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INTEGRATION OF ELECTRONIC HEALTH RECORDS (HER) ON HEALTH INFORMATION MANAGEMENT PRACTICES AT AMINU KANO TEACHING HOSPITAL (AKTH) KANO

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ABSTRACT
The healthcare sector has been witnessing a proliferation of technological advancements aimed at optimizing healthcare delivery processes for both providers and patients. Among these innovations, Electronic Health Records (EHR) have emerged as a critical tool in digitizing patient information and improving care quality. However, the effective integration of EHR systems remains a challenge in many healthcare facilities, including Aminu Kano Teaching Hospital (AKTH) Kano. This study aimed to assess the integration of EHR and its impact on Health Information Management (HIM) practices at AKTH Kano. The study employed a descriptive approach using a questionnaire and a simple random sampling method to gather data from healthcare professionals at AKTH Kano. Out of the 114 questionnaires distributed, 94 were returned and analyzed using descriptive statistics, including frequency tables, percentages, and means. The findings indicated that while some respondents agreed that records management in AKTH is partially integrated, others disagreed with the notion that EHR is fully automated in the hospital. Additionally, a significant number of respondents believed that AKTH has not fully integrated EHR into its operations. Despite these challenges, the majority of healthcare workers at AKTH demonstrated good knowledge and positive attitudes towards EHR utilization. Based on the study findings, several recommendations were proposed. Firstly, the hospital management should prioritize the training and retraining of staff to effectively integrate EHR into daily workflows. Additionally, adequate provision of EHR equipment and infrastructure, including reliable power supply, is essential to support seamless EHR implementation and usage in the hospital setting. In conclusion, while challenges exist in the integration of EHR at AKTH Kano, there is a strong foundation of knowledge and positive attitudes among healthcare workers towards EHR utilization. By implementing the recommended measures, AKTH can enhance its EHR integration efforts and ultimately improve healthcare delivery outcomes for patients.

Key-words: Integration, Electronic Health Records, Health Information Management, Aminu Kano Teaching Hospital, Kano

INTRODUTION
The integration of Electronic Health Records (EHR) has revolutionized the healthcare industry by streamlining processes, enhancing patient care, and improving overall efficiency. EHR integration involves the seamless incorporation of electronic patient information into a centralized database accessible to authorized healthcare professionals. This integration allows for comprehensive and real-time documentation of patient medical history, diagnoses, medications, and treatment plans. Healthcare providers can access this information instantly, enabling them to make well-informed decisions quickly, leading to better patient outcomes. Moreover, EHR integration facilitates communication and collaboration among healthcare teams, as multiple providers can access and update patient records simultaneously, ensuring continuity of care across different settings and specialties.

Furthermore, the integration of EHR systems offers numerous benefits beyond improved patient care. It enhances administrative efficiency by reducing paperwork and eliminating the need for duplicate data entry. Additionally, EHR integration enables data analysis and reporting, providing valuable insights into population health trends, treatment efficacy, and healthcare resource utilization. This data-driven approach

supports evidence-based decision-making and facilitates compliance with regulatory requirements and quality standards. Moreover, the interoperability of EHR systems allows for seamless exchange of patient information between healthcare organizations, promoting coordinated care and reducing medical errors. Overall, the integration of Electronic Health Records represents a significant advancement in healthcare delivery, driving improvements in quality, safety, and efficiency across the healthcare continuum.
The integration of Electronic Health Records (EHR) at Aminu Kano Teaching Hospital (AKTH) in Kano, Nigeria, would likely have a significant impact on health information management practices, potential effects was Efficiency and Accuracy: EHR integration would streamline the process of managing patient information. Instead of dealing with paper records, which can be time-consuming and prone to errors, healthcare providers could quickly access digital records. This would lead to improved efficiency in managing patient information and reduce the likelihood of errors due to illegible handwriting or misplaced documents. Accessibility With EHR, healthcare providers at AKTH would have instant access to patient records from any location within the hospital network. This would facilitate better coordination of care among different departments and healthcare professionals, leading to improved patient outcomes. Data Analytics and Decision Support EHR systems can collect a vast amount of data over time. By leveraging data analytics tools, AKTH could gain insights into disease trends, treatment outcomes, and resource utilization. This information can be invaluable for making informed decisions related to patient care, resource allocation, and quality improvement initiatives.

Patient Engagement: EHR systems often come with patient portals that allow patients to access their own health records, communicate with their healthcare providers, schedule appointments, and refill prescriptions online. This promotes patient engagement and empowers individuals to take a more active role in managing their health. Interoperability Integration of EHR at AKTH could facilitate interoperability with other healthcare facilities and systems, both within Nigeria and internationally. This would enable seamless sharing of patient information across different healthcare settings, ensuring continuity of care for patients who receive treatment at multiple facilities. Regulatory Compliance EHR systems often come with built-in features to ensure compliance with healthcare regulations and standards, such as data security and privacy requirements. By implementing an EHR system, AKTH can ensure that they are meeting regulatory requirements and protecting patient information.
Training and Support: The successful integration of EHR requires adequate training and ongoing support for healthcare staff. AKTH would need to invest in training programs to ensure that healthcare providers are proficient in using the EHR system effectively. The integration of Electronic Health Records at Aminu Kano Teaching Hospital has the potential to revolutionize health information management practices, leading to improved efficiency, better patient outcomes, and enhanced quality of care. However, it's essential to carefully plan and execute the implementation process to maximize the benefits and minimize potential challenges.

In recent years, the healthcare sector has witnessed a surge in technological advancements aimed at enhancing the efficiency of healthcare delivery for both providers and consumers. Recognizing the significance of investing in information technology, healthcare organizations worldwide have increasingly turned to innovations such as Electronic Health Records (EHR) to facilitate rapid information retrieval and streamline data management processes (Abdullah, 2018). EHR, in particular, represents a pivotal advancement as it enables the electronic availability of patients' information, thereby preventing duplicate tests and procedures, reducing medication errors and adverse drug reactions, cutting down healthcare expenditures, and enhancing compliance with practice guidelines among healthcare professionals. Overall, the adoption of EHR has played a crucial role in improving patient safety and the quality of healthcare in contemporary times.
Notably, the Ministry of Health of Nigeria has made substantial investments in implementing an EHR system with the aim of fully automating hospitals to facilitate coordinated care delivery. Consequently, it becomes imperative to evaluate the effective utilization of this system, especially concerning its impact on the performance of primary care providers post-implementation (Robert, 2019). While legislative measures have been put in place to promote the substitution of paperwork and the adoption of EHR in healthcare settings,

reluctance among healthcare professionals, ranging from nurses to ambulatory care physicians, persists, leading to limited system use and potential system failures (Panayiotis, 2014).
EHR serves as the primary entry point for information technology in the healthcare sector, with its increasing utilization observed globally, particularly in developed countries. However, developing nations often lag behind due to organizational, financial, and infrastructural constraints. Defined by the World Health Organization (WHO) and the International Telecommunication Union (ITU) as a computerized system for capturing, storing, and sharing healthcare information among providers within an organization, EHR has demonstrated its ability to improve care quality and patient outcomes by enhancing information dissemination, workflow efficiency, clinician communication, adherence to best practices, and error reduction (Robert, 2019).

The critical importance of timely and accurate information in healthcare settings is underscored by Ewing (2017), who highlights the risk of incorrect medication or treatment, particularly in emergency medicine, when physicians lack access to patient documentation. Citing a report by the Institute of Medicine (2019), which estimates between 44,000 and 98,000 annual deaths in the United States due to medical errors, Ewing emphasizes the adverse impact of inadequate information on healthcare service quality and patient outcomes. EHR emerges as a cost-effective solution to address these challenges by facilitating seamless information sharing among healthcare providers (East) and enabling comprehensive and efficient patient management systems (Meidani et al., 2018).
EHR represents a transformative innovation in healthcare delivery, offering significant benefits in terms of patient safety, care quality, and operational efficiency. However, its successful implementation requires overcoming various challenges, including technological, organizational, and attitudinal barriers. By leveraging the full potential of EHR systems and addressing these challenges effectively, healthcare organizations can realize substantial improvements in patient care and outcomes.

The Electronic Health Record (EHR) represents a comprehensive electronic repository of patient health information accumulated over one or more encounters across various healthcare delivery settings. This data encompasses patient demographics, vital signs, immunizations, medical problems, progress notes, medications, past medical history, laboratory results, and radiology reports. The adoption of EHR systems is anticipated to empower patients by providing them with easily accessible and accurate information about their health, thereby fostering greater involvement in healthcare decision-making. Moreover, healthcare practitioners benefit from EHR systems by efficiently delivering up-to-date patient information to facilitate collaborative care and access to best practices and latest research findings.

The Electronic Health Record is a highly sought-after healthcare system utilized by medical record personnel, doctors, and other healthcare professionals due to its convenience and effectiveness in managing patient records, particularly in settings with a high volume of patients. Beyond merely storing patient data, EHR systems support various care-related activities directly or indirectly through interfaces, including evidence-based decision support, quality management, and outcome reporting (Kayode, 2018).

Health Information Management (HIM) plays a critical role in the collection, analysis, storage, and protection of patient health information. HIM professionals leverage advanced technology to perform these functions, necessitating a broad spectrum of knowledge encompassing Health Insurance Portability and Accountability Act (HIPAA) regulations, data analysis, and computer systems utilization. HIM professionals are instrumental in ensuring a seamless healthcare experience, from doctor's appointments to insurance claims processing, by guaranteeing the smooth flow of health information (Stephanie, 2022).

Despite the evident benefits of Electronic Health Records in revolutionizing healthcare operations, the integration rate remains relatively low. Hospitals and healthcare facilities encounter numerous challenges in adopting and maintaining EHR systems, resulting in issues such as inaccurate

information for planning, improper documentation and registration of patient data, and time wastage (Claudia W, 2022). Consequently, there is a need for comprehensive evaluation of EHR integration and its impact on Health Information Management (HIM) practices.

Research Questions

1. To what extent has Electronic Health Records been integrated into Aminu Kano Teaching Hospital (AKTH) in Kano?
2. What are the challenges associated with the integration of Electronic Health Records in Aminu Kano Teaching Hospital (AKTH) in Kano?

Methodology

This research employed a survey methodology targeting Health Information Professionals at Aminu Kano Teaching Hospital (AKTH) in Kano. The total number of Health Information Management (HIM) staff at the time of the study was 114, all of whom were included as the sample size. Data collection was conducted using a questionnaire, and the collected data were analyzed using simple frequencies and mean scores.

Data Presentation, Analysis, and Discussion of Findings:

This section presents the analysis, presentation, and discussion of the findings obtained from the investigation. In the analysis, any item with a mean score below 3.0 is considered as disagreed.

Table 1: Extent of Electronic Health Records Integration and Implementation in AKTH, Kano

S/N	VARIABLES	SA (5)	A (4)	SD (3)	D (2)	N (1)	$\bar{X}$
1.	Records management in AKTH is fully automated.	10	8	46	30	0	**2.97**
2.	EHR is partially Integration in health information management in AKTH.	36	23	13	18	4	**3.73**
3.	AKTH has fully adopt EHR.	7	9	48	29	0	**2.90**

Source: Field Survey 2023

Table 1 illustrates the extent of Electronic Health Records (EHR) integration and implementation in AKTH, Zaria. The data suggests that the majority of respondents perceive records management in AKTH as only partially integrated into health information management, as indicated by a mean rate of 3.73. Additionally, most respondents do not believe that Electronic Health Records are fully automated, with a mean rate of 2.97.

Table 2 addresses Research Question 2, focusing on the challenges associated with the integration and implementation of EHR in AKTH, Zaria.

S/N	VARIABLES	SA (5)	A (4)	SD (3)	D (2)	N (1)	$\bar{X}$
1.	Lack of trained or computer literate staff is one of the challenges facing Integrationof EHR.	26	24	34	10	0	**3.70**
2.	Explicative power supply is one of the challenges that hinder the Integrationof EHR.	18	22	26	19	9	**3.22**
3.	The attitude of staff to change is one of the problems that is affecting the Integrationof EHR.	33	21	19	13	8	**3.61**

Source: Field Survey 2023

Table 2 illustrates the challenges related to the integration and implementation of Electronic Health Records (EHR) at AKTH, Zaria. A significant majority of respondents acknowledge the lack of computer literacy as a challenge, indicated by a mean score of 3.70. Similarly, most respondents agree that the staff's resistance to change is impeding the integration of electronic health records, with a mean score of 3.61. Additionally, respondents identify inadequate power supply as a hindrance to EHR integration, with a mean score of 3.22.

Discussion of Findings

The discussion of findings revolves around the assessment of EHR integration and its impact on health information management activities at AKTH, Kano. Out of the 114 questionnaires distributed, 94 were returned and properly completed. It is observed that EHR integration in health information management at AKTH is only partial, with a mean score of 3.73, aligning with Hodgkin's (2015) identification of successful phases in EHR integration. The study highlights challenges such as a lack of trained or computer literate staff, inadequate power supply, and staff resistance to change, with mean scores of 3.70, 3.22, and 3.61, respectively. These findings are consistent with Carayon and Smith's (2019) study, which outlined challenges in EHR integration in developing countries, including insufficient ICT infrastructure and staff resistance to change.

Conclusion, the research aimed to assess the integration of EHR and its impact on health information management activities at AKTH, Kano. The majority of health workers in AKTH exhibit good knowledge and a positive impact on EHR, contributing to efficiency in healthcare services and improving patient care quality while reducing costs and enhancing patient safety.

Recommendations

For effective EHR evaluation and integration include providing adequate ICT infrastructure and training for staff.

1. The hospital management should provide adequate ICT infrastructure for effective EHR implementation.
2. The hospital should offer training and retraining for staff to ensure effective EHR integration in the facility.

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