



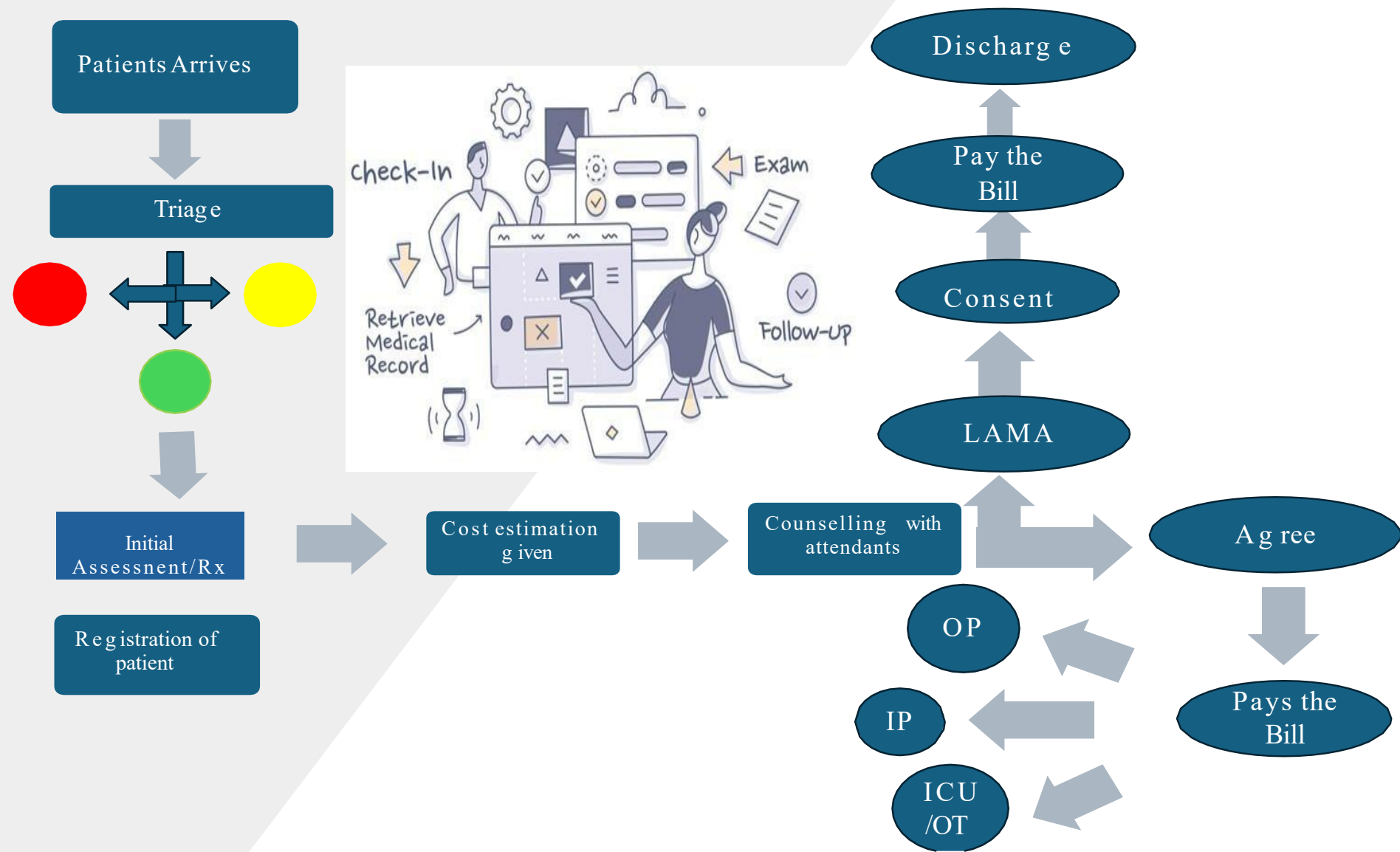
**STUDY ON TURNAROUND TIME OF PATIENTS IN EMERGENCY
DEPARTMENT AT SAI SAWALI MULTISPECIALITY HOSPITAL,
AHILYANAGAR**

Submitted by
Sumbe Ajit Bhausahab
MBA HM 28
1858

INTRODUCTION

- The Emergency Department (ED) is a crucial part of any hospital, handling a diverse range of urgent medical conditions. One of the key indicators of its effectiveness is the turnaround time (TAT), which measures the total time from a patient's arrival at the hospital to either their discharge or admission.
- This study aims to explore the factors that cause delays in the ED and to pinpoint the stages where these delays occur. Understanding these elements will help reduce waiting times and improve the efficient use of resources, ultimately leading to better and faster emergency care for patients.

PROCESS FLOW OF ED AT SAI SAWALI HOSPITAL:



LITERATURE REVIEW

Authors	Title of the study	Study location	Sample Size	Salient Features
Thakur A, Gupta S, Sharma R (2020)	Turnaround Time of Patients in Emergency Department at a Tertiary Care Teaching Hospital in Uttarakhand, India	Uttarakhand India	1128	Identified increased TAT, lack of staff during peak hours and long waiting time for diagnostic test. Recommended to increase staff, streamline triage process and improve communication
Ronny Otto (2022)	Length of stay as quality indicator in emergency departments	Germany	304,606	The length of stay depends on the factors that are related to the patients-like age and disease related factors
Chung Hsien Chaou (2015)	Analyzing Factors Affecting Emergency Department Length of Stay-Using a Competing Risk-Accelerated Failure Time Model	Taiwan	149,472	Results were divided in 3 categories: admission, death and discharge. Factors like age, transfer, in time were assessed and results showed that LOS was different by various groups

METHODOLOGY

Aim:

- The aim of this study is to know the factors associated with turnaround time in emergency department at Sai Sawali Multispeciality Hospital, Ahilyanagar

Key research question:

- What are the factors that contribute to delay in turnaround time in emergency department, and how can these be reduced to improve the efficiency and patient outcomes?

Objectives:

- To identify average of Turn Around Time for each triage category wise.
- To identify initial assessment time in each triage category wise.
- To identify factor which cause delay in initial assessment of TAT in emergency department.

Research design:

- Cross- sectional study

Study setting:

- This study is conducted in Sai Sawali Multispeciality Hospital.

Study population:

- Patients who came to emergency department between 8am to 5pm

Study Duration

- 10th March 2025- 25th May 2025

Sample size:

- 400.

Sampling technique:

- Convenience sampling technique was used to select participants, all patients

Method of data collection:

- Data was collected using a checklist which was created for tracking TAT of the patients and then it was manually entered in excel. A total of 400 patients were tracked from 10th March 2025- 25th May 2025

Ethical considerations:

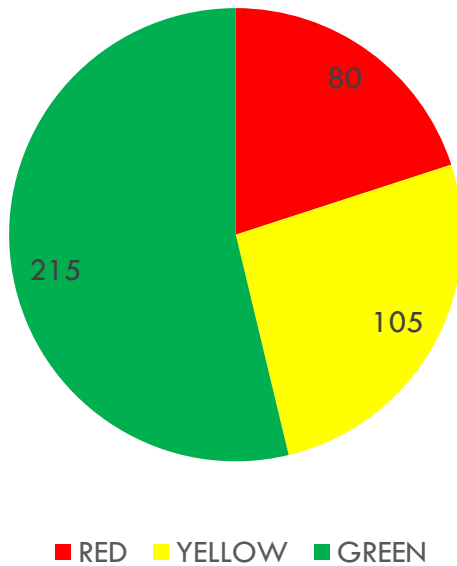
- I have obtained formal approval from the hospital to conduct the study.
- Patient's privacy is protected by anonymizing data

❖ PARAMETERS USED FOR DATA COLLECTION

S.No.	Content
1	Patient UHID
2	Chief Complaints
3	Source
4	Triage
5	In-Time
6	Initial Assessment
7	Investigation
8	Consultant Response
9	Result
10	Out-Time
11	Length of stay (In Time – Out Time)

❖ RESULTS

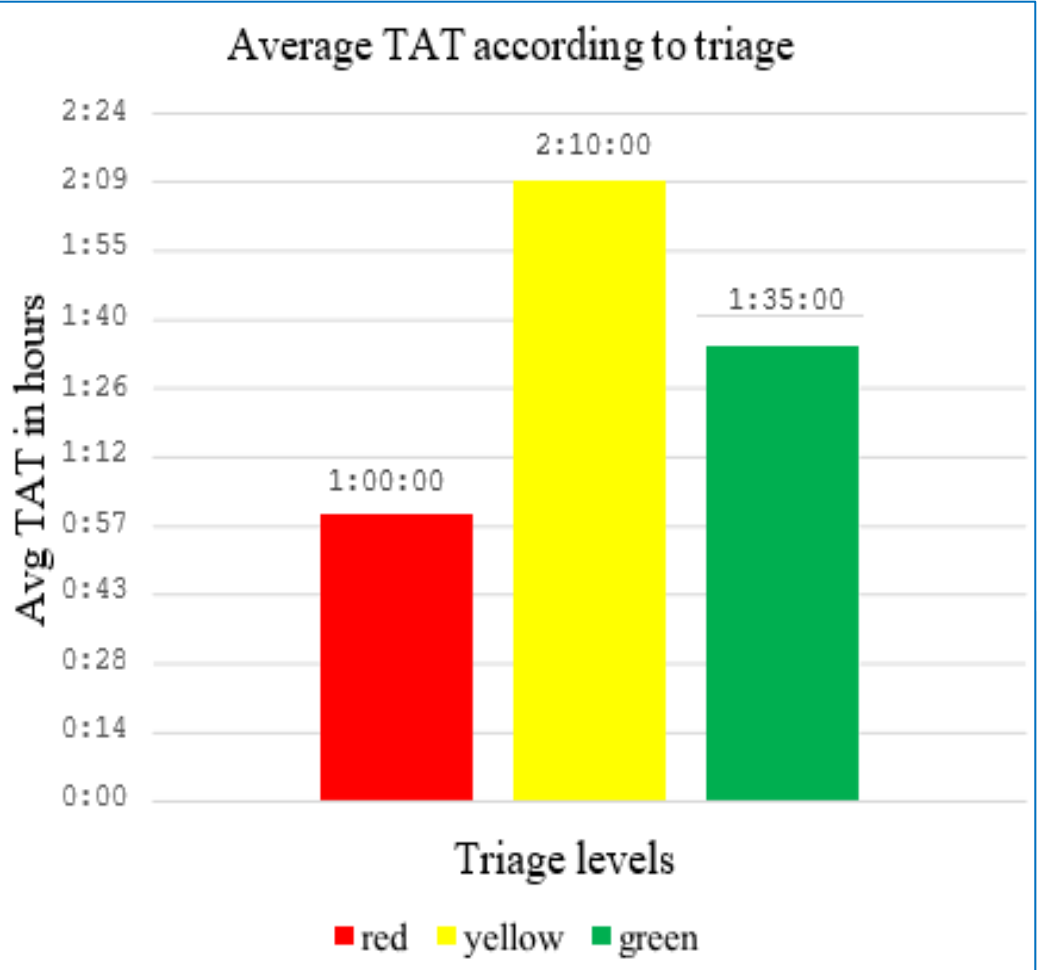
PATIENT DISTRIBUTION AS PER TRIAGE LEVELS.



❑ Triage Level Distribution

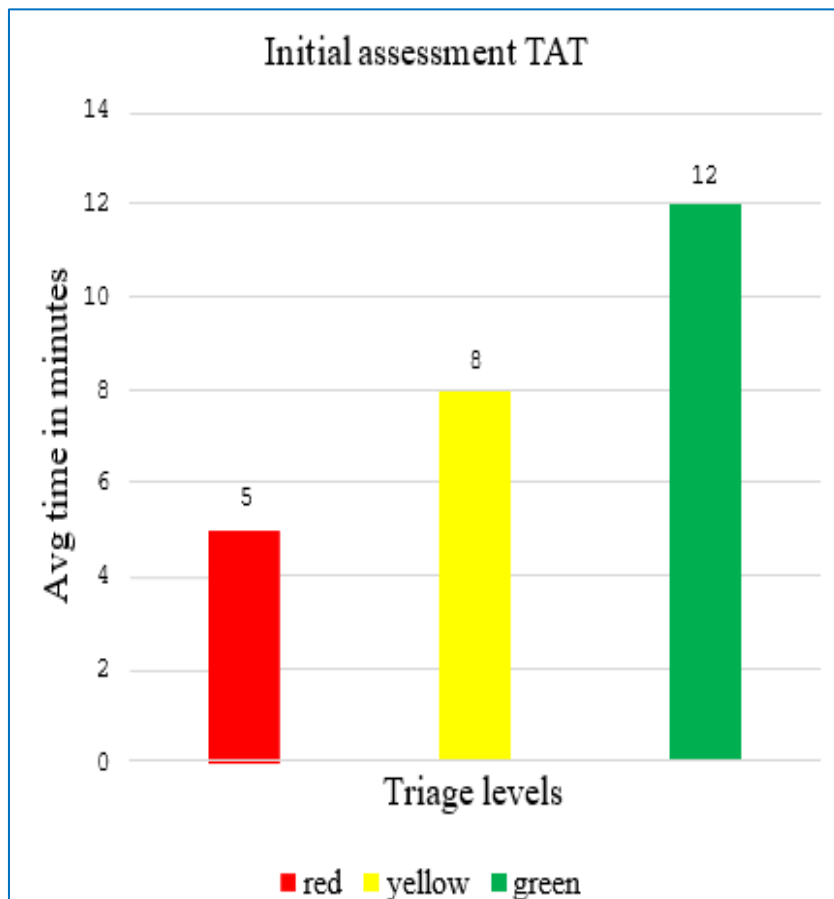
- Red: 80 patients (20%) – Critical Patient
- Yellow: 105 patients (26.25%) - Semi-critical Patient
- Green: 215 patients (53.75%) - Non-urgent Patient

❖ TO IDENTIFY AVERAGE OF TURN AROUND TIME FOR EACH TRIAGE CATEGORY WISE



- ❑ The average Turnaround Time For Triage- red is 1 hour
- Patients in critical condition receive timely care, indicating effective prioritization and rapid response by the emergency team.
- ❑ The Average Turnaround Time For Triage- yellow is 2 hour 10 minutes
- Not immediately life-threatening, these urgent cases are addressed within a reasonable timeframe. However, reducing delays through better workflow coordination can improve patient outcomes.
- ❑ The average turnaround time for triage- green is 1 hour 35 minutes
- Non-urgent cases are managed efficiently. Around 20% required IV injections, adding approximately 30 minutes to their care time.

❖ The average Turnaround time taken for initial assessment as per triage category:



- Red: 5 minutes
- Yellow: 8 minutes
- Green: 12 minutes

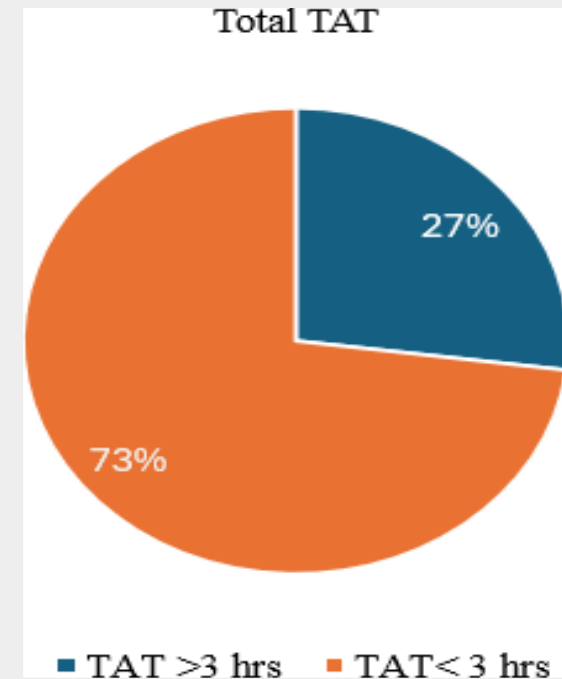
❖ Interpretation:

- Patients in the green triage level have the longest duration for initial assessment as compared to other two categories.
- It shows that even though these patients are not critical, proper care is given to these patients and thorough initial evaluation is done on time.
- The minimal difference in assessment times between yellow and green level suggests there is consistent approach in evaluation of patients regardless of urgency.

❖ LENGTH OF STAY IN EMERGENCY DEPARTMENT

- 27% of patients stay in emergency department for more than 3 hours
- 73% of patients stay in emergency department for less than 3 hours

Metric	Value
Total patients	400
Patients with TAT > 3 hours	108 (27%)
Patients with TAT < 3 hours	292 (73%)



❖ TO IDENTIFY FACTOR WHICH CAUSE DELAY IN INITIAL ASSESSMENT OF TAT IN EMERGENCY DEPARTMENT.

1. Shortage of nursing staff especially during peak hours, as it causes delay in taking initial assessment, treatment and follow-up.
2. Due to unavailability of beds, patients are made to wait in the department longer than necessary
3. As there is no separate admission counter for ED, there is a long queue in the counter due to which the patient's admission is delayed
4. Prolonged wait to see the financial counselor delays the admission process as the patients need to understand and arrange payment accordingly before proceeding with their admission
5. Non-availability of a runner delays the shifting of patients and shifting of samples
6. Slow Diagnostic Report Turnaround

CONCLUSION

- In conclusion, optimizing Emergency Department turnaround times enhances patient outcomes, efficiency, and satisfaction.
- Key improvements include dedicated admission counters, streamlined bed management, faster diagnostics, added staff during peak hours.
- Lack of SOPs led to TAT delays, stressing the need for standard protocols to enhance ED efficiency.

RECOMMENDATION

- Robust HR Policy for Staff Retention
- Implementation of SOPs Based on Triage Categories
- Establishment of a Pre-Admission Stabilization Area
- Enhance Infrastructure & Bed Management
- Speed Up Diagnostics and Transport
- Employ more financial counselors or streamline the process with digital tools to prevent admission delays.

REFERENCE

- Improving Patient Flow and Reducing Emergency Department Crowding: A Guide for Hospitals. [Improving emergency department patient flow - PMC](#)
- [Reducing Emergency Department Crowding: Evidence Based Strategies – PubMed](#)
- [https://www.researchgate.net/publication/300080972 Analyzing Factors Affecting Emergency Department Length of Stay-Using a Com](https://www.researchgate.net/publication/300080972_Analyzing_Factors_Affecting_Emergency_Department_Length_of_Stay-Using_a_Com)
- [JCDR - Turnaround Time of Patients in Emergency Department at a Tertiary Care Teaching Hospital in Uttarakhand, India: A Cross-sectional Study](#)
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3966453/pdf/wjem-15-170.pdf>



THANK YOU