



## Assessment of Waiting Time and Recommend the Strategies for Reduction of Waiting Time in Outpatient Department at AVBRH, Wardha, India

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### Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Study Protocol

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## ABSTRACT

**Background:** Prolonged waiting period for patients usually observed in outpatient service and this trouble come up with number of public health problems, weaken access to care interference of hospital work system and patient dissatisfaction. It is habitual to detect patient care being delay as prolonged waiting time, and patient many time expend more time in waiting than consultation. This study aims to reduce waiting time at outpatient department for total time management at AVBRH, Wardha.

**Objectives:** 1. To determine average waiting period in outpatient department and factor related for prolonged waiting. 2. Provide recommendations on utilization of waiting period .

**Methodology:** It will be an observational cross sectional stud conducted at AVBRH Wardha. OPD patients at AVBRH will be included in the study. Data will be collected over a period of 2 months by direct field observation and will be appropriately analyzed.

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**Expected Results:** Reduction of waiting period by total time management helps to increase the level of satisfaction of patients. Judicious utilization of time and human resources will be helpful in increasing hospital efficiency and make positive impression of hospital.

**Conclusion:** Hospital efficiency can be improved by appropriate intervention and reducing waiting period.

*Keywords: Waiting period; outpatient department; prolonged; patient satisfaction; humans resource; efficiency; time management.*

## 1. INTRODUCTION

Prolonged waiting period for patients usually observed in outpatient service and this trouble come up with number of public health problems, weaken access to care interference of hospital work system and patient dissatisfaction [1]. It is habitual to detect patient care being delay as prolonged waiting time, and patient many time expend more time in waiting than consultation [1]. A study conducted in US tertiary hospital conclude that 61% of patients waited in outpatient department for 90 to 180 minutes, while 36.1% patient sent less than 5 minutes in consulting room [1]. Outpatient services and their human resource are involved in diversity of actions, where proper employ of statistics, relevant assignment of assets, information management and a opportune implementation of procedure are all essential to maintain patients flow within clinics [2]. Appointment type, ticket numbering, doctor arrival behind schedule, before time approach of patient and patient distribution list have been established as five leading phenomenon of prolong waiting time [2].

Three models were put forward by sample Chinese hospital to show how different plan if action can be implemented to raise the performance of outpatient department patients flow in model A, "doctors sharing patients" any available doctor could see any patients. In model B " adding volunteers" five volunteers added to the system. In model C " modify volunteers priorities" by changing location of volunteers, for better utilization of resources. The best reduction they have got was 78% [2]. A primary hospital in Hong Kong conducted a study to resolve the long waiting time, the cause of prolonged waiting time were increase in quantity of patient and staff turnover rate [2]. Algiriyage et al. Illustrated the problem of waiting in Shri Lanka , the study inspected various aspects of queues which generates congestion in the outpatient department. They appraise some appointment organizing rule by using stimulation model to come up with the solution that reduced the total

waiting period by 60%(2). A survey conducted in Taiwanese hospital the researchers used mixed type of registration to make improvements in the patient flow in OPD. They applied stimulation with 7 different scenarios to find out the waiting time and the percentage of refinement. Their waiting time reduction was 50% [2].

A study conducted by Institute Of Medicine (IOM) pinpoint six fundamentals aim of healthcare a) protected, b) productive, c) patient-oriented, d) unbiased, e) **punctual**, f) operative [3]. Hence timely consultation of doctors should be available at minimum waiting period. Institute of Medicine (IOM) suggested that 90% patients should receive medical facilities around 30 minutes of their appointment time [3]. Prolonged waiting time in many result in dissatisfaction of patient and substandard quality of health care due to perceived workload [4].

OPD is adjudge as the window to hospital service and patients impact of the hospital begin at OPD , this impact often effect the patient's sensitivity to the hospital and hence it is necessary to ensure OPD services furnish an excellent experience to customers. It is also well accepted that 8-10 % of OPD patients required hospitalization [5]. OPD services of the most of hospital are having queuing and prolonged waiting issues. Patients waiting period mention to time from process of registration of patient for medical consultation of doctors till they went to doctors room and for the investigation at laboratory, radiology and pharmacy department [6]. Various activity influence the facility provided at OPD [6].

- Entrance pattern of patients at waiting room.
- Time period of facility provided at OPD
- Queue length of waiting room at OPD

Hence the quantity of patients are huge and treatment should be provided within a period constriction happen with respect to the restriction

can be resolved by an operative management process [6].

Usual issues to be come across in OPD system are:

- Prolonged waiting of patient at front desk of hospital
- Patients may be carriage to inaccurate service process.
- Huge quantity of patients waiting served at OPD will result in disagreeable problem such as crowding, noise and substandard ventilation.
- Quantity of patients admitted within a working day will case overtime for doctor.
- Scheduling will not be performed due to the inappropriate examination period.
- Overlapping period of patients appointment
- Overtime shifts will cause to wait without purpose and associated cost will increased.
- Stressed ambience at OPD due to doctors and patients satisfaction
- Inappropriate management may lead to patients dissatisfaction and they could prefer another hospital [6,7].

In a study conducted by Ernst and Young in Germany in 2010 on patients satisfaction, among all the key quantity parameters measured by the study, waiting time had scored lowest [8]. Most of the respondent who received medical care in any hospital specify that they have been disappointed with the matter of waiting time. Most extensive problem in hospital is waiting period and it is regularly equate with other type of service too [8]. Waiting period is effect of the contradictions among the accessible hospital assets and the requirements of care. This contradictions may be assigned to having inadequate resources to gather requirements for health care, but deficiency of planning, co-ordination, communication in providing health care services is also the reason due to which requirements and are not sufficiently synchronized with each other's [8].

There is requirements of healthcare facilities and hospital administration to reduce the gap among human resources, organization and implementation of complex operation and internal procedure focused at decrease waiting period to make certain Operative healthcare delivery system in hospital [9]. The extent of waiting period ought to include both the management of

approach to outpatient consultation for evaluation as well as inpatient admissions for treatment. In addition, waiting period for investigation required to be monitored [9]. The aim of healthcare is to deliver medical resource of best quality of life, to cure sickness and expand life expectancy, quality of healthcare can be indicated by the level of patients satisfaction, depletion on disease identified and through assessment of health measures [9]. A investigation in international journal of health care quality assurance in China, According to the study Hospital administrator aimed at administer the efficient patients flow this implies that a research concentrated on increase efficiency of doctors and medical staff in the outpatient division the period passed by an patient and the span in outpatient queues. This described way of a computer stimulation model were enlarged to know how to modify in assignation techniques, employment policy and services unit world influenced the observed congestion [10].

Unavailability of resources is remarkable reason for prolonged waiting time in outpatient department. Prolonged period of waiting directly affect patients satisfaction in healthcare and negatively linked to patients gratification. Lengthy waiting period for medical consultation become a most affecting fact.

The objective behind study is to detect factors responsible for lengthy waiting period and suggestions to utilize waiting time for total time management so as to increase the extent of patient gratification. In tertiary hospital reduction of waiting period is outcome of upgrade hospital proficiency and raised in quality of care provided. Sometimes hold up in medical consultation in length of stay. Many hospital around world in USA, China, Sri Lanka and Taiwan make the grade for reducing waiting period by 15%,78%,60%, and 50% etc. mostly by put in some human resource or by substitute, some business or management strategy.

Patients contentment is an significant standard for evaluating the superiority of health care as it makes a difference the prompt, structured and patient- oriented provision of standards health care and patients pleasure is connected with clinical end results It is globally concur that systematically organized health system provide timely and assure access to health services.

Bulk of outpatient department participants satisfaction within process of registration, health

care providers and personal matter like wellbeing and healthcare provision reliability. Utmost domain of discontent with prolonged waiting period. Absence of stock is mentioned as cause for prolonged waiting period and queues in many hospital. According to administrative point of view reduction of waiting time increase the level of satisfaction and proper utilization of time and human resource increase the hospital efficiency.

### 1.1 Aim

To reduce waiting time in outpatient department for total time management at AVBRH, Wardha.

### 1.2 Objectives

- To find out average waiting time in outpatient department.
- To determine factors responsible for waiting time in outpatient department for total time management.
- To recommend suggestions to utilize waiting time in outpatient department so as to reduce waiting time.

## 2. METHODOLOGY

Methodology the study represent study population, sampling method, method of data collection, sample selected and strategies in which collected data being analyzed. Analyses the current waiting time for outpatient department for time management and patient satisfaction. Only outpatient department patients included in the study. Emergency department patients are excluded in this study.

In this cross sectional study, study sample selected from outpatient department of AVBRH, Wardha. Organized waiting span evaluation techniques used to evoke details about time passed before registration, time passed in waiting area, time spent with a doctor, time passed in investigation, and time necessitated for final medical consultation, the average span from arrival to departure of the hospital is recorded. The methodological sampling approach bring out by simple random sampling.

Site of study – Acharya Vinoba Bhave Rural Hospital, Sawangi, Wardha.

Study population – outpatient department patients at AVBRH, Wardha.

Study duration - 2 months study

Study design – Observational study

Sampling method - Random sampling

Sample size – 60 patients

Research tool – Tool consisting of self-administered observation record outpatient department Patients

Source of data collection – Data has been collected by using observation recorded form.

## 3. DISCUSSION

This study aimed at reducing waiting time in outpatient department and to find out factors responsible for prolonged waiting period. Prolonged waiting period had an consequences on patient appreciation of standard of care and contentment. Waiting period had unfortunate impact to patients contentment. Greater rate of dissatisfaction produced particularly in lengthy waiting among registration and consultation. A study conducted in United State usually waiting time was above 30 minutes.

As per to standard operating procedures of outpatient department for regional hospital waiting period for admissions is 1 min, distribution of medicine waiting period 2-3 min and for laboratory investigation is 10 min. It is discover that outpatient were satisfied if they do not have to wait more than 37 min. Within a many studies verify that the procedure improve team approach for assess and redesigning the patient's health care system accomplishing aim of decrease waiting time and increase patients satisfaction. A study conducted by service et al., terminate that patients respond that were well pleased with waiting period around an hour if they came behind time and less than 37 minutes if they came on the dot. A number of related articles from GBD study have been reported [11-17].

The present day prominence surpass standard outpatient services provided particularly in public health amenity need a detailed fundamentals comprehensive of how hospital outpatient department operate and delineate the procedure of care is an significant course of action taken in the direction of goals. Waiting period is an significant factor of standard services as it is well known that healthcare provision, waiting are costly not only in entitled of direct cost incurred but also in term of the prospect price decline patients contentment and unfavorable results. With dare to provide superiority services with insufficient asset healthcare system have placed substantial prominence the effective utilization of the asset. Hence, the most significant operational

topics in health care delivery involves raised in utilization and obtained by eliminating the await in providing services. A elementary and easy appointment scheduling procedure is the first move for patients on time approach to healthcare facilities. Multiple appointment scheduling techniques including smart phone, web landline etc. have been exchanged to the conventional process where patients were take the appointment physically inside hospital.

Increased in patients turnover might be have involved for the all-inclusive quality of care, such as inadequacy in patients well-being and raised stress among doctor and patients. Hence the intervention are executed for reduction of waiting period for total time management.

#### 4. EXPECTED OUTCOME

The Observational cross-sectional study conducted at AVBRH, Wardha to reduce the waiting time at OPD for total time management. Within the 2 months study duration 60 sample or patients will be observed and the focus only on OPD patients. From observation the factors responsible for waiting period in outpatient department able to find out. Using proper management the factors cause waiting can be eliminated. Reduction in waiting time increase patients satisfaction and increase quality of healthcare service. Patients who endure prolonged waiting tend into consideration their healthcare system as not as much easily attainable and less tolerable. Besides the pass a prolonged waiting period in undergo health care services did not every time correspond with a most favorable discernment of services. A long-running end result in long waiting time discernment was discovered due to carefully planned constant strive than one time course of action suitable incentive carry out by task force permit by the hospital manager.

#### 5. CONCLUSION

Reduction of waiting time can improve quality of service provide by hospital. Waiting period may vary from one outpatient department to another outpatient department within the same hospital depending on several factors. Reduction of waiting time make positive image of hospital. Utilization of human resource and asset increase the hospital efficiency and quality of healthcare.

#### 6. LIMITATION

As the study conducted in single hospital the factors responsible for prolonged waiting period

varies from hospital to hospital. Hence same plan of action is not applied to all hospitals. Second end result may be influenced by probably selection bias an unreliability measures. Future studies may explore new intervention for reducing waiting time. As the patient aware about that they were being participants in survey patients may over emphasis their discontent with waiting period, especially for them who had negatively discernment of waiting for health care system before. Although, the problem may not be easily tackle in directly observed in the study. It is impotent appraise the connection among the length of perceived time and the length of actual time pass in waiting or receiving care. Due to the limited sample size of the study does not permit us to conduct subgroup investigation.

#### CONSENT

As per international standard or university standard, patients' written consent will be collected and preserved by the author(s).

#### ETHICAL APPROVAL

As per international standard or university standard written ethical approval will be collected and preserved by the author(s).

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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