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Case Study on Waiting Time and Consultation Time in OPD Patients at Three Selected District Hospitals of Gampaha District from January to March 2023

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A B S T R A C T

Introduction: Patient waiting time and Patient consultation time have a large diversity and they measure the efficiency of health services. Both measurements are dynamic and are sensitive to many factors. Waiting time and consultation time for each nature of visit should be calculated analyzed and presented separately. Evaluation of those values gives clues on service delivery efficiency and effectiveness.

Objective: To evaluate waiting time and consultation time in OPD patients at three selected District hospitals of Gampaha district from January to March 2023

Methodology: A descriptive cross-sectional study was performed. Data was collected using an observational checklist. Statistics of daily patient attendance and staff attendance taken from respective registries. Each hospital OPD was observed all seven days, morning, and afternoon separately. Mean waiting time and mean consultation time were calculated for each hospital. Causes that lead to substandard values were identified.

Results: The mean waiting time for all three hospitals is in the range of 43 to 47 minutes in the morning whereas the mean value is in the range of 18 to 31 min in the afternoon. The mean number of patients who visit OPD is 428,180 and 240 per day—mean consultation time for morning and evening ranges from,1.71 min to 4.31.min.

Conclusion: The waiting time and consultation time duration of patients need improvements.

Recommendations: Need a comprehensive intervention strategy to improve waiting time and consultation time in low-resource government settings. Appropriate strategic measures should be followed by reauditing.

Keywords: Waiting time, Patients, Consultation time.

1. Introduction

The government Hospitals and Primary Medical Care Units are the leading curative health care service providers in the Gampaha district. (One District General Hospital, four Base Hospitals, and ten District Hospitals.) These hospitals provide outpatient and Inward treatment facilities. There are 45 Primary Medical Care Units with OPD facilities under the directive of the Regional Director of Health Services. Patients are free to visit any type of health institution according to their preferences. Ten District hospitals provide OPD, ETU Inward care, dental and laboratory facilities. But those hospitals have no specialized care units like medical, surgical, gynaecology, obstetrics, or paediatrics. They provide inward care for males, females, and children.

Treatment in an OPD is many patients' main experience of the hospital service. One consistent feature of dissatisfaction which has been expressed with the out-patient service is the length of waiting time in the out-patient clinic. Long waiting times in clinics appear to have been a consistent source of dissatisfaction. (Hart, 1996) The tolerance expressed by most patients for waits of up to half an hour, after which time their tolerance diminishes. The "30-minute threshold" was incorporated into the Patient's Charter as a National Charter standard in the United Kingdom. It is globally agreed that healthcare service management systems should not have patients wait a long time for appointments and consultations. Patient satisfaction and waiting time have an inverse relationship and overall patient satisfaction is becoming more important in the current context.

The consultation time, or the duration of the interaction between the patient and the healthcare professional, is a critical aspect of the OPD visit. A sufficient consultation time allows for a thorough assessment of the patient's condition, the provision of appropriate medical care, and the opportunity for the patient to ask questions and receive guidance. In contrast, inadequate consultation time can lead to misdiagnosis, incomplete treatment, and dissatisfaction with the care received. Thus, optimizing consultation time in OPD visits is essential in providing high-quality medical care and improving patient outcomes. The duration of consultation can vary depending on several factors, including the complexity of the patient's condition, the doctor's experience and expertise, and the resources available. Doctors should have a holistic approach to patient care, addressing not only the patient's physical health but also their mental and emotional well-being, social circumstances, and cultural background. Hence there is no standard time allocated for a patient.

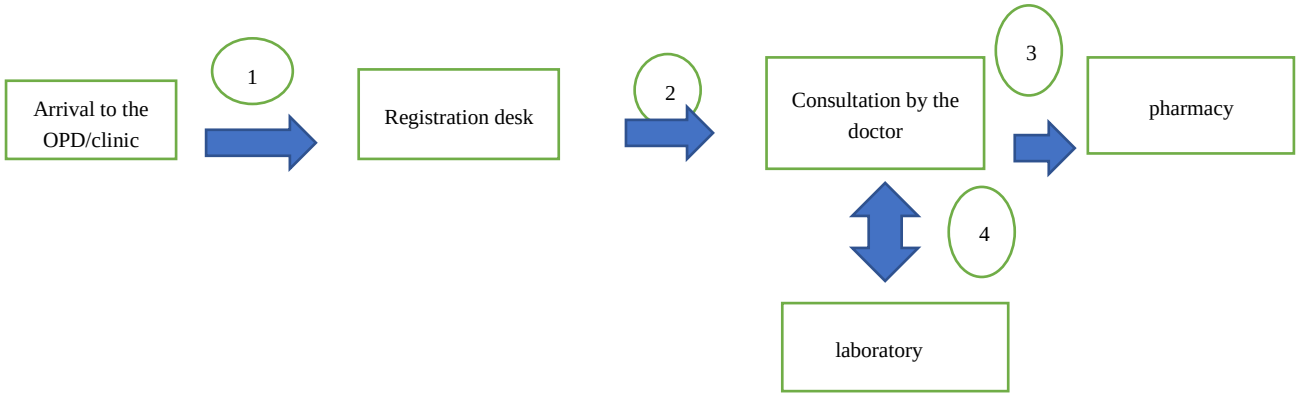
The standard waiting time for the Sri Lankan health system and standard duration of consultation have not been defined. The audit aims to evaluate OPD waiting for time and duration of consultation in three selected District hospitals of Gampaha District. The audit will focus on recommendations to reduce the waiting time at OPD and provide an adequate duration of consultation. Audit findings will be used for the future administrative purposes of the improvement of patient care services at OPD settings of District Hospitals of Gampaha District.

1.2 Background and Justification

Hospital administrators and policymakers are concerned with outpatient waiting time as it is a measure of organizational efficiency. People are impatient and do not want to wait to be seen. Waiting experiences are typically negative and affect consumers' overall satisfaction with the service encounter. (Barlow, 2002)

Patient waiting time has been defined as "the duration of time spent by a patient from his/her arrival to the OPD/ Clinic to the time the patient leaves the OPD /Clinic with prescribed drugs. According to WHO, waiting time is one of the key measurements of a responsive health system. A large diversity of time duration spent between patient arrival to the OPD and departure from the hospital. This varies in different hospitals as well. (Mathugama, 2003a)

Waiting time for each nature of visit should be calculated analyzed and presented separately. A large diversity of time duration spent between patient arrival to the OPD and departure from the hospital. This varies in different hospitals. The process of treatments at OPD has been outlined in Figure 1. These processes do not run smoothly without any frustration to the patients. It is not uncommon to experience waiting for minutes to hours at OPD. Each step of this process might get delayed due to various reasons at every hospital. The time duration which counts from the patient's arrival to the OPD/clinic till the patient leaves the OPD is defined as the Patients' waiting time at the OPD.(1+2+3+4)The period a patient waits to see a medical officer is one factor that measures the efficiency of health services. Some of the reasons for prolonged waiting time are Inadequate human resources, Infrastructure unavailability, Lack of Supervision, not implementing Quality productivity programs, Individual attitudes, and patient factors.



Even though the waiting time calculation is a quality indicator on performance review, district hospitals are not calculating it. The proposed audit finds out the waiting time and contributory factors for that waiting time in three different institutions. Quality improvements can be arranged where it will be most helpful and will improve outcomes for patients Calculated waiting time can be used to improve the quality of care received by patients and it will be useful for administrators to identify bottlenecks to implement measures to overcome related issues.

2. Literature review

There are many dimensions in measuring the efficiency and effectiveness of outpatient services of a hospital. Excessive waiting time is a major complaint of patients and is also non-value adding time. During this period, resources are not used to treat patients and it is a lose-lose strategy Hospitals lose their patients and reputation. Staff experience tension and stress.(Pillay et al., 2011)

A study has revealed that patient waiting time could be shortened by using an optimizing appointment scheduler to determine appointment intervals. Clinic mix influences patient waiting time, which was shorter with a 1 in 4 ratio of new to follow-up patients. In mixed clinics, new patient appointments are optimally spread throughout the clinic to reduce patient waiting time.(Clague et al., 1997) Several studies have revealed the tendency for patients to arrive earlier than their given appointment and arrive at the same time in large numbers. Early arrivals were common despite warnings reminders and

appointments. Studies further revealed patients are willing to wait longer if they get to see a familiar doctor. A study in Malaysia revealed the average consultation time was 18.21 min. Registration should be a quick and simple process and the registration counter should have adequate staff. Some of the reasons for a long waiting time have been identified as late-arrival and early leave of physicians; more visiting patients in the morning than in the afternoon; more patients and follow-up patients as well as fewer on-duty doctors are also some reasons for long waiting time. (Sun et al., n.d.)(O & S, 2011)

2.1 Global situation

A study aiming to determine the average waiting time in Malaysia revealed that on average, patients wait for more than two hours from registration to getting the prescription slip. The average contact time with medical personnel is only 15 minutes. Employee attitude, work process, management and supervision problems, heavy workload, and inadequate facilities lead to long waiting times.(Pillay et al., 2011) Another study in India revealed that the Median waiting time for walk-in registered patients was approximately four times (60 min, IQR (30–90)) as compared to the online registered patients (15 min, IQR (10–30)) ($p = 0.000$). The satisfaction level among the online registered patients was three times higher than the walk-in registered patients. (Sharma et al., 2022)

Studies revealed satisfactory OPD needs not only low waiting times but also a good doctor-patient communication process. Doctors must spend time with patients to communicate adequately about their illnesses. It further revealed that time spent with the physician may be more strongly associated with patient satisfaction than waiting time.(Pillay et al., 2011)

2.3 Sri Lankan context

A study conducted by Moratuwa University to analyse the current situation of waiting and overcrowding at the National Hospital and to find out ways to provide efficient service to patients revealed OPD is overcrowded due to, unnecessary arrivals, lack of resources, increased demand, ignorance of patients on OPD procedures. The study further revealed that most of the facilities for patients and staff are inadequate. To reduce queuing in some rooms alternative options were suggested. Implementation of a Proper inquiry counter and proper directions should be given to patients will help to reduce the waiting time. (Mathugama, 2003a)

A study done at NHSL Colombo revealed that a significant reduction in waiting time at the front desk can be achieved in outpatient services by implementing an efficient inquiry counter at the front desk. More than one registration desk at peak hours is also recommended for waiting time reduction. The study further revealed that patients spending their time inquiring about places and direction boards will reduce the waiting time. Upgrading the pharmacy with quality and productivity also reduces patients waiting time and computerized medicine issuing system will also help to reduce the waiting time. (Batawalage Ayanthi Saranga Jayawardena & Lanka, 2017a)(*An Assessment of Patient Waiting and Consultation Time in a Primary Healthcare Clinic - PubMed*, n.d.)(*Pharmacist Workload and Pharmacy Characteristics Associated with the Dispensing of Potentially Clinically Important Drug-Drug Interactions on JSTOR*, n.d.)

A study carried out at CNTH revealed that the mean Total Waiting Time was 19 min and 19 while the mean consultation time was 4 min and 5 s. The study further revealed that Patients with a low total waiting time and high consultation time were satisfied more than the patients with a high total waiting time and low consultation time. Introducing a pre-booking system for the outpatient department might reduce unnecessary waiting times at registration and waiting areas.(Amarathunge et al., 2021) Results of a study performed at NHSL show that Time spent in the doctor's consultation room is 12 min(median) and the average number of doctors can be allocated to work hourly for all days, or that the number of doctors needed for consultation and pharmacy can be modified hourly and daily.(Batawalage Ayanthi Saranga Jayawardena & Lanka, 2017; Mathugama, 2003)

General objective

To evaluate waiting time and consultation time in OPD patients at three selected District hospitals of Gampaha district from January to March 2023

Specific Objectives

To describe patients' waiting time at the OPD of three selected district hospitals in Gampaha District.

To describe the consultation time of doctors at the OPD of three selected district hospitals in Gampaha District.

3. Methodology

- Non-participatory observation of the process in the OPD of selected hospital units.
- Review of secondary data.
- In-depth interview with medical officers, sister in charge OPD, nursing officers and health care assistants working in OPD.
- A structured interview with selected patients and bystanders who came for treatments at OPD

The study setting was the OPD settings of three district hospitals in the Gampaha district. The study period was from 25th February to 25th April 2023. Three hospitals out of 10 District hospitals were selected using a simple random sampling lottery method.

The evaluation was started after the administrative clearance from the provincial director of Health service in the Western province.

An observational checklist was filled out by investigators all 7 days morning at 9 am and 2.30 pm. (Saturday and Sunday mornings only)12 observations were made for one hospital. The average waiting time was calculated for each DH separately and compared with the standards. The investigators secure the confidentiality of the Data collected.

During evaluation following Audit indicators were used for the study and observed data compared against standards.

- Waiting time of the patient = (Time registered at OPD to leaving at the pharmacy) standard-30min
- Availability of signposting at OPD-Yes/No standard-yes
- Availability of appointment system no standard
- Availability of registration counter -Yes/No standard-yes
- The number of healthcare personnel working at the registration desk standard depends on the total number of patients.
- The starting time of the OPD standard is 8.00 am/2 pm
- Time spent per patient by the doctor Standard (13-16 min per patient/patient,4-5 patients /min
- Prescriptions per hour by one pharmacist Standards 14/hour

Results:

The total number of patients who attended during a week to OPD was calculated. Their mean waiting time for the morning session and afternoon session was calculated separately. The number of doctors on duty was taken and the mean consultation time was calculated.

Day	time	DH Radavana	DH Malwathuhiripitiya	DH Biyagama
Monday	9am	388	76	235
	2 pm	120	32	40
Tuesday	9am	408	201	155
	2 pm	136	54	45
Wednesday	9am	345	115	210
	2 pm	136	57	65
Thursday	9am	291	138	200
	2 pm	96	71	66
Friday	9am	349	141	200
	2 pm	101	66	62
Saturday	9am	372	199	241
	2 pm	254	108	161

Table 1

The average Waiting time of the patient of each Hospital can be calculated as follows using the number of doctors working in OPD and working hours. Calculated waiting times according to weeks of the day are illustrated in the following table.

Day	time	DH Radavana	DH Malwathuhiripitiya	DH Biyagama
Monday	9am	45	35	44
	2 pm	20	20	22
Tuesday	9am	40	58	45
	2 pm	15	20	20
Wednesday	9am	45	15	35
	2 pm	25	16	15
Thursday	9am	45	58	92
	2 pm	35	25	15
Friday	9am	55	39	20
	2 pm	35	21	20
Saturday	9am	45	73	15
	2 pm	30	30	15

Table 2 - Average Waiting time of the patient of each Hospital (in minutes)

Mean waiting time for patients was calculated and values are illustrated in table 4.

	DH Radavana	DH Malwathuhiripitiya	DH Biyagama
Mean waiting time for the morning	43.57 min	44 min	46.57 min
Mean waiting time for the afternoon	31 min	20.4 min	18.4 min

Table 3

The mean waiting time to consult an OPD doctor in each hospital ranges between 44 min to 18.4 min whereas the mean Standard waiting time lies between 13-16 min per patient/patient.

Mean consultation time was calculated, and the findings are as follows.

	DH Radavana		DH Malwathuhiripitiya		DH Biyagama	
	Morning	Evening	Morning	Evening	Morning	Evening
Mean Consultation time per patient in minutes	43.57	31	44	20.4	46.57	18.4

Table 4

All three hospital OPDs were signposted with directional boards. Most patients are regular visitors of the hospital, and they are very aware of the OPD arrangement and pharmacy location. The appointment system is functioning well in all three hospitals and a token number is issued for all patients. Only one registration counter is open in all three hospitals and this counter opens about 30 minutes before the start of OPD consultations. Registration counterwork is being carried out by only one healthcare assistant and then patients are advised to be seated till their turn for consultation. There are no laboratory facilities available in these hospitals and waiting time does not include laboratory waiting time and blood collection waiting time.

Recommendations

1. Staffing and Training: Recruit and train additional healthcare assistants for the registration process to reduce wait times.
2. Technology Integration: Implement a digital platform for appointment scheduling and registrations to reduce paperwork and streamline the process.
3. Patient Feedback and Continuous Improvement: Set up a feedback mechanism to constantly gauge patient experiences and use these insights to make further improvements.
4. Waiting Area Management: Arrange for a digital or visible queue system to inform patients about their position in the queue and approximate wait times.
5. Information Dissemination: Implement a digital or physical informational system, providing details about the OPD arrangement, approximate consultation times, and other relevant information.
6. Laboratory Facilities: Collaborate with nearby diagnostic centres or consider establishing in-house laboratory facilities to streamline the entire patient process.

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MOIC- DH-Radavana, MOIC-DH Malvathuhiripitiya , DH- Biyagama

NOIC- DH-Radavana, MOIC-DH Malvathuhiripitiya , DH- Biyagama

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