

Prospective Observational Study “To Assess the Incidence of
Medication Errors in The Inpatient Department” of Thumbay
Hospital, Hyderabad

By

Poulami Paul

*Dissertation submitted for the partial fulfillment of the
MBA Hospital and Health Management*

Academic year, 2016-2018



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TO WHOM SO EVER MAY CONCERN

This is to certify that **Poulami Paul** student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at **Thumbay Hospital India Pvt. Ltd. Hyderabad** from **05 Feb, 2018 to 10 May, 2018**.

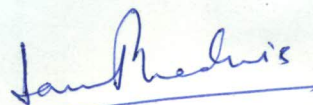
The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish her all success in all her future endeavors.



Dr Ashok Kaushik
Dean, Academics and Student Affairs
The IIHMR University, Jaipur



Dr. Sameer Phadnis
Associate Professor
The IIHMR University, Jaipur



తుంబే హాస్పిటల్ ఇండియ ప్రై. లి.
THUMBAY HOSPITAL INDIA PVT. LTD.



(CIN: U85100TG2015FTC101486)

Ref: THI-H- HRCA/EST /2018/MGT TR/001

January 17 , 2018

Ms. Poulami Paul
Rajasthan, India

Dear Ms. Poulami Paul

Sub: Provisional Appointment as Management Trainee at Thumbay Hospital India (P) LTD.

We are pleased to offer you a provisional appointment as **Management Trainee** at Thumbay Hospital India (P) LTD for a period of three months with effect from date of joining. You will be paid a stipend of INR 35,000/- (Thirty Five Thousand Rupees) per month. After successful completion of 3 months service and based on the performance appraisal, your appointment will be confirmed on a permanent basis subject to the approval of both parties concerned.

We look forward with pleasure to the prospect that you will join at Thumbay Hospital India (P) LTD. Kindly indicate your acceptance by signing this Letter and returning a copy of this to us immediately.

Thanking you,
For Thumbay Hospital India (P) LTD

THUMBAY MOIDEEN

President

I accept the appointment of as **Management Trainee** at Thumbay Hospital India (P) LTD

Ms. Poulami Paul
India.

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation **A PROSPECTIVE OBSERVATIONAL STUDY TO ASSES THE INCIDENCE OF MEDICATION ERROR IN IN-PATIENT DEPARTMENT AT THUMBAY HOSPITAL, HYDERABAD** , submitted by **POULAMI PAUL** Enrollment No- **IIHMR-U/01/2016-18/0462** under the supervision of **DR. SAMEER PHADNIS** for award of MBA in Hospital and Health of the University carried out during the period from **5TH FEBRUARY 2018** to **10TH MAY 2018** embodies my original work and has not formed the basis for the award of any degree, diploma associate-ship, fellowship, titles in this or any other institute or other similar institution of higher learning.


Signature

ACKNOWLEDGEMENT

With immense pleasure, I express my heart full gratitude to the Chairman of IIHMR Jaipur, Dr. S.D. Gupta, President Dr. P.R. Sodani and Dean Dr. Ashok Kaushik, and my mentor Dr. Sameer Phadnis for having given me this opportunity to undergo training.

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POULAMI PAUL

MBA- HM 21

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ACRONYMS/ABBREVIATIONS:

A&E- Accident and Emergency

DAMA-Discharge Against Medical Advice

HCA-Health Care Assistant

ALOS-Average length Of Stay

CMD-Chief Medical Director

COO-Chief Operating Officer

CGHS-Central Government Health Scheme

CSSD-Central Sterile and Supply Department

CT-Computerized Tomography

ECG-Electro Cardiogram

TMT-Trade Mill Test

HOD-Head of Department

HRD-Human Resources Department

ICU-Intensive Care Unit

MICU-Medical Intensive Care Unit

IPD- In-Patient Department

MRD-Medical Records Department

LASA – Look Alike and Sound Alike Drugs

ADR – Adverse Drug Reaction

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INTRODUCTION

Medication error has been defined as any preventable event that may cause or lead to inappropriate medication use or patient harm, while the medication is in the control of health-care professional, patient or consumer. The error may be of commission or omission, with potentially negative consequences for the patient, which would have been judged wrongly by skilled and knowledgeable peers at the time it occurred, independent of whether there were any negative consequences. Medication errors can be broadly considered to be of three types: prescribing errors, dispensing errors and administration errors .

DEFINITIONS:

THERAPEUTIC DUPLICATION:-

Therapeutic Duplication Is The Practice Of Prescribing Multiple Medications For The Same Indication Without A Clear Distinction Of When One Agent Should Be Administered Over Another .

NEAR MISS :-

A Near- Miss Is An Unplanned Event That Did Not Result In Injury, Illness, Or Damage But Had The Potential To Do So. Errors That Did Not Result In Patient Harm, But Could Have, Can Be Categorized As Near Misses .

MEDICATION ERROR :-

Medication Error Is Any Preventable Event That May Cause Or Lead To Inappropriate Medication Use Or Patient Harm While The Medication Is In The Control Of Health Care Professional, Patient, Or Consumer .

ADVERSE DRUG REACTION (ADR) :-

A Response To A Drug Which Is Noxious & Unintended & Which Occurs At Doses Normally Used In Man For Prophylaxis, Diagnosis Or Therapy Of Disease Or For The Modification Of Physiologic Function .

Therefore ADR = Adverse Event With A Causal Link To A Drug.

DRUG-DRUG INTERACTION:-

Drug-Drug Interaction Can Be Described as a Change in a Drug's Effect on the Body When the Drug Is Taken Together With the Second Drug. A Drug-Drug Interaction Can Delay, Decrease or Enhance Absorption Of Either Drug. This Can Decrease Or Increase Action Of Either Or Both Drugs Or Cause Adverse Effects .

DRUG-FOOD INTERACTION: -

Drug-Food Interaction Can Be Described As A Reaction Occurs When The Food You Eat Affects The Ingredients In A Medicine You Are Taking So The Medicine Cannot Work The Way It Should. Drug-Food Interactions Can Happen With Both Prescription And Over-The-Counter Medicines, Including Antacids, Vitamins And Iron Pills .

HIGH ALERT MEDICATIONS:-

Joint Commission On Accreditation Of Healthcare Organizations (Jcaho) Defines High Alert Medications As 'Medications Involved In A High Percentage Of Medication Errors Or Sentinel Events & Medications That Carry A High Risk For Abuse, Error, Or Other Adverse Outcomes .

LOOK ALIKE SOUND ALIKE DRUGS:-

Drugs Name That Look Similar In Print Or Sound Similar To Other Drugs When Pronounced Is Known As Lookalike Sound-Alike Drugs . Such Agents Carry A Significant Risk Of Being Administered Improperly To The Patients, Esp. When Exchanged For One Another .

INDEPENDENT DOUBLE CHECK SYSTEM:-

Independent Double Check Means A Second Independent Check Confirming The Medication Correctly & Reflects The Original Prescribed Medication Order .

HOSPITAL FORMULARY:-

A Continually Revised Compilation Of Approved Pharmaceuticals, Plus Important Ancillary Information, Which Reflects The Current Clinical Judgment Of The Institution's Medical Staff

REVIEW OF LITERATURE

Medication errors can be broadly considered to be of three types as described by Barber and colleagues (2003): prescribing errors, dispensing errors, and administration errors. Errors occur mostly at the stage of drug ordering, dosage errors, and errors involving the intravenous route are the most frequent'. What led to these studies are the observations that nearly half of all medication errors occur during the prescribing process with a subsequent cascade effect, which causes errors downstream in dispensing or administration (Thomsen and Schroeder 2004). 'The most common type of errors include giving the wrong drug or wrong dose, using the wrong route or failure to check patient's identity (Allan et al 1995: Ferner et al 1999) '.

Under reporting of medication error is a major challenge for all healthcare facilities and medication errors are often under reported if the provider perceives no harm to patient or the errors are not considered worthy of reporting (Allan and Barker 1990; Wilson et al 1998). Under-reporting of medication errors by nurses is due to fear of reaction of nurse manager and co-workers, fear of punishment, complex and low self-esteem, organizational factors, and potential termination' from job (Beardsley 1999; Uribe et al 2002). Ineffective reporting of medication errors occurred in all medication distribution categories: prescribing, transcribing, dispensing, and administration (Hirtz et al 2002) .

Medication of misadventure can occur anywhere can occur anywhere in the healthcare 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 Erris Hurnan; Building a Safer Health System 44,000 to 98,000 Americans 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 study that

demonstrated errors are a much bigger problem than anyone realized. Barker and Mc Connel 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 item errors). This figure is 1,422 times the number identified by incident reports. Other studies have confirmed the difference between the two methods .

Phillips J. et al did a retrospective analysis of medication errors between 1988 and found that the most common types of errors were from administering improper dose (40.9%); overdose (36.4%); wrong route of administration (9.5%). The investigators also found that the most common causes of errors were performance and knowledge deficits (44%) and communication errors (15.8%) .

Communication barriers can result in medication errors during every step within the medication administration process. In many cases, the physicians orally give medication orders, which can create errors due to the fact that many drug names sound alike and can be mispronounced. Doctors often write medication orders, and the nurses transcribe, by hand, the information. Messy and illegible handwriting, by both the physicians and nurses, can result in errors, such as a wrong patient, incorrect medication, incorrect dose, and/ or incorrect route. In addition, some hospitals use medication order forms that produce duplicate copies, and handwriting can become very illegible through several carbon copies .

Classification of medication errors should allow for better management of follow-up activities upon medication error detection. A simple classification of medication error is the following:

- Level 0 : no medication error occurred (potential errors would be classified here) .
- Level 1 : an error occurred that did not result in patient harm .
- Level 2 : an error occurred that resulted in the need for increased patient monitoring
but no change in vital signs and no patient harm .
- Level 3 : an error occurred that resulted in the need for increased patient monitoring
With a change in vital signs but no ultimate patient harm, or any error that
Resulted in the need for increased laboratory monitoring .
- Level 4: an error occurred that resulted in the need for treatment with another drug
Or an increased length of stay or that affected patient participation in
an
Investigational drug study .
- Level 5: an error occurred that resulted in patient harm .
- Level 6: an error occurred that resulted in patient death .

AIM

- TO REDUCE MEDICATION ERROR IN THE IN-PATIENT DAPARTMENT

OBJECTIVES

1. To assess the medication process of the hospital under study.
2. To study the medication error rate for the study period.
3. To identify the cause of medication error.
5. To suggest various measures to prevent medication error in further if any.

RESEARCH QUESTION

1. How many cases of medication error are present?
2. What are the reasons of medication error in in-patient department?

METHODOLOGY:

- **STUDY SETTING** – THUMBAY Hospital, HYDERABAD.
- **STUDY DURATION**- 3 months
- **STUDY DESIGN** – Prospective Observational Study
- **STUDY POPULATION** – Patients visiting the hospital.
- **SAMPLE SIZE** – 200
- **SAMPLING METHOD** – Non-probability convenience sampling
- **DATA COLLECTION** – Reviewing of Case Sheet and nursing staff
- **DATA ANALYSIS** – Using Microsoft Excel. Lean Sigma.

NATURE OF DATA :

Quantitative data collected through structured questionnaire checklist technique .

TYPE OF DATA:

1. Collection through direct observations .
2. Interacting with the nurses and the clinical pharmacist of this hospital .
3. Information obtained through organization records .
4. Information gathered through internet .

STUDY TECHNIQUE USED:

Structured Checklist is used. The scoring pattern is Yes and No.

STUDY TOOLS USED:

- 1- Structured Checklist.
- 2- Survey by visiting the inpatient wards.

PROBLEM STATEMENT

1. Lack of Knowledge Among Nurses And Pharmacists
2. Use of Short Names Instead Of Medicine Name.
3. Doctors Handwriting Is Illegible
4. Unavailability of Medicine
5. Lack of Staffs In Pharmacy And Nurses
6. Dose Error by Doctors.
7. Patient Identification Not Done

PROBLEM JUSTIFICATION

- Re-Occurrence Of Prescription Error Is A Negative Impact Of Hospital.
- Rise of Medication Error Results To Negligence, In-Adequate Knowledge, And Patient Harm Which Leads To Lack Of Good Service.

DMAIC

DEFINE PHASE

1. Lack of Knowledge among Nurses and Pharmacists regarding medication process.
2. Use of Short Names Instead Of Medicine Name by doctors.
3. Doctors Handwriting Is Illegible.
4. Unavailability Of Medicine in the pharmacy.
5. Lack of Staffs in Pharmacy and Nursing department.
6. Dose Error by Doctors.
7. Patient Identification Not Done properly by nurses.

PROCESS FLOW

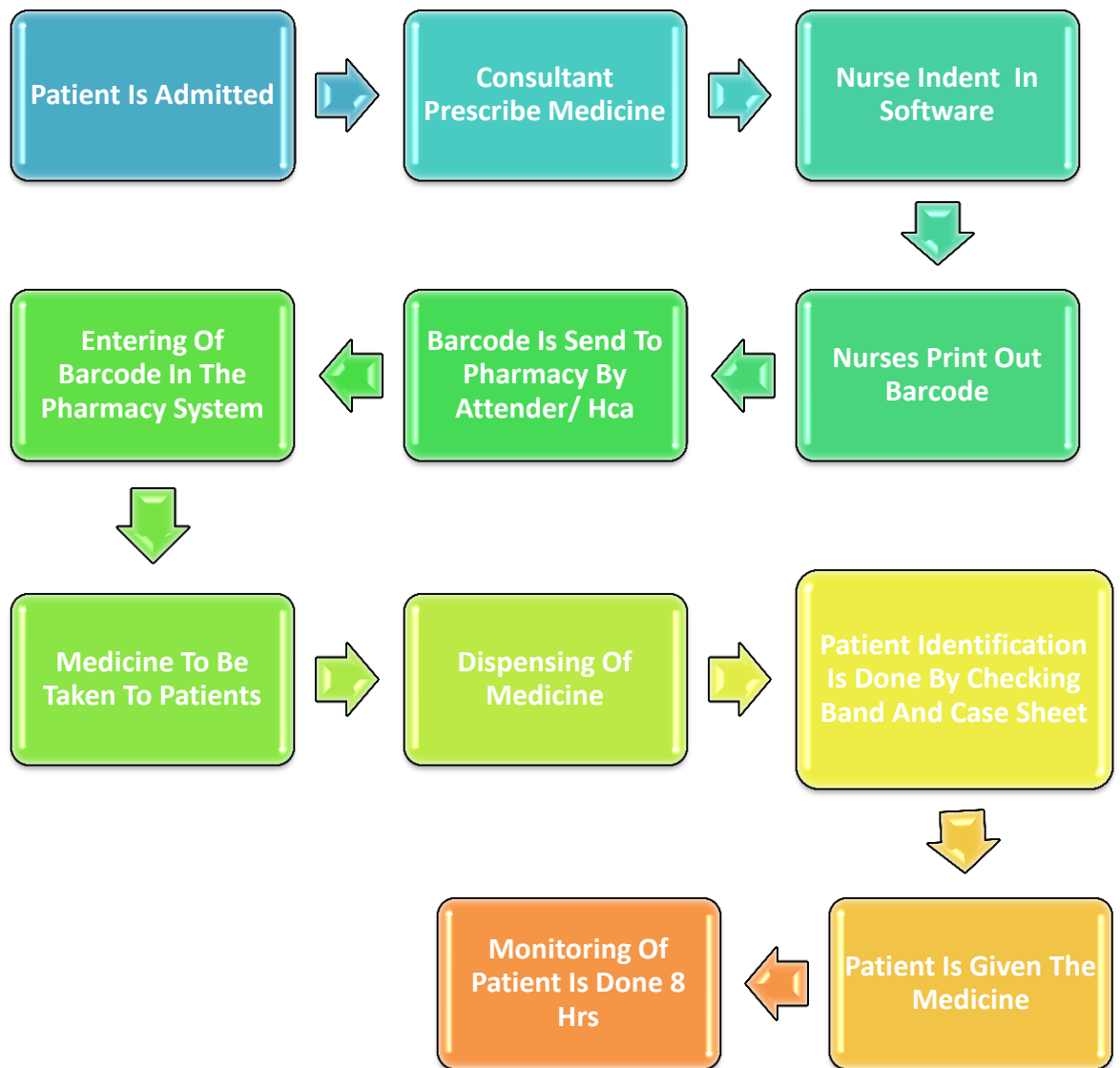


FIG 1 : PROCESS FLOW OF MEDICATION IN I.P.D

SIPOC

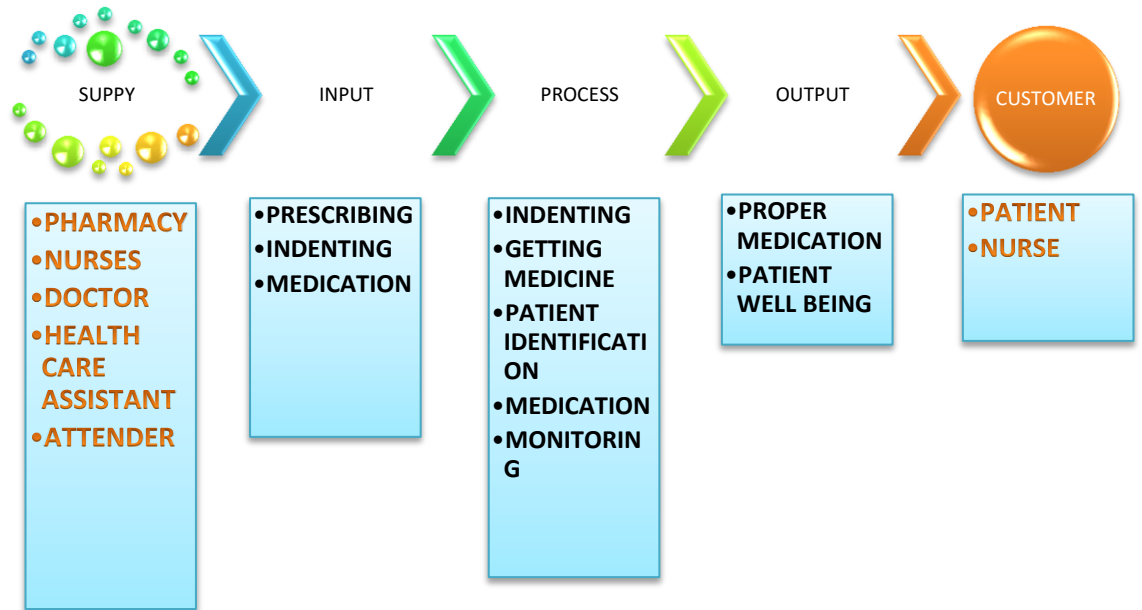


FIG 2 : SIPOC [SUPPLY-INPUT-PROCESS-OUTPUT-CUSTOMER]

PROJECT CHARTER

Project Title: A six sigma approach to reduce Medication Error In In-Patient Department			
PROBLEM STATEMENT			OPPORTUNITY STATEMENT
1. Lack Of Knowledge Among Nurses And Pharmacists 2. Use of Short Names Instead Of Medicine Name. 3. Doctors Handwriting Is Illegible 4. Unavailability Of Medicine 5. Lack Of Staffs In Pharmacy And Nurses 6. Dose Error By Doctors			➤ Problem in transcribing the prescription because of doctor's illegible hand-writing. ➤ Delay in medicine administration ➤ Loss of revenue. ➤ Patient harm ➤ Dissatisfied customer
Goal Statement			Project scope
Current Level	Goal/Target	Target Date	Process under improvement:
		5.05.17	Starts with: 1.03.18 Ends with :5.05.18
Project Plan			
Phase	Start	End	Remarks
Define	01.03.18	15.04.18	Completed within time
Measure	15.04.18	30.04.18	Completed within time
Analyse	30.04.18	05.05.18	Completed within time
Improve			Limitation of the study
Control			Limitation of the study

TABLE 1: PROJECT CHARTER

MEASUREMENT PHASE**DATA MEASUREMENT PLAN:**

Process/ Input	Data Source & Location	Sam ple Size	Who Will Collect The Data	Data Collection	How Will Be Data Collected	Other Data That Should Be Collected At The Same Time
Medication Error In- Patient Dept.	I.P.D Of Thumbay Hospital	200	POULAM I PAUL	01.02.18 To 30.04.18	Manual	None

TABLE 2: DATA MEASUREMENT PLAN

DATA COLLECTION PROCEDURE

UHID	Med Legible/ Complete/ Clear	Med In Caps	Start Date & Time	Dose	Omission
10686	N	y	Y	N	n
10644	y	y	y	n	n
10592	y	y	y	n	n
10701	y	y	y	n	Y not available
10705	y	y	y	n	n
10721	n	n	y	n	n
10725	n	y	y	n	n
10572	y	y	y	n	n
10697	y	n	y	n	n
10708	y	y	y	n	n
10676	y	n	y	n	n
10672	y	y	y	n	n
10649	n	n	y	n	n
10759	y	y	y	n	n
10786	y	n	y	n	n

TABLE 3 : DATA COLLECTION PROCEDURE

DATA MEASUREMENT CHARTS:

PARAMETERS	Med Legible/ Complete/ Clear
YES	184
NO	4
NO CHART	12
PARAMETERS	Med In Caps
YES	95
NO	93
NO CHART	12
PARAMETERS	Start Date & Time
YES	185
NO	3
NO CHART	12
PARAMETERS	Dose Error

OPPURTUNITIES	8		
DOCUMENTATION ERROR	37	UNITS	200
MEDICINE NOT IN CAPS	44	DEFECTS	99
DOSE ERROR	9	DPU	0.495
MEDICINE ILLEGIBLE	2	DPMO	12375000
OMISSION ERROR	3		
TIME ERROR	1		
FREQUENCY ERROR	1		
NURSES SIGN	2		

TABLE 4: DATA MEASUREMENT CHART

DATA SUMMERISATION

For Discrete (x)

Output indicator	No. of. units	No. of opportunities/unit	No of defects	DPMO	SIGMA LEVEL
X1	200	8	99	12375000	2.64

TABLE 5: DATA SUMMERISATION

ROOT CAUSE ANALYSIS

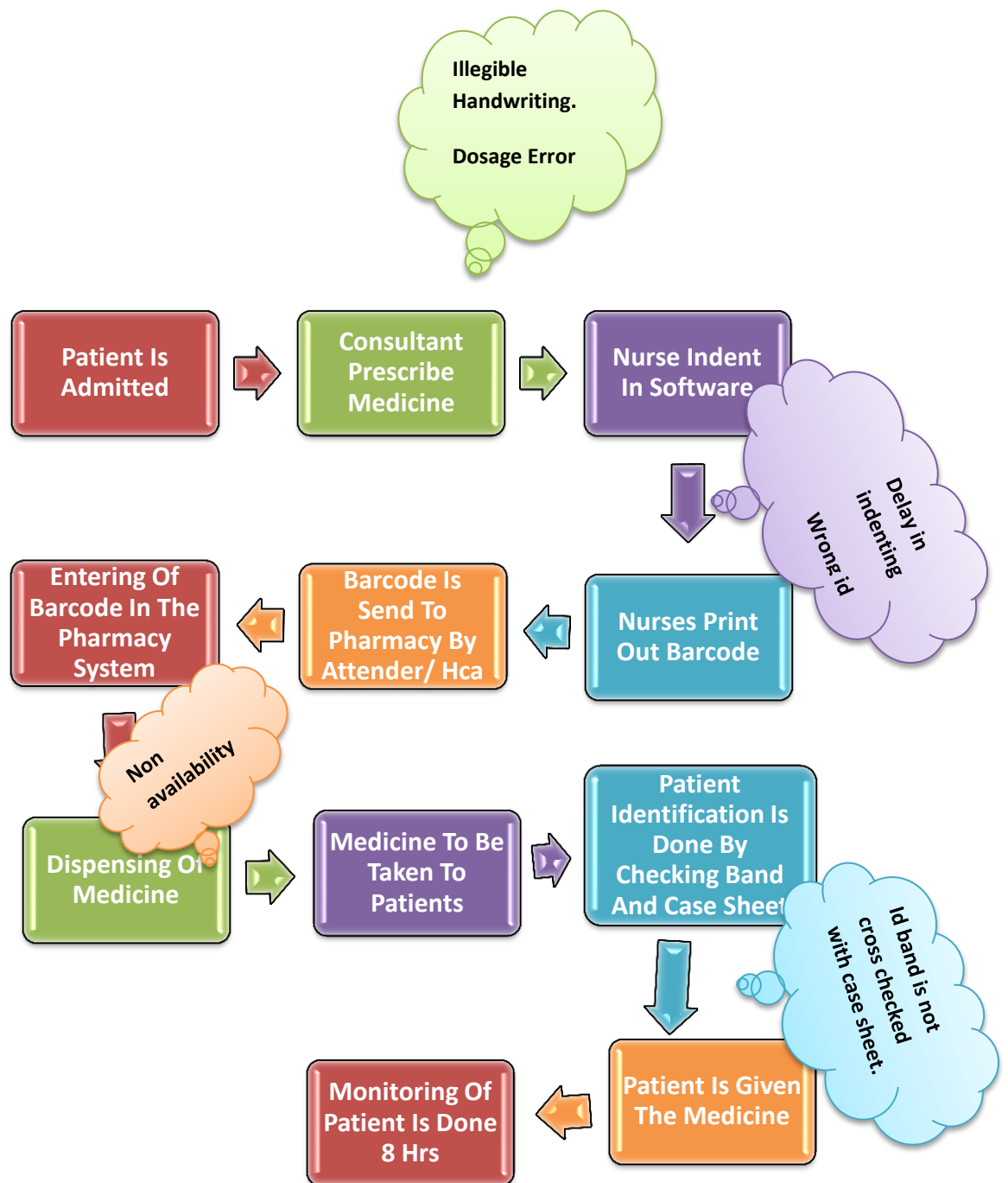


FIG 3 : ROOT CAUSE ANALYSIS

FISH BONE ANALYSIS

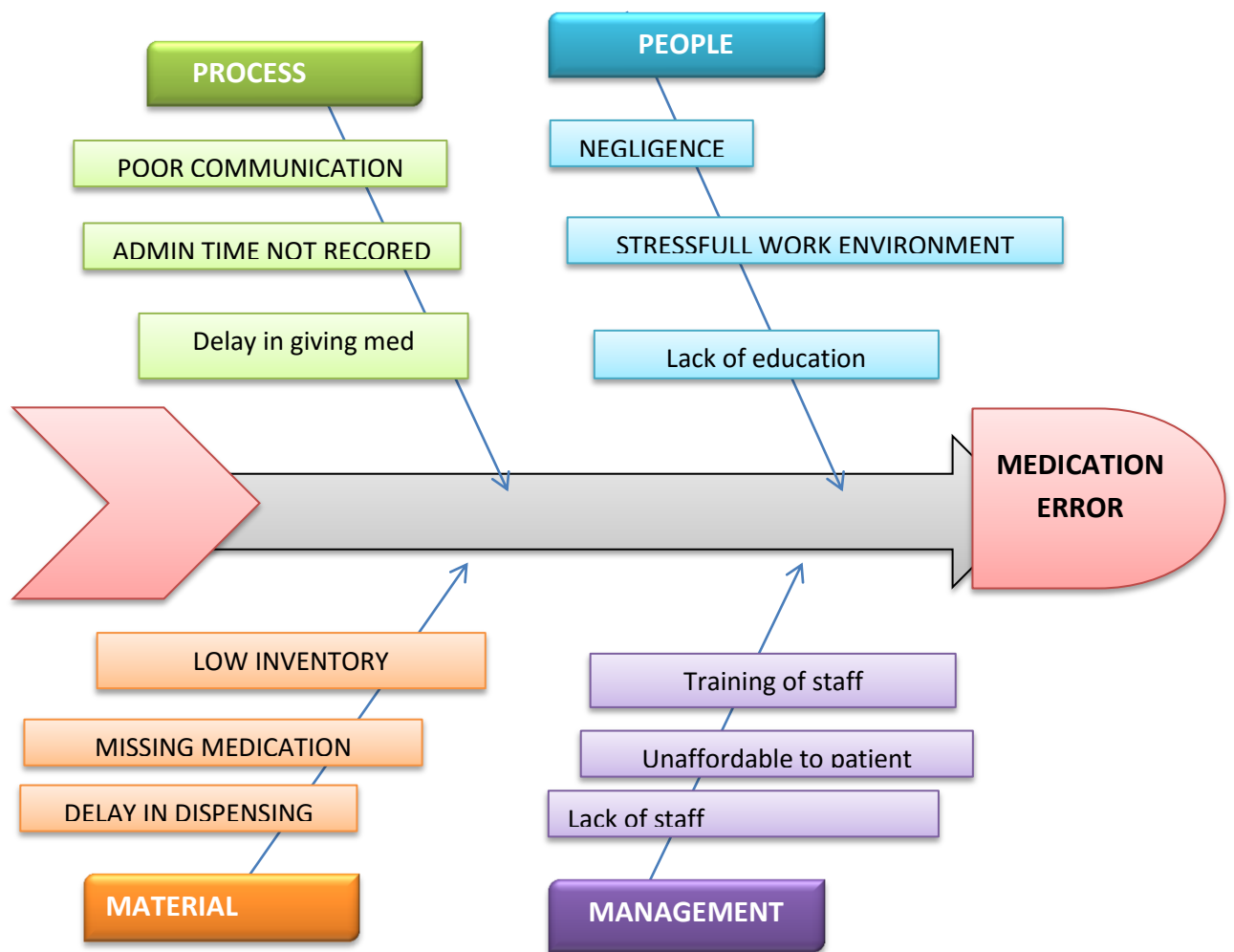


FIG 4: FISH BONE ANALYSIS

PROCESS WISE SYSTEM ERRORS

PROCESS	SYSTEM	PROBLEM IDENTIFIED
PRESCRIBING	Standard Order Sets On-Going Medication	Lack Of Awareness And Training Among Doctors
INDENTING	Computerized System Online Indenting With Barcode	Software Slow Down
DISPENSING	Based On Barcode Online Indent , Physically Dispensed	Inaccurate Dose Calculations
ADMINISTRATION	Medication Administration Records	Lack Of Mechanism To Counter Back The Drug
MONITORING	Regular Reporting	Done By Nurse

TABLE 6: PROCESS WISE SYSTEM ERRORS

RESULTS BY GRAPHICAL ANALYSIS

MEDICINE LEGIBLE / COMPLETE / CLEAR

PARAMETERS	Med Legible/ Complete/ Clear	%age
YES	184	92
NO	4	2
NO CHART	12	6
TOTAL	200	100

TABLE 7: showing the number and percentage of medicine legible / complete or Clear in the prescription.

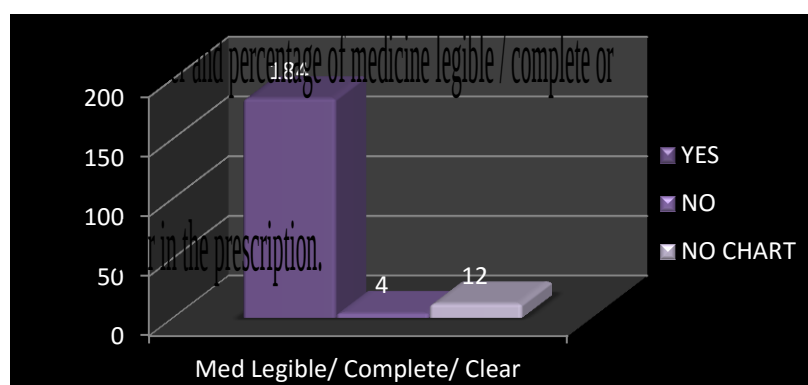


FIG: 5 showing the number and percentage of medicine legible / complete or Clear in the prescription.

In the above figure we can see that out of 200 samples 6% of them did not have any medication chart, 2 % of the medicine written was not legible and was not clear which turned in difficulty for the transcribing.

MEDICINE IN CAPITAL LETTERS

PARAMETERS	Med In Caps	%age
YES	95	47.5
NO	93	46.5
NO CHART	12	6
TOTAL	200	100

TABLE: 8 Showing the numbers and percentage of presence of medicine name in capital letters.

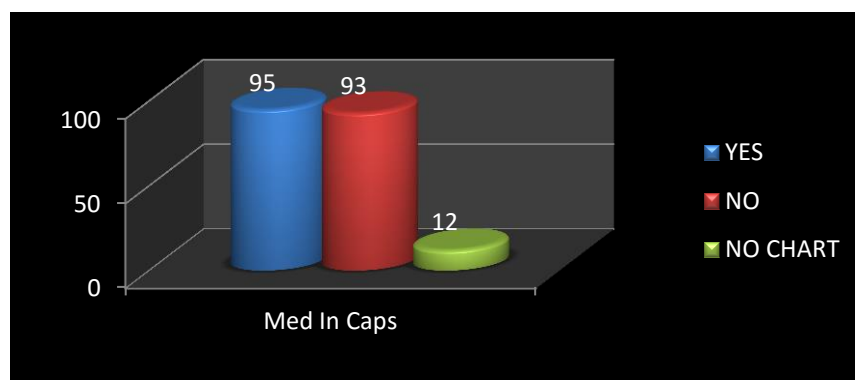


FIG: 6 Showing the numbers and percentage of presence of medicine name in capital letters.

The following figure shows that out of 200 samples 6% of them did not have any medication chart, 46.5% of the medicine written was not written in capital letter which leads to a threat as it is very high percentage of prescription error.

MEDICINE START AND DATE TIME

PARAMETERS	Start Date & Time	%age
YES	185	92.5
NO	3	1.5
NO CHART	12	6
	200	100

TABLE: 9 showing the number and percentage of presence of medicine start date and time.

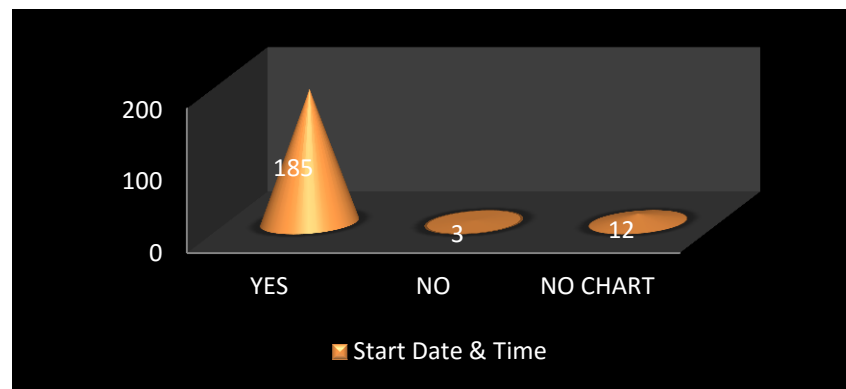


FIG: 7 showing the number and percentage of presence of medicine start date and time.

We can see that out of 200 samples 6% of them did not have any medication chart, 1.5 % of the prescription advice starting date and time was not mentioned and which causes medication error and can harm the patient if delayed in dosing and administering.

PRESENCE OF DOSE ERROR

PARAMETERS	Dose Error	%age
YES	19	9.5
NO	169	84.5
NO CHART	12	6
TOTAL	200	100

TABLE 10: showing the number of dosage error

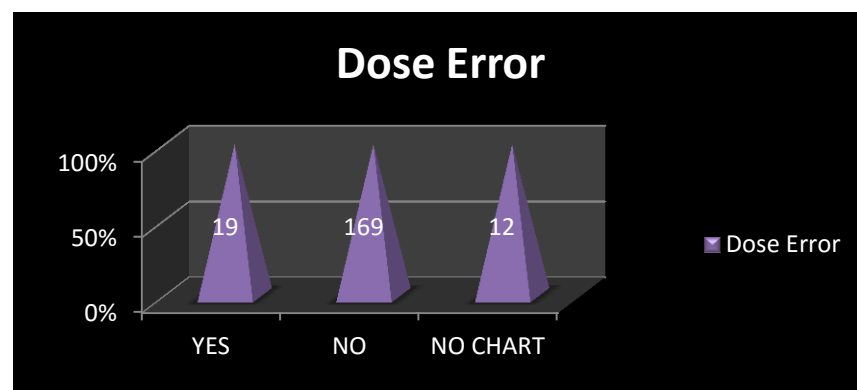


FIG : 8 showing the number of dosage error

We can see that out of 200 samples 6% of them did not have any medication chart, 9.5 % of the review resulted to dosage error which is a threat and may lead to patient harm which may result as a level 4 medication error.

PRESENCE OF OMISSION

PARAMETERS	Omission	%age
YES	7	3.5
NO	181	90.5
NO CHART	12	6
TOTAL	200	100

TABLE: 11 showing the number of omission error

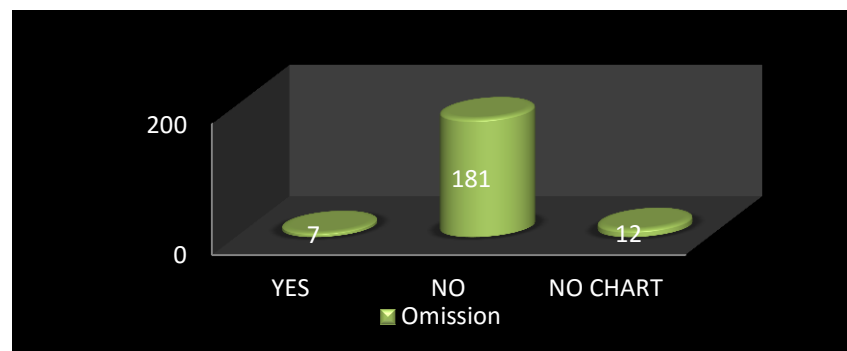


FIG: 9 showing the number of omission error

The following graph shows that out of 200 samples 6% of them did not have any medication chart, 3.5 % of the medication chart had omission error, which is a because of high negligence of nurses and pharmacists.

DOCUMENTATION ERROR

PARAMETERS	DOCUMENTATION	%age
YES	79	39.5
NO	109	54.5
NO CHART	12	6
TOTAL	200	100

TABLE: 12 showing the number and percentage of documentation error

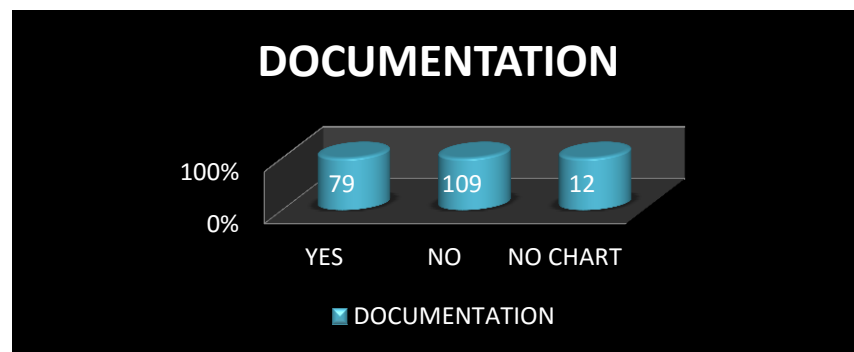


FIG: 10 showing the number and percentage of documentation error

The following graph shows that out of 200 samples 6% of them did not have any medication chart, 39.5 % of the medication chart had documentation error which is a huge number showing the careless attitude of doctors and nurses. This is because of mainly high usage of error prone abbreviation in the prescription by doctors.

FREQUENCY ERROR

PARAMETERS	Frequency error	%age
YES	2	1
NO	186	93
NO CHART	12	6
TOTAL	200	100

TABLE: 13 showing the number and percentage of frequency error

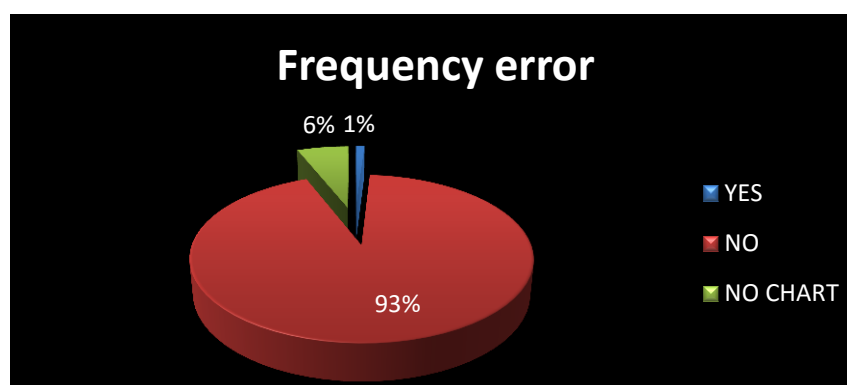


FIG:11 showing the number and percentage of omission error

The following fig:11 shows that out of 200 samples 6% of them did not have any medication chart, 1 % of the medication chart had frequency error that may lead to wrong time and duplication of dosage or miss of dosage.

TIME ERROR

PARAMETERS	Time error	%age
YES	2	1
NO	186	93
NO CHART	12	6
TOTAL	200	100

TABLE: 14 showing the number and percentage of time error

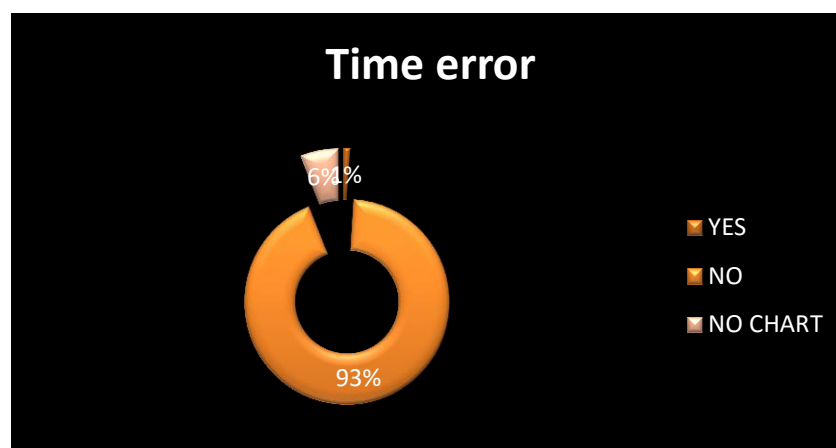


FIG: 12 showing the number and percentage of time error

The following fig:12 shows that out of 200 samples 6% of them did not have any medication chart, 1 % of the medication chart had time error. That shows the negligence of nurse and their careless attitude for administering drugs to patient.

ROUTE ERROR

PARAMETERS	Route error	%age
YES	0	0
NO	188	94
NO CHART	12	6
TOTAL	200	100

TABLE : 15 showing the number and percentage of route error

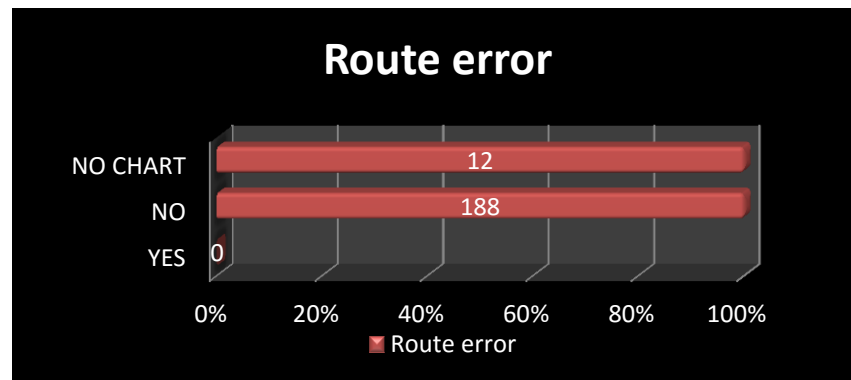


FIG : 13 showing the number and percentage of route error

The following fig:13 shows that out of 200 samples 6% of them did not have any medication chart, 0 % of the sample showed route error which is great practise in a hospital.

PRESENCE OF DOCTOR SIGNATURE

PARAMETERS	Sign of Doctor	%age
YES	187	93.5
NO	1	0.5
NO CHART	12	6
TOTAL	200	100

TABLE : 16 showing the number and percentage of presence of doctor's signature.

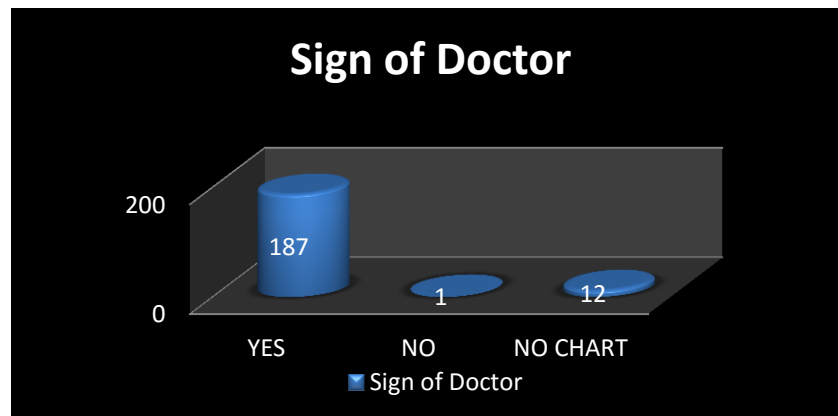


FIG : 14 showing the number and percentage of presence of doctor's signature.

The following fig:14 shows that out of 200 samples 6% of them did not have any medication chart, 1 % of the medication chart had no sign of doctors. Doctors have to sensetizedfor this act and they have to be careful.

SIGN OF NURSE AFTER GIVING MEDICINE

PARAMETERS	Signed by Nurse after giving Med	%age
YES	184	92
NO	4	2
NO CHART	12	6
TOTAL	200	100

TABLE : 17 showing the number and percentage of presence of nurse's signature.

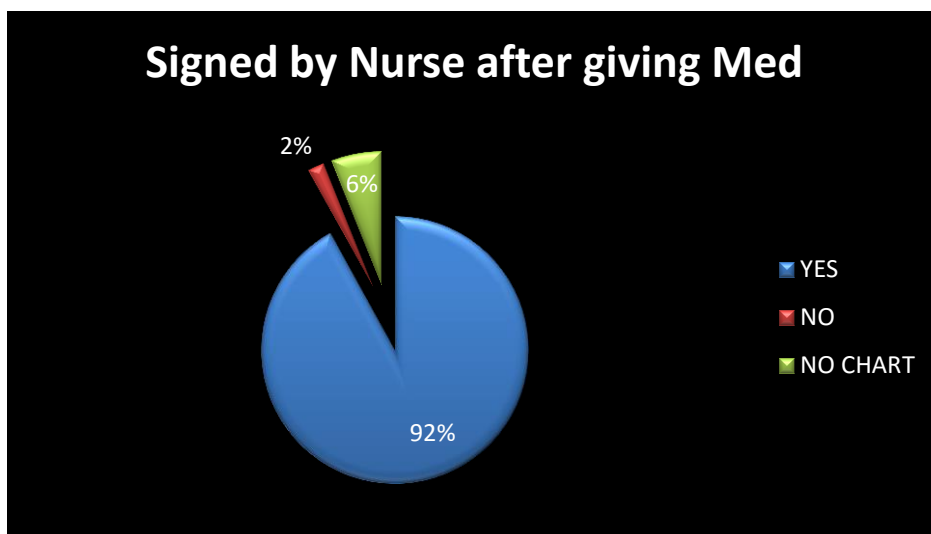


FIG : 15 showing the number and percentage of presence of nurse's signature.

The following figure shows that out of 200 samples 6% of them did not have any medication chart, 2 % of the medication chart had no sign of nurses after giving the medicine. Nurses have to be careful and complete all the required documentation to avoid these errors.

CONSULTANT SIGNATURE

PARAMETERS	Consultant Sign	%age
YES	188	94
NO	0	0
NO CHART	12	6
TOTAL	200	100

TABLE : 18 showing the number and percentage of presence of consultant's signature.



FIG : 16 showing the number and percentage of presence of consultant's signature.

The following figure shows that out of 200 samples 6% of them did not have any medication chart, 94 % of the medication chart had consultant signature. It is clear that the consultant signature is maintained properly and no error occurs due to this.

RESIDENT MEDICAL OFFICER SIGNATURE

PARAMETERS	RMO Sign	%age
YES	0	0
NO	188	94
NO CHART	12	6
TOTAL	200	100

TABLE: 19 showing the number and percentage of presence of RMO's signature.

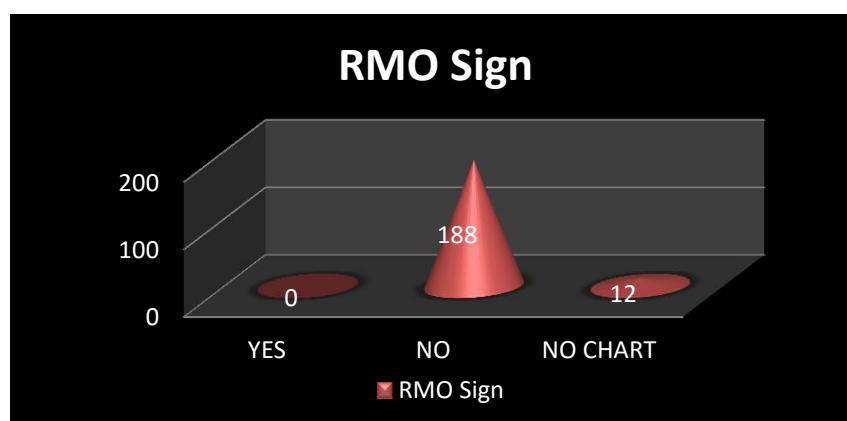


FIG 17: showing the number and percentage of presence of RMO's signature.

The above graph shows that out of 200 samples 6% of them did not have any medication chart, 94 % of the medication chart had no sign of RMO's signature. This is because it is not followed in the hospital. RMO sign should be there in every medication chart.

PRESENCE OF MEDICATION CHART

PARAMETERS	MEDICATION CHART	% age
YES	188	94
NO	12	6
TOTAL	200	100

TABLE: 20 showing the number and percentage of presence of medication chart.

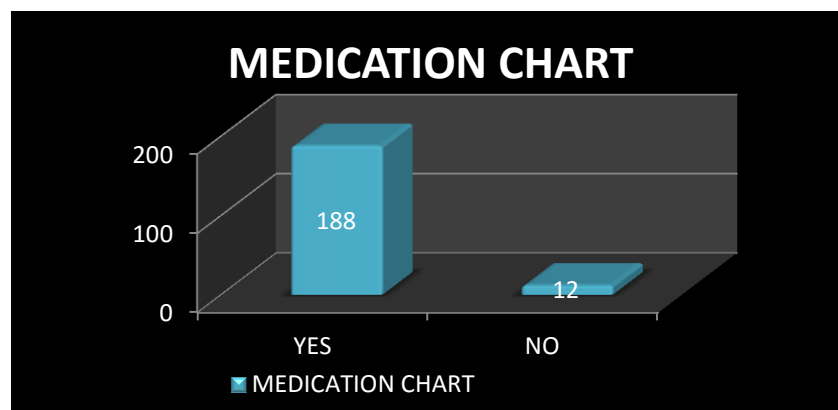


FIG: 18 showing the number and percentage of presence of medication chart.

The above shows that out of 200 samples 6% of them did not have any medication chart, because of in the Medical ICU they at times follow their own chart and do not keep any medication chart in the case sheet which should never be practised.

RESULTS OF ANALYSIS OF MEDICATION ERROR

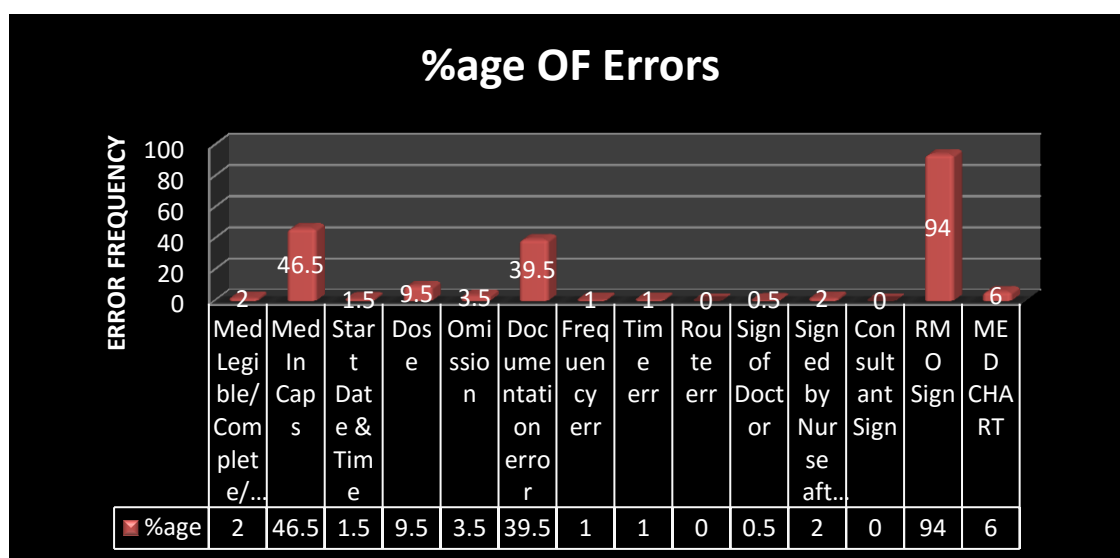


FIG: 19 showing the number and percentage of total error according to all the parameters.

In the above graph we can see that

- Among the 200 samples the most occurring error is the 94% of the cases not having RMO'S signature.
- 46.5 % of the cases did not have medicine written in capital which is a negligence of doctor.
- 39.5 % of the cases documentation error which is again because of doctor using error prone abbreviations.
- 3.5% of omission that is due to non-availability of drugs in pharmacy.

PARAMETERS	ERRORS	%age
Med Legible/Complete/Clear	4	2
Med In Caps	93	46.5
Start Date & Time	3	1.5
Dose	19	9.5
Omission	7	3.5
Documentation error	79	39.5
Frequency err	2	1
Time err	2	1
Route err	0	0
Sign of Doctor	1	0.5
Signed by Nurse after giving Med	4	2
Consultant Sign	0	0
RMO Sign	188	94
MED CHART	12	6
TOTAL	414	207

TABLE: 21 showing the number and percentage of total error according to all the parameters.

CONCLUSION

After completion of the study what i found is:

- * There is a lot of lack of knowledge among nurses and pharmacists which leads to negligence and medication error.
- * The usage of short names like mgso4 instead of medicine name leads to problem for nurses while transcribing the prescriptions at times.
- * Doctor's handwriting is illegible that is a very poor practise.
- * Unavailability of medicine is also an issue in the pharmacy. The stores are not being filled properly which leads to un-availability of drugs during emergency and also when patient requires them who are admitted in I.P.D.
- * There is a major issue of lack of staffs in pharmacy which results to work-load and turns ending to wrong dispensing of drugs in rush, like the look alike drugs, or missing writing the labelling of drugs in envelope .
- * shortage of nurses leads to work load pressure which results to delay in administering the drugs to the patients. Last but not the least dose error by doctors are found practised which is a result of careless behaviour.

SOLUTIONS:

1. Monthly Training for Pharmacy and Nurses. And Especially New Joiners.
2. Request Doctors for Writing Properly and In Caps and Full Forms.
3. Request For Online Prescription
4. Checking Of Re-Order Level.
5. Recruiting Of New Staffs.
6. Proper Rechecking Before Administration.

SUGGESTIONS AND RECOMMENDATIONS

1. Doctors should be sensitized continuously to avoid Prescription Error.
2. Nurses to be empowered to raise more of prescription error.
3. Regular audits of medication errors done by multidisciplinary team.
4. Use of drugs in generic name within the hospital formulary.
5. E-prescription to reduce prescribing error from illegible handwriting.
6. Required number of Pharmacists and Nurses to be recruited to reduce the workload error.
7. Nurses should be requested to follow the patient identification protocol before administering concerned medicine to the respective patient.
8. Dispensing error to be reduced by proper education to the pharmacists and providing with adequate stock to avoid error non availability of drugs respectively.
9. Adequate number of nurses and pharmacists along with health-care assistants should be made available to reduce work load.

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4. <http://www.amcp.org/WorkArea/DownloadAsset.aspx?id=9300>
5. <http://www.researchgate.com>

ANNEXURE

UHID					
Med Legible/Complete/Clear					
Med In Caps					
Start Date & Time					
Dose					
Documentation error					
Omission error					
Frequency error					
Time error					
Route error					
Sign of Doctor					
Sign of Doctor					
Signed by Nurse after giving Med					
Consultant Sign					
RMO Sign					