

MEDICATION TURNAROUND TIME IN HOSPITAL IP PHARMACY AND MAPPING MEDICATION ERROR

INTRODUCTION

- MEDICATION TURNAROUND TIME is the total time taken between the indent ordered to the time it takes to reach the respective station.
- MEDICATION ERROR is defined as any preventable event that may cause or lead to inappropriate use or patient harm while the medication is in control of the patient, healthcare professional or consumer.

AIM

- The aim of the study was to find out the turnaround time of hospital in-patient pharmacy taking indent entries of new as well as routine patients to check for delay in medications arrival for new patients and to map their medication errors to know the state of medication errors in files and suggest recommendations for the above.

OBJECTIVES :

- To calculate the turnaround time of hospital IP Pharmacy indents.
- To find out the medication errors of the sample taken with respect to the medications indented.

METHODOLOGY

- STUDY DESIGN-The study design was a Descriptive Study.
- STUDY SITE- Zydus Hospitals, Ahmedabad.
- STUDY DURATION-The duration of the study was from 15th April'17 till 20th May'17
- SAMPLE SIZE-The sample size taken was 300 patients' indent entry.
- DATA COLLECTION METHOD-Primary Data Collection

Primary Data Collection:

The time of each step in the process flow of medication dispensation was recorded and then the files of respective patients were checked for mapping medication errors.

Inclusion & Exclusion Criteria:

New as well as Routine patients' entry were recorded. Data was collected of 300 patients without repetition and between the time frame 8 AM to 5 PM.

- DATA ANALYSIS TOOL-The tool used for analysing data collected was MS-Excel.

RESULTS

The results is divided into two parts:

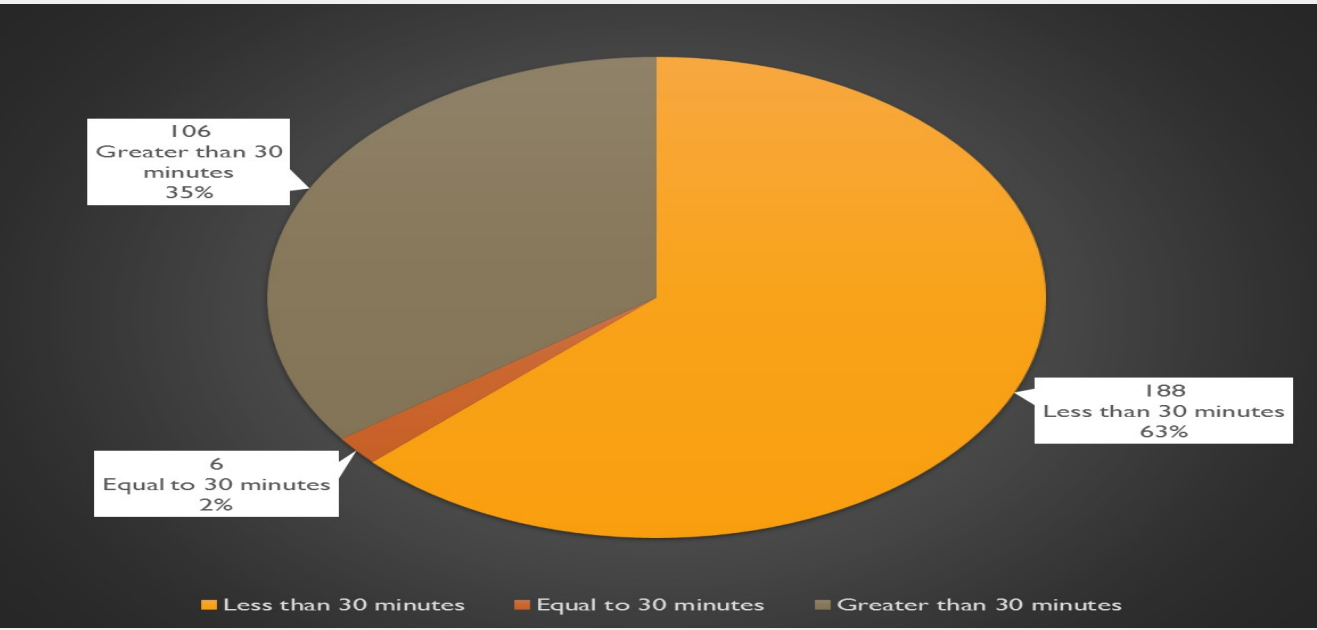
- Medication TAT results– which is further divided into two sections:

- A. Result of TAT of the 300 sample size taken
- B. Dividing the sample size into New and Routine indents.

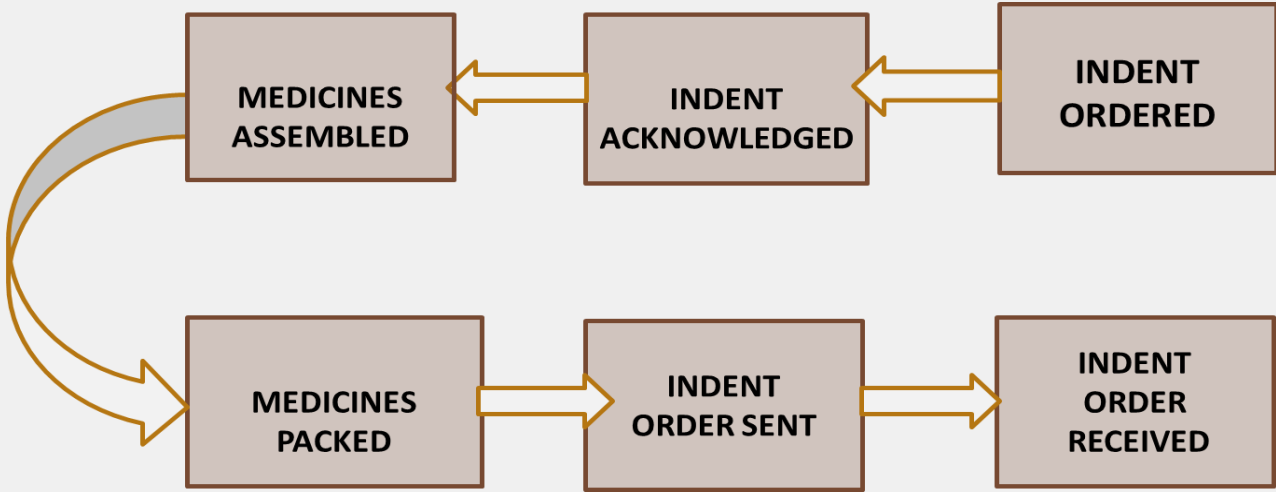
- Medication Error Results:

- A. The total number of errors of individual categories
- B. The NCCMERP Index as per the errors files.

1A. Analysis of the 300 sample size taken:



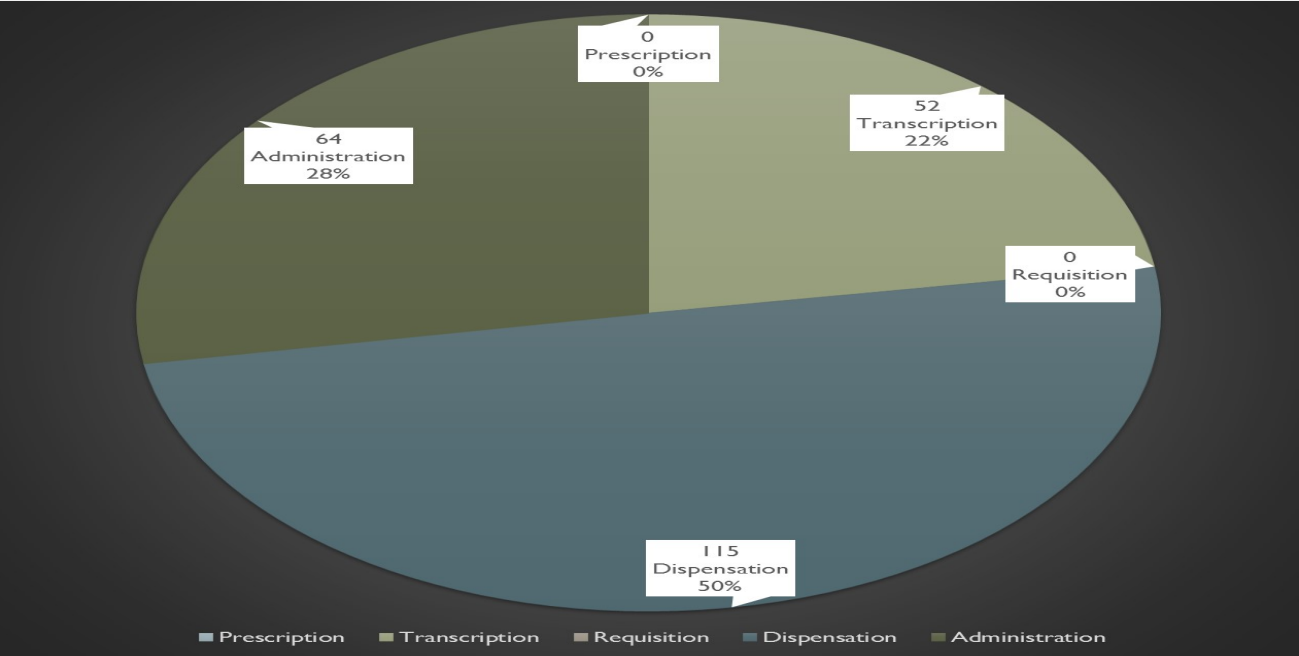
- The total TAT of 300 samples showed an average **delay** of 24 minutes i.e. 54 minutes,
- The problem as observed was because of the extra time taken in the individual steps that are involved in the process flow.
- Time taken between individual steps are as follows:
6 mins— 20 mins— 6 mins— 13 mins— 9 mins



1B. Dividing the sample into new and routine patient's indents:

	NEW	ROUTINE
TOTAL	73	227
LESS THAN OR EQUAL TO 30M	29	144
%	40	63
GREATER THAN 30M	44	83
%	60	37

2A. Medication Error– total number of errors in each category:

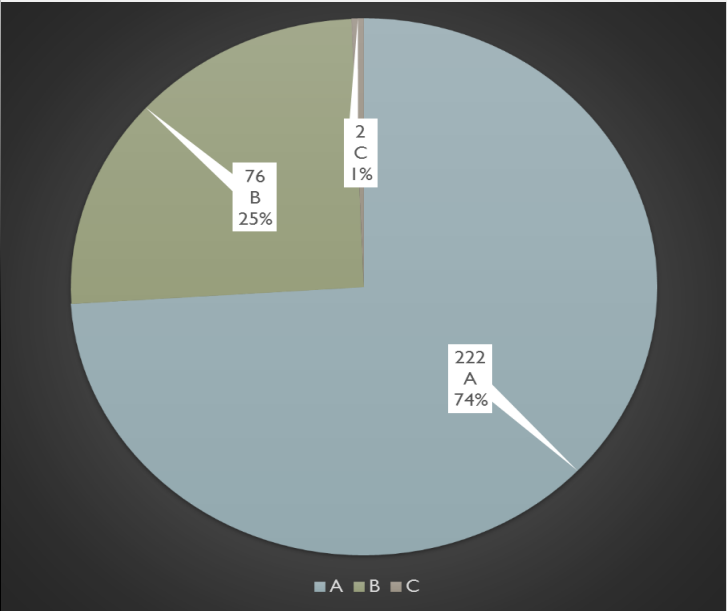


- PRESCRIPTION ERRORS**
 - DATE
 - TIME
 - SIGNATURE
 - DOSE
 - CAPITAL
- TRANSCRIPTION ERRORS**
 - START DATE
 - DOSE
 - ROUTE
 - TIME
 - SIGNATURE
- REQUISITION ERROR**
 - NAME
 - QUANTITY (TABS)
- DISPENSATION ERROR**
 - DRUG COMBINATIONS
 - LASA/ WRONG MEDICINE
 - DRUG DISPENSED WITHIN THE DEFINED TIME FRAME
- ADMINISTRATION ERROR**
 - SIGNATURE
 - PROPER FILE DOCUMENTATION

Capital (illegible writing)	24
Start Date	3
Dose	6
Route	1
Time	5
Signature	13

Drug Combinations	2
Wrong Medicine	1
Indent destination code	0
Drug not dispensed within the defined time frame	112
Signature	61
Improper Documentation	3

2B.The NCCMERP Index as per the errors filed:



A	No error, capacity to cause error
B	Error that did not reach the patient
C	Error that reached the patient but unlikely to cause harm

CONCLUSION :

- The turnaround time calculated was greater than 30 minutes for 35% of the cases , the delay being of 24 minutes.
- The medication error was maximum in the case of dispensation error which included the tat greater than 30 minutes, i.e. in 106 cases.
- Minimum errors were in prescription and requisition; administration errors accounted for 28% which included the signature at time of medications and proper file maintenance.
- Recommendations were suggested to decrease the turnaround time and medication errors.

RECOMMENDATIONS :

- Display of the division of work load among staff– pharmacists and attendees.
- There should be a fixed time for each step in the process flow of dispensation of medication as per hospital policy.
- There should be a display at receiving stations to return the containers as soon as they are emptied.
- Introducing BCMA (Bar Code Medication Administration).

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