

Analysis Of The Use Of Electronic Medical Records With The Fishbone Method Approach At Rokan Hulu General Hospital

David Maulana^{1*}, Wen Via Trisna², Tri Purnama Sari³

^{1,2,3}Medical Record & Health Information Universitas Hang Tuah Pekanbaru, Pekanbaru, Indonesia

wenviatrisna@htp.ac.id

Abstract— RSUD Rokan Hulu has started implementing electronic medical records (RME) since September 2023 in outpatient services. RSUD Rokan Hulu provides 20 Polyclinics, of which 6 Polyclinics have implemented RME and 14 Polyclinics have not implemented RME. In its implementation, of course, it has obstacles. This study aims to determine the inhibiting factors for the use of electronic medical records based on the Man, Machine, Material, Method, Money factors. The type of research used is descriptive qualitative. The subjects in this study were the head of the medical record installation, nurses, doctors, IT / IMRS staff and KASI Humas. The object of this research is electronic Medical Records at Rokan Hulu Hospital, the methods used are interviews and observations. Data analysis uses descriptive analysis and the results are presented using a fishbone diagram. The results of inhibiting factors in the use of electronic medical records with the fishbone method approach at Rokan Hulu Hospital in 2024 based on the Man factor, namely the lack of special training in the use of RME to health workers, the limitations of health workers in using computers, and not all doctors want to use RME. The machine factor is the unavailability of electronic pens. Network material factors often experience interference and the RME application used is not easy for doctors to use. The method factor is that there is no SOP related to the use of RME and there are no guidelines for the flow of RME implementation. The money factor has no problems and obstacles.

Keywords—Electronic Health Record, Health Workers, Fishbone, Implementation, Inhibiting Factors

I. BACKGROUND

Health facilities in Indonesia are essential for providing preventive, protective, promotive, and rehabilitative health services provided by the government, local authorities, and the state. However, the increasing use of digital technology has impacted the quality of health care services, particularly in the field of medicine [1].

Medical record, which refers to information about patient identification, health status, physical examination results, and appropriate treatment, is crucial for maintaining patient safety. However, many hospitals and health facilities in Indonesia lack electronic medical records. Despite the digital transformation, 80% of hospitals in Indonesia have not integrated electronic medical records [2] [3]

The use of electronic medical records in healthcare is still under-researched, with only 74 out of 575 hospitals in Indonesia integrating electronic medical records. This lack of integration has significant implications for patient safety, documentation, and access to patient data. [4]

The use of electronic medical records can improve patient safety, documentation, and access to patient data. However, there are still challenges in implementing electronic medical records, such as the need for human resource management, quality assurance, and accreditation. (Amin et al. 2021) [5] [6] [7]

In reviewing the problems or obstacles that occur, it can be done by approaching the fishbone method. There are 5 fishbone methods used in this study, namely Man, Machine, Material, Method, and Money. The selection of the fishbone method is adjusted based on things that can help organize the ideas that are required [8]

The fishbone method is used in this study to identify and detail the causes of a problem, providing solutions for implementing electronic medical records (EMRs). The implementation of RME is crucial to improve the quality of Indonesian health services, as it facilitates the transfer of medical information, facilitates the diagnosis process, and helps in assessing the effectiveness of the health care system [9].

Rokan Hulu Regional General Hospital (RSUD) was established in 2004 which was determined through the decision of the Regent of Rokan Hulu No.061 of 2004 as a type C hospital and its function was inaugurated by the Regent of Rokan Hulu on September 14, 2004.

Based on an initial survey conducted by the author in March 2024, the number of outpatient visit history data for the last 3 months from December 2023 to February 2024 amounted to 26,359. RSUD Rokan Hulu provides 20 polyclinics,

namely, poli Surgery, Dental, Pulmonary, TB.Dot, Neurology, Eye, Internal Medicine, Obstetrics, ENT, Children, Skin & Gender, Family planning (KB), Medical rehabilitation, Geriatrics, Heart, MCU, Soul, Psychologist, VCT & Drugs, and Hemodialysis. RSUD Rokan Hulu has started implementing electronic medical records starting in September 2023. However, the implementation of RME has not been evenly distributed throughout all available polyclinics. Only 6 polyclinics have implemented RME including, Poly Surgery, Pulmonary, TB.Dot, Pediatric, Skin & Gender, and Medical Rehabilitation and 14 other polyclinics have not implemented RME. Based on the results of interviews conducted by the author

Based on the results of interviews conducted by the author to the head of the medical record installation at Rokan Hulu Hospital, it was found that in the implementation of RME there were still obstacles, namely, there were still health workers who did not want to fill in medical records electronically and there was no SOP regarding the obligation to fill in RME.

II. METHOD

The type of research used is descriptive qualitative. The subjects in this study were the head of the medical record installation, nurses, doctors, IT / IMRS staff and KASI Humas. The object of this research is electronic Medical Records at Rokan Hulu Hospital, the methods used are interviews and observations. Data analysis uses descriptive analysis and the results are presented using a fishbone diagram

III. RESULTS AND DISCUSSION

Inhibiting Factors in the Use of Electronic Medical Records Based on the Man Factor

Man, or human resources in this case are all health and non-health workers who participate in the implementation of RME. Based on the results of interviews on the implementation of RME, it can be seen that the obstacles in the use of RME based on man factors are:

Health workers at Rokan Hulu Hospital have never attended special training using RME. Electronic Medical Record (RME) training aims to improve the quality of hospital human resources. along with efforts to realize digital transformation in hospitals. With the implementation of Electronic Medical Records (RME) Electronic Medical Records (RME) are expected to be able to provide a positive transformation in existing services such as supporting data completeness, facilitating data accessibility, facilitating data distribution, facilitating data access, and reducing the usual data entry that was previously done manually.

Based on the results of the research, the authors found that there are still 16 polyclinics that have not implemented RME. These polyclinics include dental, neurological, eye, internal medicine, obstetrics, otolaryngology, family planning (KB), geriatrics, heart, MCU, mental, psychologist, hemodialysis, VCT and drugs. This is due to the doctor's perception that the existence of RME lengthens the service process and increases workload. In the implementation of RME, humans or in this case health workers have an important role in filling out RME so that due to changes in manual medical records to electronic medical records, officers are expected to be willing to adapt and finally realize the benefits of RME. This study is in line with Rizki Amelia's research, 2022 where the lack of awareness of doctors to the RME implementation policy may hinder the RME implementation process.

The implementation of RME requires doctors' knowledge and skills in operating computers. Here the officer must be able to adapt to change the habit of writing to typing. Most old people have limited ability to operate computers and find it difficult to understand the use of computers. This study is in line with the research of Yulida et al., 2021 that the limited ability of users to operate computers is very influential in filling out the RME. This will make it difficult for users to fill out the RME.

According to research by Nur, H., Yaumi, M., Patak, A. A., & Said, H. (2014) training related to electronic medical records is very important. Education is one way to develop one's potential to be used in life and work.

In the opinion of the researcher, health workers need to understand more about electronic medical records by providing training to officers when using electronic medical records in services so that officers can increase their capacity to adopt new technologies and methods.

Inhibiting Factors in the Use of Electronic Medical Records Based on Machine Factors

Machines are tools that make it easy to do work. RME supporting tools are computers, printers, electronic pens, and others. Based on the results of interviews and observations of the implementation of RME, it can be seen that the obstacles in

the use of RME based on machine factors are the unavailability of electronic pens, these electronic pens are very useful when patients sign on the general consent form.

In the opinion of the researcher, the tools supporting the implementation of electronic medical records are quite good, but it is necessary to replace the latest units such as computers, in order to minimize the occurrence of interference with the computers used. And it is also necessary to provide an electronic pen for patients to sign the general consent form so that the implementation of electronic medical records is maximized. This research is in line with the research of Amin et al., 2021 that the unavailability of sufficient facilities and infrastructure will hinder the implementation of RME.

Inhibiting Factors in the Use of Electronic Medical Records Based on Material Factors

Materials or materials consist of finished and unfinished materials. Material in this case, namely the network used to run electronic medical records and the application system used to implement electronic medical records. based on the results of observations and interviews the authors found obstacles, namely:

The internet network used for the implementation of RME is provider telkomsel with a network speed of 200 mbps. Even so, the RME system still occurs interference so that the application on RME experiences an error and as a result the service is disrupted. This research is in line with Amin et al., 2021 that the network affects the implementation of RME.

The medical record application used is not updated and is not simple for doctors, making it difficult when filling out the RME. The application used for the implementation of RME is web-based and integrated with SIMRS, but health workers such as doctors say the application is not updated and not simple so that doctors find it difficult when filling out anamnesis, physical examination as a result the service becomes long.

In the opinion of researchers, the network used in the implementation of RME is not optimal because it often experiences interruptions and errors so that services are disrupted and as a result there is a buildup of patients so that services are not optimal.

Inhibiting Factors in the Use of Electronic Medical Records Based on Method Factors

Method or method is a work procedure that facilitates work. Based on the results of observations and interviews on the implementation of RME, it can be seen that the obstacles in using RME based on method factors are:

SPO which is used as a guideline in implementing RME does not yet exist One example of motede here SPO (Standard operating procedures). In the absence of SPO, a job is less than optimal and its implementation will not go well. At Rokan Hulu Hospital there is no SPO related to the use of electronic medical records and on the other hand there are no verbal warnings or sanctions for officers who are not willing to use RME.

According to Permenkes RI No. 22 of 2024 states that Health Service Facilities must develop standard operational procedures for implementing Electronic Medical Records as referred to in paragraph (1) tailored to the needs and resources of each Health Service Facility, by referring to the Electronic Medical Record guidelines. This research is in line with the research of Sri Lestari et al, 2021 that policies and encouragement from leaders have a major influence on the successful implementation of RME.

Researchers argue that SPO (Standard Operating Procedure) is needed in the implementation of RME. Users will comply if there are provisions from the leadership that require them to use RME and perform direct entry using a computer. So that in the application of RME, a clear and firm policy on the system of using RME is needed.

Inhibiting Factors in the Use of Electronic Medical Records Based on the Money Factors

Money or money is one important element that cannot be ignored. Money here is in the form of the budget needed to meet all the needs in the process of using electronic medical records, based on the results of interviews on the implementation of RME, it can be seen that the inhibiting factors in the use of RME based on the money factor are no obstacles because the budget for implementing RME already exists and is sufficiently fulfilled. The budget is sufficient for the needs of the current year, for its development it will adjust to the needs according to the developments and innovations needed.

IV. CONCLUSIONS AND SUGGESTIONS

The effectiveness of electronic medical records in Rokan Hulu Hospital is influenced by several factors. Firstly, the health care staff is not trained in electronic medical records, but rather socially involved in their use. Secondly, the equipment used in creating electronic medical records is outdated, causing errors and failures. Thirdly, the lack of standard operating procedures and proper training for electronic medical records is also a factors lack of financial resources.

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