

The Relationship Between the Accumulation of Medical Record Documents and the Time Required to Retrieve Them

Fizrawati ¹, Wa Ode Sitti Budiatty ^{2*}, Rika Setyowati ³

^{1,2,3}Politeknik Baubau, Kota Baubau, Indonesia

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CORRESPONDING AUTHOR

Nama : Wa Ode Sitti Budiatty
Address : Politeknik Baubau
E-mail : de2usman.725@gmail.com

A B S T R A C T

At the South Buton District Hospital, documents are still piled up due to limited storage space and a suboptimal arrangement system. This condition is thought to affect the length of time it takes to retrieve documents, which impacts the smoothness of patient services. This study aims to analyze the relationship between the accumulation of medical record documents and the retrieval time of medical record documents. This research method is quantitative with a correlational design. The study population is all active medical record documents and medical record unit officers. Samples were taken using an accidental sampling technique with the number of documents observed according to the analysis needs. Data collection was carried out through direct observation using a checklist to measure the level of accumulation and time recording using a stopwatch to measure the duration of document retrieval. Data analysis used a correlation test to see the relationship between the two variables. The results showed that the level of accumulation of medical record documents at the South Buton District Hospital is classified as dense to very dense with less orderly arrangement. The average document retrieval time reaches 10-15 minutes, even longer when documents are piled up, exceeding the ideal service standard of ≤ 10 minutes. There is a significant and positive relationship between document accumulation and medical record document retrieval time, where the higher the level of accumulation, the longer it takes to retrieve documents.

INTRODUCTION

Medical records are a fundamental component of healthcare delivery systems. Every medical intervention provided to a patient must be documented systematically and accurately, serving both as a form of professional accountability for healthcare workers and as a basis for clinical decision-making (Valentina & Ritonga, 2021). Medical records function not merely as a history of a patient's illness but also as a source of continuous information to ensure the continuity of care. Without effective medical record management, healthcare processes are susceptible to administrative and clinical obstacles (Meliana et al., 2026).

In the context of hospital management, medical records play a strategic role in supporting service quality. These documents serve as indicators of documentation quality, the accuracy of medical interventions, and the efficiency of patient care workflows (Putra et al., 2025). A well-organized medical record management system enables healthcare workers to access patient information quickly and accurately. Conversely, a disorganized system can lead to service delays and information errors, ultimately reducing patient satisfaction (Sukarmi et al., 2025). Therefore, the management of medical record storage and distribution is a crucial aspect of efforts to improve hospital service quality.

In practice, a common issue encountered in regional healthcare facilities is the accumulation of medical record documents. This buildup can result from rising patient visit volumes, limited storage space, suboptimal filing systems, and a lack of periodic record retention and disposal procedures (Valentina & Ritonga, 2021 ; Farhansyah et al., 2023). Accumulated documents are difficult to organize systematically, potentially leading to storage disarray.

The accumulation of medical records directly impacts the time required to locate and retrieve documents when they are needed. Patient waiting times at registration or outpatient service counters

are often influenced by the speed at which staff locate medical record files (Afifah et al., 2022). If the retrieval process exceeds established service standards, it can disrupt service workflows, lead to long queues, and affect public perception of the hospital's service quality (Valentina & Ritonga, 2021).

METHOD

This study employs a quantitative approach. This approach was selected because the study aims to objectively examine the relationship between two variables through structured measurement and statistical analysis. The data obtained will be expressed numerically, thereby enabling empirical and measurable hypothesis testing (Masturoh & T, 2018).

A correlational research design is used. Correlational designs aim to determine the existence and strength of the relationship between independent and dependent variables without applying specific treatments or interventions to the research subjects. In this study, the researcher does not manipulate document storage conditions but instead observes and measures the conditions as they exist in the field.

Using this correlational design, the study will analyze the relationship between the level of medical record document accumulation (the independent variable) and the time required to retrieve medical record documents (the dependent variable). The analysis results are expected to provide an empirical overview of the connection between these two variables within the context of hospital medical record administrative services (Masturoh & T, 2018).

RESULTS & DISCUSSION

This study was conducted at the South Buton Regency Regional General Hospital (RSUD), located on Jalan Gajah Mada, Batauga District, South Buton Regency, Southeast Sulawesi Province. The study aimed to determine the relationship between the accumulation of medical record documents and the time required to retrieve them at the hospital. Data collection involved observing 346 medical record documents and interviewing two medical record staff members.

Data processing allowed for the analysis of all 346 medical record documents, with no missing data. The distribution of results revealed a consistent pattern between the level of document accumulation and the timeliness of retrieval.

Analysis Results of Medical Record Document Backlog and Timeliness of Medical Record Document Retrieval

a. Case Processing Summary

The Case Processing Summary is used to determine the amount of data available for statistical analysis. The research results indicate that the entire dataset-comprising 346 medical record document samples (100%)-was suitable for analysis, with no missing data; consequently, the data met the requirements for statistical testing using the Chi-Square test. The results of the Case Processing Summary are presented below.

Table 1. *Case Processing Summary*

	Cases					
	Valid		Missing		Total	
	N	%	N	%	N	%
Stacking* Punctuality	346	100.0%	0	0.0%	346	100.0%

Source: Primary Data, 2026

Based on Table 1 (Case Processing Summary), the total number of data points analyzed in this study was 346 medical record document samples (100%). There was no missing data; therefore, the entire dataset could be processed and analyzed using the Chi-Square statistical test to determine the relationship between the accumulation of medical record documents and the time required to retrieve them at the South Buton Regency Regional General Hospital (RSUD).

b. Crosstabulation

In this study, crosstabulation is used to present the relationship between the accumulation of medical record documents (Variable X) and the document retrieval time (Variable Y); this allows for a clearer view of the distribution and relational trends across the categories of both variables. Through this method, it is possible to determine whether a high level of document accumulation tends to be associated with longer retrieval times-or conversely, whether low accumulation tends to result in faster retrieval-thereby establishing a descriptive basis for observing relational patterns prior to conducting further statistical analyses, such as the Chi-Square test, to assess the significance of the relationship between the two variables.

Table 2. Crosstabulation of Document Backlog and Retrieval Timeliness

Accumulation	Fast	Moderate	Slow	Total
Low	70	0	0	70
Medium	0	171	0	171
High	0	0	105	105
Total	70	171	105	346

Source: Primary Data, 2026

The crosstab results show that low accumulation falls entirely within the "fast retrieval time" category, moderate accumulation falls entirely within the "adequate" category, and high accumulation falls entirely within the "long" category. This pattern reveals a very clear trend: the higher the accumulation, the less timely the document retrieval process.

Table 3. Document Backlog and Retrieval Timeliness

Category	n	%	Accumulation
Low stracking	70	20,2	Fast retrieval time
Medium stracking	171	49,4	Adequate retrieval time
High stracking	105	30,3	Long retrieval time
Total	346	100,0	

Source: Primary Data, 2026

Table 3 shows that the highest frequency of document accumulation falls into the moderate category, comprising 171 documents (49.4%), followed by the high category with 105 documents (30.3%) and the low category with 70 documents (20.2%). A similar pattern is observed regarding retrieval timeliness: the "moderate" category accounted for 171 documents (49.4%), the "slow" category for 105 documents (30.3%), and the "fast" category for 70 documents (20.2%). These results indicate that denser storage conditions tend to be associated with longer retrieval times. These findings align with research by (Farhansyah et al., 2023), which links document accumulation to space constraints, an increasing volume of documents, and suboptimal arrangement. Research by (Afifah et al., 2022) also demonstrates that storage conditions, filing systems, and document organization influence the waiting time for medical record retrieval. Theoretically, an organized filing system facilitates document access and retrieval; conversely, when shelves are overcrowded and documents are disorganized, the search process becomes more difficult.

Table 4. Chi-Square Test Results on the Relationship Between Document Accumulation and Retrieval Time

Uji	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	692,000	4	0,000
Likelihood Ratio	715,166	4	0,000
Linear-by-Linear Association	345,000	1	0,000
N of Valid Cases	346		

Source: Primary Data, 2026

The Chi-Square test yielded a Pearson Chi-Square value of 692.000 (df=4, p=0.000). Since $p < 0.05$, the null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted. Thus, there is a significant relationship between the accumulation of medical record documents and the timeliness of document retrieval. The Linear-by-Linear Association value of 345.000 ($p=0.000$) further indicates a directional relationship, wherein increased accumulation is associated with decreased retrieval timeliness.

These results align with (Valentina & Ritonga, 2021), who noted that document accumulation on filing shelves hinders staff in locating documents, thereby extending retrieval times.

The findings are also consistent with research on delays in medical record availability, which identifies limited space, disorganized storage, and filing systems as key factors. From a managerial perspective, this situation highlights the need to reorganize the filing area, increase shelving capacity, implement periodic document retention policies, and develop electronic medical records to reduce reliance on physical storage.

CLOSING

Based on the research findings and discussion regarding the relationship between the accumulation of medical record documents and the timeliness of their retrieval at the South Buton Regency Regional General Hospital (RSUD), the researcher draws the following conclusions:

Accumulation of Medical Record Documents at RSUD South Buton Regency

The accumulation of medical record documents in the filing room at RSUD South Buton Regency falls predominantly into the "moderate" category, comprising 171 documents (49.4%), followed by the "high" category with 105 documents (30.3%) and the "low" category with 70 documents (20.2%). This situation indicates that the medical record storage area remains congested due to the increasing volume of documents and limitations regarding storage space and shelving.

Timeliness of Medical Record Document Retrieval at RSUD South Buton Regency

The timeliness of medical record document retrieval at RSUD South Buton Regency falls mostly into the "adequate" category (171 documents or 49.4%), followed by the "slow" category (105 documents or 30.3%) and the "fast" category (70 documents or 20.2%). Retrieval timeliness is influenced by the condition of the filing room, the organization of the documents, the level of document accumulation, and the ease with which staff can locate the required documents.

The accumulation of medical record documents can be attributed to limited storage space, a constantly growing number of patient documents, and disorganized document arrangement on filing shelves. Congested storage shelves make it difficult for staff to locate medical record documents; thus, it can be concluded that there is a relationship between the accumulation of medical record documents and the timeliness of their retrieval at RSUD South Buton Regency. The higher the level of document accumulation, the longer it takes for staff to search for and retrieve the documents. Congested filing shelves hinder staff in locating documents, which can impact the effectiveness and quality of hospital services.

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