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ORIGINAL RESEARCH ARTICLE

EFFECTS OF LONG HOSPITAL WAITING TIME: A STUDY AT THE OUTPATIENT DEPARTMENT AT A PRIVATE HOSPITAL IN GHANA

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Conflict of interest: None declared

Abstract

Background: Long waiting times in hospital outpatient departments (OPDs) are a major contributor to patient dissatisfaction, reduced health service utilization, and increased patient churn. Despite global attention to this issue, limited research has been conducted within Ghana's private healthcare system.

Objective: This study explores the effects of prolonged outpatient waiting times on patient satisfaction and retention at a private hospital in Ghana, with a specific focus on operational inefficiencies contributing to patient churn.

Methods: A retrospective data analysis was conducted using the JMED Pro version 22.00 hospital management system at the Rock Hospital Accra Ghana. Attendance data from 2019 to 2024 were extracted and analyzed using descriptive statistics, linear regression and chi squared test to assess trends in OPD registration, turnover, and churn rates and variations across National Health Insurance Scheme (NHIS), private, and corporate patient categories. Operational inefficiencies—such as delayed staff reporting and extended breaks—were also reviewed as potential contributing factors.

Results: OPD attendance declined significantly over the study period ($p = 0.002$), with average yearly reductions of 3,679 visits with highly significant variations ($P= 0.00e+00$). NHIS and private registrations also decreased significantly ($p = 0.0019$ and $p = 0.0064$, respectively) and highly significant variations $p = 1.10e-12$ and $p = 2.23e-08$ respectively), while corporate registrations rose ($p = 0.0033$) with high significant variations Corporate: $p = 0.026$. Churn rates increased steadily across all categories, reaching a high of 4.56% overall in 2024. Notably, corporate churn rose more than sixfold from 2019 to 2024 ($p = 0.010$). Operational delays linked to staff behavior were identified as key contributors to increased pending attendance and premature patient departure.

Conclusion: The study highlights a statistically significant decline in patient attendance and a rising churn rate, closely tied to long waiting times and internal workflow inefficiencies. These findings underscore the urgent need for targeted interventions to streamline OPD operations, enhance patient experience, and reduce attrition in Ghana's private healthcare facilities.

Keywords: waiting time, outpatient department, patient churn, hospital efficiency, Ghana,

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INTRODUCTION

The Outpatient Department (OPD) serves as the face and primary reception point of any hospital, providing the first impression to patients through a warm welcome and initial comfort. It is responsible for conducting skilled triage based on clinical protocols, usually performed by well-trained nurses and Emergency Medical Technicians (EMTs). Timely interventions within this department are essential in avoiding unnecessary delays, which can prove critical, especially in emergencies. Beyond routine vital sign checks, OPD professionals are trained to perform a range of nursing and medical activities, ensuring patient comfort, facilitating mobility, and making proper referrals to consultants. The appearance and conduct of OPD personnel form a summarized perception of the entire facility's operation and management standards. Furthermore, adherence to a scheduled workflow in the OPD is directly linked to patient satisfaction and retention. In many respects, the quality of customer service within a hospital begins at the OPD and ends with the pharmacy or other service departments.

Long waiting time in the OPD negatively impacts patients' willingness to return to a facility, thereby reducing health service utilization[1]. Several studies have shown that extended waiting time is a key contributor to patient dissatisfaction, physical and emotional discomfort[2], and even revenue loss. A time-motion study in a major Chinese hospital found that actual waiting time was inversely related to patient satisfaction[4]. In the United States, a 2022 meta-analysis reported a 48% patient churn rate attributed in part to extended hospital waiting times[3].

Literature Review

Waiting time challenges are common across healthcare systems globally. In Ethiopia, outpatient department waiting times are notably long; a recent study found that patients waited an average of 4.5 hours to receive care[2]. Similarly, a Nigerian tertiary hospital outpatient survey revealed that 89.8% of respondents were dissatisfied with the length of waiting times[5]. In Botswana, research conducted at the Princess Marina Hospital's Emergency Department in 2020 confirmed that both waiting times and lengths of stay were significantly long[6]. A time-motion study of primary healthcare services in central Mozambique indicated prolonged waiting times prior to consultations, especially for first-time antenatal visits[7].

In Ghana, a study at the Holy Family Hospital in Techiman reported an average OPD waiting time of 2 hours and 50 minutes, with the majority of patients spending over two hours before being attended to[8]. These findings reflect a common challenge across healthcare systems in many low- and middle-income countries.

Prolonged waiting times not only affect patient satisfaction but also impact hospital revenue. Studies have shown that a positive patient experience correlates with improved financial performance[9]. Negative perceptions of care can lead to adverse word-of-mouth, potentially causing a revenue loss of up to $400,000 over a single patient's lifetime[10]. In response to such concerns, the Centers for Medicare & Medicaid Services (CMS) in the United States have linked reimbursement rates to patient satisfaction metrics[11].

These findings reinforce the notion that long waiting periods are a persistent problem in sub-Saharan Africa, contributing to decrease patient satisfaction and strained healthcare delivery systems.

Beyond satisfaction, long waiting times have clear financial implications. A positive patient experience is strongly linked to increased profitability, while negative experiences can result in substantial revenue losses. Studies have shown that patient perceptions of care quality can account for 17% to 27% variation in hospital financial performance metrics[9]. In fact, poor patient experiences have been linked to potential revenue losses of up to $400,000 over a single patient's lifetime[10].

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Policy shifts in developed countries reflect the economic importance of patient satisfaction. Following the enactment of the Patient Protection and Affordable Care Act in 2010, the Centers for Medicare and Medicaid Services in the U.S. tied reimbursement rates to patient satisfaction scores[11]. Furthermore, a 2020 digital health consumer survey across seven countries revealed that 64% of patients would switch providers if their expectations were not met[12],[13]. In this context, long waiting times are not only a quality-of-care issue but also a business risk, as patient churn continues to rise in both public and private healthcare settings.

The body of evidence highlights a clear and consistent link between long waiting times, reduced patient satisfaction, increased churn, and significant financial repercussions for healthcare providers. Despite these trends, limited research has been conducted within Ghana's private healthcare system.

Objective of Study

This study aims to explore the effects of long outpatient waiting times on patient satisfaction and provider retention at a private hospital in Ghana.

Method Design

This study used quantitative data from Rock Hospital's administrative records, extracted using JMED Pro version 22.00. Data covered the years 2019 to 2024 and included OPD attendance by registration type (NHIS, private, corporate), pending visits, and churn rates. Descriptive statistics and linear regression were used for analysis. "Pending Attendance" (patients registered but not attended to) was treated as a proxy for patient churn and dissatisfaction.

Setting

The study was carried out at a 100 bed-capacity Rock Hospital, a private primary hospital category Level C

Inclusion and exclusion criteria

A core operational metric used in this study is pending attendance, defined as the number of patients who were awaiting initial assessment (e.g., vital signs) and triaging by the OPD nurse but left the facility before this process was initiated or completed. These patients consequently did not receive any formal consultation or treatment by a doctor or prescriber, contributing to the facility's overall churn rate for all three shifts (morning, afternoon and night)

Procedure

Ethical clearance was granted from the Institutional Review Board (IRB) of the Rock hospital and the Chief Executive Officer.

Data analysis

Attendance data from 2019 to 2024 were extracted and analyzed using descriptive statistics, linear regression and chi squared test to assess trends in OPD registration, turnover, and churn rates and variations across National Health Insurance Scheme (NHIS), private, and corporate patient categories

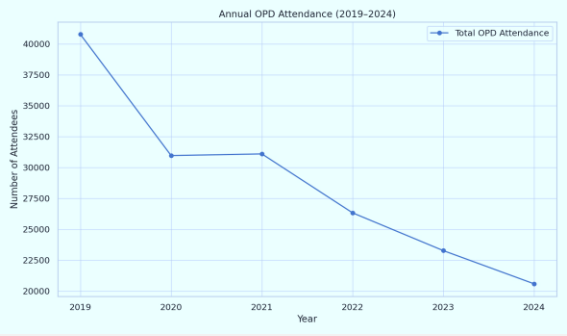
Results

Annual OPD Churn Rates

Year	Total OPD Attendance	Churn Rate (%)
2019	40773	-
2020	30965	24.06
2021	31099	-0.43
2022	26329	15.34
2023	23272	11.61
2024	20587	11.54

Linear Regression (P=0.0024) → statistically significant decrease

Chi-squared Test (P=0.00e+00) → highly significant variation over time



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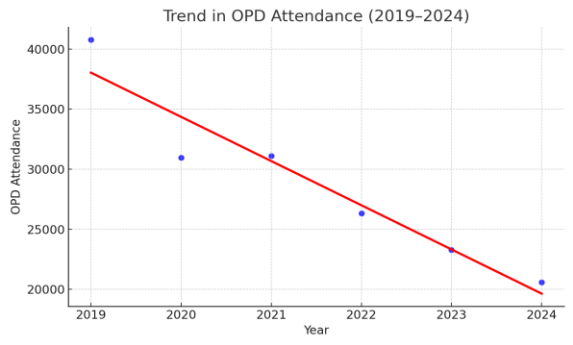
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Year	NHIS Churn (%)	Private Churn (%)	Corporate Churn (%)
2019	3.66	3.44	1.72
2020	2.84	3.86	0.00
2021	3.50	3.70	1.05
2022	3.81	4.91	2.62
2023	3.77	4.77	5.61
2024	4.30	5.09	6.25

Linear Regression (trend over time):

- NHIS: p = 0.117 ⟶ Not statistically significant
- Private: p = 0.009 ⟶ Statistically significant
- Corporate: p = 0.025 ⟶ statistically significant



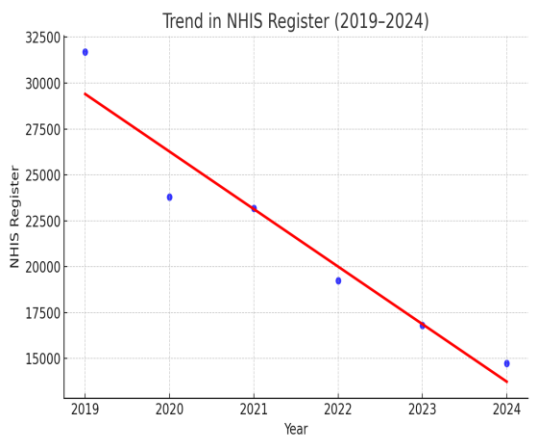
Chi-squared Test (variation over years):

- NHIS: p = 1.10e-12 ⟶ highly significant variation
- Private: p = 2.23e-08 ⟶ highly significant variation
- Corporate: p = 0.026 ⟶ statistically significant variation

Patient Turnover Trend

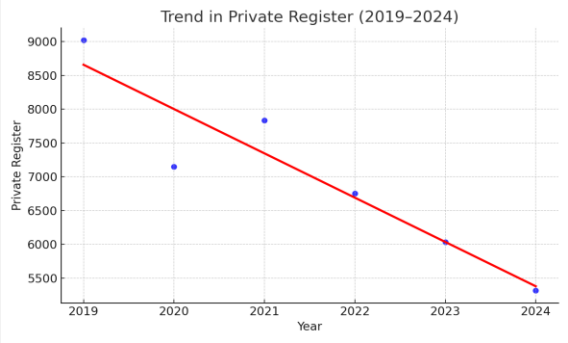
NHIS Turnover:

- Declining trend, but not significant (p = 0.082).



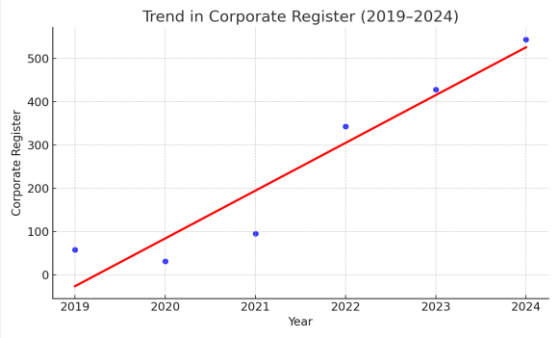
Private Turnover:

- No significant trend detected (p = 0.599).

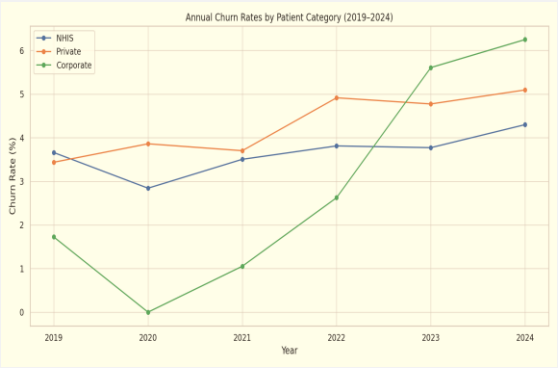


Corporate Turnover:

- Significant increase (p = 0.010).
- Average increase: ~7 cases per year



Specific Churn Rate



DISCUSSION

The analysis shows a steady decline in NHIS and private patient visits, while corporate registrations increased. This trend indicates dissatisfaction among walk-in patients, likely due to operational inefficiencies such as staff lateness, delays in triage, and shift management issues. These inefficiencies not only compromise patient experience but also affect hospital

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revenue through loss of clientele. Compared with global data, these findings align with trends in other developing countries, confirming that wait time is a critical determinant of health service utilization.

LIMITATIONS

A core operational metric used in this study is pending attendance which limited a wider methodological application to generate statistically significant results.

The study also ignored break down of monthly attendants' statistics for each year and specific operational metric

CONCLUSION

Long OPD wait times significantly impact patient satisfaction and loyalty, leading to reduced attendance and financial losses. This study emphasizes the urgent need for institutional reforms to improve frontline service delivery in Ghanaian private hospitals

RECOMMENDATIONS

- Improve punctuality monitoring among OPD staff.
- Streamline triage processes using digital systems.
- Enhance shift transition protocols.
- Institutionalize churn rate monitoring as a KPI for OPD performance

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