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EXPLORING THE HEALTH RECORDS MANAGEMENT SYSTEMS AND PATIENT SATISFACTION AT THE UNIVERSITY OF PORT HARCOURT TEACHING HOSPITAL, RIVERS STATE, NIGERIA

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Abstract

This study explores health record management systems (HRMS) and patient satisfaction at the University of Port Harcourt Teaching Hospital (UPTH), Rivers State, Nigeria. A cross-sectional survey design was adopted using structured questionnaires and interviews to gather data from a sample of 227 patients at various outpatient clinics. This study examined patients' perceptions of the use of HRMSs including paper-based, electronic, and hybrid systems. Data analysis was conducted using descriptive statistics to identify trends and levels of satisfaction with health care services. The findings revealed that paper-based HRMS was the most prevalent, with patients expressing dissatisfaction with the hospital's transition to electronic record management. Moreover, patient satisfaction levels were generally high, particularly in the general outpatient and health records management departments, despite challenges related to the hospital's HRMS. The study concludes that the quality of HRMS plays a crucial role in patient satisfaction, recommending improvements in electronic health record (EHR) adoption and training of health care providers to enhance service delivery and patient outcomes.

Introduction

Health record management systems (HRMS) are essential for effective health care delivery in modern medical facilities. They facilitate the systematic organization storage, and retrieval of patient data, thereby supporting

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informed decision-making among health care providers (Braa & Hedberg, 2017). As health care institutions adopt more digitalized solutions, the role of HRMS becomes even more pronounced, influencing both operational efficiency and patient satisfaction. Health records are indispensable to patient care, as they serve as a comprehensive repository of patient history, diagnostic tests, treatment plans, and follow-up care (Evans, 2020). Well-organized and readily accessible health records enhance the quality of healthcare services by providing accurate and up-to-date patient information, which is crucial in delivering timely interventions and avoiding medical errors (Coiera, 2018).

Several types of HRMS are currently in use including traditional paper-based systems and more advanced electronic health records (EHR) systems. EHRs are digital platforms designed to store patient information in an accessible, secure, and organized manner (Garde et al., 2018). These systems enhance communication among health care workers and ensure that vital patient information is readily available when needed (Häyrinen et al., 2020). The adoption of EHR systems offers significant advantages, including the reduction of administrative errors, improved patient data accuracy, and enhanced coordination of care (Campanella et al., 2016). EHRs can integrate data from various departments within a healthcare facility, providing a holistic view of patient care, which helps clinicians offer more personalized treatments (Bowman, 2017).

In Nigeria, health care facilities are at various stages of adopting HRMS. While some teaching hospitals have embraced digital systems, others still rely on traditional paper-based records, leading to challenges in data storage, retrieval, and sharing (Olugbile, 2019). This mix of systems affects both the efficiency of health care delivery and patient satisfaction, especially in large facilities like teaching hospitals. The University of Port Harcourt Teaching Hospital (UPTH) is one of Nigeria's leading healthcare institutions, providing a wide range of medical services to the population of Rivers State and its environs (Babalola & Adegoke, 2020). With its large patient base, effective management of health records is critical for ensuring efficient service delivery and high patient satisfaction.

Public health care institutions in Nigeria, particularly University of Port Harcourt Teaching Hospital (UPTH) face several challenges in their health records management system. These include inadequate infrastructure, insufficient training for personnel, and overreliance on paper-based records, according to Idowu et al. (2018). Such challenges often lead to delays in accessing patient information and can negatively impact the overall quality of care. Many health care institutions in Nigeria, including UPTH, are gradually transitioning from paper-based to electronic health record systems. However, this shift is often met with resistance due to factors such as inadequate funding, lack of technical expertise, and concerns about data security (Luna et al., 2014). Nevertheless, the potential benefits of EHR systems, particularly in improving patient outcomes, are too significant to ignore.

Effective HRMS play a critical role in ensuring high patient satisfaction. A well-organized system reduces waiting times, improve the accuracy of patient data and enhance the overall patient experience (Carter, 2016). In contrast, according to Blumenthal and Tavenner (2017), poorly managed health records can lead to delays, miscommunication, and frustration, resulting in lower patient satisfaction. Patient satisfaction is a key indicator of the quality of health care services provided. It encompasses various factors such as the ease of access to care, the quality of communication with healthcare providers, and the efficiency of service delivery (Gill & White, 2018). Equally, Bleich et al. (2019) posited that a positive experience with HRMS can contribute significantly to how patients perceive the quality of care they receive.

Several studies have found a positive correlation between the implementation of EHR systems and patient satisfaction levels. For instance, research by Adler-Milstein et al. (2018) showed that health care facilities that use advanced EHR systems report higher patient satisfaction, especially regarding communication and reduced treatment plan errors. This underscores the importance of efficient record management in shaping patient

experiences. At UPTH, patient satisfaction may be affected by several factors, including the efficiency of health record management, availability of health care personnel, and quality of facilities (Akinbola & Balogun, 2021). Long waiting times, difficulty in accessing medical records, and administrative delays are common complaints that can reduce satisfaction with health care services.

Health care providers can concentrate more on patient care and less on administrative duties by streamlining operations with the help of an effective HRMS. Research indicates that hospitals that use digital records management systems have better resource allocation, lower costs, and more efficient workflows (Jones et al., 2020). Better patient outcomes and a more responsive health care system can be resulting from this. At UPTH, several actions can be taken to enhance patient satisfaction and HRMS. These include implementing stringent data security procedures, educating health care professionals on how to use EHR systems, and investing in digital infrastructure (Afolabi & Oke, 2018). By taking these steps, the total patient experience can be improved in addition to the administration of medical records.

Exploring the relationship between health record management systems and patient satisfaction at UPTH is essential for identifying areas that require improvement. By understanding how HRMS affects patient's experience, health care providers can make informed decisions that lead to better health care delivery and higher levels of patient satisfaction (Weiner et al., 2017). The findings of this study will be beneficial not only to UPTH but also to other health care institutions in Nigeria that aim to improve their service quality through better record management.

Effective health record management is critical for ensuring that health care providers can deliver quality services, maintain accurate patient data, and improve patient satisfaction. However, many healthcare institutions, particularly in developing countries like Nigeria, face significant challenges in their health record management systems (HRMS), which range from outdated paper-based systems to inefficient electronic health record (EHR) implementations. At the University of Port Harcourt Teaching Hospital (UPTH), these challenges have manifested as delays in accessing patient records, poor coordination of care, and potential medical errors.

Despite the increasing awareness of the importance of digitalizing health records, UPTH continues to encounter problems related to data retrieval, patient confidentiality, and record management efficiency. This has resulted in service delivery bottlenecks and dissatisfaction among patients who, often experience long waiting times and administrative errors. In addition, limited resources, inadequate staff training on EHR systems, and concerns about data security further intensify the issue.

The central problem of this study is that the current health record management system at UPTH may not meet the needs of both healthcare providers and patients, which could negatively affect the overall patient experience and satisfaction levels. There is a need to explore the effectiveness of HRMS at UPTH and its impact on patient satisfaction to identify gaps and propose actionable solutions for improvement.

Objectives of the study

The objectives of this study are to:

i). determine the type of health record management system used at UPTH.

ii). determine the level of patient satisfaction with the health care services they frequently obtain from UPTH, Rivers State, Nigeria.

Research Questions

i). What type of health record management system is used at UPTH, Rivers State, Nigeria?

ii). What satisfaction level do patients derive from the health care services they frequently receive from the UPTH?

Review of Related Literature

Health records management systems (HRMS) refer to the systematic process of collecting, storing, managing, and utilizing patient data to ensure that health care providers can make informed decisions. Traditional health records were primarily paper-based, but with advances in technology, electronic health records (EHR) have gained popularity, offering faster retrieval of information and improved accuracy in patient care (Raghupathi & Raghupathi, 2018).

Evolution of Health Records Management Systems

The transition from paper-based to electronic systems has been driven by the need to better coordinate health care services. Historically, health care providers have faced challenges related to misfiling or losing paper records, leading to inefficiencies and potential medical errors (Dinesh, 2019). The introduction of EHR systems has addressed some of these issues by providing a centralized and easily accessible repository of patient information.

Types of Health Records Management Systems

There are several types of HRMS used globally, including paper-based, electronic health records (EHR), and hybrid systems. EHR systems are the most common in developed countries due to their ability to integrate various health care functions. However, in many developing countries, including Nigeria, health care institutions often rely on hybrid systems that combine paper and electronic records because of infrastructural limitations (Aina & Ajiferuke, 2022).

Health Records Management Systems in Nigeria

In Nigeria, adoption of EHR systems has been slow due to factors such as high costs, inadequate infrastructure, and a lack of skilled personnel. Studies have shown that many Nigerian healthcare institutions, including teaching hospitals, still rely heavily on paper-based systems, which limits efficiency in healthcare delivery (Joshua, 2024). The UPTH is not exempt from these challenges, and this affects the overall quality of healthcare services provided.

Impact of EHR on Patient Care

The implementation of EHR systems has been linked to improved patient outcomes. By providing immediate access to accurate patient information, healthcare providers can make more timely and informed decisions (Glenda et al., 2020). Additionally, EHR systems allow for better coordination of care among different healthcare providers, ensuring continuity of care for patients with complex medical needs.

Patient Satisfaction in Health Care Settings

Patient satisfaction is a key indicator of the quality of health care services. The definition encompasses various factors, including the level of communication between health care providers and patients, the efficiency of services, and the perceived quality of care received (Achebe, 2023). A well-functioning HRMS can significantly influence patient satisfaction by reducing waiting times and ensuring that patients receive accurate and timely care.

Relationship between Health Records Management and Patient Satisfaction

Several studies have established a strong relationship between efficient health record management and patient satisfaction. A well- organized HRMS enhances the ability of healthcare providers to retrieve patient information quickly, reducing delays and improving the overall patient experience (Ani, 2022). Conversely, inefficient systems can lead to long waiting times and administrative errors, which can negatively affect patient satisfaction.

Challenges in Health Records Management in Developing Countries

Despite the benefits of HRMS, health care institutions in developing countries face numerous challenges in implementing effective systems. These include inadequate funding, poor infrastructure, limited access to technology, and a lack of trained personnel (Brafi & Arthur, 2023). At UPTH, these challenges are compounded by the reliance on paper-based records, which are prone to mismanagement and loss.

The Role of Technology in Improving HRMS

The integration of information and communication technologies (ICT) into health care has revolutionized health record management. Innovations such as cloud-based storage, mobile health applications, and telemedicine have made it easier to manage and access patient records (IFLA/FAIFE, 2017). These technologies can improve HRMS at UPTH, however their adoption is still limited.

Patient-Centered Care and the Importance of HRMS

In recent years, there has been a growing emphasis on patient-centered care, which focuses on patient needs and preferences. A key component of this approach is ensuring that health care providers have access to comprehensive patient information through efficient HRMS (Katimani, 2020). By streamlining the management of patient records, health care institutions can deliver more personalized and efficient care.

Legal and Ethical Considerations in Health Records Management

Health records contain sensitive patient information, and managing such records in compliance with legal and ethical standards. Health care institutions must ensure that patient data are kept confidential and secure (Lee, 2019). At UPTH, concerns have been raised about the security of patient records, particularly in cases where paper-based records are used, which can easily be misplaced or accessed by unauthorized individuals.

The Role of Training in Effective HRMS

Effective health record management requires trained personnel who understand how to use HRMS efficiently. Training programs are essential to ensure that health care workers are equipped with the necessary skills to manage electronic health records, prevent errors, and maintain data security (Luambano & Nawe, 2024). At UPTH, continuous training is required to ensure that staff are proficient in the use of HRMS.

Barriers to EHR Implementation in Nigeria

Despite the global push toward digital health records, Nigeria has faced several barriers in adopting EHR systems. These barriers include high implementation costs, inadequate infrastructure, and resistance by health care workers to change (Imhonopi & Urim, 2022). Addressing these barriers is crucial for the successful implementation of an effective HRMS at UPTH and other Nigerian health care institutions.

Patient satisfaction at the UPTH

Patient satisfaction at the UPTH has been a concern, with many patients reporting long waiting times and dissatisfaction with the quality of services received. Studies have shown that these issues are often linked to inefficiencies in the health records management system, which causes delays in service delivery and errors in patient care (Bankole & Oludayo, 2022). Improving HRMS at UPTH could significantly enhance patient satisfaction levels.

Although the existing literature highlights the importance of HRMS in improving patient care and satisfaction, research on the Specific challenges face by teaching hospitals in Nigeria, such as UPTH is limited. This study aimed to fill this gap by exploring the current health record management system at UPTH and assessing its impact on patient satisfaction. Understanding these factors is essential for recommending improvements to HRMS and enhancing the overall quality of health care services.

Methodology

The study employed a cross-sectional survey research design, focusing on gathering data through standardized questionnaires and interviews with 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. This study utilized self-reported measures as part of a quantitative 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 health care experiences at UPTH.

The study population 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 systematic and unbiased selection of respondents. For data collection, the researchers designed a questionnaire that was 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 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

This section discusses the interpretation, analysis, and discussion of the collected data. Two hundred twenty-seven (227) copies of the questionnaire were given to patients who attended the health records department, general outpatient department, medical outpatient clinic, national health insurance clinic, dental clinic, and

ophthalmology clinic, respectively. Out of the 227 copies administered, 198 were retrieved, and all sections were well documented, providing a return rate of 87.22%.

Research Question One: What type of health record management system id in use at the UPTH, Port Harcourt, Nigeria?

To address research question number one above, patients were asked to respond to statements based on the type of health records management system (paper-based, electronic and hybrid) in use at the UPTH, Port Harcourt on a four-point Likert scale: strongly agree, agree, disagree, and strongly disagree. Their answers were analyzed and presented in Table 1.1

Table 1.1

Descriptive Analysis of Patients' responses based on the type of health records management system in use at the UPTH, Port Harcourt, Nigeria

S/N	Type of health record management system in use at UPTH	SA Freq. (%)	A Freq. (%)	D Freq. (%)	SD Freq. (%)	Mean $\bar{x}$	Standard Deviation
Paper-based Health Records Management System					**2.978**	**.933**	
1	In this hospital, patient medical records are retrieved from shelves by health care providers.	87 (43.9)	77 (38.9)	15 (7.6)	19 (9.6)	3.172	.935
2	In this hospital, patient medical records are only obtained by handwriting.	62 (31.3)	83 (41.9)	33 (16.7)	20 (10.1)	2.944	.941
3	In this hospital, all patients' medical information is stored in a paper folder.	49 (24.75)	84 (42.42)	45 (22.73)	20 (10.1)	2.818	.922
Hybrid (paper-based & electronic-based) Health Records Management System					**2.084**	**.721**	
4	In this hospital, patient complaints are recorded on paper and in computers.	39 (19.7)	102 (51.5)	45 (22.7)	12 (6.1)	2.849	.804
5	In this hospital, advice regarding patient treatment is given through face-to-face and electronic communication.	3 (1.5)	17 (8.6)	106 (53.5)	72 (36.4)	1.753	.672
6	In this hospital, the drugs are prescribed by handwriting on paper and through an electronic method.	2 (1.0)	18 (9.1)	87 (43.9)	91 (46.0)	1.652	.687
Electronic Health Records Management System					**1.963**	**0.963**	
7	All patient care information is shared through electronic medium in this hospital.	25 (12.63)	36 (18.18)	70 (35.35)	67 (33.84)	1.985	.942
8	In this hospital, patient medical information is maintained using computer system.	21 (10.6)	27 (13.3)	76 (38.4)	74 (37.4)	1.975	.969
9	In this hospital, patients receive information only through electronic media on how to manage their health challenges.	19 (9.6)	31 (15.7)	65 (32.8)	83 (41.9)	1.929	.980
Grand Mean						**2.34**	**0.87**

Source: Researcher's 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.

Table 1.1 presents the result of descriptive statistics on patients' views of the type of health records management system at UPTH, Port Harcourt, Rivers State, Nigeria. The results revealed that patients rated the most preferred option of the type of health record management system in use at different departments and clinics based on a grand mean ($\bar{x}$ = 2.34, SD = 0.87) on a four-point Likert scale measurement. The result falls within the benchmark

of 1.75-2.49 disagree, thereby connoting a poor health record management system at UPTH. The results further indicated that the paper-based health records management system dimension of the type of health records management in use at UPTH was the highest ($\overline{x}$ = 2.978, SD = 0.933), while the electronic health records management system was the least ($\overline{x}$ = 1.963, SD = 0.963). Furthermore, on the dimension of paper-based health records management system type, patients' medical records were retrieved from shelves by healthcare providers and had the highest responses on the option strongly agree with 87 (43.9%) and ($\overline{x}$ = 3.172, SD = 0.935), while all patients' medical information was only stored in a paper folder was the least rated ($\overline{x}$ = 2.818, SD = 0.922), with the agree option having the highest response value of 84 (42.42%). Equally, the hybrid dimension of health records management system type ($\overline{x}$ = 2.084, SD = 0.721) with patients' complaints being recorded on paper and in computers had the highest responses on agree option 102 (51.5%), strongly disagree as the least with 12 (6.1%), and ($\overline{x}$ = 2.849, SD = 0.804). Conversely, the dimension of electronic health record management system type was the least rated and had every information regarding patient care only shared through electronic medium in the hospital as the highest rated on the strongly disagree option with figure 70 (35.35%) and ($\overline{x}$ = 1.985, SD = 0.942), while in this hospital, patients receive information on how to manage their health challenges only through an electronic medium was the least rated on the strongly agree option with figure 25 (12.63%), and ($\overline{x}$ = 1.929, SD = 0.980).

Research Question 2: What is the satisfaction level of patients with the services provided at the selected department of study at the UPTH?

To address research question number four above, patients were asked to respond to statements based on their level of satisfaction with the services provided at the selected clinics and departments of study at the UPTH, Port Harcourt, Rivers State, Nigeria on a four-point Likert scale: very high level = 4, high level = 3, low level = 2, and very low level = 1. Their answers were analyzed and are presented in Table 1.2

Table 1.2:

Patients' responses were based on their level of satisfaction with the services provided at the selected department of study at the UPTH.

S/N	Patients' satisfaction level with health care services they receive at the selected departments of study in the UPTH, Nigeria	VHL Freq. (%)	HL Freq. (%)	LL Freq. (%)	VLL Freq. (%)	Mean $\overline{x}$	Standard Deviation (SD)
1	What level of satisfaction have you always received from the services delivered to you at the General Outpatient Clinic at this hospital?	34 (17.2)	78 (39.4)	67 (33.8)	19 (9.6)	2.641	.877
2	What level of satisfaction did you always received from the services delivered to you at the Health Records Management Department at this hospital?	34 (17.2)	81 (40.9)	54 (27.3)	29 (14.6)	2.606	.938
3	What level of satisfaction have you always received from the services delivered to you at the National Health Insurance Scheme Clinic at this hospital?	26 (13.1)	90 (45.5)	56 (28.3)	26 (13.1)	2.586	.879
4	What level of satisfaction have you always received from the services delivered to you at the dental clinic at this hospital?	38 (19.2)	77 (38.9)	45 (22.7)	38 (19.2)	2.581	1.008
5	What level of satisfaction have you always received from the services delivered to you at the Ophthalmology Clinic at this hospital?	33 (16.7)	60 (30.3)	60 (30.3)	45 (22.7)	2.409	1.017
6	What level of satisfaction did you always received from the services delivered to you at the Medical Outpatient Clinic at this hospital?	17 (8.6)	65 (32.8)	82 (41.4)	34 (17.2)	2.328	0.860
Grand Mean						**2.538**	**.919**

Source: Researcher's Field Survey 2024

Key: VHL=Very High Level, HL=High Level, LL=Low Level, VLL=Very Low Level*Decision Rule if mean is 1 to 1.74 = Very Low Level; 1.75 to 2.49 = Low Level; 2.50 to 3.24 = High Level; 3.25 to 4 = Very High Level.**

Table 1.2 shows the results of descriptive statistics on patients' opinions of the level of satisfaction with the health care services provided at the various clinics and departments at the UPTH, Port Harcourt, Rivers State, Nigeria. The results, as indicated in the table, revealed that patients had a high level of satisfaction with healthcare services received from the various clinics and departments at UPTH as a result of a grand mean ($\overline{x}$= 2.538, SD = 0.919) on a four-point Likert scale measurement recorded. Results on the table further show that the level of satisfaction patients always get from the services delivered to them at the General Out-Patient Clinic at the UPTH is the highest rated with a mean ($\overline{x}$ = 2.641, SD = 0.877), and the highest response option was high level, which had 79 (39.4%), followed by low level, 67 (33.8%), while very low level was the least, having 19 (9.6) as its figure recorded. The next highest response on the table was the level of satisfaction patients always get from the services delivered to them at the Health Records Management Department at the UPTH as the second most rated high with a mean ($\overline{x}$ = 2.606, SD = 0.938), the high-level option was the highest rated with 81 (40.9%), followed by low level 54 (27.3%), and very low level indicated the least rated had 29 (14.6%). The results in Table 1.2 further indicated the level of satisfaction patients always get from the services delivered to them at the National Health Insurance Scheme Clinic at the UPTH as the third most rated high with a mean ($\overline{x}$ = 2.586, SD = 0.879), the high-level option being the highest rated with 90 (45.5%), followed by low level 56 (28.3%), and very low level and very high level indicated the least rated had 26 (13.1%) respectively. Furthermore, the results on the table established the level of satisfaction patients always get from the services delivered to them at the Medical Outpatient Clinic at this hospital as the least rated and had a mean value of ($\overline{x}$ = 2.328, SD = 0.860), with the low-level option having 82 (41.4%) as the highest rating, followed by the high-level option having 65 (32.8%), and the very high-level option having 17 (6.6%) as the least rated option in the study, as indicated on Table 1.2

Conclusions

This section discusses the analysis's main generalizations considering the findings of earlier studies linked to and cited in this work's body. The goal is to draw conclusions and offer criticism to advance the knowledge.

Research question one: Patients at the University of Port Harcourt Teaching Hospital (UPTH) rated the overall health records management system as poor, with a preference for paper-based systems over electronic systems. The paper-based system, in which medical records are retrieved from shelves by health care providers, was the most commonly used. The hybrid system, in which patient complaints are recorded on paper and on computers, was also used. However, the electronic health records management system was the least used, with patients receiving information on health management primarily through paper-based media. The findings are in contrast with Chandra and Tiwari (2019) survey, which found that hospitals face system blocks because of high patient footfall. To address these issues, hospitals have developed various methods to improve patient experience and efficiency. One approach is to reduce waiting times for outdoor patients and improve patient satisfaction and system efficiency. Operations research models and electronic health records have also been developed to address these issues. In another dimension, Pandit and Debmallik (2016) investigated the turnaround time (TAT) of the radiology department at a tertiary care hospital in Kolkata using a Lean Six Sigma (DMAIC) strategy. They determined which regions were holding up the analysis and intervention phases. Pre-test and post-test waiting times were decreased by implementing practical strategies that improved patient orientation and scan readiness. A major improvement was observed in the "Services on Time" section, where only 51.1% of reports were generated in less than 2 hours. Enabulele et al. (2018) recommended an average consultation duration of 15

minutes for each patient, but the 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 and times.

Research question two: Patients at the University of Port Harcourt Teaching Hospital (UPTH) in Port Harcourt, Rivers State, Nigeria rated various factors as contributing to long waiting times across different departments and clinics. The top factors were workers' negative behavior [mean = 3.308, SD = 0.838], inadequate staffing levels [mean = 3.303, SD = 0.753], and lack of record filing space [mean = 2.909, D = 1.014]. Overall, patients agreed that diverse factors were associated with prolonged UPTH waiting times with a grand mean of 3.098 (SD=0.876) on a 4-point Likert scale. These findings are somewhat in tandem with O'Neill et al. (2014) study, which established that prolonged waiting times in public health facilities in Calabar Municipal Council, Nigeria, are largely due to poor record-keeping and inadequate health personnel. This issue compromises the quality of care and violates health insurance laws. The study found that insufficient facilities, lack of health care personnel, and poor organization contribute to longer wait times in public hospitals. In another study in southwest Nigeria by Usman et al. (2020), the results indicated that longer patient waiting times significantly reduced satisfaction with health care services. Factors contributing to longer waiting times included insufficient medical staff and lack of insurance coverage.

Equally, a survey of over 150 patients and radiographers at a radiology department in Owerri, Nigeria, by Ugwuanyi et al. (2017) identified several factors affecting waiting times, including patient tardiness, high patient volume, a lack of staff, faulty equipment, and radiographer restrictions. Despite this, patients were generally satisfied with the department's services. Conversely, Wafula and Ayah's (2021) found that waiting times for patients at the University of Nairobi health care facilities are influenced by gender. To reduce wait times, health practitioners must be easily accessible. In addition, a study by Geta and Edessa (2020) found that patient satisfaction with waiting time among outpatients at Nekemte Referral Hospital in Ethiopia was 57.1%, with factors such as registration, visiting physicians, laboratory services, drugs, and payment being significantly associated with satisfaction. The study recommends reducing waiting times to ≤ 30 minutes for health services to increase outpatient satisfaction. Sarwat (2022) reported that physician professionalism received the highest scores, while waiting times received the lowest. Ndibuagu et al. (2020) found that patient satisfaction with hospital services, particularly the General Outpatient Department (GOPD), is crucial for their continued use. The results of this study also, in a certain aspect, supported a cross-sectional study at the University of Nairobi by Wafula and Ayah (2021), which found that gender and doctor availability also affected waiting times, with women waiting longer than men. The majority of patients spent about an hour at the facility, with an inadequate number of health workers being the main cause of the long waiting time. Long waiting times in outpatient clinics are a significant issue that affect patient adherence, missed appointments, and treatment initiation.

The study on health record management systems (HRMS) and patient satisfaction at UPTH has shown that the hospital largely relies on paper-based systems despite growing global trends toward electronic and hybrid systems. This reliance on traditional methods has impacted the hospital's efficiency and the overall satisfaction of patients, as reflected by the respondents' feedback. Although patients reported high level of satisfaction with the health care services provided, particularly in the general outpatient and health records management departments, their dissatisfaction with the current health records system underscores the need for improvement. Effective health record management is critical for ensuring seamless patient care, reducing errors, and enhancing patient satisfaction. Therefore, transitioning toward a more efficient electronic health record system would significantly improve hospital service delivery.

Recommendations

1. **Adoption of a Fully Electronic Health Records System (EHR)**: UPTH should invest in transitioning from a paper-based to an electronic system. This shift will streamline the health care records management process, reduce delays, and enhance overall patient care.
2. **Training for Health Care Providers**: To ensure a smooth transition to electronic records, health care providers should undergo regular training on how to effective use HER systems. This will help reduce resistance to the new system and improve the accuracy and efficiency of record management.

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