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FACTORS THAT INFLUENCE THE DELAY OF FILLING IN MEDICAL RECORDS AT THE HOSPITAL OF RSUD Dr. M.M DUNDA LIMBOTO

I Wayan Tirtayasa[1)], Andi Kurniawaty[2)], Meyrin Kadir[3)]
Universitas Bina Mandiri Gorontalo[1], Dinas Kesehatan Kabupaten Gorontalo[2], Dinas Kesehatan kabupaten Bone Bolango[3]
Email : wayantirtayasa949@gmail.com, andinaue36@gmail.com, dokumeka@gmail.com

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ABSTRACT
Medical records are essential components of healthcare services that support continuity of care, patient safety, legal accountability, and hospital accreditation. Delays in completing medical records may reduce the quality of healthcare services and affect the effectiveness of hospital information systems. This study aimed to describe the completeness of inpatient medical records and identify factors that may contribute to delays in medical record completion at Dr. M.M. Dunda Limboto Regional Hospital. A quantitative descriptive research design was employed and conducted from April to June 2021. Data were collected through questionnaires, observations, and reviews of medical record documents from the Intensive Care Unit (ICU), Irina H, and Irina C inpatient wards. Data were analyzed using descriptive statistics and presented as frequencies and percentages. The results showed that incomplete medical records remained prevalent across the study wards. The proportion of incomplete records was 78.6% in the ICU, 49.2% in Irina H, and 63.0% in Irina C. Respondent characteristics indicated that nurses constituted the largest professional group involved in medical record documentation in all wards. Based on observations and respondent responses, delays in medical record completion may be related to discipline, knowledge, and workload among healthcare personnel. In conclusion, incomplete medical records remain a significant issue at Dr. M.M. Dunda Limboto Regional Hospital, highlighting the need for improved supervision, staff training, and workload management to support timely and complete medical record documentation.

INTRODUCTION

Medical records are fundamental components of healthcare services and serve as essential tools for documenting patient information, supporting clinical decision-making, facilitating communication among healthcare professionals, and ensuring continuity of care. The completeness and timeliness of medical record documentation are critical indicators of healthcare quality because they directly influence the effectiveness, efficiency, and safety of patient management. Delays in completing medical records may result in incomplete clinical information, hinder communication between healthcare providers, and negatively affect subsequent patient care processes [1].

Timely completion of medical records is also closely related to patient safety. Accurate and complete documentation provides healthcare professionals with comprehensive information regarding diagnoses, treatments, medications, and follow-up plans. Delayed documentation can lead to communication failures, duplication of services, medication errors, and inadequate continuity of care, particularly

during patient transfers or discharge processes [1]. Furthermore, Mishra et al. [2], reported that documentation delays contribute to inefficiencies in healthcare delivery and may prolong administrative and clinical processes within hospitals.

In addition to supporting clinical services, medical records have important legal and administrative functions. Medical records constitute official evidence of healthcare services provided to patients and are frequently used in legal investigations, insurance claims, quality assurance activities, and medical audits. Therefore, healthcare providers are required to document patient care accurately and promptly to ensure compliance with professional standards and regulatory requirements. Incomplete or delayed documentation may expose healthcare institutions and healthcare professionals to legal and administrative risks while reducing the reliability of healthcare information systems [1].

Medical record completion is also an important component of hospital accreditation and quality management systems. Accreditation standards emphasize the availability of complete, accurate, and timely patient documentation as evidence of quality healthcare delivery. Hospitals that fail to maintain adequate documentation standards may encounter difficulties in demonstrating compliance with accreditation requirements and quality indicators. Consequently, improving the timeliness of medical record completion has become a strategic priority for healthcare organizations seeking to enhance service quality and organizational performance.

Previous studies have identified several factors contributing to delays in healthcare documentation and administrative processes. Workflow inefficiencies, inadequate staffing, excessive workloads, and delays in obtaining clinical information have been reported as major causes of service delays in hospital settings [3]. Similarly, Mishra et al. [2], found that deficiencies in hospital information systems and documentation workflows can contribute to delays in completing patient records. Although electronic medical record systems have been introduced to improve documentation efficiency, implementation challenges, technical limitations, and user adaptation issues may paradoxically increase documentation delays in some healthcare settings [4]. Furthermore, resource constraints, including shortages of personnel and limitations in infrastructure, have been associated with delays in processing and managing medical record documents.

Despite the growing body of literature on healthcare service delays and medical record management, studies specifically examining the factors influencing delays in medical record completion remain limited. Most previous research has focused on discharge delays, workflow efficiency, or electronic health record implementation, while relatively few studies have investigated the determinants of delayed medical record completion within hospital settings. This gap highlights the need for further investigation into organizational, human resource, and system-related factors that contribute to documentation delays.

Dr. M.M. Dunda Limboto Regional Hospital is one of the major referral hospitals in Gorontalo Regency and plays an important role in providing comprehensive healthcare services to the community. As a referral hospital, the institution is required to maintain high standards of medical record management

to support clinical services, administrative reporting, insurance claims, and accreditation requirements. However, preliminary observations at the hospital indicate that delays in medical record completion continue to occur in several service units. Incomplete documentation and delays in returning medical record files may affect healthcare service continuity, claim processing, medical audits, and hospital performance evaluation. These conditions suggest the presence of factors related to workload, human resources, work procedures, supervision, and medical record management systems that may contribute to delayed documentation.

Considering the importance of timely medical record completion for healthcare quality, patient safety, legal compliance, and hospital accreditation, as well as the limited evidence regarding the determinants of documentation delays, this study aims to identify and analyze the factors influencing delays in medical record completion at Dr. M.M. Dunda Limboto Regional Hospital.

RESEARCH METHODS

Study Design

This study employed a quantitative descriptive research design. Quantitative descriptive research aims to systematically describe and analyze phenomena using numerical data and statistical methods [5]. The study was conducted from April to June 2021 at Dr. M.M. Dunda Limboto Regional General Hospital, Gorontalo Province, Indonesia.

Study Setting

The research was carried out in the Medical Record Unit of Dr. M.M. Dunda Limboto Regional Hospital. This location was selected because preliminary observations revealed a considerable number of incomplete medical record documents, particularly in the Intensive Care Unit (ICU), Irina H, and Irina C inpatient wards, where the proportion of delayed and incomplete medical record completion remained relatively high.

Population and Sample

The study population consisted of health professionals responsible for completing inpatient medical records at Dr. M.M. Dunda Limboto Regional Hospital. The sample size was determined using the Slovin formula with a margin of error of 10%. Respondents were selected based on their involvement in the medical record completion process and their willingness to participate in the study.

Data Sources

This study utilized both primary and secondary data sources. Primary data were obtained directly from respondents through structured questionnaires and observations. Secondary data were collected from hospital reports, medical record unit documentation, scientific journals, institutional reports, and other relevant literature related to medical record completion and hospital documentation systems.

Data Collection

Data were collected using two methods:

1. **Questionnaire**

   A structured questionnaire was administered to respondents to assess factors related to delays in medical record completion, including human resources, workload, knowledge, motivation, facilities, and work procedures [6].

2. **Observation**

   Direct observation was conducted using a passive participation approach, whereby the researcher observed activities related to medical record completion without actively participating in the process

[7]. This method was used to verify information obtained through questionnaires and to identify actual practices occurring in the hospital setting.

Data Processing

The collected data were processed through several stages:

1. **Editing,** Checking the completeness, consistency, and accuracy of questionnaire responses.
2. **Coding**, Assigning numerical codes to each response category to facilitate data entry and analysis.
3. **Scoring**, Converting respondents' answers into quantitative scores based on predetermined criteria.
4. **Data Entry**, Entering coded data into the Statistical Package for the Social Sciences (SPSS) software.
5. **Data Cleaning**, Reviewing the dataset to identify and correct errors, missing values, or inconsistencies before analysis.

Data Analysis

Data analysis was performed using SPSS software. Univariate analysis was conducted to describe respondent characteristics and the distribution of each study variable using frequencies, percentages, means, and standard deviations.

Bivariate analysis was performed using the Pearson Chi-Square test to examine the relationship between factors influencing delays in medical record completion and the occurrence of delayed medical record completion. The Chi-Square test was applied under the following assumptions:

1. For a 2 × 2 contingency table, no more than one cell may have an expected frequency less than five.
2. For contingency tables larger than 2 × 2, cells with expected frequencies less than five should not exceed 20% of the total cells.
3. If the assumptions for the Chi-Square test were not met, Fisher's Exact Test was used as an alternative statistical procedure.

A significance level of 95% confidence interval ($\alpha = 0.05$) was applied. Variables with a p-value less than 0.05 were considered statistically associated with delays in medical record completion.

Ethical Considerations

Prior to data collection, respondents were informed about the objectives and procedures of the study. Participation was voluntary, and informed consent was obtained from all respondents. Confidentiality and anonymity of participant information were maintained throughout the research process.

RESEARCH RESULT

Completeness of Medical Record Files

Table 1. Distribution of Medical Record Completeness (AKLPCM) in the ICU Inpatient Ward, April, August, and October 2020

Medical Record Status	Frequency (n)	Percentage (%)
Complete	3	21.4
Incomplete	11	78.6
Total	14	100.0

Source: Medical Record Unit, Dr. M.M. Dunda Limboto Hospital (2020)

Table 1 shows that of the 14 medical record files reviewed in the ICU inpatient ward, the majority were incomplete. A total of 11 files (78.6%) were identified as incomplete, while only 3 files (21.4%) met the completeness standards. These findings indicate that medical record completion remains a major concern in the ICU ward.

Table 2. Distribution of Medical Record Completeness (AKLPCM) in Irina H Ward, February–April 2020

Medical Record Status	Frequency (n)	Percentage (%)
Complete	234	50.8
Incomplete	227	49.2
Total	461	100.0

Source: Medical Record Unit, Dr. M.M. Dunda Limboto Hospital (2020)

Table 2 demonstrates that among 461 medical record files reviewed in Irina H ward, 234 files (50.8%) were completed appropriately, while 227 files (49.2%) remained incomplete. Although the proportion of complete records was slightly higher, the incompleteness rate was still substantial.

Table 3. Distribution of Medical Record Completeness (AKLPCM) in Irina C Ward, July 2020

Medical Record Status	Frequency (n)	Percentage (%)
Complete	17	37.0
Incomplete	29	63.0
Total	46	100.0

Source: Medical Record Unit, Dr. M.M. Dunda Limboto Hospital (2020)

Table 3 indicates that 29 of the 46 medical record files (63.0%) in Irina C ward were incomplete, whereas only 17 files (37.0%) were complete. This finding suggests that delayed or incomplete documentation was still common in this ward.

Characteristics of Respondents

Table 4. Distribution of Respondents by Profession in the ICU Ward

Profession	Frequency (n)	Percentage (%)
Nurse	5	71.4
Administrative Staff	2	28.6
Total	7	100.0

Source: Primary Data (2021)

Table 4 shows that nurses constituted the majority of respondents in the ICU ward, accounting for 71.4% of participants, while administrative staff represented 28.6%.

Table 5. Distribution of Respondents by Gender in the ICU Ward

Gender	Frequency (n)	Percentage (%)
Male	1	14.3
Female	6	85.7
Total	7	100.0

Source: Primary Data (2021)

Table 5 indicates that female respondents dominated the ICU ward, comprising 85.7% of the respondents, while males accounted for only 14.3%.

Table 6. Distribution of Respondents by Age in the ICU Ward

Age Group (Years)	Frequency (n)	Percentage (%)
20–29	3	42.9
30–35	1	14.3
36–42	3	42.9
Total	7	100.0

Source: Primary Data (2021)

Table 6 shows that respondents aged 20–29 years and 36–42 years each represented 42.9% of the ICU respondents, while those aged 30–35 years accounted for 14.3%.

Table 7. Distribution of Respondents by Profession in Irina H Ward

Profession	Frequency (n)	Percentage (%)
Nurse	9	81.8
Administrative Staff	1	9.1
Nutrition Officer	1	9.1
Total	11	100.0

Source: Primary Data (2021)

Table 7 demonstrates that nurses were the dominant professional group in Irina H ward, accounting for 81.8% of respondents.

Table 8. Distribution of Respondents by Gender in Irina H Ward

Gender	Frequency (n)	Percentage (%)
Male	3	27.3
Female	8	72.7

Total	11	100.0

Source: Primary Data (2021)

Table 8 shows that female respondents represented the majority (72.7%) of participants in Irina H ward.

Table 9. Distribution of Respondents by Age in Irina H Ward

Age Group (Years)	Frequency (n)	Percentage (%)
20–29	4	36.4
30–35	7	63.6
Total	11	100.0

Source: Primary Data (2021)

Table 9 indicates that most respondents in Irina H ward were aged 30–35 years (63.6%).

Table 10. Distribution of Respondents by Profession in Irina C Ward

Profession	Frequency (n)	Percentage (%)
Nurse	10	71.4
Administrative Staff	2	14.3
Nutrition Officer	1	7.1
General Practitioner	1	7.1
Total	14	100.0

Source: Primary Data (2021)

Table 10 shows that nurses comprised the largest proportion of respondents (71.4%) in Irina C ward.

Table 11. Distribution of Respondents by Gender in Irina C Ward

Gender	Frequency (n)	Percentage (%)
Male	2	14.3
Female	12	85.7
Total	14	100.0

Source: Primary Data (2021)

Table 11 demonstrates that female respondents accounted for the majority of participants (85.7%) in Irina C ward.

Table 12. Distribution of Respondents by Age in Irina C Ward

Age Group (Years)	Frequency (n)	Percentage (%)
20–29	8	57.1
30–35	2	14.3
36–42	4	28.6
Total	14	100.0

Source: Primary Data (2021)

Table 12 indicates that respondents aged 20–29 years constituted the largest age group in Irina C ward, accounting for 57.1% of participants.

DISCUSSION

Overview of Medical Record Completion Delays

The findings of this study indicate that delays in completing medical record files remain a significant issue at Dr. M.M. Dunda Limboto Regional Hospital. Analysis of the AKLPCM data revealed that the ICU ward had the highest proportion of incomplete medical records, with 11 out of 14 files (78.6%) categorized as incomplete. Similarly, in Irina C ward, 29 out of 46 files (63.0%) were incomplete, while in Irina H ward, 227 out of 461 files (49.2%) had not been completed according to established standards. These findings demonstrate that medical record documentation has not yet reached the expected level of completeness across the hospital.

Medical records are fundamental components of healthcare services because they contain comprehensive information regarding patient identity, examination results, diagnoses, treatments, nursing care, and outcomes. Complete and timely documentation is essential not only for ensuring continuity of care but also for supporting communication among healthcare professionals, facilitating clinical decision-making, and providing legal evidence of healthcare services rendered. Delays in medical record completion may compromise service quality, hinder information exchange among healthcare providers, and negatively affect patient safety.

The high proportion of incomplete medical records identified in this study

suggests that several factors may contribute to documentation delays. Based on the research framework, these factors include discipline, knowledge, and workload among healthcare personnel. These factors are closely related to the human resource component of health information management and significantly influence the quality and timeliness of documentation practices.

Influence of Discipline on Medical Record Completion

Discipline is an essential determinant of employee performance, particularly in healthcare settings where adherence to procedures and standards directly affects service quality. In the context of medical record documentation, discipline refers to the commitment of healthcare workers to complete patient records accurately and within the time limits established by hospital regulations.

The findings indicate that incomplete medical records remain prevalent despite the existence of documentation guidelines. This condition may reflect varying levels of discipline among healthcare personnel regarding the completion of medical records after providing healthcare services. In many hospitals, documentation activities are often postponed until healthcare workers have completed direct patient care activities, resulting in delays and incomplete entries.

According to Ernawaty et al. [8], compliance with medical record completion is strongly influenced by healthcare professionals' attitudes and commitment toward documentation responsibilities. Their study found that specialist physicians often delayed completing medical records due to competing clinical duties and limited supervision. This finding suggests that documentation compliance is not solely determined by individual willingness but is also influenced by organizational monitoring systems and managerial support.

Inadequate discipline in medical record completion may lead to several adverse consequences. Incomplete records can disrupt communication among healthcare providers, delay patient management decisions, and create difficulties in evaluating healthcare outcomes. Furthermore, incomplete documentation may expose hospitals and healthcare professionals to legal risks because medical records serve as official evidence of services provided to patients. Therefore, strengthening disciplinary measures through routine monitoring, periodic audits, and clear accountability mechanisms is necessary to improve documentation performance.

Influence of Knowledge on Medical Record Completion

Knowledge plays a critical role in ensuring accurate and timely medical record documentation. Healthcare professionals who understand the importance, purpose, and legal implications of medical records are more likely to comply with documentation requirements. Conversely, limited knowledge regarding documentation standards may contribute to incomplete or delayed record completion.

The high percentage of incomplete medical records observed in this study may indicate insufficient understanding among some healthcare workers regarding documentation requirements and procedures. Medical record completion requires not only technical skills but also awareness of the significance of documentation in supporting patient care, quality improvement, and legal accountability.

Ramos-Silva et al. [9], reported that deficiencies in healthcare workers' knowledge and perceptions regarding proper documentation practices were associated with incomplete nursing records. Their findings emphasized that healthcare professionals who receive adequate training and education demonstrate better documentation performance than those who lack such opportunities. This suggests that educational interventions can significantly improve compliance with documentation standards.

Knowledge-related issues may arise from several factors, including limited training opportunities, insufficient orientation programs for newly recruited staff, and inadequate dissemination of updated documentation guidelines. In healthcare organizations, continuous professional development is essential to ensure that staff members remain informed about documentation requirements and evolving healthcare regulations.

Improving knowledge can be achieved through regular workshops, seminars, refresher training programs, and internal audits accompanied by constructive feedback. By enhancing healthcare workers' understanding of documentation standards, hospitals can reduce the frequency of incomplete medical records and improve overall healthcare quality.

Influence of Workload on Medical Record Completion

Workload emerged as another important factor contributing to delays in medical record completion. The results showed that the ICU ward had the highest proportion of incomplete medical records. This finding may be related to the intensive nature of patient care provided in critical care units, where healthcare professionals must manage complex clinical conditions requiring continuous monitoring and immediate interventions.

The majority of respondents in all study wards were nurses, accounting for 71.4% in the ICU, 81.8% in Irina H, and 71.4% in Irina C. Nurses are responsible not only for direct patient care but also for documenting nursing assessments, interventions, and patient responses. As patient loads increase, documentation activities may receive lower priority compared to immediate clinical responsibilities.

This finding is consistent with the study conducted by Febriyanti et al. [10], which identified human resource limitations and excessive workloads as major factors affecting delays in medical record management. Similarly, Wu et al. [4], found that healthcare documentation efficiency may decline when healthcare workers face increased operational demands and time pressures. Under such conditions, staff often experience difficulties balancing clinical responsibilities and administrative tasks.

Excessive workload may also contribute to fatigue, reduced concentration, and decreased motivation, all of which can negatively affect documentation quality. Healthcare workers managing large numbers of patients within limited working hours may be unable to complete medical records promptly, resulting in accumulation of unfinished documentation.

The situation becomes more challenging when staffing levels are insufficient to meet service demands. Resource limitations can increase the workload burden on existing personnel, thereby prolonging documentation processes. Therefore, hospital management should carefully evaluate staffing adequacy, workload distribution,

and workflow efficiency to ensure that healthcare workers have sufficient time to complete medical records accurately and on schedule.

Characteristics of Respondents and Their Relationship with Documentation Performance

The demographic characteristics of respondents provide additional insights into the documentation process. Across all study wards, female respondents constituted the majority of participants, accounting for 85.7% in the ICU, 72.7% in Irina H, and 85.7% in Irina C. Most respondents were also within productive working age groups, particularly between 20 and 35 years.

These findings suggest that the workforce involved in medical record documentation is relatively young and active. Younger healthcare professionals may possess adequate technological adaptability and learning capacity; however, they may also face challenges related to limited work experience and documentation skills. Consequently, continuous mentoring and supervision remain important to ensure compliance with documentation standards.

Professional composition also showed that nurses represented the largest occupational group in all wards. Since nurses are heavily involved in documentation activities, interventions aimed at improving medical record completeness should prioritize nursing staff while also involving physicians, administrative personnel, and other healthcare professionals.

Implications for Hospital Management

The findings of this study have important implications for hospital management. The high proportion of incomplete medical records indicates the need for comprehensive strategies addressing human resource, organizational, and procedural factors simultaneously.

First, hospital management should strengthen monitoring and evaluation systems related to medical record completion. Routine audits can help identify recurring documentation deficiencies and provide feedback for continuous improvement. Second, regular training programs should be implemented to improve healthcare workers' knowledge and awareness regarding documentation standards and legal responsibilities. Third, workload distribution should be reviewed to ensure that staffing levels correspond to service demands and documentation requirements.

In addition, the hospital should develop clear policies regarding documentation deadlines and establish accountability mechanisms for incomplete records. Recognition and incentive programs may also encourage healthcare workers to maintain high standards of documentation practice. Through these efforts, the hospital can improve the completeness and timeliness of medical record documentation, thereby enhancing patient safety, healthcare quality, legal compliance, and accreditation performance.

CONCLUSION

This study found that the completeness of medical records at Dr. M.M. Dunda Limboto Regional Hospital has not yet met the expected standards, as indicated by the high proportion of incomplete medical records in the ICU, Irina H, and Irina C inpatient wards. The findings suggest that delays in medical record completion may be associated with several factors, including discipline, knowledge, and workload among

healthcare personnel involved in the documentation process. Therefore, efforts to improve medical record completeness should focus on strengthening supervision and monitoring systems, enhancing staff knowledge through continuous training, and optimizing workload distribution. Further analytical studies are recommended to examine the statistical relationship between these factors and delays in medical record completion.

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