

# A study of Pharmacy of a Super Specialty Hospital with a View to Reduce the Prescription Errors

Research in pharmacy practice  
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## **DECLARATION**

I hereby declare that the dissertation “A study of pharmacy of a superspeciality hospital with a view to reduce the prescription errors.” submitted for the publication in Journal of pharmacy practice is my original work.

I hereby declare that this report is purely my personal work in every form.

Place: Mumbai

Date: 30/3/2018

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Table 1. Table of Contents

### **ABBREVIATION**

- ME: Medication error
- ADE: Adverse drug events
- HCP: Healthcare professional
- NCCMERP: National coordinating council for medication error reporting and prevention.
- SSTA: Surveillance and target acquisition
- NABH: National Accreditation Board for healthcare providers and Hospitals
- MOM: Management of Medication

**ABSTRACT**

Preventable medical adverse events are a serious concern for healthcare. Medication errors form a significant part of these concerns and it is evident that these errors can have serious consequences such as death or disability.

Many medication errors are a consequence of information failure. Therefore, to prevent such adverse events, the associated information flow must be understood. This research used a systematic review methodology to conduct an analysis of medication error as a result of information failure. Its aim was to suggest solutions on reducing information induced medication errors.

Medication errors are common in general practice in hospitals. Both errors in the act of writing and prescribing faults due to erroneous medical decisions can result in harm to patients. Any step in the prescribing process can generate errors, slips, lapses or mistakes as unintended omission in transcription of drugs. Faults in dose selection, omitted transcription, and poor handwriting are common. An unsafe working environment, complex or undefined procedures, and inadequate communication between the healthcare professionals can contribute to prescription errors.

Recommendations given in the study aimed at reducing prescription errors. Review of prescriptions, which can be performed with the assistance of hospital pharmacists along with periodic audits in the department is helpful.

## I. INTRODUCTION

Medication misadventure can occur anywhere in the health care system from prescriber to dispenser to administration and finally to patient use, the simple truth is that many errors are preventable. According to studies cited in the institute of Medicine report, “to Err is Human; Building a Safer Health System” 44,000 to 98,000 people die each year as a result of medical errors.

The subject of medication errors has received more national attention recently than any other time, thanks to attention drawn to the subject by physicians. Pharmacists have a long history of conducting research on medication errors, starting 40 years ago with a study that demonstrated errors are a much bigger problem than anyone realized. Barker and McConnell compared the effectiveness of incident reports and voluntary reports to direct observation of nurses as error detection methods.

Thirty-six errors were documented by incident reports during the year studied. By comparison, two weeks’ worth of data collected by direct observation when extrapolated over the same one-year period indicated that 51,200 errors may have occurred (including 600 wrong time errors). This figure is 1,422 times the number identified by incident reports. Other studies have confirmed the difference between the two methods.

### A. Definitions

Many different definitions and classification systems have been used for dispensing errors. However, many of these are very general, referring to any medication error linked to the pharmacy department or any deviation from a ‘perfect’ prescription, without defining what ‘perfect’ means in this context<sup>24</sup>. Other studies do not give a definition. We decided to use a definition developed for use in the USA as this was the most comprehensive, and then adapt this for international use. Dispensing errors were further classified into content errors, labelling errors and documentation errors, with further classification based on those used previously.

A draft definition and classification system was sent to eight UK experts in risk or medication errors; these experts were asked to give suggestions about how they could be improved. Responses were received from seven respondents; one minor change was suggested and subsequently incorporated into the definition.

A dispensing error was therefore defined as a deviation from an interpretable written prescription or medication order, including written modifications to the prescription made by a pharmacist following contact with the prescriber or in compliance with pharmacy policy.

Any deviation from professional or regulatory references, or guidelines affecting dispensing procedures, was also considered a dispensing error.

### B. Definition of prescription errors

The following definition for ‘prescription error’ was used during the study: “A clinically meaningful prescription error occurs when, as a result of a prescribing decision or prescription writing process, there is an unintentional significant reduction in the probability of treatment being timely and effective or increase in the risk of harm when compared with generally accepted practice.

### C. Classification of prescription errors

The errors were categorized as errors in prescription writing and errors of commission. Errors in prescription writing were further categorized as:

- Errors of omission (when rate or dose, concentration, dosage form, duration, frequency, route omitted and when prescriber signature missing)
- Abbreviated and non-standard drug names
- Error prone abbreviations, symbols and dose designations
- Prescribing one tablet of drug when available in more than one strength of tablet
- Writing of incorrect dosage of drug (In terms of mass unit)
- While error in commission included: ignoring drug-drug interaction, potentially inappropriate medication use. Inappropriate medications were identified using Beers' 1997 explicit criteria. The Drug-Drug interactions were checked using Medscape drug interaction checker

#### *D. General prescription pattern*

The following age categories were used as in study by Straand *et al* [8]; the younger elderly: 65-74 years and older elderly: 75+ years. Disease diagnosed and drugs prescribed to each patient were studied. Following WHO prescribing indicators were assessed to evaluate the drug prescribing pattern:

- Average number of drugs per prescription.
- Percentage of drugs prescribed by generic name.
- Percentage of prescriptions with antimicrobial(s) prescribed.
- Percentage of prescriptions with injection(s) prescribed.
- Percentage of drugs prescribed from essential drug list.

## **II. OBJECTIVES**

The objectives of the study conducted in an superspeciality hospital to investigate the number of prescription errors is as follows

- To reduce the number of prescription-related errors in compare to standard needs.
- To distinguish the number of errors according to each cancer DMG.
- Emphasize the importance of writing correct prescription related errors.
- To validate the narcotic prescriptions in accordance to legal compliance.
- To provide training to the staff regarding the standard protocol to be followed in prescription writing.

## **III. PROBLEM STATEMENT**

Before the beginning of the study there were many complains reported to the medical service department regarding the medication errors that were happening from the OPD or IPD department prescriptions that were received in the pharmacy.

The pharmacist specifically mentioned that the duration and dosage of drugs were not mentioned on the prescription which led patients confused and consumed more time at the dispensary which also caused trouble to the pharmacist. There were also other issues like sending incomplete narcotic prescriptions, names and registration number of doctors were not mentioned on the prescription. But these errors were minor in compare to that of the one mentioned above.

Hence in order to analyse the situation study was conducted in a pharmacy department of general ward as the major junk of prescription error complains was lodged from the general ward dispensary.

#### IV. RESEARCH METHODOLOGY

The study was conducted in two parts. The first focused on counting and classifying the errors identified at the final check stage, that is the dispensary in this study. Staff remained anonymous for this part of the study, which we hoped would minimise biased reporting. The second part concerned interviewing the staff involved, to explore their causes.

For this part of the study it was decided to focus only on dispensing errors identified within the pharmacy department. This was for two reasons. First, interviewing staff about errors that did not reach the patient was considered less threatening to those involved. Second, there may be considerable time delays between dispensing of medication and reporting of an error identified outside the department, which may make it difficult both to identify the staff involved and for them to recall the events surrounding the error. This model of human error has been used to explore the causes of errors in other health care environments and has more recently been applied to prescribing errors.

##### A. Research statement

- A study of pharmacy to reduce the prescriptions errors and to analyse the compliance of narcotic drugs with regards to legal requirements in super speciality cancer hospital located in south Mumbai.
- Research methodology.
- Observation based study.

##### B. Research tools

- Audit checklist
- Unstructured questionnaire
- Narcotic prescription file

##### C. Sources of data

- Primary source:
  - Observation of online as well as narcotic prescription in pharmacy using a checklist.
- Secondary source:
  - Retrospective data from narcotic prescription file
  - Newspapers and magazines
  - Journal papers.

##### D. Sampling method



- Stratified simple random sampling.

*E. Sample size:-* 500 patient prescriptions.

#### *F. Sample*

The study was conducted in the Mumbai. The targeted populations for this research are patients both in patients and OPD, doctors, nurses and pharmacists from all the parts of country visiting the hospital. This way, the review of the patients' charts could be performed as confidential as possible. Table 1 displays the geographical distribution of patients visiting the hospital.

#### *G. Inclusion Criteria*

All the inpatients and OPD patients were considered in the study with age group of 6 months to 90 years of age.

Zone	Male (n)	Female (n)	Total (n)
East	60	50	110
West	50	50	100
North	70	60	130
South	30	30	60
Central	44	56	100
Total	254	246	500

Table 2. Number of patients included in the study from India (occurrence of medication errors) by randomly picking patient charts

#### *H. Data Collection Procedure*

The randomly selected number of inpatients charts and out patients prescriptions forms were examined for period of five weeks.

Developed a data collection form capturing the type of medication, setting (outpatient vs inpatient), nature of the inconsistency in errors (drug dosage, administration time, schedule, days supplied, quantity, refills, or duration), and potentially predictive variables (representing instances in which communication errors may be more likely).

#### *I. Data Analysis Plan*

Data was entered into a Microsoft Excel database. A review of 500 records validated quality of data entry. Since the information retrieved from the patients charts and prescriptions were all open-ended and of varied characteristics, a statistical data analysis was done on excel and results were derived.

## V. LITERATURE REVIEW

### A. *British journal of haematology*

- *Medication errors*:- causes, prevention and reduction.
- *AUTHOR*:- Jonathan Allard, Jane Carthey.
- *ABSTRACT*:-

Medication mistakes have been evaluated to represent over a fourth of instances of ADEs. Such mistakes are characterized as any preventable occasion that may cause or prompt improper prescription utilize or patient damage while the medication is in the control of the medicinal services proficient, patient or buyer. All phases of the medication conveyance process i.e. endorsing deciphering, administering and organization) are helpless mistake.

### B. *Journal of oncology practice*

- Study of medication errors on a community hospital oncology ward.
- *AUTHOR*:- Clyde D (MD) and Julie Killebrew (MS)
- *ABSTRACT*:-

Prescription mistakes have been a noteworthy issue bringing about over the top patient dreariness and cost, particularly for disease chemotherapeutic specialists. Albeit some advance has been made, ME estimation techniques and counteractive action procedures stay imperative zones of research

### C. *Study on dispensing errors of inpatient prescriptions in a tertiary care hospital*

- *Author name*:- Sonal Sekhar M, Mini Anne Mathew, Suja Abraham, Asha Anand, ShaliniSasidharan
- Department of Pharmacy Practice, Amrita School of Pharmacy, Amrita Vishwa Vidya peetham University
- AIMS Health Sciences Campus, Kochi, Kerala, India
- *ABSTRACT*:-

Dispensing is an integral part of drug therapy and errors in it can cause some major complications. This study was aimed to assess the prevalence and determine the various types of dispensing errors occurring in inpatient prescriptions; also to create awareness among the pharmacy professionals about the various types of dispensing errors and thus help to minimize them. The present study is a prospective one which involves the inpatient prescriptions from a period of Dec 2007 to September 2008. The prescriptions of the patients admitted in the general wards were included in the study. The errors reported by the nurses, were documented by the pharmacist in a dispensing error report form. All the documented errors were collected, analysed and categorized into the various types. The frequency of occurrence of different types of dispensing errors was calculated. The incidence of dispensing errors was found to be 4.8% and the most frequent type of dispensing error was found to be wrong medication(43.1%).

### ➤ *How are medication errors defined? A systematic literature review of definitions and characteristics*

- *Author name*:- M. Lisby L.P. Nielsen B. Brock J. Mainz
- International Journal for Quality in Health Care
- *ABSTRACT*: -

Multispecialty has been suggested as a possible explanation for the variation in the prevalence of medication errors. So far, few empirical studies have challenged this assertion. The objective of this review was, therefore, to describe the extent and characteristics of medication error definitions in hospitals and to consider the consequences for measuring the prevalence of medication error.

#### A. *A Systematic Review on Medication Errors*

- *Author:-* Karthikeyan M, Balasubramanian T, Mohammed Ibrahim Khaleel, Muhammed Sahl and Rashifa P Department of Pharmacology, Al Shifa College of Pharmacy, Perinthalmanna, Kerala, India
- *ABSTRACT:-*  
Prescription Mistakes (MEs) are a typical reason for iatrogenic antagonistic occasions. An orderly survey of MEs in endorsing, interpreting, apportioning, organization and documentation in grown-ups and kids was finished. We incorporated a wide range of concentrates that revealed the rate of solution blunders or recognized the reasons for MEs, either in grown-ups or kids. All human services experts have an obligation in recognizing contributing components to pharmaceutical mistakes and to utilize that data to additionally lessen their event. Creating nations direly need to acquaint proficient projects with enhance endorsing aptitudes and learning of prescribers, and to urge medical caretakers to enhance their nature of medication organization.

#### B. *Cross-sectional study of prescribing errors in patients admitted to nine hospitals across North West England*

- *Author:-* Kay Seden, Jamie J Kirkhan, Tom Kennedy, Michael Lloyd, Sally James, Aine Mcmanus, Andrew Ritchings, Jennifer Simpson, Dave Thornton, Andrea Gill, Carolyn Coleman.
- *Abstract:-* To evaluate the prevalence, type and severity of prescribing errors observed between grades of prescriber, ward area, admission or discharge and type of medicine prescribed

#### C. *Causes of prescribing errors in hospital inpatients: a prospective study*

- *Author:-* Prof Bryony Dean, Phd Mike Schachter, MRCP, Prof Charles Vincent, PhD, Prof Nick Barber, PhD
- *Abstract:-* To prevent errors made during the prescription of drugs, we need to know why they arise. Theories of human error used to understand the causes of mistakes made in high-risk industries are being used in health-care. They have not, however, been applied to prescribing errors, which are a great cause of patient harm. Our aim was to use this approach to investigate the causes of such errors.

#### D. *The alarming reality of medication error: a patient case and review of Pennsylvania and National data*

- *Author:-* Brianna A. da Silva, MD\* and Mahesh Krishnamurthy, MD, FACP, SFHM
- *Abstract:-* Errors occurred at multiple care levels, including prescribing, initial pharmacy dispensation, hospitalization, and subsequent outpatient follow-up. This exemplifies the Swiss Cheese Model of how errors can occur within a system. Adverse drug events (ADEs) account for more than 3.5 million physician office visits and 1 million emergency department visits each year. It is believed that preventable medication errors impact more than 7 million patients and cost almost \$21 billion annually across all care settings. About 30% of hospitalized patients have at least one discrepancy on discharge medication reconciliation. Medication errors and ADEs are an underreported burden that adversely affects patients, providers, and the economy.

#### E. *Assessment of medication errors and adherence to WHO prescription writing guidelines in a tertiary care hospital*

- *Author:-* Dilnasheen sheikh, Uday Venkatmateti, Shamaprakash Kabekkodu, T Sanal
- *Abstract:-*

The target of the examination is to survey the pharmaceutical mistakes and adherence to WHO medicine composing rules in a tertiary care clinic. A planned observational examination was done for a time of 8 months from June 2015 to February 2016 at tertiary care healing center. At inpatient office customary diagram survey of patient case records was completed to evaluate the solution blunders. The watched prescription mistakes were surveyed for level of damage by utilizing NCCMERP record. The outpatient medicines were screened for adherence to WHO solution composing rules. Out of 200 patients, 40 patients created prescription mistakes. A large portion of the prescription blunders were seen in the age assemble over 61 years (40%). Greater part of the prescription blunders were seen with sedate class of anti-toxins 9 (22.5%) and bronchodilators 9 (22.5%). A large portion of the mistakes were under the NCCMERP file class C. Out of 545 outpatient medicines, 51 (9.37%) solutions did not have prescriber's name and the greater part of the remedies do not have prescriber's close to home contact number. Eighteen solutions did not have patient's name and 426 (78.2%) medicines did not have patient's age. The predominance of medicine mistakes in this examination was generally low (20%) with no lethal result. Oversight blunder was the most every now and again watched medicine mistakes 31 (77.5%). In the present examination, the patient's age was absent in 78.2% of the solutions and none of the medicines had patient's address and the medication names were not said by their non specific names.

#### *F. Evaluation of medication errors in tertiary care hospital in uttarakhand*

- *Abstract:-* Medication errors are serious problems in health care and can be a source of significant morbidity and mortality in the health care settings. Medication error is recognized as the eighth leading cause of death. **Objective:** The study was proposed to evaluate the prevalence and types of medication errors in IPD (In-patient department) at multispecialty teaching hospital of Dehradun (Uttarakhand). **Materials and method:** This cross sectional and prospective study was carried out on 250 patients admitted in different wards of hospital. **Result:** The results of the present study revealed that among the prescribing errors, complete instructions to the patients regarding the use and side effects of drugs were not mentioned in any prescription (100%). Other major prescribing errors were absence of weight of patients (100%), registration number of prescribers (100%), allergic specification (100%), poor handwriting (74.4%) and use of abbreviations (100%). Maximum errors while dispensing were, failure to educate the patient regarding the use of medication (90%) followed by substitution and short supply of medicines (48%). Maximum causes of errors as perceived by interviewing the nurses were when they are distracted by other patients, coworkers or events on the unit (74%) followed by confusion between two drugs with similar names (72%).

## VI. ANALYSIS OF STUDY POPULATION

The table below captures the general information about the characteristics of the population sampled for this study.

The in patients were selected randomly. These are the patients or patients relatives who were either inpatients or were visiting hospital on OPD basis and after consulting the doctor collected medicine from the hospital pharmacy.

All the patients visiting the hospital used to collect medicine from the hospital pharmacy itself as it was economical for the patients and there were various benefits given to below poverty line patients.

The type of data card of the patient was one of the demarcating factor to obtain information regarding the socioeconomic status of the patient.

The age and sex of the patient were recorded at the time of collecting the data for prescription errors.

From this larger group of 500 patients. Table 8 contains a summary of the 500 patients whose charts were selected for the study.

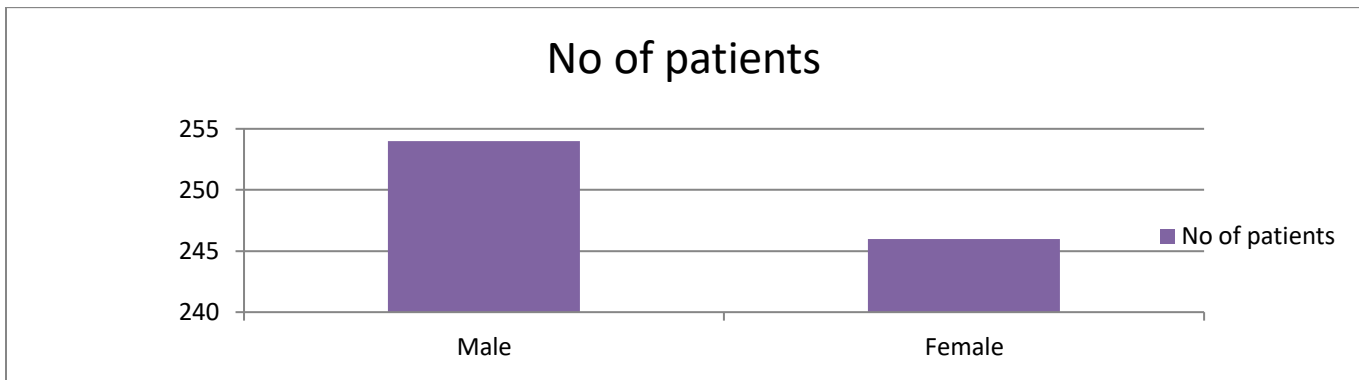


Fig. 1:- Number of patients

Table 3. Socio-demographic characteristic of Patients - Educational Level

Characteristics	Patients (n=500)	
	Frequency	Percentage (%)
Illiterate	48	9.6
Read and Write	92	18.4
Primary Schools	84	16.8
Secondary Schools	182	36.4
College and Above	94	18.8
Total	500	100

Table 4. Socio-demographic characteristic of Patients – Occupation

Characteristics	Patients (n=500)	
	Frequency	Percentage (%)
Student	101	20.2
Government employee	211	42.2
Self-employee	98	19.6
Employed by private business	35	7.0
Unemployed	55	11.0
Total	500	100

Table 5. Socio-demographic characteristic of Patients- Annual income

Characteristics	Patients (n=500)	
	Frequency	Percentage (%)
Less than 4500 Rs.	196	39.2
4500 to 10000 Rs.	204	40.8
10000 to 25000 Rs.	75	15.0
More than 25000 Rs.	25	5.0
Total	500	100

#### A. Educational level and occupation -patients

Further analysis of the patients based on their educational level showed that 9.6 % of the patients were illiterate, and 35.2 % of patients either read and write, or had primary level education and 55.2 were found to have secondary level, and college and above level of education. Analysis also showed that 20.2% of patients

were students and 68.8% of the patients were either government employees, employees of private business or self-employed. But the rest, 11.0 % were unemployed

### VII. RESULTS

The following section includes the analysis of the entire data collected during the study. All the prescriptions in the general wards were observed in the study. All the general prescriptions were E-prescriptions and narcotic prescriptions were either e-prescriptions in case of inpatients and handwritten on the hospital prescriptions. In 62% cases it was found that form of medication was not mentioned in the prescription. In 57.4% it was seen that dosage of medication was not mentioned on the prescription.

Table 6:- Errors Display

ERROR NAME	No of Errors
DOCTOR NAME	1
GENERIC NAME	1
DOSAGE OF MEDICATION	1
DURATION OF MEDICATION	287
FORM OF MEDICATION	310

Table 6. Displays the number of patients on each prescription, drugs, the number of times prescribed, number of signals and confirmed cases, the percentages of the confirmed cases to the total prescriptions, and the percentages of ADEs from the signals.

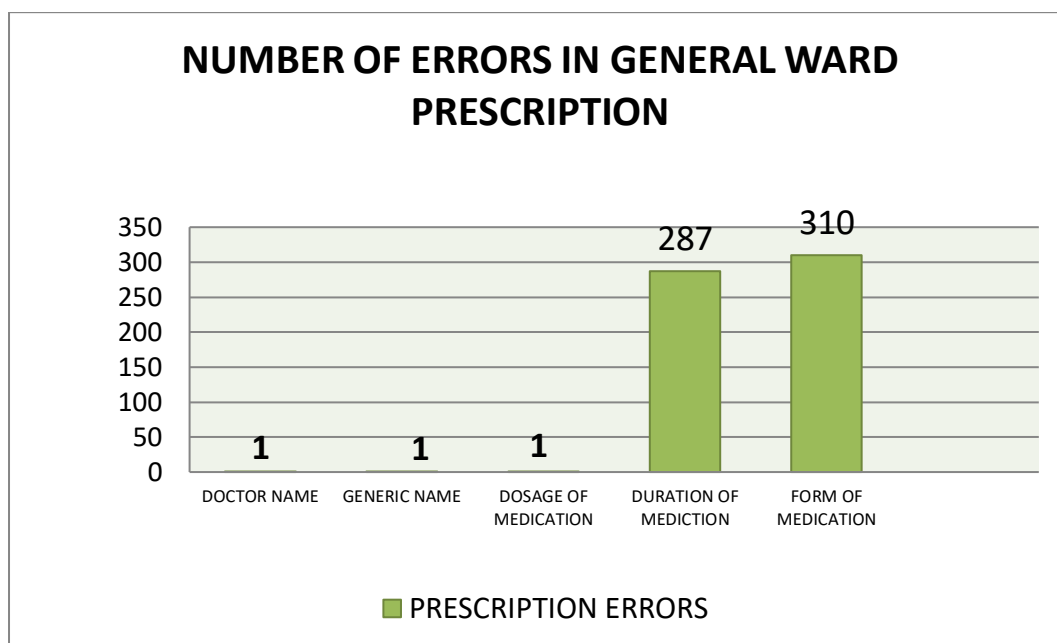


Fig 2:- Number of errors in General Ward

Fig 2 shows the number of prescription errors. In a hospital the most number of prescription errors is accounted by form of medication Doctors fail to write mode or route of medication administration. In around 210 cases it was observed that duration of medication was not mentioned in the prescription paper.

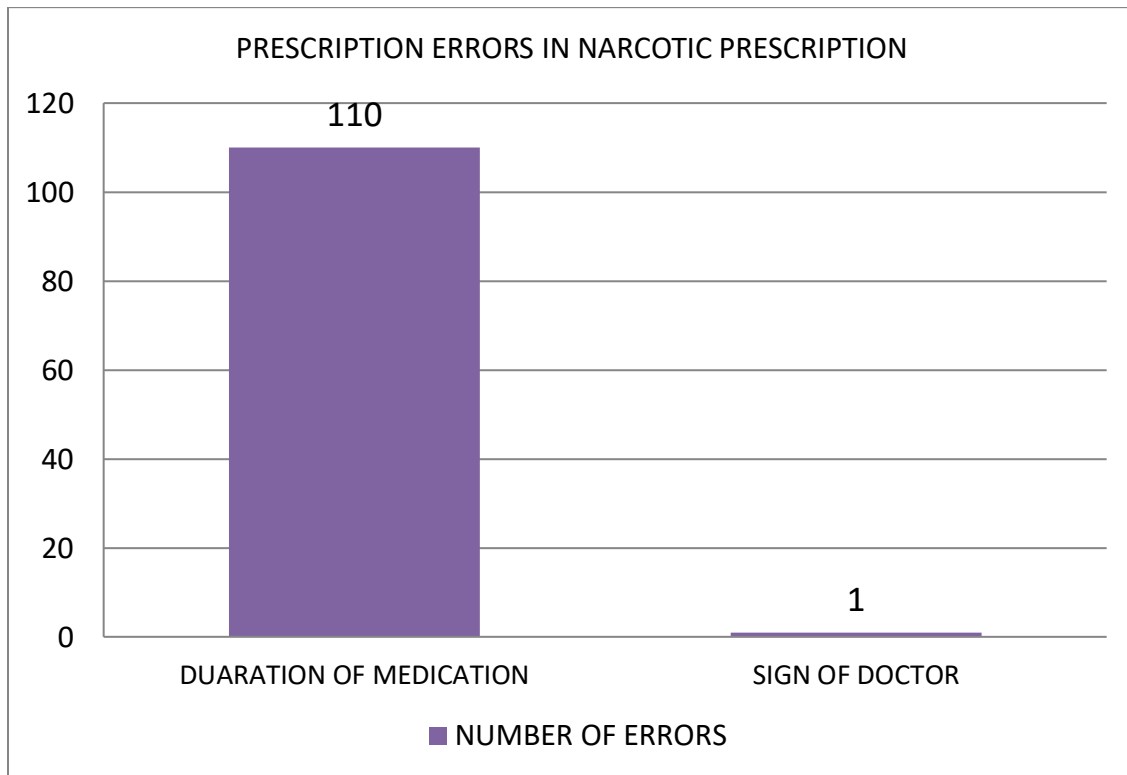


Fig 3:- Errors in Narcotic Prescriptions

Fig 3 conveys the number of prescription errors in narcotic prescriptions. From 110 cases of narcotic prescriptions observed it was found that in 110 cases the duration of medication was not mentioned in the prescription. And in one case the there was no sign of the prescribing doctor which can result in to medico legal consequences.



## VIII. HANDWRITTEN PRESCRIPTION

- From total sample size of 500, 14 Prescriptions were handwritten with following findings:

Table 7:- Types of Error

Type of error	Number of errors
Age of patient	14
Name of patient	1
Medicine name not written in capital	14
Duration	11

## IX. DISCUSSION

Human missteps, for example, slips and passes were because of tiredness, push, poor time and inability or absence of information. 12 of the mistakes were because of a direct inaccurate correspondence or absence of information. The 12 blunders that happened for the most part needed to do with absence of medicine history which brought about prescription mistakes inside the treatment point inside the clinical procedure. The greater part of mistakes that happened were preventable. It is obvious from the articles that were evaluated that proposals lessen the danger of clinical blunders are appeared.

All the general prescriptions were E-prescriptions and narcotic prescriptions were either e-prescriptions in case of inpatients and handwritten on the hospital prescriptions. In 62% cases it was found that form of medication was not mentioned in the prescription. In 57.4% it was seen that dosage of medication was not mentioned on the prescription. The error related to form of medication can end up delivering wrong form of medication from dispensary to patients. Absence of dosage of medication on prescription left patients confused as to how many times the medication is to be taken. Few patients enquired at the dispensary but most of them dint even enquire which can even result in to life threatening condition, because of over dosage of drug or Adverse drug reaction.

In a hospital the most number of prescription errors is accounted by form of medication Doctors fail to write mode or route of medication administration. In around 210 cases it was observed that duration of medication was not mentioned in the prescription paper. In case name of the prescribing Doctor was not mentioned which can lead to legal consequences.

During the study it was also observed that the name of the medications were mentioned by the prescribing Doctor that is the main Head Doctor and later that prescription from patient file was transferred in to e-prescription by assistant and was entered in to patients data card. And this is the process which is the key reason for occurrence of most of the prescription errors.

Legitimate marking of medications and appropriate understanding of patient information will also reduce the likelihood of information failure. Tiredness and stress can also be reduced in the clinical environment through support and policies on reducing long shift hours. Double looping and double checking of patient charts and patient information can identify any mistakes made. As evident there are multiple problems therefore multiple solutions are required. The Swiss cheese model is able to represent this. Each barrier that is implemented into the clinical process will reduce the likelihood of an adverse event occurring.

The study has shown a high tendency to omit necessary information (viz. date of starting a drug, signature of prescribing doctor, date of stoppage of drug) in the medical wards. Ideally, no information should be missed. A medication order is valid only if the medical officer enters all the required items. Any information that might be missed may result into occurrence of more serious error. Though the frequency of occurrence is low, one of the major causes of medication errors is the use of potentially dangerous abbreviations in prescribing 21. An abbreviation used by a prescriber may mean something quite different to the person interpreting the prescription. Although using abbreviations may seem to be a time saving convenience, use of abbreviations does not promote patient safety 22. The study highlights the need to pay attention to prescription writing.

Need to print solutions and the need to record the course, recurrence of organization, beginning and ceasing date of the medication ought to be thoroughly implemented. An efficient utilization of input together with the appropriation of organizations where spaces for remedy date, mark of the doctor and course of organization are more underscored would rearrange the prescriber's undertaking.

Ignoring drug-drug interaction can cause important injuries and clearly affect the process of treatment or even cause serious or fatal problems for the health of patient, thus evidencing the need of constant evaluation of these events in order to prevent them. The lack of hospital pharmacist in majority of hospitals of Nepal means many of drug interactions go unnoticed and might have led to innumerable harm and adverse reactions. Further research on the occurrence and consequences of drug interactions in both hospitalized and ambulatory patient shall shed a light on the dangerous implications of drug interactions.

Comparison criteria in the study is also is done with the help of NABH standards NABH has mentioned in the chapter of management of medication the standards for prescription writing. According to MOM 3: There should be documented procedure guide for prescription of medications.

- The organisation determines who can write orders.
  - Orders are written in a uniform location in the medical records.
  - Medication orders are clear, legible, dated, named and signed.
- Educational programmes for drug prescribers and nurses concerning drug therapy are urgently needed to avoid drug errors and to improve patient safety by clinical pharmacists.

## X. LIMITATIONS

- The study was conducted in an specific time period hence the errors happening before and after that period could not be recorded which resulted in to missing even of important data findings.
- Since the study was only conducted in general ward dispensary one in the delux wards were missed.

- At a time around 7 prescriptions were handled at various counters so it was not possible to audit of the data at the same point of time.
- The characteristics and prevalence recorded in the study might not reflect the overall occurrence of medication errors.

## **XI. RECOMMENDATION**

- Concerned staff ought to be educated about significance of entering term of prescription and issues related with it.
- Increase awareness of ME among healthcare professionals.
- Prescribers need to pay more attention to drug dosing
- Improve medication error reporting systems and policy among organization by removing barriers, clarifying the importance of reporting and encouraging healthcare professionals to report medication errors
- Clinical consequences of MEs should be assessed and evaluated.
- Conduct educational programmes by clinical pharmacists and clinical pharmacologists on drug therapy for Doctors and nurses.
- Carry out regular intensive educational and training programmes for undergraduate medical and paramedical students.
- Prescription before issuing ought to be investigated first to maintain a strategic distance from mistakes.
- Writing age of the patient on prescriptions ought to be made compulsory.
- Implement bar-coding for, for instance, prescriptions, blood, gadgets, and patients. In different enterprises, bar-coding has drastically lessened mistake rates, it is likely that bar-coding will have a noteworthy impact.
- Use current electronic frameworks to convey key bits of offbeat information

## **XII. CONCLUSION**

This study was aimed at finding out the occurrence of medication errors and the occurrence of risk factors for medication errors in the inpatient setting of the general hospitals in Mumbai, 500 patients charts were the population involved in the study. Most of the patients were not aware of their medication status. This is because there were huge number of patients in waiting the patients were directly entered in the system which used to get feed in data card of patients. Patients were generally not explained about the duration of medication nor were not entered in e-prescription which resulted in to confusion among the patients. The patients usually used to reach at pharmacy and then pharmacist used to inform them about the dosage or they had to go again to the doctors chamber for the same. This resulted in to great inconvenience to patients. Hence it can be concluded the prescriptions from the Doctors should be fully completed with all the details and then forwarded further.

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