegible and incomplete prescription orders. A study done by Winslow et al. concluded that 20.2% of prescription orders were illegible or readable with effort.

[3] Factors associated with prescribing errors include calculations of drug dose errors in decimal points, medications with similar names, medication dosage forms (controlled release vs. non-controlled release) and use of abbreviations. The pharmacist's misinterpretation of subtle clues, which might have prevented the errors. The most important target for improvement. A study done to screen drug prescriptions dispensed at a pharmacy in a tertiary care hospital for the essential elements of prescriptions and to analyse the trends in writing a prescription.

MATERIALS AND METHODS:-

A cross-sectional study was done on [1] [2] [3]. To review the completeness legibility and legality of the prescription received at community pharmacies, hospitals This study was conducted among community pharmacies situated in Anantapur town of Andhra Pradesh, India. This study protocol was approved by the IRB of Raghavendra Institute of Pharmaceutical Education and Research (RIPER/IRB/2014/18). The completeness of prescriptions was analyzed through the checklist of essential elements as per World Health Organization (WHO) standard guiding principle for prescription writing. [2] An analytical and cross-sectional study, with a quantitative approach, was conducted in six government-owned community chain pharmacies of Asmara, Eritrea. This is because there is comparably high availability and affordability of drugs in these pharmacies when compared to private community pharmacies like.[1]

i)   Sample size determination

ii)   Sampling design and allocation

iii) Data collection tool and technique

iv) Variable measurement

v)   Assessment procedure for legibility

vi) Data processing & statistical analysis

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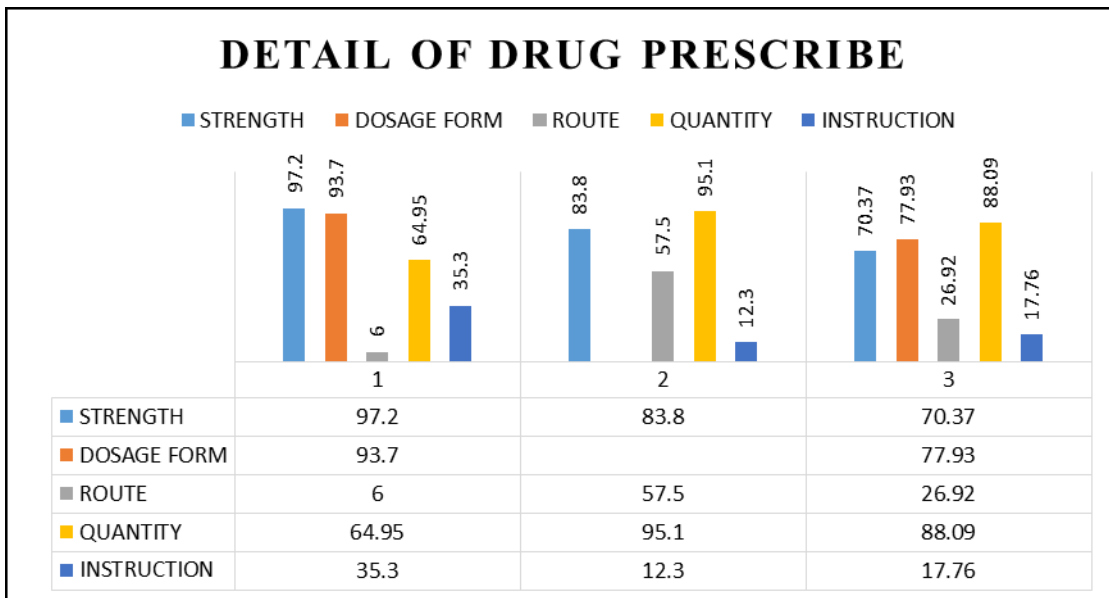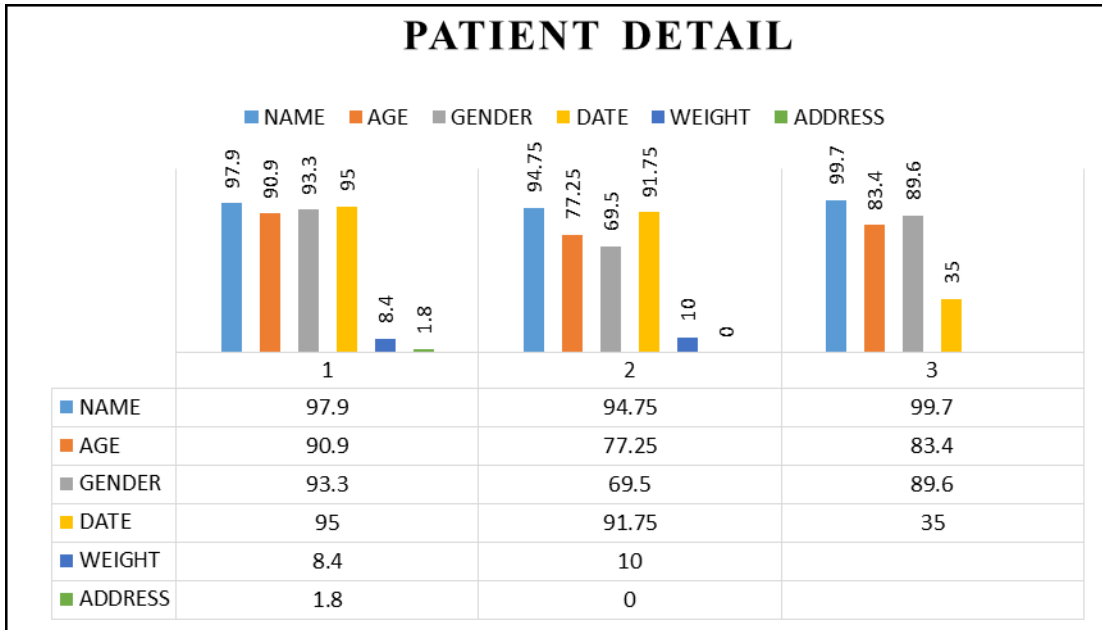
172

vii) Institutional Ethics Committee permission was obtained. The prescribing doctors were not aware of the study being done. To analyze the patterns of prescriptions a checklist of essential parameters according to WHO guidelines for prescription writing was made. Parameters included patient information, prescriber information, and Details of each medication prescribed.in this they also analysed the legibility of the physician's handwriting on the prescriptions on a subjective scale as Grade 1: Illegible, Grade 2: Barely legible, Grade 3: Moderately legible, 4: Clearly legible.[3]

RESULT:-

In total 285 prescriptions were analyzed 1095 medication were prescribed with and average of 3.8 medications per prescription all the prescriptions were handwritten.Most of all the prescribers give less preference to the generic names (97.9%). All the prescriptions were properly written with the frequency of administration and quantity of medications. In [2] total of 385 prescriptions were analysed of which 710 drugs were prescribed. On average, a randomly selected prescription had 78.63% completeness. Analysis of factors affecting legibility was performed using multinomial logistic regression for each independent variable. Generally, legibility was significantly associated with percentage completeness, a total number of drugs prescribed, and the number of drugs written in a brand name In[3] Total 400 prescriptions were analyzed on which total of 1092 drugs were prescribed with an average of 2.7 drugs per prescription (min 1 and max 7). It include Prescriber information, Patient information, Details of medication prescribed, legibility.[1]

DISCUSSION: -

After the review of [1] [2] [3]it is concluded that adequacy of patient information, detail of drug prescribed, and prescriber information such as

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173

PATIENT DETAIL

	1	2	3
NAME	97.9	94.75	99.7
AGE	90.9	77.25	83.4
GENDER	93.3	69.5	89.6
DATE	95	91.75	35
WEIGHT	8.4	10	
ADDRESS	1.8	0	

DETAIL OF DRUG PRESCRIBE

	1	2	3
STRENGTH	97.2	83.8	70.37
DOSAGE FORM	93.7		77.93
ROUTE	6	57.5	26.92
QUANTITY	64.95	95.1	88.09
INSTRUCTION	35.3	12.3	17.76

CONCLUSION: -

Prescribing errors can be seen as a significant contributor to medical mistakes that pose serious safety risks to patients. Our study findings highlight the urgent need to consistently address the clarity and comprehensiveness of prescriptions. Clinicians should be continually reminded of the crucial role that clear and complete prescriptions play in patient safety. Furthermore, this underscores the importance of transitioning from handwritten prescriptions to computerized electronic prescribing systems as a way to reduce medication errors. To reduce prescription writing errors, healthcare providers should adhere to national prescription

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174

guidelines. Additionally, regulatory authorities should enhance the enforcement of existing laws, and it is advisable to conduct regular awareness-raising programs.5, 6

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175

	Author Name – Shubhangi Kadu *Author Affiliation: NCRD's Sterling Institute of Pharmacy ,Nerul Navi Mumbai* Author Address/Institute Address : Plot no.93, Sector 19, Nerul (E),400706
	Author Name: Rakesh kumar Gupta Author Affiliation: NCRD's Sterling Institute of Pharmacy ,Nerul Navi Mumbai Author Address/Institute Address: Plot no.93, Sector 19, Nerul (E),400706
	Author Name: Nadira Khan Author Affiliation: NCRD's Sterling Institute of Pharmacy ,Nerul Navi Mumbai Author Address/Institute Address : Plot no.93, Sector 19, Nerul (E),400706

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176