A STUDY TO IMPROVE THE DISCHARGE PROCESS BY APPLYING SIX SIGMA APPROACH

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INTRODUCTION

- Discharge is defined as, “A process by which an episodes of treatment and care to a patient is formally concluded by the health professional”.

- Six sigma continuous to be the interest in the corporate world and has been used to address number of problems including decreasing length of stay, decreasing medication errors, improving the admission process and improving the quality of care.

There are three types of discharge:

- **Discharge on advice:** The consultant will discharge on satisfaction with the patient condition. Discharge information shall be given to the resident or staff nurse and after that the resident will prepare discharge summary in written form and approved by the consultant signature.
- **Discharge on request:** The patient request for discharge while further treatment is advised due to financial or any other reason.
- **Discharge against Medical Advice (DAMA):** The process for patient leaving the hospital in DAMA is same as the discharge on advice. The consent from the patient is recorded in DAMA form.

OBJECTIVES

- To study the process flow of discharge process
- To calculate the turnaround time of discharge process
- To diagnose the reasons for delay
- To apply six sigma techniques in discharge process for time reduction

METHODOLOGY

- **SAMPLE SIZE:** 220

Out of 220, 160 sample was taken for pretesting and 60 sample was taken for post testing

- **SAMPLING:** Non Probability Convenient sampling

- **RESEARCH DESIGN:** Descriptive Cross sectional study

- **RESEARCH APPROACH:** Observation of turnaround time (Pre and Post intervention)

SIX SIGMA APPROACHES

- The five phases of six sigma are

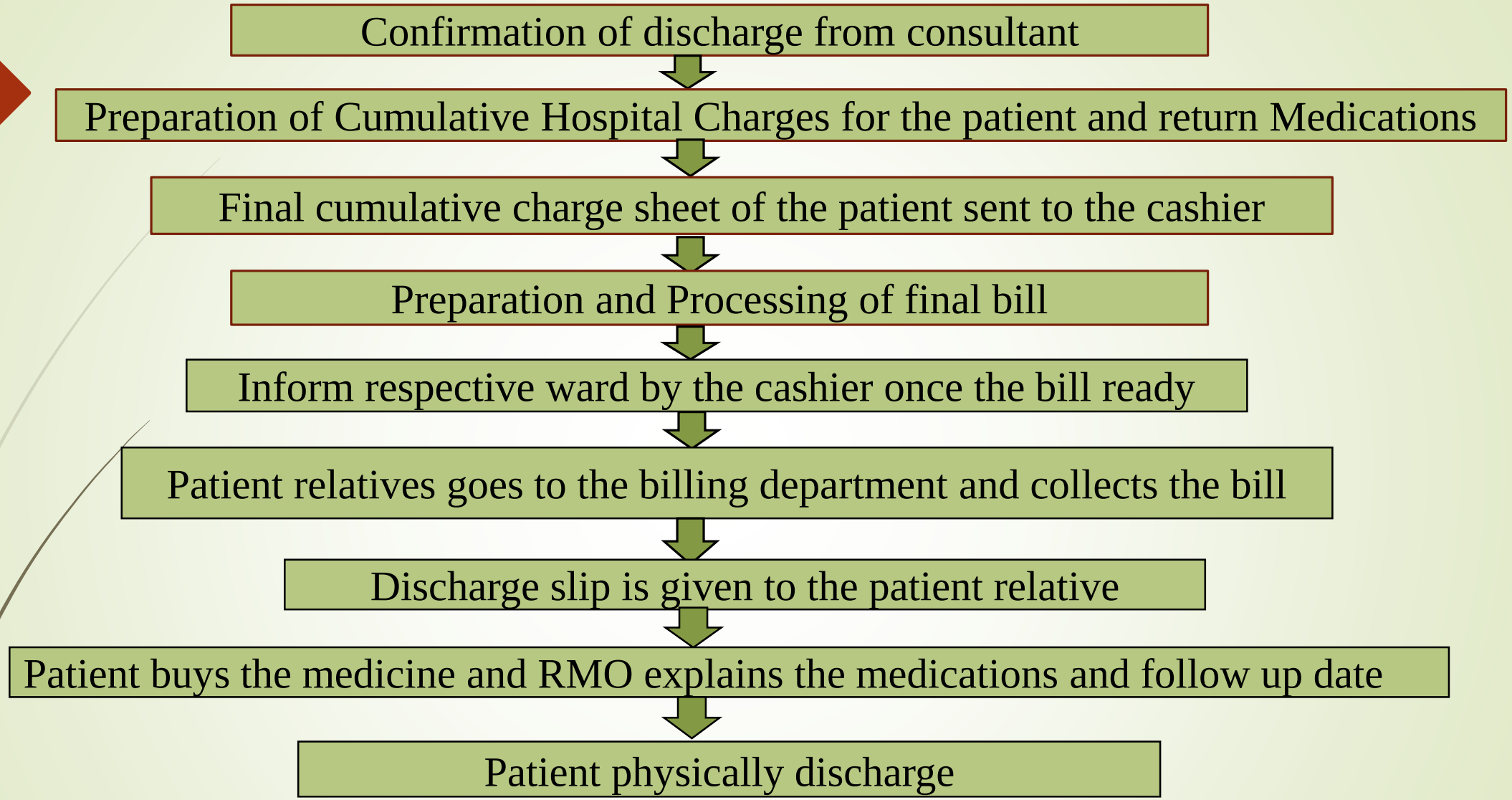
  Phase 1-Defining the problem

  Phase 2-Measure

  Phase 3- Analyze

  Phase 4 - Improve

  Phase 5 - Control



Process flow of Discharge Process

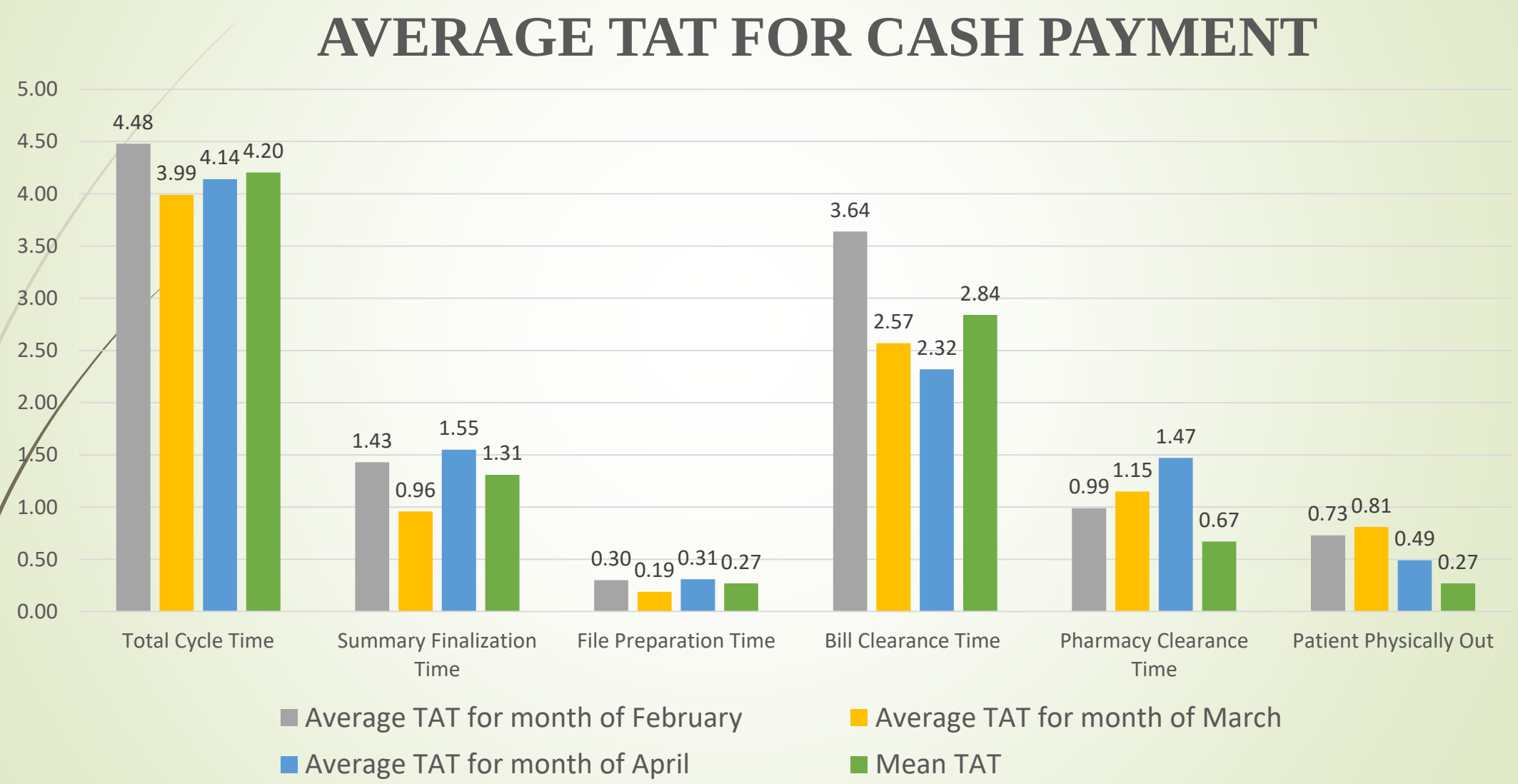
DATA COLLECTION

- **Primary Data:**

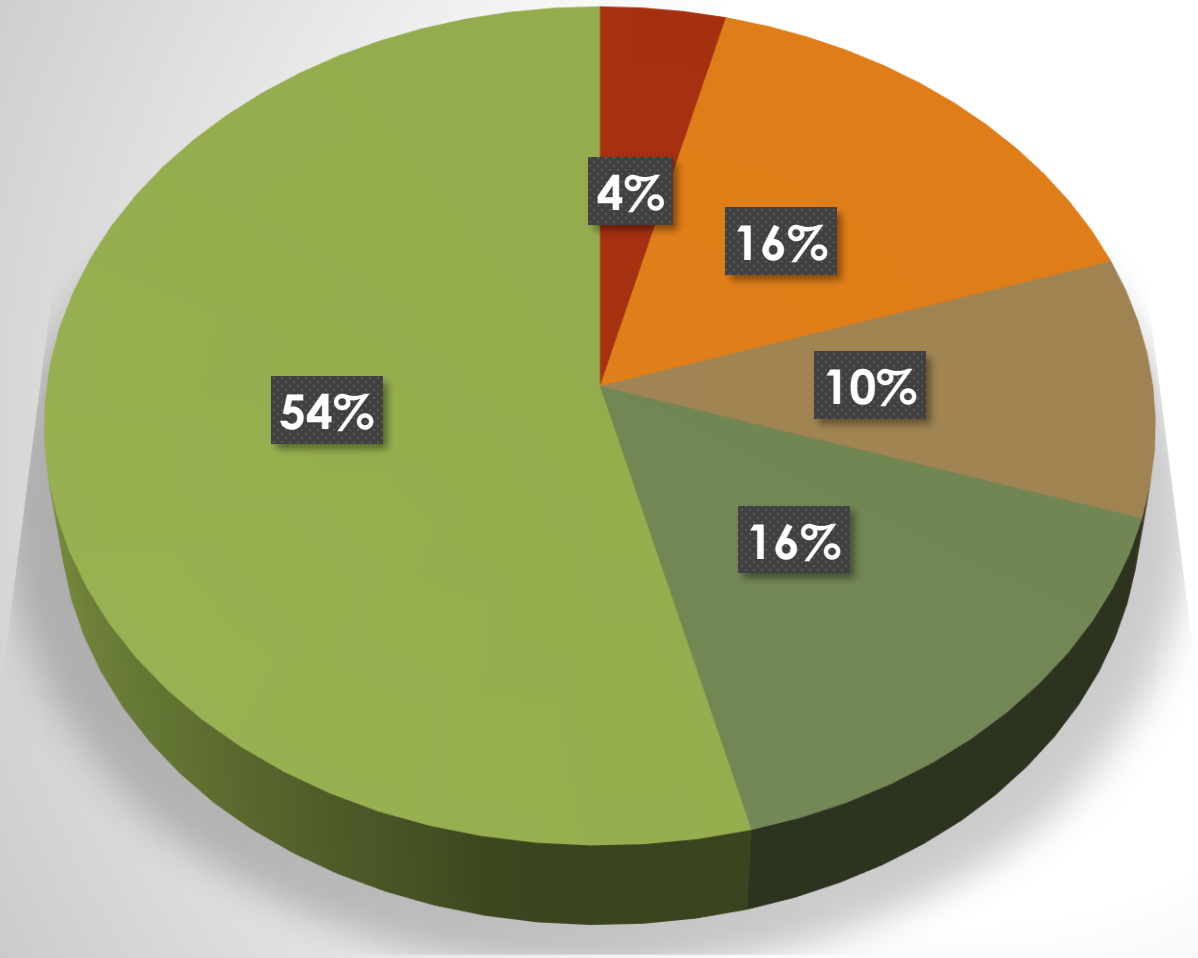
Data was collected for the four parameters- Summary finalization, Pharmacy return, File preparation, Bill clearance, Patient physically out. Sample for 160 patient discharges from IPD floors as per convenience sampling. The investigation recorded the start time and the end time of every parameter for daily discharge.

- **Methodology:** Observation is the method for the collection of primary data.

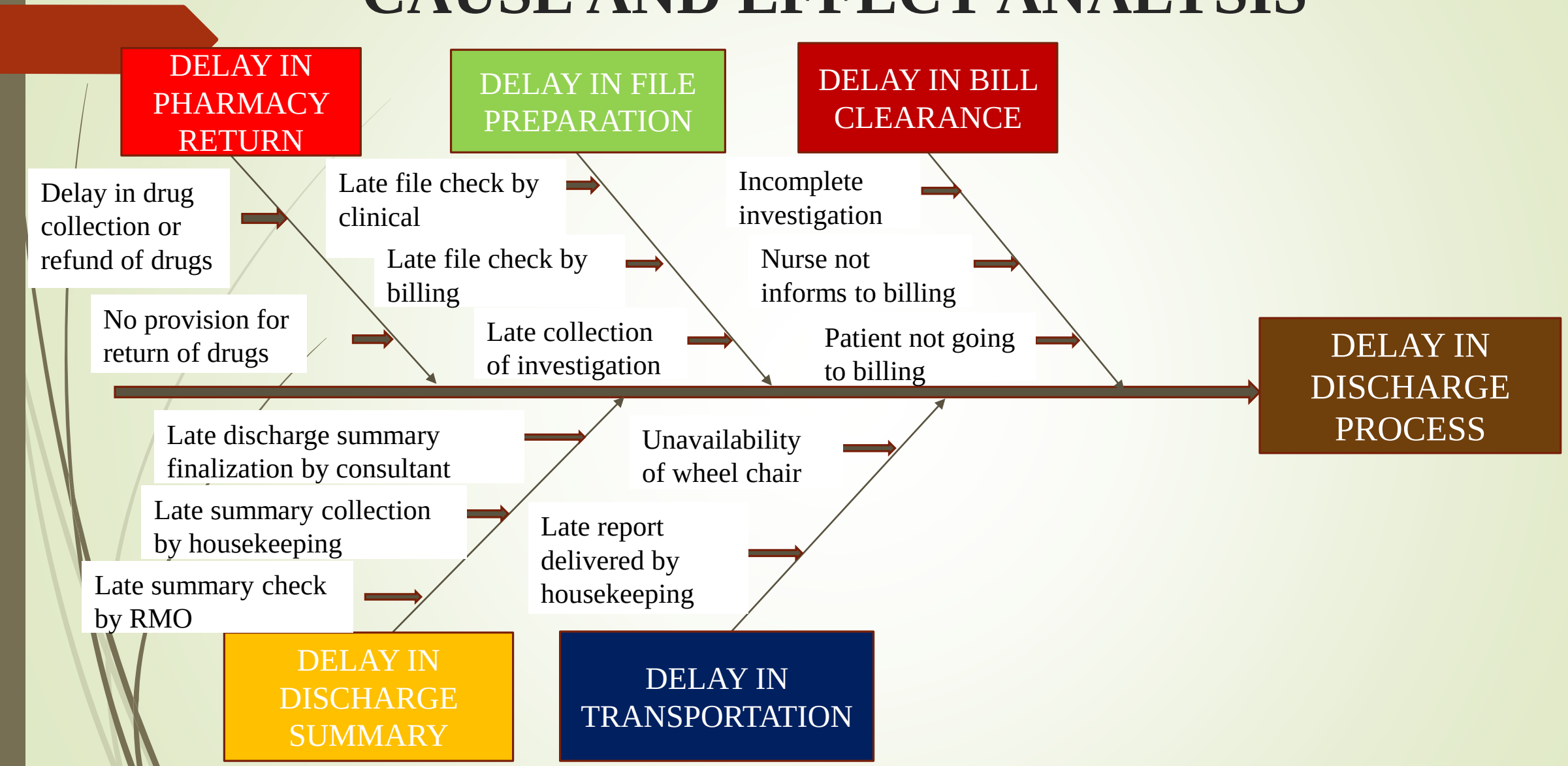
DATA ANALYSIS



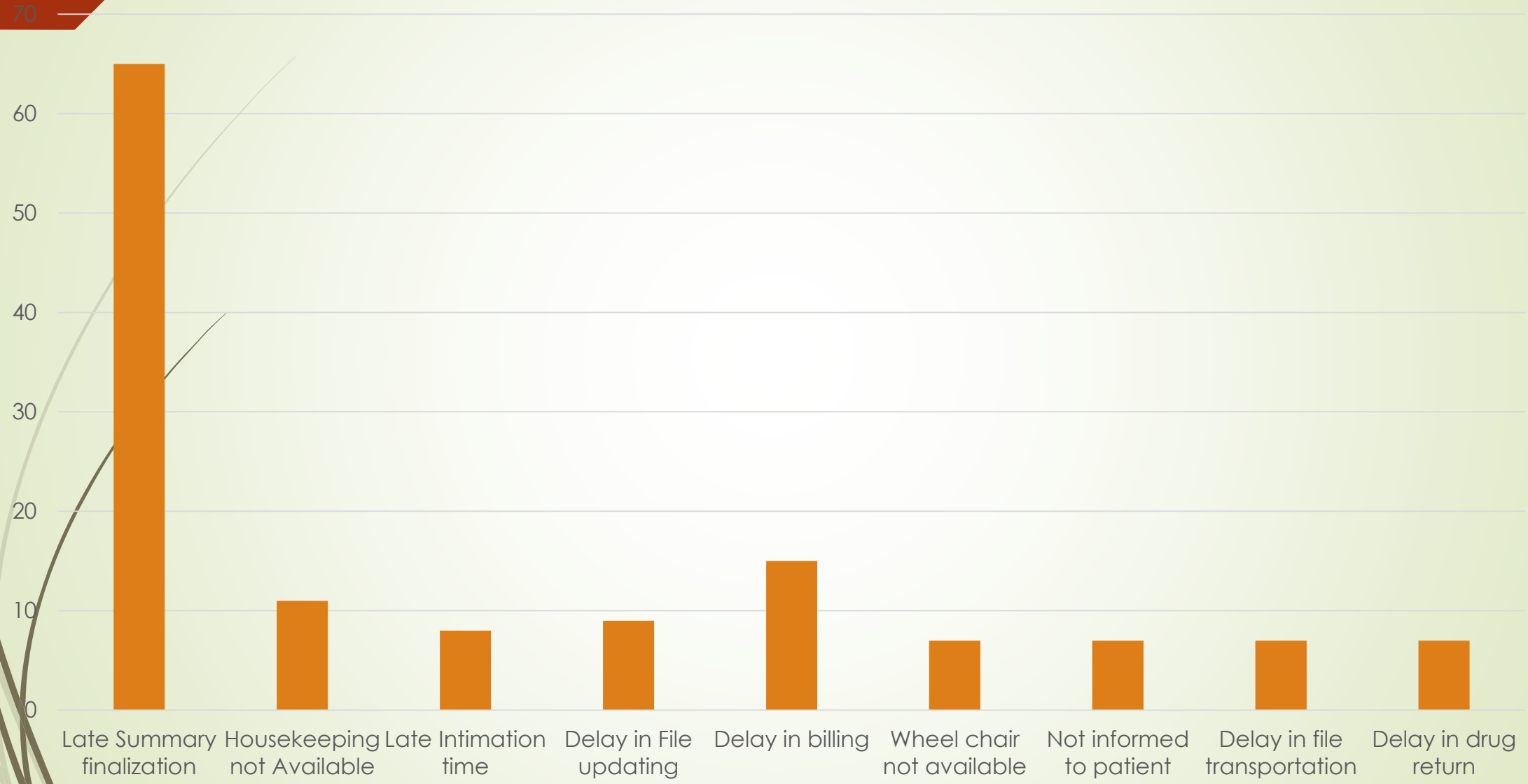
PERCENTAGE OF DISCHARGE IN TIME RANGE



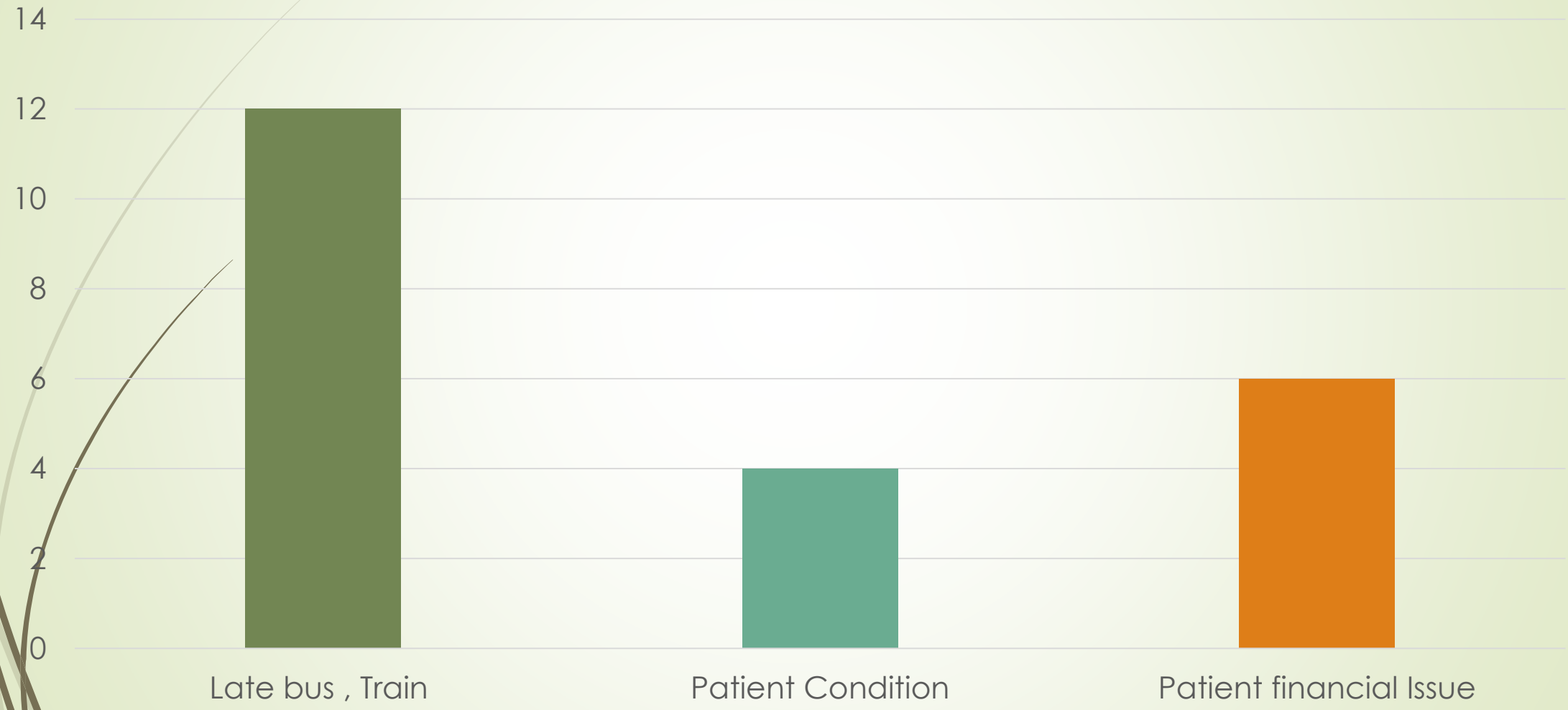
CAUSE AND EFFECT ANALYSIS



CONTROLLABLE REASONS FOR DELAY



NON CORRECTABLE REASONS FOR DELAY



ACTION TAKEN ON THE BASIS OF CAUSE AND EFFECT ANALYSIS

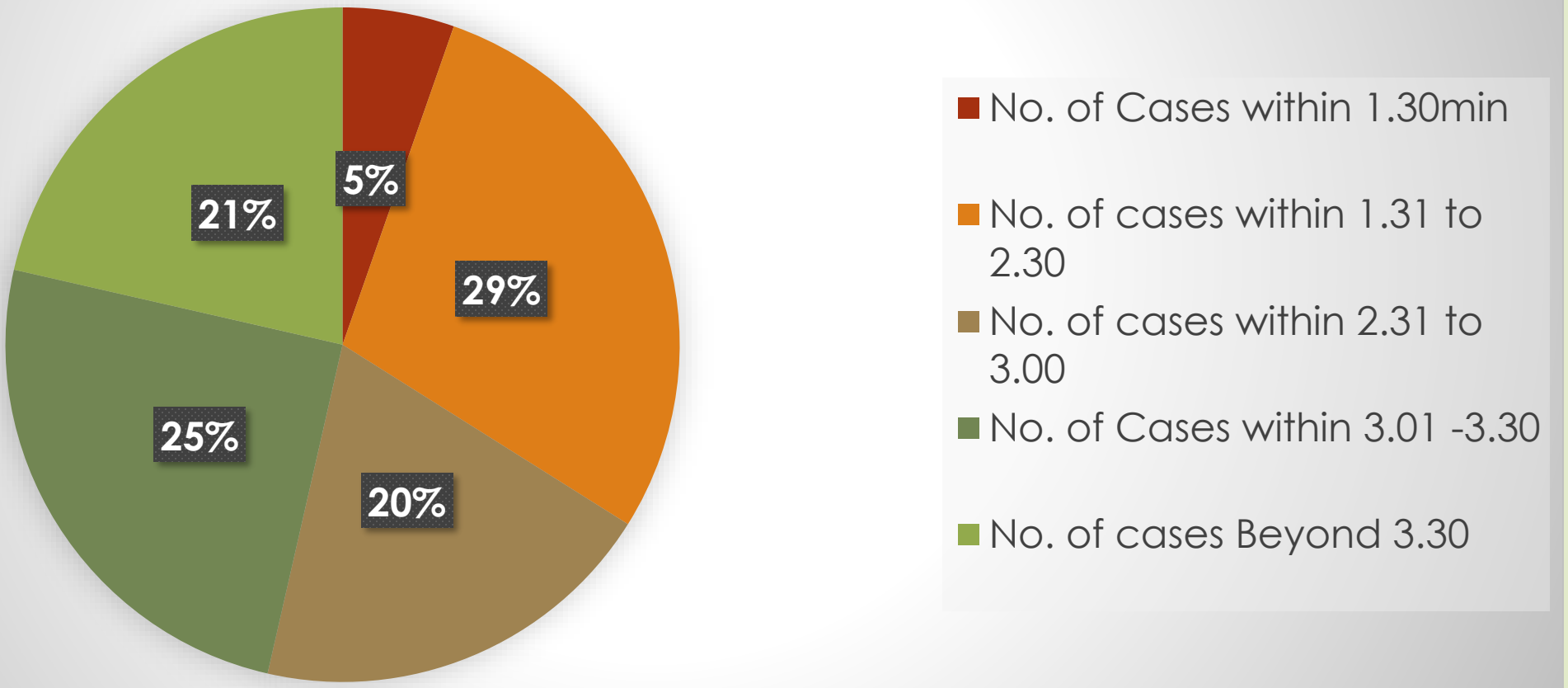
- The discharge summary was updated a day prior to the expected date by the doctor and typist, so that when the doctor go on rounds they are able to complete the process of discharge summary and sign it in the nursing station, immediately after the rounds.
- After the assigned nurse has finalized the pharmacy which is to be returned, the return material was counterchecked and signed by the in charge.
- After requesting for drug return the housekeeping collects the drug from the Nursing station on time.
- The documents was updated in the file on daily basis by the typist.
- The doctors filed investigation and treatment on daily routine basis.
- The attendant was provided with a printed provisional bill a day prior to the expected date of exchange.
- The assigned nurse was assigned with the responsibility to coordinate with Patient and billing department.

POST ANALYSIS

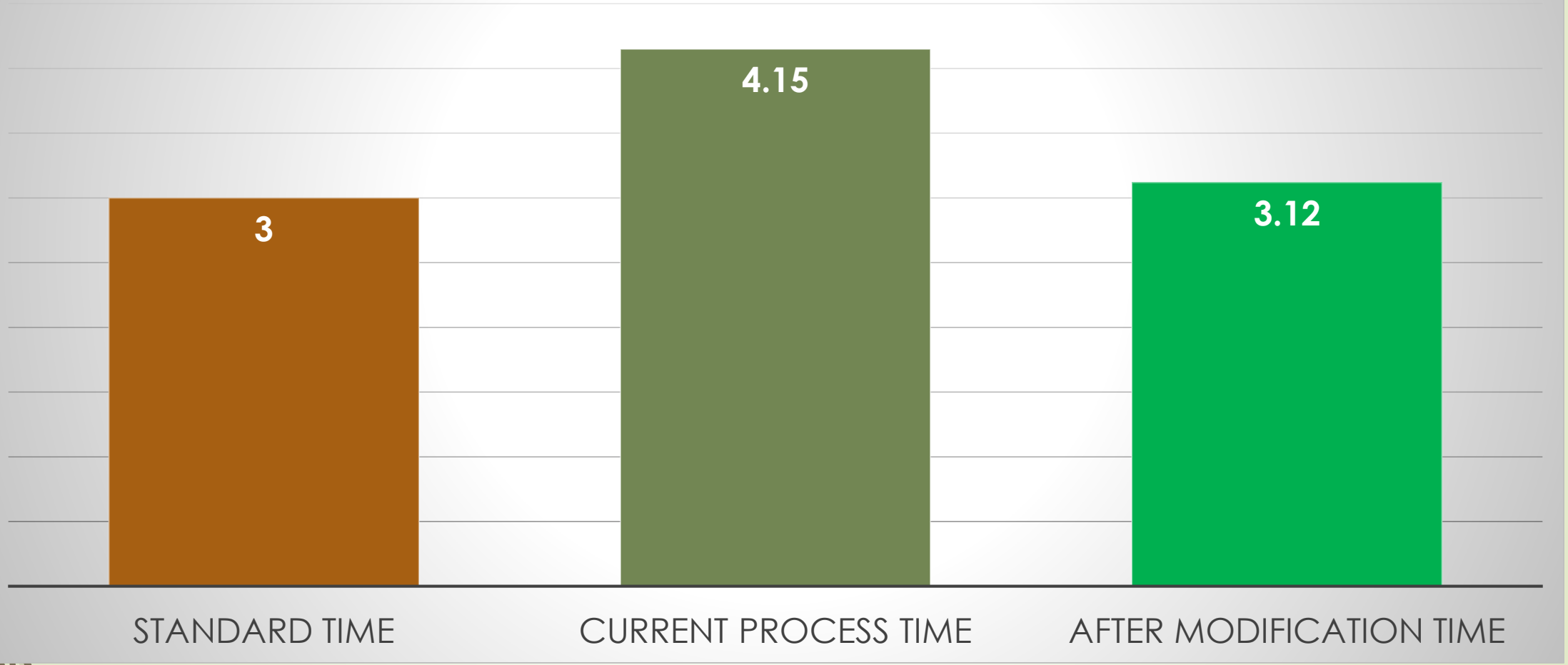
DATA COLLECTION

- Sample for 60 patient discharges from IPD floors as per convenience sampling.

PERCENTAGE OF DISCHARGE IN TIME RANGE



COMPARISON OF TIME IN DISCHARGE PROCESS (IN HOURS)



The standard time of discharge process in Rajan Hospital is **3 hours i.e. 180minutes** but the actual time taken for completing the process is **4 hours 15minutes i.e. 255minutes**. After implementing the recommendation in the discharge process the time taken for completing the discharge process **is 3hours 14minutes i.e. 192 minutes**. The difference between pre -analysis and post analysis is **63 minutes.**

CONCLUSION

- Regular follow up of Discharge process should be taken by ward coordinator.
- Assigned the Responsibility to Nurse for completing discharge process within 3 hrs.
- Appreciate the Nursing staff who completed the process within time.
- Make the software which will give the discharge Message to every Department.
- Distribute the proper work to every department
- Present the Data of discharge at the end of the month.

THANK YOU