



**A STUDY ON QUALITY MANAGMENT PRACTICES: MEDICATION ERRORS
at
MAX SUPERSPECIALITY HOSPITAL, SAKET NEW DELHI**

Submitted By:
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MBA-Hospital & Health Management 2014-16



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CERTIFICATE

This is to certify that **Dr. Sheeba** has undergone her Summer Training in **Max Super Speciality Hospital, Saket, New Delhi** from 7th April, 2015 to 7th June 2015 and has done projects on:

A Study on Quality Management Practices : Medication errors

Her approach to the study has been scientific and analytical. The summer training is in partial fulfilment of the course requirement and is recommended for the award of Master of Business Administration-Hospital & Health Management.

I wish her success in all her future endeavours.



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SUMMER TRAINING CERTIFICATE

This is to certify that Dr. Sheeba of IIHMR, Jaipur Batch -19 of IIHMR University (Jaipur) has successfully completed her Summer Internship during 7th April - 7th June 2015.

The project undertaken by her in Max Saket Super Speciality Hospital titled:

“A study on Quality Management practises: Medication Errors at Max Super Specialty Hospital, Saket, New Delhi”

The project on evaluation fulfils all the stated criteria and the students findings are her original work.

I hereby certify her work excellent/good/satisfactory to the best of my knowledge.


Dr. Sandeep Mor
DMS (Deputy Medical Superintendent)
Max Super Specialty Hospital, Saket,
New Delhi

DECLARATION

I do hereby declare that I am a student of 1st year, MBA in Hospital and Healthcare Management, IIHMR University, Jaipur, Rajasthan session 2014-2016.

I would like to state that I have carried out my Internship on the topic “A study on Quality Management Practices : Medication Errors at Max Super Speciality Hospital, Saket ” under the guidance of Dr. Sandeep Mor (Deputy Medical Superintendent) at Max Super Speciality Hospital, Saket, New Delhi for the partial fulfilment for the degree of MBA in Hospital and Healthcare Administration.

This project work is my own and has not been submitted to any of the other Institute or University for the purpose of award of any degree or diploma.

Dr. Sheeba

IIHMR University

(2014-2016)

ACKNOWLEDGMENT

A summer project is a golden opportunity for learning and self-development. I consider myself fortunate for having been provided an opportunity to undergo summer training at Max Super Specialty Hospital, Saket, New Delhi.

I have had the privilege to get know many people that generously shared their experiences and knowledge with me. I would like to take this opportunity to express my gratitude to all of them.

I wish to express my deep gratitude to Dr. Sandeep Mor, DMS (Deputy Medical Superintendent) at Max Super Specialty Hospital, Saket, New Delhi, who in spite of being extraordinarily busy with his duties, took time to hear, guide and keep me on the correct path by giving helpful advice, constructive comments and encouragement throughout the project. His valuable guidance made this project possible.

I am also very thankful to all the staffs of Max for their attention towards my work and helping me which greatly added to my project. The Administrative staff of the department has been very helpful to me and I would like to express my deep gratitude to all.

Dr. Sheeba

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CHAPTER 1: INTRODUCTION

Medication error is defined as “the failure of planned action to be completed as intended or use of a wrong plan to achieve an aim”. These are unintended mistakes in prescribing, dispensing, and administration of medicines that could cause harm to a patient. They are the most common preventable cause of undesired adverse events in medical practice and present a major public health problem.

These kinds of errors tend to decrease the patients’ confidence in healthcare systems and increase healthcare costs. These may prolong the patients’ hospital stay and also tend to increase the risk of death almost 2 fold. The problems and sources of medication errors are multi-disciplinary and multi-factorial. Errors occur from lack of knowledge, substandard performance and mental lapses and defects/failures in systems.

The various types of errors are as follows:

- (1) Prescription errors-including ineffective prescribing, under-/over-prescribing; such kinds of errors are done by the physicians.
- (2) Transcription errors- errors done while writing down (esp. done in cases where verbal orders are given).
- (3) Indenting errors-errors that occur while converting manual prescriptions into digital order .Usually done by the nurses or junior doctors who upload the prescription into the computer.
- (4) Dispensing errors-Usually done by the pharmacists. Includes dispensing a wrong drug ,a wrong formulation, dispensing drug with a wrong label or dispensing the correct drug to the wrong patient.
- (5) Administration errors-Any deviation from the six rights of medication administration is termed as administration error. This includes wrong patient, wrong drug, wrong dose, wrong route, wrong duration and wrong documentation. Usually this type of errors is done by the nurses.
- (6) Omission errors- include omitting the drug that has been prescribed for the patient.

Many medication errors are probably undetected. The outcome(s) or clinical significance may be minimal with few or no consequences that adversely affect a patient. However some may cause temporary or even permanent harm to the patient. Thus these in no case should be taken lightly so that the very basic goal of drug therapy (to improve the patient's quality of life) is not defeated.

NCC MERP recommends an index for categorizing various medication errors (the errors could lead to harm which has been classified as under)

(1) Category A- Circumstances/ events that have the capacity to cause error.

(2) Category B- An error but it did not reach the patient.

(3) Category C- An error occurred that reached the patient but did not cause patient harm.

(4) Category D- An error occurred that reached the patient and required monitoring to confirm that it resulted in no harm to the patient.

(5) Category E- An error occurred that may have contributed to or resulted in temporary harm to the patient and required intervention.

(6) Category F- An error occurred that may have contributed to or resulted in temporary harm to the patient and required initial or prolonged hospitalisation.

(7) Category G- An error occurred that may have contributed to/ resulted in permanent patient harm.

(8) Category H- An error occurred that required intervention to sustain life.

(9) Category I- An error occurred that may have contributed to/ resulted in patient's death.

The most common places where these errors can occur are: Paediatric wards ; Intensive care units ; Emergency department units ; Operating rooms ; Outpatient clinics ; Medical Day Clinics ; Oncology departments ; Dialysis units .

Rationale of the Study

Identification of the potential sources of MAEs is a very complex process. Use of this survey/ study can assist the quality improvement efforts already being undertaken in a several ways. This survey can be used to:

- Provide staff with a means of confidential input into the current medication administration processes and its flaws that may cause a disruption in the smooth functioning of the same.
- Determine intervention priorities for improving the medication administration processes and reporting culture.
- Assess relative differences in perceptions of interruptions in the medication administration processes in order to appropriately target improvement interventions.
- Assess the direction and magnitude of the difference in perceptions of various healthcare service providers regarding factors that cause medication administration errors.

Recommendations that would follow the study would be a source of help to enhance the extent of implementation of continuous quality improvement.

Objectives

- To quantify the number of medication errors occurring in the hospital.
- To find out major causes that lead to errors in medication.
- To suggest a few measures to reduce the occurrence of errors in medication administration.

CHAPTER 2: LITERATURE REVIEW

This literature review focuses on research that primarily addresses the issues related to medications that arise in tertiary care facilities. Medication administration errors are reported to occur in 1 in 5 dosages (Baker & McConnell, 1962). The issue of medication administration has long been the focus of scrutiny and research, in part because medication administration errors contribute directly to patient morbidity and mortality (Tissot, 2003). This literature review is a critique of current understanding of physician practice, nursing practice and pharmacists in relation to medication administration.

The search methods employed for this review include both nursing and medical databases. The keywords employed for search are “MA” ; drug administration ; medical administration error ; medication safety ; quality use of medication ; nursing and medication ; patient safety ; incident reporting ; quality improvement safety ; organisational safety . The search was limited to only English based articles.

Various medication administration rates:

- Nurses in geriatric and Cardio-thoracic units: 14.9:100 (Tissot et al 2003)
- Nurses in paediatric ICU - 32.4:100 (Schneider et al 1998)
- Clinical charts and incident Chart 74.7:100 (Headford et al 2001)
- Nurses & doctors (intravenous medication in acute care): 34:100 (Wirtz et al 2003)
- Medical and surgical units (two tertiary-care hospitals): 38:100 (Leape 1995)
- Doctors, nurses, pharmacist (tertiary-care hospital) : 25:100 (Wilson et al 1998)
- Doctors, nurses, pharmacist (tertiary-care hospital incident reports): 32:100 (Ashcroft et al 2003)
- All HCP in PACU (MEDMARX database) : 59.5:100 (Hicks et al 2004)

Also two observational studies have found that medication administration errors varies between 14.9% (Tissot, 2003) to 32.4% (Schneider, 1998). The medication error rate for IV injections is significantly higher than other types of medications with researchers observing preparation error rates of 26% and administration error rate of 34% (Wirtz, 2003).

Hospitals are complex systems comprising both human and technological aspects (Clancy, 2004). Such systems may be thought of as consisting of components that include design, equipment, procedures and environment and within any of these the errors may occur (Andersen, 2002).

The literature that explores MAE frequently links errors to specific professional traits, focusing on individual practitioner's attributes, skill levels and competencies (Preston, 2004). For example, it is reported that an individual practitioner may contribute to a medication error. This lack of knowledge may include the inability to

accurately calculate medication dosages which, according to research, significantly contributes to a nurse's likelihood of making errors (Oldridge, 2004). This is of particular importance in paediatric settings and neonatal intensive care where drug dosages are determined by body weight. Analysis of medication errors can lead to system improvement and reduced risk only if the errors are detected, reported, and used to design better patient-care practices and systems. Voluntary medication error reporting systems rely on the ability and willingness of individual physicians, pharmacists, and nurses to detect and report errors as part of their routine practice. Because of the central role nurses play in medication administration, it is important to understand their perceptions of the medication error reporting process. This paper describes the development and validation of a survey designed to measure nurse perceptions of medication administration error (MAE) reporting. The survey contains questions in three general content areas: why medication errors occur; reasons why medication errors are not reported; and the estimated percentage of medication errors actually reported. Over the past 10 years, the MAE survey has been administered four times to nurses in Iowa's acute care hospitals statewide. Principal components exploratory-factor analysis with orthogonal rotation was used to determine if the individual items could be combined into subscales. Five subscales emerged for "reasons why medication errors occur"; four subscales emerged for "reasons why medication errors are not reported." Subscale reliability was assessed using Cronbach's Coefficient Alpha. Although health care organizations have implemented continuous quality improvement programs that focus on systems, rather than individuals, barriers remain in MAE reporting. Surveys, such as the one described here, provide a basis to begin discussions about improving the system.

CHAPTER 3: RESEARCH METHODOLOGY

The study on medication errors has been carried out in a 513 bedded tertiary care hospital. For the purpose of studying the errors the prescriptions were chosen randomly and/or the details were followed till discharge of the patients. The data for present study was collected by chart review method. During the study inpatients case records was reviewed, which includes patients case history, diagnosis, physician medication order sheets, nurse medication administration records, progress chart, laboratory investigations and report of other diagnostic tests. This information was documented in the patient profile form. Whenever Medication error is identified, during the review data from patient profile form is transferred to medication error reporting and documentation form(annexure-7). All medication errors documented were analyze for following parameters such as demographic status of patients, month wise distribution of the errors, professionals involved in the errors, Causes of medication errors, Incidence of medication errors, Types of medication errors and system wise distribution of errors. Medication errors were also asses for its severity level.

- Type Of Study: Descriptive cross sectional study
- Location of Study: 1) In-Patient Department: Max Hospital, Saket , New-Delhi.
2) Pharmacy: Max Hospital, Saket, New-Delhi.
- Duration Of Study: 6 months (1st December 2014 to 31st may 2015)

- Study Subject: 1) Nurses
2) In-Patient Pharmacists
3) Physicians

- Sample Size: 70

- Data Collection Technique:

The data was collected for the months of December to March from the hospital records (secondary source) while for the months of April and May the data was collected through observation (primary source).

To determine the factors that lead to medication errors, the technique used was personal interview

- Data Collection Tool: Self-Administered questionnaire
- Data Analysis: MS Excel
- Study Material: The following material was used for the study:
Patient Profile Form (Includes patient prescription and administration details)
Medication error reporting and documentation form.(Annexure -I)
Patients informed consent

Three Separate questionnaires were prepared for nurses, physicians, and pharmacists (annexure I, II and III) and 40 nurses, 20 physicians and 10 pharmacists asked to fill them respectively.

The data hence collected was analysed using Microsoft Excel Software.

Limitations

This study has only been carried out in a tertiary care healthcare setting with the only interest to gain an insight into some factors that may cause MAEs in hospitals.

The study relies only on the perceptions of nurses, physicians and pharmacists and thus determination of actual reasons because of which errors occur are beyond the scope of this study.

CHAPTER 4: FINDINGS and DATA ANALYSIS

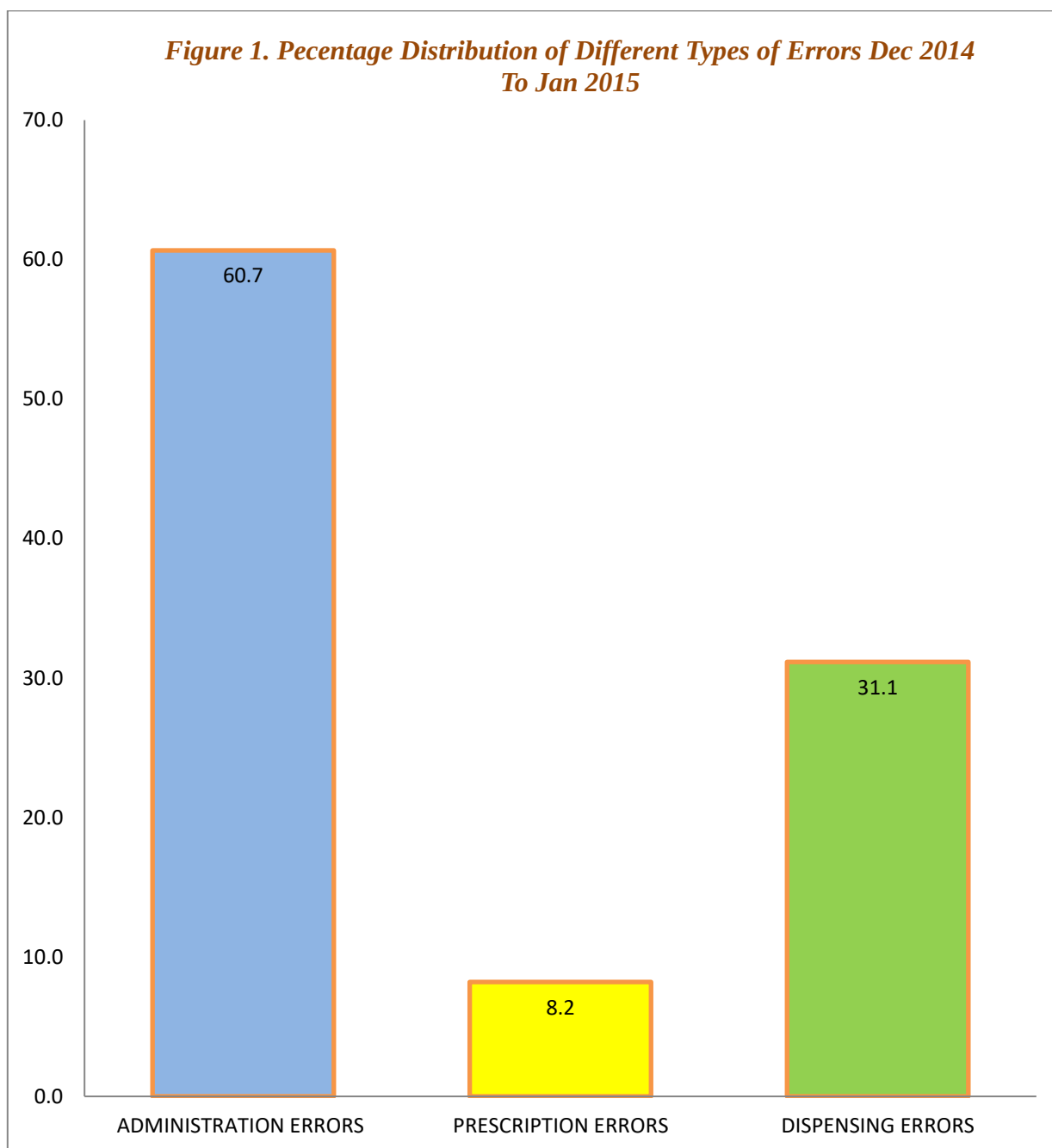
- In order to reduce the occurrence of medication errors in the hospital, BCMA (Bar Code Medication Administration) is practiced here.
- After scanning of the bar codes on the dispensed medication, it is also checked manually by the nursing personnel to reduce the chances of any error further.
- The bar codes are available for all the drugs except the Over the Counter (OTC) drugs.
- The process flow for medication administration is as follows :

Chart 1 :

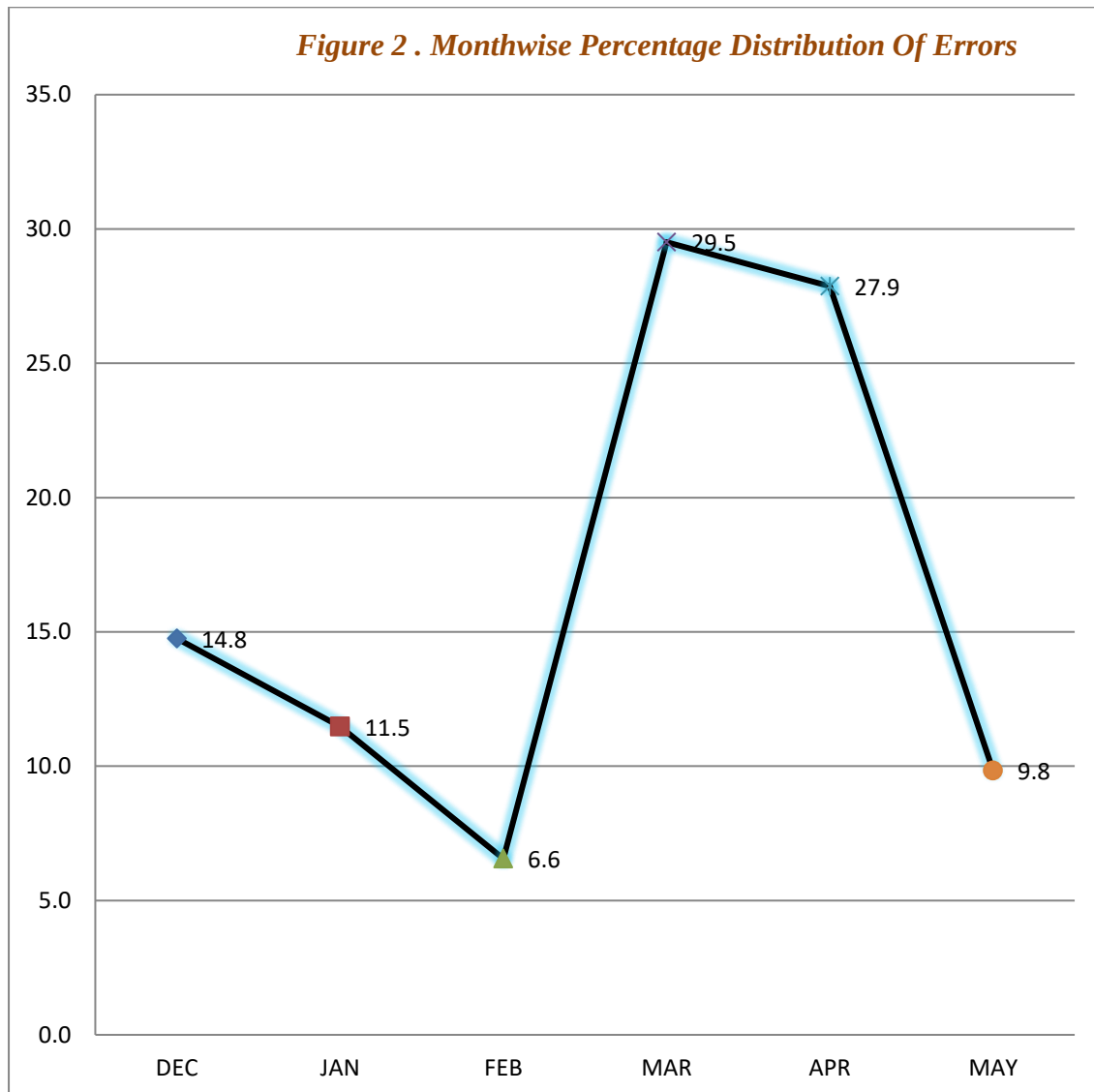


- Despite this , medication errors are seen in the hospital out of which the prescription , administration and dispensing errors are the most common

The distribution of various types of errors is as follows

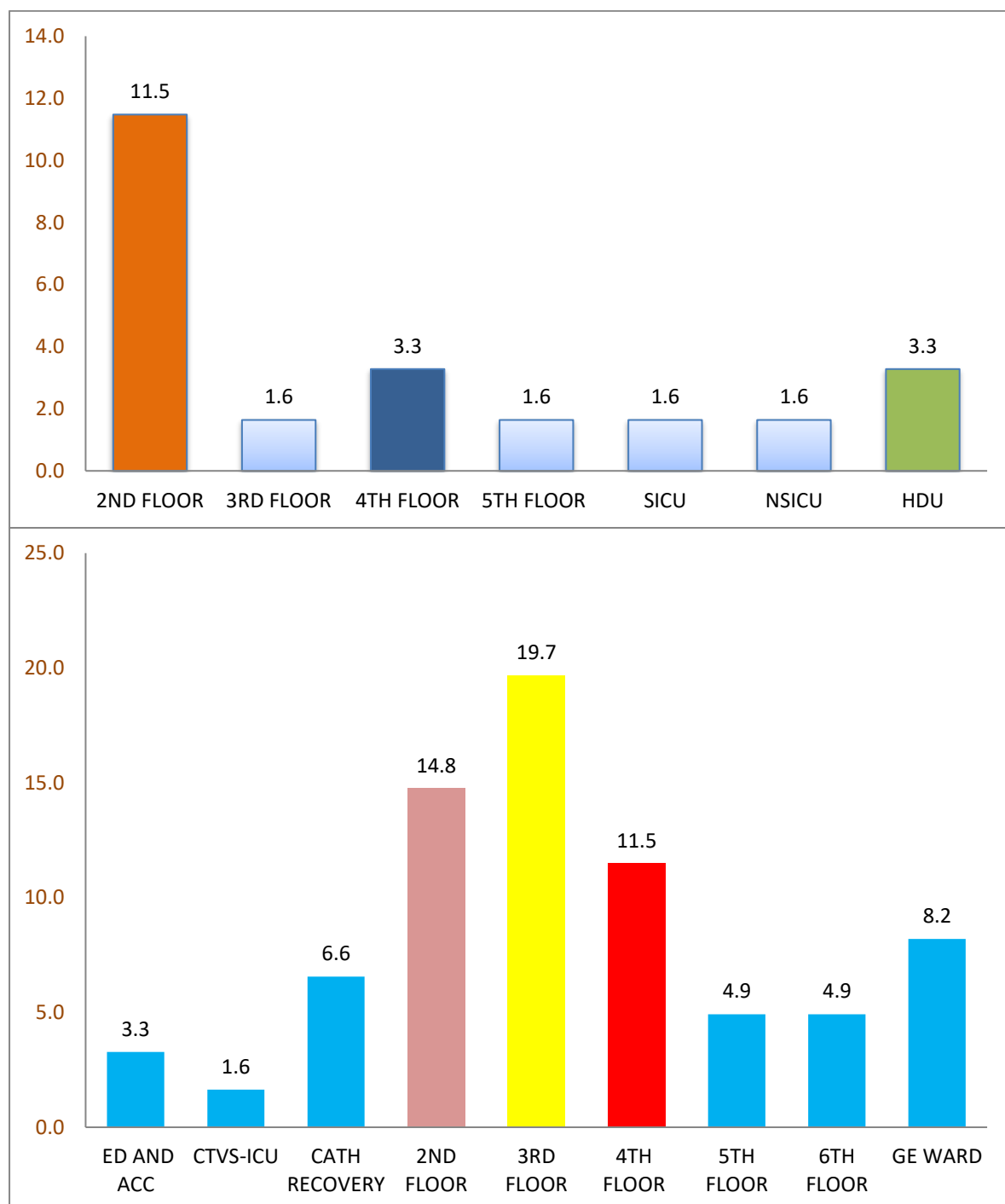


- The data was collected for the months of December , January , February , march , april and may .
The month wise distribution of data is given as under :



The number of errors in the months of march and april have risen sharply to about 30% of the total number of errors during the study period . This is because of the high occupancy during this period as a result of which there was high workload on the hospital staff which in turn led to a higher error rate during this period.

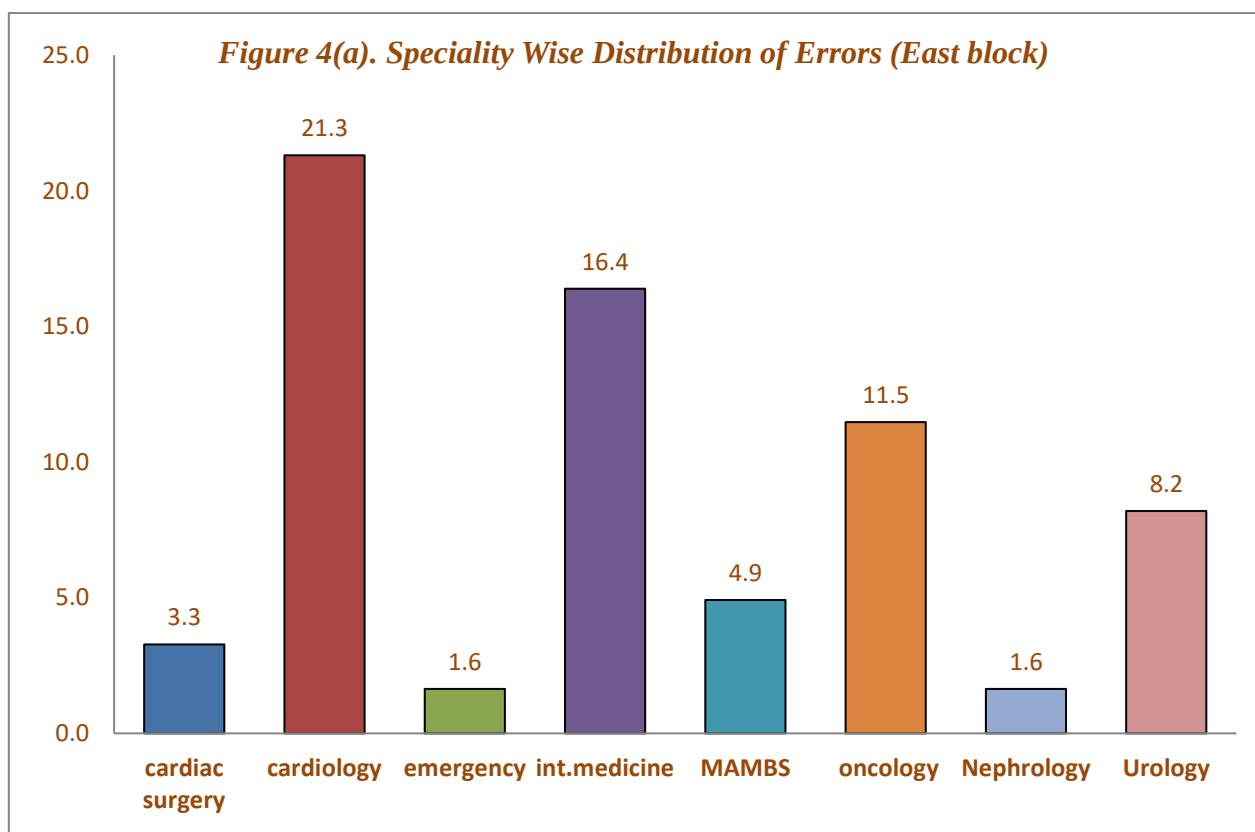
The ward wise distribution of the medication errors that occurred in the 6-month period is as follows:

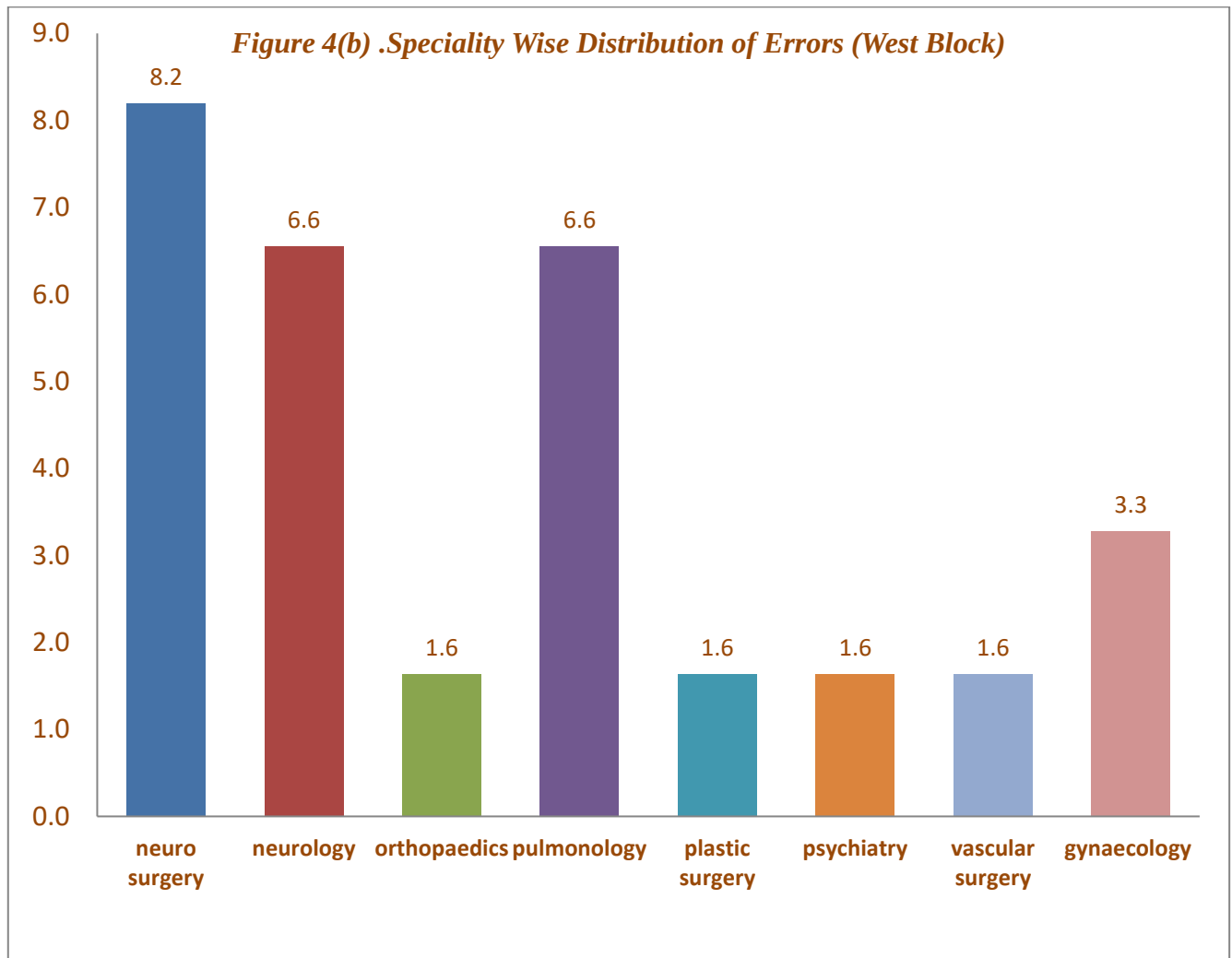


The highest number of errors have been seen to be occurring on 3rd floor (east wing) followed by 2nd floor (east wing) and thereafter 4th floor (east) and 2nd floor (west). On in-depth discussion with the nursing supervisors and the nurses on the floors, it can be concluded that the following can be some of the reasons for this:

- Higher number of beds on 3rd and 4th floors east block as compared to others

- Although 3rd and 4th floors have same number of beds i.e 70, the errors are higher on 3rd than the 4th floor. This may be because 3rd floor (east) has patients of many specialities – cardiology , internal medicine , respiratory ailments while 4th floor (east) is specifically for oncology
Nurses in the latter floor are trained for one speciality while this is not the case with 3rd floor.
Dispensing errors are less likely on the 4th floor where the specialists write more or less similar drugs and similar brands too. On the other hand, 3rd floor has different specialities, therefore , different teams of doctors writing different kinds of drugs are bound to increase the chances of dispensing errors as well.
- The speciality wise occurrence of medication errors in the hospital during the six-month study period is as under:



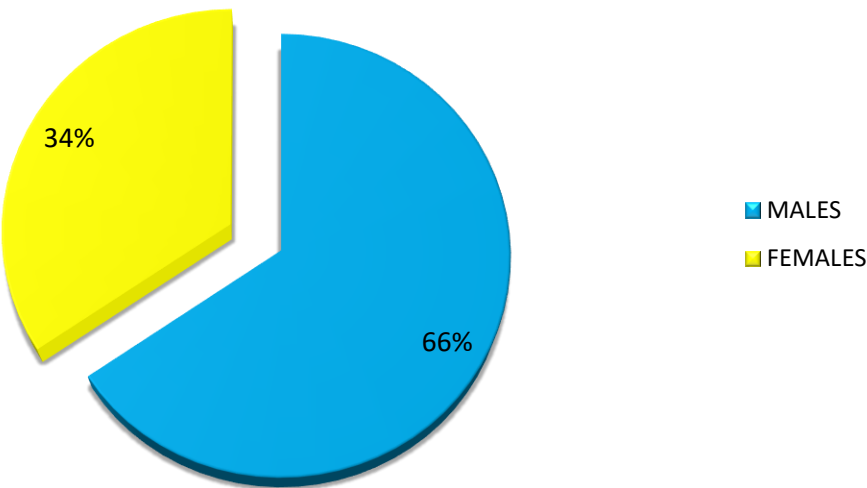


The highest number of errors have occurred in cardiology followed by internal medicine and thereafter about 11% of the errors occurred in oncology and about 8% in urology and neurosurgery.

Demographic Distribution Of Patients Who Were Subjected To The Medication Errors

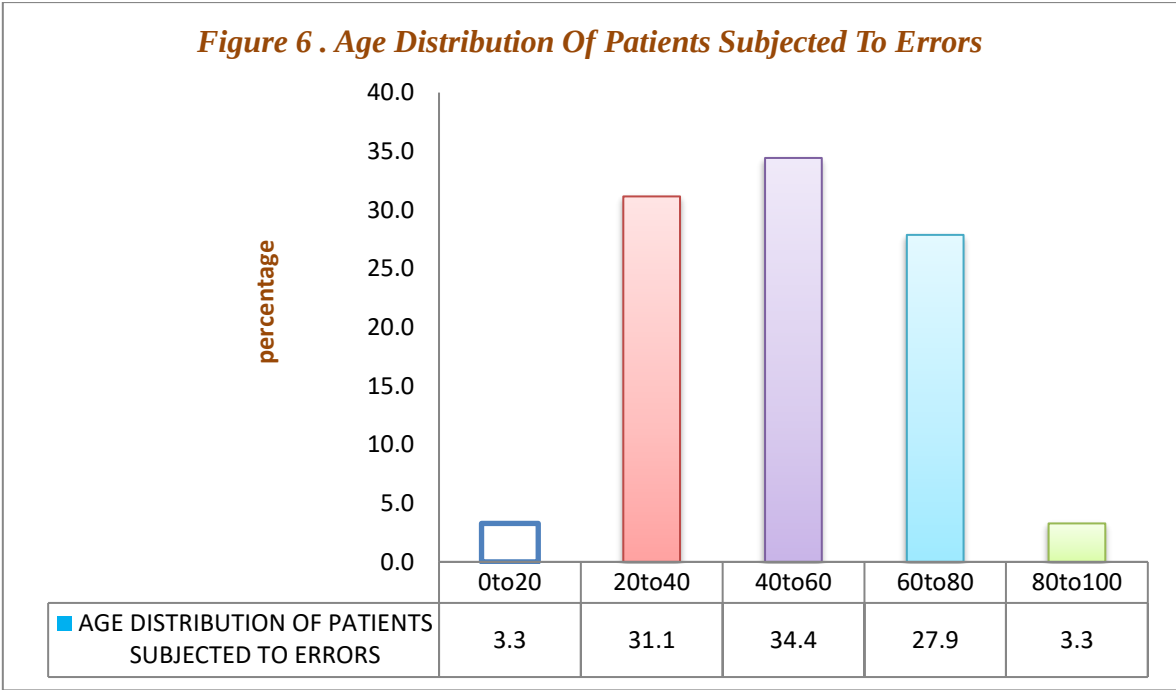
- Among the patients who were subjected to these errors, 65.6% were males and 34.4% were females.

Figure 5 . Gender Distribution Of Patients Subjected To Errors

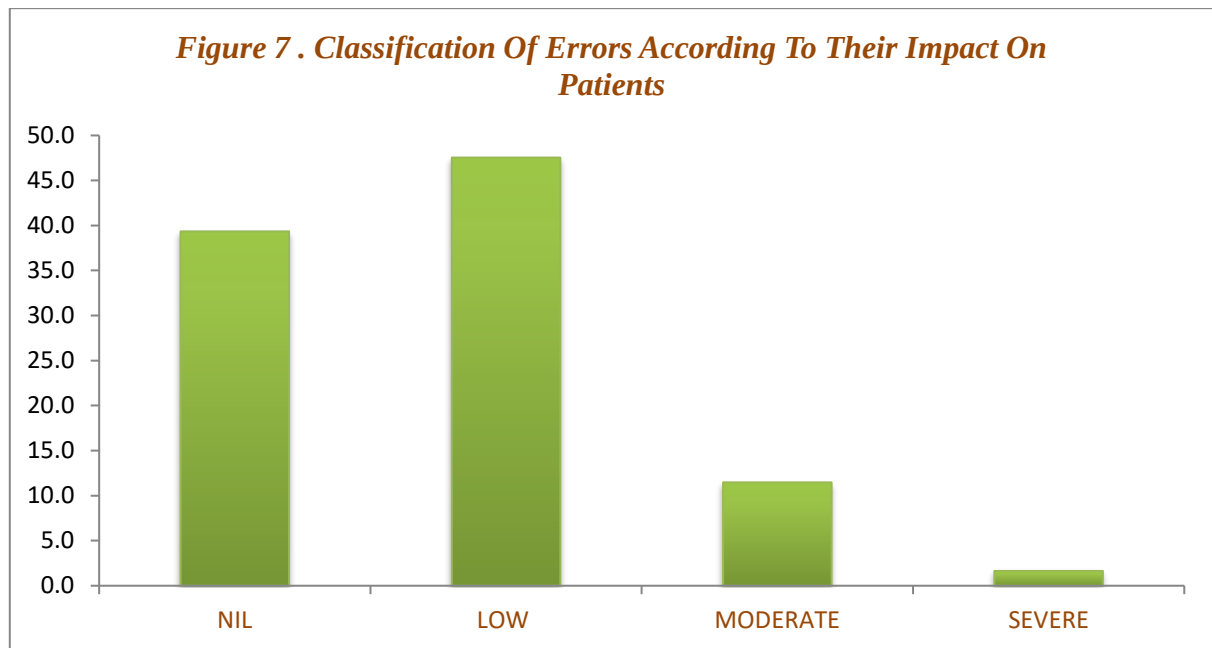


- The age distribution of patients who were subjected to the different kinds of errors is

Figure 6 . Age Distribution Of Patients Subjected To Errors



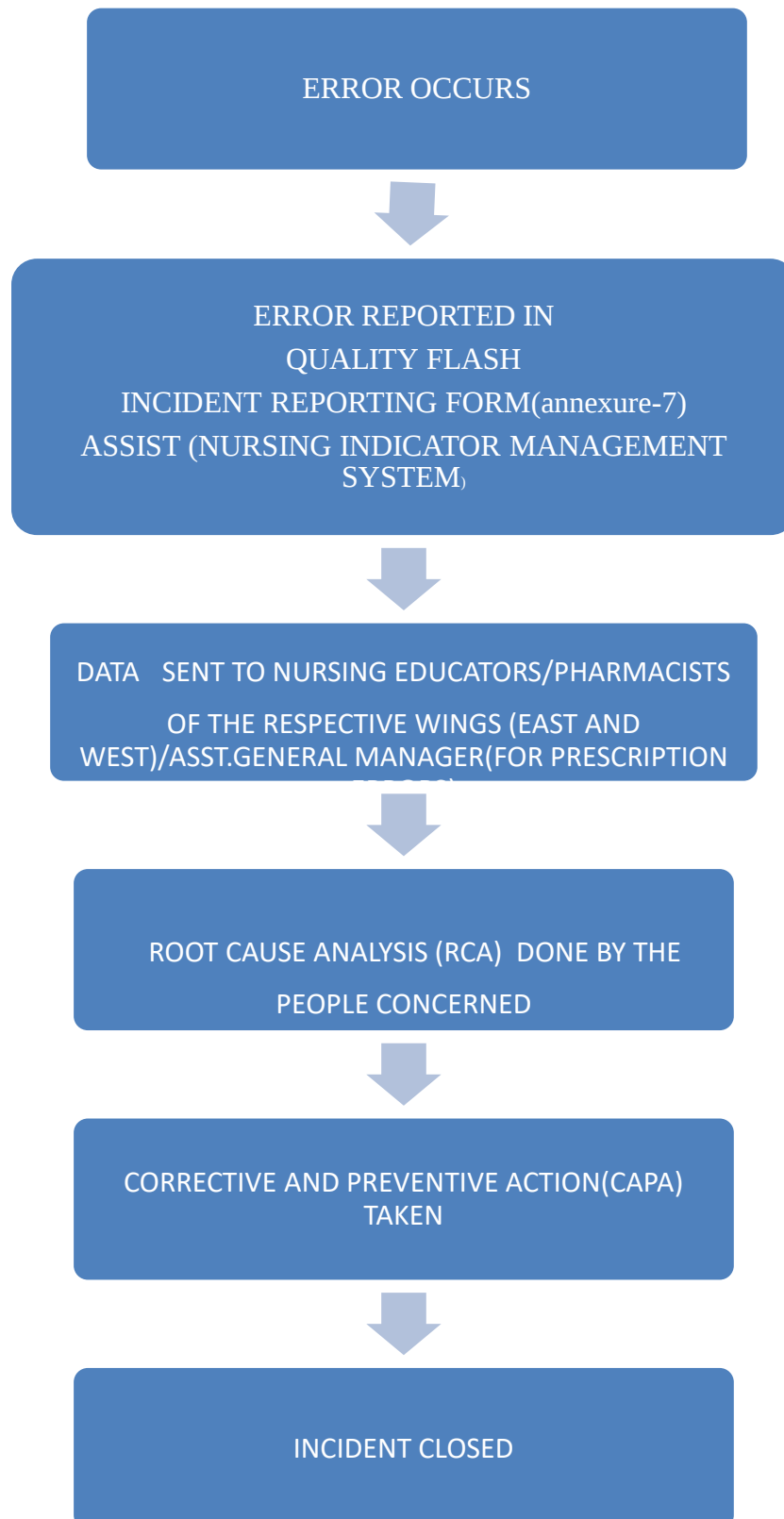
Distribution of Errors According to their Impact on the Patient



Errors with a low impact on the patient have been found to be maximum in number (47.5%) ; followed by the ones which didnot affect the patients at all(about 31%).

ONCE ERROR OCCURS, The process flow being followed is described under:

Chart 2 :



Corrective and Preventive Action

- On Job Training – done as per error ; also it is conducted every Tuesday and Friday for 2 hours (1PM – 2 PM ; 3PM -4PM) which is mandatory for everyone.
- Briefing sessions – conducted by nursing supervisors (for administration errors)
- Counselling of the personnel concerned is done so that the chances of further errors can be reduced.

In order to find out the causes for the occurrence of these errors, a survey was carried out in which the method of sampling used was CONVINIENCE SAMPLING. The sample consisted of 40 nurses, 20 physicians and 10 pharmacists.

Out of the sample of 40 nurses who were interviewed, 11 were males and 39 were females.

The demographic distribution is given as follows:

Figure 8(A) . Demographic Distribution of Pharmacists

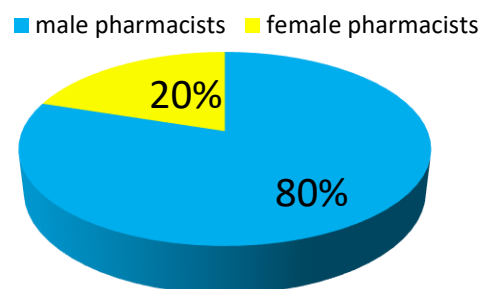


Figure 8 (B) . Demographic distribution of physicians

■ male psicians ■ female physicians

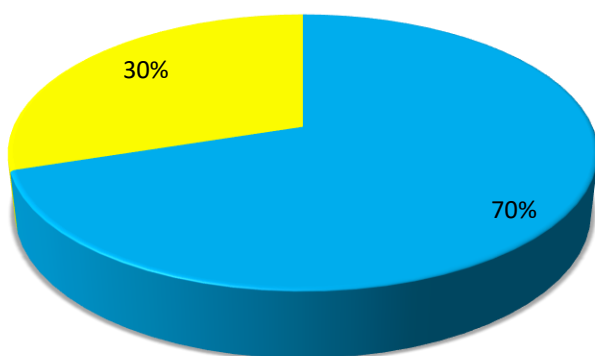
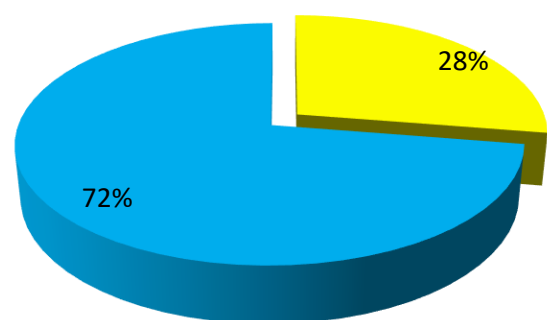


Figure 8 (C) . Demographic Distribution of Nurses Interviewed

■ males nurses ■ females nurses



On analysing the responses given by the nurses , around 28% of the nurses agree and 52% strongly agree that errors are caused due to HIGH WORKLOAD.

About 28% of them agree and 5% strongly agree that the cause of errors is interruptions in the work environments like sound etc

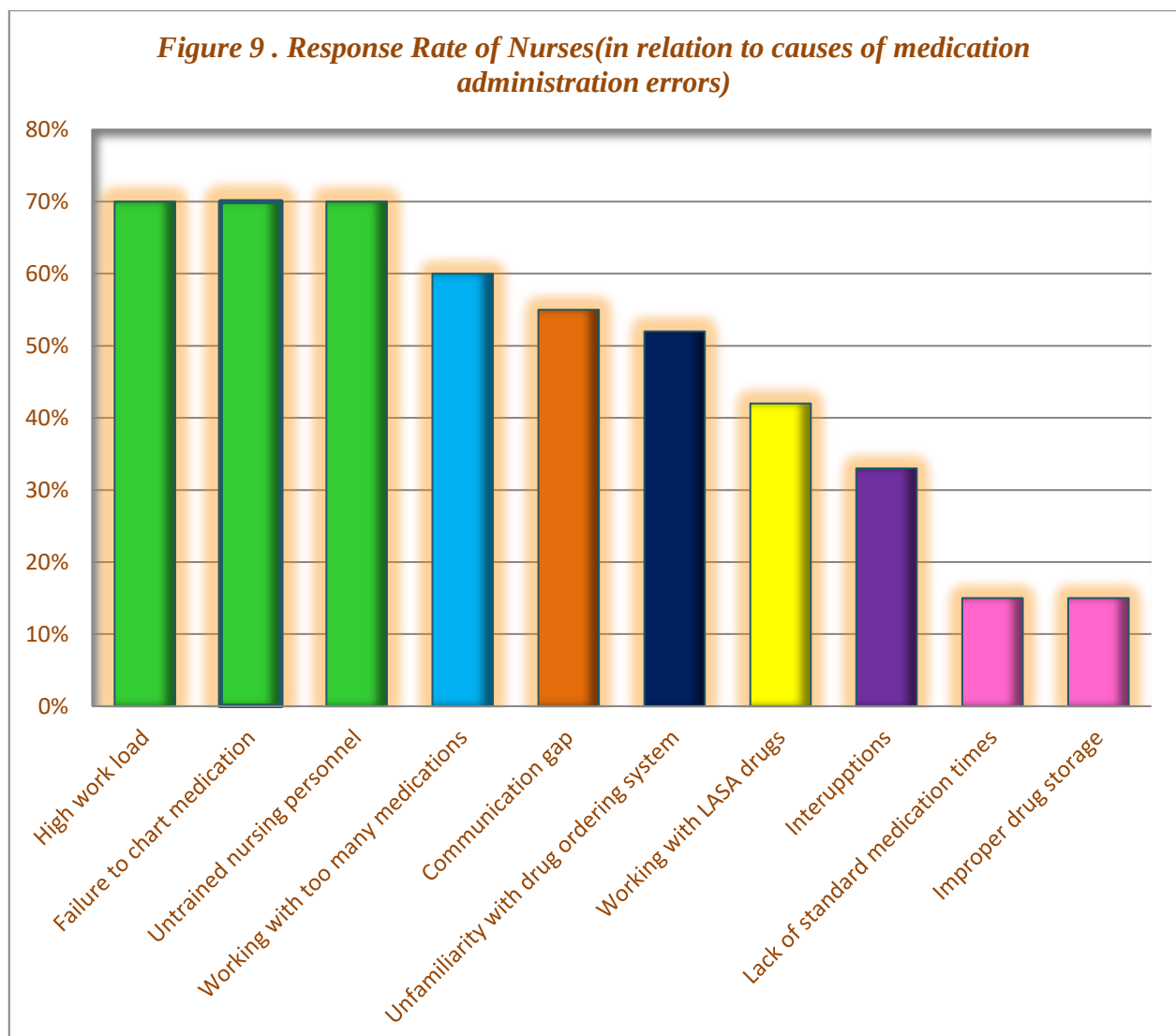
Around 55% of the nurses agree that the communication gap between the service providers can be an important source of errors in medication administration.

About 70% of the paramedics have agreed that most of the errors occur due to inadequately or untrained nursing personnel.

About 65% of the nurses are of the opinion that most errors occur due to failure of the nurses to follow BCMA and enter the medication administered in the computer system.

About 52% of the nurses believe that errors in medication administration occur because of the lack of an in-depth understanding of drug ordering systems being followed in the hospitals.

Improper drug storage is not considered as one of the important reasons for errors in administration of medicines in healthcare facilities.



Hence the most important cause of administration errors is high work load of the nurses and also untrained nursing personnel followed by communication gap within the service providers.

On analysis of the various responses of the doctors, it was found out that

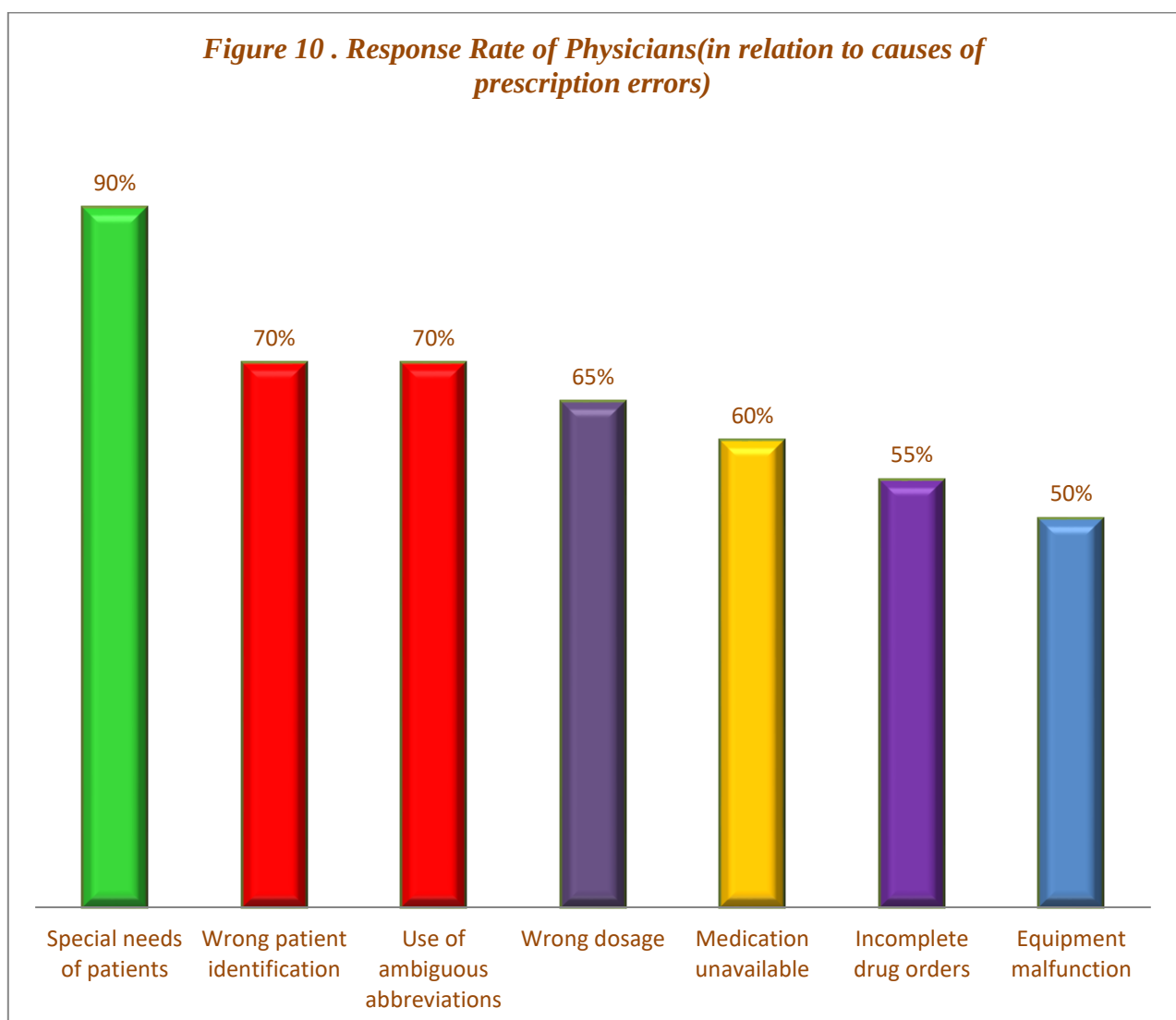
About 20% of them strongly agreed and 50% agreed that **WRONG PATIENT IDENTIFICATION** is an important cause of medication administration error.

Around 65% of the physicians believe **WRONG DOSAGE** as the causes of medication error.

About 15% of the physicians strongly agree and 55% agree that **USE OF AMBIGUOUS ABBREVIATIONS** can cause a lot of medication errors in hospitals.

EQUIPMENT MALFUNCTION has been said by 50% of the physicians as the source of MAE.

About 15% of them strongly agree and 85% agree that **different medical specialities** (geriatrics, paediatrics) and the specific needs for the patients is the source of error in medication administration .



Hence the most important cause for prescription errors is the **special needs of patients (paediatric , geriatric etc)** and the resultant a large number of medical specialities. Another important cause is **use of ambiguous abbreviations** by the doctors and the **wrong patient identification**.

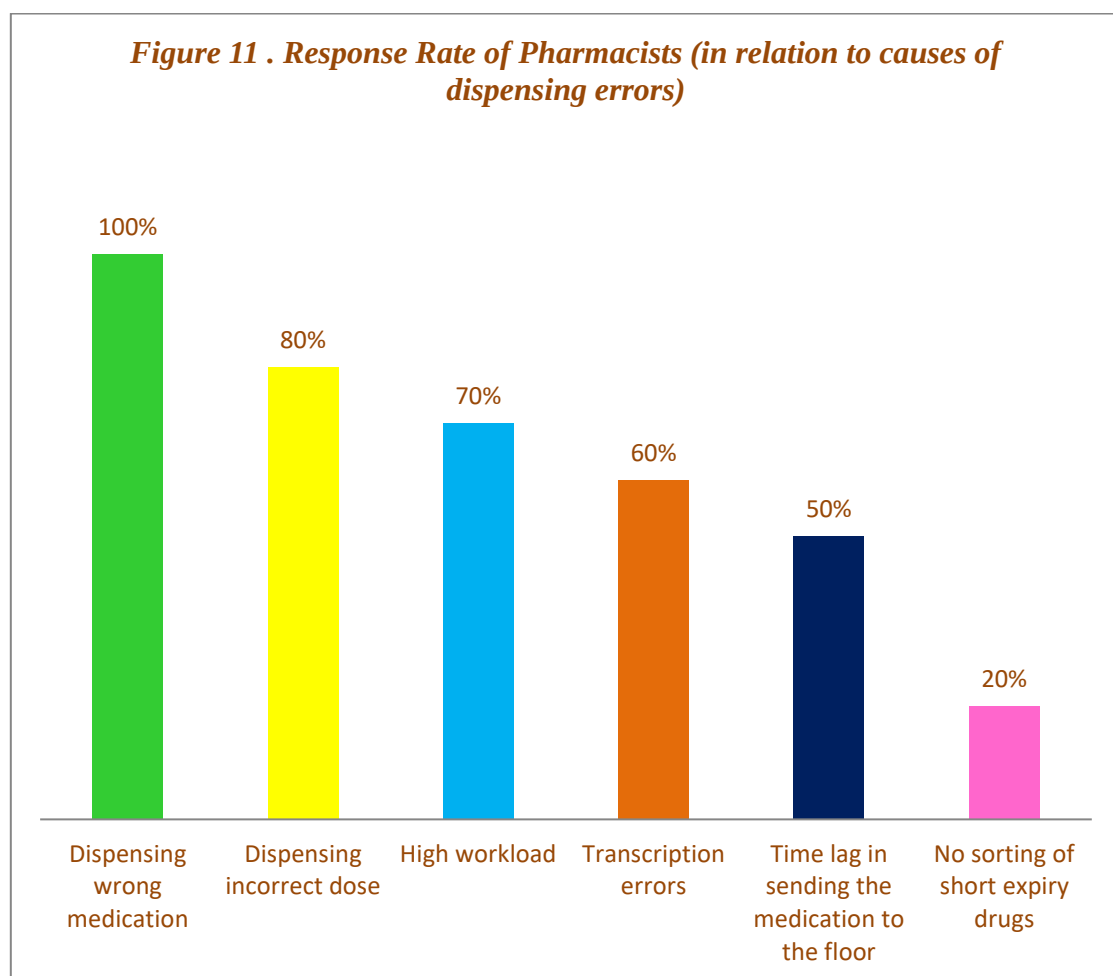
On analysis of the pharmacists' responses, it was found out :

100% of the pharmacists are of the opinion that working with LASA drugs is a very important source of error in MA.

About 80% believe that dispensing wrong dosage can cause medication administration error.

High workload is considered by 70% of the physicians as the cause of MAE

Around 60% of them are of the opinion that transcription errors in case of hand written orders also can cause dispensing errors to a large extent.



Discussion

A thorough analysis of the survey reveals:

- For prescription and transcription errors (mostly caused by physicians)- the most important cause is **specialised medical services(paediatrics, geriatrics etc)and their specific needs** followed by **wrong patient identification and use of ambiguous abbreviations**
Unavailability of medication that has been prescribed is also a very important cause of MAEs.
- For administration errors (caused by the nursing personnel)-the cause of MAEs that has been perceived by the highest proportion is **inadequately or untrained nursing personnel**.
Following this, the next important factor is found out to be **high workload**_which can also be one of the causes of **inability to record the medication administration on the chart/BCMA**_.
Apart from these, **lack of communication between the healthcare service providers**_and **lack of familiarity with the drug ordering system** have been cited as the important factors in causing MAEs by about 50-55% of the nurses.
- For dispensing errors (caused by the pharmacists)- the factors that cause MAEs in the order of decreasing order of importance are **dispensing a wrong drug(esp. While working with LASA drugs**_followed by;
Dispensing an incorrect dose,and,
High workload
Also, **transcription errors esp in case of hand written orders** (in case emergency drugs) is found to be an important cause as per about 60% of the pharmacists.

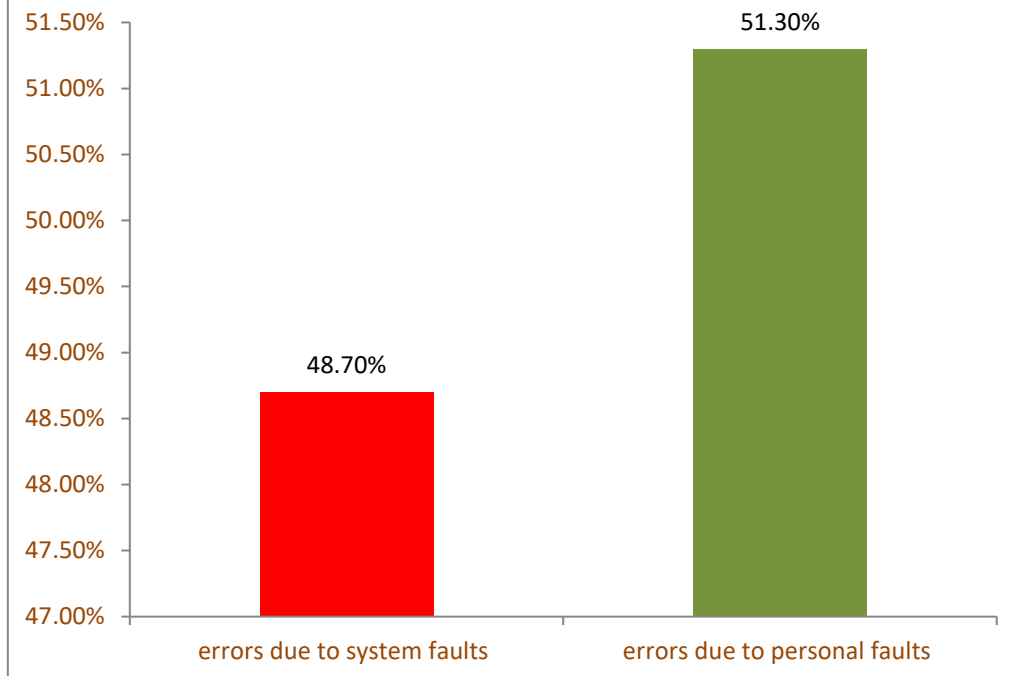
Critical Analysis

Out of 70 nurses , pharmacists and physicians who were interviewed , 48.70% believed that the medication errors were caused due to system faults and 51.3% believes that they occurred as a result of faults on a personal level.

Faults in the system have been reflected as high workload , untrained nursing personnel , communication gap within the service providers , interruptions within the work environment , no system to sort short expiry drugs , unavailability of the prescribed medication , equipment failure / malfunction , improper drug storage and lack of standard medication administration times.

Faults at a personal level have been reflected as wrong patient identification , wrong dosage , working with LASA drugs , working with too many medications , transcription errors , use of ambiguous abbreviations , incomplete drug orders and lack of familiarity with drug ordering system.

***Figure 12 . Percentage of People with a view that
Medication Errors are due to System or Personal Faults***



CHAPTER 5: RECOMMENDATIONS

In order to reduce the frequency of occurrence of errors in the hospital, the following are some of the recommendations:

- Increasing nursing manpower
- Providing training sessions for the staff which would cover the following aspects:
 - Extending the training period for the new staff
 - Making the culture of the hospital less punitive in nature
 - Continuing education programs for doctors, nurses and pharmacists.
 - Use of technology such as more advanced infusion devices , automated dispensing cabinets etc.
 - Quality improvement programs should provide guidance for patient support, staff counselling and education, and risk management processes when a medication error is detected.
 - Incident reporting policies and procedures and appropriate counselling, education, and intervention programs should be established in all hospitals. This would help to reduce further occurrence of errors by establishing a cause for the error.
 - Risk management processes for medication errors should include pharmacists, physicians, and nurses, in addition to risk management specialists

CHAPTER 6: CONCLUSION

This study has highlighted that medication administration is an important part of delivering safe patient care. Despite a desire to deliver high quality care, errors occur on both a systems and personal level. But when they are not paid attention to, the potential to avoid further errors is greatly reduced. Thus potentially avoidable adverse events such as increased mortality and morbidity – as well as resource utilisation will result.

A lack of high quality data reduces the institution's risk management capabilities. Without the knowledge gained by analysing a series of medication errors, it is impossible to separate special cause from common cause errors and to enhance the overall effectiveness of the medication delivery system.

While it is unrealistic to expect a zero error rate, a culture that supports identification and reporting of the adverse events is more likely to enhance the quality enhancement initiatives. Surveys and studies like the one described above can be helpful in providing a basis to begin discussions on bringing about an improvement in the system.

ANNEXURE 1

Questionnaire for nurses (regarding medication administration errors)					
<i>How far do you think the following factors are responsible for causing errors in medication administration</i>					
	Strongly agree	Agree	Disagree	Strongly disagree	N/A
Work load levels within working hours					
Interruptions in work environments (eg noise level etc)					
Communication gap within healthcare service providers (esp while handing over /change of shifts)					
Lack of standard medication administration times					
Inadequately/un trained nursing personnel					
Failure to record /chart the medication administered due to mal functioning of bar code scanner					
Working with too many medications					
Working with look alike sound alike(LASA) drugs					
Lack of familiarity with drug ordering system (indenting)					
Improper drug storage					

ANNEXURE-2

Questionnaire for physicians (regarding medication administration errors)					
<i>How far in your opinion the following factors are responsible for causing medication administration errors ?</i>					
	Strongly agree	Agree	Disagree	Strongly disagree	N/A
Wrong patient identification					
Wrong dosage					
Use of ambiguous abbreviations					
Incomplete/unclear drug orders (w.r.t patient's name , full name of drug , its dosage and frequency)					
Medication unavailable					
Equipment malfunction / failure					
Medical service (special needs for certain patient populations including geriatrics,paediatrics,oncologyetc)					

ANNEXUR-3

Questionnaire for pharmacists (regarding medication administration errors)					
<i>How far do you think the following factors are responsible for causing errors in medication administration ?</i>					
	Strongly agree	Agree	Disagree	Strongly disagree	N/A
Dispensing wrong medication (esp while working with LASA drugs)					
Dispensing incorrect dose					
Time lag in sending the medication to the floor					
High workload					
Lack of standard mechanism to sort the short term expiry drugs					
Transcription error in case of handwritten orders					

ANNEXURE-4

Questionnaire for nurses (regarding medication administration errors)					
<i>How far do you think the following factors are responsible for causing errors in medication administration</i>					
	Strongly agree	Agree	Disagree	Strongly disagree	N/A
Work load levels within working hours	28%	52%	7%	0%	13%
Interruptions in work environments (eg noise level etc)	5%	28%	50%	7%	10%
Communication gap within healthcare service providers (esp while handing over /change of shifts)	0%	55%	40%	5%	0%
Lack of standard medication administration times	0%	15%	77%	5%	3%
Inadequately/un trained nursing personnel	13%	67%	10%	3%	7%
Failure to record /chart the medication administered due to mal functioning of bar code scanner	5%	65%	20%	4%	8%
Working with too many medications	7%	53%	40%	0%	0%

Working with look alike sound alike(LASA) drugs	2%	40%	53%	0%	5%
Lack of familiarity with drug ordering system (indenting)	2%	50%	40%	3%	5%
Improper drug storage on the floor	5%	10%	78%	5%	5%

ANNEXURE-5

Questionnaire for physicians (regarding medication administration errors)					
<i>How far in your opinion the following factors are responsible for causing medication administration errors ?</i>					
	Strongly agree	Agree	Disagree	Strongly disagree	N/A
Wrong patient identification	20%	50%	20%	10%	0%
Wrong dosage	25%	40%	35%	0%	0%
Use of ambiguous abbreviations	15%	55%	25%	0%	5%
Incomplete/unclear drug orders (w.r.t patient's name , full name of drug , its dosage and frequency)	20%	35%	20%	20%	5%
Medication unavailable	15%	45%	10%	30%	0%
Equipment malfunction / failure	25%	25%	40%	10%	0%
Medical service (special needs for certain patient populations including geriatrics,paediatrics,oncologyetc)	15%	75%	10%	0%	0%

ANNEXURE-6

Questionnaire for pharmacists (regarding medication administration errors)					
<i>How far do you think the following factors are responsible for causing errors in medication administration ?</i>					
Causes	Strongly agree	Agree	Disagree	Strongly disagree	N/A
Dispensing wrong medication (esp while working with LASA drugs)	10%	90%	0%	0%	0%
Dispensing incorrect dose	10%	70%	20%	0%	0%
Time lag in sending the medication to the floor	20%	30%	50%	0%	0%
High workload	50%	20%	30%	0%	0%
Lack of standard mechanism to sort the short term expiry drugs	0%	20%	80%	0%	0%
Transcription error in case of handwritten orders	10%	50%	10%	0%	30%

ANNEXURE-7

INCIDENT REPORT FORM

Patient's Name

Age

Sex

UHID

Bed No

IP No

To be filled within 12 hours of Incident & submitted to Nursing Supervisor/TL within 24 hours

List of Incidents to be reported
(Please tick the desired option)

- ? Patient Fall
- ? Medication Errors
- ? Pressure Sores
- ? Hypoglycemia (Less than 70mg/dl)
- ? Nosocomial Infection
- ? Infection Out break
- ? Needle Stick Injury
- ? Readmission within 7 days
- ? Return to OT within 7 days
- ? Return to ICU within 7 days
- ? Return to Emergency within 7 days
- ? Mortality
- ? Adverse Drug Reactions
- ? Sentinel Events
- ? Blood Transfusion related errors

(Labeling related,

Other Adverse Events

- ? Patient Identification Error
- ? Acute Limb ischemia
- ? Discrepancy in Sponge/gauge count
- ? Cautery Burns
- ? Needle left inside Porta Cath
- ? Others

.....

Near Miss

- ? Patient Fall
- ? Medication Error
- ? Patient Identification Error
- ? Any other kind of Near Miss

Please

specify.....

Incident Details

? Inpatient

? Out-patient

? Relative

Patient's Admission Diagnosis:

Admitting Consultant/Consultant in charge:

Name of witness / first person to attend:

Ward/Dept:

Exact Location:

Date & Time of the Incident:

Describe what happened and the kind of incident

Impact on the Patient (e.g description of any injury/harm sustained to patient)

Mention category : minor, major or near miss

Sign & Name of Admitting Consultant + ICU In charge (If applicable).

Sign & Name of the
Reporting Staff
Emp. Code
Date & Time

Floor Manager
Name /Sig
Date & Time
Emp. Code

Sign & Name of Nursing
Supervisor/TL
Emp. Code
Date & Time

RMO/Floor Doctor
Emp. Code
Date & Time

ROOT CAUSE ANALYSIS

PLEASE ATTACH THE INCIDENT REPORT FORM

Please do not use this template for RCA of Nosocomial Infection, Return to OT/ICU, Readmission, and Code Blue.

Incident category (Please tick the desired option)			
Major ☐ May require prolonged hospitalization ☐ Additional treatment/procedure ☐ Intervention required to sustain life ☐ Prolonged or permanent disability ☐ Patient Death	Minor ☐ Minor Treatment/test required ☒ No harm to patient, temporary discomfort	Near Miss ☐ Event having potential of incurring harm	
RISK PRIORITY MATRIX (Please tick the desired option)			
	Potential Severity (IMPACT: HARM/INJURY TO PATIENT)		
Likelihood of recurrence at that severity	Major	Minor	Near Miss
Frequent	9	5	2
Occasional	7	4	1
Rare	6	3	1
Interpretation	High Risk > 6	Moderate Risk = between 5 to 2	Low Risk =1
Investigation team (Names,		Source of Information & evidence	

Roles, Dept.'s)		gathered
Chronology of events: background of case, detection, on spot rescue, and actions		
Chronology of events: background of case, detection, on spot rescue, and actions, (For complex cases any summary timeline included in the report should be a summary)		
Contributing Factors:		
What were the gaps (Please tick the desired option)		
☐ Failure to plan?	☐ Failure to rescue/respond?	
☐ Failure to communicate?	to	☐ Failure to recognize?
☐ Failure to care?	☐ Any Equipment related factor? Slow down of HIS	
Lessons learned (Key safety and practice issues identified which may / may not have contributed to this incident but from which others can learn:		
1.		
Corrective and Preventive Action (For each of the findings identified in the analysis)		
Actionable Point	Responsibility	Target Date

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Responsibility for communication, coordination and follow-up will be with the Quality Manager of the respective hub.

Signature and Name of RCA Team Leader:-

Date of RCA Report:-

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