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**Research Article**

# Analysis of Medical Record Document Filling Completeness of Outpatient at Nala Husada Dental Hospital

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**Abstract**

Medical records (RM) as patient health information recorded assessment results, plans and implementation of care, treatment, integrated patient progress, as well as a summary of discharge for inpatients made by PPA. The results of medical record documents tracing at the Nala Husada dental hospital found that the RM was incomplete. This study aims to analyze the completeness of medical records filling that does not align with the accreditation standard of medical records management and health information (MRMIK). This study identified causal factors as a follow-up to implementing patient medical record management**.** It was conducted quantitatively with a descriptive observational approach. Data was obtained through observation, interviews, and documentation at the medical record unit during July 2022. The data was then processed and analyzed. Based on the analysis of the completeness of the 80 file documents, 86.25% were found to be complete, and 13.75% were incomplete. Incomplete medical record documents with good records were 17.4%, 16% important reports/records, 12.5% author authentication, and 8% patient identity. Factors causing incomplete filling of medical record documents with the management element approach included human error (lack of understanding and discipline, limited number of staff, training), Material and Machine (limited equipment, various documents, unspecific evaluation monitoring review), and method (incomplete regulatory studies), monitoring and evaluation are not continuous), and money (not included in the program budget plan). Recommendations to improve the completeness of medical record filling were training, sanctions, and rewards, regulation review, procedures for filling as per PPA requirements, and standardization of medical record forms.

**Keywords**: completeness; medical record; MRMIK

## INTRODUCTION

Successful treatment of the Nala Husada Dental Hospital is a health service facility that provides oral health services for treatment, recovery, and disease prevention through outpatient, emergency, and medical treatment services. Nala Husada Dental Hospital has not implemented hospital accreditation. Standards of hospital accreditation were issued by the Directorate General of Health Services, Ministry of Health of the Republic of Indonesia, first edition in April 2022, according to services related to a patient. One of the four groups of accreditation standards is hospital management. There are seven standards in hospital management, one of which is the Management of Medical Records and Health Information /MRMIK.[1]

Medical Records (RM) consist of documents of health care to patients. Medical records are written evidence that records all patient health information, both electronic and paper-based medical records.[2] The administration of medical records is an activation process that begins when the hospital services them and implements the care plan from the PPA.

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Cases of complaints/claims against practices that are not satisfied with the service occur when the medical record is filled out incompletely. It cannot be used as evidence that the service provider has been carried out under the Regulation Procedure of Medical Record.[3] Medical record contains notes and documents regarding patient identity, examination, treatment, procedures, and other services given to patients. Medical record completeness is a review of the contents of medical records related to documentation, treatment, and assessing the completeness of medical records. Several similar studies that have been conducted showed that medical record filling is incomplete.[4,5]

Hospitals are required to measure the completeness of the RM indicator by conducting an audit of medical record performances. The medical record documentation audit is carried out by the medical record sub-committee and or the person in charge of the medical record work unit.[6] The problem of completeness of filling out medical record documents occurs in several hospitals. It can be seen from several previous studies. Based on the initial survey, the problem was that the complete RM documentation was not implemented. Monitoring and evaluating the completeness of medical record documents has been carried out, but the quantitative analysis is not yet specific and complete. To prepare for the accreditation of the Nala Husada Dental Hospital, it is necessary to monitor and evaluate by conducting an "Analysis of Medical Record Document Filling Completeness of Outpatient at Nala Husada Dental Hospital". The study results are expected to provide recommendations to improve the completeness of filling out medical record documents according to regulations.

## MATERIALS AND METHODS

The research was conducted quantitatively with a descriptive observational approach. Analyzing each form contained in the medical record document aimed to analyze the completeness of medical records. Researchers were assisted by medical records staff. The data collection method included observation, interviews, documentation, and a literature study. The object of this research was 412 outpatient medical records in July 2022. Sampling was conducted using a random sampling technique based on the Slovin formula. The samples employed the formula, namely, the research object (N) divided by 1 plus N multiplied by e squared. e is a 10% sample error. According to this formula, it can be determined that the calculation of minimal sampling was 80 documents. The inclusion criteria were all outpatients treated at integration and specialists' clinics, while the exclusion criteria were patients who came with partial referrals at Nala Husada Dental Hospital.

Data analysis was conducted descriptively. The analysis results of filling out medical record documents were divided into 4 data tables: Patient Identification Filling, Important Reports/Notes Filling, Author Authentication, and Good Recording. The results and discussion were analyzed based on the literature. Factors causing incomplete filling of medical record documents were analyzed and concluded as well as recommendations for improvement. The data were then compiled, processed, analyzed, and presented in reports.

## RESULT

### Patient Identification

Filling in this study concerns the patient's identity in the medical record documentation. Identity sheets containing administrative data/patient social data can be a tool for specific patient identification, at least containing medical record numbers, registration numbers, patient names, gender, place, and date of birth.[7] Data on the completeness of filling in patient identification can be seen in table 1.

**Table 1.** Patient Identification

| No | Patient Identity | Complete | | Incomplete | |
|---|---|---|---|---|---|
| | | Total | % | Total | % |
| 1 | Name | 74 | 92.5% | 6 | 7.5% |
| 2 | Medical Record Number | 74 | 92.5% | 6 | 7.5% |
| 3 | Date of Birth/Age | 74 | 92.5% | 6 | 7.5% |
| 4 | Gender | 73 | 91% | 7 | 9% |
| | Average | 74 | 92.5 % | 6 | 7.5% |

The results of the quantitative analysis showed that the identification of 80 outpatient medical record documents at Nala Husada Dental hospital revealed 92.5% complete and 7.5% incomplete. Completeness of filling in the identity included the patient's name, medical record number, and date of birth/age filled in with a total of 74 (92.5%), while 6 of them were incomplete (7.5%). Most gender identities were complete (91%)

## Important Reports or Notes

Important reports/records provide information about the actions doctors and nurses took in providing patient care; thus, they are expected to contain accurate, complete, and reliable information.[8] Incomplete medical record filling is influenced by several factors, one of which is limited time. Besides, the doctors often miss several forms, so the medical records are not filled out.[5] This important record includes data useful in monitoring the progress of a patient's disease. The data includes Outpatient Medical Brief Profile (PRRMJ), General Consent, Informed Consent (IC), Patient Rights & Obligations, Informed Consent (IC), Surgery, IC Local Anesthesia, Initial Assessment, Integrated Patient Progress Record (CPPT), and Education. Important Report/Note is presented in table 2.

**Table 2.** Important Reports/Notes

| No | Important Reports / Note | Complete | | Incomplete | |
|---|---|---|---|---|---|
| | | Total | % | Total | % |
| 1 | PRRMJ | 67 | 83.75% | 13 | 16.25% |
| 2 | General Consent | 78 | 97.5% | 2 | 2.5% |
| 3 | Informed Consent (IC) | 63 | 78.75% | 17 | 21.25% |
| 4 | Patient Rights & Obligation | 78 | 97.5% | 2 | 2.5% |
| 5 | IC Surgery Procedure | 59 | 73.75% | 21 | 26.25% |
| 6 | IC Local Anastasi | 60 | 75% | 20 | 25% |
| 7 | Initial Assessment | 58 | 72.5% | 22 | 27.5% |
| 8 | CPPT | 76 | 95% | 4 | 5% |
| 9 | Education | 63 | 79% | 17 | 21% |
| | Average | 67 | 84% | 13 | 16% |

Based on the quantitative analysis of good reports/records, outpatient medical record documents at Nala Husada Dental Hospital were 84% complete and 16% incomplete. The highest percentage of completeness is general consent and patients' rights & obligations, with a total of 78 out of 80 medical record files or 97.5%. Meanwhile, the lowest percentage is the initial assessment, with a total of 58 out of 80 files or 72.5%.

## Author Authentication

Author authentication is the doctor in charge of the patient or the nurse who handles the patient while providing care. Doctors and nurses have the authority to fill in authentication, such as full name, signature, stamp, and initials, that can be

identified in medical records or someone's code for computerization.[9] Author Authentication Complete Data can be seen in table 3.

**Table 3.** Author Authentication

| No | Author Authentication | Complete | | Incomplete | |
|---|---|---|---|---|---|
| | | Total | % | Total | % |
| 1 | Doctor's Name | 58 | 73% | 22 | 27% |
| 2 | Doctor Signature | 76 | 95% | 4 | 5% |
| 3 | Nurse's Name | 70 | 87.5% | 10 | 12.5% |
| 4 | Nurse's Signature | 77 | 96% | 3 | 4% |
| | Average | 70 | 88% | 10 | 12% |

Based on the results of the quantitative analysis in table 3, the author's authentication of outpatient medical record documents at the Nala Husada Dental Hospital shows 88% complete and 12% incomplete. The highest percentage of completeness in filling in the author's authentication component is the nurse's signature component, with a total of 96%, while the doctor's signature is 95%. The lowest percentage is in the doctor's name component, with a total of 58 medical record files (73%) completed.

## Good Recording

Recording in the medical record file has to be carried out appropriately as the medical record file is an important aspect to be completed. Correct recording should not contain scribbles, ex-types, or blank sections, and record the date and time of patients' service. Data on the completeness of a good record is presented in table 4.

**Table 4.** Good Recording

| No | Good Recording | Complete | | Incomplete | |
|---|---|---|---|---|---|
| | | Total | % | Total | % |
| 1 | No scribbles | 56 | 70% | 24 | 30% |
| 2 | No ex type | 79 | 99% | 1 | 1% |
| 3 | No blank section | 51 | 64% | 29 | 36% |
| 4 | Date and Time | 78 | 97.5% | 2 | 2.5% |
| | Average | 66 | 82.6% | 14 | 17.4% |

Based on the analysis results, table 4 shows that, in 80 medical records, 17.4% of scribbles, ex-types, and blank sections were found in recording the time and date. On the other hand, 82.6% of good records found no scribbles, no ex type, no blank section, and the time and date of service. The table above indicates the lowest percentage is 36% blank section, 1% ex type, and 2.5% date and time incompleted. Two medical record files during service hours are not recorded.

## The Recapitulation of Medical Record Audit Documentation

The analysis result of the completion of medical record documents in tables 1,2,3 and 4 are recapitulated and presented in table 5.

**Table 5.** Recapitulation of Completion of Medical Record Documents

| No | Recapitulation of Completion of Medical Record Documents | Complete | | Incomplete | |
|---|---|---|---|---|---|
| | | Total | % | Total | % |
| 1 | Patient Identity | 74 | 92% | 6 | 8% |
| 2 | Important Reports/Notes completion | 67 | 84% | 13 | 16% |
| 3 | Author Authentication | 70 | 87.5% | 10 | 12.5% |
| 4 | Good Record | 66 | 82.6% | 14 | 17.4% |
| | Average | 69 | 86.25% | 11 | 13.75% |

Based on the recapitulation of quantitative analysis of the completion of medical record documents conducted by researchers at the Nala Husada Dental Hospital, the total average of the completeness of patient identity data, important reports/notes, author authentication, and good recording is 69 (86.25%). In comparison, 11 (13.75%) are incomplete. The percentage of incompleteness in the good record component is 17.4%, important reports/notes are 16%, author authentication is 12.5% , and patient identity is 8%. If the results of the analysis of most of the medical record files are good, it can be concluded that the quality of the health services provided is good.

## DISCUSSION

A similar quantitative analysis has been carried out by several researchers to identify incomplete recording of medical records, including identity review, authentication review, recording review, and reporting review.[10] Based on the data from table 1, the incompleteness of the patient's identity is caused by the limitation of the sticker printing tool in the patient identity stickers. The patient immediately received the service. However, after the treatment was given, the registration officer did not print the identity sticker. After the medical record was submitted and the completion was checked, the medical record officer submitted it to the registration section to print the patient's identity sticker. The importance of completing the patient's identity is still less understood. The patient identification component completion is crucial for the certainty of patient data recorded in the medical record documentation.[8] Completeness of patient identification in medical record documents as demographic information must be filled in completely. It will also determine that the services provided to patients are correct. When the patient's identity is not printed on a sticker, it can be written on the patient identity sheet.

In table 2, the incompleteness of this important record is influenced by the limited time of doctors and nurses. It is also caused by the lack of understanding that this initial assessment is important in determining the action plan that will be given to the patient. Doctors, dentists, and other health workers are responsible for the records and documents made in the medical record.[11] The outpatient medical assessment form at least includes the patient's medical history, primary complaint, allergy history, physical examination, diagnosis, and action plan.[12] Based on the Regulation of the Minister of Health of the Republic of Indonesia number 290/Menkes/PER/III/2008, informed consent is an agreement given to a patient or family who has received a complete and detailed explanation regarding the medical action. Informed Consent is closely related to law and ethics. Although services have been provided to patients in medical malpractice, it does not rule out the risk of prosecution. Arrangements in medical completion will provide legal protection.[12] Law of Republic Indonesia Number 29 /2004 concerning Medical Practice states that "Every medical or dental action that a doctor or dentist will carry out on a patient must receive approval".[14] Chapter 5 of the Indonesian Medical Ethics Code issued by the MKEK IDI doctor (Honorary Council

of Medical Ethics of the Indonesian Doctors Association) states that “every act or advice that may weaken psychological or physical endurance must receive the consent of the patient/family and only given for the benefit of the patient and the well-being of the patient”.

Based on the data in table 3, many doctors' names are not included. The data only shows the doctors’ signatures due to irregularities in including the doctor's name as the patient's doctor. Authentication is validating or proving a user's identity who is willing to access a particular file, application, or system. The authentication review ensures that the medical record data in the form of service date, full name, signature, initials of officers, or computer access in the form of codes and passwords are only held by the owner in initials (short name). If the doctor's name and signature are not completed, the examination and treatment cannot be accounted for by the doctor and can be considered ethical malpractice.[8]

Furthermore, good recording in the medical record is important. Writing notes in medical record documents must be corrected correctly, as shown in Table 4. If there is a recording error in the medical record file, it will not be able to be deleted. It can only be underlined (crossed out) by putting the note on the side of the wrong part. Lastly, it has to add the initials of the officer concerned.[15]

Incomplete medical records can be an issue as they are sometimes the only records that can provide information related to the patient and the disease, examination and administration of drugs.[16] Medical record as a record of the patient's disease note is a file that must be filled in completely. The incomplete medical record file will result in missed notes and difficulty identifying the previous patient's health information. Completeness of filling in the medical record file must be 100% for 1x24 hours after the patient leaves the hospital.[13] The quality of health services can be achieved by assessing several aspects, one of which is the quality of the completeness of the medical record file.[9] It aims to support orderly administration to improve the quality of hospital health services. To achieve this purpose, doctors and nurses must correctly complete the medical records in the hospital based on the results of medical procedures carried out.[17]

In analyzing the completeness of medical record documents, the researcher used a fundamental management approach using resources to achieve organizational goals effectively and efficiently. It aligns with previous research analyzing management elements in medical records management, namely Man, Machine, Material, Method, and Money.[18,19] Each management element identifies factors that cause the problem.

Human resources in medical records management included doctors, nurses, and medical record staff. Several factors can trigger the incompleteness of medical record documents, including a lack of understanding and discipline in completing the medical records. It occurs due to an excessive number of patients served and the workloads of consultant doctors in providing care to patients, nurses, and the limited number of medical record staff. Based on the results of interviews, the medical records at the Nala Husada Dental Hospital were managed by three people, namely, 1 head of the medical record unit with a D3 medical record educational background and 2 people with a high school educational background who had never received training. There are no sanctions for doctors and nurses who do not complete medical record documents. Thus, they are less likely to bring changes to follow-up improvements in completing medical record documents.

Furthermore, the incompleteness of medical record documents could be caused by the lack of discipline of medical personnel and paramedics to complete the patient's medical records. Other factors included doctors prioritizing service provision, an excessive number of patients

that rushed the doctors' action, the long duration of the laboratory examination result process to ensure better a more specific diagnosis, a limited number of doctors, lack of cooperation between nurses and medical record officers, and doctors being less concerned about medical records.[20]

In addition, the material factor causing the incompleteness of the medical record file was that there was only one sticker printing device for the patient's identity. Besides, the staff did not get used to writing down manually the patient condition. Doctors and nurses considered there were an excessive number of types of medical record documents to be filled in. Moreover, it was not easy to take up much service and recapitulate data on the medical record files and report it on monitoring and evaluating results.

Based on the results of interviews with the medical record unit, the factor of the incomplete medical record files in terms of the method is that there had not been an evaluation and review of the regulations. Guidelines, Policies, SOPs, and Unit Programs have to be developed so that the implementation of the activities contained in the SOPs can run according to the provisions and can be sustainable. By evaluating the regulations, the monitoring and evaluation process can be carried out more specifically with tools such as a checklist sheet for assessing the completeness of medical record files.

Furthermore, budget funds need to be planned to support all processes so that medical record documents can be managed properly according to standard provisions. The submission of the required source of funds is contained in the unit program to support the needs for facilities and infrastructure used for Medical Record Management and Health Information, such as the need for more sticker printers. Currently, medical records at Nala Husada Dental Hospital are still paper-based and are in the process of transitioning into electronically recording medical records. These changes require the necessary socialization and training to support the completeness of filling out the correct medical records. In addition, facilities and infrastructure can support security and confidentiality in medical records management.

## CONCLUSION

The results of the analysis of incomplete filling of outpatient medical record documents at Nala Husada Dental Hospital can be concluded as follows: the percentage of completeness in filling in medical record documents was 86.25%. Incomplete medical record documents were 17.4% good records, 16% important reports/records, 12.5% author authentication, and 8% patient identity. Furthermore, factors causing the incomplete filling of medical record documents can be handled utilizing the management element approach, such as Man, Materials, Machine, Methods, and Money. The completeness of the medical record is crucial since it records all patient health care information and communication between caregiving professionals. Information failure due to incomplete medical record filling is one of the factors causing a patient safety incident.

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