

Utilization of Electronic Medical Record System (EMRS) by Record Officers in Federal University Teaching Hospitals in North-West, Nigeria

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Abstract

This work discusses the Awareness and use of Electronic Record Management Systems (EMRS) by Medical Record Officers in Federal University Teaching Hospitals in North West States of Nigeria. The aim of this study is; To determine the current level of awareness regarding ERMS among Medical Records Officers Federal University Teaching Hospitals (FUTHs) in North-West, Nigeria (NWN), To identify the strategies or training programs may facilitate a more comprehensive awareness and utilization of EMRS by Medical Records Officers in FUTHs in NWN and To reveal the primary challenges faced in effective utilization of ERMS by Medical Records Officers FUTHs in NWN. The study used Quantitative Methodology and Cross-Sectional Survey Design to carried out the research among various Medical Professionals using a sampling frame obtained from a list of some selected Hospitals located in and around Zaria Metropolis Kaduna State, Nigeria, from 2022-2023. Proportionate Stratified Sampling technique was employed in this research. The study reveal that a high percentage of Medical Record Officers are aware of ERMS, utilize it daily, and believe it positively impacts search and retrieval, patient diagnosis, and record-keeping in their healthcare facility. It found that Medical Record Officers in FUTHs are overwhelmingly in support of in-house training and awareness campaigns for electronic records. They are divided on reducing the number of record systems. The study concluded that while Medical Record Officers are generally aware of the existence of ERMS, several challenges and barriers hinder their effective utilization. The study recommended that FUTHs should develop and execute training programs that cover all aspects of ERMS to increase awareness and proficiency among Medical Records Officers in FUTHs. This training should encompass system navigation, data entry, retrieval, and security measures.

Keywords: Medical Records, Medical Record Officers, Electronic Medical Record System, Utilization, Teaching Hospitals

Introduction

The effective management of Medical Records is critical to ensuring quality healthcare services and patient safety. In today's digital age, Electronic Record Management Systems (ERMS) have emerged as a transformative tool in healthcare facilities worldwide (Al-Azmi, 2019). In an era characterized by rapid technological advancement, healthcare facilities are increasingly turning to Electronic Record Management Systems (ERMS) to optimize patient care and streamline

administrative operations. ERMS offer a secure, efficient, and organized approach to storing and managing patient records, ensuring quick access to critical information, and enhancing healthcare delivery.

Electronic records, often referred to as electronic records or e-records, are digital or electronic versions of documents, files, or information that were traditionally kept as paper documents or other non-digital formats. These records can encompass a wide range of information, including text documents, spreadsheets, emails, images, videos, and more. Electronic records are typically stored and managed in electronic formats, making them easily accessible, searchable, and shareable. Medical Records, according to Adeleke (2018), are a written account of a patient's examination and treatment that includes the patient's medical history, descriptions of their illnesses, and complaints, as well as the doctor's findings and the outcomes of any diagnostic tests, procedures, medications, or therapeutic procedures.

According to Al-Azmi (2019), good medical care depends on qualified physicians and nurses as well as top-notch facilities and tools. Good Medical Record keeping is essential to providing quality medical treatment. Medical professionals may not provide the optimal care or may actually misdiagnose a problem, which can have serious repercussions, if patient Medical Records are not accurate, thorough, current, and easily accessible.

To ensure the protection of patients, it is important to take good care of their Medical Records which includes Medical Data, X-Rays, Samples, Drug Records and Patient Registrations. The seamless operation of the Hospital's administration can be ensured by good Medical Record keeping practices; archiving of unused data; keeping storage places clean and easily accessible in such a manner that important records can be promptly located saving time and resources. Medical Records serve as a crucial source of information for medical research, statistical analyses, and health information systems management; they also demonstrate the hospital's accountability for its activities (Al-Azmi, 2019).

NHO Healthcare Records Management Steering Committee (2017) defines records management as "the systematic and consistent control of all records, wherever they are housed, throughout their lifecycle. Medical Records Management Life Cycle encompasses the systematic management of Medical Records from their creation or receipt to their eventual disposition. It consists of several stages: creation, classification, storage, retrieval, maintenance, and disposition. During creation, Medical Records are generated or received and should be properly documented. In classification, Medical Records are categorized for easy organization and retrieval. Storage involves securing records in an accessible and safe manner. Retrieval ensures timely access when needed. Maintenance involves ongoing care, including updates and preservation. Finally, disposition determines when Medical Records are no longer needed and facilitates their destruction or archival preservation. This life cycle ensures efficient and compliant Medical Record keeping in organizations. It also entails the creation, use, maintenance, and eventual disposition of organizational records. It begins with Medical Record creation, followed by active use and storage. Medical Records are then regularly reviewed and updated or archived as needed. At the end of their useful life, Medical Records can be either destroyed or permanently preserved, depending on legal and regulatory requirements. This cycle ensures efficient information management, compliance, and accountability throughout an organization's operations. The management of the Medical Record, whether Electronic or Paper, must be uniform, continuous, and consistent as keeping track of patients Medical Records is essential and necessary whether resources are plentiful or scarce.

Records Management is therefore considered as the process of controlling and governing important records of an institution in a comprehensive and complete cycle. The process includes identifying, classifying, prioritizing, storing, securing, archiving, preserving, retrieving, tracking and destroying of records.

Some of the benefit of EMRS include Improved Efficiency and Accuracy by streamlining the process of recording and retrieving patient information, reducing errors and enhancing the accuracy of medical records, Enhanced Data Accessibility and Sharing by allowing for quick access to patient information, facilitating better communication and coordination among healthcare providers, Better Patient Care by making a comprehensive and readily available patient data, healthcare providers can make more informed decisions, leading to improved patient care and outcomes and Saving of Patient Time through the automation of routine tasks and easier access to records which significantly reduce the time spent on administrative tasks, allowing healthcare professionals to focus more on patient care.

Utilization of EMRS is faced with some key challenges which may include Technical Issues that is frequent technical problems such as system downtime, slow performance, and software bugs can hinder the efficient use of EMRS, Inadequate training for staff on how to use EMRS effectively can lead to underutilization and errors in data entry and management, Resistance from healthcare staff who are accustomed to traditional paper-based systems can slow the adoption and effective use of EMRS, Insufficient IT support for troubleshooting and maintenance of EMRS can lead to prolonged periods of system unavailability and unresolved technical issues and initial cost of implementing EMRS, including software, hardware, and training expenses, can be a significant barrier.

Statement of the Problem

An effective management of Medical Records is a critical factor in providing capacity for hospitals' efficiency, accountability, transparency, information security and indeed good governance. Ideally, through Medical Record management, medical workers track changes in a patient's condition, make decisions about needs, and ensure continuity of care but it was observed the there are incident of misplaced documents, not being able to retrieve long consult patients' records; loss of records or files and alteration of information in most Teaching Hospitals as these Records are managed manually which makes it difficult for Medical Record Officers to effectively operate. Adoption of ERMS in healthcare facilities is a pivotal advancement in the age of digitalization, promising to revolutionize Medical Records Management, enhance patient care, and improve overall healthcare efficiency. However, despite the potential benefits, some FUTHs in NWSN face challenges in the awareness and utilization of ERMS by Medical Record Officers.

Objectives of the Study

- To determine the current level of awareness regarding ERMS among Medical Records Officers in FUTHs in NWN.
- To identify the strategies or training programs that may facilitate a more comprehensive awareness and utilization of EMRS by Medical Records Officers in FUTHs in NWN.
- To reveal the primary challenges faced in effective utilization of ERMS by Medical Records Officers in FUTHs in NWN.

Review of Related Literature

The healthcare industry has undergone a significant transformation with the advent of Electronic Record Management Systems (Adeleke, 2018). These systems have revolutionized the way medical records are created, stored, and accessed in healthcare facilities, including teaching hospitals. The effective implementation and utilization of ERMS in these hospitals are crucial for improving patient care, reducing administrative burdens, and enhancing overall healthcare services. However, the success of ERMS depends on the level of awareness and proficiency among healthcare professionals, as they play a central role in its adoption (Al-Azim, 2019).

Alegbeleye (2019) states that Electronic Record Management Systems encompass various technological tools and processes designed to manage and store patient health records digitally. In teaching hospitals, where a significant emphasis is placed on education and research alongside patient care, the effective integration of ERMS is paramount. To achieve this, healthcare professionals, including doctors, nurses, and administrative staff, need to be well-informed about ERMS and its applications. Unfortunately, the level of awareness among healthcare professionals regarding ERMS in many teaching hospitals is often lacking (Aljumah, 2019).

According to Ayoku & Ojediran (2018), ERMS is so important in teaching hospitals because it allows for quick and secure access to patient records, which can significantly enhance the quality of care. Accurate and timely information leads to better decision-making and, ultimately, improved patient outcomes which streamlines the management of patient data, reducing the need for physical storage and administrative tasks. This leads to cost savings and improved resource allocation. Similarly, Al-azmi, Al-enezi, & Chowdhury (2019) assert that teaching hospitals often involve multiple healthcare professionals working together. ERMS facilitates seamless communication and information sharing among different departments and teams which can serve as a valuable resource for research and academic purposes, enabling healthcare professionals to access a vast pool of patient data for studies and clinical trials and helps teaching hospitals adhere to regulatory requirements regarding data security and patient privacy, reducing the risk of legal and financial repercussions.

Besser (2015) argues that despite the advantages, there are various challenges that hinder the level of awareness about ERMS among healthcare professionals in teaching hospitals, the author states that these challenges may not be unconnected with the fact that healthcare professionals, like any other workforce, may resist adopting new technologies due to a fear of change. This resistance can stem from concerns about their ability to adapt to the new system or the potential disruption to their routines. He further argues that many teaching hospitals do not provide sufficient training and resources to help healthcare professionals familiarize themselves with ERMS. This lack of training can result in a steep learning curve and reduced enthusiasm for adoption.

In the same vein, Bridgeclinic (2022) posits that not all healthcare professionals are technologically proficient. They may struggle with the technical aspects of ERMS, leading to frustration and reluctance to embrace the system, which may also result in misconceptions about the capabilities and limitations of ERMS contributing to a lack of awareness. Healthcare professionals may not fully understand how ERMS can benefit their daily work. The author is of the view that healthcare professionals are rightfully concerned about the privacy and security of patient data. An inadequate understanding of ERMS can lead to unwarranted concerns about data breaches.

Enhancing awareness among healthcare professionals about ERMS in teaching hospitals is essential for its successful implementation (Carayon, 2019). Teaching hospitals should invest in comprehensive training programs to educate healthcare professionals about ERMS. These

programs should be ongoing and include hands-on experience with the system. ERMS should be designed with user-friendly interfaces, making it easier for healthcare professionals to navigate and utilize the system without extensive technical knowledge and at the same time Incentives, such as recognition and rewards for proficient ERMS usage, can motivate healthcare professionals to embrace the technology (Chachage, 2016).

Alegbeleye (2019) states that hospital administrators should communicate the benefits of ERMS clearly and address any misconceptions. Transparent communication about data security measures can alleviate concerns and encouraging experienced ERMS users to mentor their colleagues can foster a supportive environment for learning and using the system.

Electronic Record Management Systems are pivotal in enhancing patient care, streamlining administrative tasks, and supporting research and academic activities in teaching hospitals. However, the level of awareness among healthcare professionals regarding ERMS remains a challenge in many healthcare institutions. Addressing this issue is critical for the successful adoption and utilization of ERMS. By investing in training, creating user-friendly interfaces, offering incentives, and fostering a supportive environment, teaching hospitals can bridge the awareness gap and unlock the full potential of ERMS. Ultimately, the benefits of ERMS extend beyond the convenience of healthcare professionals to the quality of care provided to patients, making it a worthy investment for teaching hospitals (Chinyemba, & Ngulube, 2015).

In the words of (Shonubi, 2015) ERMS have revolutionized the healthcare industry by enhancing the efficiency, accuracy, and accessibility of patient records. In teaching hospitals, where patient care, education, and research converge, the successful adoption and utilization of ERMS are pivotal. To achieve this, comprehensive awareness and training programs are essential.

Steward (2015) states that one of the strategies in enhancing awareness and utilization of ERMS is providing healthcare professionals with ongoing training sessions to keep them updated on ERMS features and best practices. Regular training can ensure that they are well-prepared to use the system efficiently which offer practical, hands-on training sessions that allow healthcare professionals to interact with the ERMS in a real-world setting. This experience helps them become more comfortable with the system. The author further states that ERMS should be designed with user-friendly interfaces, making it easier for healthcare professionals to navigate and utilize the system without extensive technical knowledge, allow users to customize their ERMS interfaces to align with their specific needs and preferences. Personalization can enhance user engagement.

Similarly, Alegbeleye, (2019) states that introducing a rewards and recognition system for healthcare professionals who proficiently use ERMS. Publicly acknowledge their contributions and achievements, which can motivate others to follow suit, consider offering productivity bonuses or other financial incentives to encourage healthcare professionals to embrace ERMS as well as enhancing Hospital administrators' communication on the benefits of ERMS clearly and address any misconceptions. Transparent communication about data security measures can alleviate concerns will all serve in enhancing awareness and utilization of ERMS in health care facilities.

Wamukoya and Mutula (2015) in their study on capacity building for e-records management stated that enhancing awareness and utilization of ERMS is not unconnected to creating channels for healthcare professionals to provide feedback on the ERMS, allowing them to voice their concerns, suggest improvements, and feel involved in the implementation process which encourage experienced ERMS users to mentor their colleagues. Mentors can provide guidance, share their experiences, and answer questions, fostering a supportive learning environment at the same time

establishing online or in-person user communities where healthcare professionals can share tips, tricks, and best practices for using ERMS effectively (Wamoukoya, 2015).

Wong and Bradley (2019) recommended that new healthcare professionals should receive comprehensive orientation programs that cover ERMS features, policies, and protocols. These programs should be an essential part of the onboarding process through developing certification courses that healthcare professionals can complete to demonstrate their proficiency in using ERMS. Achieving certification can be recognized and rewarded. They further state that creating a library of online learning modules and resources accessible through a Hospital's learning management systems can be self-paced and available 24/7 for healthcare professionals to access when convenient which will ensure a self-simulation training where healthcare professionals can practice using ERMS in a controlled environment. Simulated scenarios help them build confidence and competence in the system.

In the same vein, Yahya, Asunmo, and Abolarinwa, (2015) posit that implementing a continuous education program that includes regular updates and refresher courses will ensure that healthcare professionals remain proficient in using ERMS and adapt to any system updates. They argue that comprehensive awareness and utilization of ERMS lead to better patient care by enabling healthcare professionals to access accurate and up-to-date patient information, make informed decisions, and prevent medical errors which streamline clinical workflows, reducing administrative tasks, and enabling healthcare professionals to spend more time on patient care, this enhances the overall efficiency of the hospital.

Zulu (2018) states that ERMS offer patient portals that empower individuals to access their health records, schedule appointments, and communicate with healthcare providers. This transparency fosters patient engagement and empowers patients to take an active role in their healthcare which support medical education by providing students and faculty with real-world experience in navigating EHRs. It also offers valuable resources for academic research. The author is of the view that ERMS serve as a valuable resource for research and academic activities by providing access to a vast pool of de-identified patient data. This facilitates clinical research projects, clinical trials, and data analytics.

Comprehensive awareness and utilization of ERMSs in FUTHs are essential for maximizing the benefits of these systems. By implementing strategies such as comprehensive training programs, user-friendly interfaces, incentives for adoption, clear communication, and peer support, teaching hospitals can overcome the challenges of resistance to change, technical barriers, and misconceptions. Training programs (Zulu, 2018).

The benefits of these efforts are vast, including improved patient care, enhanced efficiency, empowered patients, support for medical education, and enhanced research opportunities. Teaching hospitals that prioritize comprehensive awareness and utilization of ERMS are better equipped to fulfill their mission of providing exceptional patient care, educating the next generation of healthcare professionals, and advancing medical science. Electronic Record Management Systems are not just tools for record-keeping; they are transformative solutions that drive progress in modern healthcare (Alegbeleye, 2019).

According to Yahya et al (2017) ERMS have become an integral part of healthcare, promising increased efficiency, reduced errors, and enhanced patient care. In teaching hospitals, where patient care, medical education, and research intersect, the effective utilization of ERMS is crucial. However, healthcare professionals often encounter various barriers and challenges that hinder the optimal use of these systems.

Yahya et al (2017) is of the view that one of the fundamental challenges faced by healthcare professionals in teaching hospitals is the resistance to technological change. Many professionals, particularly those with years of experience, are accustomed to traditional paper-based record-keeping systems. The introduction of ERMS disrupts their established routines and workflows, leading to apprehension and reluctance. They recommend that teaching hospitals can address this resistance by providing comprehensive training programs, offering incentives for adoption, and involving experienced users in the transition to ERMS. Communication should emphasize how ERMS will improve their daily tasks and reduce the administrative burden.

Similarly, Wong and Bredly (2019) posit that healthcare professionals may be unfamiliar with the functionalities of ERMS due to limited training opportunities. This lack of training can create a steep learning curve, causing frustration and reduced enthusiasm for utilizing ERMS effectively as comprehensive training programs are essential. Hospitals should invest in ongoing education, offer practical, hands-on training, and ensure that healthcare professionals receive training during their onboarding process. Continuous education and support can help bridge the training gap. They further state that not all healthcare professionals are technologically proficient. They may struggle with the technical aspects of ERMS, leading to inefficiency and potential errors in utilization which is why user-friendly interfaces should be prioritized in ERMS design, making navigation and usage more intuitive. Technical support teams should be readily available to assist with any issues, and training programs should be tailored to accommodate varying levels of technical expertise.

Wamukoya and Mutuala (2015) assert that misconceptions about ERMS capabilities and limitations can contribute to resistance and underutilization. Some healthcare professionals may believe that ERMS are overly complex or inefficient; perpetuating negative attitudes they posit that hospitals should engage in transparent communication to clarify misconceptions. Demonstrating the benefits of ERMS and sharing success stories from peers can help dispel myths and foster a more positive attitude toward the technology. In the same vein, they are of the view that healthcare professionals are understandably concerned about the privacy and security of patient data. An inadequate understanding of ERMS can lead to unwarranted concerns about data breaches or unauthorized access to this end, the authors recommend that clear communication about data security measures, including encryption and access controls, can reassure healthcare professionals. Hospital administrators should emphasize the role ERMS play in maintaining data integrity and patient privacy.

Stward (2015) stats that the design and functionality of ERMS interfaces can also pose challenges. Cluttered, non-intuitive, or non-standard interfaces can lead to inefficiencies and frustration for healthcare professionals, hence developers should prioritize user-centric design, making interfaces more intuitive and streamlined. Customization options for individual users can enhance user engagement and satisfaction. The author further states that many teaching hospitals use multiple systems for different purposes and the integration of these systems with ERMS can be complex. A lack of interoperability can lead to data silos, requiring healthcare professionals to switch between various applications to access information however, hospitals should invest in interoperable ERMS solutions and seamless integration with other hospital systems. This ensures that healthcare professionals have access to comprehensive patient data in one place, reducing the need to switch between applications.

Wamukoya (2015) argues that ERMS can sometimes lead to an increased documentation workload for healthcare professionals, as they are required to input information into the system in addition to their existing responsibilities. This can lead to burnout and decreased efficiency therefore ERMS should be designed to minimize redundant data entry and automate routine tasks. Hospitals can

also consider employing scribes or dedicated data entry personnel to alleviate the documentation burden on healthcare professionals. H is of the opinion that teaching hospitals often operate with limited resources and tight budgets. Implementing ERMS and providing adequate training and support can strain already stretched financial resources which is why hospitals should seek cost-effective ERMS solutions and allocate resources strategically. Collaboration with vendors or the use of open-source ERMS can be budget-friendly options.

Healthcare professionals may encounter challenges while using ERMS, and inadequate support or technical assistance can exacerbate these issues, leading to frustration in which case hospitals should establish responsive technical support teams that can address user concerns promptly. User communities and peer support can also play a valuable role in providing assistance and sharing best practices (Algebeleye, (2019).

According to Shonubi (2015) overcoming the barriers and challenges to effective ERMS utilization in teaching hospitals is essential for reaping the numerous benefits the technology offers; effective ERMS utilization leads to improved patient care by facilitating quick access to patient records, reducing errors, and enhancing clinical decision-making. This ultimately translates to better outcomes and patient satisfaction which help streamline clinical workflows, reducing the time and effort required for administrative tasks. Healthcare professionals can focus more on direct patient care, resulting in increased efficiency and reduced burnout, simplifying data management by reducing the reliance on paper records, minimizing the risk of data loss, and improving resource allocation. This efficiency can translate to cost savings for teaching hospitals, foster collaboration among healthcare professionals by providing a centralized platform for data access and communication. This can improve inter-departmental collaboration and the quality of care delivered as well as supports research and education by providing access to a wealth of patient data for academic studies, clinical trials, and medical training. This significantly contributes to the advancement of medical science.

The barriers and challenges faced by healthcare professionals in teaching hospitals regarding the effective utilization of ERMS are diverse and significant. Resistance to technological change, limited training opportunities, technical barriers, misconceptions, privacy concerns, and many other obstacles hinder the seamless integration of ERMS into daily practice (Roehrs et al, 2017). Addressing these challenges requires a multi-faceted approach, including comprehensive training programs, user-friendly interfaces, incentives for adoption, clear communication and peer support. Moreover, the design and functionality of ERMS interfaces, integration with existing systems, documentation workload, and budget constraints must be considered to overcome obstacles effectively. The benefits of effective ERMS utilization are substantial, leading to improved patient care, streamlined workflows, efficient data management, enhanced collaboration, and support for research and education. By proactively addressing the barriers and challenges, teaching hospitals can unlock the full potential of ERMS, ultimately providing superior patient care and contributing to the advancement of medical knowledge and practice. Electronic Record Management Systems are not merely tools for data management; they are transformative solutions that drive progress in modern healthcare (Marinič, 2015).

Methodology

The study used Quantitative Methodology and Cross-Sectional Survey Design to carried out the study among various Medical Record Officers using a sampling frame obtained from a list of FUTHs located in and around NWN, from 2022-2023. Proportionate Stratified Sampling technique was employed in this research. Stratified sampling is a sampling procedure in which elements of the

population are divided in to homogenous subgroups (called “strata”), and a simple random sample is drawn within each subgroup. The choice of Stratified sampling is due to the fact that the FUTHs are geographically spread in different states of the NWN. Base on this the population; FUTHs in NWN was divided into Three (3) stratum as it is only Three (3) states that have Federal University Teaching Hospitals (Kaduna, Kano and Sokoto). Questionnaire was use to collect data while frequency and percentage was use to analyzed the data.

According to Keilman (1995) as cited by Ibrahim (2013) a sample of 35% - 43% is considered adequate representative sample in a research. Therefore, the researcher will use simple random sampling to randomly select 35% sample of the respondents in each stratum (FUTHs).

Summary of target sample size of each strata are shown in Table 1

Table 1: Sample Size distribution of the Medical Record Officers in the various FUTHs

S/N	Federal Teaching Hospital	Population	Sample Size
▪	Ahmadu Bello University Teaching Hospital Zaria (ABUTH)	128	45
▪	Aminu Kano Teaching Hospital Kano (AKTH)	113	40
▪	Usmanu Danfodio University Teaching Hospital Sokoto (UDUTH)	120	42
	Total	361	127

Source: Field Work (2023)

A sample size of 127 Medical Record officers participated in the study. This ensured that about 35% of the hospital Medical Record officers participated in the study to have a more manageable and representative sample size that can minimize sampling biases and consequently, get reliable findings. Units such as Maternity/ Anesthesia Clinic, Medical Wards (Pediatrics, Female & Male), Out Patient Department (GOPD, SOPD, MOPD & POPD), Records office and Surgical Wards (Pediatrics, Female & Male) had most participants in the sample size. These units recorded higher participants because the units had more Medical Records officers. Moreover, these units on daily basis create process and maintain more Medical Records on daily basis. On the other hand, units such as psychiatric and Public/Community Medicine had fewer participants because they had fewer Record Officers in their respective units. Also, these units create and maintain less Medical Records on daily basis.

Results and Discussion

A total of 127 Questionnaire were distributed to respondents out which, 121 questionnaires were duly filled and returned making 95.3% response rate. The analysis was based on simple frequency and percentages.

Table 2: Level of awareness among Medical Record Officers in FUTHs regarding ERMS

Level of awareness among Medical Record Officers	Strongly agree	Agree	Disagree	Strongly Disagree	Total
I am aware of ERMS in the Teaching Hospital	111 (91.7%)	10 (8.3%)	0 (0.0%)	0 (0.0%)	121 (100%)
I utilize ERMS on a daily Basis	91 (75.2%)	11 (09.1%)	10 (08.3%)	9 (07.4%)	121 (100%)
ERMS facilitate search and retrieval in carrying out our daily routine	101 (83.5%)	11 (09.1%)	9 (07.4%)	0 (0.0%)	121 (100%)

ERMS enhance the quality and response time for diagnosis of patient	103 (85.1%)	18 (14.9%)	0 (0.0%)	0 (0.0%)	121 (100%)
ERMS ensures adequate records keeping	101 (83.5%)	20 (15.5%)	0 (0.0%)	0 (0.0%)	121 (100%)

Field survey, 2023

Table 2 reveals the level of awareness and perceptions of Medical Record Officers in FUTHs in NWN regarding ERMS. From the Table, it is discovered that 111 (91.7%) of respondents strongly agree that they are aware of ERMS in the healthcare facility, 91 (75.2%) of the respondents utilize ERMS daily, 101 (83%) of respondents strongly agree that ERMS enhance the quality and response time for diagnosing patients, indicating high confidence in the system's effectiveness and 101 (83.5%) of respondents believe that ERMS ensure adequate record-keeping, emphasizing the importance of ERMS in maintaining comprehensive healthcare records. Overall, this table suggests a high level of awareness and positive perceptions among Medical Record Officers regarding ERMS in FUTHs in NWN, reflecting its significant role in their daily routines. It shows that a high percentage of respondents are aware of ERMS, utilize it daily, and believe it positively impacts search and retrieval, patient diagnosis, and record-keeping in their healthcare facility. This is in line with the findings of Alegbeleye (2019) who stated that ERMS encompass various technological tools and processes designed to manage and store patient health records digitally. In teaching hospitals, where a significant emphasis is placed on education and research alongside patient care, the effective integration of ERMS is paramount. To achieve this, healthcare professionals, including doctors, nurses, and administrative staff, need to be well-informed about ERMS and its applications. Unfortunately, the level of awareness among healthcare professionals regarding ERMS in many teaching hospitals is often lacking (Aljumah, 2019).

Table 3: Strategies or training programs for Medical Record Officers in FUTHs regarding ERMS

Strategies or training programs	Strongly agree	Agree	Disagree	Strongly Disagree	Total
Comprehensive training programs by offering ongoing, specialized training tailored to each department's needs	118 (97.5%)	03 (02.5%)	00 (00.0%)	00 (00.0%)	121 (100%)
User-friendly interface	110 (90.9%)	11 (09.1%)	00 (0.0%)	00 (0.0%)	121 (100%)
Clear communication by Implementing regular awareness campaigns and workshops on ERMS	108 (89.3%)	13 (10.7%)	00 (00.0%)	00 (00.0%)	121 (100%)
Incentives for adoption	111 (91.7%)	10 (08.3%)	00 (00.0%)	00 (00.0%)	121 (100%)
Peer support programs by Outsourcing training to external consultants	70 (57.8%)	21 (17.4%)	20 (16.5%)	10 (08.3%)	121 (100%)

Field survey, 2023

Table 3 evaluates Medical Records Officers opinions on strategies and training programs to enhance awareness and utilization of electronic records in FUTHs. From the table it was discovered that 118 (97.5%) of the respondents strongly agreed that Comprehensive training programs by offering ongoing, specialized training tailored to each department's needs is effective, 110 (90.9%) of the respondents believe in User friendly interface is very effective strategy. Furthermore 108 (89.3%) of the respondents strongly agreed that Clear communication by

Implementing regular awareness campaigns and workshops on ERMS is an effective avenue for training, 111 (91.7%) of the respondents are of the view that Incentives for adoption is a very effective strategy and 70 (57.8%) of the respondents strongly believe that Peer support programs by outsourcing training from external consultants is a good strategy. This indicates some skepticism about external training. Larsen and Marstein (2015) posit that Teaching Hospitals use ERMS to provide medical students, residents, and interns with access to real patient cases, enabling hands-on clinical training. Students can learn to navigate EHRs and gain practical experience in the same way medical educators can use ERMS to teach students about the importance of maintaining comprehensive patient records, documentation standards, and ethical considerations in record-keeping, serving as a valuable resource for academic research where medical students and faculty can access a vast pool of de-identified patient data for clinical research projects and studies.

The findings implies that Medical Record Officers in FUTHs are overwhelmingly in agreement with Comprehensive training programs by offering ongoing, specialized training tailored to each department's needs. This is backed up by the findings of Steward (2015) stating that one of the strategies in enhancing awareness and utilization of ERMS is providing healthcare professionals with ongoing training sessions to keep them updated on ERMS features and best practices. Regular training can ensure that they are well-prepared to use the system efficiently which offer practical, hands-on training sessions that allow healthcare professionals to interact with the ERMS in a real-world setting. This experience helps them become more comfortable with the system. The author further states that ERMS should be designed with user-friendly interfaces, making it easier for healthcare professionals to navigate and utilize the system without extensive technical knowledge, allow users to customize their ERMS interfaces to align with their specific needs and preferences. Personalization can enhance user engagement.

Table 4: Primary challenges faced by Medical Record Officers in FUTHs regarding ERMS

Primary challenges	Strongly agree	Agree	Disagree	Strongly Disagree	Total
High cost of ERMS implementation	49 (40.5%)	26 (21.5%)	24 (19.8%)	22 (18.2%)	121 (100%)
Overwhelming workload and time constraints	21 (17.4%)	16 (13.2%)	56 (46.3%)	28 (23.1%)	121 (100%)
Lack of interest among Medical Record Officers	05 (04.2%)	09 (07.4%)	72 (59.5%)	35 (28.9%)	121 (100%)
Inadequate ERMS technology	82 (67.8%)	26 (21.5%)	08 (06.6%)	05 (04.1%)	121 (100%)
Resistance to change among Medical Record Officers	39 (32.2%)	49 (40.5%)	26 (21.5%)	7 (05.8%)	121 (100%)

Field survey, 2023

Table 4 highlights the key barriers and challenges faced by Medical Record Officers in FUTHs in effectively utilizing ERMS. Inadequate ERMS technology is a significant barrier, with 82 (67.8%) strongly agreeing, highlighting technological shortcomings as a major concern. Also a significant proportion 49 (40.5%) strongly agrees that the high cost of ERMS implementation is a major hurdle, with an additional 26 (21.5%) in agreement. This shows that Financial burden is a primary concern. Resistance to change among Medical Record Officers is also a challenge, with 39 (32.2%) strongly agreeing and 49 (40.5%) agreeing, demonstrating the need for change in management

strategies. Furthermore, overwhelming workloads and time constraints are not seen as substantial challenge, with 56 (46.3%) in disagreement and 28 (23.1%) strongly disagreeing. This indicates that time pressures do not significantly hinder the use of ERMS. Lack of interest among Medical Record Officers is not seen as a notable issue, with 72 (59.5%) in disagreement, reflecting a lack of enthusiasm do not hinder ERMS adoption.

Discussion of Findings

- i. The study reveal that a high percentage of Medical Record Officers are aware of ERMS, utilize it daily, and believe it positively impacts search and retrieval, patient diagnosis, and record-keeping in their healthcare facility.
- ii. It found that Medical Record Officers in FUTHs overwhelmingly support in-house training and awareness campaigns for electronic records. They are divided on reducing the number of record systems.
- iii. The study revealed that, Inadequate ERMS technology, High cost of ERMS implementation and Resistance to change among Medical Record Officers represent the primary barriers to effective ERMS utilization at FUTHs.

Conclusion

This research has shed light on the critical aspects of electronic record utilization within the FUTHs. The findings reveal that while Medical Record Officers are generally aware of the existence of ERMS, several challenges and barriers hinder their effective utilization. The challenges identified include the Inadequate ERMS technology, High cost of ERMS implementation and Resistance to change among Medical Record Officers. However, FUTHs can enhance awareness, proficiency, and the overall utilization of electronic record systems, ultimately leading to more efficient and reliable healthcare services. This research underscores the importance of adapting and optimizing ERMS in FUTHs to improve patient care, data security, and operational efficiency. This implies that Utilization of ERMS in FUTHs will reduce the stress of Medical Record Officers as well as minimizing the rate at which Records are lost or misplaced

Recommendation

Based on the findings of this study, the following recommendations were made:

- i. FUTHs should develop and execute training programs that cover all aspects of ERMS to increase awareness and proficiency among Medical Records Officers in FUTHs. This training should encompass system navigation, data entry, retrieval, and security measures.
- ii. Management of FUTHs should consider user-friendly and intuitive ERMS solutions that require minimal training, making it easier for Medical Record Officers to adapt. If necessary, customize or develop ERMS with a focus on user experience to encourage adoption and maximize system utilization.
- iii. FUTHs should establish a dedicated technical support team or helpdesk to address system-related issues promptly. Medical Record Officers should have easy access to technical assistance, ensuring a smoother and more efficient experience with ERMS.

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