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A Service Quality Review of Medical Record Department In Private Hospital, South Jakarta

Eka Widya Rita P.^{1,*}, Ratna Indrawati¹, Lily Widjaja¹
¹Faculty of Health Science, Esa Unggul University

The medical record is a document containing the patient's identity, history, physical examination, diagnosis, supporting tests and patient treatment. Here, the excellent medical record system service is one of the standard hospital services that function to help the patient care process. Thus, in this study to obtain empirical evidence and field data regarding the input, process, output, and impact in the medical records department at the outpatient installation of a Class-B Private Hospital at South Jakarta. Here, we used the data observation in June-July 2020 using the Mix Method with retrieval technique of Purposive Sampling sample of 72 medical records and 10 medical record staff respondents. The study results shows that the completeness of medical records reached 93.1% with the accuracy of the data around 87.5% and the distribution reached 58.3% with an average distribution time of 11 minutes / medical record. Also, in the effective category, the reliability value was 92%, responsiveness in was 100%, assurance was 100%, and empathy was 100% while tangibles in the less effective category were 67%. Thus, it means that the medical records service system in the outpatient installation at X Private Hospital Class B, South Jakarta, was in an effective category. Further research should be conducted to obtain more in-depth information.

Keywords: Medical Records, Service Quality, Hospital.

1. INTRODUCTION

The administration of medical records is one of the activities carried out to achieve complete, accurate, and timely services, which meets legal requirements so that the resulting information is more effective and efficient [1]. A medical record is a compilation of related facts about a patient's life and medical history, including past and present illnesses and treatments has studied by health workers who contribute to patient care [2]. Medical records are an essential tool in the diagnostic and therapeutic pathways of patients which are becoming increasingly crucial for administrative reporting. In some countries, such as Italy, medical records are used by third-party payments, also for the evaluation of the suitability of health care facilities. Here, a medical record is a file that states who, what, why, where, when and how services a patient receives while being treated or undergoing treatment [3]. Based on the initial survey of the study, out of 30 outpatients, 47% had a delivery response time of

more than 10 minutes, and incomplete medical records remained existed. The delay in providing the medical record files has an effect on medical services to patients. The longer the provision of medical record files, the longer the time for medical services provided to patients. A medical record management as the task of ensuring that all recorded information, regardless of form and medium, is managed in an economical and efficient manner [4]. Good medical record management governance, recording systems, medical record management technology and infrastructure, medical record filing processes, and medical record management human resource capabilities are essential for effective medical record management. A medical record must support accountability, security, integrity and completeness, and are essential for effective service delivery to the community [5, 6]. A medical record is not appropriately managed, health services can be negatively affected. An essential element of medical record management is that medical records are created

*Email Address: widyapanjaitan@email.com

and stored so that they are available to intended users whenever needed [7, 8].

2. METHODOLOGY

In this study was conducted by taking data from June-July 2020 over X Private Hospital Class B, South Jakarta. Here, a descriptive research method with a mixed-method approach that combines qualitative and quantitative research methods are used in this study. The qualitative research population was conducted upon ten medical record officers, and the quantitative research was outpatient medical records in 2019 with an average number of outpatients of 242 people/day. Sampling was done by purposive sampling using the Slovin formula so that the number of medical records to be observed was 72 medical records. Data analysis used chi-square analysis to determine the suitability of the distribution of records with the achievement of the Key Performance Indicator (KPI) of the medical record services quality of the outpatient installation at X Private Hospital Class B, South Jakarta.

A. Health Worker Psychological

The results of the Chi-Square show 3 cells with an expectation value <5 , meaning that there is no expected value less than 5. The minimum expectation value is 0.35, meaning that there is no expected value less than 5, then the Chi-square test conditions are met. Furthermore, analysis with 2 X 2 tables and the formula "Continuity Correction" is used. From the Chi-square test, the p-value or sig is 0.000; by using an alpha of 0.05, then the p-value ≥ 0.05 or the calculated χ^2 value of $57,357 \geq \chi^2$ table of 3,841. This means that Hypothesis 1 is not accepted, so there is no match between the results of the completeness of the medical record form and the KPI for the quality of medical record services.

The results of Chi-Square show one cell with an expectation value <5 , meaning that there is no expected value less than 5. Then the minimum expected value is 1.13, meaning that there is no expected value less than 5, then the Chi-square test conditions are met. Furthermore, because of the analysis with 2 X 2 tables, the formula "Continuity Correction" is used. From the Chi-square test, the p-value or sig is 0.000; using an alpha of 0.05, then the p-value ≥ 0.05 or the calculated value χ^2 is $63,147 \geq \chi^2$ table of 3,841. This means that Hypothesis 2 is not accepted, so there is no match between the results of the accuracy of the medical record data with the KPI for the quality of medical record services. The Chi-Square result shows 0 cells with an expectation value <5 , meaning that there is no expected value less than 5. Then the minimum expected value is 12.50 meaning that there is no expected value less than 5, then the Chi-square test requirements are met. Furthermore, because of the analysis with 2 X 2

tables, use the formula "Continuity Correction" is used. From the Chi-square test, the p-value or sig is 0.000; using an alpha of 0.05, the p-value ≥ 0.05 or the calculated value of χ^2 is $67,944 \geq \chi^2$ table of 3,841. This means that Hypothesis 3 is not accepted, so there is no match between the results of the distribution of medical records and the KPI for the quality of medical record services.

H₁: There is match between the results of the completeness of the medical record form and the KPI for the quality of medical record services.

H₂: There is match between the results of the accuracy of the medical record data with the KPI for the quality of medical record services.

H₃: There is match between the results of the distribution of medical records and the KPI for the quality of medical record services.

Thus, the hypotheses in this study are showed on Figure 1, as follows:

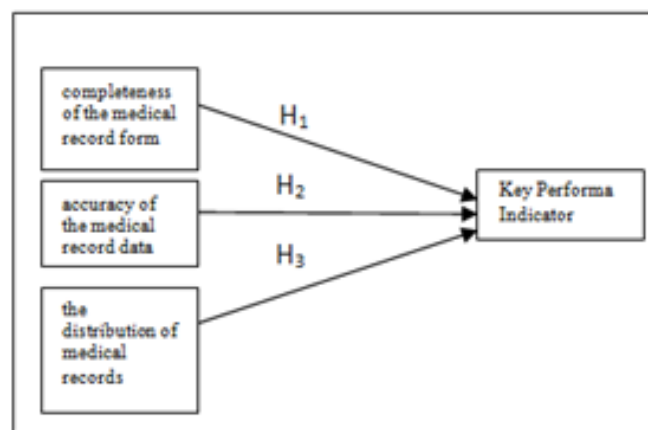


Figure 1. Framework Conceptual Study

3. RESULT AND DISCUSSION

A. Completeness of Medical Record Forms

In order to achieve the result, each data observation at medical record at X Private Hospital Class B, South Jakarta was processed using quantitative analysis to completeness of medical record. Based on the results we obtain the completeness of medical records from a total sample of 72 medical records reached as much as 93.1%, while the incomplete number was 6.9%. These findings mean that the first hypothesis is not compatible with the achievement of 99% medical record quality indicators since it was still below 99%. However, the measure standard from Dean J Champion criteria must be have effective factors due to the value obtained is in the 76-100% interval. Thus, the incomplete forms are the ones with no integrated patient progress record form (CPPT), blank consultation forms and no nursing record forms (see Table I).

Table I. Completeness of Medical Records

No.	Completeness of Medical Records	Indicator		Total (%)
		Achieved (%)	Unachieved (%)	
1	Complete	93.1	0	93.1
2	Uncomplete	0	6.9	6.9
	Total	93.1	6.9	100

The reviewing patient medical records is the most widely applied technique for investigating side effects in hospitals. Here, the determining recorded information can affect the visibility of adverse events. Low-quality information in patient records can be a cause or consequence of the low quality of care and is associated with higher rates of side effects. The better quality of health care data in patients' medical records can influence clinical and administrative decision making in the economics of patient health and safety. The patient's medical record serves two essential functions such as first is to help support direct patient care by assisting clinicians in clinical decision making and providing communication. The second is to provide a legal record of the care provided and assist as a source of data to support clinical auditing, research, resource allocation, monitoring and evaluation, epidemiology, and service planning. Thus, medical records are vital documents used to communicate and document important information among healthcare professionals. Incomplete medical records from patient care and result is a dissatisfaction with different patients. To overcome this problem, the completeness of medical records is part of the national key performance indicator to monitor the magnitude of the problem and intervene according to needs.

B. Accuracy of Medical Record Data

Table II shows the accuracy of the complete medical record data from a total sample of 72 medical records reached as much as 87.5% with incomplete data reached 12.5%. However, we obtain the effective value around 76-100% interval. Here, we have a problem filling out medical records are the incomplete date and time of filling in medical records, and unfound name and signature of the care provider (PPA) performing the service. All entries in the medical record must be complete. A medical record is considered accurate if it contains sufficient information to identify the patient, support a diagnosis/condition, justify treatment, treatment and treatment outcomes, and provide continuity of care among health workers. All entries in medical records must be dated, timed and authenticated, in written or electronic form, by the person responsible for providing or evaluating the services provided.

Table II. Accuracy of Medical Record Data

No.	Accuracy of Medical Record Data	Indicator		Total (%)
		Achieved (%)	Unachieved (%)	
1	Accurate	87.5	0	87.5
2	Inaccurate	0	12.5	12.5
	Total	87.5	12.5	100

Furthermore, the one of most important reasons for incomplete records is that doctors and surgeons believe that the medical or surgical care needed by patients is more important. However, the treatments document data is not considered as a part of the treatment process. The quality of medical records reflects the quality of health care provided by doctors and an efficient medical record system facilitates medical care assessment and research. Accurate, timely and accessible health care data plays a vital role in improving the quality of health services. Improving quality and disseminating quality information on time is essential if health authorities are to maintain health care at optimal level.

Here, increasing medical record completeness services is an important step to improve the quality of health services. It can also provide valuable information to help measure progress and effectiveness. Medical records have become critical legal documents; good medical records are essential not only for current and future patient care but also as legal documents to protect patients and hospitals from litigation.

C. Distribution of Outpatient Medical Records

After researching by collecting data through tests and data analysis on 72 medical records with 58.3% of the total distribution met the standard (≤ 10 minutes) we obtain 41.7% did not meet the criteria (> 10 minutes) with an average time around 11 minutes/medical record (see Table III). Factors influencing the delay in providing medical record files in the outpatient clinic could be due to input factors including human resources or medical record officers, facilities and infrastructure. The medical record storage room in X Private Hospital Class B, South Jakarta, is located on the B1 floor on serves two different buildings while the building have one on the 1st, 2nd and 3rd floor, and building two on the 1st, 2nd and 6th floor. Inadequate facilities are in the form of the full capacity of storage racks. Moreover, medical records are sometimes not found on the shelves or misplaced. Those factors significantly impact the length of distribution time of outpatient medical record documents to exceed the minimum service standards at Ministry of health Republic Indonesia act (see Table III).

Table III. Time Duration for Distributing Outpatient Medical Records

No	Distribution of Medical Record (Min)	Indicator		Total
		Achieved (%)	Unachieved (%)	
1	1-10	58.3	0	58.3
2	11-30	0	41.7	41.7
3	>31	0	0	0
	Total	58.3	41.7	100

Furthermore, the research above claims that distribution time for medical record files needed South Tangerang City Hospital is 27 minutes/medical record. The average time for the provision and distribution of medical record files at the Polyclinic of Yogyakarta Regional General Hospital is 41 minutes 43 seconds. The fastest time for providing and distributing medical record files is 5 minutes, while the slowest time for the same case is 2 hours 33 minutes. Therefore, this case does not comply with the Ministry of Health regulation which stipulates that provision and distribution of health record files are ≤ 10 for outpatients. Machines, people, methods and environment are the influential factors behind them. Here, the distribution of medical records at Hospital X with an average time duration of 13 minutes. It is partly due to the lack of medical record officers, especially the distribution department, and the different floor location of the service area with storage room, causing delays in distributing medical records to the service unit. Thus, the total of 81 medical records shows that 33 medical record files (34.25%) had met the standard ≤ 10 minutes, and 48 medical record files (65.75%) had not met the minimum service standards (> 10 minutes), with an average distribution time of 12.30 minutes. One of the benchmarks in the quality aspect of health services is access to these services with an indicator of patient waiting time. As much as 23% of customers will leave or move from a health service provider due to long waiting times. Patients will choose another hospital to seek a better quality of service. The final result of an interaction of various components in the hospital management organization is the quality of service that has a system. In practice, patients do not expect a delay to get medical record documents. The provision and distribution of medical record files significantly affect medical services in fulfilling services to patients; a fast process is required in the condition. The implementation of rapid and precise distribution of medical record files is the main goal in the distribution of medical record files that influence the provision of health services to patients. In addition, a previous research was observed that the use of manual medical record systems in public hospitals and the use of registers when tracking files from medical record management systems is currently time-consuming. This study confirms that the challenges faced by general hospitals are loss of medical record files, tearing of files, missing diagnoses and long queues. On the contrary, the

problem has been going on for a decade without being tackled. The indication is that the integration of Information and Communication Technology can be the key to increasing the efficiency of the recording system in hospitals. It is according to the International Records Management Trust (IRMT) that, if medical records are not appropriately managed, health services can be affected negatively. An essential element of medical record management is that medical records are created and stored so that they can be made available to the intended users and whenever needed. Therefore, poor medical record management tends to harm patient care because the clinical treatment of patients depends on the case history contained in the medical file.

D. Dimensions of Medical Record Service Quality

The interviews with ten medical record officers obtained a medical record quality with 92% reliability, 100% responsiveness, 100% assurance, 100% empathy, and 67% tangibles, respectively. Based on the criteria result the services of the medical records department in the X Private Hospital Class B in South Jakarta must be 76-100% interval. However, the value of the tangibles is still below 75%, which means it remains less effective. The results of the interviews indicated that the HIS system in medical records often experienced problems or obstacles. One way to support services is by optimizing resources such as computerized system. It can be used not only in terms of a service speed but also for doctors and nurses to access online medical records. Thus, patients can be served quickly due to immediate access of patient's disease history (see Table IV).

Table IV. Dimensions of Medical Record Service Quality

No	Dimension	Result (%)		Total
		Yes	No	
1	Reliability	92	8	100
2	Responsiveness	100	0	100
3	Assurance	100	0	100
4	Empathy	100	0	100
5	Tangibles	67	33	100

In addition, a reliability is a ability to be relied on in demonstrating the promised services responsibly and accurately to consumers. Reliability means that the company keeps what was promised, both regarding delivery, problem solving and price. Reliability in providing services can be seen from the reliability in providing services in accordance with the level of knowledge possessed, reliability in being skilled in mastering the applied work field, reliability in mastering the field of work according to the work experience shown and reliability in using work technology. The dimension of assurance is employee knowledge and hospitality, as well as the ability of employees to accept or bring trust and comfort. The characteristics of this dimension are competence to provide service, politeness and a respectful attitude towards guests. This next dimension may be an essential part of a service where consumers feel safe and

secure. Here, an empathy is the only dimension that has a significant effect on customer satisfaction for all types of hospitals. In fact, in the case of private hospitals, empathy is the only dimension of service quality that has a predictive impact on customer satisfaction. The military hospital is the only type of hospital that has the same dimensions in the regression model, predicting customer satisfaction and return intentions. This is physical evidence and empathy. The tangibles dimension has a significant effect on customer satisfaction and returns intention only in the case of military hospitals. The implementation of medical record services depends on the human resources of medical record officers. With the fulfilment of medical record officers in quantity and quality, the service will be maximized. Human resources play an essential role in medical record services. This is because good medical record management requires a competent workforce in their field. In the end, the competence of medical record service providers will be in line with the services provided to patients and other health workers.

4. CONCLUSION

Based on the research results, the following conclusions were obtained the completeness and accuracy of the data strongly support accountability, security, and integrity in the delivery of effective services to patients. Good quality of medical record services will help to improve the quality of hospital services. The time required for distribution of medical records from the medical record unit to the service unit was 11 minutes. It exceeds the standard predetermined time (≤ 10 minutes/medical record). Judging from the dimensions of service quality in the medical records department at the outpatient installation of X Private Hospital Class B, South Jakarta, it is still in $> 75\%$ intervals, meaning that the quality of medical record services is still adequate. Furthermore, It is necessary to monitor the implementation of quality indicators to be in line with the KPI in X Private Hospital Class to support and improve the quality of hospital services so that the services provided are maximized. Moreover, to reduce patient waiting time, it is necessary to use an Electronic Medical Record to facilitate access to medical records. This is to avoid long waiting time as well as a long process of providing services by the health workers. Thus, the hospital management should issue a policy to conduct training on filling out medical records for caregivers so that the quality of medical records is improving. There is also a need for the head of the medical record unit to monitor and evaluate the implementation of quality indicators and the implementation of medical record unit services regularly. Also, a change in the flow to speed up the process of

distributing medical records and the use of electronic medical records are needed.

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References

- [1]. Huffman, E. (1994). Health Information Management Tenth Edition Illionis. Phycian Record Company. New York-USA.
- [2]. Wijesekera, Nandalal. (2013). Documenting medical records, Australia, School of Population Health, The University of Queensland
- [3]. Shepherd, E and Yeo, G. (2003). Managing records: A Handbook Of Principles And Practice. London: Facet.
- [4]. Adeleke, I. T. A. O. Adekanye, K. A. Onawola et al. (2012). Data quality assessment in healthcare: 365-day chart review of inpatients' health records at a Nigerian tertiary hospital, vol. 19, no. 6, pp. 1039–1042, Journal of the American Medical Informatics Association.
- [5]. Tavakoli, N, M. Jahanbakhsh, M. Akbari, and M. Baktashian. (2015). The study of inpatient medical records on hospital deductions: an interventional study. Journal of Education and Health Promotion, vol. 4, article 38.
- [6]. Tola, Kasu., Haftom Abebe, Yemane Gebremariam, and Birhanu Jikamo. (2017). Improving Completeness of Inpatient Medical Records in Menelik II Referral Hospital, Addis Ababa, Ethiopia, Hindawi Advances in Public Health. <https://doi.org/10.1155/2017/8389414>.
- [7]. Wagida A. Anwar, Nahla F. Abo El Ezz, Doaa M. Elhossiney, Reham A. Abd Allah (M.B.B.Ch). (2016) Measurement of Completeness of Medical Records in Family Health Centre in El Shorouk City. The Egyptian Journal of Community Medicine Vol. 34 No. 3.
- [8]. WHO, (2006). Medical Records Manual: A Guide For Developing Countries Revised and Updated.
- [9]. Javed et all, (2018). Evaluation Of Outpatient Satisfaction And Service Quality Of Pakistani Healthcare Projects.
- [10]. Wedad, Abdelrahman. (2014). Medical Record Keeping: Clarity, Accuracy, And Timeliness Are Essential. BMJ ; 348 doi: <https://doi.org/10.1136/bmj.f7716>
- [11]. Luthuli L, Kalusopa T. (2018). The Management Of Medical Records In The Context Of Service Service Delivery In The Public Sector In KwaZulu-Natal, South Africa: the case of Ngewezezana Hospital.
- [12]. Shepherd, E and Yeo, G. (2003). Managing records: A Handbook Of Principles And Practice. London: Facet.
- [13]. Asunmo, A.O. and Yaya, J.A. (2016). Management and preservation of health records in some selected hospitals in Lagos state, 3(1): 1601-1605. Nigeria. International Journal of Information Research and Review.
- [14]. Zeithaml, V. A. (2003). Service Marketing (3rd ed.), Tata McGraw Hill, New Delhi.
- [15]. Calisir, Fethi., Cigdem Altin Gumussoy, Ayse Elvan Bayraktaroglu and Burcu Kaya (2012). Effects of Service Quality Dimensions on Customer Satisfaction and Return Intention in Different Hospital Types, Proceedings of the 2012, July 3 – 6, International Conference on Industrial Engineering and Operations Management Istanbul, Turkey.
- [16]. Skurka, Margaret A. (2012). Health Information Management: Principles and Organization for Health Information Services. Chicago: AHA press.

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