

Discovery and Analysis of Documentation Systems and Medical Record Service Procedures at Hospital Nacional Guido Valadares

Anabela Markes¹, Alberto², Tita Hariyanti¹

¹Program Studi Magister Manajemen Rumah Sakit Fakultas Kedokteran Universitas Brawijaya Malang, Indonesia

²Hospital Nacional Guido Valadares Dili Timor-Leste, Indonesia

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Corresponding Author:

Anabela Markes

bellamarkes89@gmail.com

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Abstract: Prepare information to facilitate the service process to patients and facilitate managerial decision making by clinical and administrative service providers in hospitals. This study aims to identify problems, root causes, carry out identification of alternative solutions, develop programs as selected solutions, and intervention plans to improve the causes of documentation systems and procedures for medical record services at Hospital Nacional Guido Valadares. This research is qualitative research. The subjects of the study were representatives of section heads and unit heads, representatives of medical record officers. Data collection is observation, interviews, documentation, recorder, Focus Group Discussion (FGD), Urgency Serousness Growth (USG) and brainstorming. Results of root cause identification using fishbone diagram and 5 why's analysis, alternative solutions using FMEA, risk priority number (RPN). The result of this study is that the officer provides medical record documents belonging to patients taken home, new patients do not bring referral letters from doctors, do not bring Electoral cards or other identity cards. Old patients forget to bring their identity cards for treatment, come back not according to the doctor's appointment. Suggestions for socialization efforts continue to be carried out to educate, remind patients and officers about the documentation and procedures that have been established and periodic evaluations.

Keywords: Documentation System; Medical Record; Service Procedures

Introduction

Documentation systems and procedures for medical record services as an effort in orderly administration in every government hospital and private hospital (Kikoba et al., 2019; Wager et al., 2021). This is also desired by Hospital Nacional Guido Valadares, Dili, Timor Leste. The country shall promote the establishment of a universal and common national health system, and as long as possible free of charge by law. This has been stated in Law No. 57 paragraph 2 concerning Health. Therefore, every health facility that

provides services to patients is free of charge other than foreign patients (Lindskou et al., 2019).

According to PP RD TL No. 11/2011 concerning hospital governance consisting of national hospitals, regional hospitals and district hospitals. Where national hospitals accept referral patients from regional and regional hospitals accept referral patients from district hospitals. Hospital Nacional Guido Valadares is the only national referral hospital in Timor-Leste that accepts referral patients from 5 regional hospitals and a Community Health Centre (CHC) as its service area. This hospital has various types of services, namely

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outpatient specialists and sub-specialists, inpatient, emergency care and specialist medical support and medical record units under information management (Aregay et al., 2023).

In the documentation system and medical record services can be carried out in various clinical service units (Nursikuwagus, 2020), but the principle is in the medical record unit which functions to provide information to facilitate management in services to patients and facilitate managerial decision making (planning, organizing, implementing, supervising, assessing and controlling) by clinical service providers and administration of health service facilities according to the objectives of the medical record service system. We recommend that in medical record services the main tools used are forms, records and reports used to record, record patient services in each clinical service unit.

The medical record service unit is divided into 2, namely the medical record data recording unit which is outside the medical record unit and the medical record data collection and processing unit which is in the medical record unit (Thorsen-Meyer et al., 2020). Basically, the documentation system and medical record service procedures consist of system elements, namely systems and procedures for medical record services at outpatient reception points, outpatient units, emergency departments, inpatient reception points, inpatient units, service support installations. The systems and procedures for medical record services in assembling, coding & indexing, filing and analyzing and reporting.

To run a medical record service system, policies must first be established on the system of recording, identification, numbering, storage, destruction and others. Based on this policy, the elements of the system that form the medical record service system will carry out their respective duties and functions. The main tasks and functions of each element of the medical record service system and their role in carrying out the main activities in sequence carried out in accordance with their job and function, functions related to the elements of the medical record service system, so as to produce information for the purposes of patient service and management as well as a network of procedures that form a system in controlling elements in accordance with the flow of forms or medical record documents.

According to Dewi & Agustina (2017) arguing that the documentation system and procedures for medical record services, medical officers in this case the doctor in charge still do not pay attention to hospital policies because of their busy lives so that there are still those who have not filled out complete medical record documents, some have missed or forgotten the contents such as signatures, dates, times and complete diagnoses, illegible writing. This still needs to be reminded by the medical record officer on duty in the inpatient room, in

this case the PCMR or Person in Charge of Medical Records. Due to the duplication of medical record numbers, officers have difficulty in finding medical record documents and require large human resources (Fennelly et al., 2020).

Starting with the 5M management element based on staff's lack of knowledge of SOPs, training and education without a medical record background, Money did not have the budget to increase resources Arguing that the documentation system and procedures for medical record services, medical officers in this case the doctor in charge still do not pay attention to hospital policies because of their busy lives so that there are still those who have not filled out complete medical record documents, some have missed or forgotten the contents such as signatures, dates, times and complete diagnoses, illegible writing. This still needs to be reminded by the medical record officer on duty in the inpatient room, in this case the Person in Charge of Medical Records (PJRM). Starting with the 5M management element based on staff's lack of knowledge about SOPs, training and education without a medical records background, Money did not have the budget to improve the human resources and infrastructure of the medical records department (Lindawati & Rudiansyah, 2018).

Based on the results of a preliminary study conducted from December 12 to 27, 2022 in the clinical and non-clinical services section of Hospital Nacional Guido Valadares, several problems were identified, especially in the data recording unit at the outpatient registration site, recording referral patients from 5 regional referral hospitals, 824 patients, 10 CHC as many as 11,813 patients. Emergency hospitalizations totaled 8,876 patients. However, the place of registration of inpatients as one part of the hospital whose activities regulate the reception and registration of patients to be hospitalized, so that all inpatients who have gone through outpatient or emergency examinations are directly directed to the intended unit or ward and the recording of inpatient data is not good.

The hospital's medical record data recording department recorded duplication of medical record numbers of 1,020, new patients without electoral cards 32,683 people, patients without referral letters and without going through a doctor's appointment 2,859 people, old patients forgot to bring medical identity cards (KIB). Then in the medical record data collection and processing unit, a 306 DRM miss file occurred. The retention of medical record documents amounted to 3,968, has not been destroyed because there is no written regulation. A total of 17,986 DRM inactives for which there is no storage space. Patient medical records are still spread across clinical service units with a total of 117,490 DRM. Completeness of filling in patient DRM is not filled with patient social data doctor observation sheet

12,401 DRM, the main task of quantitative and qualitative analysis of medical records has not been carried out due to delays in sending medical record documents from the inpatient room, a total of 818 DMR of deceased patients have not been attached to the cause of death report. The writing of the diagnosis is not in accordance with the rules of ICD-10. The submission of daily census reports from the inpatient room has not been in accordance with the SOP.

Referring to the preliminary study, this research aims to identify problems, root causes, carry out identification of alternative solutions, develop programs as selected solutions, and plan corrective interventions to the causes of the documentation system and medical record service procedures at Hospital Nacional Guido Valadares.

Method

The research method used in this study is descriptive with a qualitative approach. While the research design used is phenomenology. The study was conducted for two months from January 3, 2023 to February 28, 2023 at HNGV. The subjects in this study consisted of representatives of the board of directors, section heads, unit heads and medical record officers, while the object of this study was the documentation system and medical record service procedures.

Data collection method through primary data and secondary data. Primary data were obtained through observation and interviews of resource persons (representatives of section heads and unit heads, representatives of medical record officers, representatives of the board of directors), documentation, recorders, field notes. Using ultrasound method (urgency, seriousness, growth) through focus group discussion (FGD) and brainstorming. While secondary data is obtained from hospital profiles, and hospital statistical reports. The method of identifying the

root of the problem and the author's alternative solutions using fishbone diagram analysis are described in the 6 M management elements (man, money, material, mechine, method, motivation) and the 5 why's method. The author's alternative solution identification method uses FMEA analysis followed by calculating the risk priority number (RPN) value through FGD and brainstorming.

Result and Discussion

General Overview of Nacional Guido Valadares Hospital

Hospital Nacional Guido Valadares, a national referral center and government-owned hospital, has a capacity of 397 beds with a BOR (*Bed Occupancy Rate*) of 83% in 2022. Has various types of specialist and sub-specialist services consisting of outpatient, emergency, inpatient and specialist medical support services. The address of this hospital is located on Jl. Bidau Toko Baru, Kelurahan Kuluhun Kec. Cristo Rei Kab. Dili Negara Timor Leste.

Based on a preliminary study on December 12-27, 2022, collecting data then making a list of problems after that conducting analysis to obtain priorities problems in accordance with conditions in the field based on applicable regulations, problems are obtained (gaps), using the ultrasound method through FGD with representatives of section heads and unit heads and representatives of the HNGV board of directors to summarize problems from 23 problems to 5 problems. Of the 5 problems, the priority of the problem with the highest score being ranked I is the lack of knowledge of patients, medical record officers and other health workers about the documentation system and medical record service procedures. Fishbone validated data on the roots of the existing problems, to find out how much it contributed. The description is set out in Figure 1 (Suryani, 2018).

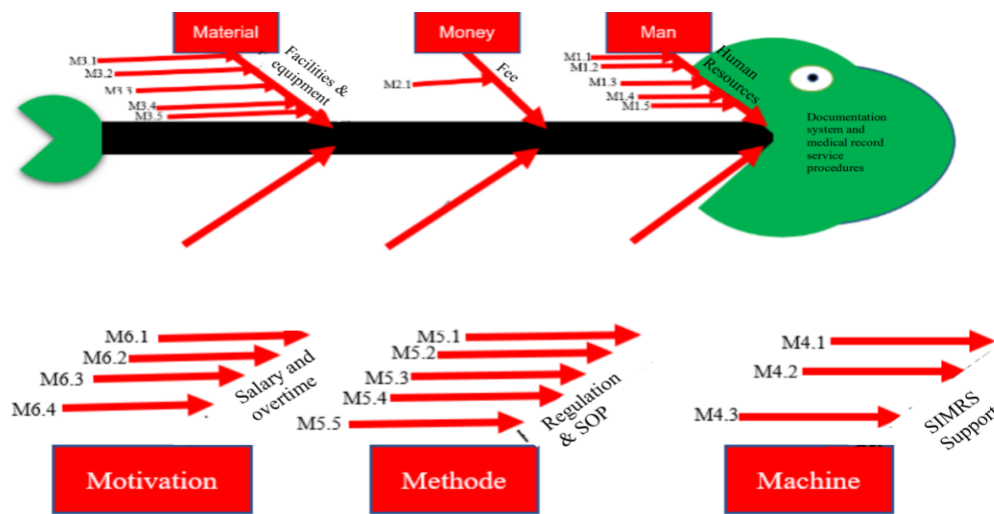


Figure 1. Diagram of Fishbone

Through 6 M management elements (man, money, material, mechine, method, motivation), in the form of human resources, costs, facilities and equipment, SIMRS support, regulations and SOPs, Salary & Overtime, employee status as the root of problems with the documentation system and medical record procedures. This process can be done by discussion or brainstorming with related units, then the results of the fishbone are carried out the 5 why's method (Purba, 2008). Method Identification of the root cause of each 6 M management element (Man, Money, Material, Machine, Material, Motivation) each is described in this fishbone diagram to facilitate the flow of thinking and analyzing using 5 Why's (7) Analysis using the 5 Why's method as follows.

Human resources (HR): knowledge of patients, medical records officers, other Health workers (Bohr & Memarzadeh, 2020). Education and experience of medical records officers, Contract employees are more than permanent employees (Sheikh et al., 2021; Strich et al., 2021). Medical records leaders have not socialized medical record SOPs; Cost: There is no special fund for the essential needs of the medical record unit; Facilities and equipment: storage racks, medical record folders, inactive storage spaces. work tables and chairs, there is no place for registration of inpatients; SIMRS support: the absence of web-based SIMRS software, SIMRS hardware, social media platforms; Regulations and SOPs: There is no written regulation on DRM destruction, medical record leaders have not disseminated SOPs. Officers obtain medical record numbers only for medical support and prescription purposes without making medical records, DMR is taken home by patients, sanctions from hospital leaders; and Salary & overtime, employment status: The difference in salary between contract employees, then not entitled to overtime, is not yet clear the employment status.

Tabulation of the root of the problem that will be carried out through discussion with the brainstorming method with related units to facilitate the preparation of alternative solution programs, the results of discussions from related units are as follows: Man, lack of knowledge of patients, medical record officers and other health workers on the documentation system and procedures for medical record services; Money, the unavailability of special funds for the essential needs of the medical record unit; Materials, medical record folders do not yet cover the amount of patient DRM that exists; Machine, no SIMRS support yet; Methode, other health workers obtain medical record numbers only for medical support and prescription purposes without making patient medical records; and Motivation, contract officers are not entitled to overtime.

After tabulating the root of the problem, the author identified alternative solutions by making observations, literature studies, brainstorming with the information management section of Hospital Nacional Guido Valadares. Identify alternative solutions with the aim of finding all possible solutions that can be done to provide solutions to the root of the problem. These alternative solutions must consider various aspects, namely aspects of benefits or advantages for HNGV, aspects of the effectiveness of solutions that are able to control problems and provide added value for HNGV, aspects of ease of implementation of solutions and aspects of costs.

Based on the data tabulation, the author conducted an FMEA analysis followed by calculating the risk priority number (RPN) of the 6 alternative solutions offered. In the FMEA analysis, the highest score ranked I is the man indicator, namely the lack of knowledge of patients, medical record officers and other health workers on the documentation system and medical record service procedures. Can be seen in Table 1.

Table 1. Analysis of Identification of Alternative Solutions

Process	Urgency	Potential impact	Able to do	Resources	Readiness	Integration	Scoring	Rank
Man, Lack of knowledge of patients, medical record officers and other health workers to the documentation system and procedures Medical Record Services	5	5	5	5	5	5	30	I
Money, Not yet available special funds for the essential needs of medical record units	4	3	3	4	3	4	21	VI
Material, Medical record folder does not yet cover the amount of DRM the patient has in place	5	5	5	4	4	3	26	IV
Machine, No support yet SIMRS	4	4	4	4	4	4	24	V
Method, other Health Workers obtain medical record numbers only for medical support and prescription purposes without making patient medical records.	5	5	5	5	4	4	28	II
Motivation, Contracting officer is not entitled to overtime	5	5	5	5	3	4	27	III

In Table 2. this has been identified the value of RPN which is ranked I with a score value of 900 is the knowledge of patients, medical record officers and other health workers on the documentation system and procedures for medical record services (Ayaad et al., 2019; Enaizan et al., 2020; Tsai et al., 2020). An alternative solution offered by the author is to socialize patients, medical records officers and other health workers working at Hospital Nacional Guido Valadares with the board of directors, representatives of the head of outpatient and the head of information management with the following objectives.

Socialization to patients

The place of implementation of this activity is carried out in front of the outpatient registration place and outpatient polyclinic, every morning and evening according to the polyclinic service hours for 5 working days a week. The participants are all patients and families of patients who visit the outpatient polyclinic are involved Socialization materials are medical record service procedures regarding referral letters from doctors, electoral cards, medical identity cards (KIB), doctor appointments, medical record folders documents.

Socialization to medical record officers

The place of implementation of the meeting room of the medical record unit, according to working hours for 1 day in 8 working hours. Socialization material for medical record service procedures that focus on the main tasks, main activities, functions related to medical record services to produce information according to the flow of forms or medical record documents to achieve system goals.

Socialization to other health workers

The venue was in the meeting room hall of Hospital Nacional Guido Valadares, 75 participants including 5 members of the board of directors and heads of sections / units. Socialization materials are documentation systems and procedures for medical record services.

This socialization activity runs according to the schedule set between the authors

Identify the human elements that cause the Documentation System and medical record service procedures (Agustin et al., 2020; Apriliani et al., 2020), namely the lack of knowledge of patients, medical record officers and other health workers on the documentation system and medical record service procedures. The importance of medical record documents both for patients, health workers who provide health service actions, health facilities, especially hospitals. For this reason, it needs to be maintained from the aspect of security and confidentiality. Security aspects of medical record files storage rooms should be equipped with maintenance tools such as vacuum cleaners, spraying insects or given campers, medical record storage space is limited by access rights such as fingerprints. The confidentiality aspect of patients who consult other polyclinics or want to carry out further examinations at supporting facilities is delivered by medical record distribution officers (Husnina & Sutrisno, 2021). It is better to record loans or to issue information to a 3rd party in documenting should the hospital use computerized documentation to make it safer and easier to calculate data, documenting the purpose as a form of evidence in case of future claims (Abidin & Yunengsih, 2021).

The importance of a referral letter from a doctor for patients seeking treatment at Hospital Nacional

Guido Valadares in order to get direct treatment from the intended specialist. According to the government regulation on hospital governance in article 13 paragraph 1 reads national hospital is a public hospital that provides tertiary health services, to patients referred by health units throughout the national territory (Timor Leste Government Regulation, 2012). Every patient is required to bring a referral letter through a practicing doctor or the nearest health facility. Hospitals and employees strive to improve their competency services to be in accordance with the standards and mechanisms that have been implemented (Sinta et al., 2022).

The importance of electoral cards or other identity cards to support the registration process to complete the patient's identity on the form, filling out the patient master index (PMI) form on the computer and KIB (Mammadova & Jabrayilova, 2019), so that in the process of getting doctor's action there is no maladministration and malpractice, making it easier when seeking treatment again. The importance of medical identity cards for patients is one of the supports for the smooth

implementation of registration activities. Explain to patients that KIB that has been obtained at the place of patient registration needs to be laminated pressed from plastic to minimize damage, using labels. HNGV has implemented one medical identity card for one patient and socialized the importance of medical identity cards (Harjanti & Wariyanti, 2020). Using this KIB during patient registration to speed up the time of the process of social identification of patient data through the patient master index (PMI) on the computer.

Socialization activities on the importance of visiting cards/medical identity cards are indicators of quality in health services (Lee & Yoon, 2021; Mardiwati et al., 2021). Socialization went well and it is hoped that patients can receive material and raise awareness of the importance of carrying KIB during treatment (Putri et al., 2022). This activity needs to be carried out as an effort to increase awareness, concern and encourage the role of cadres and residents to orderly carry the medical index card (KIB) when seeking treatment at health care facilities (Imam et al., 2021).

Table 2. Calculating the Risk Priority Number (RPN) Value

Process	Failure mode	Severity	Occurance	Detection	RPN	Rank
Lack of knowledge of patients, medical record officers and other health workers on documentation systems and procedures for medical record services	The system and procedure of medical record services on the elements of the system did not achieve the objectives	10	9	10	900	I
The unavailability of special funds for the essential needs of the medical record unit	The medical records unit is not functioning as intended	9	6	8	432	VI
The medical records folder does not yet cover the number of existing patient DRM	Security and confidentiality of patient DRM is not maintained, storage system and the alignment of medical records does not achieve the goal	10	9	9	810	II
No SIMRS support	The medical record data collection and processing unit did not achieve the purpose of the system	9	8	7	504	V
Other health workers obtain medical record numbers only for medical support and prescription purposes without making records Medical Patient.	The documentation system for patient care in clinical decision making does not achieve its objectives	10	8	8	640	III
Contracting officers are not entitled to overtime	The main tasks of each element of the system are coherently carried out in medical record services and their roles do not achieve the objectives	10	8	8	560	IV

The importance of patients coming for treatment according to doctor's appointments is that booking doctor's appointments in various hospitals is evenly affordable for all levels of society (Marpaung & Irwansyah, 2021). Convenience is the main motivation for patients to use the appointment registration system.

Personal knowledge and ability are two important factors influencing the choice of patient appointment system. Hospitals should improve the design and promotion of appointment registration systems to better facilitate their use (Rohman & Marsilah, 2022).

Conclusion

Based on the analysis of the fishbone diagram, it has been described as the root cause of the documentation system and procedures for medical record services at Guido Valadares Hospital Nacional in the 6 M management elements (man, money, material, mechine, method, motivation) in the form of human resources, costs, facilities and equipment, supporting medical record management information systems, regulations and SOPs, salary & Overtime, employee status. The analysis is also explained in the 5 why's method. Playing an important role in the documentation system and procedures for medical record services at HNGV is the medical committee and medical record committee to pay attention to medical record guidelines and management in helping medical record officers convey various causes to hospital management to make clinical management planning decisions. Management should immediately function the medical record committee to carry out its roles and functions and sanction health workers who violate medical record policies and SOPs immediately take action with the HNGV board of directors.

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Author Contributions

The authors of this article consist of three people, namely A,M, A and T.H. All members of the drafting team worked together in preparing this article.

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Conflicts of Interest

The authors declare no conflict of interest.

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