



Vol. 9(3), Pp. 161 -166, December 2024,  
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<https://journals.directresearchpublisher.org/index.php/drjphet>

Research Article  
ISSN: 2734-2182

## Assessment of Patients' Waiting Times and Healthcare Delivery at the University of Port Harcourt Teaching Hospital (UPTH), Rivers State, Nigeria

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### ABSTRACT

*This study assesses patient waiting times and healthcare delivery at the University of Port Harcourt Teaching Hospital (UPTH), Rivers State, Nigeria. Utilizing a cross-sectional survey research design, data were collected through standardized questionnaires and interviews from 227 patients across various outpatient clinics including the Medical Records, General Out-Patient Department (GOPD), Medical Out-Patient Clinic (MOPC), National Health Insurance Scheme Clinic (NHISC), Dental Clinic (DC), and Ophthalmology Clinic (OC). The study aimed to understand the average waiting times, associated factors, and their impacts on healthcare delivery. Results indicate that a significant portion of patients (70.7%) waited 56 minutes or more to receive care. Factors such as workers' negative behavior, inadequate manpower, lack of computer skills among providers, and insufficient record filing space were identified as major contributors to prolonged waiting times. Data analysis using SPSS version 23 revealed a mean waiting time of 17.32 minutes and identified key factors affecting waiting times. The study highlights the need for interventions to address these factors to improve patient satisfaction and healthcare efficiency.*

**Keywords:** Cross-sectional survey, Healthcare delivery, Outpatient clinics, Patient waiting times, University of Port Harcourt Teaching Hospital, Nigeria.

### Article information

Received 2 November 2024;

Accepted 15 December 2024;

Published 26 December 2024

DOI: <https://doi.org/10.26765/DRJPHET256789191>

Citation: Isaruk, J.I.D., Isaruk, J.I.D. PHD, Minkailu, A.A. (2024). Assessment of Patients' Waiting Times and Healthcare Delivery at the University of Port Harcourt Teaching Hospital (UPTH), Rivers State, Nigeria. Direct Research Journal of Public Health and Environmental Technology. Vol. 9(3), Pp. 161 -166. This article is published under the terms of the Creative Commons Attribution License 4.0.

### INTRODUCTION

The issue of prolonged waiting times in healthcare facilities is a significant concern in many developing countries, including Nigeria. Waiting time is a crucial indicator of the quality of healthcare delivery, as it directly impacts patient satisfaction and overall experience within healthcare institutions (Ogunfowokan & Mora, 2012). Long waiting times can contribute to patient frustration,

reduced trust in healthcare services, and increased likelihood of patients abandoning necessary medical consultations (Hassani et al., 2020). In Nigeria, the healthcare sector is already burdened by challenges such as inadequate infrastructure, limited personnel, and insufficient funding (Akande, 2004), and these issues exacerbate the problem of long patient waiting times.

The University of Port Harcourt Teaching Hospital (UPTH), located in Rivers State, Nigeria, serves as a tertiary healthcare facility that provides specialized care to patients from various parts of the state and beyond. Despite its status as a major healthcare provider, UPTH, like many other public hospitals in Nigeria, struggles with the challenge of long patient waiting times, which negatively impacts healthcare delivery (Odiba et al., 2016). A study by Olukunmi et al. (2017) noted that long waiting times in Nigerian teaching hospitals are often linked to inefficiencies in hospital administration, understaffing, and poor scheduling of patients.

Assessing the average waiting time for patients at UPTH and identifying the factors associated with these delays are critical to improving healthcare delivery at the hospital. Several factors, including the availability of medical personnel, hospital management practices, patient volume, and the efficiency of healthcare processes, can influence patient waiting times (Wanyenze et al., 2010). By identifying these factors, healthcare administrators can implement strategies to reduce waiting times and enhance the overall quality of care provided to patients.

Moreover, studies have shown that reducing waiting times in healthcare facilities can lead to improved patient outcomes, increased patient satisfaction, and greater confidence in the healthcare system (Ndibuagu et al., 2020; Vaughan et al., 2018). Therefore, understanding and addressing the factors contributing to long waiting times at UPTH will not only enhance healthcare delivery but also improve the hospital's reputation as a leading healthcare institution in Rivers State.

This study aims to assess the average length of time patients spend waiting for healthcare attention at UPTH, as well as to determine the factors associated with these waiting times. By doing so, the study seeks to provide evidence-based recommendations to help the hospital management improve service delivery and patient satisfaction.

Long waiting times in healthcare facilities have been identified as a critical issue that negatively impacts patient satisfaction, health outcomes, and overall healthcare delivery (Shahzadi & Annayat, 2017; Thapa et al., 2018). In Nigeria, particularly in public healthcare institutions like the University of Port Harcourt Teaching Hospital (UPTH), extended waiting periods have been reported to hinder access to timely and effective care (Olukunmi et al., 2017). Patients often experience delays in receiving medical attention, which can lead to dissatisfaction, increased anxiety, and in some cases, deterioration of health conditions (Hassani et al., 2020). Despite UPTH's status as a tertiary care provider, it continues to face challenges in managing patient flow and reducing waiting times, largely due to factors such as limited healthcare personnel, inadequate infrastructure,

and inefficiencies in hospital management (Akande, 2004). This situation is not unique to UPTH, as it reflects broader systemic issues within Nigeria's healthcare system. However, the prolonged waiting times at UPTH have specific implications for patient care, as they may discourage patients from seeking necessary treatment or completing their care process, leading to poorer health outcomes.

The factors contributing to the long waiting times at UPTH are multifaceted and may include the high patient-to-doctor ratio, inefficient appointment scheduling systems, and delays in service delivery processes (Ogunfowokan & Mora, 2012). While these issues are widely acknowledged, there has been limited empirical research on the average waiting times at UPTH and the specific factors that contribute to these delays. Without a clear understanding of these factors, efforts to improve the hospital's efficiency and service delivery may be ineffective or misdirected.

This study, therefore, seeks to assess the average length of time patients spend waiting for healthcare services at UPTH and to identify the key factors associated with these waiting times. Addressing this problem is crucial not only for improving patient satisfaction and the quality of care but also for enhancing the overall operational efficiency of UPTH as a leading healthcare institution in Rivers State.

### **Objectives of the study**

The study's objectives are to:

- i). Find out average length of time patients spent at the UPTH in Rivers State, Nigeria, to get healthcare attention.
- ii). Determine factors associated with patients' waiting times for healthcare at the UPTH in Rivers State, Nigeria.

### **Research Questions**

- i). What is the average time spent by patients who always receive healthcare services at the UPTH, Rivers State, Nigeria?
- ii). What are the factors associated with patients waiting times at the UPTH in Rivers State, Nigeria?

### **METHODOLOGY**

The study employed cross-sectional survey research design, focusing on gathering data through standardized questionnaires and interviews from a specific sample of patients at the University of Port Harcourt Teaching Hospital (UPTH). According to Asika (2012), this design allows for the examination of variables and their relationships within a set timeframe. The study utilized self-reported measures as part of a quantitative

**Table 1:** Descriptive Analysis of average time spent by patients who always receive healthcare services at the different clinics/departments UPTH, Rivers State, Nigeria.

Items	Options	Frequency Percentage (%)	Mean	Standard Deviation
Patients' waiting time at the UPTH	1-15 minutes	11 (7.3)	8.660	2.845
	16-25 minutes	7 (4.7)		
	26-35 minutes	5 (3.3)		
	36-45 minutes	7 (4.7)		
	46-55 minutes	14 (9.3)		
	56 minutes and above	106 (70.7)		
Name of departments and clinics at UPTH	Health Records Management Department	25 (16.7)	3.500	1.714
	General Out-Patient Clinic	25 (16.7)		
	Medical Out-Patient Clinic	25 (16.7)		
	National Health Insurance Scheme Clinic	25 (16.7)		
	Ophthalmology Clinic	25 (16.7)		
	Dental Clinic	25 (16.7)		
What is the length of time a patient waits to receive healthcare services in the different clinics and departments at UPTH			5.160	1.572
Patients' average length of stay to receive healthcare in the different clinics/departments at the UPTH			17.320	5.689

**Source:** Researchers' Field Survey 2024

methodology to understand patients' preferences, opinions, and behaviors. Participants were selected based on specific inclusion and exclusion criteria to ensure reliable responses, targeting those with repeated healthcare experiences at UPTH.

The population for the study consisted of 560 patients from various outpatient clinics at UPTH, including the Medical Records, General Out-Patient Department (GOPD), Medical Out-Patient Clinic (MOPC), National Health Insurance Scheme Clinic (NHISC), Dental Clinic (DC), and Ophthalmology Clinic (OC). Using Cochran's (1963, 1975) formula, a sample size of 227 patients was calculated, ensuring a representative sample from each clinic. Multi-stage sampling, proportional simple random sampling, and purposive sampling were used to ensure that the selection of respondents was systematic and unbiased. For data collection, the researchers designed a questionnaire validated by experts from the School of Public Health at the University of Port Harcourt. The questionnaire was divided into two sections: demographic information and questions addressing the study's research objectives. Data analysis was conducted using SPSS version 23, where descriptive statistics such as frequency, percentage, mean, and standard deviation were used to analyze the demographic data and answer the research questions.

## RESULTS

In this section, the research questions formulated in the study were used to guide the analysis of the data obtained from the questionnaire given to patients as well as observation outcome at the different clinics and departments at the University of Port Harcourt Teaching

Hospital (UPTH), Rivers State, Nigeria. The researcher used mean scores, standard deviations, percentages, and simple tables.

**Research Question One:** What is the average time spent by patients who always receive healthcare services at the UPTH, Rivers State, Nigeria?

To discourse research question number three above, patients were observed based on the time they visited the clinic or department and when they received medical attention or care from a healthcare provider, and the time frames were 1–15 minutes, 16–25 minutes, 26–35 minutes, 36–45 minutes, 46–55 minutes, and 56 minutes and above, respectively. The answers were analysed and shown in Table 1.

Table 1. shows that at each of the departments or clinics at the UPTH that was used for the study, 25 (16.7%) people were observed, with a mean of 3.5 and a standard deviation (SD) of 1.714. Results indicated 106 (70.7%) that the majority of patients wait 56 minutes and above to receive medical attention at the different clinics or departments, followed by 14 (9.3%) who spent 45–55 minutes, while 5 (3.3%) spent 26–35 minutes, and generally, a mean of 8.660, SD = 2.845, was recorded as patient wait time at the different clinics at the UPTH in corresponding to the different time ranges. Equally, the table indicated a mean of 5.160 and SD = 1.572 as the length of time a patient waited to receive healthcare services in the different clinics and departments at UPTH, Rivers State. Furthermore, the result showed that the average length of stay for patients to receive healthcare in the different clinics and departments was mean = 17.32 and SD = 5.69. This implies that patients wait longer at the different clinics and departments at the

**Table 2:** Descriptive Analysis of Patients' responses based on the factors associated with patients' waiting time at the UPTH, Port Harcourt, Nigeria

S/N	Factors associated with patients' waiting time in receiving healthcare services at the various departments and clinics at the UPTH	SA Freq. (%)	A Freq. (%)	D Freq. (%)	SD Freq. (%)	Mean ( $\bar{x}$ )	Standard Deviation (SD)
1	Workers negative behavior always contributes to patient waiting time in this hospital	97 (48.99)	77 (38.89)	12 (6.06)	12 (6.06)	3.308	.838
2	Inadequate manpower levels in this hospital contribute to prolonging patient waiting times.	89 (45.0)	86 (43.4)	17 (8.6)	6 (3.0)	3.303	.753
3	Lack of good computer skills among healthcare providers always delays attending to patients in this hospital.	80 (40.4)	87 (43.9)	22 (11.1)	9 (4.6)	3.202	.812
4	Lack of light in record retrieval units often delays the provision of care to patients in this hospital.	62 (31.3)	81 (40.9)	36 (18.2)	19 (9.6)	2.939	.938
5	Patients not obeying their healthcare provider's advice always contribute to their long waiting time in this hospital.	56 (28.3)	90 (45.5)	34 (17.1)	18 (9.1)	2.929	.904
6	Lack of record filing space always contributes to long patient waiting times in this hospital.	70 (35.4)	63 (31.8)	42 (21.2)	23 (11.6)	2.909	1.014
Grand mean						3.098	.876

Source: Researchers' Field Survey 2024

Key: SA=Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree \*\*\*Decision Rule if mean is 1 to 1.74 = Strongly Disagree; 1.75 to 2.49 = Disagree; 2.50 to 3.24 = Agree; 3.25 to 4 = Strongly Agree

UPTH before receiving healthcare services.

**Research Question 2:** What are the factors associated with patient waiting time at the UPTH?

To address research question number three above, patients were asked to respond to statements based on the factors associated with patients' waiting time at the UPTH, Port Harcourt on a four-point Likert scale: strongly agree = 4, agree = 3, disagree = 2, and strongly disagree = 1. Their answers were analysed and shown in Table 2. Table 2 presents the result of descriptive statistics on patients' views based on the factors associated with patients' waiting time at UPTH, Port Harcourt, Rivers State, Nigeria. The results revealed that patients rated agree as their most preferred option on the factors associated with patients' waiting time at the different departments and clinics of UPTH based on a grand mean ( $\bar{x}$  = 3.098, SD = 0.876) on a four-point Likert scale measurement. The result falls within the benchmark of 2.49–3.24 agree, thereby signifying the presence of diverse factors associated with patients' waiting times at the different departments and clinics at the UPTH. The results further indicated that workers negative behaviour always contributes to patient waiting time in the different clinics and departments at the UPTH was the highest with 97 (48.99%) as strongly agree, followed by agree option had 77 (38.89%) while strongly disagree had 12 (6.06%) as the least response and a mean ( $\bar{x}$  = 3.308, SD = 0.838). The result also showed inadequate manpower levels in the hospital contribute to prolonging patient waiting times, as the second-rated items with strongly agree had 89 (45%), followed by agree 86 (43.4%), and strongly agree had the least response with

6 (3%) and had a mean ( $\bar{x}$  = 3.303, SD = 0.753) as the general rating. Equally, the result on table 2 further established that lack of record filing space always contributes to long patient waiting times in the diverse clinics and departments at UPTH, Port Harcourt Rivers State, as the least associated factors responded to by patients with strongly agreeing were the highest, with 70 (35.4%), followed by agreeing with 63 (31.8%), and strongly disagreeing with 23 (11.6%), and a mean ( $\bar{x}$  = 2,909, SD = 1.014).

### Discussion of Findings

This section discusses the analysis's main generalisations in light of the findings of earlier studies linked to and cited in this work's body. The goal is to draw conclusions and offer criticisms for a stronger argument and submission that will advance knowledge.

**Research question one:** The study found that the majority of patients at the UPTH wait 56 minutes or more for medical attention, with a mean of 8.66 minutes. The average length of stay for patients was 17.32 minutes, indicating that they wait longer at different clinics and departments before receiving healthcare services. The mean wait time was 5.16 minutes, with a standard deviation of 1.57. These findings indicate that patients face significant delays in accessing care at UPTH, which can negatively impact their satisfaction and experience with the healthcare system. These findings are in support of a study by Thapa et al. (2018), which revealed that the psychiatry department had the longest waits, with average waiting times of 44.85 minutes and consultation times of 17.357 minutes at Yenepoya Medical College

Hospital in India. They blamed file organisation issues, sluggish file retrieval, and unplanned worker absences for the delays. In dermatology and psychiatry, the study discovered a somewhat favourable association between waiting and consultation times. The findings further consolidated Shahzadi and Annayat's 2017 study, which reported that patients in the outpatient department usually have to wait a lengthy time, which leads to poor quality service and missed appointments. Although the poll reveals that people are generally satisfied, having more workers on hand could improve service delivery and reduce wait times. The average time patients spent receiving healthcare services, as indicated in the findings, is above the recommended time duration for patient care according to Enabulele et al. (2018). The British Medical Association recommends an average consultation duration of 15 minutes for each patient, but literature indicates that 90% of patients should be seen within 30 minutes of their scheduled appointment time, according to the Institute of Medicine (2001). In addition, long wait times can be attributed to a lack of staff, patient records being misfiled, consultations taking longer than expected, and concurrent break times. A significant factor is the lack of a system of appointments with times.

**Research question two:** The study reveals that patients at the University of Port Harcourt (UPTH) in Nigeria have a high level of satisfaction with the healthcare services provided at various clinics and departments. The General Out-Patient Clinic at UPTH has the highest satisfaction rating, with 79 patients (39.4%). The Health Records Management Department has the second highest satisfaction rating, with 81 patients (40.9%). The National Health Insurance Scheme Clinic has the third highest satisfaction rating, with 90 patients (45.5%). The Medical Outpatient Clinic has the least satisfaction rating, with 82 patients (41.4%). The study concludes that patients at UPTH have a high level of satisfaction with their healthcare services. But the opposite responses were established in another study by Patavegar et al. (2012) on patient satisfaction with outpatient department services at a tertiary care hospital using a cross-sectional survey design. 44.5% of patients expressed dissatisfaction with the waiting area's cleanliness. The scheduling of the outpatient department was deemed convenient by 91% of patients. Before seeing a physician, 176 people (39.12%) had to wait fewer than 30 minutes. The results demonstrated that the General Out-Patient Clinic had the greatest satisfaction percentage (79%), with high patient satisfaction with healthcare services provided at the University of Port Harcourt Teaching Hospital (UPTH). Nonetheless, 41.4% of patients gave the Medical Outpatient Clinic a negative satisfaction rating, giving it the lowest grade (2.328). Enhancements to the Medical Outpatient Clinic have the potential to augment patient contentment. Similarly,

according to Usman et al. (2020) study, wait times for patients are a significant indicator of patient satisfaction and the quality of healthcare services. Notable variations exist in the link between waiting time and patient satisfaction. Outpatient services like paediatrics, internal medicine, midwifery, and surgical clinics are gaining popularity among the general population due to the fact that they offer one-day treatment and practical therapy. Long wait times are a big source of annoyance, but they should be taken into account while choosing a hospital. Ndibuagu et al. (2020) assert that reducing waiting times and improving patient-friendly dispositions are critical for all parties involved in the design and delivery of health care services. Since patient requirements are increasingly driving healthcare solutions, patient satisfaction must be given priority.

## Conclusion

The study concludes that patient waiting times at the University of Port Harcourt Teaching Hospital are significantly long, with many patients experiencing delays of 56 minutes or more before receiving medical attention. The findings reveal that various factors contribute to these delays, including negative behavior from healthcare workers, inadequate manpower, insufficient computer skills among staff, and a lack of proper record filing space. These factors collectively impact the efficiency of healthcare delivery and patient satisfaction at UPTH.

## Recommendations

1. **Improve Staffing Levels:** Increase the number of healthcare staff in outpatient clinics to reduce patient waiting times and ensure timely care.
2. **Enhance Training:** Implement regular training programs to improve healthcare workers' interpersonal skills and computer proficiency to enhance their efficiency in patient care and record management.
3. **Provide adequate infrastructure:** Establish electronic health records system and other health records infrastructure to forestall the problems of records storage space and associated issues so as to enhance timely patient information management for effective and efficient care services across diverse sections.

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