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A study on waiting time of the OPD Patient in a Multispecialty Hospital

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Abstract: ***In this study, the OPD is defined as the hospital's department where patients received diagnoses and/or treatment but did not stay overnight. Patients spend substantial amount of time in the clinics, waiting for the services to be delivered by physicians and other allied health professionals. The degree to which health consumers are satisfied with the care received is strongly related to the quality of the waiting experience.***
The methodology for Data collection is a balance of primary and secondary sources. Primary outcome based upon personal visits to the hospital and hospital database. Secondary outcomes based upon the information collected through questionnaire.
The present study was aimed at studying the waiting time of outpatient in the multi-speciality hospital. Our observation reveals that many patients face the difficulties in finding the various OPDs. On an average 10 minutes of waiting time outside the various O.P.D. and other departments.As the Hospital is coming up with the new hospital building, it is expected that infrastructural issues can be taken care during the planning and development stage. Assessment of patient's waiting time and satisfaction is cost effective way for evaluation of heath care services.
Keywords: OPD, Waiting Time, Patient management, Hospital management.

I. OBJECTIVES

A. Research Question

1) How long do patients wait to receive care at the Assessment centre?
2) Where along the continuum of care of assessment do patients experience delays?
3) What are the possible factors that may lead to excessive patient waiting times?

B. Main Objective

To quantify the waiting time and identify the factors associated with waiting time for services offered at the general outpatient department in order to find with evidenced based solutions of solving the problem of long waiting time.

II. INTRODUCTION

In this study, the OPD is defined as the hospital's department where patients received diagnoses and/or treatment but did not stay overnight. Patients spend substantial amount of time in the clinics, waiting for the services to be delivered by physicians and other allied health professionals. The degree to which health consumers are satisfied with the care received is strongly related to the quality of the waiting experience.

Patients' waiting time has been defined as, the length of time from when the patient enters the out-patient clinic to the time patient actually leaves the OPD. Waiting time refers to the time a patient waits in the clinic before being seen by one of the clinic medical staff. Patient clinic waiting time is an important indicator of quality of services offered by hospitals. The amount of time a patient waits to be seen is one factor which affects utilization of healthcare services. Patients perceive long waiting times as a barrier to actually obtaining services. Keeping patients waiting unnecessarily can be a cause of stress for both patient and doctor. Waiting time is a tangible aspect of practice that patients will use to judge health personnel, even more than their knowledge and skill. The duration of waiting time varies from country to country, and even within a country it varies from centre to centre.

Long waiting times have been reported in both developed and developing countries. It is often one of the most frustrating parts about health care delivery system. So it is an important to improve the waiting time for out-door patients. Measurement of patient satisfaction has become common place in many healthcare settings due to its impact on quality of care. It has been known for some time that satisfied patients are more compliant with treatment, remaining with a physician, and maintain appointments.

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A well-managed, clean and well-maintained hospital with the necessary information boards and proper directions generally provide good image. Successful and efficient management of OPD can also lighten the burden on the patient wards. As patient's satisfaction is an important component of the health care industry in this competitive modern era. So present study was conducted to know the difficulties face by patients while searching the various OPDs/departments, waiting time at OPDs, and various investigation departments, to get feedback about service provided.

III. LITERATURE REVIEW

A. *Patient Satisfaction in a French Emergency Department*

1) *Objectives:* To assess patient satisfaction in a French Emergency Department (ED) and to determine factors associated with dissatisfaction.
2) *Methods:* From July 2003 to February 2004, a prospective cohort study was conducted in an ED (Elbeuf Reference Hospital, Upper-Normandy region). Baseline data collection was performed during individual interview at inclusion. Waiting time at the ED was recorded. Patient satisfaction was assessed by telephone 1 month later. Questions included assessment of overall satisfaction and three different areas of satisfaction: quality of reception, patient–doctor communication, and delays.
3) *Conclusion:* Elevated waiting times appeared as the unique independent risk factor of patient dissatisfaction. Information on delays and reasons for this delay could be systematically communicated to patients attending EDs; it could be an effective strategy to reduce perceived waiting times and improve patient satisfaction.

B. *Theoretical Background of Waiting Time in Healthcare*

Over the years, healthcare organization and processes have been viewed within the context of queuing systems in which patients arrive, wait for service, obtain service, and then depart (Fomundam and Hermann, 2007). Queuing theory was originally developed by French mathematician S.D.

Poisson (1781- 1840) is usually used to define a set of analytical techniques in the form of closed mathematical formulas to describe properties of the processes dealing with scenarios of congestions and blockages (Amero et al, 2004). Therefore, it seems very logical to view the services or operations of Outpatient department as a queuing system: patients needing the services of the units wait in a queue to be served and leave the system after service.

IV. METHODOLOGY

A. *Data Collection Plan*

The methodology for data collection is a balance of primary and secondary sources.
Primary outcome based upon personal visits to the hospital and hospital database.
Secondary outcomes based upon the information collected through questionnaire.

B. *Methods*

1) *Study Design*
2) *Study Type:* Prospective study.
3) *Population:* Urban population.
4) *Inclusion Criteria:* All patients visit to OPD regardless of age and sex.
5) *Exclusion Criteria:* Patients visit to OPD.

This involves a prospective cohort study of the available patient's records. Primary data was provided by the Doctor's as well as the team leaders who are part of department. Discussions on the subject and provision of OPD protocols were done. Data analysis was taken retrospectively of the existing patient's records from June 2017 to Dec 2017, and the data was audited.

V. RESULTS AND DISCUSSION

Table 1 shows that majority patients attending the OPDs was belong to 20 to 40 years of age group (54.08%) followed by 0-20 years of age group (23.70%), and 40-60 years of age (17.04%). Mean age of patient attending the OPD was 30.31±15.65 years. Of which female 73 (54.07%) patients are more than the male 62 (45.93%).

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Table 1: Age and sex wise distribution of patients attending the OPDs.

Age (Years)	Male numbers (%)	Female numbers (%)	Total
0-10	06 (09.68)	09 (12.33)	15 (11.11)
10-20	07 (11.29)	10 (13.70)	17 (12.59)
20-30	23 (37.09)	27 (36.98)	50 (37.04)
30-40	11 (34.37)	12 (16.44)	23 (17.04)
40-50	06 (09.68)	09 (12.33)	15 (11.11)
50-60	03 (04.84)	05 (06.85)	08 (05.93)
60-70	05 (08.06)	01 (01.37)	06 (04.44)
70-80	01 (01.61)	00 (00.00)	01 (00.74)
Total	62 (45.93%)	73 (54.07%)	135 (100%)

Out of 135 patients 62 (45.93%) registered within 10 minutes and 54.07% patient registered 20 minutes after standing in queue. Registration time depend upon time of visiting the counter, patients flow in hospital, numbers of registration counter etc. Longer duration of time spent for registration cause inconvenience to the patients (Table 2). Majority of patient 95 (70.37%) were waited up to 10 minutes, while 40 (29.63%)patients waited more than 20 minutes outside the OPD while seeking for medical care in concern OPDs. The mean waiting time was 12.16±2.35 min. longer waiting time at OPD may causes a negative impact on patient's satisfaction.

Table 2: Time spent at registration counter and waiting time outside the OPDs

A Time spent on Registration Counter	
Time in minutes	Number (%)
0-10	62 (45.93)
10-20	00
20-30	42 (31.11)
>30	31(22.96)
B. Waiting time outside the OPDs	
Waiting time in minutes	Number (%)
0-10	95 (70.37)
10-20	00
20-30	23 (17.04)
>30	17 (12.59)

In present study 118 (87.41%) were examined by doctor in concern OPD and Privacy was maintained during examination. 12.59% of patients told that they were not examined by doctor and 103 (76.3%) told that they were examined in less than 5 minutes for their complain (Table 3).

Table 3: Distribution of patients as per examination time spent by doctor.

Examination time (min)	Number Percentage
0-5	103 (76.30)
5-15	13 (09.63)
15-30	2 (01.48)
NA	17 (12.59)
Total	135 (100)

The present study was aimed at studying the waiting time of outpatient in the multi-speciality hospital. Our observation reveals that many patients face the difficulties in finding the various OPDs. On an average 10 minutes of waiting time outside the various O.P.D. and other departments. Maximum numbers of patients were female, mainly housewives and privacy was maintained with a female assistant during their examination by doctor. Patients were satisfied with treatment provided and they were also satisfied with the behaviour of hospital staff. As the Hospital is coming up with the new hospital building, it is expected that infrastructural issues can be taken care during the planning and development stage. Assessment of patient's waiting time and satisfaction is cost effective way for evaluation of heath care services.

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VII. CONFLICT OF INTEREST

I declare that there is no conflict of interest.

VIII. AUTHOR'S CONTRIBUTIONS

All authors listed have made a substantial, direct, intellectual contribution to the work and approved it for publication.

IX. FUNDING

None.

X. DATA AVAILABILITY

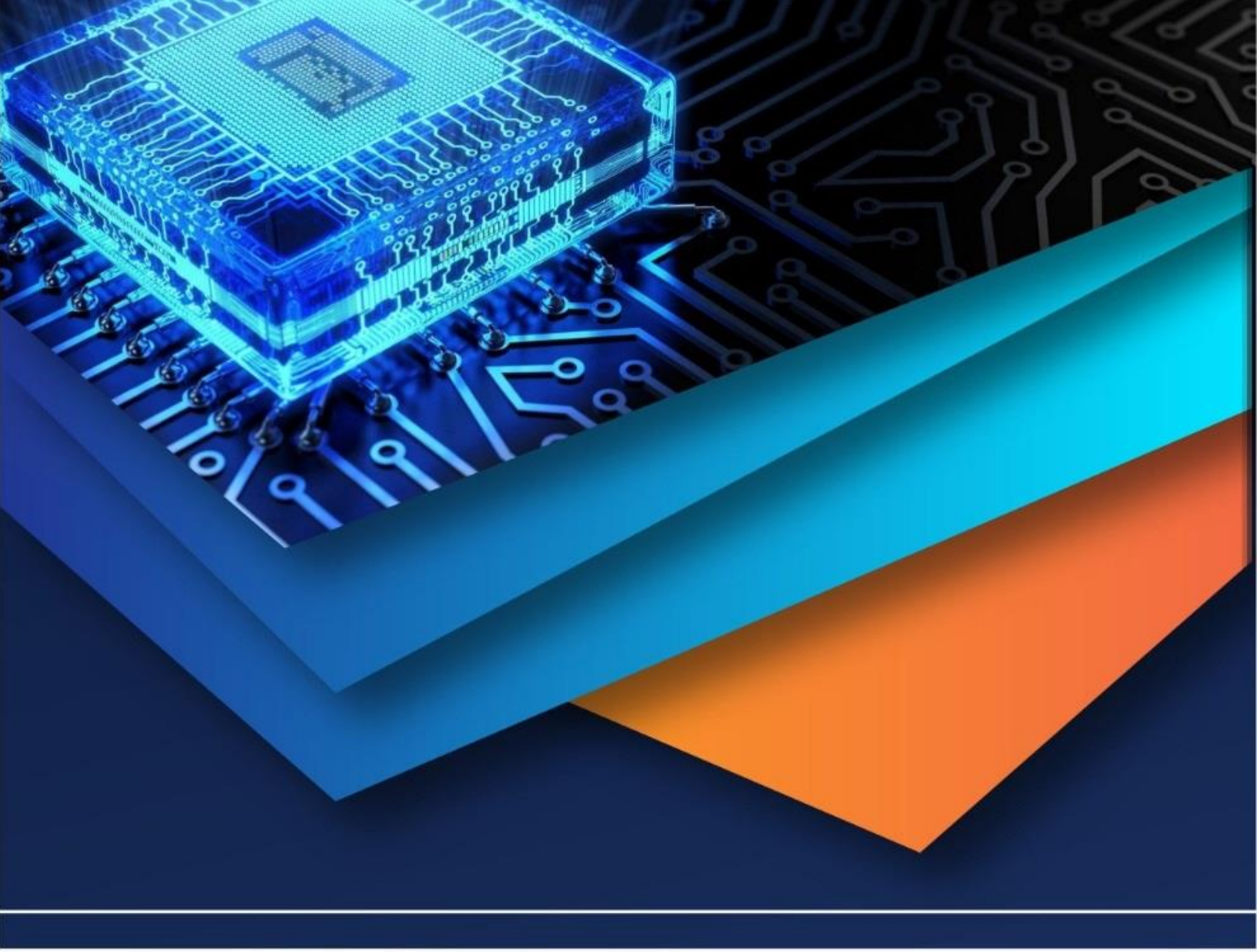
All data sets generated and analyzed during this study are included in the manuscript and in supplementary files.

XI. ETHICS STATEMENT

This study does not contain studies with human participants or animals performed by any of the authors.

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