

**To identify the main causes of Prescription Error in
the Inpatient Areas of Rabindranath Tagore
International Institute of Cardiac Sciences:
An Observational Study.**

INTRODUCTION

- Medication errors, broadly defined as any error in the prescribing, dispensing, or administration of a drug, irrespective of whether such errors lead to adverse consequences or not, are the single most preventable cause of patient Harm

- There are 2,000 deaths every year from unnecessary surgery
- 7,000 deaths from medication errors in hospitals
- 20,000 from other errors in hospitals
- 80,000 from infections in hospitals
- 106,000 deaths every year from non-error, adverse effects of medications.
- Nearly 98,000 people die annually, because of mistakes committed by medical professionals in hospitals

Source: Reddy L. K. V, A. G. Modi, B. Chaudhary , V. Modi, M. Patel Medication errors – A case study , 2010, Page 112, Vol:7, Journal 2

Sources of medication error

- Inaccurate recording and transcribing order.
- Confusion in LASA drugs
- Misidentification of patients.
- Incomplete delivery of drugs .
- Verification errors .
- Use of inadequate knowledge or inaccurate knowledge base.
- Time and performance pressure

CLASSIFICATION OF MEDICATION ERROR

Medication errors may also be classified according to where they occur in the medication use cycle, i.e. at the stage of prescribing, dispensing, or administration of a drug.

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Error in the Inpatient Areas of Rabindranath
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Prescribing medicines to patients is an integral part of medical care. It involves decision-making about the choice of medicines, its communication to pharmacist in the form of prescriptions for dispensing and finally, administration of medicines.

- Prescription errors are a potentially preventable source of harm to patients and are therefore an important target for improvement.
- The causes for prescription errors can vary from
 - ✓ Miscommunication between physician, patient, pharmacist and other paramedical staff
 - ✓ Confusion of look-alike sound alike (LASA),
 - ✓ lack of information of current trends & dosing
 - ✓ Inadequate awareness of the staff regarding new medicines, narcotics or high-alert medications.

Rationale

- Medication error especially prescription error is one of the most common problems in health care and can be the source of significant morbidity and mortality in the health care setting.
- In India, irrational use of drugs is common and this has led to antibiotic resistance, adverse drug reactions, and other drug related problems.

- Medication error is one of the critical aspects involved in patient safety and identified as one of the quality indicators for nursing and pharmacy.
- Prescription error mostly are under reported every time they occur
- The study will aware the staff about the prevalence of the errors, identify the main causes leading to the error

AIM

The aim of the study is to evaluate the prevalence of prescription errors and identify the main cause leading to prescription errors in RTIICS, Kolkata.

OBJECTIVES

- ❖ To measure the rate of prescription error for the study period
- ❖ To identify the causes leading to prescription error
- ❖ To develop the solutions to reduce and or to prevent prescription errors in the hospital under study.

METHODOLOGY

Study Design: It is a descriptive observational Study carried out in RTIICS, Kolkata.

Study Subject: Doctors' progress notes and medicine card

Sample size: 300 Medicine cards of inpatients of RTIICS, Kolkata

Sampling procedure- Purposive sampling method.

Study period-data collection period – 20th February to 20th May, 2016.

Data source- Case sheet of the inpatient who are admitted in hospital.

Inclusion criteria: Indoor patients of the hospital

Exclusion criteria: OPD and Emergency patients

DATA COLLECTION TOOL

Type of data: Primary and Secondary data was collected for the study.

A predesigned checklist is used for the study. The checklist is prepared with the help of the guidelines of Medical Council of India.

Instrument used for primary data collection is a Structured Checklist of different types parameters taken in consideration ,

- Complete documentation of medicine card
- Allergy documentation
- Frequency of drug well specified
- Dose/strength of drug
- Co-morbidities documented
- Generic Name of the prescribed medication
- legibility of the prescription
- Duration of medication / treatment
- Review of medication

The scoring pattern for the analysis used is
1 = Compliance, 0 = Non Compliance

Methods of data collection:

Review of medicine card,
Review of doctors' progress notes
Observations of drugs at patient's bed side

DATA ANALYSIS

A total of 300 prescriptions were Analyzed

A total of 1061 errors were found during the study.

To calculate the percentage of Prescription Error Rate (%), the following

Formulae has been used= Total Number of error observed * 100/ Total Opportunities for the occurrence of errors

$$\begin{aligned} & 1061 * 100 / 2700 \\ & = 39\% \end{aligned}$$

- General Ward:

140 prescription card was analysed

Total Error found was 496

Prescription Error Rate: $496/1260 * 100 = 42\%$

- Deluxe Ward:

99 Prescription card was analysed

Total Error found was 352

Prescription Error Rate: $=352/891 * 100 = 40\%$

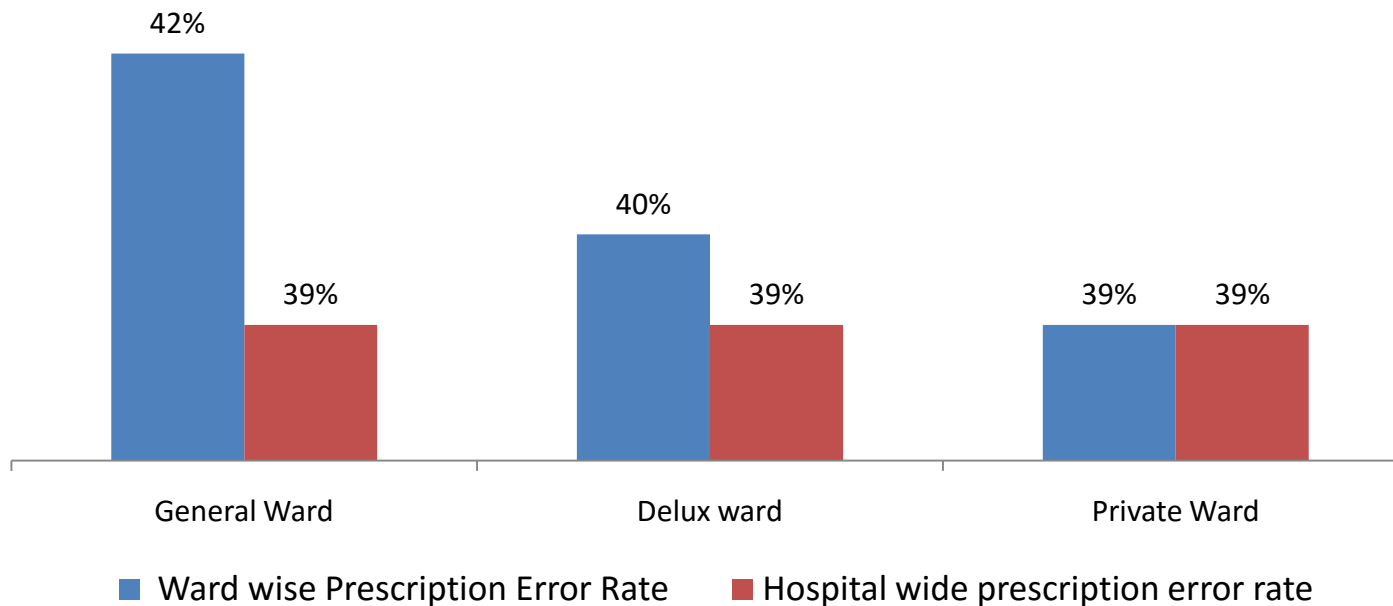
Private Ward:

61 prescriptions were analysed

A Total of 213 errors was found

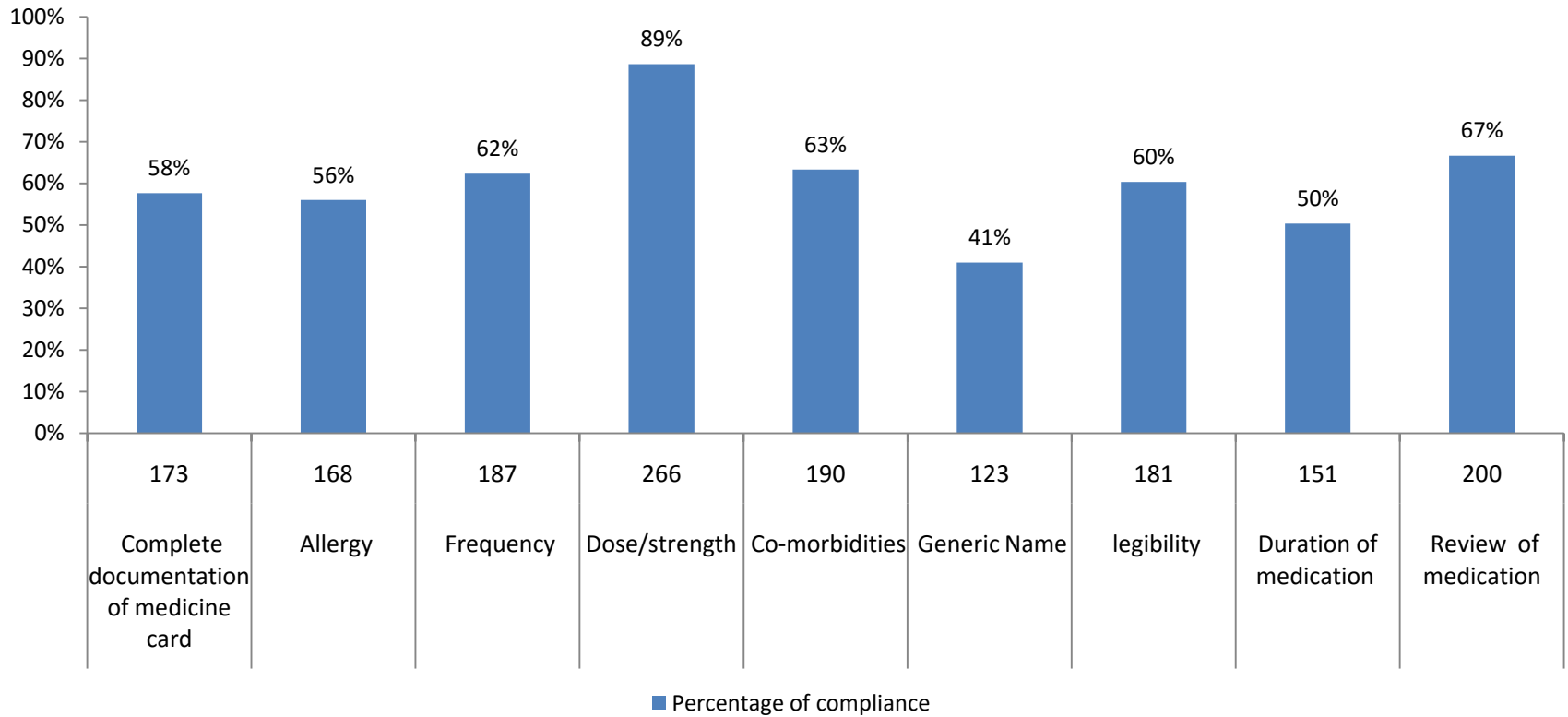
Prescription Error Rate

$$=213/549* 100 = 39\%$$



Graph 1: Ward wise Prescription error rate in comparison with hospital wide prescription error rate

Percentage of compliance



Graph2: Percentage of compliance with the parameters bases on MCI guidelines

Illustrations 1:

REGULAR PRESCRIPTION

Date: 20/3 Time: 10:00
Drug (approved name): IN- Cefazolin
Dose: 100 Route: i.v Duration: 14
Frequency: on
Dr. Name: son
Signature: [Signature]

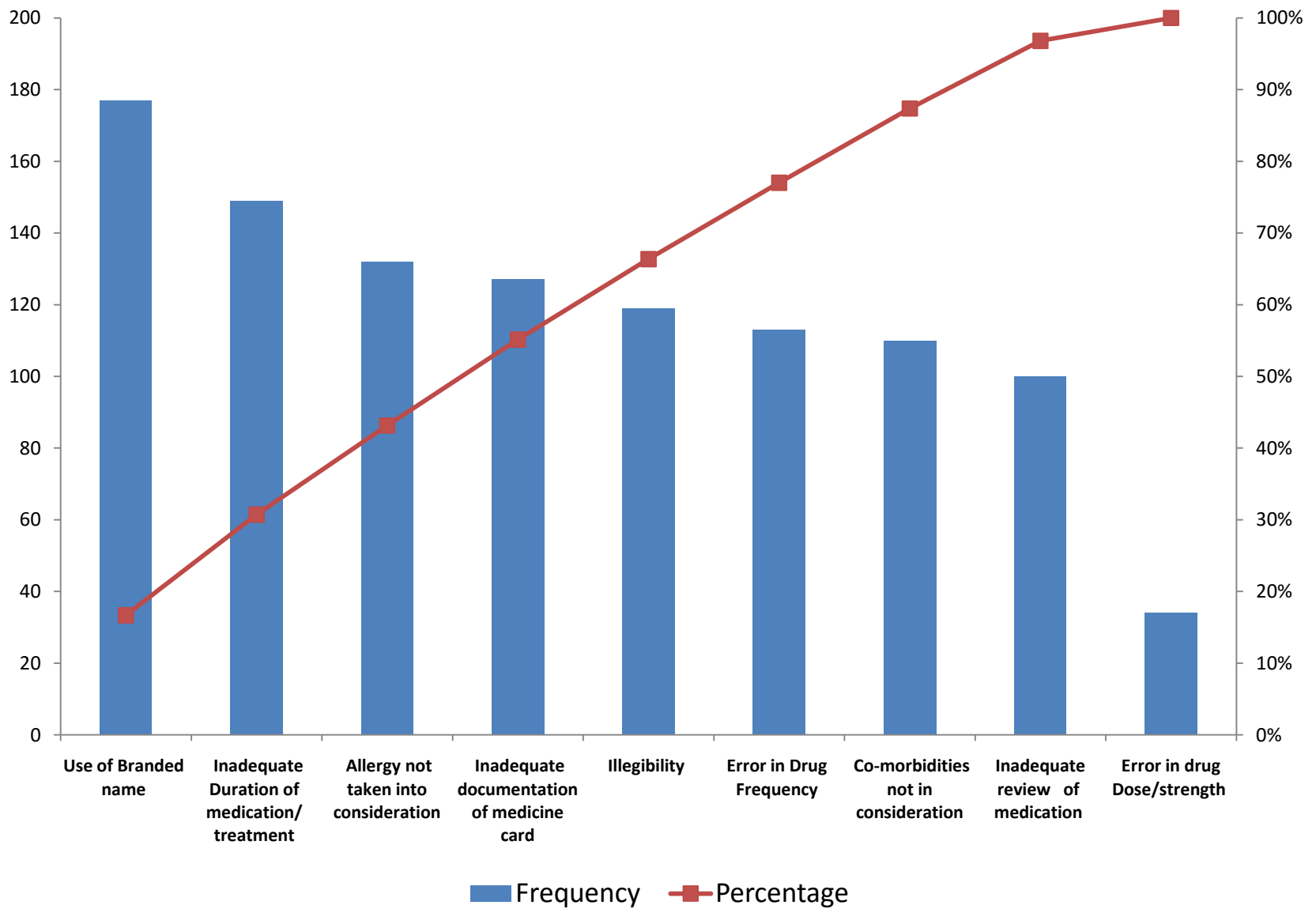
Date: 22/3 Time: 4:00
Drug (approved name): IN- Cefazolin
Dose: son Route: i Duration: 22
Frequency: on
Dr. Name: [Signature]
Signature: [Signature]

Date: 22/3 Time: 4:00
Drug (approved name): IN- Cefazolin
Dose: 100 Route: i.v Duration: 10
Frequency: on
Dr. Name: [Signature]
Signature: [Signature]

Date: 22/3 Time: 4:00
Drug (approved name): IN- Kadipora
Dose: 100ml Route: i.v Duration: 6
Frequency: on
Dr. Name: [Signature]
Signature: [Signature]

DATE: 23/3
TIME: 12
Staff Sign: [Signature] I/C Sign: [Signature]
DATE: 23/3
TIME: 18
Staff Sign: [Signature] I/C Sign: [Signature]

[illegible]



Recommendation

- Doctors should be sensitized continuously to avoid Prescription Error.
- Nurses to be empowered to raise more of prescription error
- Regular audits of medication errors done by multidisciplinary team
- Use of drugs in generic name and within the hospital formulary
- E- Prescription to reduce prescribing error from illegible handwriting.
- Use of CPOE system to eliminate the need for transcription of orders

Conclusion

- This study is a small attempt to represent prescription errors . From the study it is clear that prescription errors are highly prevalent for in RTIICS, Kolkata. Therefore the study necessities the large scale research on prescribing errors in different hospitals in order to get the actual scenario of prescription error.
- Besides, the study suggests the prescriber's to be more professional, cared, focused and concentrated during prescribing medicines.
- Furthermore, the study urges the inclusion of clinical and retail pharmacist to reduce the prescription error in RTIICS, Kolkata.

Check list

PRESCRIPTION/ TRANSCRIPTION ERROR	SI NO					
	UH ID					
	Ward					
	Complete documentation of medicine card					
	Allergy					
	Frequency					
	Dose/strength					
	Co-morbidities					
	Generic Name					
	legibility					
	Duration of medication					
	Review of medication					