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THE QUANTITATIVE STUDY OF THE FACULTY MEMBERS PERFORMANCE IN DOCUMENTATION OF THE MEDICAL RECORDS IN TEACHING HOSPITALS OF MAZANDARAN UNIVERSITY OF MEDICAL SCIENCES

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ABSTRACT

Introduction: Documentation of patients' medical records has been always emphasized because medical records are as a means to be applied by patients, all medical staff, quality evaluations of health care, lawsuits, medical education and, etc. Regarding to this, each of the data elements available in the sheets of medical records has their own values. The rate of completion indicates the importance of the medical recorders for faculty member. So in this article the researcher evaluates the completion of medical records in the teaching hospitals of Mazandaran University of Medical Sciences. **Methods and Materials:** This cross- sectional study has been conducted to review the patients' medical cases in five teaching university hospitals. To collect data, a check list was mode based on data element arrangement in four main sheets of admission and discharge, summery, patients' history and clinical examination and progress note sheets. Recorded data were defined as "Yes" with the value 1, not recorded data were defined as "No" with the value 2, and not used data were defined for cases in which the mentioned variable had no use with the value Zero. The overall evaluation of the rate of documentation was considered as %95 -100 equal to "good", 75-94% equal to average and under 75% was considered as "poor". Using the sample volume formula, 281 cases were randomly stratified reviewed. The data were analyzed by the software SPSS version 19 and descriptive statistical scales. **Results:** The results have shown that the overall documentation rate in all the four sheets was 62% and in a poor level. There was no big difference in the average documentation among the hospital. Among the educational group, the gynecology and infection groups are equal to each other and had the highest record average (68%). Within the all groups, the highest rate has belonged to the documentation of signatures (91%). **Conclusion:** Regarding to the overall assessment that documentation rate was in a poor level, more attempt should be made to achieve a better condition. Even if a data element of the sheets seems meaningless, unnecessary and duplicated, it should not be ignored and skipped. In order to solve such problems, it is suggested that medical records sheets and the elements that seem unnecessary, should be reviewed in relevant committees.

Key words: Documentation, Assessment, medical forms, Faculty.

1. BACKGROUND

Daily documentation and maintenance of medical record quality is a crucial issue in orthopaedic surgery (1). Medical record denotes the main information support used by healthcare providers (2). Although medical records serve many functions, their primary purpose is to record information about patients and their care (3, 4). Poor documentation of medical notes and plans not only adversely affects patient management but also has medico-legal implications (1). Poor documentation of medical notes and plans not only adversely affects patient management but also has medico-legal implications (5). Documentation of medical data in patient records is needed to improve the quality of healthcare and medical knowledge progress. Documentation of patient history, clinical problems, treatment, and follow-up care are needed to improve practice and research (6).

Medical record is the source of information for many purposes, including evaluation of the quality of care provided (7, 8). Poor documentation in medical records might reduce the quality of care and undermine analyses based on retrospective reviews (3, 9). Because physicians have an important role in documentation (10), medical students become familiar with methods of history taking and documentation during their academic education prior to clinical courses. History taking, physical examination and regular documentation process are the first steps in patient assessment (5, 11).

Documentation of patient care in medical record formats is always emphasized. These documents are used as a means to go on treating the patients, staff in their own defense, assessment, care, any legal proceedings and medical science education (12). Medical records are important factors in treatment and prevention of diseases, and also the reflecting mirror of specialty services in medical centers and hospitals. According to the importance of the documentation data in medical record sheets or forms and their application in accelerating the process and correction of the treatment methods, indicating the performance of medical, nursing and care staff (13), creating relationship among caregivers, defending and advocating the patients and hospitals, health and treatment organization programs, paying off the health insurance expenses (14, 15) and making proper and required decisions it is necessary that patients clinical records should be perfect completely (16, 17). Documentation of medical records is often used to respect and keep patients' medical researches, training the health care staff, general studies and qualitative reviews (18). Medical records are the most valuable and significant criteria of evaluating the hospital staff activities (19) as the based educational and research and health management planning and decision making (20). If the identity data are not complete, the patient sheets may be mistaken. Incomplete documentation of data inpatients' may lead to repeat the tests (20) and much more expenses for them. Without correct documentation, is hard to prove if the offered services to patients have been required and desirable. Incomplete records will have many other consequences. Patients are the first people whom the consequences refer to, because in later references to hospitals, the medical teams will need valid documents of the previous treatments and results and if the records are not completely recorded, it may lead to longer time of decision making and repetitive evaluations (20). Providing and compiling the medical reports of the inpatients in hospitals both keep the patients' medical records in archives or medical diagnoses and helps doctors thinking about their care plan and treatment (21). The most important cause of incomplete records is that the doctors and surgeons believe that healthcare and required surgeries are vital, but they don't consider the documentation of the health care data as a part of treatment process, while the time that is spent on registering or recording the patients' records of offered healthcare must be considered as a part of care process (18-20, 22-25). In teaching hospitals also this problem may be resulted from the lack of supervision of chief attends on interns and assistants' performances (20).

Many studies were conducted on the ways of documentation of medical records. In the study of Mashoofi, it was mentioned that in 52.2% of records, the principles of documentation were not considered (19). In Babaee's study, documentation of admission form contents as a main page of the records was evaluated with the scores 32.7 in teaching hospitals, 32.2 in private hospitals and 29.4 in the hospitals of social security organization in an undesired condition (5). In the study of Seif Rabiee, 88% of the patient medical history and clinical examination sheets and 61% of the disease progress note forms were not signed by interns or assistants (13).

In Mahjoob's study also the average of clinical data documentation of patients' history was 38%, and totally in this study the rate of forms completion was not desired and some records were evaluated poor and incomplete (26). In the study of Esmaili, the condition of documentation of patient's history by the assistants, interns and stager student was evaluated fair and poor and progress note in all three groups was poor and summery sheet completion in the group of assistants and residents was evaluated good (21). In Tavakkoli's study, 56% the researcher believe that the reason of poor documentation is the lack of sufficient supervision of chief attends on the performance of interns and residents(15). In Rashida's study final diagnoses and any procedures that performed for patient were not recorded in admission sheet, while have been taken many procedure and recorded in other forms (27) .

In Mazandaran province, three researches were made on documentation of patient records (27, 28, 29), which don't include the present study aspects, so determining the present condition about documentation manner, effective steps will be taken in correction of documentation. The results of this study can be a reliable means for health, treatment and medical authorities to achieve the goals in health system.

2. MATERIALS AND METHODS

This is a cross- sectional study. The test group was the admission–discharge briefs, history, summery and disease progress note which were in medical records of the hospitalized patients in five teaching university hospitals of Mazandaran University of Medical Sciences. The reason of choosing these sheets was the importance that the samples consider to respond. The data collection scale was a check list including 49 questions according to the arrangement of data element in the admission form, 21 questions in the sum-

Sheet name group date classified	Demo-graphic	Diagno-stic	Disch-arge	Case man-agement	Verifica-tions	Permissions letters	Progress report	history	Progress number	Total
Admission	77	41	85	22	81	26	-	-	-	55
Summary	61	90	76	81	96	-	-	-	-	80
Progress note	90	-	72	-	94	-	94	-	59	81
History	95	48	75	-	93	-	-	68	-	75
Total	80	59	77	51	91	26	94	68	59	62

Table 1. The Documentation Average in the forms Categorized in the Hospitals of Mazandaran University of Medical Sciences 2014

mary sheet, 38 questions in the patient's history sheet and 10 questions in the disease progress note sheet. Recorded data were defined as "Yes" with the value 1, not recorded data were defined as "No" with the value 2, and not used data were defined for cases in which the mentioned variable had no use with the value Zero The choice "Not applied" was for the situations which the content variable had no use for the patients. In other words, if the patient hadn't died, the variable death before 24 hours was recorded with no application it the check list. In order to categorization the reports, the variables were determined in the admission form in 5 categories including demography, discharge, diagnostic, verifications and case management and in the history form in 5 categories including demography, diagnoses, verifications, case management and history, in the form of disease progress in 5 categories including demography, verifications, case management, progress report and number of progress reports. For example, in the admission form, there were variables like name, Father's name, birth date ad demographical information and all signatures and stamps as the verifications, primary diagnoses while treatment as diagnostic data and variables like room or bed number, ward name were as the case management data. Sample volume and sampling methods were multi- stage (stratified and randomly). Regarding to the lack of studies, this parameter was considered 50% and the samples were 281 persons considering Alpha equal to 5% and d equal to 5%. In the next stage each specialty was considered as a category was considered as a category and the number of the required samples for each category was in the year 2012. The last stage was randomly extracted of patient record from filing area and the data were registered on check list.

After collecting, the data were put into the software SPSS and calculated by descriptive statistics including frequency, required percepts and averages. The overall assessment of the documentation rate was considered as 95-100% as good, 94 to 75% as fair and less than 75% as poor. In order to follow the ethical considerations and research rights, in the final report, it was avoided to mention the names of the doctors whose case were reviewed in this study and also no details were brought from the hospitals or doctors. The data of this study will be kept for the organization performing this project.

3. RESULTS

The results of this study showed that in the five teaching hospitals in the research respectively in Zaree hospital of 36 reviewed records the registration average was 65%, In Imam hospital, of 68 cases the registration average was 60%, In Fatemeh Zahra hospital, of 24 cases the average was 58%, in Avicenna hospital, of 132 reviewed cases the average of registration was 62% and in Zakariya al-Razi hospital, of 21 cases the average score was 66% and the total average score in all the hospitals was 62%. The other findings of the study are **shown** in the Tables 1 and 2.

Order	Specialty	Frequ-ency	Order	Specialty	Average
1	Internal medicine	62	8	Psychiatry	66
2	Pediatrics	66	9	Cardiology	58
3	Gynecology	68	10	Neurology	64
4	General surgery	65	11	Infectious	68
5	Ophthal-mology	54	12	Dermatology	60
6	ENT	63	13	Orthopedics	56
7	Nurosurgery	47	14	Urology	59
Total registration					62

Table 2. The Registration Average of all the Sheets Based on the Educational Department Specialties of Mazandaran University of Medical Sciences 2014

4. DISCUSSION

Documentation of medical records is always emphasized due to the data requirements of the applicants. Also the main reasons of the deductions by the insurer organizations are resulted from defection in documentation (13). It is also emphasized that, it is a main duty of any people that has permission to deliver any care to patients.

Registration and recording the documents are necessary to control the quantity and quality. In this study, the quantity of documentation was regarded in 4 main sheets. These sheets were chosen due to the importance and significance of them for the requester and the doctors from the aspect of data and the relationship with other sheets (21, 30) , because most of the time for legal authorities the case summery and admission form can meet the needs and demands. In some trials, the disease progress note sheet and the history can be helpful. Regarding that in teaching hospitals, some parts of the care with groups, so documentations must be sufficient and exact. Of course, whether they are adequate or not is not reviewed in this study and they showed be dealt with in qualitative evaluations.

The results of this study in the part of admission form and in the category of diagnostic data showed that rate of documentation has been in the lowest level which was similar to Babaee's study(16). In Mashoofi's study, the lack of primary diagnosis documentation, diagnoses while treatment and final diagnosis and also the event causes,

conditions and recommendations after discharging have been noted (19). Recording these two points is duty of doctors. What is common in hospitals, after documentation the points mentioned above by interns or residents, attends or the doctors verify them. Signature shows the verification and taking the responsibility of something. It is obvious that when something must be registered, but it is not recorded, what do the signatures verify? In order to solve this problem, we should deal with the medical education that the significance of registration should be taught in addition to the responsibility of signatures. In the admission forms and discharge summary in the part of permission the hospitalization average score was just 26%. It means that care have been delivered on the patients without their permission, and legally permissions must be taken from patients otherwise the doctors will be responsible for any consequences (31) In the study of Sheikh Taheri, just 2 patients and in Hajavi's study 1.2% of the patients was not asked to give permission for treatments (32, 33). Failure to register the permission letters needs more education for the medical record staff and more understanding to their responsibilities in asking for permission letters (34). Of course, there are other methods to obtain permission from patient who needs more required substructures (35) .

The study results in the category of identity data in all the sheets were evaluated fairly well, but in the admission form which is considered the basis of other forms (19). 77% of it was completed and 33% of the patients' identity data were not completed. This case was reported in Mahjoob's study that documentation of identity data had an undesired condition (26) . It is obvious that removing the sheets from the medical file intentionally or accidentally makes data problems and the sheets will be recognized just by identity data. All the can givers are responsible for completing the data in this category. Let's give an example to explain it. For example, in the evening or night shifts that the medical secretary is absent, if one of the sheets is full completed and one more sheet is needed, a new sheet should be added to complete the data elements. Now, suppose who is the responsible for completing the new sheet from the night to the next day when the secretary comes for the overall review of the cases (Daily chart round)?

The results showed that recording the discharge data of the admission form and summery sheet were evaluated "Poor". Discharge data including discharge condition, patient's condition while discharging and recommendations for post- discharge period indicate the results of caring the patients. Evaluation of this section shows that what were the results of treatment like and what should the patients do after discharging. The value of discharging data is the same as the patients' instruction, and training after discharging because even though the patient had a perfect treatment at the hospital and would be an outpatient in clinics, so if this is not recorded by the care provider, the whole treatment would be effected.

About the registration in the history and clinical examination sheet that is a means of drawing the patient's treatment plan, the diagnostic data and history data were evaluated poor which was similar to Mahjoobs study results (15, 26). In Amoiee study was also noted that failure to complete the history forms has been a factor of complaining from doctors to justice (36). In Esmaili's study, the rate of recording among assistants, interns and stager student was evaluated fair, fair and poor (P=0.000) (21). In Foroozandeh's study on different parts of the forms, the recording rate was evaluated poor, fair and desired (37) . Of course, in this study, the overall condition of completing main sheets in teaching hospital was evaluated desired. It's obvious that to be desired is not equal to 100% completion of data elements, because a desired condition is generally considered when all the applicants can refer to the records and reach and get their required data and the records can meet the needs.

Reviewing the form of disease progress note was evaluated in a poor level. Of course, the present forms which have been introduced by the ministry of health are width designed that follow a compositional format to record the documentations. In the present quantitative study researcher has been dealt with.

In Esamieli Doki's study, also a quantitative study, the performance of assistants, interns and stager student in recording the disease progress sheet was evaluated "Poor"(21). In a conducted study on the number of reports, the sheet mentioned above incorporating the disease progress briefs in the doctor's prescription form and changing the compositional (SOAP) format to Subjective, Objective, Assessment and plan. There was a remarkable increase in the number of disease progress notes (30).

The study results in the section of educational department performance shown that, the gynecology and infectious department or group had the highest rate of documentation. Neurosurgery had lowest rate. In the study of Kahoeei, it was mentioned that 60% of the assistants are unaware of the legal aspects of documentation (22). It should be noted that the groups with residents and interns can promote their conditions. This can be possible with educating in Residents Continuously Management (RCM) courses and periodical supervision of attendants and scoring the improvement process in Education Development Center (EDC) programs with internal evaluation scores.

The study results in separated hospitals showed that recording rate was not so much different among them. Documentation range was different from 58% to 65%, but regarding that in wards with resident changes will be simply made, it seems that required efforts should be made. So the attendants can be great patterns for residents, residents for interns and interns for stager student bilaterally. Having in mind that recording documents is part of care process (38-40). Totally, based on the present study and other researches, informing the document recorders of the significance of data registration and ways of documentation, it is suggested and recommended to supervise periodically the process of documentation and encourage the groups who have registered the medical records more carefully.

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