

Patient Waiting Time in Emergency Department

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Abstract- The emergency department is the most critical area of any hospital. The time taken for each patient for triaging, consultation and referral can affect the disease outcome of the patient. The present study was undertaken to determine the average waiting period of patients visiting a tertiary level emergency department. The present study comprised 38 emergency admissions for duration of two weeks. A participatory observational method was used to collect data. The study revealed that the average total waiting period from entry till disposal was 2.46 Hours with a mean deviation of 1.26 hours. The key factors responsible for the delays are examination of patient, time taken for consultation, emergency investigations or imaging, unavailability of vehicles for transport, admission procedure etc.

Index Terms- Emergency Department, Patient, Waiting time

I. INTRODUCTION

A Hospital is an integral part of a social and medical organization, the function of which is to provide the population complete healthcare, both curative and preventive and whose outpatient services reach out to family and its home environment, hospital is also a centre for training of health workers and biosocial research.¹ Patients who check into a hospital's emergency room (ER) often experience long wait times in an emergency room waiting area. These wait times are due to the triage process that is requisite to hospital admission, patient "boarding" (waiting for a bed), a shortage of on-call physicians and the pile-up of emergency patients due to local accidents and disasters. As ER wait times can lead to delayed treatment of patients who require immediate medical care, hospitals must focus efforts on reducing the amount of time patients must spend in the waiting area⁶. The average time that hospital emergency room patients wait to see a doctor has grown from about 38 minutes to almost an hour over the past decade, according to new federal statistics in 2012. According to CDC report, about 119 million visits were made to U.S. emergency rooms in 2006, up from 90 million in 1996 causing a 32 percent increase emphasizing more organized patient management in emergency department.

The researchers undertook the present study to determine the average waiting time of patients reported in the emergency department and to assess the factors responsible for the waiting period of patients in emergency department. The need of the study was conceived from the verbal report and grievances of patients visiting the emergency department and researcher's personal observation made during emergency department rounds.

II. MATERIALS & METHODS

The study was a cross sectional observational study using a semi structured observational checklist which was validated by a panel of experts. A non probability convenient sampling was used to select the patient reporting to emergency department. The researchers were participating in the patient care activities of emergency department during collection of data and observed the disposal of patients. Observation was concealed to the health care personnel who involved in the care and disposal of patients to limit bias in the study.

A formal permission obtained from Medical Officer in charge Emergency Department for conducting the study who was not directly involved in the care and disposal of emergency admission. The study duration was of two weeks during day shift. Night shift observation was excluded due to feasibility factor of researchers. The descriptive statistical method was used to analyze the data using frequency, percentages, mean and Standard deviation.

III. RESULTS & DISCUSSION

The data was analyzed using descriptive statistics. A total number of 37 patients reported to emergency department during the observation period. Out of 37 patients, majority (12) reported with GI complaints (32.43%). 11 (29.73%) admission contributed to RTA/Trauma. Neurological emergencies contributed to 08 (21.62%) admissions and 03(8.1%) of emergencies reported were due to Cardiac/respiratory conditions (Figure1). Majority of the subjects 20 (51.35%) belonged to the age group of 21-40 yrs of age and majority of the sample reported were male (67.57%)

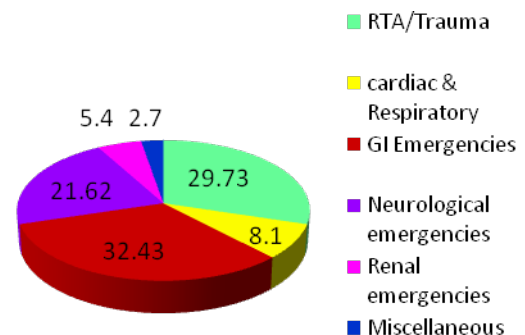


Figure 1: Type of Emergencies

The total duration of emergency department waiting time ranged from 2.25 Hrs to 2.67 hrs with mean waiting period of 2.46 Hours with a standard deviation of +/- 1.26 hours from entry till disposal. There are various factors responsible for this delayed period of disposal which is categorized further ranging from conveyance problem, consultation delay etc.

The time taken from arrival to specialist consultation ranged from 28.31 minutes to 38.33minutes with mean duration of 33.32 minutes and SD of +/- 30.47 minutes. This delay is caused mainly because the patient is first assessed by MO Emergency Department, then the specialist/ Specialist trainee is informed telephonically. The junior trainee attends the case and then the Intermediate/Senior Trainee is consulted to arrive into a decision.

The patients waiting time from specialist's arrival to consultation, investigation and decision making for final disposal ranged from 23.54 minutes to 31.42 minutes with mean duration of 27.48 minutes and SD +/- 24.0 minutes. The delay is caused due to consultation by various levels of specialist trainees who has to depend on the Specialist or senior trainees for decision making. The flow of information from one channel to another channel caused maximum delay in the decision making process.

The time taken for final disposal from specialist decision to disposal of patient had a mean duration of 1.33 Hours with SD +/- 55.36 minutes. The delay was mainly caused due to valuable time spent in documentation, admission procedures and unavailability of ambulance for transporting patient from emergency department to various wards/departments. The findings are correlating with an earlier study conducted by Bharali S in selected hospitals of Karnataka which revealed that time taken for registration affects the delayed waiting period of emergency patients.³

The causes identified (Figure 2) for delay in the disposal of patients were delay in consultation (32.43%), unavailability of ambulance (32.43%), delay in documentation (24.32%), absence of necessary identity proof from patients side (5.4%) and administrative problems like unauthorized admission, MLC cases etc. (5.4%). The consultation delay was mainly due to the delay in investigations, especially imaging procedures and subsequent delay in transportation of patient from emergency department to radiology department. The arrival of senior trainees and time taken to consult the Specialist also contributed to consultation delay in great extent. A study was conducted by Mohammed Hanaffi Abdullah in a hospital in Malaysia to determine the OPD waiting time and to investigate possible operational factors responsible for patients waiting period in the OPD's of hospital. The study revealed that there are various factors responsible for waiting period such as registration procedure, number of staff at counter and insufficient doctors.^[2] The present study also concludes that various factors such as registration procedure and decision making time affects the emergency waiting period of patients.

Unavailability of ambulance for transport of patient from Emergency Department to respective wards was another major concern for increasing the waiting period of patients. Documentation delay is mainly identified during admission procedure. Considerable time was spent in verifying the identity, completing case sheets, procuring necessary documents which contributed to increased waiting period in approximately 09 emergency cases.

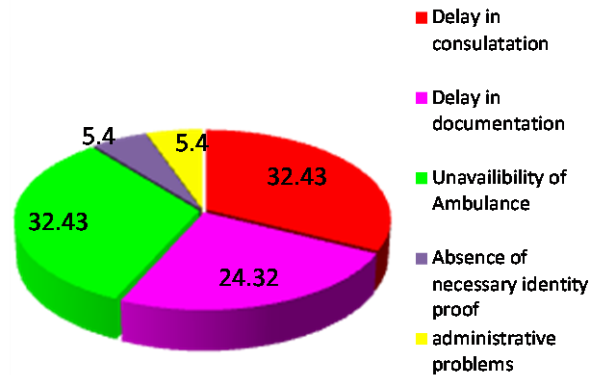


Figure 4: Causes of prolonged waiting time

IV. CONCLUSION & RECOMMENDATIONS

The present study was conducted to determine the waiting period of patients in an emergency department of a tertiary care hospital and to identify causes which contributes to the delay if any. The main cause identified contributing to waiting period are delay in decision making, registration procedure and non availability of vehicles for transportation of patients. The following recommendations are made in the present study to Consider an admission counter exclusively for emergency admission, Detail a specialist trainee from each department exclusively for emergency department only, Make provision for more vehicles to be available especially during working hours and to conduct a similar study on large samples including all emergency admissions in all shifts.

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