

ANALYSIS OF INPATIENT MEDICAL RECORD SERVICE MANAGEMENT BASED ON MEDICAL RECORD SERVICE STANDARDS BETWEEN GENERAL HOSPITAL ROYAL PRIMA MEDAN AND ROYAL PRIMA MARELAN

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Abstract. Inpatient medical records play a crucial role as a source of data and health information for inpatients, supporting their treatment and care planning. One of the main factors contributing to issues in inpatient medical records management is the lack of discipline among those responsible for handling patients when filling out medical records. This can lead to discrepancies in inpatient medical record management, preventing it from aligning with established medical record service standards. The purpose of this study was to analyze the management of inpatient medical records based on medical record service standards. This research employed a quantitative analytical approach with a cross-sectional design. Data analysis was performed using univariate analysis, bivariate analysis with the chi-square test, and multivariate analysis with multiple logistic regression at a 95% confidence level ($\alpha=0.05$). The results indicated that the implementation of inpatient medical record management based on medical record service standards at Royal Prima Medan Hospital and Royal Prima Marelan Hospital was significantly influenced by work motivation ($p=0.001$) and supervision ($p=0.000$). Meanwhile, the variables that did not have a significant effect were length of service ($p=1.000$), education ($p=0.848$), and teamwork ($p=0.241$). Among these, the supervision variable was the most dominant factor, with an Exp (B) / OR value of 19.542. It is recommended that hospital leadership enforce close supervision (waskat) for all medical record employees and provide motivation through seminars and training programs to enhance the implementation of inpatient medical record management based on medical record service standards.

Keywords: Management, Medical Records, Inpatient.

I. INTRODUCTION

Hospitals are one of the organizations that have been carried out by professional medical personnel to organize well starting from permanent medical infrastructure, medical services, nursing care, diagnosing and also treating several diseases experienced by patients [1]. Quality health services are efficient health services, and if health services are poor, it will be made in organizational services that often incur very expensive costs. Thus, health services are very well maintained, namely competitive health services [2]. Medical records contain written or recorded patient information on identity, anamnesis, laboratory, physical determination, diagnosis to medical actions given to inpatients, outpatients to emergency services [3].

Organizing medical records is a process of activities that begins when the patient arrives until the patient goes home or dies, which includes activities of recording patient medical data and handling medical record files, namely the activity of storing and retrieving medical record files for the purpose of borrowing medical record files [4]. Medical records are confidential and contain the patient's diagnosis results and notes on actions taken by health workers and doctors as well

as all records of medical activities carried out by patients during treatment [5]. Regarding time, medical records for inpatient services are generally completed and completed 2 x 24 hours after returning from hospitalization [5]. In this study, the researcher will examine the management of medical records for inpatients. The main factor causing the delay in taking inpatient medical records is the Human Resources (HR) factor, namely the lack of discipline of the doctors in charge of treating the patient in filling out medical records, especially in the medical resume. This can cause the management of inpatient medical records not to be in accordance with medical record service standards [6]. Based on the report from the medical records department at RSU Royal Prima Medan, the retrieval of medical record files for inpatients in 2024 with all patients still being treated or patients who had died was 1.17% and 98.83% of medical records had been returned. In addition, some of the medical records of inpatients did not comply with medical record service standards [6].

There are still obstacles in medical record management, namely incomplete medical records at RSU Royal Prima Marelan because the management did not pay enough attention to the incomplete filling of medical records because doctors did not have time to fill them in medical records of inpatients

do not comply with Standard Operating Procedures (SOP), minimal communication between doctors and nurses, and the absence of strict sanctions [7]. Several studies that have conducted research related to medical record management have obtained varying results.

The factors influencing medical record management are internal/individual factors consisting of abilities and skills and motivational factors. Meanwhile, external factors or management are reviewed from resource factors, leadership and organizational strategy [8]. The performance of medical record officers based on skills was good, but medical record officers in the coding and inpatient indexing section could not carry out their duties based on the completion period based on the Ungaran Regional Hospital work unit [9]. The medical records section is divided into two sections, namely the medical records section and the data processing section. The medical records section oversees the inpatient and outpatient Patient Registration Place (TPP), medical record file storage and retention, and distribution. While the data processing section oversees assembling, INA CBG's, data processing, administration, and visum et repertum.

The preliminary survey conducted by the researcher by observing the medical records section of inpatients at RSU Royal Prima Medan showed that medical records management had not been carried out properly. This can be seen from the archiving and processing of data or documents that were not organized so that patient documents piled up. The time for providing medical record files to the front office desk from 20 patients averaged 5.4 minutes while the standard response time determined by the RSU Royal Prima Marelán medical record installation was 3 minutes. Other problems found in the implementation of medical records at RSU Royal Prima Medan Medan ranged from several incomplete fillings of inpatient medical records (misfiles) to the occurrence of duplicate medical records. This can cause complaints both from the doctors regarding medical services and from the patients who are hospitalized.

II. RESEARCH METHODS

The type of research used in this study is quantitative analytical study research, namely research conducted to obtain explanations that will be studied. Quantitative analytical research aims to analyze the management of inpatient medical records based on medical record service standards at RSU Royal Prima Medan and RSU Royal Prima Marelán. The research design used is cross-sectional, namely the research variables are studied directly at the time of the study.

This research was conducted at RSU Royal Prima Medan and RSU Royal Prima Marelán. The reason for choosing this location is because the number of samples is sufficient and there has never been a study with the same title as this study. This research was conducted from May 2024 to June 2024. Population is a generalization area consisting of objects or subjects that have certain quantities and characteristics determined by researchers to be studied and then drawn conclusions (Sugiyono, 2015).

The population of this study was all medical record employees at RSU Royal Prima Medan as many as 70 people and RSU Royal Prima Marelán 45, so the total population was 115 people.

A sample is a portion taken from the entire object being studied and is considered to represent the entire population [10]. The sample in this study was the entire population, which was 115 people (total sampling). Where specifically the number of medical recorders was 9 people. Validity test is used to measure the validity of an instrument used, meaning it is able to express what is being measured. Validity test was conducted at RSU Royal Prima Medan on 20 people. The test conducted was to determine the correlation between the question items and the total score of the construct or variable. A construct is declared valid if there is a positive and significant correlation. The correlation value must be greater than 0.444 or the Corrected Indicator-Total Correlation value in the SPSS output is greater than 0.444 using the test *Pearson Product Moment* [11]. For more details, please see in the following table:

TABLE 1.
Results of Validity Test of Research Variable Questionnaire

No.	Variables	r-count	r-table	Caption
1.	Work motivation -1	0.748	0.444	Valid
2.	Work motivation -2	0.910	0.444	Valid
3.	Work motivation -3	0.500	0.444	Valid
4.	Work motivation -4	0.876	0.444	Valid
5.	Work motivation -5	0.735	0.444	Valid
6.	Work motivation -6	0.447	0.444	Valid
7.	Work motivation -7	0.465	0.444	Valid
8.	Work motivation -8	0.832	0.444	Valid
9.	Work motivation -9	0.504	0.444	Valid
10.	Work motivation -10	0.656	0.444	Valid
1.	Teamwork -1	0.847	0.444	Valid
2.	Teamwork -2	0.447	0.444	Valid
3.	Teamwork -3	0.672	0.444	Valid
4.	Teamwork -4	0.929	0.444	Valid
5.	Teamwork -5	0.748	0.444	Valid
6.	Teamwork -6	0.474	0.444	Valid
7.	Teamwork -7	0.676	0.444	Valid
8.	Teamwork -8	0.444	0.444	Valid
9.	Teamwork -9	0.451	0.444	Valid
10.	Teamwork -10	0.918	0.444	Valid
1.	Supervision-1	0.590	0.444	Valid
2.	Supervision-2	0.655	0.444	Valid
3.	Supervision-3	0.483	0.444	Valid
4.	Supervision-4	0.500	0.444	Valid
5.	Supervision-5	0.867	0.444	Valid
6.	Supervision-6	0.524	0.444	Valid
7.	Supervision-7	0.447	0.444	Valid
8.	Supervision-8	0.814	0.444	Valid
9.	Supervision-9	0.828	0.444	Valid
10.	Supervision-10	0.720	0.444	Valid
1.	Implementation-1	0.494	0.444	Valid
2.	Implementation-2	0.602	0.444	Valid
3.	Implementation-3	0.685	0.444	Valid
4.	Implementation-4	0.538	0.444	Valid
5.	Implementation-5	0.454	0.444	Valid
6.	Implementation-6	0.445	0.444	Valid
7.	Implementation-7	0.671	0.444	Valid

This research uses measurements reliability done in one shot way or single measurement, that is, the measurement is only once and the results are compared with other questions or measures correlation between answers to questions. The statistical test used is the Cronbach Alpha. A construct or

variable is said to be reliable if the results Cronbach Alpha statistical test gives a value > 0.600 [11].

III. RESULTS AND DISCUSSION

A. Respondent Characteristics

Based on the research results, the characteristics of the respondents consist of from the respondent's last education and length of service. More details can be found seen in the following table.

TABLE 2.

Frequency Distribution of Respondents Based on Age Characteristics

No	Age	Hospital				Amount	F%
		Royal Hospital First Class Medan		Royal Hospital First Marelan			
		f	%	f	%		
		f	%	f	%		
1.	20-30 years	28	40	8	17.8	36	31.3
2.	31-40 years	28	40	28	62.2	56	48.7
3.	>40 years	14	20	9	20	23	20.0
Amount		70	100.0	45	100.0	115	100.0

Table 2 above shows that most of the respondents in RSU Royal Prima Medan is mostly aged 20-30 years and 31-40 years years each 28 people (40%), a small number are >40 years old as many as 14 people (20%). Respondents at RSU Royal Prima Marelan aged 31-40 years as many as 28 people (62.2%), a small number aged 20-30 years as many as 8 people (17.8%). Based on the research results, univariate analysis of old variables work can be seen in the following table.

TABLE 3.

Frequency Distribution of Respondents Based on Length of Service Variable

No	Age	Hospital				Amount	F%
		Royal Hospital First Class Medan		Royal Hospital First Marelan			
		f	%	f	%		
		f	%	f	%		
1.	<10 years	43	61.4	22	48.8	65	56.5
2.	>10 years	27	38.5	23	51.2	50	43.5
Amount		70	100.0	45	100.0	115	100.0

Table 3. above shows that based on the length of service, respondents at Royal Prima Medan Hospital mostly worked <10 years as many as 43 people (61.4%), the rest worked >10 years as many as 27 people (38.5%). Respondents at Royal Prima Marelan Hospital mostly worked >10 years as many as 23 people (51.2%), a small portion of respondents' age worked <10 years as many as 22 people (48.8%). Based on the research results, the univariate analysis of work motivation variables can be seen in the following table.

B. Multivariate Analysis

To analyze the factors that influence the implementation of inpatient medical record management based on medical record service standards, a multivariate data analysis was simultaneously carried out using multiple logistic regression tests through several steps:

- 1) Conducting the selection of potential variables to be included as model candidates. The variables selected as candidates are variables that have significant values.
- 2) In this modeling, the candidate variables are variables that have a p value <0.25 in the bivariate analysis (chi-square test) that are entered together in the multivariate analysis. The use of statistical significance of 0.25 as a requirement in the multiple logistic regression test to allow variables that are covertly considered less related are actually very important in substance to be included in the multivariate model.
- 3) Based on the results of the bivariate analysis, the variables that can be used as candidate models in the multiple logistic regression test in this study because they have a significant value of <0.25 are 4 variables, namely work motivation (p = 0.000), teamwork (p = 0.000), completeness of facilities and infrastructure (p = 0.000), and supervision (p = 0.000). The variables that are not used as candidate models in the multiple logistic regression test in this study because they have a significant value >0.25 are 2 variables, namely length of service (p = 1.000), and education (p = 0.848). More details can be seen in the following table.

TABLE 4

Candidate Models for Multiple Logistic Regression Test

No	Variables	P-Value	Information
1.	Length of work	1,000	Not a Model Candidate
2.	Work motivation	0,000	Model Candidate
3.	Teamwork	0,000	Model Candidate
4.	Supervision	0,000	Model Candidate

- 4) Furthermore, testing was carried out with multiple logistic regression testing simultaneously with the forward conditional method to identify the most influential variables on the implementation of inpatient medical record management based on medical record service standards. The forward conditional method is to enter one by one the variables from the results of variable correlation and meet the statistical significance criteria to enter the model, until all variables that meet these criteria enter the model. The first variable to enter is the variable that has the largest partial correlation with the dependent variable and that meets certain criteria to enter the model.

Based on the results of the multiple logistic regression test that has been carried out conducted showed that of the 4 variables tested, 2 variables influenced the implementation of inpatient medical record management based on medical

record service standards, namely work motivation and supervision.

C. Length of Service Has No Effect on the Implementation of Inpatient Medical Records Management Based on Medical Records Service Standards.

Based on the results of the study, it shows that from the bivariate analysis, the variable of length of service has no effect on the implementation of inpatient medical record management based on the medical record service standards of Royal Prima Medan Hospital in 2022, $p = 1,000$. Respondents with a length of service <10 years, most of the implementation of inpatient medical record management based on medical record service standards are in the good category (66%). Likewise, respondents with a length of service >10 years, most of the implementation of inpatient medical record management based on medical record service standards are also in the good category (54%). In line with the results of research conducted by [12] at the University of Riau that there are two factors that influence employee performance, the first factor is the individual factor consisting of ability and skills and motivation. However, it can also be seen that the ability and skill factors with the sub-indicator of length of service or work experience are considered to have less influence on employee performance. Research conducted by [13] at the PDHI Yogyakarta Hospital, the minimum length of service for respondents was 1 year and the maximum was 9 years. The average length of service of medical records officers at PDHI Hospital Yogyakarta is 5.14 years.

This is clearly different from [14] that the longer a person works in an organization, the higher their work performance. The length of service or tenure of medical records officers affects employee performance [15] This is in accordance with the statement from [16] which states that one of the internal factors that affects employee performance is work experience. The length of service of medical records officers in this work is influenced by several things, including a pleasant work environment and good cooperation between employees.

According to the researcher, the results of this study indicate that the implementation of inpatient medical record management based on medical record service standards is not influenced by the length of service of medical recorders in government hospitals in Medan City. This is because medical record employees who have worked <10 years and those who have worked >10 years are the same in implementing inpatient medical record management based on medical record service standards. The number of medical record employees who have worked <10 years (66%) is also almost the same as those who have worked >10 years (54%). In implementing inpatient medical record management based on medical record service standards, the two categories are also almost the same, namely both groups implement inpatient medical record management well so that when statistical tests were carried out, there were no changes in the two category groups.

D. Work Motivation Influences the Implementation of Inpatient Medical Record Management Based on Medical Record Service Standards

Based on the results of the study, it shows that from the multivariate analysis, the work motivation variable has an effect on the implementation of inpatient medical record management based on the medical record service standards of Royal Prima Medan Hospital $p = 0.001$. The work motivation variable which has an Exp (B)/ OR value = 12.061 means that medical record employees who have high work motivation have the opportunity to implement inpatient medical record management based on medical record service standards well by 12.0 times higher than medical record employees with low work motivation.

Research conducted [17] at RSUP dr. Saiful Anwar Malang found that medical recorders lack motivation and do not receive sanctions, there is a lack of discipline among officers and there is no clear SOP (Standard Operating Procedure) regarding the implementation of the distribution of medical record documents. The results of this study differ from [18] study at Lavalette Hospital Malang which found that there was no significant relationship between work motivation and the performance of medical recorders. Likewise, research conducted by [12] found that motivation affects employee performance. The results of the journal scoping review conducted [19] that motivation consists of intrinsic and extrinsic factors that significantly influence the performance of Medical Recorders and Health Information (PMIK).

Motivation is very important to encourage work enthusiasm. Motivation is influenced by family background, community environment, culture and religious values that are adhered to. Someone who sees work as a burden and compulsion will have low performance. Conversely, someone who views work as a need, challenge and achievement will produce high performance [20]. Work motivation is the willingness to work that arises because of the drive from within the employee as a result of the overall integration of personal needs, the influence of the physical and social environment where its strength depends on the integration process [21]. Work motivation is a driving force that causes an employee to be willing and willing to mobilize the ability to form expertise and skills, energy and time to carry out various activities that are his responsibility and fulfill his obligations in order to achieve the goals and various organizational targets that have been previously determined [22].

According to the researcher, the results of this study prove that the implementation of inpatient medical record management based on medical record service standards at RSU Royal Prima Medan is influenced by work motivation. The motivation of medical records employees arises both from within themselves (as well as motivation from outside themselves (co-workers, work environment, superiors, etc.) in completing their tasks which are their daily workload in the medical records department. Employees do not delay the work given which is already their responsibility because they are sure they can carry out the work according to the specified time. This condition is also influenced by the fact that medical

records employees have a desire to improve their competence in the medical records section so that they will carry out their work well, especially in the implementation of inpatient medical records management based on medical records service standards. Motivation is very important in working because with this motivation, a medical records employee will try as hard as possible to carry out the work according to what has been assigned to him. However, some medical record staff stated that the supervision carried out by superiors was still lacking in the implementation of inpatient medical record management based on medical record service standards. Superiors were considered not to have prepared objectives and standards for the implementation of work in medical records. Superiors rarely measured work results to determine whether inpatient medical record processing staff were doing their work in accordance with standards or objectives. Superiors did not routinely compare facts with standards for the work of inpatient medical record processing staff. Superiors also did not routinely check the work results of inpatient medical record processing staff at the end of work hours.

IV. CONCLUSIONS

Based on the results of the research that has been conducted and presented in the previous chapter, the following conclusions can be drawn: Length of service does not affect the Implementation of Inpatient Medical Records Management Based on Medical Records Service Standards. Work motivation influences the implementation of inpatient medical record management based on medical record service standards. Teamwork does not affect the implementation of inpatient medical record management based on medical record service standards. Supervision influences the implementation of inpatient medical record management based on medical record service standards. The supervision variable is the most dominant variable or has the greatest influence on the implementation of inpatient medical record management based on medical record service standards with a value of $\text{Exp(B)/OR} = 19.542$. Medical record employees who stated that supervision was carried out well by their superiors on medical record employees improved the implementation of inpatient medical record management based on medical record service standards well, compared to medical record employees who stated that supervision was still lacking.

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