

Documentation of Medical Records in Hospitals of Mazandaran University of Medical Sciences in 2014: a Quantitative Study

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doi: 10.5455/aim.2016.24.202-206

ACTA INFORM MED. 2016 JUN; 24(3): 202-206

Received: FEB 25, 2016 • Accepted: APR 25, 2016

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ABSTRACT

Introduction: 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. Therefore, in this study, each of the data elements available in patients' records are important and filling them indicates the importance put by the documenting teams, so it has been dealt with the documentation the patient records in the hospitals of Mazandaran province. **Method:** This cross-sectional study aimed to review medical records in 16 hospitals of Mazandaran University of Medical Sciences (MazUMS). In order to collection data, a check list was prepared based on the data elements including four forms of the admission, summary, patients' medical history and progress note. The data recording was defined as "Yes" with the value of 1, lack of recording was defined as "No" with the value of 2, and "Not applied" with the value of 0 for the cases in which the mentioned variable medical records are not applied. **Results:** The overall evaluation of the documentation was considered as 95-100% equal to "good", 75-94% equal to "average" and below -75% equal to "poor". Using the stratified random sample volume formula, 381 cases were reviewed. The data were analyzed by the SPSS version 19 and descriptive statistics. **Results:** The results showed that %62 of registration and all the four forms were in the "poor" category. There was no big difference in average registration among the hospitals. Among the educational groups Gynecology and Infectious were equal and had the highest average of documentation of %68. In the data categories, the highest documentation average belonged to the verification, %91. **Conclusion:** According to the overall assessment in which the rate of documentation was in the category "week", we should make much more efforts to reach better conditions. Even if a data element is recognized meaningless, unnecessary and repetitive by the in charge of documentation, it should not be neglected and skipped. In order to solve the problems of these types, it is suggested to discuss the medical records forms and elements that seem unnecessary in the related committees.

Key words: medical records, documentation, analysis- medical sheets.

1. INTRODUCTION

Medical records are the important tools to perform the affair of treatment and prevention and are known as the reflecting mirror of the medical affairs in an institute. Regarding to the importance of registered data in medical record sheets and their application in accelerating the process and correcting treatment and medical and nursing staff performances, defending the patients and hospitals, medical/health organization planning and making proper and fundamental decisions, the clinical records are necessary to be perfect from any aspect (1). Documentation of medical records is often used to protect the researches, train medical care staff, gen-

eral studies and qualitative studies (2).

Medical records documentation and dissemination of information, which are used as the foundation of the programming and decision making management in education, research and health, are the most valuable criteria of hospital staff professional assessment (3). If patients' identity data are not complete, the sheets may be mistakes with each other. Incomplete registration of data in a medical record will lead to duplication of the tests and undergoing further expenses for patients (4).

Preparation of the inpatients' medical reports in hospitals will help the doctors for planning patients' treatment, and care project in addition to docu-

ment as records and disease diagnosis (5). The most important reason of incomplete records is that the doctors and surgeons believed that the medical or surgical care required for patients are vital, but documentation of the data concerning to care is not considered as a part of treatment process by them, while the time spent to register and complete the patients' medical records must be considered as part of care process (4). In teaching hospitals, this problem may be resulted from the lack of supervision of attends on the performance of the assistants and interns (6).

Many studies have been conducted on the ways of registering medical record documents. In the study of Mashofee, it was mentioned that in 52.2% of the records the principles of documentation have not been considered (7). In a study by Babae, registering the contents of admission sheets, of the mainsheets of records, was evaluated with the score 32.7% in teaching hospital, 32.2% private and 29.4% in social security hospitals. And all are in poor level of documentation (8). In Sayf Rabiee research results showed that 88% of history sheet and 61% of progress note are not signed by intern or residents (1). In Mahjoob research the average documentation of medical records in history sheet 38% and in all evaluation are not good or in poor level (9). In Esmaili article mentioned that the documentation of history sheet by intern, residents and stager student are in "average", "average" and poor level, and in progress note all group are in poor level of documentation and in summery sheet residents and stager student have a good performance (10). In Tavakoli's study 56% of respondent that the poor supervision of attendant on performance of interns and residents is the cause of poor documentation (11). 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 (12).

In Mazandaran province, there studies have been conducted on document registration (12-14) that didn't include any aspects of the present study. This research is one of the steps will be taken to modify documentation determining the present conditions about documentation. The results of this study may be a valid and reliable tools for health- medical authorities to get the health goals.

2. METHODS

The present study was cross-sectional. Admission sheet and discharge summary, case summary, medical history and progress note in medical record of the patients hospitalized at 16 affiliated hospitals of Mazandaran University of Medical Sciences (MazUMS) in 2014 were reviewed. Check list was the data collection tool in which there were 62 items for data elements in admission sheet, 25 items in case summary sheet, 37 items in the history sheet and 13 items in progress note chart. In order to simplify the reporting of the data, the data classified in the admission sheet as 6 categories, and in the case summary sheet with 5 categories, and in patients' history sheet with 5 categories, in progress note with 5 categories. Regarding to the lack of a value for the \underline{p} parameter in previous studies, this parameter was considered 50% and considering Alpha equal to 5% and \underline{d} equal to 5% the sample volume was calculated 381. In the next stage, each specific field of study was considered as a category and the number of needed

samples for each category was determined regarding to the proportion of the inpatients in 2012. In the final step, the cases were extracted randomly by referring to the archives of medical record of the hospitals and the data were documented. SPSS software used for data analysis. The overall assessment of the documentation rate was considered as 95-100% equal to "good", 75-94% equal to "average", and less than 75% to poor. In order to consider the ethical points and the research rights in the final report, it was avoided to mention the names and identity of the doctors, patients and so on.

3. RESULTS

Data registration average in admission sheet of the teaching or university hospitals was 53% and in other hospitals it was 52%. The average of data registration in summary sheet of teaching hospitals was 74% and 73% for non-teaching hospitals. The average of data registration in history sheet in teaching hospitals was 64% and 74% in non-teaching hospitals. The average of data registration in the sheets of disease progress in teaching hospitals was 75% and 86% in non-teaching hospitals. In all of the four sheets the average was

Sheet name group date classified	Demographic	Diagnostic	Discharge	Case man- agement	Verifications	Permissions letters	Progress note	History	Progress note number	Total
Admission	78	41	86	22	81	97	-	-	-	53
summery	62	87	78	77	96	-	-	-	-	74
progress note	92	-	75	-	95	-	94	-	61	78
History	95	46	77	-	93	-	-	61	-	59
Total	81	58	79	74	91	97	94	61	61	60

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

Order	Specialty	Frequency	Order	Specialty	Average
1	Internal medicine	52	8	Psychiatry	56
2	Pediatrics	50	9	Cardiology	59
3	Gynecology	29	10	Neurology	63
4	General surgery	36	11	Infectious	67
5	Ophthalmology	28	12	Dermatology	60
6	ENT	23	13	Orthopedics	56
7	Neurosurgery	11	14	Urology	59
Grand total					60

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

Order	Hospital name	Average	Order	Hospital name	Average
1	GhaloGah	56		Zakariya al-Razi	66
2	Emam Behshahr	57		Emam Reza Amol	60
3	Shohadaye Behshahr	59		17Sharivar Amol	61
4	Emam hossein Neka	63		Fereidonkenar	57
5	Zare	64		Chaloos	43
6	Emam Sari	59		Kelardasht	56
7	Fatematoz-zahrah	58		Tonekabon	55
8	Avicenna	62		Ramsar	61
Grand total					60

Table 3. The Documentation Average of all the Sheets Based on the Educational Department Specialties of Mazandaran University of Medical Sciences 2014.

60% and the average of registering all the pages in teaching hospitals was 61% and 58% in non-teaching hospitals. The other results of this study are shown in the Tables 1 to 3.

4. DISCUSSION

One of the duties of caregivers for patients and offered care is to documentation on patient record it. In this study, the quantity of registering the documents in the four main sheets has been paid attention. The reason of choosing these four pages is the importance of these sheets for applicants and specially the doctors and also the inter-relation of these sheets with other sheets (12-20) because most of the time in legal cases, the case briefs and admission sheets can meet the demands and needs. In some legal claims also while differences the sheets of disease progress note and patients' history can be helpful.

The results of the present study have shown that the average documentation of admission sheet registration is evaluated "poor". It is obvious that doctors, nurses, admission staff, medical record staff, ward secretary have participated to register this sheet and they have signed the bottom of the sheet and verified the data. Signatures show the verification of the documentation. Do the signatures verify when something is not registered? In other words, they verify anything unregistered with their signatures. This problem was shown 100% in the study of Rashida and 99% in the study of Seyf Rabiee about the nurses. It means, despite the lack of document registration they have signed the sheets and they have had to Problems (12, 1). In the study of Rangraz Jeddi and etc. who dealt with investigating the documentation rate in the emergency record departments, respectively, the medical and admission staff 17% and nurse 11% have failure to register (6). In an overall view, there are not any differences in documentarians because each data element has been designed so purposefully that in cases of failure to register, the relevant data will not be obtained. Another aspect of examining the admission forms based on the categorized data in the present study showed that demographic data registration in the average and diagnostic levels was poor.

In the study of Mashofee with the same classification method, the documentation of identifying information was 86% and 4.3% were diagnostic information (7). This similarity shows that frequently the doctors didn't attention to the admission sheets. Of course, maybe the summary forms are the reason of the poor rate of registration which some data elements are in both of the forms similarly. But it must be remembered that each form and sheet has its own importance and efficacy and may be applied for patient independent on other forms. In review of other parts of admission sheets which were designed as back and front gape, the consent paper was designed on the back of the form, but in the present study, 10 patients (6.2%) were not asked to fill the consent paper. Even until the end of treatment period and discharge, the time of final review by the ward secretary and before discharge from the ward, the time of primary submission and review by medical record staff and archives, this problem was not paid intentioned. It should be noted that receiving permission letters from the patients is the duty of medical record staff. It means that treatment actions are taken with the permission of patients which permission must be received from

the patients based on law, or the doctors will be responsible for any cones quinces (20). In the study of Shaiktaheri only 2 patients were not asked to sign consent and 1.2% of the patients in the study of Hajavi were not asked to submit consent and permission letter (21-22). Failure to register the permission letter may need further training in order to change the medical record staff attitude and more understanding of their responsibilities toward permission letters (23-24). But it doesn't mean that the care team staff forgets their duties to check the pages of permission letters. Of course, there are other ways to obtain permission letters which the necessary sub-structures must be provided to perform them (25).

Summary sheet assessment which is actually the abstract of the offered services in one sheet showed that it is in a "poor" level. The data elements of this sheet are completed by the doctors and based on the documents in other sheets. Patients often ask for consultation and going on their treatment from other doctors. It seems that the sheet of summary is really the reflection of the care givers' performance. In the study of Esmaili Doki, the performances of the assistants and interns were "good" in completing this sheet (19).

Review of the patients' history sheet showed that it was "Poor". Frequently, the patient history forms are filled as soon as the patients enter the hospitals before offering any care with obtaining and registering some history and physical examinations. At the end of filling this form, the doctors plan seems that treatment will be nonsense and meaningless without exact filling of this sheet. In the study of Esmaili also the performance of assistants and interns was "Fair" and the performance of stager student was "Poor" (10).

The examination of the disease progress note sheet was evaluated "Poor". Of course, the present form sheets which have been designed and passed by the ministry of health follow a compositional frame, so in the present quantitative study, it has been dealt with its lack of complete documentation and numbers of notes. In the study of Esmaili which was a quantitative study, the performances of sheet of disease progress were evaluated poorly (10). 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 (20).

The overall assessment showed that with exception of Taleghani hospital in Chaloos, there were no differences among the other hospitals and all were in poor conditions. Of course, in the study of Esmaili who dealt with the students' performance in an educational hospital, student's overall performance was fair (10). In Rangraz Jeddi's study, it was evaluated fairly desired and in Seyf Rabiees' study, there was no significant difference (1, 6). In this case, it can be concluded that it must be paid attention to all the hospitals in order to improve the conditions. For example, if its' going to perform educational programs, it should include the participation of all educational and other hospitals.

The performance assessment of specialty groups showed that there was no difference in the specific expert groups. In the study of Abassi, the specialty of Ear, Nose and throat had the highest rate of defection and maxillofacial specialty had the least defections (16). It may be resulted from the equity

of the knowledge level or the rate of importance of specialty groups to documentation. It should be noted that, in many studies, the positive effects of education in different groups of documentation were dealt with (2, 3, 7).

5. CONCLUSION

So as an overall guidance, it seems that inclusion of continuous and progressive educational plans of documentation and considering the various and quick changes in the science of patient care are necessary and inevitable. Also, the required instructions including the documentation methods, the registered documents feedback, praise or punishment are helpful and studying the effects of each of them needs team work and organized examinations.

- Conflict of interest: None Declared.
- Acknowledgements: The authors would like to thank the staff of Medical Records and Health Information technology in affiliated hospitals of Mazandaran University of Medical Sciences for their help and commitment throughout the completion of this research.

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