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System Challenges and Patient Waiting Time in Outpatient Care: A Qualitative Study in a Nigerian Public Hospital

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Abstract

Background: Patient waiting time in outpatient departments is a key indicator of healthcare quality, particularly in low- and middle-income countries where delays frequently exceed two hours. In Nigeria, systemic inefficiencies, understaffing, manual record-keeping, and high patient volumes contribute to prolonged waits. Existing studies have predominantly used quantitative methods, leaving a gap in understanding the lived experiences of patients and perspectives of frontline healthcare workers, especially in secondary-level public hospitals. **Methods:** An exploratory qualitative study was conducted at the General Outpatient Department of General Hospital Minna, Niger State, Nigeria. Convenience sampling recruited 16 patients, while purposive sampling selected 13 healthcare professionals (doctors, nurses, and health information personnel). In-depth, audio-recorded interviews were conducted and data analysed using thematic analysis. **Results:** Five themes emerged: patient experience and outcomes; current strategies and solutions; monitoring and metrics; implementation challenges; and future directions. Three-quarters of patients reported prolonged waits associated with emotional distress and dissatisfaction. Providers identified high patient volumes, inadequate record-keeping, and partial scheduling implementation as systemic barriers. Cultural factors influenced patient tolerance, and both groups prioritised digital solutions including electronic medical records, smart scheduling, and telemedicine. **Conclusion:** Waiting time in the outpatient department is shaped by interacting systemic, cultural, and operational factors. Structured monitoring, improved patient communication, and targeted digital interventions are essential to reducing delays and strengthening patient-centred care in Nigerian public hospitals.

Keywords: Waiting time; outpatient services; patient experience; qualitative study; healthcare system challenges

Introduction

Patient waiting time in outpatient departments is a critical indicator of healthcare quality and service delivery efficiency. Waiting time refers to the duration a patient spends in a healthcare facility from arrival to receiving clinical attention, encompassing registration, triage, consultation, and post-consultation services (Oche and Adamu, 2013). Prolonged waiting times remain one of the most persistent challenges in healthcare systems globally, with consequences extending beyond inconvenience to affect clinical outcomes, patient satisfaction, and public perception of healthcare institutions (Ogunfowokan and Mora, 2012). In developed healthcare systems, considerable progress has been made in reducing outpatient waiting times through digital health technologies, appointment scheduling systems, and optimized patient flow protocols. The United States, for instance, reports average outpatient consultation waiting times of approximately 15 minutes, a benchmark that contrasts sharply with realities in many low- and middle-income countries (Bleustein et al., 2014). In Sub-Saharan Africa, and Nigeria in particular, waiting times frequently exceed two hours, with some studies

reporting averages of up to 168 minutes at tertiary institutions (Oche and Adamu, 2013; Ogaji et al., 2015). These figures reflect systemic inefficiencies, including inadequate staffing, poor workflow organization, absence of formal scheduling systems, and high patient volumes in under-resourced facilities.

Patient satisfaction is closely tied to the waiting experience. Research consistently shows that patients who experience excessive waiting times are more likely to report dissatisfaction, disengage from care, or fail to return for follow-up visits, even when clinical care is of acceptable quality (Nkrumah et al., 2016). This is particularly significant in outpatient settings, which serve as the primary point of contact between communities and the formal healthcare system. When outpatient services are perceived as slow or disorganized, the consequences include increased morbidity from delayed care, reduced healthcare-seeking behavior, and erosion of trust in public health institutions (Ofili and Ofovwe, 2005).

In Nigeria, outpatient department challenges are compounded by a rapidly growing population, uneven distribution of healthcare workers, insufficient infrastructure, and limited adoption of health information technologies. Studies have identified common drivers of delay, including inadequate staffing, reliance on manual record-keeping, ineffective triage systems, and the absence of structured appointment frameworks (Ogaji et al., 2015; Oche and Adamu, 2013).

Despite growing literature on outpatient waiting times in Nigeria, existing studies have predominantly employed quantitative methods, focusing on measurable durations and satisfaction scores with comparatively little attention given to patients' lived experiences or the perspectives of frontline healthcare workers. This is a significant gap, as qualitative approaches are increasingly recognized as valuable tools for understanding the real-world experiences behind the numbers, including the social and cultural factors that influence how waiting times are perceived and managed. This gap is even more pronounced in secondary-level public hospitals, which are the main point of healthcare access for most Nigerians, yet remain understudied. Without this deeper understanding, efforts to improve waiting times risk being poorly suited to the actual needs and realities of these settings. This study therefore aims to qualitatively explore the systemic challenges and lived experiences shaping patient waiting times at the General Outpatient Department of General Hospital Minna, Niger State, to inform contextually relevant interventions.

Methods

Study settings

This study was conducted at General Hospital Minna, established in 1946 and currently under the Niger State Ministry of Health. The focus was the General Out-Patient Department (GOPD), staffed by general practitioners serving as the primary healthcare entry point for community members.

Study Design and Sampling

An exploratory qualitative design was adopted. Convenience sampling recruited 16 patient participants from those present in the GOPD. Purposive sampling initially selected 17 healthcare professionals: 4 doctors, 5 nurses, and 8 health information management personnel from the total GOPD staff of 23, based on their specific roles and direct relevance to the research objectives. However, only 13 healthcare professionals were ultimately interviewed. Of the four who did not participate, one was absent during the data collection period, two were unavailable due to the demands of high patient flow at the time of scheduled interviews, and one repeatedly postponed and could not be rescheduled within the data collection window. The combined sample of 29 participants; 16 patients and 13 healthcare professionals was deemed sufficient to achieve data saturation. Sample adequacy was determined iteratively, as no new codes or themes emerged from successive interviews, indicating that data saturation had been reached. This is consistent with recommendations that qualitative studies require a minimum of 12 participants to reach saturation (Fugard and Potts, 2014; Guest, Bunce, and Johnson, 2006).

Inclusion and Exclusion Criteria

Patients aged 18 and above who were willing to participate were included. Those with severe medical conditions, cognitive impairments, or who were below 18 were excluded. Healthcare professionals required active GOPD employment, at least 2 years of experience, and direct patient care involvement; those in other departments or on internship were excluded.

Data Collection

Data were collected through in-depth, semi-structured, audio-recorded interviews conducted by the principal and co-researchers, who received prior training in qualitative interviewing techniques to ensure consistency

and minimise interviewer bias. An interview guide was developed based on the study objectives and reviewed by the research team before use; the guide covered patient factors affecting waiting tolerance, satisfaction, and service recommendations for patient participants, and provider strategies, perceived effectiveness, and implementation barriers for healthcare professional participants. Interviews were conducted in a private area within the GOPD to ensure confidentiality. Each interview lasted between 10 and 20 minutes. All interviews were conducted in English or translated into the participant's preferred language where necessary, and audio recordings were transcribed verbatim for analysis.

Statistical Analysis

Data analysis followed Braun and Clarke's (2006; 2019) six-phase reflexive thematic analysis framework using an inductive approach. Audio-recorded interviews were transcribed verbatim and imported into NVivo 15 for systematic coding and theme development. Codes emerged from the data through repeated reading, initial code generation, and progressive grouping into themes that were reviewed and refined to produce coherent findings.

Ethics

Ethical approval was obtained from General Hospital Minna's Research, Ethics and Publication Committee (Reference: HBM/GHM/136/VOL.III/696, 28th May 2025). Informed consent was obtained from all participants, who were assured of confidentiality and the right to withdraw.

Results

Characteristics of Participants

Healthcare provider participants comprised doctors (30.8%), nurses (23.1%), and health information personnel (46.2%), achieving representation across key operational roles (Table 1). The 76.5% response rate indicated strong engagement, though variation across cadres suggested differential time availability or interest levels. Patient participants (n=16) demonstrated demographic diversity in age, gender, and ethnicity, with Nupe and Hausa ethnic groups predominating, consistent with regional population distributions (Tables 2).

Table 1 Cadres and Response Level of Healthcare Professional Participants

Cadres of Healthcare Professionals	Total Recruited	Successfully Interviewed	Not Interviewed	Response Rate (%)
Doctors	4	4	0	100.0
Nurses	5	3	2	60.0
Health Information Personnel	8	6	2	75.0
Total	17	13	4	76.5

Thematic Analysis

Analysis of both datasets generated five integrated themes capturing the complexity of waiting time dynamics, the Patient experience and outcomes, current strategies and solutions, monitoring and metrics, challenges in implementation, and future directions. See table 3 for the summary of the themes, subthemes and quotes generated.

Theme 1: Patient Experience and Outcomes

Providers highlighted systemic consequences of prolonged waiting, noting that delayed care worsens outcomes, particularly for urgent cases, and reduces patient satisfaction. They contrasted 15-minute average waits in high-income settings with approximately 168 minutes observed in Nigerian tertiary facilities, underscoring structural disparities. Variability across service points was the most frequently mentioned concern (5 cases); ahead of average wait metrics (2 cases). Patients corroborated these accounts through direct experience: 12 of 16 (75%) reported extended waits, with representative accounts including:

> *"I was here two months ago, and I waited for six hours before consultation. I felt very bad because I am in pain and nobody considered me..."*

> *"I came here last time by 9am... we didn't leave this hospital until after 3pm, we are exhausted and hungry honestly we felt very bad about the wait."*

Satisfaction outcomes reflected these experiences: 6 patients expressed satisfaction with clinical services, 4 were dissatisfied, and 5 were partially satisfied, with waiting time consistently cited as the primary detractor. While providers focused on systemic efficiency, patients emphasised immediate discomfort though both groups recognised the dual emotional and clinical impact of prolonged waits.

Table 2 Age/Gender and Ethnicity Distribution of Patient Participants

Gender	Age Range (years)
Female	22 – 62
Male	31 – 40
Ethnic Group	
Nupe	5
Hausa	4
Gbagyi	3
Yoruba	2
Igbo	2
Total	16

Theme 2: Current Strategies and Solutions

Providers described several operational strategies at GOPD. Triage was the most frequently implemented (7 cases, 11 references); credited with prioritising urgent cases and reducing wait times. A 5-minute interval consultation system was used to maintain patient turnover, and appointment scheduling was partially in place to regulate flow. Additional measures included early staff arrival, health education talks during waiting periods, and duty delegation.

Patient recommendations independently converged on similar priorities. Increased staffing and punctuality were most frequently cited (5 cases each), illustrated by concerns such as inadequate doctor-to-patient ratios. Patients also suggested telemedicine for follow-up care (3 cases), dedicated services for elderly patients, and improved waiting area facilities (2 cases).

Theme 3: Monitoring and Metrics

Providers acknowledged the importance of systematic measurement but reported inconsistent practice. Informal patient feedback was the most common monitoring approach (5 cases), with formal wait time records recognised as important yet minimally implemented (3 cases), one participant noted: *"We don't have such record unfortunately, but the record team are working towards that."* Monthly aggregate statistics on patient volume were reported in one case.

Patients functioned as indirect indicators, drawing on personal time tracking and physical experience: accounts such as waiting from 9 am to 1:30 pm served as de facto benchmarks. Their evaluation criteria included comparisons with prior visits, physical comfort, and emotional distress, providing a patient-centred dimension to monitoring not captured in formal systems.

Theme 4: Challenges in Implementation

Providers identified six operational barriers: high patient volume particularly during peak seasons (5 cases); human factors including staff and patient behaviours (6 cases); lack of formal wait time records hindering evidence-based management (4 cases); absence of digital scheduling tools (1 case); sub-optimal workflows (1 case); and resource constraints in funding and manpower (1 case).

Patients reported experiential barriers that compounded wait-related dissatisfaction. Eight cases reported feeling ignored during waits, and two described disrespects from staff. Communication gaps specifically, a lack of explanation for delays were a recurring concern. Social and individual factors also shaped wait tolerance (5 cases). Cultural influences were notably present: patience norms encouraged acceptance *("my culture showed us not to be selfish, so if others wait why not me?"*), while individual time valuation created tension *("Yoruba people always value their time so I expect that patients time should be valued").* Coping strategies included social support, mobile phone use, and resigned acceptance.

Theme 5: Future Directions

Providers outlined five emerging priorities: electronic medical records (4 cases), smart scheduling and digital appointment systems (4 cases), telemedicine (3 cases), *predictive analytics for patient flow (1 case). Providers also noted current workforce adequacy as a readiness asset: "We are not lacking in manpower. We have enough hands to work with*," suggesting an enabling condition for technology adoption. Patient recommendations aligned with provider visions, with telemedicine (3 cases) and increased staffing (5 cases) most frequently cited, reflecting convergent expectations for digital and human resource solutions to reduce waiting times.

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Table 3: Summary of Themes, Subthemes, and Representative Quotes

Themes	Subthemes	Representative Quotes
Theme 1 Patient Experience and Outcomes	1a. Systemic impacts on patient satisfaction and health outcomes 1b. Emotional and physical toll of prolonged waits 1c. Global disparities in waiting times	"Long waiting times can lead to decreased patient satisfaction" (Provider) "I was here 2 months ago and I waited for 6 hours before consultation, I felt very bad because I am in pain..." (Patient)
Theme 2 Current Strategies and Solutions	2a. Provider-implemented strategies (triage, 5-minute interval system, scheduling) 2b. Patient-recommended solutions (staffing, telemedicine, specialized services)	"Triage has greatly helped reduce waiting times" (Provider) "There should be more doctors because with all this population of patients you are seeing, only two doctors attend to them..." (Patient)
Theme 3 Monitoring and Metrics	3a. Formal and informal measurement methods by providers 3b. Patient-based experiential time tracking	"We don't have such record unfortunately, but the record team are working towards that" (Provider) "I waited from 9am to 1:30pm" (Patient)
Theme 4 Challenges in Implementation	4a. Operational and systemic barriers (volume, staffing, records) 4b. Patient experience barriers (communication, disrespect) 4c. Cultural and personal influences on waiting tolerance	"Existing workflows are not optimized for efficiency" (Provider) "Nobody considered me from the nurses" (Patient) "My culture showed us not to be selfish, so if others wait why not me?" (Patient)
Theme 5 Future Directions	5a. Digital health solutions (EMRs, smart scheduling, predictive analytics) 5b. Telemedicine expansion 5c. Workforce readiness	"Technology integration, electronic health records and other digital solutions helps enhance patient care and reduce wait times" (Provider) "Improvement of telemedicine" (Patient)

Discussion

Waiting time in outpatient settings is a critical barometer of healthcare system performance, reflecting both service delivery efficiency and the degree to which health systems respect patient needs. The findings of this study bring this reality into focus within a Nigerian General Outpatient Department, revealing structural inadequacies, human factors, and cultural dynamics that collectively shape how waiting time is experienced and managed by patients and providers alike.

The predominant concern expressed by both groups regarding prolonged waiting aligns with substantial evidence linking waiting times to patient satisfaction and health outcomes. Ojetunde et al. (2022) and Prentice et al. (2020) have consistently demonstrated that extended outpatient waiting times are among the strongest predictors of patient dissatisfaction in sub-Saharan African settings. The emotional distress articulated by patients, including feelings of pain, hunger, exhaustion, and neglect, corroborates findings by Anderson et al. (2007), who identified physical discomfort and perceived neglect during waiting as major contributors to negative healthcare experiences globally. The disparity between average waiting times in high-income settings such as the United States (approximately 15 minutes) and Nigerian tertiary facilities (approximately 168 minutes) reflects well-documented structural inequities in healthcare resource allocation (Abimbola et al., 2021; Umeh and Feeley, 2017). These findings underscore the urgent need for targeted policy interventions that prioritise patient flow efficiency and address the disproportionate burden of waiting experienced in low- and middle-income health systems.

The triage system emerged as the most widely adopted intervention among providers, consistent with global evidence supporting prioritisation-based approaches to patient flow management (Zachariasse et al., 2019). However, the partial implementation of appointment scheduling and the informality of workflow optimisation strategies point to a persistent gap between policy intent and operational reality, consistent with findings by Ofili and Ofovwe (2005), who noted that non-adherence by both staff and patients frequently undermined appointment systems in Nigeria. Notably, the convergence between patient-recommended solutions, particularly increased staffing and improved punctuality, and provider-described strategies suggests a shared understanding of the core problem. This alignment provides a productive foundation for co-designing

interventions, consistent with participatory quality improvement approaches advocated by Batalden et al. (2016), and should inform the development of structured, facility-level quality improvement plans.

The near-absence of formal waiting time measurement systems is among the most critical findings of this study. Providers acknowledged that systematic record-keeping was not yet in place, with patient satisfaction determined primarily through informal verbal feedback. This reflects a broader challenge documented by Oleribe et al. (2019), who identified inadequate health information systems as a fundamental barrier to quality improvement across Nigerian health facilities. Patients' record of time, such as "I waited from 9am to 1:30pm," represent experiential evidence increasingly recognised within patient-reported outcomes research (Black, 2013) and capture qualitative dimensions, including physical discomfort and emotional distress, that standardised metrics may fail to detect. Integrating such experiential data into formal monitoring frameworks would align with WHO recommendations for patient-centred measurement (WHO, 2016). The recognition by health information personnel that record systems were under development signals emerging institutional readiness, a foundation that hospital management and health authorities should actively support through targeted investment in data infrastructure and capacity building for evidence-based quality management (Nutley and Reynolds, 2013).

The challenges identified in this study span organizational, interpersonal, and sociocultural domains. High patient volumes and resource constraints mirror findings from Nigerian tertiary hospitals (Ibe et al., 2023) and are broadly representative of pressures facing public health systems in low- and middle-income countries. The identification of human factors, including staff behaviours and patient-related variables, as a leading challenge reflects growing recognition that implementation failures are rarely purely technical but are embedded in organisational culture and individual agency (Greenhalgh et al., 2004). These findings point to the need for health system managers to complement structural reforms with investment in staff engagement, behavioural accountability frameworks, and patient education initiatives.

Particularly distinctive in this study was the identification of cultural dimensions of waiting tolerance. The tension between communal patience and individual time valuation points to heterogeneity within the patient population seldom captured in quantitative studies, and aligns with Kleinman's (1988) framework of explanatory models, which states that patients' responses to healthcare experiences are shaped by cultural norms, social context, and personal meaning. Understanding these cultural mediators is essential for designing contextually acceptable interventions, as reinforced by Saha et al. (2008) in discussions of culturally competent care. The communication gaps reported by patients, specifically the lack of explanation for delays, compound the psychological burden of waiting and have been identified as an independently modifiable determinant of patient satisfaction (Bleustein et al., 2014). Even where structural change is slow, improved communication about expected wait times represents a low-cost, high-impact intervention that healthcare managers can implement immediately without requiring additional resources.

The strong convergence between provider and patient visions for future improvement, centered on electronic medical records, smart scheduling, telemedicine, and predictive analytics, reflects broader trends in global health system digitalization. While Adler-Milstein et al. (2017) demonstrated that EMR adoption improved care coordination in high-income settings, African evidence shows more mixed results, often attributable to infrastructure deficits and digital literacy gaps (Jawhari et al., 2016). In the Nigerian context, barriers including unreliable internet connectivity, limited device ownership, and regulatory ambiguity continue to constrain telemedicine's potential (Osei and Mashamba-Thompson, 2021). The endorsement of these technologies by both patients and providers nevertheless signals strong community-level readiness that policymakers and health system planners should leverage prioritizing infrastructure investment, staff training, and enabling regulatory frameworks as preconditions for sustainable digital transformation in outpatient care.

Limitations

The limitations for this study include the single-site design that limits the transferability of findings to other facilities, settings, or regions with different resource profiles, social desirability bias may have influenced participants' responses, particularly among healthcare professionals who may have been reluctant to disclose negative practices or views, and interviews were conducted at a single point in time, the findings reflect a cross-sectional snapshot and may not capture seasonal variation in patient flow or staffing conditions.

Conclusion

This study demonstrates that prolonged outpatient waiting times at General Hospital Minna arise from interconnected systemic, human, and cultural factors. Key gaps in formal measurement systems, digital infrastructure, and patient communication undermine existing interventions such as triage and workflow optimisation. Critically, the convergence between patient and provider recommendations around staffing, electronic medical records, and telemedicine signals a ready foundation for co-designed, evidence-based solutions. Health managers and policymakers should prioritise formalising waiting time monitoring, investing

in digital health tools, and implementing low-cost communication protocols as immediate steps toward improving outpatient care quality and restoring patient trust in Nigeria's public health system.

Conflicts of interest: The authors declares no conflicts of interest.

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