

Knowledge of Health Information Management Professionals on Digital Health Record at Ahmadu Bello University Teaching Hospital Shika, Zaria, Kaduna State, Nigeria

Umar, Faruk Abubakar

Department of Information Technology and Health Informatics, Federal University of Health Science, Azare, Bauchi State, Nigeria.

Corresponding author email: famzarab@gmail.com

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ABSTRACT: This research investigates the knowledge of Health Information Management (HIM) professionals on digital health records at Ahmadu Bello University Teaching Hospital (ABUTH) Shika, Zaria. A survey research design was adopted, with a population comprising 86 selected staff members involved in HIM activities within the hospital. Total enumeration was employed for data collection. A well-structured questionnaire was developed to gather primary data, covering key aspects of digital health records knowledge such as functionalities, data security, interoperability, and implications for patient care. Statistical Package for the Social Sciences (SPSS) version 23 was utilized for data analysis, employing descriptive statistics to summarize sample characteristics and interpret quantitative data obtained from the survey responses. The rigorous use of SPSS ensured reliability and validity of findings, facilitating evidence-based recommendations to enhance HIM practices in digital health records at ABUTH Shika. Out of 90 distributed questionnaires to the staff of Health Information Management Department ABUTH Shika, Zaria, 75 were returned. The findings reveal various challenges faced in the digitalization of health records among HIM professionals in ABUTH Shika. These include inadequate electricity supply (13%), inadequate ICT infrastructure (20%), lack of basic ICT skills (27%), lack of funds for ICT acquisition (20%), high cost of internet service (7%), and poor internet connectivity (13%). Notably, the majority of respondents (27%) identified the lack of basic ICT skills as the main challenge. Additionally, perceptions regarding digitalization of health records were assessed, with respondents indicating high levels of convenience (20%) and efficiency (20%), while also highlighting difficulties in adoption (21%). In conclusion, the findings suggest a favorable perception of digitalization of health records among HIM professionals, despite challenges in implementation, emphasizing the importance of addressing skill gaps and infrastructure limitations to optimize digital health record management at ABUTH Shika.

Keywords: Health Information Management, HIM professionals, digital health records, Ahmadu Bello University Teaching Hospital, ABUTH Shika

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INTRODUCTION

Health Information Management (HIM) plays a critical role in modern healthcare systems by ensuring the accurate, timely, and secure management of patient information. With the advancement of technology, the transition from paper-based health records to digital health records has become essential for enhancing patient care, improving operational efficiency, and facilitating evidence-based decision-making within healthcare institutions. Ahmadu Bello University Teaching

Hospital (ABUTH) Shika, Zaria, as a prominent healthcare facility in Nigeria, recognizes the importance of adopting digital health records to meet the evolving demands of the healthcare landscape (Song et al., 2020). Ahmadu Bello University Teaching Hospital (ABUTH) Shika, located in Zaria, Kaduna State, Nigeria, stands as a renowned institution in the Nigerian healthcare. Established as part of Ahmadu Bello University's commitment to providing quality healthcare and medical

education, ABUTH Shika serves as a tertiary healthcare facility, offering a wide range of specialized medical services, research, and training programs. ABUTH Shika plays a pivotal role in healthcare delivery, catering to the healthcare needs of the local community in Zaria, as well as serving as a referral center for patients from across Kaduna State and beyond. With state-of-the-art medical facilities, a dedicated team of healthcare professionals, and a commitment to excellence in patient care, ABUTH Shika holds a significant position in the healthcare ecosystem of Nigeria (Pastel et al., 2015).

The significance of the study on the knowledge of Health Information Management (HIM) professionals on digital health records at ABUTH Shika lies in its potential to contribute to the enhancement of healthcare information management practices within the institution and beyond. As healthcare continues to evolve with technological advancements, the effective utilization of digital health records is paramount for improving patient care outcomes, optimizing healthcare delivery processes, and ensuring data security and privacy. By assessing the knowledge level of HIM professionals at ABUTH Shika regarding digital health records, this study aims to identify areas of strength, as well as potential gaps and challenges. Understanding the current state of knowledge among HIM professionals is essential for developing targeted interventions, training programs, and policy initiatives to enhance their competency in managing digital health records effectively (Office of the National coordinator for Health information Technology 2016). Furthermore, the findings of this study have broader implications for healthcare organizations and policymakers in Nigeria. By shedding light on the challenges and opportunities associated with digital health record management, the study can inform strategic decision-making, resource allocation, and capacity-building efforts aimed at promoting the adoption and utilization of digital health records across healthcare institutions in the country. The significance of this study lies in its potential to drive positive change in healthcare information management practices, ultimately leading to improved patient care, enhanced healthcare delivery efficiency, and the advancement of healthcare systems in Nigeria.

However, the successful implementation and utilization of digital health records rely heavily on the knowledge and expertise of HIM professionals. These professionals are tasked with various responsibilities, including the design, implementation, maintenance, and security of digital health record systems. Their proficiency in understanding the functionalities, interoperability standards, data security protocols, and implications for patient care associated with digital health records is paramount for ensuring the effectiveness and efficiency of healthcare delivery at ABUTH Shika.

Despite the growing recognition of the importance of

digital health records, there remains a need to assess the knowledge level of HIM professionals at ABUTH Shika in this domain. Understanding their current knowledge, skill gaps, and training needs is essential for developing targeted interventions and strategies to enhance their competency in managing digital health records effectively. Additionally, identifying potential challenges and barriers to the adoption and utilization of digital health records will inform policy decisions and resource allocation aimed at optimizing HIM practices and improving healthcare outcomes at ABUTH Shika. Therefore, this study seeks to investigate the knowledge of HIM professionals on digital health records at ABUTH Shika, Zaria, to contribute to the advancement of healthcare information management practices within the institution and beyond (Obotu et al., 2018).

Health Information Management (HIM) is a crucial component of healthcare systems worldwide, responsible for the collection, organization, and protection of patient health information. HIM professionals play a vital role in ensuring the accuracy, accessibility, and confidentiality of medical records, thereby facilitating effective patient care, clinical decision-making, and healthcare delivery. The importance of HIM lies in its ability to provide healthcare providers with timely and relevant information essential for diagnosis, treatment, and ongoing patient management. Through meticulous documentation and management of health records, HIM professionals contribute to the continuity of care, enabling seamless communication and collaboration among healthcare professionals across different specialties and settings (Mom, 2016).

According to Lammers et al. (2017), in recent years, the transition from paper-based health records to digital health records has revolutionized healthcare information management. Digital health records encompass electronic health records (EHRs), personal health records (PHRs), and other electronic medical record (EMR) systems that digitize patient health information. This transition offers numerous advantages over traditional paper-based systems, including:

Enhanced Accessibility: Digital health records enable instant access to patient information from any authorized location, improving healthcare provider efficiency and reducing the risk of errors associated with manual record retrieval. 2. Improved Coordination of Care: Digital health records facilitate seamless sharing of patient information among healthcare providers, promoting better coordination of care and interdisciplinary collaboration. 3. Data Integration and Analysis: Digital health records support the integration of diverse healthcare data sources, allowing for comprehensive data analysis, clinical decision support, and population health management. 4. Patient Engagement: Digital health records empower patients to access and manage their health information online, fostering greater engagement

in their care and promoting shared decision-making with healthcare providers. 5. Enhanced Security and Privacy: Digital health records offer advanced security features and encryption protocols to safeguard patient information, reducing the risk of unauthorized access, loss, or theft compared to paper-based records.

The adoption of digital health records represents a transformative shift in healthcare information management, offering opportunities to improve patient outcomes, enhance healthcare delivery efficiency, and drive innovation in healthcare practices. As HIM professionals continue to adapt to this digital era, their expertise and leadership are essential in ensuring the effective utilization and optimization of digital health record systems to meet the evolving needs of patients and healthcare organizations (Gasch & Gash, (2020).

The transition from paper-based health records to digital health records marks a pivotal advancement in healthcare information management practices. This shift is propelled by technological innovations that enable the electronic storage, retrieval, and exchange of patient health information. Regulatory mandates, such as those stipulated by governments and healthcare governing bodies, further catalyze this transition by requiring healthcare organizations to adopt electronic health record (EHR) systems. The benefits of digital health records are manifold, including improved accessibility, enhanced data accuracy, streamlined documentation processes, and heightened security measures, driving healthcare organizations worldwide to embrace digitalization (Kruse et al., 2016).

Digital health records promote interoperability and seamless data exchange among healthcare providers and institutions, facilitating better coordination of care and treatment continuity for patients. Patient engagement is also bolstered through digital health records, as patients gain access to their health information via patient portals and personal health record (PHR) systems. This enhanced engagement fosters collaborative decision-making between patients and healthcare providers, ultimately leading to improved health outcomes and increased patient satisfaction with healthcare services (Fontaine et al., 2016).

Digital health records serve as a foundation for data analytics and population health management initiatives, offering a wealth of structured health data for analysis. By leveraging data analytics tools and population health management platforms, healthcare organizations can derive valuable insights into patient populations, disease trends, treatment efficacy, and resource utilization patterns. These insights inform evidence-based clinical decision-making, enhance care delivery processes, and optimize resource allocation within healthcare systems, ultimately driving improvements in patient care quality and healthcare system efficiency (Caligtan, 2019).

Health Information Management (HIM) professionals

serve as linchpins in the effective management of digital health records within healthcare organizations. Their role spans across various critical functions, starting from the initial selection and implementation of electronic health record (EHR) systems to their ongoing maintenance and optimization. HIM professionals ensure that EHR systems meet organizational needs, comply with regulatory standards, and align with best practices in health information management. They play a pivotal role in safeguarding the integrity and security of patient health information, developing and enforcing policies and procedures to mitigate risks associated with unauthorized access, breaches, and data breaches (Blumenthal & Tavenner, 2018).

HIM professionals are responsible for overseeing data quality assurance within digital health records, conducting audits, and implementing corrective measures to maintain data integrity. They collaborate closely with clinical staff to design efficient documentation workflows, establish standardized coding practices, and provide training and education to ensure healthcare staff's proficiency in utilizing EHR functionalities and complying with documentation requirements. Moreover, HIM professionals play a vital role in promoting interoperability and health information exchange initiatives, facilitating seamless sharing and exchange of patient information across healthcare settings and systems. Their expertise and dedication contribute significantly to advancing healthcare information management practices and ensuring the delivery of high-quality patient care in the digital age (Based et al., 2014).

According to Asabe et al., (2013), stated that the study on the knowledge of Health Information Management (HIM) professionals on digital health records at Ahmadu Bello University Teaching Hospital (ABUTH) Shika holds significant relevance within the context of the institution for several reasons. Firstly, as a leading tertiary healthcare facility in Nigeria, ABUTH Shika serves a diverse patient population and handles a substantial volume of health information daily. Understanding the knowledge level of HIM professionals regarding digital health records is crucial for ensuring efficient management and utilization of electronic health record (EHR) systems within ABUTH Shika.

Secondly, the findings of the study can inform strategic decision-making and resource allocation within ABUTH Shika to enhance HIM practices in digital health record management. Identifying knowledge gaps and training needs among HIM professionals will enable the institution to develop targeted interventions, training programs, and capacity-building initiatives to address these deficiencies effectively.

Furthermore, the study's insights can contribute to the optimization of healthcare delivery processes, improvement of patient care outcomes, and enhancement of data security and privacy measures

within ABUTH Shika. By promoting the effective utilization of digital health records, the study has the potential to drive positive changes in healthcare information management practices, ultimately benefiting both healthcare providers and patients within the institution. The relevance of the study within the context of ABUTH Shika lies in its potential to advance HIM practices, optimize digital health record management, and ultimately improve the quality and efficiency of healthcare delivery within the institution.

Health information management professionals (HIM) provide services in all aspects of records management, including data collection and data quality management, integrity, standards, disclosure, coding, disposition, and privacy of health information. They perform detailed analysis of the information in the health record to facilitate health care delivery, patient safety and decision support. They play a role in ensuring the confidentiality of health information within the patient record and are advocates of the patient's right to private, secure and confidential information (Adler-Milstein et al., 2017).

The digitalization of health record is also known as (electronic health record EHR is a longitudinal electronic record of patient health information generated by one or more encounters in any healthcare delivery settings included in this information are patient demographics, vital signs, immunizations, problems, progress notes, medications, past medical history, laboratory data and radiology reports (Adler-Milstein et al., 2015).

Digitalization of health record has the ability to generate complete record of patients' clinical encounters, as well as supporting other care related activities, directly or indirectly via interface including evidences-based decision support quality management and outcomes reporting. Much interaction with digitalization of health record is less than ideal system crashes, paralyzes clinics poor system, responses time, test user, patience multiple system passwords create redundancy and frustration and overreliance on digitalization of health record. EHR in lieu of direct inter specialty communication can impair patient care despite these problems there are advantages to using electronic health record and its continued existence is as certain as the interest (Mom, 2016).

The principal benefits identified for the introduction of an electronic health record system are supporting patient care and improving the quality of that care. Accurate and timely health information which is accessible when needed by both provider/users and consumers has great advantages for the healthcare of all individuals and would enhance the health and welfare of the community. It will also enhance the productivity of healthcare providers in the delivery of care and be a strong support to clinical and health research. Implementation of electronic health record EHR has been said to revolutionize how we collect, store and use health information (Mohammed

et al., 2017).

Patients are expected to become more involved in healthcare decision when electronic systems provide them with easily accessible and accurate information about their health problems and care. It is often advocated that healthcare practitioners tend to deliver healthcare by being able to more efficiently provide up to date details of a patient's healthcare to others involved in treating the patient and by having better access to best practice and the latest research finding.

Several possible advantages to electronic health record over paper record have been proposed but there is debate about the degree to which these are achieved in practice (Mom, 2016).

Digitalization of medical records are more effective when extracting medical data for the examination of possible trends and long-term changes in a patient population-based studies of medical records, and which could also be facilitated by the wide spread adoption of EHR's (Gasch, & Gash, 2020).

Electronic Health Information Systems (EHIS) promises a number of substantial benefits which ranges from effective and more efficient delivery of health care (through more efficient storage and retrieval of patient information) to decreased health care cost (Adler-Milstein et al., 2017). The goal of all health system activities is to promote, maintain, improve, re-establish or at least stabilize the health status of citizens – independent of their personal situation. With the many advances in information technology over the years particularly in healthcare a number of different forms of electronic healthcare have been developed and implemented. Some countries are currently planning a nationwide electronic record healthcare delivery system (Mohammed et al., 2017).

The type and extent of electronic health vary and what one country calls an electronic health or tele-health may not be the same as that of developed countries. Although effort is going on in some countries on some forms of a computerized patient health care information system and yet not many hospitals have successfully introduced an electronic health record with clinical data entry at the point of care. Interest in automating the health record is generally high in both developed and developing countries unfortunately in some cases the introduction of an electronic health record system seems overwhelming issue and almost out of research to many health providers and administrators as well as health information managers (Mohammed et al., 2017).

Digitalization of health record along this line may encounter obstacles which may not be inadequate technology but technical support and cost of changing to an electronic system coupled with insufficient healthcare funding in many developing countries cost available technology lack of technical expertise and computer skill of staff and lack of processing facilities are in fact major

issues which would need to be address before implementation is possible (Mohammed et al., 2017).

Statement of the problem

The transition to digital health records represents a fundamental shift in healthcare management, promising improved efficiency, accuracy, and accessibility of patient information. Within the context of Ahmadu Bello University Teaching Hospital (ABUTH) Shika, Zaria, this transition necessitates a thorough understanding of digital health record systems among Health Information Management (HIM) professionals. However, assessing the current level of knowledge among HIM professionals at ABUTH Shika regarding digital health records is critical to identify potential gaps and challenges. This assessment must delve into various aspects, including the proficiency in utilizing digital health record functionalities, awareness of data security protocols, familiarity with interoperability standards, and comprehension of the broader implications for patient care and healthcare system efficiency. Furthermore, understanding the specific training needs of HIM professionals is paramount to address deficiencies effectively. By conducting a comprehensive analysis of the areas where further education and skill development are required, ABUTH Shika can tailor training programs to enhance the competency of its HIM workforce in managing digital health records. Identifying barriers to knowledge acquisition, such as organizational constraints or resource limitations, is equally crucial. By uncovering these barriers, ABUTH Shika can implement targeted strategies to mitigate obstacles and facilitate continuous learning among HIM professionals, thereby fostering a culture of innovation and excellence in healthcare information management. Ultimately, the findings of this study will inform strategic initiatives aimed at optimizing the utilization of digital health records at ABUTH Shika. By bridging knowledge gaps, addressing training needs, and overcoming barriers to knowledge acquisition, ABUTH Shika can ensure that its HIM professionals are well-equipped to leverage digital health records effectively. This, in turn, will not only enhance patient care outcomes but also contribute to the overall efficiency and sustainability of the healthcare system at ABUTH Shika, positioning it as a leader in healthcare information management within the region.

Research question

The study sought to address the following research question:

- (a) What is the level of awareness of digitalization of health records among health information management professionals in ABUTH Shika, Zaria?

METHODOLOGY

For this research on the knowledge of Health Information Management (HIM) professionals on digital health records at Ahmadu Bello University Teaching Hospital (ABUTH) Shika, Zaria, a survey research design was chosen. The population for the study comprised 86 selected staff members involved in HIM activities within the hospital. Total enumeration was adopted. To collect primary data, a well-structured questionnaire was developed, encompassing key aspects of digital health records knowledge, including functionalities, data security, interoperability, and implications for patient care. The questionnaire was designed to elicit comprehensive responses that would facilitate a thorough understanding of the participants' knowledge level and training needs in this domain. Upon completion of data collection, the responses obtained from the survey were analyzed using the Statistical Package for the Social Sciences (SPSS) version 23. SPSS provided the necessary tools and techniques for data analysis, including descriptive statistics to summarize the characteristics of the sample. Through SPSS, quantitative data obtained from the survey responses were processed and interpreted, allowing for insights into the current state of knowledge among HIM professionals regarding digital health records at ABUTH Shika. The use of SPSS ensured rigorous analysis of the data, enhancing the reliability and validity of the findings, and enabling the research to draw meaningful conclusions and make evidence-based recommendations for enhancing HIM practices in the context of digital health records at the hospital.

RESULTS

The findings obtained from the were collected through the use of questionnaire which was distributed to the respondents and analyzed in order to have insight information on the use of Information Technology in Health Information Management Department in ABUTH Shika, Zaria, Kaduna State of Nigeria. Out of 90 copies of questionnaires distributed to the staff of Health Information Management Department ABUTH Shika, Zaria, 75were dully filled and returned.

Research question: What is your perception on digitalization of health record among health information management professional in ABTUH Shika?

The result shows that 15(15%) of the respondents indicated that It is very convenience as the perception on digitalization of health record, also 15(15%) of the respondents markedhigh level of efficiency as one of the perception of digitalization of health, 10(10%) of the respondent stated it is very secure, 15(15%) of the respondent indicated it is difficult to adopt as the

Table 1: Perception of respondents toward the use of digitalization in health sector.

Perceptions on Digitalization of Health Record	Frequency	Percentage
It is very Convenience	15	20%
There is high level of Efficiency	15	20%
It is very secure	10	13%
It is difficult to adopt	15	21%
It save time	10	13%
It is difficult to adopt	10	13%
Total	75	100%

Source: Field survey, 2023.

perception on digitalization of health record, while, 10(10%) of the respondent stated that it saves time, also 10(10%) of the respondent stated that it is difficult to adopt. These indicate that majority of the respondents have high perception on the digitalization of health record.

DISCUSSION

The finding show that the number of benefits of digitalization of health record among health information management professional in ABUTH Shika Zaria Which are shows as follows: Confidentiality of patient record, it increased efficiency, It improved Communication between health care of patient, It helps n Better Data Management, Security and fraud detection. The study also indicates that the perception of digitalization of health record among health information professional in ABUTH Shika Zaria, as it has a positive effect on health information management department in ABUTH Shika Zaria, it helps in delivering effective and efficient service in the department.

Conclusion

The study underscored the fact that the Health Information Management professionals at the Ahmadu Bello University Teaching Hospital, Shika, have good knowledge of digitalization in health Information Management department. Digitalization of health record among health information management professional in ABUTH Shika, Zaria is an integral part of medical/ healthcare service delivery as it goes a long way in enhancing better service delivery as well as serving as a basis for following patient health trend overtime. It also serves as a basis for effecting referral service. Because digitalization of health record has a positive effect in health information management department.

Recommendations

The hospital should ensure sustainable internet connectivity in the hospital for digitalization of health

record, effective health information processing, storage, and retrieval.

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