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AVAILABILITY OF TOOLS FOR THE DOCUMENTATION OF MEDICAL RECORDS AMONG HEALTH WORKERS AT PADER HEALTH CENTER III. A CROSS-SECTIONAL STUDY.

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ABSTRACT

Background
Health professionals are required to document and keep records of patient care regarding the standard of practice and the organizational policies and procedures. Thus, the purpose of this study was to assess the availability of tools for the documentation of medical records among health workers at Pader Health Centre III, Pader district.

Methodology
A descriptive cross-sectional survey was used which involved both qualitative and quantitative methods of data collection and it involved 30 health workers (respondents) while using self-administered questionnaires. Data collected was thematically presented and analyzed using descriptive frequencies and percentages using Microsoft Excel.

Results
The Majority of the respondents 20 (67%) were female, 16(53%) were married 13(43%). 25(83%) had attained University/ Tertiary education. 24 (80%) of the respondents showed that the health facility had never lacked HMIS tools supplied by the government, participated in the documentation, and never used a paper-based documentation system. 27(90%) reported that the facility was not connected to electronic health records, and 12(40%) reported that the electronic system was expensive to operate.

Conclusion
The facility had adequate documentation tools. However, the facility was not advanced in the electronic health records.

Recommendations
The MoH should implement the use of an electronic health records system which will improve the completeness, accuracy, and timeliness of documentation.

Keywords: *Medical records, Documentation, Tools, Health workers*
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BACKGROUND
According to the World Health Organization (WHO, 2016), Medical record documentation refers to the capturing of pertinent facts about the patient's life and health history, including past and present illness(s) and treatment(s), written down by the health professionals handling the patients care. Whether Electronic medical records or Paper-based medical records, a well-documented medical record must fully contain information that identifies a particular patient, supports the diagnosis, justifies the treatment, and the results well documented. Poor medical records documentation is majorly stated as the incompleteness of data in a patient`s medical record, inaccuracy of data in terms of errors, omissions, and untimely recording of patient`s data in the respective forms and registers.

According to (S Verma, 2020), documentation can be defined as a clear concise, and accurate history of the patient's life and illness written from the medical point of view. He went further to say that before the records can be completed, they must contain sufficient data written in a sequence of events to justify the diagnosis and warrant the treatment and the result. Health care practices require complete, accurate, and timely documentation to effectively ensure continuity of care, communication among health care providers, health facility planning, risk management in terms of reducing medical errors, provision of proof in medico-legal issues, and the facilitation of evidence-based decision making at all centers of health care facility.

According to a survey by the World Health Organization (WHO, 2016), the lack of standard health data-capturing tools in health facilities leads to poor communication among healthcare providers which eventually causes medical errors. In Africa, health workers working in health care institutions experienced medical records documentation as a major challenging practice due to a shortage of recording materials (tools that the health care providers use to document the information about the patient). (Mutshatshi et al 2018). Although keeping a patient record is part of their professional obligation, many studies identified deficiencies in the practice of documentation among nurses across the globe. It has been reported that nursing records are often incomplete, lack

accuracy, and have poor quality due to lack or shortage of standard medical records tools (H Tasew, 2019).

There was also a consensus that Electronic Health Records (EHRs) can improve patient care, promote safe practices, and enhance communication between patients and multiple providers due to proper and systematic capturing of medical data hence reducing the risk of errors. (Venkataraman, 2016). Some studies suggest high levels of user satisfaction and enhanced patient care with the adoption of EHRs. In 2008, the New England Journal of Medicine reported that 82% of EHR users report improved clinical decision-making, 92% report improved communication between health providers and patients, and 82% of the users report a reduction in medication errors as a result of proper documentation of medical data. (Venkataraman, 2016).

Furthermore, even though the electronic system was most preferred, in Uganda there was still low adoption of the system. Paper-based medical documentation dominates 85% of government facilities (MOH, 2016)., Ugandan Ministry of Health through the Health Management Information System (HMIS), designs and distributes the HMIS registers and forms to all HMIS offices in all districts, then, they are distributed to all health facilities in that particular district. However, due to some factors, facilities had reported inadequate supply of those tools and poor utilization. Thus, the purpose of this study was to determine the availability of tools for documentation of medical records at Pader Health Center III, Pader district.

METHODOLOGY

Study Design

A descriptive Cross-sectional design was used, with both qualitative and quantitative methods. The quantitative method presented variables in numerical figures for easy representation on tables and charts while Qualitative methods described and explained the meaning of data presented on tables and charts by words.

Study Area

The study was conducted at Pader Health Center III, located in Pader town council, Pader district, in northern Uganda. Pader district is bordered by Kitgum district in the north, Lira district in the south, Gulu district in the west, and Kotido district in the East. It's a government health facility offering various services like maternal services, outpatient services, antenatal services, ART services, Laboratory services, and dental services. Its coordinates are 2°52'37.9"N, 33°05'26.2"E (Latitude: 2.8772000°; Longitude: 33.0906000°). The facility is 430 km from Kampala, the capital city of Uganda, and it is 98 km from Gulu Regional Referral Hospital, the biggest health facility in the Northern region of Uganda.

Study Population

The study involved facility health workers responsible for the documentation of medical records that is to say Medical Records Assistants, Clinicians, Nurses, Midwives, and Laboratory personnel.

Sample Size Determination

The sample size of Health workers who participated in the study was determined by using a statistical formula suggested by Kish and Leslie (1965) which states that;

$n = \frac{Z^2P(1-P)}{d^2}$ Where; n = Sample size

Z = Standard deviation at 96% confidential level (i.e. 1.96) P = estimated proportion of health workers d = acceptance degree of error

For P = 2%, then, $n = \frac{(1.96)^2*0.02(1-0.02)}{(0.05)^2}$ therefore; n = 30.

Therefore, the sample size was **30** respondents.

Sampling Technique

Non-probability Convenience sampling technique was used to select respondents for the study since it's easy and inexpensive for the researcher. Also, since it's a busy health facility, the technique was expected to yield a greater outcome (positive response) since they were only required to participate at their free/convenient time.

Sampling Procedure

In their different departments, health workers (respondents) were explained by the researcher about the study, and those who turned positive (willing) were given tools (questionnaires) for capturing data and they used/ filled them at their convenience/ free time.

Data Collection Methods

Data was collected using both interview and questionnaire methods. It's because the study involved gathering information from medical professionals who were literate and could understand the study questions.

Data Collection Tools

Both interview guides and self-administered questionnaires were used to collect data from the respondents. Interview guides were used by the researcher to collect data from respondents who were not willing to read and write while questionnaires were issued to those willing to write and read and they were expected to be filled at the respondents' convenience time.

Data Collection Procedures

After approval of the research proposal; an introductory letter from the Kampala School of Health Sciences (KSHS) research committee to the study area was obtained. After getting permission, respondents were explained the purpose

of the study, then the researcher administered the questionnaires to the respondents and translated interview guides were used. Verbal or written consenting was allowed, then data collection, and then they were thanked for taking part in the study.

Study Variables
These included dependent and independent variables.

Independent Variable
Demographic factors, availability of tools for documentation

Dependent Variable
Documentation of medical records among health workers

Quality Control
The researcher ensured the quality of the study by pretesting the questionnaire, training the research assistants, giving ample time for data collection, having clear inclusion and exclusion criteria, and adhering to standard operating procedures.

Pre-Testing
A pilot questionnaire was administered before the main study to a group of 10 respondents with similar dynamics as the final respondents selected on convenience, to correct the questionnaire and eliminate potential problems. Respondents used in the pilot study were not included in the final study. Once the researcher is satisfied with the results, the tool is ready for use in the final study.

Inclusion Criteria
The study those who were available at the time of study from different departments that is to say; medical records, Nursing, midwives, clinical, and Laboratory.

Data Analysis and Presentation
Data was analyzed manually using tally sheets and entered into a computer using Microsoft Excel computer program to generate tables, pie charts, and bar graphs for easy presentation of findings.

Ethical Considerations
Before commencing the study, a letter of introduction was obtained from the Kampala School of Health Sciences, which introduced the researcher to seek permission from the health in charge of Pader health center III to carry out the study. An informed consent was obtained and participants were assured of maximum confidentiality and security. The study would only continue after the objectives of the study were explained to the participants.

RESULTS
Demographic data

Table 1; shows the respondents' demographic data

RESPONSE	FREQUENCY (N=30)	PERCENTAGE (%)
AGE		
Below 30 years	9	30
31 – 40 years	15	50
41 – 50 years	4	13
51 & above	2	7
SEX		
Male	10	33
Female	20	67
Marital status		
Single	14	47
Married	16	53
Religion		
Catholics	13	43
Anglican	8	27
Moslems	3	10
Others	6	20
Education level		
Secondary	5	17
University/ Tertiary	25	83

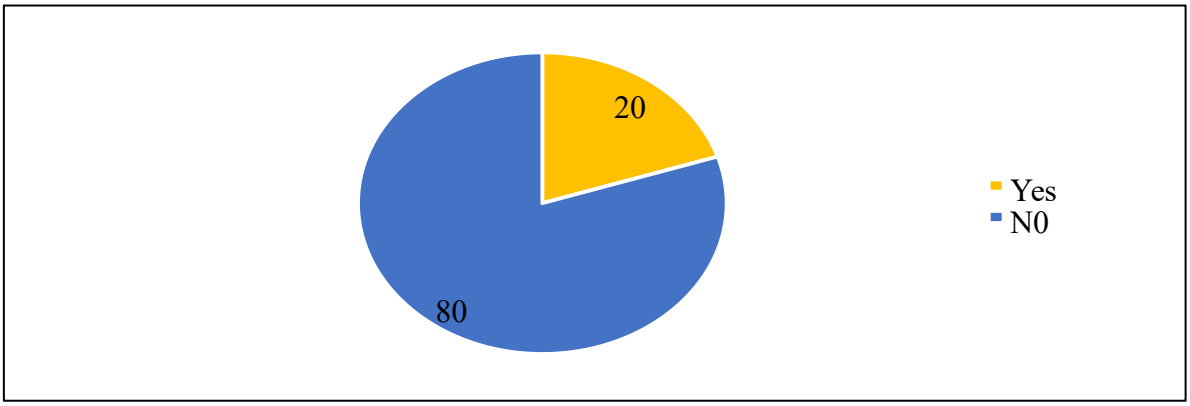
From Table 1, the majority of the respondents were aged between 31 – 40 years while the minority were aged 51 years and above. Regarding respondents' sex, the majority of the respondents 20 (67%) were female while 10 (33%) were male, majority of the respondents 16(53%) were married while the minority 14(47%) were single. Regarding respondents' religion, 13(43%) were Catholic, 8(27%) were Anglican, 3(10%) were Muslims and the rest 6(20%) belonged to other religious affiliations, majority of the respondents 25(83%) had attained University/ Tertiary

education while the minority 5(17%) had attained only secondary level of education.

Availability of Tools for documentation of medical records among health workers

Participation in the documentation of medical records

Figure 1: Shows the distribution of respondents who have ever participated in the documentation of medical records. (N= 30)



From Figure 1 majority of the respondents, 24(80%) had participated in documentation of medical records whereas the minority 6(20%) had ever participated.

System of documentation

Table 2: Shows responses about the system of documentation they had ever used. (N=30)

System	Frequency (f)	Percentage (%)
Paper-based system	24	80
Electronic system	4	13
Both system	2	7
Total	**30**	**100**

From Table 2, the majority of the respondents 24(80%) had ever used a paper-based system for documentation, 4(13%) used electronic systems whereas a minority 2(7%) had ever used both systems for documentation.

Tools used in a paper-based system

Table 3: Showing responses on the types of tools used. (n=30)

Tools	Frequency (f)	Percentage (%)
Registers	**20**	**67**
Forms	**5**	**17**
Patients owned book	**3**	**10**
All the above	**2**	**6**
Total	**30**	**100**

From Table 3, the majority of the respondents 20(67%) used registers, 5(17%) used medical forms, and the least 2(6%) used registers, forms, and patient-owned books.

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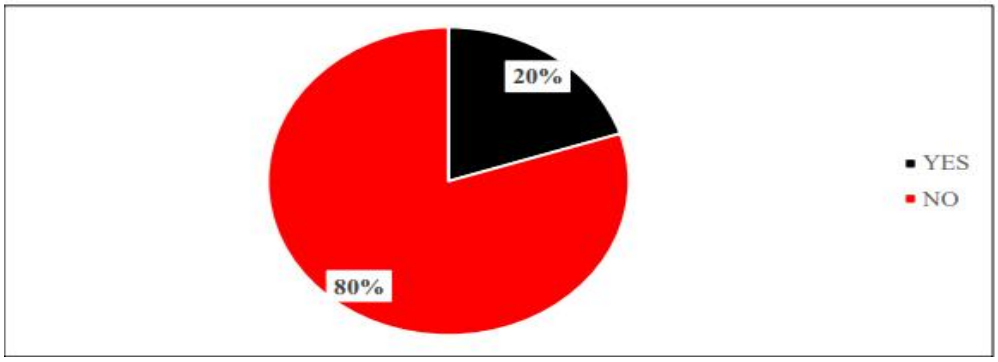
Shortage of tools at the facility

Figure 2: Showing responses on whether the facility has ever lacked tools (N=30)



From Figure 2 above, the majority of the respondents 24(80%) said that the facility had never lacked tools, while 6(20%) said that the facility had ever lacked tools for documentation.

Challenges associated with a paper-based system

Text 1: Showing responses to challenges associated with paper-based systems. (N=30) Respondents reported various challenges associated with paper-based records like being easily deteriorated when poorly handled, they require a big space, they require a lot of time to locate a single record, they require more manpower, and others.

Connection of the facility to an electronic system.

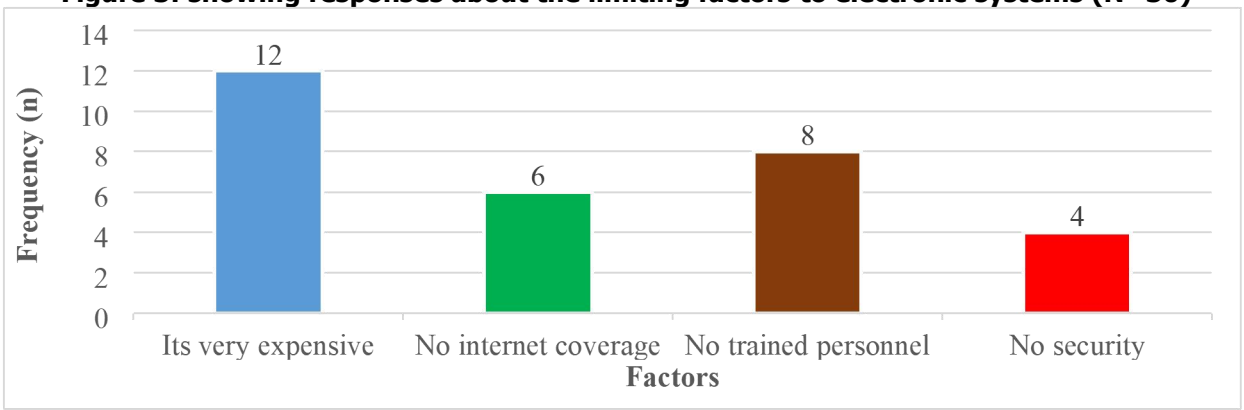
Table 4: Showing responses if the entire facility is connected to an electronic system (N=30)

Response	Frequency (f)	Percentage (%)
Yes	3	10
No	27	90
Total	**30**	**100**

From Table 4 majority of the respondents, 27(90%) said that the entire facility was not connected to an electronic system whereas the minority 3(10%) said that the facility had an electronic system.

Limiting factors to electronic medical records system

Figure 3: showing responses about the limiting factors to electronic systems (N=30)



From Figure 3, most of the respondents 12 (40%) said that electronic systems are very expensive to operate in the area, a few 8(27%) said that the facility didn't have trained workers and 6(20%) said that there is a burden of network coverage in the area while the least 4(13%) said there is no security for the computers.

DISCUSSION

Tools towards documentation of medical records among health workers.

Results showed that Pader H/C III is majorly using a paper-based medical records documentation system, as this was confirmed by 80% of the respondents. The fact that it's a government health facility, is in agreement with MOH, (2016) which said that even though the electronic system was most preferred, in Uganda there is still low adoption of the system. Paper-based medical documentation dominates 85% of government facilities. Among the tools used, 67% of the respondents said that they had ever used HMIS registers like HMIS OPD 002, HMIS pharm 001, HMIS IPD 003, and others, while 17% of the respondents said that they were using HMIS forms.

The majority of the respondents 24(80%) reported that health facilities had never lacked tools for medical documentation. In Uganda, tools for medical documentation are distributed by the Ministry of Health Information Department and implementing partners like Mildmay, Baylor, Rakai health sciences program, and others to combat the issue of poor documentation due to a shortage of tools like registers and HMIS forms. This is in disagreement with (Mutshatshi et al 2018), who stated that in Africa, health workers working in healthcare institutions experienced medical records documentation as a major challenging practice due to a shortage of recording materials (tools that the healthcare providers use to document the information about the patient).

About the challenges associated with paper-based medical documentation systems, findings revealed that the system can have a lot of incomplete and inaccurate data in it (80 % of the respondents), which eventually leads to medical errors. Since some health workers take medical documentation to be time-consuming and not too necessary in case management, they end up missing some key facts about the patient and in the sense of managing time, they end up writing badly and incorrectly. This is in agreement with (Nakate, 2016) who said that in paper-based records, reports had shown higher levels of incompleteness, inaccuracy, and untimely capturing of medical records. It had been attributed to a lack of standard registers and forms for data capturing, time-consuming when recording, and the unfriendly layout of those forms.

Conclusions

Pader Health Center III being a government/ Public health facility, it was reported that it has all the necessary tools for documentation as this was confirmed by 80% of the respondents, and that it uses both paper-based medical documentation systems and electronic systems. However, 24(80%) health workers reported that they used paper-based systems for documentation of medical records and these were majorly registers and forms.

Study Limitations

Some respondents were not willing to participate in the study due to their busy working schedules.

Since the researcher is a student, the study was inadequately funded which hindered the quality.

Recommendations

In line with the availability of documentation tools, the Ministry of Health should empower the use of telecommunication technologies like Clinic master software, and Uganda EMR software to strengthen and improve the electronic system of documentation of medical records and the associated benefits.

The District Health Officer should promote continuous health education by Health workers, especially on the impact of medical records documentation in the health care service delivery at Pader Health Center III to enhance their knowledge as far as medical documentation is concerned.

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ABBREVIATIONS AND ACRONYMS

KSHS: Kampala school of Health Sciences
MOH: Ministry of Health
OPD: Out Patient Department
WHO: World Health Organization
ART: Antiretroviral therapy
EHR: Electronic Health Record
H/C: Health Center
HMIS: Health Management Information System

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