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## Medical Documentation Practice of Health Professionals and Attitude towards it at University of Gondar Hospital, Gondar, North West Ethiopia

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### ABSTRACT

Medical documentation is believed as pertinent facts of medical care plan. It is a warehouse for patient's information and interaction with their caregivers in particular. However, there are lack of completeness, consistency, proper recoding and other constraints regarding the current medical record practice. The main objective of this study was to assess the current medical documentation practice of health professionals and attitude towards it at University of Gondar Hospital, Gondar, North West Ethiopia, 2016. Institution based cross sectional quantitative study was conducted from March 15 to April 30, 2016 at University of Gondar Hospital. About 260 health professionals who work in different wards were participated. Data were collected using structured self-administered questionnaires of professionals and reviewed their recorded medical documentation (chart). Logistic regressions; both bi-variable and multi-variable logistic regressions analyses models were fitted. The odds ratio with 95 % CI was computed and these variables which have a (p-value < 0.05) in the multi-variable logistic regression analysis model were taken as statistically significant and interpreted accordingly. Good medical documentation practice by health professionals was 45.4% (n=118). Documentation for all patients using documentation standard tools with AOR=1.799(95% CI [1.065, 3.040]), working area with AOR=2.522(95% CI [1.264, 5.033]), and favourable attitude towards medical documentation with adjusted OR=1.182(95% CI [1.039, 3.169]) were significantly associated with good medical documentation practice. Medical documentation practice at University of Gondar Hospital was found low. Documentation using standard tools, working area (setting) and attitude of professionals were important factors associated with medical documentation practice. Organizational support needs to be strengthening, ensure procedure, format and documentation type (including documentation tools and forms); etc needs emphasis to improve documentation practice.

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## 1. INTRODUCTION

Documentation is a record of the care, the clinical assessment, professional judgment and critical thinking used by a health professional in relation to the provision of patient care. This documentation may include written and electronic health records, observation charts, actions, outcomes, check lists, communication books, shift / management reports and clinical anecdotal notes or personal reflections (held by the clinicians personally or any other form of documentation pertaining to the care provided. The medical documentation (medical record or paper based record) therefore, is one of the health (clinical) records in which

we need to assess its practice level or status. Of course, the practice or the documentation may be recorded or done by doctors, nurses, midwives and other care providers (health professionals) in general [1].

Despite widespread interest in standardizing of health records in many parts of the world [2], narrative text record (manually written documentation) for patient's information is a usual trend everywhere. The data in documentation can be organized in a variety of ways including time-oriented, problem-oriented, and source-oriented approaches. Based on a recent review, an emphasis of data attributes (accuracy, completeness, and timeliness) are needed for documentation to quality measurement [3].

Likewise the value of health records is ultimately dependent on their completeness for providing patient's information and care provision. This varies with physician to patient communication, the patient's condition and the physician's documentation style. Of course, clinical documentation (record) has been found complete and appropriate for clinical decisions when data are filled on time [4]. But, study shows that many physicians and other health care providers have argued that the quality for clinical documentation is inadequate and overloading with irrelevant data [5].

Paper-based documentation is practiced in most developing countries [6]; as an African it is a basic issue to assess this documentation practice of health professionals and related factors towards documentation. Developing countries therefore are, highly relied on standard tools, clinical guidelines, documentation books forms / formats, procedures and other resources / materials to record patient's information in hospitals and other health centers due to a very limited health professionals' practice unlike the developed world (i.e. EHR) [6]. The information in the medical documentation is definitely valuable. However, the process of documenting it is given less priority by many health care givers. A busy physician may accidentally record a progress note in the wrong patient's health records. Medical or clinical assessment of vital signs might be consistent, but the documentation process was highly variable within groups and among hospitals. Different health care professionals and specialties have developed their own types of documentation style to document patient's care in the paper-based patient record system. Lack of a unified documentation approach finally leads to a national proposal to generate a unified paper-based patient record. This serves as a good basis for a unified national documentation style. Since, transforming the paper-based record into digital form by purely digitizing the narrative text does not yield the benefits. So, it is essential that the structure, data set headings and classifications are used as clear medical / clinical documentation guides and contents [7]. A nurse may get a call to assist a patient and forget to record medication given to another patient [8].

Although clinical guidelines and standardized tools are essential for evidence based decision making health care provision and manually written documentation practice; their usability used by health professionals is low because of physician's attitude [9]. Evidence indicates that besides of their benefits for documentation practice, guidelines, documentation sheets/formats, standard tools in total were in doubt of resistance from health professionals. Information retrieval from narrative documents of chart or written documentation is rarely used outside laboratories where information extraction systems have been developed [10]. From all the above reviews, medical documentations (manually written documents) are the only warehouse of patient's information. But, these documentations are with many problems and sometimes negligible for some health professionals. This is due to variations of documentation styles and documentation standards, sheets/formats they used. On the other hand, data in hospitals remain incomplete and inappropriate while documenting, reporting, charting and etc. And thus, most records neglect the patients' problem and practices regarding documentation in the hospital being experienced [11].

There are gaps in Ethiopian context. Because, there is no study conducted to inform whether the above mentioned standard tools are properly used to the completeness of documentation or not. Since Ethiopia is one of the developing nations, the problem regarding patient's written record or documented information is a serious issue from different corners. However, the level of documentation practice of health professionals, attitude towards documentation about patient's information and even other related factors affecting documentation practice are not known indeed. Only, the federal ministry of health (FMoH) was trying to alleviate such problems by giving training for health workers and preparing guidelines like Ethiopian hospitals reform implementation guideline. But, no researches were done to show where the status of documentation practices and the gaps are nationally. So, it is better to focus on reducing the gaps between practice level of professionals and their attitude to documentation using evidence. On the other hand when to document, what to document, how to document etc are crucial aspects to fill the gaps.

## 2. EXISTING METHODS

Medical Documentation Practice Since 2006, AMIA has organized Health Policy to examine issues concerning health care and health information policy towards the generation of health records (medical documentations) that will give up the rich patients' data. This is an evidence in which medical documentations play a key role in the efforts by providing access to data that can improve individual care, organization support,

clinical research, quality improvement efforts and the achievement of public health objectives; all of which work towards documentation system improvement [12]. Study shows that health professionals have a positive perspective about documentation systems, but their 'full function' practice is low: 3.6% in 2006 to 6.9% in 2009 [12,13].

Medical record keeping has been almost fully implemented even in several developed countries including Sweden, Denmark, the Netherlands and UK although it has been implemented in less than 20% of US hospitals. Likewise, paper-based documentation is practiced in most developing countries [6]. Nurses in the Netherlands recorded low scores on the accuracy of the documentation of their interventions [14]. The study conducted in Jamaica based on descriptive cross sectional design, 2013 by reviewed 90 patients records of 3 wards were audited documentation practices health professionals using Jamaican Ministry of Health tool. The result shows (97%, 98%, 96% and 98%) percentages of records were legible, neat, and concise and followed documentation guidelines respectively. Only 26% of the records had nursing diagnosis, which corresponded to the current medical diagnosis and 48% had documented evidence of discharge planning [15]. In Finland, paper-based patient records have been a longitudinal (continuing) collection of patient data [7]. Documentation of patients with chronic pain from the Southern health care center region of Stockholm results that nurses reported insufficient documentation (24%). In Nigeria, health record inadequacies were found in clinical documentation, especially gross under utilization of discharge summary forms. However, some forms were properly documented, suggesting that hospital health care providers possess the necessary skills for quality clinical documentation but lack the will. When dictation or a manual system is used, the production of accurate health records depends on the providers' record keeping practices [16]. Results from 9 general hospitals of South Africa report among 459 records in 1989, 27.7% (127) of the records were from medical units, 29.4% from surgical units, 14.6 from pediatrics units and the remaining from the general units; it shows insufficient and poorly documented practice [17].

### 3. METHODOLOGY

#### 3.1. Study Design

An institution based cross sectional quantitative study was conducted in University of Gondar hospital from March 15 to April 30 2016. The study was conducted at University of Gondar Hospital, North Gondar, North West Ethiopia. The hospital was established in 1920 in Amhara regional state in North Gondar zone, North West Ethiopia, Gondar town administration 748 far from Addis Ababa. In 2016, the total number of health professionals in this hospital is about 793 who provide services for the catchment area with estimated number of populations more than five million. All health professionals who were worked at the University of Gondar Hospital during data collection period.

#### 3.2. The Inclusion and Exclusion Criteria

All health professionals who were not willing, those who were on leave and those pharmacists were excluded. Sample size in this study was calculated as follows using the assumptions of single population proportion formula by the assumptions of.

$n$  = sample size

$z$  = standardized normal distribution value at 95% CI, which is 1.96

$p$  = medical documentation practice 50%

$d$  =  $w$  = the margin error, taken as 5%

$n = [Z (\alpha/2)^2 * P (1-P)]/d^2$

$n = [(1.96)^2 * 0.5(1-0.5)]/(0.05)^2$

$n = 384$

Here correction factor was used (population reduction formula)

$n/(1+n/N) = 384/(1+384/629)$

$= 240$

By assuming the non-response rate of 10% [18] the total sample size became 264.

#### 3.3. Sampling Selection Procedure

Stratified sampling procedure was used to select the respondents. Health professionals in each ward of inpatient department were randomly selected using simple random sampling after proportional allocation of health professionals in each profession and work setting was ensured. The strata were wards in which the participant health professionals were worked. These four strata were medical, surgical, pediatrics and obstetrics & gynecology wards. Sampling selection procedure of health professionals from each ward at UoG hospital as shown in Figure 1.

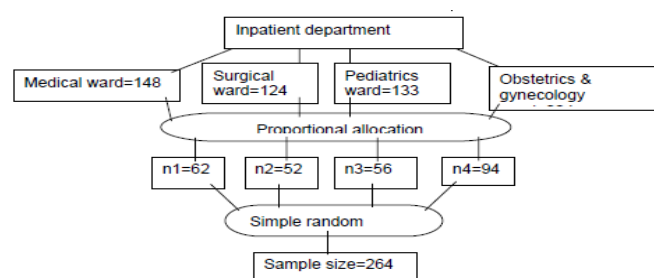


Figure 1. Sampling Selection Procedure of Health Professionals from Each ward at UoG hospital, 2016, Ethiopia (n=260)

#### 4. ETHICAL CONSIDERATIONS

Ethical clearance was obtained from Institution of Public Health, Research Ethical Review Board of College of Medicine and Health Sciences, University of Gondar. Communication with University of Gondar Hospital administration was made through formal letter from the clinical director and ward team leaders. The purposes and the objectives of the study were explained in detail for the participants and hence, written informed consents were received. To keep confidentiality data collection anonymity was maintained in all aspects. Respondents were informed that participation was on a voluntary basis. They were also told to refuse and withdraw any time if they feel discomfort and unwilling to participate in the study. Ethical clearance from both UoG and UoG Hospital.

#### 5. RESULTS

##### 5.1. Socio Demographic Characteristics of Study Participants

Among 264 study participants, 260 (98.5%) returned the questionnaire back. About 118 (63 females and 55 males) were answered 'Yes' and 142 (78 females and 64 males) were answered 'No' to the questions provided from the document reviewed assessment. More than half of participants 141 (54.2%) were female participants, nearly half of them 128 (49.2%) were single. From the total participants, 50% of them were below 30 years of age. About 94 (36.2%) of them were worked in obstetrics and gynecology wards and most of them 231 (88.8%) were Bachelor degree holders. Table 1 shows the Socio-demographic characteristics of health professionals who were worked at University of Gondar Hospital.

Table 1. Socio-Demographic Characteristics of Health Professionals Who Were Worked at University of Gondar Hospital, North West Ethiopia, 2016 (N=260)

Variable		Frequency	Percentage
Age	20-24	15	5.8
	25-29	107	41.2
	30-34	85	20.4
	>=35		32.7
Sex	Male	141	54.2
	Female	119	45.8
Marital Status	Single	130	50
	Married	116	44.6
	Divorced	8	3.1
	Others	6	2.3
Religion	Orthodox	237	91.2
	Muslim	12	4.8
	Protestant	9	3.5
	Others	2	0.8
Working setting	Medical	61	23.5
	Surgical	49	18.8
	Pediatric	56	21.5
	Obstetrics & Gynecology	94	36.2
Educational status	Diploma	11	4.2
	Bachelor degree	231	88.8
	Master & above	18	6.9
Experience	< 5 years	131	50.4
	5 -10 years	69	26.5
	>=10 years	60	23.1

In this research medical documentation practice at UoG Hospital in 2016 is (45.4%); that means it was relatively low since documentation is a crucial aspect for patients' life. Even though the finding is too hard for comparing with other local studies, let to compare with countries having different socio-economic status, geographical settings, life style and others. As it was mentioned, this study revealed that good medical documentation practice among health professionals was 45.4%; and this is much lower as compared to study in Jamaica (98 %) [19]. The difference of course could be due to the research methodology, research setting. Descriptive approach was followed and only medical ward were the concern there in Jamaica but, here institutional cross sectional quantitative approach was followed and four work setting wards were included at the same time respectively. Another difference could be the way to follow standard documentation guidelines and procedures. Whereas, the result obtained from this study is higher than the study done in Iran (22.9%) [20]. The possible reason could be due to the different instrument used and the institutional structure that means organizational supervision system, responsibility and accountability of the leaders and institution.

The findings of this study were collectively obtained from 16.9% from medical wards, 16.9% from surgical ward, 20.3% from pediatrics ward and 45.8% from obstetrics and gynecology wards. This result is somewhat closer to results from 9 general hospitals of South Africa audit among 459 records in 1989, 27.7% of the records were from medical units, 29.4% from surgical units, 14.6 from pediatrics units and there maining from the general units. Specially, the result in this study 45.8% from obstetrics and gynecology wards were sufficient enough than results of all the units of South Africa. The study conducted in Jamaican in 2013 based on descriptive cross sectional design by reviewed 90 patients records were audited documentation practices of health professionals using Jamaican Ministry of Health tool. The result shows 98% of records were followed documentation guidelines and 48% had document evidence of discharge planning [15]. But, in this study 60.8% of health professionals had followed medical documentation standard tools (sheet and guideline, procedures). This might be because of the socio-economic and cultural difference between the two countries. And the difference of tools used by ministry of health of the two countries. A Postal questionnaire survey between October 1993 and January 1994 was conducted at Hospitals found Oxford region and the result shows that most respondents 77% were welcoming favorable attitudes towards medical documentation standard tools [21]. This is again higher than this study's finding. This is most probably due to the difference of study design selected and the ways of lifestyle the participants followed. This study reveals that was significantly associated with medical documentation practice.

Those professionals who have favorable attitude about medical documentation are less likely to have good documentation practice compared to those who have unfavorable attitude. This is due to human resource shortages, less organizational support and shortage of equipment as described in Figure 4. This study is consistent with studies from Malawi [22] a mixed of quantitative and qualitative methods was applied using checklists at the Medical Department of Kamuzu Central Hospital in Lilongwe, Malawi identified that human resource shortages, staff attitudes and shortage of equipment as big obstacles for documentation registers. From the study carried out in Nigeria in 2009, documentation performance was very good (98.49%) and hence the result was much higher than the findings of this study. Of course, the reason may be a study conducted in Nigeria was a retrospective study design to assess the documentation of 780 paper-based health records of inpatients discharged. But records reviewed from the departments of obstetrics (45.9%) [23] was consistent with the study result in our research (45.8%).

## 5.2. Limitations

- Self-administrator questionnaires are not the best way to collect the views of individual professionals about such a subject. We have no audit of the respondent's attitude and performance in MDP.
- The study was conducted only on a single referral hospital; and thus it is not generalize able for other health centers (HC).
- A broad literature search on this topic shows lack of similar published studies in Ethiopia. Hence it was difficult to make comparisons in the Ethiopian health professionals' context.

## 6. CONCLUSION

The findings of this study indicated that health professionals at hospitals have somewhat poor documentation practice and unfavorable attitude to medical documentation practice. The study confirms the importance of work setting, documenting for all patients using documentation standard tools and attitude towards medical documentations. It also shows how universal standard guidelines for care in different settings are differently used. And even, one can have favorable attitude towards medical documentation, there might lack medical documentation practice. This study findings lead to conclude that if someone had favorable focus to medical documentation; it didn't mean that s/he had put action to medical documentation practice. This of

course was due to different reasons such as shortage of format, lack of time, lack of space to document and high patient to professional ratio.

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