Research Article

Administration Management At Baranti Community Health Center: A Systems Approach Analysis

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Abstract: Readiness to use electronic medical records in Indonesia has met the minimum requirements in terms of infrastructure to implement digitalization of medical record data. With RME, patient data can be accessed quickly and accurately, reducing patient waiting time and minimizing recording errors. In addition, RME also allows integration of medical data between health facilities, making it easier to coordinate and refer patients. This research uses a type of field research (Field Research), with a qualitative descriptive approach which aims to describe phenomena that occur in the field in depth and systematically. The research focus in this study is the Electronic Medical Record (RME) application. The informants in this research were technicians or staff responsible for maintenance and technical support of RME, administrative staff (Registration, laboratory, pharmacy, clusters 1,2,3,4, doctors, polyclinics), head of the Baranti health center. Data collection was carried out by observation, interviews and documentation. The research results show that implementing electronic medical records is faster and easier than manual ones because it is easier to find patient data and archiving is simpler, patient complaints appear automatically, and are supported by the Head of the Community Health Center and the Health Service. Several factors that are the main obstacles include limited internet networks, limited computer equipment, and a long initial assessment process. Conclusion The implementation of Electronic Medical Records (RME) at the Baranti Community Health Center has proven to provide a significant increase in the efficiency of the health administration process. The RME system makes it easy to quickly and accurately search and archive patient data, replacing slower and error-prone manual methods. The recording process becomes more complete and structured, and reduces the use of paper and physical storage space, which also supports cost efficiency and is environmentally friendly. However, there are still obstacles that hinder the optimization of RME, such as application features that are incomplete and less flexible, operational times that are sometimes longer than manual, and training that is not evenly distributed for all staff.

Keywords: electronic medical records, Health administration, Health Center

1. Introduction

A study in Spain revealed that Electronic Medical Records (EMRs) have been widely adopted in hospitals and have had a positive impact on medical practice, with 95% of surveyed hospitals already using them. Approximately 80% of respondents acknowledged improvements in work organization and the quality of patient services, although 35.1% felt

that EMRs icreased workload and worsened doctor-patient relationships. Limitations such as restricted outpatient information and difficulties in managing free-text data remain key challenges. Nevertheless, EMRs are generally perceived as providing substantial benefits to hospitals.

In Indonesia, the utilization of health information systems has become increasingly vital for enhancing the operational efficiency of healthcare facilities. According to the Medical Practice Act and the Ministry of Health Regulation No. 269 of 2008, medical records encompass a variety of data types, including text and biosignals. Although the supporting infrastructure and software for EMR digitization have met minimum standards, implementation continues to face numerous challenges, such as a lack of skilled personnel, unsupportive organizational culture, and deficiencies in governance and computer networking.

A study at Syekh Yusuf Regional Hospital reported high readiness for EMR implementation, as assessed using the DOQ-IT method, including strong performance in human resources, work culture, leadership, and IT infrastructure. Other research has shown that satisfaction with technology and effective communication among medical personnel enhance patient safety. However, excessive dependence on EMRs may pose risks to safety procedures.

Community health centers (Puskesmas), as primary healthcare providers, still struggle with manual medical record management, which is time-consuming, error-prone, and requires significant physical storage. Thus, EMR implementation is considered a strategic solution to improve efficiency, reduce waiting times, and facilitate data integration across healthcare facilities. The use of information technology in healthcare has expanded from planning to reporting, including the e-Puskesmas application developed by PT Telkom and PT Infokes since 2013.

Since April 2024, Baranti Community Health Center has begun implementing EMRs through the e-Puskesmas application. However, network limitations remain a challenge, often requiring data to be entered manually first. This study aims to analyze the implementation of EMRs at Baranti Health Center in improving the efficiency and quality of health administration management. The findings are expected to offer recommendations for the development of more effective and sustainable health information systems.

2. METHOD

This study is a field-based qualitative descriptive research aiming to provide an in-depth analysis of the implementation of electronic medical record (EMR) information technology in health administration management at Baranti Community Health Center, Baranti Sub-district, Sidenreng Rappang Regency, South Sulawesi. The research was conducted from February to April 2025. The research object includes the EMR system comprising patient health histories, diagnoses, treatments, prescriptions, and test results. Informants were selected purposively and included the head of the puskesmas, IT technicians, and administrative staff such as registration officers, laboratory and pharmacy personnel, and doctors.

Data were collected through observation, in-depth interviews, and documentation. Observations were conducted directly on the EMR implementation process, while interviews

followed a semi-structured guide to explore insights from key and supporting informants. Documentation included interview transcripts, field notes, and supporting photos and videos. Data were analyzed using Nvivo software, which facilitated systematic organization and classification of qualitative data to support the research findings and answer the study's problem formulation.

3. RESULTS AND DISCUSSION

Results

Table 1. Characteristics of Baranti Health Center Informants in 2025

No	Informant	Amount	Information
1	Head of Health Center	1	0.083%
2	Electronic Medical Records Officer	2	0.166%
3	Registration	1	0.083%
4	Cluster 1 Officer	1	0.083%
5	Cluster 2 Officer	1	0.083%
6	Cluster 3 Officer	1	0.083%
7	Cluster 4 Officer	1	0.083%
8	Doctor	1	0.083%
9	Polyclinic	1	0.083%
10	Laboratory	1	0.083%
11	Pharmacy	1	0.083%

Implementation of Electronic Medical Record System (EMR) at Baranti Health Center:

The implementation of the Electronic Medical Record (e-Puskesmas) information system at the Baranti Health Center was carried out by a team responsible for the Baranti Health Center Electronic Medical Record system. E-Puskesmas began to be implemented at the Baranti Health Center in April 2024. This Medical Record System is accessed online through the E-Puskesmas website. This Electronic Medical Record information system is implemented only in several service units at the Baranti Health Center such as registration, clusters 1,2,3,4, polyclinics, laboratories, doctors and pharmacies.

Implementation of electronic medical records can improve efficiency in the Health Administration process at Baranti Health Center.
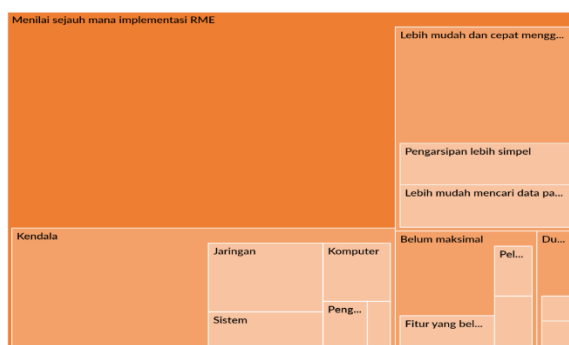
Hierarchy Chart Data Processing Results

Source: Primary Data 2025

1. It's easier and faster to use RME

1. Ease of searching patient data

The view that RME is faster and easier was expressed by several groups of informants, including doctors (3.67%), informants from cluster 1 (1.29%), cluster 3 (5.63%), cluster 4 (2.17%), poly unit (2.50%), and RME 2 technicians (1.69%).Based on interview findings, the Electronic Medical Record (EMR) information system at Baranti Health Center is considered effective, easier and faster because of the ease of searching for patient data, this can provide support to medical personnel in providing services, so that access to services can be more efficient.

"It's easier because we just open the e-health center application and then we can immediately search for patient data."(AF. Cluster 3 Officer)

2. Simpler archiving

In addition, the ease of the archiving process is also one of the important points highlighted. Positive responses to this aspect came from pharmacy informants (1.57%), cluster 1 (1.97%), cluster 2 (1.36%), poly unit (4.32%), RME technician 1 (4.30%), and RME technician 2 (3.06%). Based on interview findings, informants assessed that with the RME system, the need for physical manual recording can be minimized, so that the use of paper in the administration and health service processes becomes more efficient. In addition to having a positive impact on reducing waste and operational costs, this efficiency also reflects a shift towards a more environmentally friendly and integrated health information system.

"When it was still manual, most of it was handwritten, which resulted in waste of stationery, but now in the electronic era, storing archives is different and simpler." (H. Cluster 1 Officer)

3. Support

Based on the interview results that have been analyzed using the NVivo application in the form of a Chart, it was found that the implementation of Electronic Medical Records (EMR) received support from the heads of health centers and health offices. The response from informants of the heads of health centers was recorded at 11.99%, which shows the commitment of the leadership in encouraging the success of digital transformation in first-level health care facilities. Based on the interview findings, informants of the heads of health centers continue to provide support for the implementation of Electronic Medical Records (EMR), such as budgeting and selecting people who are responsible for holding the Electronic Medical Records (EMR) system. In addition, the Health Office also provides support for the implementation of Electronic Medical Records (EMR) by continuing to coordinate the development of the Electronic Medical Records (EMR) system. With this support, the development of the Electronic Medical Records (EMR) system can be improved for better service.

"Very supportive, especially since there are already regulations and it continues to be coordinated and monitored by the health service, last year the health service gathered 18 health centers in Sidrap district and then agreed to find 1 mentor, because this is an application that has many systems."(MT. Head of Health Center)

4. Not yet optimal

Based on the results of data analysis using the NVivo application in the form of a Hierarchy Chart, the implementation of Electronic Medical Records (EMR) in health care facilities shows that its implementation has not been running optimally. Several factors that are the main obstacles in the implementation of EMR include system features that are considered incomplete, operational time that is considered time consuming, and training that is considered less than optimal.

a. **Incomplete features**

Responses from doctor informants showed that incomplete features were the main focus with a proportion of 22.10%. Interview results showed that one of the main problems in implementing the Electronic Medical Record (EMR) system in Puskesmas was incomplete features. Doctor informants emphasized that incomplete features, especially related to limited choices in the application, were an obstacle in recording medical data optimally. This has the potential to cause limited information recorded in the EMR, which can ultimately affect the quality of health services and the accuracy of patient medical data.

"Sometimes we doctors are constrained by language in the application, sometimes we want to write something about what we see but only one option appears in the application."(G. Doctor)

b. **Time consuming operational time**

In addition, the time-consuming aspect also received attention, with the percentage of responses from doctor informants being 5.53% and informants from cluster 1 being 1.7%. The interview results showed that training in the use of EMR was still not optimal, with most officers learning independently or from fellow co-workers. Limited training and only attended by a few people resulted in the ability to operate EMR not being evenly distributed across all service units. This caused delays in the service process, as well as dependence on a few people who were already proficient, thus hampering the smooth implementation of EMR in the Health Center.

"It is faster and easier to use the manual one because with the manual we can directly write the examination results, sometimes the words we want to write do not match those in the electronic medical record, we cannot type the words directly, we have to click according to the options in the application and also the network if the network is not good then all services are hampered, if the network is hampered, patients usually have to queue for a long time".(G. Doctor)

c. **Training that is not yet optimal**

Training that has not been maximized, informants from the pharmacy department gave a response of 0.86%, and from cluster 1 2.72%. The interview results showed that training on the use of RME was still not optimal, with most officers learning independently or from fellow co-workers. Limited training and only attended by a few people caused the ability to operate RME to be uneven across all service units. This caused delays in the service process, as well as dependence on a few people who were already proficient, thus hampering the smooth implementation of RME in the Health Center.

"For the training, there is no training for pharmacy itself, so only a few people have received training and pharmacy has not been included today because of the limited number of people who can participate, so for pharmacy it is represented by the admin so the admin explains to us how the implementation

*process is, some of us learn autodidactically/via YouTube and ask other friends and I feel that the training is not optimal."(*DA. Pharmacy Officer)

5. Constraint

The results of the interview data analysis using the NVivo application in the form of a Hierarchy Chart show that the implementation of Electronic Medical Records (EMR) in health care facilities still faces a number of technical and non-technical obstacles. Several factors that are the main obstacles include limited internet networks, limited computer devices, the initial assessment process with a long process, and the EMR system itself which still needs further development.

a. Network

Network limitations were the main focus of various informants with varying percentages, such as doctors (2.71%), pharmacy (3.10%), cluster 2 (4.58%), laboratory (2.40%), registration section (2.25%), polyclinic (2.32%), and RME 2 technicians (0.69%). Interview results showed that network disruptions were an obstacle that was felt evenly in almost all service units, and had a direct impact on the smooth operation of RME use at the Baranti Health Center.

"Network, if the health center's wifi network is problematic, it can be solved by using personal wifi, and if the network is problematic, the patient can wait a long time because the patient will be examined if their data has been inputted."(S. Cluster Officer 2)

b. Computer limitations

In addition to network constraints, limited computer devices are also a significant obstacle in the implementation of Electronic Medical Records (EMR). The results of interviews that have been processed using the NVivo application in the form of Charts show that a number of informants identified the lack of computer availability as a factor that hinders the smooth use of the EMR system. This was expressed by informants from cluster 1 (2.04%), cluster 2 (2.34%), and EMR technician 2 (4.81%).

"The implementation has been good, but there are still some who have not used electronic medical records, such as in nursing care, because they are still constrained by infrastructure."(LS. Electronic Medical Records Officer 2)

c. System

The results of the interviews that have been processed using the NVivo application in the form of Charts also show that system factors are also obstacles in the implementation of Electronic Medical Records (EMR). Several informants said that the EMR system used is still often down. This was expressed by informants from the pharmacy department (1.60%), cluster 1 (1.40%), cluster 3 (1.01%), and registration department (1.16%). The results of the interviews showed that disruptions to the EMR system, such as servers often down and error, are obstacles in the implementation of EMR. As a result, the process of recording medical data is often done manually as a temporary solution, which can disrupt the smoothness and efficiency of services at the Health Center.

"Sometimes there are times when the application is down so it cannot be used so medical recording is done manually."(DA. Pharmacy Officer)

d. Initial assessment

The interview results that have been processed using the NVivo application in the form of a Chart also show that the initial assessment factor, which is considered time-consuming, was obtained from data from cluster 1 informants of 5.63% and poly informants of 8.64%. This finding indicates that the initial assessment process is one of the main obstacles in the operationalization of RME, which has the potential to hinder the efficiency of health services. The interview results show that the initial assessment in the RME process takes a long time and hinders the flow of services. Patients must go through several stages before receiving services at the intended polyclinic, causing delays in service.

"For technical problems, usually in registration, it is recommended that an initial assessment must be carried out, there are complaints from the public that it takes too long, while people come with certain medical conditions, we have to ask for several patient identities and we as examiners for beginners also still feel that the system is rather slow in service, but fortunately it is in archiving."(H. Cluster 1 Officer)

Evaluation of the benefits of using electronic medical records at Baranti Health Center.

Hierarchy Chart Data Processing Results
Source: Primary Data 2025

1. **Improve service quality**

Based on the results of data analysis using the NVivo application visualized in the form of a hierarchy chart, it is known that the use of electronic medical records (EMR) is considered to provide significant benefits in improving the quality of health services. The increase in quality is driven by several factors, including ease and accuracy of recording, ease of tracking patient data, patient complaints appear automatically, and efficiency in paper use.

   a. **Ease and accuracy of recording**

In particular, the aspect of "easier and more accurate recording" received attention from various informants, with the largest contribution coming from RME technician 2 (4.65%), followed by informants from cluster 2 (3.41%), cluster 4 (3.04%), laboratory (2.31%), and RME technician 1 (1.27%). The interview results showed that the implementation of RME not only simplifies the administrative process, but also has the potential to speed up services and minimize recording errors, which ultimately have a positive impact on the overall quality of health services.

"Electronic medical records are better than previous records because electronic medical records have several questions that must be filled in, so the accuracy of patient identity and data is more accurate compared to manual ones, then there are several question items in electronic medical records that are not in previous records, and the advantage of electronic medical records is that data can be sent directly across clusters with other program managers."(S. Cluster Officer 2)

b. Ease of searching patient data

Ease of patient data tracking is one of the main benefits of implementing electronic medical records (EMR) expressed by informants in this study. The results of the analysis using the NVivo application showed that this aspect received responses from informants in cluster 1 (2.58%), cluster 3 (2.08%), and informants from the polyclinic unit (3.64%). The interview results showed that the ease of tracking patient data was considered very helpful for health workers in accelerating the service process, reducing the risk of data loss or error, and increasing work efficiency. This shows that EMR not only improves the recording system, but also supports faster and more precise clinical decision-making.

"Archiving patient data has become easier because we can search directly in the application compared to before, when we had to manually search for each medical record one by one."(H. Cluster 1 Officer)

c. Patient complaints appear automatically

One of the significant benefits of using electronic medical records (EMR) expressed by informants in this study is the automatic appearance of patient complaints in the system. This feature is considered to help health workers understand the patient's condition quickly and accurately from the start of service. Based on the results of the analysis of interview data processed using the NVivo application, responses regarding this aspect were conveyed by informants from the pharmacy unit at 4.29% and informants from cluster 2 at 3.51%. The automatic appearance of patient complaints in the EMR system contributes to the acceleration of the service process because the main information regarding patient complaints has been documented and can be directly accessed by medical personnel, without the need for manual refills. The interview results showed that the automatic appearance feature of patient complaints in the EMR helps speed up the service process. This feature allows medical personnel to understand the patient's condition quickly without having to ask again, thus facilitating the examination and drug administration process.

"Yes, because with electronic medical records, services are easier because patient complaints already appear in the application." (S. Cluster Officer 2)

2. Not yet efficient

Based on the results of data analysis using the NVivo application in the form of a hierarchy chart, an evaluation of the benefits of using electronic medical records (EMR) shows that its implementation is considered not yet fully efficient. Several factors that influence this include the lack of integration of the EMR system in all service units, limited infrastructure, and obstacles to use by elderly groups who are not yet familiar with electronic systems.

a. The RME system has not been implemented in all service units

One of the main issues raised by informants is the non-implementation of RME in units such as the ER, PONED, and care. This is reinforced by the response

from the pharmacy informant, who stated that the aspect of the uneven implementation of RME was 4.23% in the perception of the inefficiency of the system. The results of the interview showed that the implementation of RME in the Health Center was not evenly distributed to all service units such as the ER, PONED, and care. This has an impact on the inefficiency of the system as a whole, because not all patients are recorded in the RME system, so the benefits of RME efficiency have not been fully felt.

"In terms of efficiency, yes, but the presentation is not up to 100%, because not all patients use electronic medical records because, for example, in the ER, it was not ready yet, only some of them used it, so the efficiency has not been truly felt."(DA. Pharmacy Officer)

b. **Infrastructure limitations**

Infrastructure limitations are one of the main factors that hinder the effectiveness of electronic medical record (EMR) implementation. Based on the results of the analysis using the NVivo application, RME technician informant 1 said that infrastructure limitations provided a response with a contribution of 1.60% to the perception of system inefficiency, while RME technician 2 gave a similar response with a contribution of 3.09%. This shows that from a technical perspective, infrastructure readiness, such as a stable internet network, adequate hardware, and other supporting systems, has not been optimally met. Infrastructure limitations, such as an unstable internet network and inadequate hardware, are the main obstacles to the effectiveness of EMR implementation. This condition causes the system to not be able to operate optimally in all service units.

"There are still not enough computers, or at least there are no tablets, the network is still unstable, the point is that there is still a need for additional networks because there are still units that are not fully covered by the network."(LS. Electronic Medical Records Officer 2)

c. **Elderly groups who are not yet familiar with electronic systems**

In addition to infrastructure constraints and uneven implementation, user factors also influence the effectiveness of the use of electronic medical records (EMR). Based on the results of interviews processed through the NVivo application, informants from the polyclinic unit noted that the elderly group (lansia) is a challenge in adapting to electronic systems, with a contribution of 1.50% to the perception of barriers to the use of EMR. The elderly tend to have difficulty interacting with digital systems due to physical limitations, such as vision and hearing, as well as limitations in digital literacy. The elderly group is a challenge in the use of EMR due to physical limitations and digital literacy. Many elderly people have difficulty operating electronic systems, so they are more dependent on family assistance during registration, which hinders the smooth running of the service process.

"For now, it is still average, because most people do not have cellphones, especially the elderly, who are definitely constrained by cellphones, and their families have just registered them, so it is difficult."(AI. Polyclinic Officer)

4. DISCUSSION

Implementation of electronic medical records can improve efficiency in the Health Administration process at Baranti Health Center.

1. **It's easier and faster to use RME**

The implementation of Electronic Medical Records (EMR) at the Baranti Health Center has been proven to increase the efficiency of health services, especially in searching and archiving patient data. Interview results analyzed through the NVivo application showed that the majority of informants felt that the use of EMR was more practical than the manual system. Health workers only need to enter the name or NIK to access patient data, which speeds up medical services and decision-making. This finding is in line with research by Nurfitria et al. (2022) and Apriliyani et al. (2021) which stated that EMR accelerates the administrative process and reduces recording errors.

In addition, RME facilitates data archiving because it no longer relies on physical documents. Patient data is recorded more completely and neatly, and can be accessed quickly for service purposes and digital reporting. The use of RME also reduces paper and stationery consumption, supporting cost efficiency and environmentally friendly practices. The previously time-consuming health reporting process can now be done in minutes, as explained in the studies of Apriliyani et al. (2021) and Studi et al. (2024), which highlight the benefits of digitalization in facilitating reporting and environmental conservation.

The success of the implementation of RME cannot be separated from the support of the leaders of the health centers and the Health Office which is in line with the national digitalization policy. This support accelerates the transformation of the work culture of health workers towards a modern and integrated system. Research by Khasanah and Budiyanti (2023) emphasized that the active role of leaders, proper budget planning, and structured system supervision are key factors in the success of RME. This shows that the digitalization of health services requires cross-sector synergy and strong institutional commitment.

2. **Not yet optimal**

   a. **Incomplete features**

The doctor informant stated that the language limitations and options available in the application often made it difficult to record the patient's condition comprehensively. He explained that in practice, doctors often want to write down the specific findings they observe, but the application only provides limited options without any feature to add free information. This result is in line with research(Mohammad Fajar Mukharram et al., 2024), which states thatincomplete system design, such as inaccessible drawing facilities and some features that do not function properly.

This condition shows that the application is not flexible enough to accommodate the needs of medical documentation optimally, which can ultimately affect data quality and the clinical decision-making process. This inconsistency emphasizes the importance of reviewing the application design, especially in terms of providing free text input features and more relevant language support. Therefore, active participation of medical personnel in application development is essential so that the resulting health information system can truly support the needs of medical practice optimally.

   b. **Time consuming operational time**

The use of electronic medical records (EMR) which should simplify the health service process actually still causes obstacles, especially in terms of the time required for medical personnel to operate it. This is reflected in the statements of doctors and cluster 1 officers, who stated that electronic systems are often considered slower than manual recording because staff are accustomed to manual medical records. These results are in line with research(Yulida et al., 2021), which states thatThe patient service process will take longer if the user work culture changes from manual to electronic.. Doctors feel that the manual system is more flexible because it allows direct recording with the words needed, while RME limits the choice of words available in the system.

c. **Training that is not yet optimal**

Based on the interview results, it was revealed that the implementation of training for the implementation of Electronic Medical Records (EMR) was still uneven and had not achieved the expected effectiveness. In the pharmacy department, only a small number of staff had ever attended training, while most of the others only received information from the admin or learned independently through online sources such as YouTube and discussions with colleagues. This shows that training has not been provided comprehensively, so that understanding and skills in using EMR are still limited. Similar conditions were also found in cluster 1, where training was carried out simultaneously with the signing of a cooperation agreement with the system developer (INFOKES), but only a few individuals truly mastered the system and became a source of reference for others. These results are in line with research(Methods et al., 2025), which states thatNot all health workers in health centers have been trained to use RME. By asking their colleagues, many health workers can learn independently. Limited technological literacy, especially for elderly health workers, makes health workers initially face difficulties.

This inequality can hinder the process of adopting technology as a whole, because not all staff have the same level of understanding. This finding emphasizes the importance of organizing more systematic and equitable training so that all parties involved are able to adapt to the new system effectively. Thus, the potential of RME in improving the efficiency and quality of health services can be realized optimally.

3. **Constraint**

a. **Network**

Network problems are the main obstacle in the implementation of Electronic Medical Records (EMR) at Baranti Health Center. Various informants from almost all service units said that network disruptions greatly affect operational smoothness. Dependence on a stable network connection makes services less than optimal when disruptions occur. In situations like this, officers must find alternative solutions such as using a private network, running procedures manually, or directing patients to other units such as the Emergency Room that do not yet use the EMR system. These results are in line with research(Lestari, 2024), which states thatOne of the most common obstacles experienced by users is network constraints, which have a major impact on the process. This shows that the benefits of the RME system are indeed felt, but the

obstacles and the implementation of RME that are not yet comprehensive make the application program not yet feel optimal for users.

The impact of network disruptions not only slows down the administration and medical service process, but also causes patient discomfort and emotional stress for officers who have to deal with complaints directly. Some units even stated that patient data cannot be processed if it has not been inputted into the system, resulting in longer patient waiting times. This indicates that the EMR system is highly dependent on reliable digital infrastructure. Therefore, strengthening the network is an important priority to ensure that digital transformation in health services can run effectively, efficiently, and provide a positive experience for both patients and officers.

b.　Computer limitations

One of the main challenges in implementing the Electronic Medical Record (EMR) system at Baranti Health Center is the limited availability of computer devices. The informant's statement emphasized that the limited availability of computer devices forced several service units to still rely on manual recording as a temporary solution. As expressed by officers from Cluster 1, the implementation of the electronic system has increased the need for computer devices in almost every service unit. However, in reality, not all units are facilitated with computers, so access to the EMR system is still limited. These results are in line with research(Faida & Ali, 2021), which states thatInfrastructure unpreparedness includes lack of availability of servers and computers to run electronic medical records.

This situation indicates the need for a more planned and even procurement strategy for devices in each service unit. Equal distribution of computers is very important to ensure that all service units can be integrated into the RME system. Therefore, before this system is fully implemented, it is important to evaluate the infrastructure needs and proper budgeting to support the success of its implementation.

c.　System

The obstacles in question include unstable RME system conditions, such as frequent disruptions or inaccessibility (down), which ultimately hamper the digital medical recording process. Several informants said that when the system is disrupted, the service process is still carried out manually as a temporary alternative. This illustrates that the RME system that is implemented is still not fully reliable in certain situations. Officers from the pharmacy department said that system disruptions meant that the recording process had to be done manually again. In line with that, officers from cluster 1 explained that server constraints often occur even though they are usually accompanied by notifications from the management and further solutions that allow services to continue running. These results are in line with research(Amin et al., 2021), which states that the server capacity is inadequate where there are server down constraints, RME cannot be accessed causing service to be delayed because of the server.

These findings indicate that the instability of the health information system is a major challenge in the implementation of RME. Reliance on manual solutions when the system is disrupted reflects the suboptimal technical readiness and the absence of an adequate backup system. Therefore, improving the quality of technology

infrastructure, strengthening the server system, and providing a more efficient disruption handling mechanism are urgent things to do so that the implementation of RME can run better and more consistently.

d. Initial assessment

Initial assessment actually plays an important role in ensuring that patient data is documented accurately. However, in practice, this process is often considered to slow down the service flow, especially in the early stages of a patient visit. As explained by informants from cluster 1, the system currently used is still considered inefficient, especially by health workers who are new or not yet familiar with EMR. As a result, the data entry process and initial interviews take longer, giving rise to complaints from the public who hope that services can be carried out more quickly. These results are in line with research(Sari Dewi & Silva, 2023), which states that system speed, officers said that the RME system had not fully accelerated the performance of officers because of the many menus on the RME which took longer, the patient data filling process took a long time because of the many columns to be filled in, and network problems sometimes occurred.trouble.

These findings emphasize that while initial assessment is an important element in a health information system, its implementation needs to be adjusted so as not to hinder the speed and ease of service. The EMR system should be a solution to speed up service, not add to the administrative burden.

Evaluation of the benefits of using electronic medical records at Baranti Health Center.

1. Improve service quality
a. Ease and accuracy of recording

Several informants stated that the RME system was able to improve accuracy in recording because there were mandatory columns that ensured that important patient information was not missed. In addition, RME also included new data elements that were previously unavailable in the manual system, and enabled direct and rapid data exchange between clusters and health programs. These results are in line with research(Simanjuntak, 2019), which states thatA number of benefits result from the use of RME and this new system, including time efficiency, increased work effectiveness, provision of more complete and accurate information, increased patient safety through clarity of treatment data, and opportunities for further development, such as the incorporation of electronic prescriptions.

These findings confirm that RME not only improves the administrative process, but also has a positive impact on the quality of service. With faster, more accurate and easily accessible recording, this system helps realize more efficient, integrated and technology-based health services.

b. Ease of searching patient data

The informants said that through RME, patient data searches can be done directly through the application, without having to go through a manual process like

before. That way, health workers can access data more quickly and efficiently, which ultimately speeds up the service flow. In the context of health services, speed and accuracy in obtaining patient information are very important to support medical decision-making. Digitizing medical data through RME helps minimize the potential for loss or errors in recording that often occur in manual systems. All patient information is stored in a structured manner and can be accessed at any time, thereby increasing data reliability and strengthening service continuity. These results are in line with research(Apriliyani et al., 2021), which states thatRME is very easy to use, especially for searching patient data and history. It saves time, makes it more efficient, and ensures that patient data is stored safely and is not lost.

These findings reinforce that RME not only improves the medical documentation system, but also contributes to improving overall service performance. This digital transformation is a strategic step towards a more modern and responsive health service to patient needs.

c. **Patient complaints appear automatically**

One of the main findings in this study shows that the automatic emergence of patient complaints in the Electronic Medical Record (EMR) system has a positive contribution to increasing the efficiency and accuracy of health services. The ease of accessing patient complaint information directly from the system allows health workers to immediately understand the patient's condition without having to input data manually. This not only saves time but also reduces the risk of recording errors. These results are in line with research(Erawantini & Wibowo, 2019), which states that the results of the supporting examination will be known to the doctor automatically on this menu, because the radiology and laboratory officers have previously inputted it into the laboratory system and radiology information system. If there are results that do not match normal conditions, the system will provide a warning in the form of risk information.

With the patient complaint automation feature in the RME system, it not only simplifies medical recording, but also strengthens the role of information technology in improving the quality of health services. This feature is an important part in supporting the speed of service, reducing administrative burdens, and increasing the accuracy of medical actions.

2. **Not yet efficient**

a. **The RME system has not been implemented in all service units**

One of the problems from the results of interviews with informants is that the Electronic Medical Record (EMR) system has not been fully implemented in all service units. Several important units such as the Emergency Room, PONED, and inpatient rooms are known to not have fully used EMR in the recording and service process. This has an impact on the less than optimal use of the system in supporting work efficiency and health services. These results are in line with research(Nurfitria et al., 2022), which states thatDue to the many benefits of RME, it is hoped that its implementation will be evenly distributed across all health service facilities.

Therefore, strategic steps are needed from the management to encourage the expansion of the implementation of RME as a whole. This includes strengthening

technological infrastructure, increasing human resource capacity through training, and establishing internal policies that support the use of RME consistently in all service units. These efforts will contribute to the creation of a more efficient, integrated, and quality health service system.

b. **Infrastructure limitations**

Infrastructure limitations are one of the main obstacles in the implementation of an effective Electronic Medical Record (EMDR) system. This obstacle includes several important factors, such as the lack of adequate hardware, the lack of availability of tablets or computers evenly, and an unstable internet network connection that has not reached all service units. These results are in line with research(Faida & Ali, 2021), which states thatThis shows that the unpreparedness to run RME is mainly due to infrastructure issues rather than other issues. The development of RME is hampered by the limited budget for hospital information technology. Hospitals need to build information technology infrastructure, including computers, electricity, security systems, training, consultants, and wired and wireless networks. Therefore, financial issues are very important.

This reflects that the readiness of infrastructure, both in terms of devices and networks, is still not optimal and is a serious challenge in supporting the smooth use of RME. Therefore, efforts are needed to improve infrastructure as a whole to ensure that the implementation of the system runs as expected and is able to support the efficiency of health services.

c. **Elderly groups who are not yet familiar with electronic systems**

One of the challenges in implementing Electronic Medical Records (EMR) comes from user factors, especially the elderly group. The elderly often face obstacles in interacting with digital systems due to physical limitations, such as decreased vision and hearing function, and low digital literacy. This makes it difficult for them to carry out the registration process independently, especially when they have to use electronic devices such as smartphones. Many of them do not have or are unable to operate these devices, so they rely on family assistance in accessing services. These results are in line with research(Faizah, 2021), which states thatwhere problems arise for people who do not yet understand online registration technology.

This dependency not only slows down the service process, but also shows that the EMR system is not fully inclusive of all levels of society. Therefore, there needs to be a more elderly-friendly approach, either through system simplification, direct assistance, or increased digital literacy support, to ensure that digital transformation in the health sector can be accessed evenly and does not leave vulnerable groups behind.

The results of the discussion are supported by the ISSM (Information System Success Model) theory:

1. **System Quality**: RME is considered to have a better system than manual, especially in terms of data search features, neat archiving, and reducing the use of physical documents.

2. **Information Quality**: Patient information such as complaints, diagnoses, and treatment history are completely documented, making it easier to make medical decisions.

3. **Quality of Service**: RME supports faster, more structured services and reduces queues because data is easily accessible.

4. **Usage and User Satisfaction**: The majority of informants felt helped by the existence of RME, both in terms of data search speed, ease of recording, and archiving.

5. CONCLUSION AND SUGGESTIONS

The implementation of Electronic Medical Records (EMR) at Baranti Health Center has been proven to provide significant improvements in the efficiency of health administration processes. The EMR system facilitates the search and archiving of patient data quickly and accurately, replacing slower and error-prone manual methods. The recording process becomes more complete and structured, and reduces the use of paper and physical storage space, which also supports cost efficiency and is environmentally friendly. Support from leaders and policies from related agencies are important factors that strengthen the success of EMR implementation, accelerating the adaptation of digital work culture in the health center environment. However, there are still obstacles that hinder the optimization of EMR, such as incomplete and less flexible application features, operational times that are sometimes longer than manual, and training that is not evenly distributed to all staff. In addition, infrastructure factors such as unstable networks, limited computer devices, and system disruptions cause obstacles in operations, so that administrative services still sometimes have to be carried out manually. The initial patient assessment process also still requires simplification so as not to slow down services.

However, the evaluation also identified several obstacles that hampered the optimization of RME at Baranti Health Center. The uneven implementation of RME across all service units such as the Emergency Department, PONED, and inpatient rooms resulted in less than optimal utilization of the system. Infrastructure limitations, including hardware and uneven and unstable internet networks, are the main obstacles to implementing an effective system. In addition, challenges from the user side, especially the elderly who are less familiar with electronic technology, show that this system is not fully inclusive and user-friendly. Therefore, strategic efforts need to be made in the form of expanding the implementation of RME to all service units, improving and equalizing technology infrastructure, and special approaches to support the elderly so that they can access services easily. Thus, digital transformation through RME can run optimally, creating an efficient, accurate, and inclusive health service system at Baranti Health Center.

Suggestions

a) There is a need to improve infrastructure quality, particularly in ensuring stable internet connectivity and adequate computer equipment. This is crucial so that all service units—including the emergency department (UGD), basic emergency obstetric and neonatal care (PONED), and inpatient wards—can access and utilize the EMR system uniformly without significant technical obstacles.

b) The features within the EMR application should be continuously developed and adapted to meet operational needs in the field. Certain processes, such as initial patient assessments, are still considered time-consuming and should be streamlined to avoid disrupting service flow.

c) Comprehensive and equitable training for healthcare workers is essential. Not all staff members share the same background or skill level in using electronic systems; therefore, ongoing training is a critical step to ensure all personnel can operate the EMR effectively.

d) Special attention should be given to elderly patients, who often face difficulties with electronic systems. The health center may consider adopting more elderly-friendly service approaches, such as providing staff assistance during registration or consultations involving digital systems.

e) Support from health center leadership and policies from relevant institutions are vital for the sustainability of this program. Strong commitment from leaders will greatly assist in shaping an effective work culture that embraces the transition to digital systems.

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