



Health Records Confidentiality: A Determinant of Quality Patient Care at UNIMED Teaching Hospital, Akure, Ondo State

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<https://www.internationalpublishersijmrasfp.com>

ABSTRACT

The study examined the confidentiality of health records as determinant of quality patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State. The study specific objectives are to examine the domains of quality care, find out the existing level confidentiality of health records, determine the relationship between confidentiality of health records and quality of patient care, assess the effect of confidentiality of health records on quality patient care and to identify the factors militating against confidentiality of health records at university of medical sciences teaching hospital complex, Akure units, Ondo State. The study used the primary data (questionnaire) administration for the staff of the selected departments of the hospitals. The data collected were analysed with the aid of a descriptive and inferential statistics of the Statistical Program Eviews. The results of the study indicate that there exist a significant relationship between confidentiality of health records and quality of patient care. The study recommends that management should constantly train health practitioners to understanding that the domains of quality health care originates from individual departmental practices and actions.

Keywords: Health records, quality patient care, UNIMED teaching hospital, confidentiality

Article ID: IJMRASFP-HPC-1128414

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for profit sectors.

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1 INTRODUCTION

Health Information Management Practice plays a vital role in the delivery of health care system in Nigeria, through the focus of collection, maintenance and use of quality data to support the health care system. The world health organization (WHO) stated that the proper collection management and use of information within the health care system will determine the system effectiveness in detecting health problems and providing suitable solutions to improve health outcomes. Health information management is the practice of acquiring, analyzing, and protecting digital and traditional medical patient care (Akwukwo 2004).

Health information management practice is a cornerstone in supplying health care delivery system with a qualified and trained workforce to provide a quality services and specifically to provide high quality data. Thus, many studies emphasized the needs for changes in the ways information are been kept in some hospital, to enable the monitoring, supervision and decision making on a patient outcome. Some studies found that problem of poor information keeping practices in health care facilities such as, duplication, incomplete data, misfiling and inaccuracies in data, make it difficult for health information officer to accurately and reliably identify and define health problems (Walton 2012).

The concept is widely supported by state status and formulated in the professional ethic of physicians and other health care professional. In privacy definition, developed by State Dr, Wills and corporation September 23, 1975. Confidentially is defined as status accorded to data or information indicating that it is sensitive for some reason, therefore need to be protected against theft, or improper use and must be disseminated only to individuals or organization authorized to have it (AHIMA 2012).

Confidentially according to Merriam Webster Dictionary (2018) means something that is secret or private or trusted with secret or private information. Confidentially is an essential part of the bond of trusted that exists between health care provider and patient. Confidentially of health information is about keeping information concerning the patient securely, so that it should not be disclosed to any other person without the patient's expressed consent.

According Clark (2011) health care quality is the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes. Quality of care plays an important role in describing the iron triangle of health care relationships between quality, cost, and accessibility of health care within a community. Researchers measure health care quality to identify problems caused by overuse, underuse, or misuse of health resources. In 1999, the Institute of Medicine released six domains to measure and describe quality of care in health:

- i. Safe: Avoiding injuries to patients from care that is intended to help them
- ii. Effective: Avoiding overuse and misuse of care
- iii. Patient: Centered – providing care that is unique to a patient's needs
- iv. Timely: Reducing wait times and harmful delays for patients and providers
- v. Efficient: Avoiding waste of equipment, supplies, ideas and energy
- vi. Equitable: Providing care that does not vary across intrinsic personal characteristics

While essential for determining the effect of health services research interventions, measuring quality of care poses some challenges due to the limited number of outcomes that are measurable. Structural measures describe the providers' ability to provide high quality care, process measures describe the actions taken to maintain or improve community health, and outcome measures describe the impact of a health care intervention. Furthermore, due to strict regulations placed on health services research, data sources are not always complete (Bennett, 2010).

It has been observed that some medical and health workers do refer to patients by their illness or type of their disease and by so doing their illness is being disclosed to other people. This is absolutely improper. Patient do not want other people to know the nature of their sickness, but due to negligence and carelessness, come medical and health workers consciously and unconsciously release the information about patient.

It was further submitted that most health care services are faced with several challenges in managing information, particularly in health care delivery system, despite the relevance of health information management practice in health care system. Health information management in Nigeria has quite numbers of problems, this has been some rationale to unconsciously disclose patient information; these challenges includes insufficient/inexperienced personnel and skills, lack of modern technology, inadequate finance for office expansion or secluded buildings from others and lack of coding systems for all various of illness by the Health Information Management Officers .

For the patient to have free communication with the physician, the confidentiality of health records needs to be effective in health care delivery, unfortunately this is not the case and hence the research study becomes imperative.

This study main objective is to examine the confidentiality of health records as determinant of quality patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State.

The specific objectives are to:

- i. examine the domains of quality care at university of medical sciences teaching hospital complex, Akure units, Ondo State.
- ii. find out the existing level confidentiality of health records at university of medical sciences teaching hospital complex, Akure units, Ondo State.
- iii. determine the relationship between confidentiality of health records and quality of patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State.
- iv. assess the effect of confidentiality of health records on quality patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State.
- v. identify the factors militating against confidentiality of health records at university of medical sciences teaching hospital complex, Akure units, Ondo State.

The following hypotheses were formulated for this study and stated in the null form (H_0): They are to be tested at 0.05 level of significance;

H₀₁: There is no significant relationship between confidentiality of health records and quality of patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State.

H₀₂: There is no significant effect of confidentiality of health records on quality patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State.

The scope of this work is to examine the relationship between health record confidentiality on the quality of patient care using the University of Medical Sciences Teaching Hospital Complex, Akure Units Ondo State as a case study. Data will be extracted from the top, middle and lower cadres of the Health Information System Officers and other Health Practitioners within the university.

2 LITERATURE REVIEW

2.1 Conceptual Framework

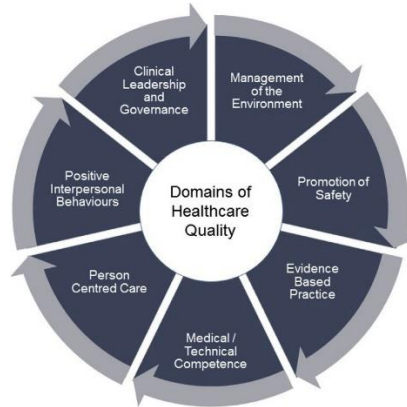
2.1.1 Confidentiality of Health Records

The ethical principle of confidentiality requires that information shared by a client with a therapist in the course of treatment is not shared with others. *Confidentiality* preserves individual dignity, prevents information misuse, and protects autonomous decision making by the patient. While it is critical to ensure confidentiality, most patients are comfortable with and support the use of health information to undertake important medical research. It is imperative that patient identifiable information meet high standards of security to ensure patient confidence in quality health care. With complete, accurate medical information, health practitioners will be assured that they are using accurate information to make decisions about a patient's health care so as to increase the quality of health care delivered for a given patient (Adam, 2023).

2.1.2 Quality Patient Care

This is a level of value provided by any health care resource, as determined by some measurement. As with quality in other fields, it is an assessment of whether something is good enough and whether it is suitable for its purpose. The goal of quality health care is to provide medical resources of high quality to all who need them; that is, to ensure good quality of life, cure illnesses when possible, to extend life expectancy, and so on. Researchers use a variety of quality measures to attempt to determine health care quality, including confidentiality of patients information to avoid patient stigmatization, counts of a therapy's reduction or lessening of diseases identified by medical diagnosis, a decrease in the number of risk factors which people have following preventive care, or a survey of health indicators in a population who are accessing certain kinds of care (Carroll, 2012).

Figure 1: Domains of Patient HealthCare Quality



Source: Carroll (2012).

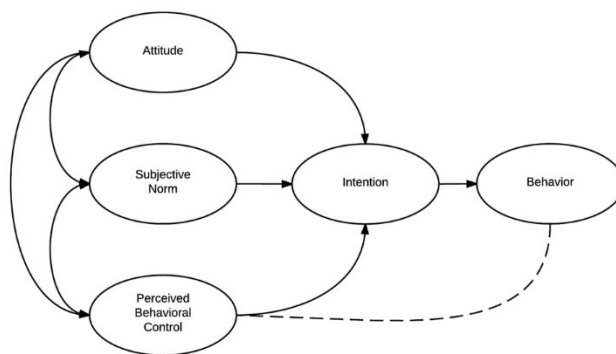
2.2 Theoretical Framework

2.2.1 The Theory of Planned Behavior

Ajzen (1991) proposed the Theory of Planned Behavior (TPB) *wherein the individual's behavior is best predicted by one's intentions*. The Theory of Planned Behavior (TPB) is a psychological theory that links beliefs to behavior. The theory maintains that three core components, namely, attitude, subjective norms, and perceived behavioral control, together shape an individual's behavioral intentions. In turn, a tenet of TPB is that behavioral intention is the most proximal determinant of human social behavior. The theory was elaborated by Icek Ajzen for the purpose of improving the predictive power of the theory of reasoned action (TRA).

Ajzen's idea was to include perceived behavioral control in TPB. Perceived behavior control was not a component of TRA. TPB has been applied to studies of the relations among beliefs, attitudes, behavioral intentions, and behaviors in various human domains. These domains include, but are not limited to, advertising, public relations, advertising campaigns, healthcare, sport management, and sustainability (Ifinedo, 2012).

Figure 2: Theory of Planned Behaviour Chart

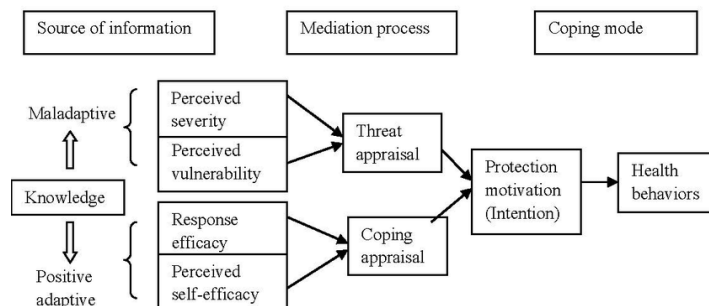


Source: Ifinedo, 2012

2.2.2. Protection Motivation Theory (PMT)

Protection motivation theory was developed by R.W. Rogers in 1975 in order to better understand fear appeals and how people cope with them. Protection motivation theory (PMT) is a widely-used framework to understand responses to triggers that appraise individuals of a potential threat. These triggers include fear messages that encourage individuals to take protective measures or to refrain from activities that might harm themselves or others. This theory falls within the expectancy-value theories that posit attitudes or beliefs will lead to subsequent behaviors.

Figure 3: Protection Motivation Theory Chart

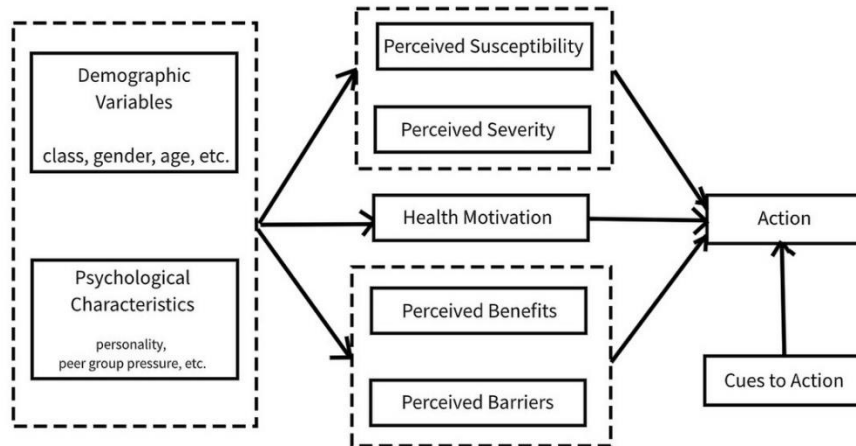


Source: Rogers, 1975.

2.2.3 Health Belief Model

This model is one of the first theories of health behavior, the HBM was developed in 1950s by social psychologists Irwin M. Rosenstock, Godfrey M. Hochbaum, S. Stephen Kegeles, and Howard Leventhal at the U.S. Public Health Service. The health belief model (HBM) is a social psychological health behavior change model developed to explain and predict health-related behaviors, particularly in regard to the uptake of health services. The model remains one of the best known and most widely used theories in health behavior research. The HBM suggests that people's beliefs about health problems, perceived benefits of action and barriers to action, and self-efficacy explain engagement (or lack of engagement) in health-promoting behavior. A stimulus, or cue to action, must also be present in order to trigger the health-promoting behavior (Abraham, & Sheeran, 2001).

Figure 4: Health Belief Model



Source: Abraham, & Sheeran, 2001.

This study was anchored on the Health Belief Model (HBM). The most important element in the theory is that people's beliefs about health problems, perceived benefits of action and barriers to action, and self-efficacy explain engagement or lack of engagement in health-quality care behavior. The HBM is in line with the theoretical paradigm of this study.

2.3 Empirical Review of Literature

Significant work has already been completed in this field and, due to the importance of the topic, new privacy by design approaches are continuously emerging. A study was carried out titled "A cyber model for privacy by design (PbD) based on privacy by design principles". This model is an executable foundation designed to build interoperable secure privacy capabilities into any standard IT network environment. However, this work is not effective where a poorly secured device is a huge financial risk, particularly in the public domain (Davis, Lang, & Shetye, 2018).

Geoff et al. (2016) mentioned that it is necessary to construct a common framework in which the approaches can be analysed by putting the previous approaches in perspective. The design of a privacy-sensitive system has to account for the observer and the observed, as well as the connection between them. This framework is designed for implementing privacy measures in ubiquitous computing environments and has demonstrated its application in pervasive healthcare.

Kenthapadi (2017) has researched the topic of "Query auditing model for data privacy". In this framework, a privacy mechanism is used to query the database that denies the query and alters the answer in order to ensure privacy. A major issue of this research is that query denial may leak information, and thus an attacker can use previously suggested auditors to compromise the privacy of a large fraction of personal data.

Lieshout, Kool, Schoonhoven & Jonge (2022) conducted a research on "Privacy by design: an alternative to existing practice in safeguarding privacy" they introduced PbD to capture different dimensions such as "user perspective", "technical aspects", and organizational and design stage from foundation to a serious perspective by referring to information systems. This work is still in progress, and the framework requires further elaboration and validation.

Ragunatha & Manmeet (2017) carried out the work, "Privacy-by-design (PbD) IoT framework: A case of location privacy mitigation strategies for near field communication (NFC) tag sensor". This framework offers a privacy solution to secure user filtering or validation with encrypted message, preventing the possibility of retrieving personal information. However, content protection and filtering techniques do not work effectively for proposed framework and have been considered for future enhancement work.

The Internet of Things (IoT) plays a major role in several healthcare devices, wherein these devices may be interconnected with wired or wireless networks without user intervention and can transmit a range of private data to and from sources. The IoT has enabled objects to be communicated and information to be exchanged in order to facilitate the collection of advanced intelligent services for users (Kloss, Brodnik, Rinehart-Thompson, 2018).

The first research evaluating PIA guidelines was conducted by Clarke (2011) who evaluated PIA guidelines published by Commissioner Offices of Canada, Australia, etc. The evaluation criteria mainly focused on the document's quality, such as its discoverability, applicability to regions or industry sections, making clear that responsibility for PIA lies within the organization and orientation on completing a report template versus the risk analysis process. Other criteria used included: obligatory status and timing of the PIA, protected privacy dimensions, applied legal frameworks, stakeholders' engagement, incorporation of the PIA process in corporate mechanisms, e.g. project funding, and the role of the oversight agency. Clarke's evaluation highlighted best practices of PIA guidelines published at that time and showed that some guidelines limited PIAs by proposing legal compliance checks or failed to convey the importance of stakeholders' engagement.

Schatz et al. (2018) studied the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance and technologies that can be used to protect the cyber environment and organization and assets." The KSA ranks second among the 193 members of the Global Security Index, rising significantly from 11th in 2 years. However, based on the International Communication Union index, it ranks first among Middle East countries and Asia.

Altamimi et al (2010) focused on non-malicious behaviors of breaching by medical interns training in academic hospitals, revealing that behavioral justification was used when medical interns do not comply with ISPs for various reasons, including feeling better about not complying with ISPs. Furthermore, they demonstrate that neutralization theory may be used to explain behavior that differs from anticipated norms and that it can also be used to predict the medical interns' intention to breach hospital privacy rules in the health care sector.

In a study conducted by Alanazi et al. (2018) the effectiveness of the theory-based model and different information security compliance behavior (ISCB) predictions for health care professionals in the KSA government hospitals were explored. Moderating and uncommon variables (such as morality and religion) affected ISCBs, whereas demographic features (such as marital status, job experiences, and age) had no effect.

Based on the findings of Chikhaoui et al. (2017) regarding the issues that threaten the privacy and security of cloud patient medical records were vulnerable to cloud computing. The data were kept secure, according to 40% of those polled, with the remaining 10% declining to respond. Comparison of the hospital data with bank data showed that most respondents claimed that "it is secured in the same way that the bank account is secured, and there is no need to be concerned about security.

Endeshaw (2019) submitted a conceptual framework for evaluating the quality of service in healthcare, as it emphasizes patients' perceptions of quality. Quality of care is important for patient outcomes, but perceptions of quality of care, which may not be relevant to actual quality, are likely to be its main determinants.

Almuayqil et al. (2020) examined the barriers to e-health care and the use of EHRs in the KSA among potential users of a proposed framework. Citizens and IT professionals reported no issues with security or privacy. However, concern about the security and privacy of patient records was shown by most health care professionals. Most health care professionals demonstrated the issue of unauthorized access to their patient EHRs ($n = 9$; 52.9%). Approximately one third of physicians complained that their patients' EHRs were not only distributed but also updated without their personal consent ($n = 7$; 41.2%).

Seth et al (2021) identified 19 models of service quality in diverse service settings. They revealed a close relationship between service quality and customer satisfaction. Earlier, Gronroos (2019) noted that organizations must have the ability to influence the perceptions of consumers and should manage service quality by narrowing the gap between consumer expectations and perceptions. He described 2 distinct aspects of service quality in his model: technical and functional quality. Both of these aspects of quality shape the image of an organization. This image may be built by word of mouth, tradition, ideology, and public relations.

2.6. Summary

From the literature reviewed, it seems as if concentration on the relationship between confidentiality and patient healthcare quality in the Nigerian private and public hospitals have not being enough nor carried out as many research studies were mostly concerned on assessing the effect of data privacy and healthcare quality outside Nigeria.

Also, many researchers relating to the research study have only focused on the impact of information technology breach on quality health care and ignored the oral data and information breach. This study improves on some of the existing studies, especially those of Oetzel and Spiekermann, (2014), Aliman and Mohamad, (2016), Wadhwa & Rodrigues (2013), Schatz et al. (2018), Seh et al. (2013), Moncrieff et al. (2017), Foukia et al. (2018) by focusing on Nigeria using the University of Medical Sciences Teaching Hospital Complex, Akure Units, Ondo State as a case study.

This study intends to fill the gap by updating the previous studies in terms of detailed analysis and current scope in years added which is 2023, and contributes to the existing literature on the relationship between confidentiality of health record and patient healthcare quality.in Nigeria, however, the study focused on the University of Medical Sciences Teaching Hospital Complex, Akure Units, Ondo State. It seems the previous year scope has only stopped in 2022. The study differed significantly from all other studies by focusing on 2023 and this was in order to provide a robust empirical explanation and analysis for the contemporary trend that might have caused challenges for data privacy. This study is an improvement on the previous studies on confidential of health record and patient healthcare quality.

3 METHODOLOGY

The descriptive survey was employed for this study. This allows the study to make inferences using the descriptive statistics or the percentage table extract and to explore the relationship between the adopted variables as stated in the research hypotheses, using statistical analysis to examine the confidentiality of health records as determinant of quality patient care at university of medical sciences teaching hospital complex, Akure units, Ondo state. The Population of the study is 135 which comprised of the Health Information Management Workers, Doctors and other Health Workers at the University of Medical Sciences Teaching Hospital Complex, Akure Units, Ondo State. The population are categorized into:

Table 3.1: Population of the Respondents

S/N	DESCRIPTION	POPULATION
1.	Health Information Management Workers	132
2.	Doctors	34
3.	Community Health Practitioners	48
4.	Nurses	42
5.	Medical Laboratory Scientist	15
	Total	271

Source: Researcher Computation, 2023

The sample size is 252 which was selected using the Olonite Sampling Technique (OST) and the Olonite Proportional Allocation Method (OPAM). The OST advocates for the use of a method called the OPAM (Olonite Proportional Allocation Method) which is a method used to allocate sample to strata based on the strata variances and similar sampling in the strata (Olonite, 2021).

Since the sample size comprised of different departments, the OPAM was adopted. This helped in allocating sample size to each department. The Olonite Proportional Allocation Method (OPAM) formulae is:

$$O_a = \frac{TSS_a(GP)}{TP}$$

Where:

- O_a = Each Department
- TSS_a = Total Sampling Size
- GP = General Population
- TP = Total Population

OPAM suggests that when the Distribution Size (DS) shows a result with a decimal; it must be rounded off to the nearest whole number.

$$O_{a1} (\text{Health Information Management Workers}) = [262(132)]/271 = 127.6 = \mathbf{127}$$

$$O_{a2} (\text{Doctors}) = [262(34)]/271 = 32.8 = \mathbf{33}$$

$$O_{a3} (\text{Community Health Practitioners}) = [262(48)]/271 = 46.4 = \mathbf{46}$$

$$O_{a4} (\text{Nurses}) = [262(42)]/271 = 40.6 = \mathbf{41}$$

$$O_{a5} (\text{Medical Laboratory Scientist}) = [262(15)]/271 = 14.5 = \mathbf{15}$$

Table 3.2. Sampling Size and Distribution

S/n	Department Under Study	Population Frequency	Sample Size and Distribution Using Olonite Proportional Allocation Method (OPAM)
1.	Health Information Management Workers	132	O ₁ = 127
2.	Doctors	34	O ₂ = 33
3.	Community Health Practitioners	48	O ₃ = 46
4.	Nurses	42	O ₄ = 41
5.	Medical Laboratory Scientist	15	O ₅ = 5
	Overall Total	271	252

Source: Researcher Computation (2023)

The instrument used for the data collection is a structured questionnaire which was administered personally to the Health Information Management Workers, Doctors, Community Health Extension Workers Health Workers, Nurses and Medical Laboratory Scientist in the university. The questionnaire was collected by hand immediately after responses have been provided. A total of 252 questionnaires were distributed and 231 questionnaires were collected from the 231 questionnaires, 15 questionnaire were found invalid (filled incorrectly).

The method of data analysis are presented in table 3.3 in a tabular form. The table consisted of three columns, namely; Serial no, Objectives/Research Questions/Hypotheses, and Method of data analysis.

Table 3.3. Data Analysis Layout Table

Serial No	Objective No in Chapter One	Objectives/Research Questions/Hypotheses (Os/RQs/Hs)	Method of Data Analysis.
1.	1	Examine the domains of quality care at university of medical sciences teaching hospital complex, Akure units, Ondo State.	Descriptive Statistics
2.	2	Find out the existing level confidentiality of health records at university of medical sciences teaching hospital complex, Akure units, Ondo State.	Descriptive Statistics
3.	5	Identify the factors militating against confidentiality of health records at university of medical sciences teaching hospital complex, Akure units, Ondo State.	Descriptive Statistics and Percentage Table.
4.	3	Determine the relationship between confidentiality of health records and quality of patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State.	Chi-Square Test.
5.	4	Assess the effect of confidentiality of health records on quality patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State.	Ordinary Least Square Regression Analysis Test.

Source: Researcher Computation, (2023)

Ethical issues relating to the subjects of the investigation are basically the voluntary participation of key respondents, respondent's data confidentiality, responses usage. Permission to distribute the questionnaire was obtained from the Physician in Charge (PIC) and other management. The respondents were convinced that their participation is highly valuable for the formulation of good policies to breach the gap between the health services and quality derived. They were further informed that their information are confidential and they need not add their names on the questionnaire for anonymity and that their responses will basically be used for academic purposes. The information provided by the respondents were kept in a way to enclose their individual responses so that the questionnaire information won't be known by their colleagues.

4 DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Analysis of Data

Table 4.1. Domains of Quality Care among Health Practitioners

S/n	Parameters	Total (F) (%)	SA (F) (%)	AG (F) (%)	DA (F) (%)	SD (F) (%)
1.	Do you believe good records keeping is an aspect of ascertaining good quality care?	216 100	112 52	76 35	23 11	5 2
2.	Do Health Information Management practice play a good role in the adoption of health information technology?	216 100	103 48	64 27	38 46	11 5
3.	Do HIM practice play a good role in the quality care of patients?	216 100	87 40	77 36	21 10	31 14
4.	Confidentiality and Privacy Protection is for the Health Information Management (HIM) alone and not for other health practitioners?	216 100	20 9	15 7	73 34	108 50
5.	Do you agree that Quality care starts from Health Information Management quality practices?	216 100	120 56	71 33	16 7	9 4
	Mean Value		88	61	34	33

Source: Researcher's Field Survey and Computation (2023)

SA = 3.5-4.0, AG = 2.50-3.49, DA = 1.50-2.49, and SD = 1.00-1.49

From table 4.1., 112(52%) out of the total respondents strongly agreed that they believe good records keeping is an aspect of ascertaining good quality care, 76(35%) respondents agreed, 23(11%) disagreed that you good records keeping is an aspect of ascertaining good quality care while 5(2%) strongly disagreed. On the second question, if Health Information Management practice play a good role in the adoption of health information technology, 103(48%) respondents strongly agreed, 64(27%) respondents agreed, 38(46%) out of the total respondents disagreed while 11(5%) respondents strongly disagreed. On the third question whether the HIM practice play a good role in the quality care of patients, 87(40%) respondents strongly agreed, 77(36%) respondents agreed, 21(10%) respondents disagreed that HIM practice play a good role in the quality care of patients while 31(14%) respondents strongly disagreed.

On the fourth question, whether the Confidentiality and Privacy Protection is for the Health Information Management (HIM) alone and not for other health practitioners, 20(9%) respondents strongly agreed, 15(7%) respondents agreed, 73(34%) respondents disagreed while 108 (50%) respondents strongly disagreed. Lastly, on the fifth question whether Quality care starts from Health Information Management quality practices, 120(56%) respondents strongly agreed, 71(33%) respondents agreed, 16(7%) respondents disagreed that Quality care starts from Health Information Management quality practices while 9(4%) respondents strongly disagreed.

From the mean value, it can be deduced that Strongly Agree (SA) has the highest value of 88, therefore the domains of quality care lies in: good Record keeping, Health Information Management Practice and other health practitioners' domain.

Table 4.2. Existing Level Confidentiality of Health Records

S/n	Parameters	Total (F) (%)	SA (F) (%)	AG (F) (%)	DA (F) (%)	SD (F) (%)
1.	Do you believe if it is serious and dangerous that the disclosure of patient privacy information will incur punishment by laws and regulations (Legal and Ethical Sanctions)?	216 100	78 36	83 34	12 5	43 20
2.	Do you think that the disclosure of patients' privacy to a third party can be exchanged for certain financial returns?	216 100	17 8	5 2	89 41	105 49
3.	Do you agree if health practitioners pay increasing attention to the privacy protection of patients using the access control measure?	216 100	29 13	16 7	79 36	92 43
4.	Are patients information released to any health practitioner in the absence of a Health Information Worker?	216 100	119 55	68 31	11 5	18 8
5.	Are patients' data stored in a separate database management by a data firm outside the hospital?	216 100	2 1	11 5	91 42	112 52
	Mean Value	49	37	37	56.4	74

Source: Researcher's Field Survey and Computation (2023)

SA = 3.5-4.0, AG = 2.50-3.49, DA = 1.50-2.49, and SD = 1.00-1.49

From table 4.2 78(36%) out of the total respondents strongly agreed that disclosure of patient privacy information will incur punishment by laws and regulations (Legal and Ethical Sanctions), 83(34%) respondents agreed, 12(5%) disagreed while 43(20%) strongly disagreed.

On the second question, if the disclosure of patients' privacy to a third party can be exchanged for certain financial returns, 17(8%) respondents strongly agreed, 5(2%) respondents agreed, 89(41%) out of the total respondents disagreed while 105(49%) respondents strongly disagreed.

On the third question whether health practitioners pay increasing attention to the privacy protection of patients using the access control measure 29(13%) respondents strongly agreed, 16(7%) respondents agreed, 79(36%) respondents disagreed that HIM practice play a good role in the quality care of patients while 92(43%) respondents strongly disagreed.

On the fourth question, whether patients information are released to any health practitioner in the absence of a Health Information Worker 119(68%) respondents strongly agreed, 68(31%) respondents agreed, 11(5%) respondents disagreed while 18(8%) respondents strongly disagreed.

Lastly, on the fifth question whether patients' data is stored in a separate database management by a data firm outside the hospital 2(1%) respondents strongly agreed, 11(5%) respondents agreed, 91(42%) respondents disagreed that patients' data are stored in a separate database management by a data firm outside the hospital while 122(52%) respondents strongly disagreed.

From the mean value, it can be deduced that Strongly Disagree (SD) has the highest value of 74, therefore the existing level confidentiality of health records is seen to be poor. This is rooted basically in the patient's information being released to any health practitioner in the absence of a Health Information Worker and health practitioners do not pay increasing attention to the privacy protection of patients using the access control measure.

Table 4.3. Relationship between Confidentiality of Health Records and Quality of Patient Care

S/n	Parameters	Total (F) (%)	SA (F) (%)	AG (F) (%)	DA (F) (%)	SD (F) (%)
1.	Has there been any case of record mismanagement that led to the death of any patient due to a long search for patient's files?	216 100	11 5	6 3	134 62	65 30
2.	Do you agree that confidentiality is as important as good quality health care?	216 100	98 45	56 26	45 21	17 8
3.	Will paying attention to the protection of patients' privacy affects the output of overall health outcome?	216 100	87 40	62 28	14 6	53 25
4.	Is there any significant link between confidentiality of health records and quality of patient care?	216 100	92 43	71 33	21 10	32 15
	Mean Value		58	39	43	33

Source: Researcher's Field Survey and Computation (2023)

SA = 3.5-4.0, AG = 2.50-3.49, DA = 1.50-2.49, and SD = 1.00-1.49

From table 4.3., 11(5%) out of the total respondents strongly agreed that there been cases of record mismanagement that led to the death of any patient due to a long search for patient's files, 6(3%) respondents agreed, 134(62%) disagreed while 65(30%) strongly disagreed.

On the second question, if confidentiality is as important as good quality health care, 98(45%) respondents strongly agreed, 56(26%) respondents agreed, 45(21%) out of the total respondents disagreed while 17(8%) respondents strongly disagreed. On the third question whether paying attention to the protection of patients' privacy affects the output of overall health outcome 87(40%) respondents strongly agreed, 62(28%) respondents agreed, 14(6%) respondents disagreed that HIM practice play a good role in the quality care of patients while 53(25%) respondents strongly disagreed.

Lastly, on the fifth question whether there any significant link between confidentiality of health records and quality of patient care, 92(43%) respondents strongly agreed, 71(33%) respondents agreed, 21(10%) respondents disagreed that there any significant link between confidentiality of health records and quality of patient care while 32(15%) respondents strongly disagreed. From the mean value, it can be deduced that Strongly Agree (SA) has the highest value of 58, therefore there is a relationship between confidentiality of health records and quality of patient Care

Table 4.4. Effect of Confidentiality of Health Records on Quality Patient Care

S/n	Parameters	Total (F) (%)	SA (F) (%)	AG (F) (%)	DA (F) (%)	SD (F) (%)
1.	Accurate Health Record of patient file keeping or swift system's retrieval can aid timely prescriptions that help patient feel a lot better?	216 100	111 51	87 40	16 7	2 1
2.	Do you believe patient feel more relived when there are constant assurances that their information are protected from the public?	216 100	180 83	36 17	0 0	0 0
3.	Is there any reasonable effect of being confidential in patient's record on the quality of patient care received?	216 100	156 72	60 28	0 0	0 0
	Mean Value		149	61	5	1

Source: Researcher's Field Survey and Computation (2023)

SA = 3.5-4.0, AG = 2.50-3.49, DA = 1.50-2.49, and SD = 1.00-1.49

From table 4.4., 111(51%) out of the total respondents strongly agreed that accurate health record of patient file keeping or swift system's retrieval can aid timely prescriptions that help patient feel a lot better, 87(40%) respondents agreed, 16(7%) disagreed while 2(1%) strongly disagreed. On the second question, if patient feel more relived when there are constant assurances that their information are protected from the public 180(83%) respondents strongly agreed, 36(17%) respondents agreed, 0(0%) out of the total respondents disagreed while 0(0%) respondents strongly disagreed. Lastly, on the third question whether there is any reasonable effect of being confidential in patient's record on the quality of patient care received, 156(72%) respondents strongly agreed, 60(28%) respondents agreed, 0(0%) respondents disagreed that there any reasonable effect of being confidential in patient's record on the quality of patient care received while 0(0%) respondents strongly disagreed. From the mean value, it can be deduced that Strongly Agree (SA) has the highest value of 149, therefore there is an effect of confidentiality of health records on quality patient care.

Table 4.5. Factors Militating Against Confidentiality of Health Records

S/n	Parameters	Total (F) (%)	SA (F) (%)	AG (F) (%)	DA (F) (%)	SD (F) (%)
1.	Do relatives of patients have access to the records of their family members?	216 100	76 35	61 28	34 16	45 21
2.	Is conducive environment for working affect effectiveness Health Information Management office to being confidential at work?	216 100	95 44	78 36	34 16	9 12
3.	Seasonal training on record safety and disposal are lacking in the hospital for health practitioners?	216 100	74 34	62 29	45 21	35 16
4.	Has low qualification of HIM staff hindered/hampered the relevance of HIM practice towards confidentiality of health records?	216 100	12 6	34 16	87 40	83 38
5.	Delegation of Health Information record files transfer to a non-Health Information Management Staff are often done by the health practitioners?	216 100	54 25	67 31	32 15	63 29
	Mean Value		62	60	46	47

Source: Researcher's Field Survey and Computation (2023)

SA = 3.5-4.0, AG = 2.50-3.49, DA = 1.50-2.49, and SD = 1.00-1.49

From table 4.5., 76(35%) out of the total respondents strongly agreed that the relatives of patients have access to the records of their family members, 61(28%) respondents agreed, 34(16%) disagreed that relatives of patients have access to the records of their family members while 45(21%) strongly disagreed. On the second question, if conducive environment for working affect effectiveness Health Information Management office to being confidential at work, 95(44%) respondents strongly agreed, 78(36%) respondents agreed, 34(16%) out of the total respondents disagreed while 9(12%) respondents strongly disagreed.

On the third question whether the Seasonal training on record safety and disposal are lacking in the hospital for health practitioners, 74(34%) respondents strongly agreed, 62(29%) respondents agreed, 45(21%) respondents disagreed that seasonal training on record safety and disposal are lacking in the hospital for health practitioners while 35(16%) respondents strongly disagreed. On the fourth question, whether low qualification of HIM staff hindered/hampered the relevance of HIM practice towards confidentiality of health records, 12(6%) respondents strongly agreed, 34(16%) respondents agreed, 87(40%) respondents disagreed while 83(38%) respondents strongly disagreed.

Lastly, on the fifth question whether delegation of Health Information record files transfer to a non-Health Information Management Staff are often done by the health practitioners, 54(25%) respondents strongly agreed, 67(31%) respondents agreed, 32(15%) respondents disagreed that delegation of Health Information record files transfer to a non-Health Information Management Staff are often done by the health practitioners while 63(29%) respondents strongly disagreed.

From the mean value, it can be deduced that Strongly Agree (SA) has the highest value of 62, therefore the factors militating against confidentiality of health records are: relatives of patients having access to the records of their family members, lack of conducive environment for working and lack of seasonal training on record safety and disposal are lacking in the hospital for health practitioners.

4.2. Test of Hypotheses

Table 4.6. Test of Hypothesis 1

Category	Observed (O _i)	Expected (E _i)	O _i – E _i	(O _i – E _i) ²	$\frac{(O_i - E_i)^2}{E_i}$
SA	92	43.2	48.8	2381.3	11
A	71	43.2	27.8	772.8	0.5
D	21	43.2	-22.2	492.8	3.6
SD	32	43.2	-11.2	121	2.3
Σ					17.4

Source: Eviews 12 (2023)

Chi-square formulae: $\chi^2 = \frac{\Sigma(O_i - E_i)^2}{E_i} = 17.4$

This hypothesis states that there is no significant relationship between confidentiality of health records and quality of patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State.

In Table 4.6, the Chi-Square (χ^2) calculated is 17.4, while the tabulated value is 13.1. The Chi-Square calculated value (17.4) is higher than the critical value (13.1). As a result of this we reject the Null hypothesis and accept the alternate hypothesis, at 0.05 confidence level. It can be concluded that there is a relationship between significant relationship between confidentiality of health records and quality of patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State.

Table 4.7. Test of Hypothesis 2

Regression analysis for Confidentiality of Health Records (CHR) and Quality of Patient Care (QPC)

Dependent Variable: QPC

Method: Ordinary Least Squares

Date: 10/08/23 Time: 23:18

Sample: 1 10 SA SD

Included observations: 10

	Coefficient	Std. Error	t-Statistic	Prob.
C	283380.5	678658.4	6.086478	0.0003
CHR	27559.06	7311.460	3.111233	0.0024
R-squared	0.768349	Mean dependent var		677.3521
Adjusted R-squared	0.696959	S.D. dependent var		343.9733
S.E. of regression	0.255534	Akaike info criterion		20.64745
Sum squared resid	3.756454	Schwarz criterion		20.83669
Log likelihood	168.8545	Hannan-Quinn criter.		20.64523
F-statistic	16.34422	Durbin-Watson stat		1.537776
Prob(F-statistic)	0.002343			

Source: *Eviews 12 result*

Confidentiality of Health Record confirms our apriori expectation of (CHR > 0) it has a positive coefficient of 27559.06, and significant which means that a percentage change (increase) in the Confidentiality of Health Record will induce a increase of 27559.06 unit change in the Quality of Patient Care. Since the P-value (0.0024) is < 0.05 (5% level of significance), we reject the null hypothesis 2 and conclude that there is an effect of confidentiality of health records on quality of patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State.

The co-efficient of determination as revealed by R-squared (R^2) indicates that 76% of the variation observed in the dependent variable (QPC) is justified by the influence of the explanatory variable (CHR) and the other 24% is attributed to other factors not included in model. The overall probability for the model is 0.002343 which is less than 0.05. This shows that the model is a good fit. The F-statistics which test the goodness of fit has value of 16.34422 and the Durbin-Watson Statistics is 1.5., which confirms that there is absence of serial correlation. A Durbin-Watson value closer to 2 shows the absence of serial correlation.

4.2 Discussion of Findings

Findings on the confidentiality of health records as determinant of quality patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State showed that the mean value of the first research question, it can be deduced that Strongly Agree (SA) has the highest value of 88, therefore the domains of quality care lies in: good Record keeping, Health Information Management Practice and other health practitioners' domain. The result disagrees with the submissions of Davis, Lang, & Shetye (2018), Geoff et al. (2016) Kenthapadi (2017) Lieshout, Kool, Schoonhoven & Jonge (2022) who found no domain.

From the mean value of the second research questions, it can be deduced that Strongly Disagree (SD) has the highest value of 74, therefore the existing level confidentiality of health records is seen to be poor. This is rooted basically in the patient's information being released to any health practitioner in the absence of a Health Information Worker and health practitioners do not pay increasing attention to the privacy protection of patients using the access control measure. This finding is consistent with the findings of Rangunatha & Manmeet (2017), Kloss, Brodник, Rinehart-Thompson (2018) and Chaudhuri & Cavoukian (2015)

From the mean value of the third research question, it can be deduced that Strongly Agree (SA) has the highest value of 58, therefore there is a relationship between confidentiality of health records and quality of patient Care. This is in line with Skinner et al. (2013), De. & Métayer, (2017) and Notario, Crespo, Martín, Alamo, Métayer, Antignac & Wright (2015).

From the mean value, it can be deduced that Strongly Agree (SA) has the highest value of 149, therefore there is an effect of confidentiality of health records on quality patient care.

From the mean value, it can be deduced that Strongly Agree (SA) has the highest value of 62, therefore the factors militating against confidentiality of health records are: relatives of patients having access to the records of their family members, lack of conducive environment for working and lack of seasonal training on record safety and disposal are lacking in the hospital for health practitioners.

The Chi-Square calculated value (17.4) is higher than the critical value (13.1). As a result of this we reject the Null hypothesis and accept the alternate hypothesis, at 0.05 confidence level. It can be concluded that there is a significant relationship between confidentiality of health records and quality of patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State. The results are consistent with the Oetzel, & Spiekermann (2014). Aliman & Mohamad (2016) and Wadhwa & Rodrigues (2013).

Confidentiality of Health Record confirms our a priori expectation of ($CHR > 0$) it has a positive coefficient of 27559.06, and significant which means that a percentage change (increase) in the Confidentiality of Health Record will induce a increase of 27559.06 unit change in the Quality of Patient Care. Since the P-value (0.0024) is < 0.05 (5% level of significance), we reject the null hypothesis 2 and conclude that there is an effect of confidentiality of health records on quality of patient care at university of medical sciences teaching hospital complex, Akure units, Ondo State. The results are in line with Van & Hoepman (2017), Schatz et al. (2018), Moncrieff et al. (2017), Mishah et al (2013).

5. CONCLUSION AND RECOMMENDATIONS

Based on the results, findings and discussions, conclusions could be drawn that Health Information Management practitioner and other health practitioner domains are the important domain to quality care as they represent the human factor that drives data privacy. The existing level of confidentiality of health records at university of medical sciences teaching hospital complex, Akure units, Ondo State is not encouraging using the aggregated mean value of the response which shows that HIM and other health practitioners are not paying attention to ever changing and increasing privacy protection need of patients using the access control measure and that patients information released to any health practitioner in the absence of a Health Information Worker which should not be so. However, the relationship between confidentiality of health records and quality of patient care is significant this means that an increase in health record confidentiality will increase the quality of patient care.

Also the study concluded that there exist the influences of confidentiality of health records on quality patient care as patient feel more relieved when there are constant assurances that their information are protected from the public. Factors militating against confidentiality of health records are rooted in unauthorized access to health records, data breach, improper disclosure of health records, relatives of patients having access to the records of their family members, lack of conducive environment for

working and lack of seasonal training on record safety and disposal are lacking in the hospital for health practitioners.

5.1. RECOMMENDATIONS

- i. Management should constantly train health practitioners on the need to keep understanding that the domains of quality health care originates from individual departmental practices and actions.
- ii. Constant sensitization on the need to pay more attention to patient health record should be taken seriously by the management and each departmental heads.
- iii. All health practitioner should take oot of secrecy very serious as it can damage patient's health status. This is as a result that there is a significant link between proper record keeping/confidentiality and quality health care.
- iv. Assurances should be made from time to time to patients that there information are kept in high secret and confidential. This influence their calmness as it reduces any form of stigmatization effect.
- v. Transferring of patient's records within department should be done by those that have been properly trained to handle such and not just any members of the department. This will reduce leaked information.

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