

## ABOUT HOSPITAL-

- Fortis Hospital Shalimar Bagh, (New Delhi) is a multi-super specialty Hospital, one stop provider for all services.
- Commenced its operations in 2010
- 262 bedded hospital
- Vision : “Saving and Enriching Lives”
- Mission : "To be globally respected healthcare organization known for Clinical Excellence and Distinctive Patient Care”

## RATIONALE :

- This study is mainly based on reducing the waiting time of patients in the queues at front desk at Fortis Hospital.
- To analyze the gaps in waiting process at front desk and thus improve the satisfaction among patients.
- Identification of the reasons for increased waiting time to reduce the resulting long waiting time in queues.

## OBJECTIVE :

- To determine the average waiting time spent by the patient in the queue at front desk of OPD.
- To analyze the factors responsible for prolonged queuing time at front desk in the OPD.
- To recommend appropriate suggestions to reduce the queuing time

## RESEARCH METHODOLOGY :

- Study Design**  
Phase I – Descriptive, cross sectional study  
Phase II - Analytical
- Study Setting**  
Fortis Hospital, situated in the Shalimar Bagh, North Delhi
- Study Duration-** 4 weeks
- Type of Sampling**  
Non Probability Sampling
- Study Sample**  
Patients visiting in month of May  
Total Patients: 250
- Inclusion criteria :** Patients coming for billing and registrations
- Exclusion Criteria :** Patients came in queue for inquiry  
Patients with more than 1 billing/invoice

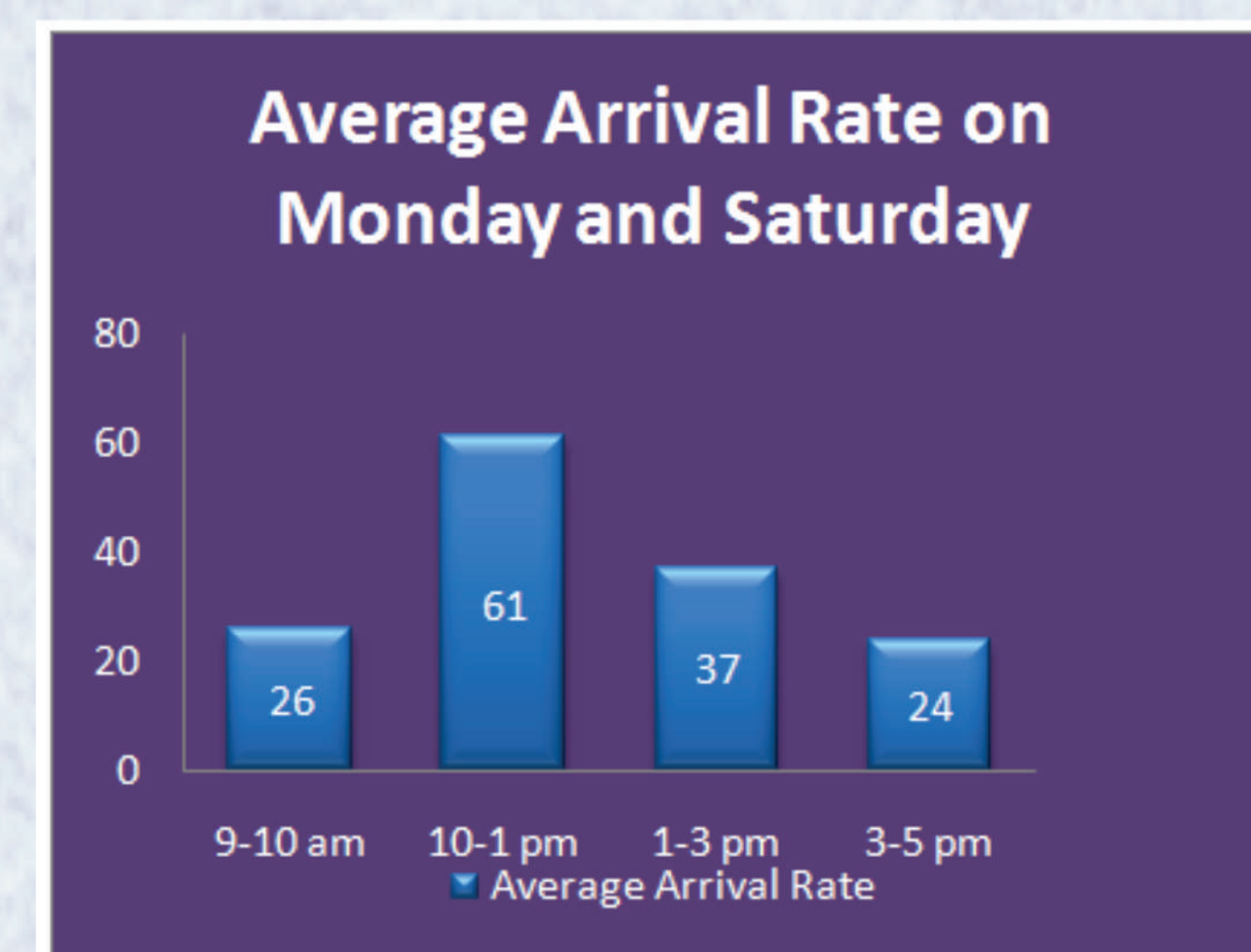
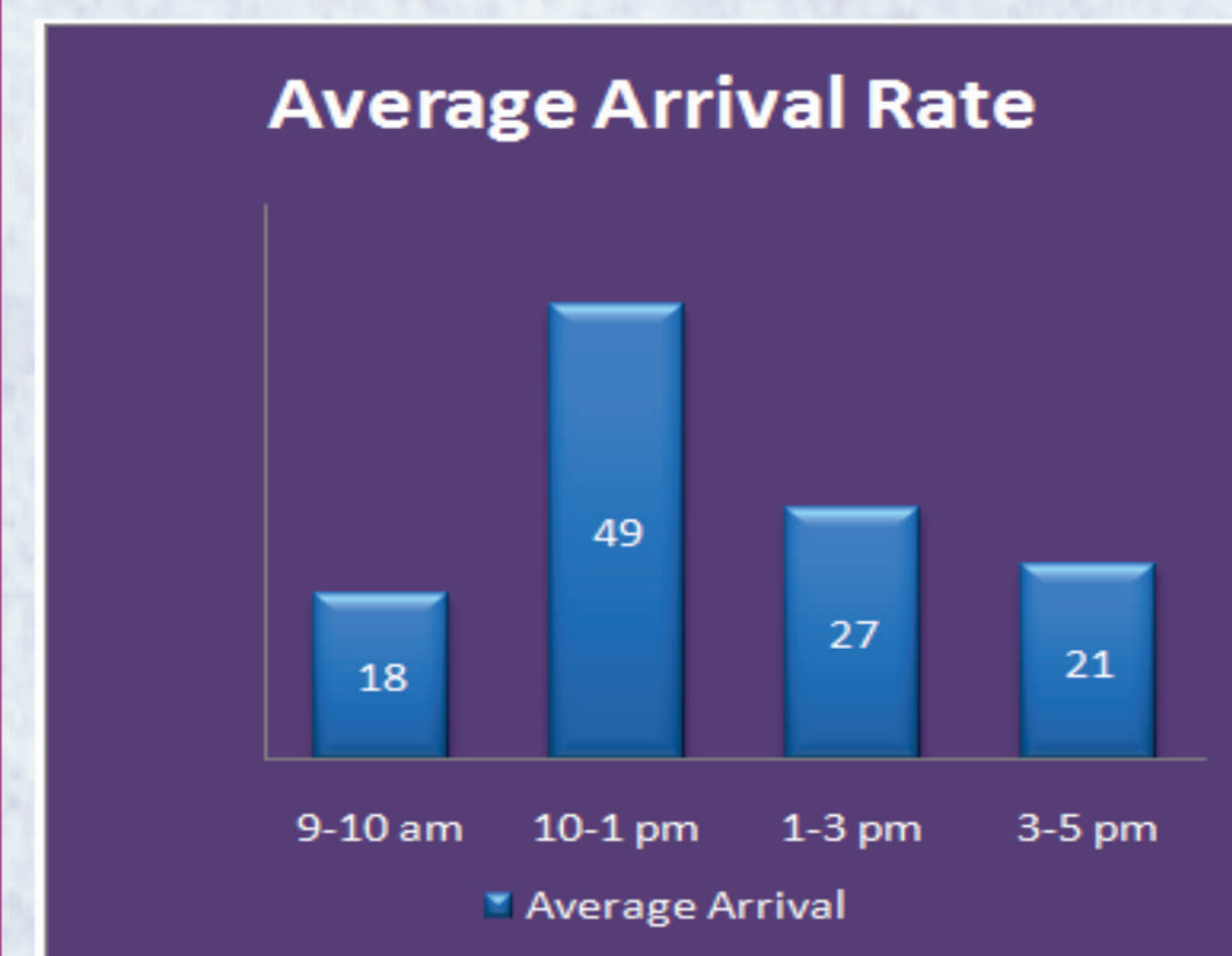
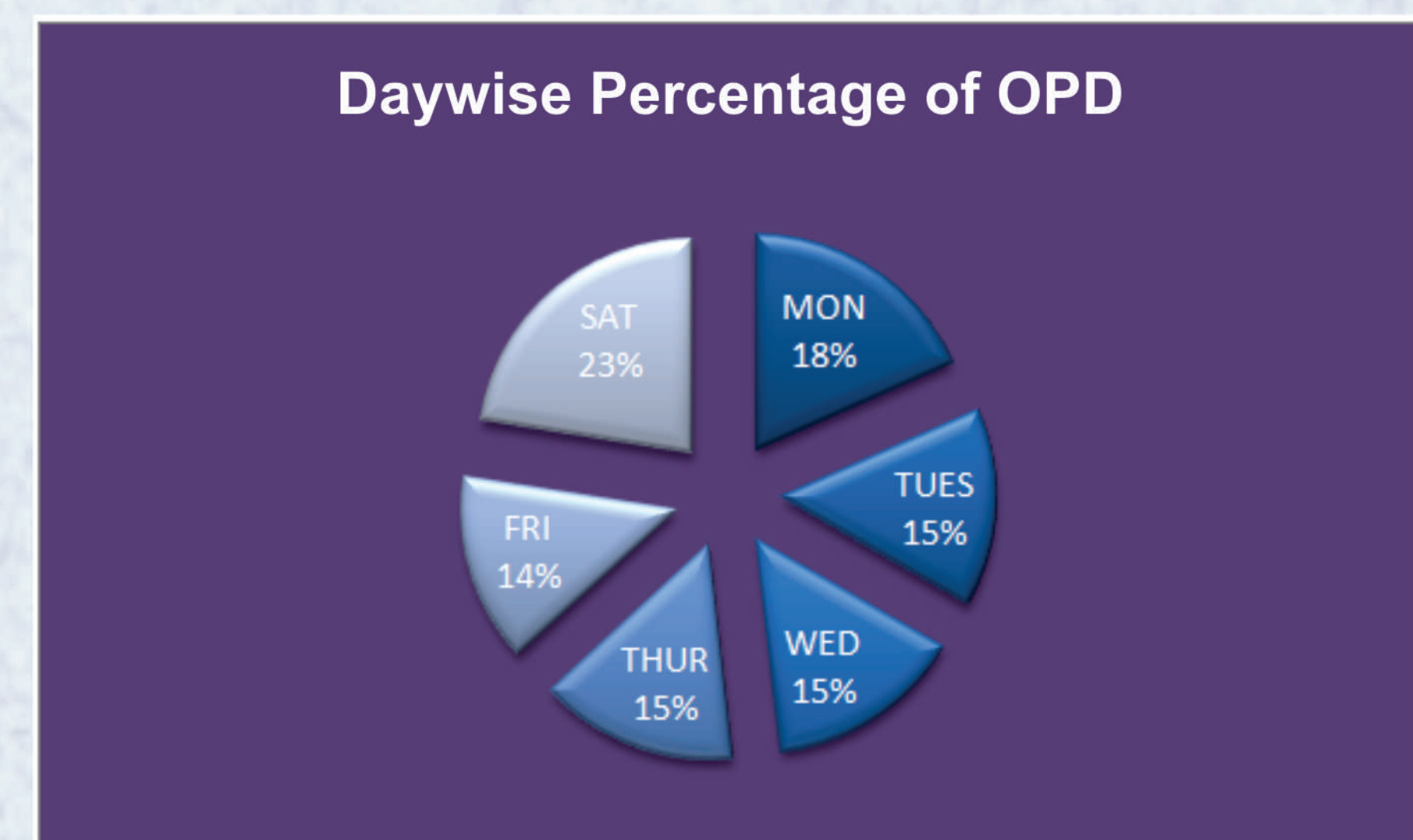
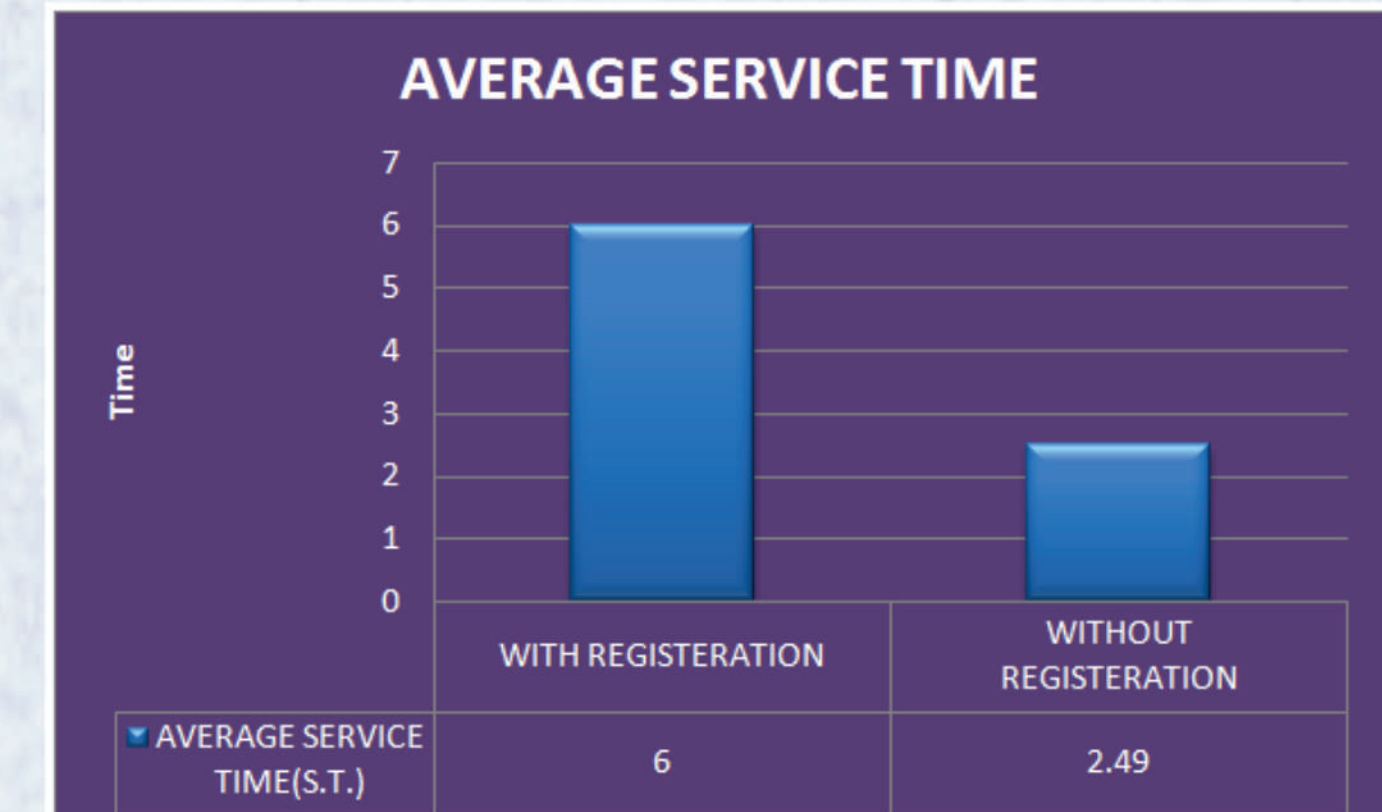
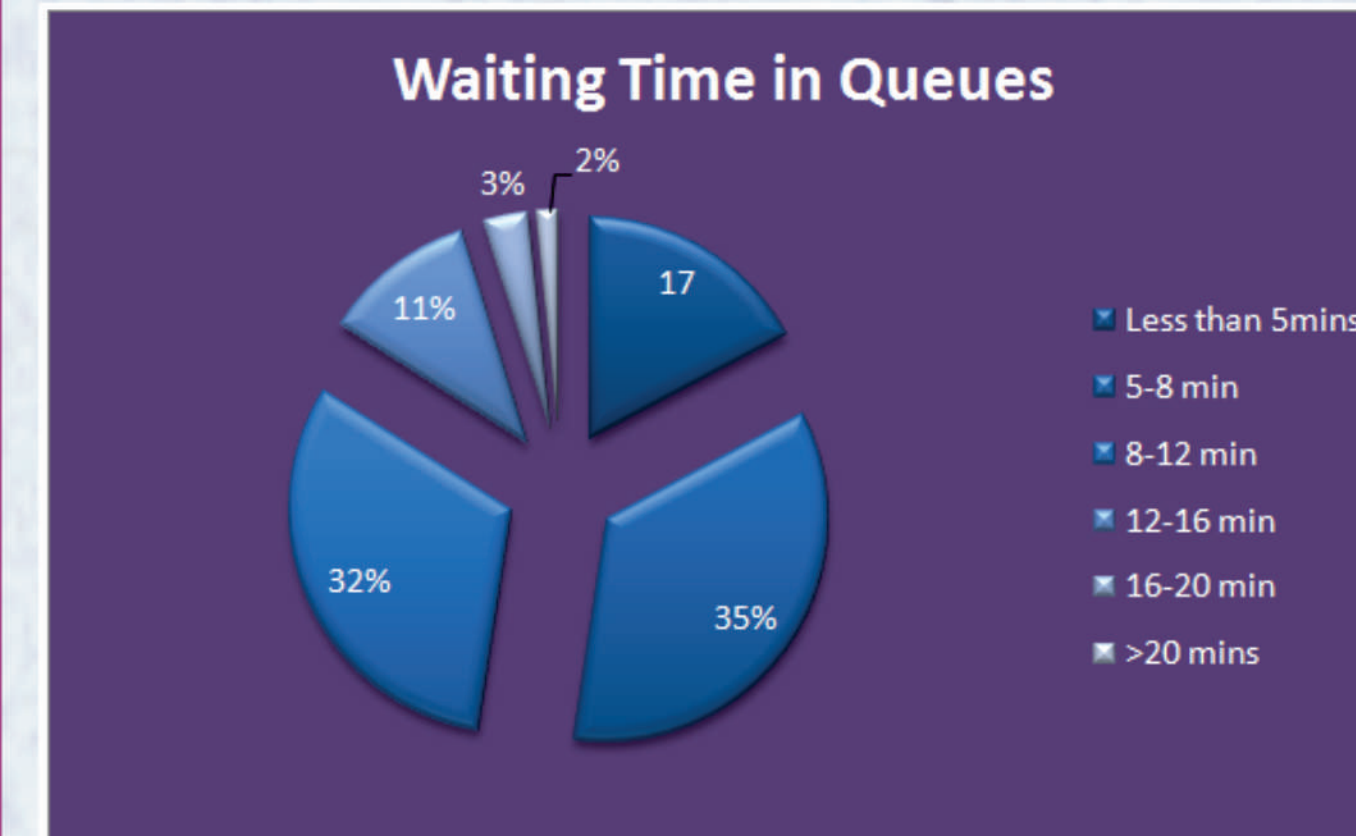
## RECOMMENDATIONS :

- Installment of proper display system/screen for floor wise OPD distribution right above front desk.
- New registration takes more time. Registration form should be get filled before entering in queue.
- Convert one more system into OPD server counter on Mondays and Saturdays
- Patients claiming for discounts take more time in service as there documents are photocopied every time. Some change in flow like uploading and saving the documents with their id for registered patients can save time.
- Counters should be different for patients coming with appointment and without appointment.
- Token system could be introduced in the system which could reduce the crowd and will convert Multiple server Multiple queue model into Multiple server Single queue (enough waiting capacity is to be ensured first).
- Patients should be encouraged to take appointments
- Improving work flow and communication of staff
- Rails separating the queues for different server if arranged more appropriately can reduce the crowd of people. A zigzag way of rails can be used so that only 1 customer (patient) reaches per server.

## INTRODUCTION-

- The Front office or reception is an area where visitors arrive and first encounter a staff at a place of business.
- A common problem that occurs is that of queuing or waiting in line.
- Queues form when the demand for service exceeds its supply.
- Queuing time depends on the arrival rate of customers, the number of servers serving line, and the amount of service time for each individual customers.
- The danger of keeping customers waiting could become a cost to them

## FINDINGS



## Comparison Between Expected Waiting Time in Queue to the Actual Waiting Time

| Time Interval | Arrival Rate (Per Hour) | Service Time (In Minutes) | Expected Waiting Time In Queue (In Min) No of server=4 | Expected Waiting Time In Queue (in Min) No of server=3 | Expected Waiting Time In Queue (in Min) No of server=2 | Actual Waiting Time In Queue (In Min) |
|---------------|-------------------------|---------------------------|--------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|---------------------------------------|
| 9-10 AM       | 18                      | 3.3                       | .02                                                    | .15                                                    | 1.11                                                   | 1.69                                  |
| 10-1 PM       | 49                      | 3.3                       | 1.04                                                   | 9.96                                                   | N.A                                                    | 6.91                                  |
| 1-3 PM        | 27                      | 3.3                       | .1                                                     | .53                                                    | 4.29                                                   | 4.83                                  |
| 3-5 PM        | 21                      | 3.3                       | .04                                                    | .24                                                    | 1.72                                                   | 3.40                                  |

## CONCLUSION :

Having an efficient hospital queue management system at a health care institution is of utmost importance, especially when the patients visiting the facility are either in pain or frail health, making it difficult for them to queue for long periods of time until a medical practitioner is available to treat them.

Fortis hospital, Shalimar bagh have an average foot fall of 270 patients per day, at front desk. It takes around 20 -25 minutes for a new patient who has never visited before, to get registered and being forwarded to the specific OPD. This time can be reduced with some efforts and above mentioned recommendations.