African Journal of Health Economics, June, 2022, Volume 11 (1): 1-17

Print ISSN: 2006-4802; Online ISSN: 2504-86-86;

Examination of health records documentation and management practices among health records personnel in two tertiary healthcare facilities in Enugu, South-East Nigeria

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Background: Availability of adequate, timely and accurate information on patients' health records in line with standard procedures is critical for enhanced accessibility and utilization of relevant information for successful patients' care. Poor records documentation and management practices adversely affect the quality and effective utilization of health information with negative consequences on healthcare delivery outcomes. The study aimed to examine the health information management practices among health records personnel in two teaching hospitals in Nigeria, for best practices and the extent of alignment to established standards.

Methods: The study adopted descriptive cross-sectional survey to examine the procedure for health records documentation and management in the two facilities. A semi-structured questionnaire was used to collect relevant information from respondents, selected by stratified proportionate random sampling technique, to answer the study questions on health records documentation and management practices and the extent of conformity to Standard Operating Procedures (SOPs), established by the Nigerian regulatory body. Data were collected and analyzed using descriptive and inferential statistics. Any procedure that scored below a criterion mean of 2.5 is considered substandard. Level of significance was set at 5%.

Results: A total of 142 respondents completed the questionnaires. Ages range from 20-56 years with majority (67.6%) as females. Less than half (44%) of the respondents could use information technology applications adequately, while only a few (21.8%) have undergone specialized training in health information management (HIM). More than half of the respondents (53.5%) do not have requisite qualifications in HIM, lacking opportunities for in-service training. The institutions operate mostly paper-based/manual system of health records documentation and management with unitary system of filing. A number of the procedures scored below the criterion mean of 2.5 indicating significant underperformance below acceptable standards especially at ESUTH. These include; Disease and procedure indexing (2.0); identification and reporting of notable diseases (2.13), attaching of deficiency slip to folder without discharge summary (2.38); weeding of inactive records (2.5); and referring for consultative services (2.5).

Conclusion: The study revealed sub-optimal performances in HIM practices among the health records personnel in the study facilities, with gaps in knowledge, infrastructure, policy and practice which is expected to negatively impact healthcare delivery. Findings underscore the need for engagement of qualified professionals, regular in-service training of health records staff as well as expanded use of electronic system in the facilities for enhanced flow of quality HIM, among addressing other identified deficiencies, for efficiency in health service delivery.

Keywords: Health Records, Health Information, Information Management & Practice, Health Records Professionals, Standard Operating Procedure, Nigeria.

Introduction

Health information system describes the process through which health related data is collected, stored, retrieved and utilized for decision-making for effective healthcare delivery. The proper collection, management and use of information in the healthcare system determine the ability and effectiveness of the system in detecting health problems, define priorities, identify solutions and allocate resources to improve healthcare outcomes [1]. Consequently, the health information system has been variously described as the foundation for better health, holding the system together and keeping it running [2].

Effective management of hospital records is essential for providing capacity for hospital efficiency, accountability, transparency, information security and indeed good governance [3]. The importance of comprehensive and accurate patients' records documentation through effective HIM practices cannot be overemphasized in health facilities, as it aims to foster quality and continuity of care. To ensure healthcare quality and safety, sufficient and reliable information should be available at the right time to support patient care and help make informed management decisions in the healthcare delivery. Hence, improving the quality of information through proper documentation and retrieval is essential for effective decision-making for enhanced healthcare delivery.The implementation and maintenance of this process through effective information management practices becomes fundamental for effective and efficient operation of healthcare facilities [4].

Health information management (HIM) is the collection, analysis, storage and protection of health records either as electronic, paper-based or a combination of both in hospitals and other health organizations [5]. Health records professionals are trained to play a crucial role in maintaining, collecting and analyzing data which physicians and other healthcare providers rely on to deliver quality healthcare. The activities and training of these professionals are regulated in Nigeria by the Health Records Officers' Registration Board of Nigeria, in line with Decree 39 of 1989 (HRORBoN) (CAP 166 LFN 1990) [6]. Since health facilities deal with the life and health of patients, quality medical care relies not only on well trained healthcare providers, sophisticated facilities and equipment but also on good record keeping, which enhances the efficiency of hospital administration [5]. Health records also provide evidence of the hospital's accountability for its actions, providing a vital source of data for medical research, statistics and health information systems [7]. Proper filing of patient's medical records facilitates effortless retrieval and ensures the reduction of patient's waiting time at the hospital as well as continuity of care.

The deployment of information technology in the healthcare system has transformed HIM to a more efficient system through the Electronic Health Records (EHRs), boosting the efficiency of HIM for prompt, accurate, comprehensive and highly accessible information [4], thus providing high volume information for efficiency in decision-making, and therefore high-quality information that underpins quality evidence for safe healthcare [8]. The use of information technology has been established to support better care of patients' outcome [9, 10]. According to Adeleke et al. (2015), the EHR possesses the potentials to enhance needed confidentiality than manual or paper-based filing systems in records keeping [5].

However, without proper records keeping in the registration and documentation unit, accurate procedure for disease coding and indexing cannot be achieved [2].

Inadequate and poor health record keeping and management practices reported in developing have been attributed mainly to the engagement and use of untrained personnel in place of qualified professionals [4, 11-13]. There is also the presence of a number of badly designed records as well as the use of multiple patient records [13-15]. In Nigeria, reports suggest inadequate records management practices in most institutions including the health sector and this has adversely affected the accessibility and utilization of health information in patients' management [4,16]. Needed patients' information is not often promptly accessible or even available. Consequently, lack of sufficient patients' health information due to poor records documentation limits healthcare provider's ability to render effective service to the patient [2, 16-18]. The disclosure of patient information, misfiling, lost to follow-up and inadequate data have been identified as some of the factors that limit effective health service delivery in Nigeria, affecting utilization and research [2, 16]. Duplication of records resulting from multiple registration and misplacement of some of the patients' records make the situation worse, resulting to delays in proper healthcare delivery. According to Ancker, et al (2012), assessment of HIM practices and the use of health information technology can improve the standards of health records keeping [19]. Health information management as a profession has to reposition itself strategically in order to be relevant in the ever-evolving health sector and society at large [9, 12].

Concerns for quality of health information remains the major challenge as reported by many studies in Nigeria and other settings, with implications for poor quality of healthcare delivery outcomes [4,12, 16]. In recognition of these concerns and the need for quality of health information for effectiveness of healthcare delivery systems, standards for health records documentation have been established by relevant authorities to ensure achievement of minimum standards in HIM for effective healthcare decision-making. Every data to be documented should conform to national standards adapted from the WHO for effective healthcare delivery [16, 20]. Consequently, this study examined the records management practices among health records personnel in the two healthcare facilities for best practices and determine to what extent the procedures align with standard operating procedures (SOPs).

Methods

Study sites

The study was carried out in two tertiary healthcare facilities in Enugu State, south-east Nigeria, namely the University of Nigeria Teaching Hospital (UNTH) and the Enugu State University Teaching Hospital (ESUTH) Parklane all in Enugu metropolis. These two facilities were selected because they present opportunities for collecting reliable and quality data for the study.

The UNTH Enugu, owned by the Federal Government is a specialist healthcare facility that provides specialist healthcare services to the people of Enugu state and environs. The facility has a bed capacity of 435 and provides a variety of specialized clinical and teaching services. The facility has total staff

strength of over 3,000 while the general out-patient department (GOPD) attends to over 128,746 out-patients visits annually. The UNTH has a functional health records department which is divided into 5 sections, namely: Registration and Documentation, Admission and Discharge, Statistics, Coding and Indexing and Library sections with a total staff strength of 143 out of which 30 are health records professionals.

The Enugu State University Teaching Hospital (ESUTH, is a state-owned tertiary healthcare facility providing specialist healthcare and teaching services to mostly Enugu State population in addition to a significant number of patients from neighboring states. The health facility has staff strength of 1,747 spread across various clinical and non-clinical departments. The hospital has a bed capacity of 310, providing a variety of teaching and clinical services. The general out-patient department attends to over 126,414 visits annually. The hospital has a functional health records department which is divided into five (5) sections, namely: Registration and Documentation, Admission and Discharge, Statistics, Coding and Indexing and Library sections. The department has staff strength of 54 personnel out of which 25 are health records professionals.

These facilities were therefore selected because of their capacity to employ records personnel across all relevant departments and units involved in health information management for service delivery.

Study design and population

A descriptive cross-sectional research design, involving the use of semi-structured questionnaire was used to collect relevant information to determine the current practice in record keeping in the study facilities. The practices were compared to the acceptable standards provided by the regulatory body, Health Records Officers' Registration Board of Nigeria (HRORBoN).

The study population includes health records personnel involved in HIM in the selected hospitals in the state.

Sampling technique and size

The study used a stratified proportionate random sampling technique, to account for differences in the distribution of health records personnel in each facility and department, qualification of personnel as health records staff, (considering that not every staff in the health records department is a health records personnel). Therefore, samples were assigned to hospitals based on qualification using proportional allocation. Samples were also assigned to the different units using equal allocation method. The sample size was drawn from health records personnel handling the day- to- day activities of the health records units in the selected hospitals. A sample size was determined using Taro Yamane formula i.e. n=N/1+N (e) [21], where:

n = represents the sample size,

N= the population under study, (197 for both hospitals)

e= the margin error (= 0.05 based on research condition)

Hence, with a population of 197 health records personnel in the two hospitals (143 in UNTH and 54 in ESUTH) a minimum sample size of approximately 132 personnel was calculated based on weighted average. However, a total sample size of 145 (representing 10% adjustment in calculated sample size) was used to allow for attrition (106 from UNTH, and 39 from ESUTH).

Data collection and sources

Quantitative method was used to collect required information from selected respondents. Data were collected using a semi-structured self-administered questionnaire reflecting the study objectives. The questionnaires were self-administered to reduce interviewer bias while the researcher was available to provide clarifications where necessary, to guide respondents for appropriate responses. The data collection tool was adapted from a standard instrument set by the HRORBoN. The questionnaire tool is divided into 6 sections (A, B, C, D, E, and F). Section A contains Socio-demographic and work-related information. Section B sought information on procedure followed in the registration and documentation unit. Section C collected information on processes in admission and discharge of patients. Section D was used for information on how diseases are coded and indexed. Section E sought information on how data are processed while Section F collected information on procedure followed in the library service unit. Sections B, D, E and F were measured in a 4-point Likert scale (4- Always, 3-Usually, 2-Sometimes, 1- Never). The tool was pretested with a pilot study on a sample of 10% representing of study sample, among health records personnel in Federal Neuropsychiatric Hospital, Enugu (FNHE) to test its validity. The questionnaire was certified for face and content validity by research experts to ensure the instrument adequately answered the study questions. Data collection was completed within one month; between August 15th and September 14th 2019.

Data analysis

Data were analyzed using descriptive and inferential statistics. The mean and standard deviation were specifically used for analysis of the scaled items. The difference in sample size of the two tertiary facilities was adjusted using SPSS – weight cases (0.5). Criterion mean of 2.5 was used as the decision rule; hence, procedures with mean of 2.5 and above were considered to have performed up to standard since the mean of 2.5 denotes the procedure was performed usually [22]. The inferential statistics used was based on independent samples t-test. Level of significance was 5%. Hence, significant difference existed if p-value is less than 0.05. The analyses were carried out using the Statistical Package for Social Science (SPSS) version 25 and Microsoft Excel 2007.

Ethical Consideration

Ethical approval for the study was obtained from the research ethics committee of the University of Nigeria Teaching Hospital, Enugu. All the respondents gave informed verbal consent and were assured of total anonymity.

Results

Demographic characteristics of study participants

A total of 142 questionnaires were returned completed, representing 95% response rate. Table 1 summarizes the demographic characteristics of study participants which show that the ages range from 20-56 years at the mean and standard deviation of 39.22±8.31. Females (67.6%) were more than males (31.7%). Majority is married (70.4%) and had tertiary education (78.2%).

Table 1: Demographic characteristics of the health record personnel (N=142)

Variables	Frequency	Percent	Range	M±SD
Age			20-56	39.22±8.31
20-29	15	10.6		
30-39	54	38.0		
40-49	51	35.9		
50-59	18	12.7		
No response	4	2.8		
Gender				
Male	45	31.7		
Female	96	67.6		
No response	1	0.7		
Marital status				
Married	100	70.4		
Single	34	23.9		
Widower	5	3.5		
Divorced/separated	1	0.7		
No response	2	1.4		
Highest level of education				
Tertiary	111	78.2		
Secondary	30	21.1		
No response	1	0.7		

Work-related characteristics of study participants

Table 2 shows that the respondents' working experience in the record unit ranged from 6 months – 31 years, with mean and standard deviation of 10.17±5.31, where up to 52.1% have worked for 11-15 years. Those licensed (46.5%) were fewer than those who were not (53.5%). Not up to 50% could use information technology application, such as Microsoft Word very well (44.4%); only a few has undergone a specialized course/training in health information technology (21.8%).

Figure 1 reveals that case notes were managed mainly by unitary filing (67.9%) in the two hospitals while the system used for record keeping by both hospitals as revealed in Figure 2 was mainly manual system (82.1%).

Standard Operating Procedures

Findings in Table 3 show that for both institutions, all the listed SOPs were performed above average with collection and collation of out-patient attendances (both new and old cases) best performed in UNTH while collection and collation of admissions, discharges and death were the best performed procedures in ESUTH. When performances were compared, there was no significant difference in the study findings between the two institutions regarding the SOPs ($p > .05$).

Table 2: Work-related characteristics of the health record personnel (N=142)

Variable	Frequency	Percent	Range	M±SD
Years of experience in record unit			0.5-31	**10.17±5.31**
≤ 5	35	24.6		
6-10	24	16.9		
11-15	74	52.1		
> 15	8	5.6		
No response	*1*	*0.7*		
Licensed as health records professionals				
Yes	66	46.5		
No	76	53.5		
Rating on use of information technology				
Can use them	19	13.4		
Can use them a little	29	20.4		
Can use them averagely well	30	21.1		
Can use them very well	63	44.4		
No response	*1*	*0.7*		
Undergone a specialized course/training in health information technology				
Yes	31	21.8		
No	108	76.1		

Note: No response 3(2.1%)

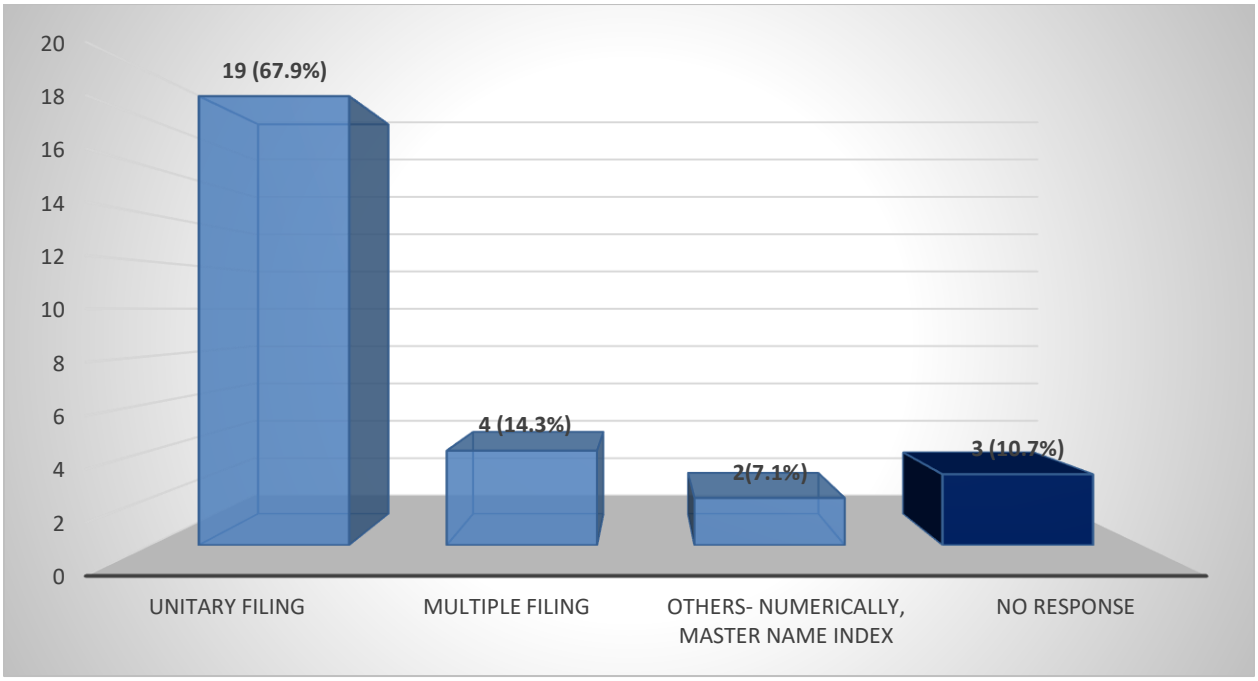

Figure 1: Patients' case note management

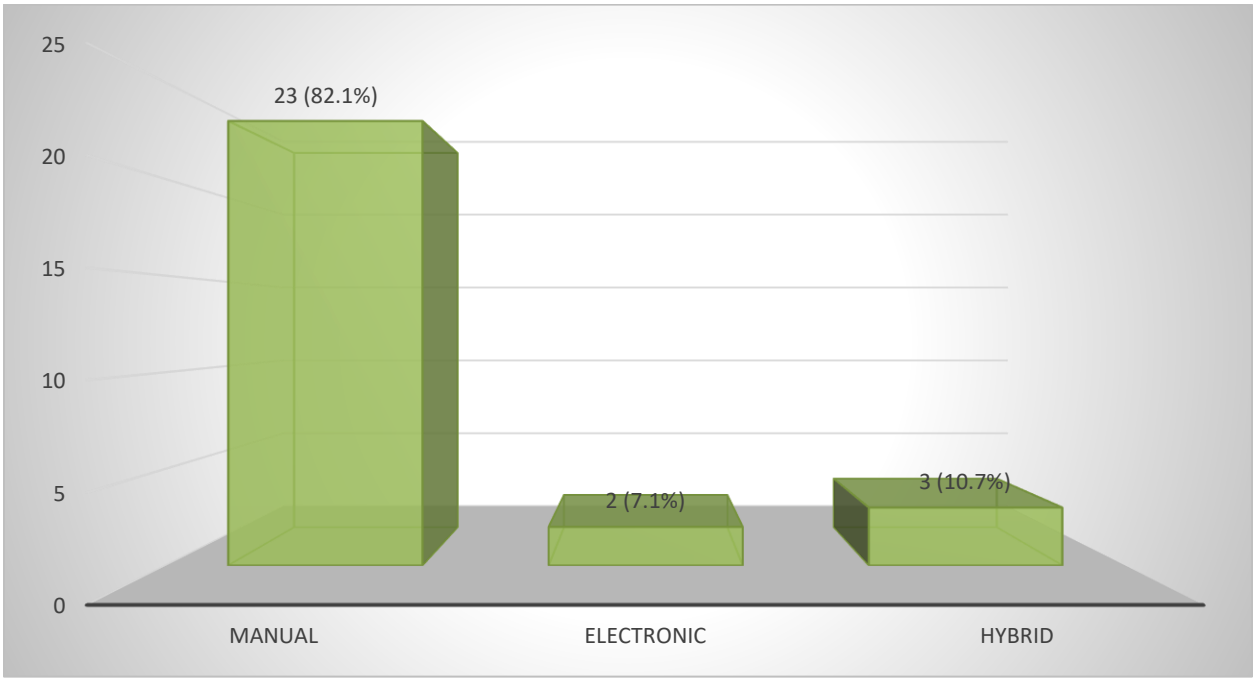

Figure 2: System used in keeping records

From Table 4, the SOPs were performed above average in UNTH by ensuring that the discharge summary is properly completed as the best performed procedure. For ESUTH, ensuring that the discharge summary is properly completed and generation of reports for research and education respectively were the SOPs performed above average. When compared, performance of disease and procedure indexing ($p < .001$), identification and reporting of notable disease ($p = .043$) and ensuring that the discharge summary has been properly completed ($p = .039$) were significantly higher in UNTH compared to ESUTH. There were no significant differences in the performance of other procedures between the two institutions.

In Table 5, findings showed that for both institutions, all the SOPs were performed above average except for weeding of inactive records, which was about just average in ESUTH. In UNTH, the best performed SOP was filing and retrieval of patients' case note while that of ESUTH were taking custody of patient's case notes, sorting and arrangement of the case notes and filing and retrieval of the same. Comparing performances in both institutions indicated no significant difference ($p > .05$).

From Table 6, all the listed SOPs were performed above average except for referring for specialist services, which was averagely performed in ESUTH. The best performed SOP in UNTH were those of initiation of records through unit numbering system and the recording of full and correct registration of patients' personal data to uniquely identify the patient. in ESUTH, the best performed procedure was the categorization of patients as individuals, family, corporate, private, NHIS, etc. When compared, both institutions showed no significant difference in their performances of the SOPs.

Table 3: Assessment of SOP in data processing unit

SOPs for data processing unit	UNTH	ESUTH	T	p-value
Collection and collation of out-patient attendances both new and old cases	3.43±0.93	2.88±1.13	1.357	0.186
Collection and collation of admissions, discharges and deaths	3.24±1.09	3.38±0.74	-.325	0.747
Compilation and presentation of hospital activity analysis	3.14±1.24	2.63±1.06	1.045	0.306

Table 4: Assessment of SOP in disease coding and indexing unit

SOPs for disease coding and indexing unit	UNTH	ESUTH	T	p-value
Disease and procedure indexing	3.40±1.14	2.00±0.53	4.406	< .001
Generation of reports for research and education	3.30±1.17	2.63±1.06	1.409	0.171
Identification and reporting of notable disease	3.20±1.20	2.13±1.25	2.124	0.043
Ensuring that the discharge summary has been properly completed	3.90±0.45	2.75±1.28	2.478	0.039
Attaching deficiency slip to folder that does not have discharge summary and send back to the physician for completion	3.21±1.13	2.38±0.74	1.906	0.068

From Table 7, all the SOPs were highly performed above average. The best performed in UNTH was that of entering of delivery details, outcome of delivery and birth registration while ESUTH was that of retrieving and consulting of patient's file each time they visit the facility. The performances when compared revealed no significant difference between the institutions ($p > .05$).

Table 5: Assessment of SOP in library service unit

SOPs for library service unit	UNTH	ESUTH	T	p-value
Taking custody of patient's case notes	3.36±1.22	3.88±0.35	-1.776	0.087
Sorting and arrangement of patient's case notes	3.50±0.96	3.88±0.35	-1.559	0.130
Filing and retrieval of patient's case notes	3.68±0.84	3.88±0.35	-.626	0.536
Maintenance of tracer system	3.14±0.94	2.88±0.99	.664	0.512
Weeding of inactive records	2.95±1.25	2.50±0.93	1.076	0.297

Table 6: Assessment of SOP in registration and documentation unit

SOPs for registration and documentation unit	UNTH	ESUTH	T	p-value
Initiate records through unit numbering system	3.53±0.96	3.13±0.83	1.024	0.316
Record full and correct registration of patient's personal data to uniquely identify the patient	3.53±1.02	3.00±1.20	1.165	0.255
Categorize patients as individual, family, corporate, private, NHIS, etc.	3.17±1.20	3.25±0.89	-.175	0.862
Refer for consultative/ specialist services	2.68±1.29	2.50±1.07	.354	0.726

Discussion

The study examined the health information management practices among health records personnel in two teaching hospitals in Enugu state, Nigeria. Findings reveal sub-optimal practices in health information processes with significant underperformances in records procedures in the key units of the records departments in both facilities. This is reflected in the results of the SOP in which a significant number of procedures performed below or barely above acceptable standards, in addition to poor operating systems. This is consistent with findings of several studies in Nigeria and beyond, which similarly assessed HIM practices among health records personnel in key health facilities, and reported poor records documentation practices in those facilities [4, 12, 13, 16]. These studies reported inefficient and inaccurate operational services ranging from missing and misfiling of patients' health records, slow process of documentation, inadequate information etc, and leading to poor quality of information for effective healthcare decision-

making. These were largely attributed to the use of unqualified/untrained personnel and limited computerization of health information process in the study facilities [4, 11, 13, 16]. A study in Ghana in 2015 reported significant improper health records documentation and management arising from various poor practices affecting responsive, quality and effective healthcare services [13]

Table 7: Assessment of SOP in admission and discharge unit

SOPs for admission and discharge unit	UNTH	ESUTH	T	p-value
Retrieving and consulting of patient's file each time they visit the facility	3.53±0.90	3.75±0.46	-.659	0.516
Death registration and identification of causes of death	3.75±0.55	3.13±1.13	1.500	0.170
Entering of delivery details, outcome of delivery and birth registration	3.95±0.22	3.50±0.53	2.302	0.0503

Demographic analysis of the records personnel in the facilities point to a youthful workforce that should be more productive hence facilitate and sustain practices for more appropriate documentation and utilization of health information (23, 24]. Similar finding was reported in Ethiopia by Ajabajel et al (2011) [25]. Analysis also showed that the health records personnel are mostly women in both health facilities, similar to a previous study in Enugu in 2008 where the records staffs were predominantly women [18]. This would suggest the dominance of women in data collection. Women are generally known to be participatory, dutiful and culturally competent [26, 27]. However, at the average age of the respondents, most are married as revealed by the study and therefore may be challenged by the combination of their domestic duties with the demands and rigors of HIM [26, 28].

This study indicates that the health records personnel in both institutions have on the average put in long duration of service, averaging 10 years. This suggests an experienced workforce that should be more familiar with standard practices, and therefore more positively impact the process. With such an experienced workforce, it is expected that majority would have been adequately exposed to the practice including in-service training for sufficient knowledge in HIM process and thereby develop more positive attitude towards good practice, as reported in the Ethiopian study [25]. However, given that a greater number of the personnel in this study lack adequate training for human capacity development, they would lack the right motivation with poor attitude towards accurate reporting and hence poor records documentation practices. Analysis suggests that majority of the records personnel (78%) have not undergone any form of specialized training in HIM, indicating

inadequate knowledge for record keeping, relying mostly on on-the-job-learning. These findings are consistent with those of similar studies in Nigeria [4, 29]. In a study in Anambra state in 2012, most of the respondents pointed to lack of in-service training being responsible for poor human capacity in HIM [29]. Poor staff knowledge, attributed to mostly the use of unqualified professionals has been identified as one of the major challenges affecting HIM practices [8, 13, 18]. Poor knowledge and lack of in-service training for improved capacity for HIM was reported in a study in Enugu which showed that about 50% of the records personnel had just less than 50% knowledge of the elements of HIM dataset [18]. To this end various bodies including the HRORBoN and Federal Ministry of Health (FMoH), have lamented the challenges of engaging untrained personnel in HIM in place of qualified professionals, largely responsible for the dearth of quality health data for effective healthcare decision making [30, 31].

Our findings show that the study facilities still operate mostly the unitary filing and paper-based (manual) systems of health records keeping, with implication for time wasting, inadequate data and inefficiency in HIM. This manual system of documentation of patients' records is consistent with findings of previous studies in Nigeria and beyond [16, 17]. Sani et al reported 100% of this practice in two federal health institutions in Jigawa state, northwest Nigeria, with implications for time wasting, poor transmission of information, inefficiency of information management etc. [16]. Glaser (2007) reported that only 10% of hospitals in Africa make use of EHR system [17]. Hence the significant manual system of records documentation identified in this study imply significant inefficiency of information management impacting negatively on healthcare decision-making in both institutions, thereby contributing to reduced quality of healthcare delivery. This underscores the urgent need for introduction of electronic system of health records documentation for efficiency in HIM in the hospitals, for a more prompt, accurate, timely and accessible health information that underpin quality evidence for safe healthcare [2]. In all, electronic system of data management makes for high-volume and high-quality information for efficiency of health decision-making for more effective healthcare delivery [5, 13, 17,19].

The assessments of the institutions' health records' documentation and reporting procedures based on the SOPs reflect the HIM practices in the study facilities, by tracking how the individual procedures across key records units conform to standards. Results show significant sub-optimal performances in a number of the health records procedures across the hospitals, with the ESUTH performing below the minimum standards in a number of procedures; such as, referring for consultative services in the registration and documentation unit; identification and reporting of notable diseases and attaching of deficiency slip to folder that does not have discharge summary in the coding and indexing unit; and weeding of inactive records in the library service unit. These have significance implications on the accuracy, adequacy and quality of health data for effective decision making.

Under the data processing units, while all the five procedures conformed to SOP, scoring above average requirements at both hospitals, the UNTH performed better, with their best performance in the "Collection and

collation of out-patients' attendances" procedure. Similarly, both hospitals performed above average for all procedures in the three other health records units. However, "Making referrals for consultative/specialist services" was the most under-performed procedure in the Registration and Documentation Unit of the two hospitals which barely scored a minimum average from the analysis. The need to make referrals when necessary to specialists cannot be overemphasized as the absence of a referral policy will negatively impact accessibility in health care provision, overstretching the resources of health care facilities [32].

Under the Disease Coding & Indexing Unit, while performances for all procedures at UNTH were significantly above average, ESUTH performances fell below standard in three of the five procedures. This particularly has critical implications on the accuracy of health data for effective decision-making and delivery outcome. This suggests inefficiency by not applying global best practices to effectively track disease outbreaks and generating evidence for informed decision-making. The discharge summary on the other hand communicates the patients care plan for continuum of care which is the only form of communication that accompanies the patient to the next setting of care [33]. The use of deficiency slip provides HIM professionals with a system to track all activities required to complete a patient's chart [2] to enable follow- ups because patient injuries may occur due to errors, illegible entries and omissions that result from poor clinical documentation of patient care [34].

In the library units, study findings also suggest that all procedures are performed optimally except for "Weeding of inactive Records" in ESUTH with barely a minimum score. Inactive records are those that are no longer necessary for administrative or reference purposes and must be removed (weeded) from permanent records before transfer for storage. This finding is supported by Oghenetega and Oghenovo (2008) which stated that inadequate facilities in the library and weeding policy of the facility were the greatest challenges in management of patients' health records in Nigerian public hospitals [35].The study suggested a proper policy on weeding of inactive records to allow for transfer of unnecessary files to a storage site or be destroyed thereby keeping libraries clear and accessible to make for easy sorting and retrieval of information.

In all, the UNTH performed significantly better than ESUTH. This may not be surprising given that UNTH is an older and more established and better resourced institution operated by the federal government, compared to ESUTH owned by the state government and established in the recent past. The use of electronic system in HIM is significantly higher in UNTH than in ESUTH, which should inform more accuracy and adequacy of health information and therefore better practice and more efficiency in health information management.

Study limitation

The major limitation of the study is the restriction to only two facilities in one area of study. A more expanded study involving the entire south-east or the six geopolitical zones of the country is encouraged. Nonetheless, a study of this nature in two tertiary healthcare facilities has its intrinsic advantage, by assessing practices obtainable in a small population, making intervention effective. Meanwhile findings compare favorably with

those of similar studies in Nigeria and other settings, covering more facilities in larger areas of study [13, 16, 18, 29].

Conclusion and recommendations

This study revealed significant sub-optimal practices in HIM in the study facilities arising from lack of optimum performances in health records documentation and management processes, including limited application of modern technology. However, the UNTH demonstrated better practices and efficiency in data management compared to ESUTH. Major challenges arise from the use of unqualified personnel with limited knowledge in health records operations, lack of regular in-service training, substantial use of manual health records system, and inadequate adherence to standard operating procedures. Addressing identified deficiencies and challenges provide opportunities for improving HIM practices in the study facilities for enhanced decision-making and effective healthcare services delivery. Accordingly, the study makes the following recommendations to boost the efficiency in health information management in the facilities

- Engage more qualified health records professionals with appropriate skills for effective health records documentation and management practices.
- Upgrade and expand the application of electronic information system through computerization of health records units and provision of other information technology (ICT) facilities to enhance the quality and efficiency of health information and management for effective healthcare decision-making at all levels of healthcare services.
- Provide opportunity for capacity development/in-service training for health records personnel for enhanced knowledge for improved service delivery.
- Design and implement a well-structured and coordinated HIM system incorporating strategy for capacity development through in-service training for adequate and updated knowledge in HIM, including ICT skills, for enhanced efficiency in HIM.
- Establish measures for regular monitoring of health records documentation and management processes in the facilities to ensure adherence to acceptable standards in line with SOPs.
- Provide relevant incentives (financial and/or non-financial) to the workers for enhanced motivation with positive attitudes and commitment towards improved service delivery.

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