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NURSES' EXPERIENCE IN CARRYING OUT NURSING CARE DOCUMENTATION USING *ELECTRONIC MEDICAL RECORD (EMR)*

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Abstract

The development of information and communication technology has led to significant changes in the provision of nursing care. This study examines nurses' experiences with using Electronic Medical Records (EMRs) for nursing care documentation. This study aims to explore the experiences of nurses using EMR in documenting nursing care. This qualitative study uses a phenomenological approach involving 10 nurses, including the head of the room, team leader, and implementing nurses. Participants were selected using purposive sampling techniques, with the following criteria: nurses who perform nursing care documentation using an Electronic Medical Record (EMR), nurses working in inpatient, outpatient, emergency (IGD), and intensive care units, nurses with a work experience of at least 2 years, and nurses who are willing to participate. The study was conducted at a private hospital in Pekanbaru. Data were collected through interviews and analysed using thematic analysis, employing the Colaizzi method. Result: The analysis revealed three themes: the benefits of Electronic Medical Records (EMR) in nursing services, supporting factors for the implementation of EMR, and inhibiting factors for the implementation of EMR. Based on the study results, it can be concluded that nurses feel the effectiveness and efficiency of EMR in documenting. However, during its implementation, there are still obstacles that require attention from hospital management. Thus, providing health services becomes optimal and efficient for patients and health workers.

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INTRODUCTION

Documentation of nursing care in many hospitals is still commonly performed manually or handwritten using forms provided by the institution) [1]. Although paper-based documentation is widely used in nursing practice, this method has several limitations, including the longer time required for nurses to complete documentation, printing costs, the need for large storage space, and the risk of documents becoming lost, damaged, or difficult to retrieve when needed [5]. These drawbacks highlight the need for a more efficient documentation system.

Along with technological advancements, many health care facilities have transitioned to electronic-based documentation systems known as electronic medical records (EMR). Research has shown that EMR offers various benefits for nurses, such as shorter documentation time, more complete and structured presentation of patient data, and easier access to information [2] Other studies have also reported that electronic documentation improves efficiency and enhances nurses' performance in documenting nursing care [3]. EMR implementation has been associated with improved quality of care, increased patient safety, and greater patient satisfaction due to the availability of more interaction time with nurses [4] .

In Indonesia, EMR has been increasingly adopted in various health care institutions, including Santa Maria Hospital Pekanbaru. Based on preliminary observations, the hospital began transitioning from manual documentation to EMR in mid-2019. However, this change brings new challenges. Audit results conducted by

the PIC team in early 2022 indicated that not all nursing units had implemented EMR documentation completely. Both outpatient and inpatient units achieved more than 90% completeness only in the initial assessment and nursing diagnosis. Meanwhile, other components of nursing documentation remained below the target, with average completion rates still under 70%.

Further observations revealed inconsistencies in the selection of nursing diagnoses, mismatches between planned and implemented interventions, and outcomes that did not align with expectations. Although the EMR platform already provides all required components of the nursing care process assessment, diagnosis, planning, implementation, and evaluation nurses still require adaptation and habituation to optimize its use [4]. These findings suggest the presence of barriers and gaps in EMR-based nursing documentation at the hospital.

Considering the gap between the potential benefits of EMR and the challenges identified in its implementation at Santa Maria Hospital Pekanbaru, further exploration is needed. Therefore, this study aims to describe nurses' experiences in performing nursing care documentation using EMR at Santa Maria Hospital Pekanbaru.

RESEARCH METHODS

Descriptive phenomenology is used to see and listen more closely and in detail to an individual's explanation and understanding of an experience or event, not to produce a theory or model but to obtain a complete interpretation of the phenomenon being studied (Martha & Kresno, 2017). The design of this study is qualitative research using a descriptive phenomenological approach with Colaizzi's method, where the researcher explores information from nurses regarding their perspectives on the implementation of EMR at Santa Maria Hospital. This approach allows the researcher to investigate the meaning of nurses' lived experiences and describe them comprehensively in accordance with the research objectives.

The stages of phenomenological research include asking questions during interviews, analyzing interactions, interpreting the significance of experiences in the form of narratives, and presenting these narratives systematically according to the aims of the research [5].

In accordance with Colaizzi's phenomenological method, data analysis in this study followed seven steps conducted systematically, beginning with familiarization, where the researcher repeatedly read all interview transcripts to understand the whole description of participants' experiences. The next step was identifying significant statements related to nurses' experiences in documenting nursing care using EMR, followed by formulating meanings from each significant statement. These formulated meanings were then organized into thematic clusters, which later formed an exhaustive description of the phenomenon. The researcher then refined this description into a fundamental structure and subsequently validated the findings by returning them to participants (member checking) to confirm accuracy and ensure that the interpretations truly represented their experiences.

The population in this study consisted of all nurses documenting nursing care using EMR. A total of 194 nurses were actively working at Santa Maria Hospital and thus had the opportunity to participate in the study. Ten participants were selected using purposive sampling based on specific criteria, including nurses who perform nursing care documentation using EMR, those working in inpatient, outpatient, intensive care, and emergency units, nurses with at least two years of work experience, and individuals who were willing to be participants. This selection ensured that participants had sufficient experience and exposure to EMR implementation to provide meaningful insights.

This study was conducted at Santa Maria Hospital Pekanbaru, which has Plenary accreditation. The settings included outpatient units, inpatient units, intensive care units, and the Emergency Installation (IGD). Overall, the hospital employs 194 active nurses who have diverse lengths of service and work experiences ranging from 2 to 25 years. Interviews were conducted in the VIP lounge to maintain participants' privacy and provide a comfortable

environment that enabled participants to speak freely, describe their experiences in detail, and respond openly to the interviewer's questions.

Data collection was carried out using semi-structured interviews guided by a list of questions prepared and developed by the researcher. Prior to data collection, potential participants meeting the inclusion criteria were informed about the objectives and procedures of the study. Those who agreed to participate signed informed consent forms. After obtaining consent, interviews were conducted at times and locations mutually agreed upon by the researcher and participants. Throughout the interview process, conversations were recorded using a digital recorder to ensure accuracy in capturing participants' verbal expressions and prevent loss of important information.

This research passed an ethics review from the Research and Health Ethics Commission (KEPK) of the Faculty of Nursing, University of Riau, with number 392/UNI9.5.1.8/KEPK.FKp/2024. Ethical approval ensured that the research met standards of confidentiality, autonomy, and respect for participants' rights throughout the study.

In analyzing the data, the researcher used Colaizzi's phenomenological method based on verbatim transcripts to identify the themes emerging from participants' experiences .[6] The transcripts were examined to identify key statements and formulate meanings, which were then coded and categorized into themes .[7] To ensure credibility, the researcher conducted member checking by returning the formulated themes to participants to verify whether the findings accurately reflected their experiences. Credibility was further strengthened through prolonged engagement with the data, reflexivity, and peer debriefing, ensuring that the interpretations were grounded in participants' narratives and free from researcher bias.

RESULTS AND DISCUSSION

Table 1. Respondent Characteristics

Code	Length of Employment (th)	Education Level	Position	Work Area
P1	20	DIII	Team leader	Outpatient
P2	18	S1 + Ners	Team leader	Hospitalization
P3	19	S1 + Ners	Nurse	Hospitalization
P4	22	S1	Nurse	Hospitalization
P5	25	S1 + Ners	Nurse	Outpatient
P6	23	S1 + Ners	Team leader	IGD
P7	2	S1 + Ners	Executive	Hospitalization
P8	12	DIII	Executive	Hospitalization
P9	3	DIII	Executive	Intensive
P10	19	S1 + Ners	Executive	Intensive

Demographic data was recorded for all participants at the beginning of each interview. Ten participants consisted of 3 room heads, 3 team leaders, and 4 nurse implementers who had been interviewed in depth. Based on table 1 above, 8 participants with a service period of more than 5 years (80%) while 2 of them had a service period of < 5 years (20%). Judging from the level of Education, the last education with strata 1 and professional education was 6 participants (60%), the rest had the last education of strata 1 (10%) and D III Nursing (30%).

From the results of the thematic analysis, 3 themes were found related to the experience of nurses in documenting nursing care using EMR. The three themes are as follows: 1) the benefits of EMR in nursing services; 2) supporting factors for the implementation of EMR*;* 3) factors inhibiting the implementation of EMR. The experience of nurses in carrying out documentation of nursing care using EMR is described in a descriptive form.

Table 2. Themes found

	Sub-Theme	Theme
A.	1. Effectiveness and efficiency of EMR 2. Advantages of using EMR	Benefits of EMR in Nursing Services (Theme 1 highlights how EMR mechanisms directly contribute to improved efficiency, accuracy, and optimization of nursing workflows.)
B.	1. Infrastructure support 2. Training support 3. IT team support	Supporting Factors for EMR Implementation (Theme 2 emphasizes how

		organizational support including adequate infrastructure, continuous training, and responsive IT assistance facilitates successful EMR adoption.)
C.	1. Unstable network 2. Nurse abilities 3. Nurse time management and nursing care services	Inhibiting Factors for EMR Implementation (Theme 3 identifies barriers such as technical issues, competency gaps, and workload challenges, leading to policy-oriented recommendations for improvement.)

The results of this study indicate that the implementation of EMR at Santa Maria Hospital provides various benefits for nursing services, particularly by improving the effectiveness and efficiency of documentation. The first theme, Benefits of EMR in Nursing Services, highlights that EMR facilitates nurses in recording patient data more quickly, accurately, and systematically. This aligns with previous studies stating that electronic documentation can reduce duplicated work, accelerate data access, and minimize recording errors [5]. This efficiency is a key mechanism that supports the improvement of nursing service quality, as nurses can allocate more time for direct patient interaction.

The second theme, Supporting Factors for EMR Implementation, emphasizes the organizational role in supporting change through the provision of infrastructure, training, and IT team assistance. Analysis using Lewin's Change Theory shows that the EMR implementation process can be seen through three stages. First, Unfreezing, which involves introducing EMR and providing training for nurses to familiarize themselves with the new system. This stage is crucial to prepare individuals for change, reduce resistance, and motivate nurses to use EMR. Second, Changing, where nurses actively implement EMR in daily practice. At this stage, challenges such as unstable networks, variations in nurses' technical skills, and time management issues due to workload were observed. Third, Refreezing, where expectations regarding new documentation standards are established, and EMR practices become routine, allowing documentation processes to be consistent and aligned with quality targets.

The third theme, Inhibiting Factors for EMR Implementation, highlights barriers encountered during implementation, both technical and non-technical. Technical barriers, such as unstable networks and device issues, may disrupt documentation workflows, while non-technical barriers include nurses' varying abilities and limited time due to workload. Identifying these barriers provides the basis for policy recommendations, such as strengthening IT infrastructure, adjusting workloads, and implementing continuous training programs for nurses.

Moreover, EMR implementation has a direct impact on service quality. EMR enhances patient safety by reducing the risk of documentation errors and facilitating access to critical patient information, ensuring safer care delivery. Electronic documentation also supports continuity of care, as patient data can be accessed in real-time by the entire healthcare team across inpatient, outpatient, and emergency units. Additionally, EMR promotes standardization of documentation, ensuring nursing information is complete, systematic, and consistent, in accordance with hospital standards and professional regulations.

Overall, integrating Lewin's Change Theory and service quality analysis shows that EMR implementation not only improves operational efficiency but also contributes to enhanced nursing service quality. The organization plays a crucial role in facilitating change through technical support, training, and resource management, while reinforcing standardized electronic documentation ensures safe, integrated, and consistent care delivery.

1. **Benefits of EMR in Nursing Services**

   Documentation of nursing care is an integrated activity carried out by nurses and is one of the means of communication between health workers as well as proof that nurses have provided nursing care to patients. Currently, the documentation of nursing care at Santa Maria Hospital is carried out by EMR. In this study, themes related to the benefits of EMR in nursing

services were found, namely the effectiveness and efficiency of EMR and the advantages of using EMR. Information obtained from nurses who documented nursing care by EMR said that EMR proved to be useful for nurses in carrying out the documentation process. Some participants said that by using EMRs their work became faster and more efficient. Some of the statements of the participants that support the above statements are as follows:

"This computerized system is very easy and simple for nursing. We write less and have more time to provide care to patients." (P3)
"Everything is in one place: patient records, nurse notes, doctor notes, pharmacy, and nutrition. I no longer need to search for information." (P2)
Other participants also expressed the same as previous participants. The participant said that documenting using EMR makes it easier for nurses to access patients' medical history quickly and *in real-time*. The full expression from the participants is as follows:
"With the computer, we can immediately access previous patient history; it is faster and more effective." (P10)
"We can easily find patient care history, including previous treatments, through the computerized system." (P3)
"The system is well-structured and all staff can easily master the software." (P3)

EMR also provides a new experience for nurses. In contrast to manual documentation of nursing care, EMRs are more systematic and do not require a large space to store documented data. Data archives can be stored safely and free from damage due to environmental conditions, weather and others. If needed at any time, data can be accessed easily. This is in line with what one of the participants expressed:
"At this time, our typing seems to be more comfortable, the hand is less painful typing than handwriting, so yes, if for example using this EMR we go greener, we only need 1 PC or for example our laptop can access it immediately" (P4, lines 107, 109, 111).

Based on the experience of participants who have done electronic documentation, participants get convenience during the implementation where participants say that EMR provides efficiency and effectiveness in carrying out nursing documentation when compared to manual documentation, computer-based documentation is superior in terms of efficiency, cost effectiveness, clarity of information, and completeness of documentation.
According to the researchers, this is in line with the results of previous research where EMR It has many advantages in its use [8]. Display the benefits The EMR Allows quick and easy access to patients' medical information from various departments and locations in the hospital. This speeds up the process of diagnosis, treatment, and patient care, as well as improves coordination between the medical teams involved in patient care. EMR also supports sustainable, patient-oriented medical practice by providing comprehensive information about the patient's medical history [9]. This allows doctors to make better, more informed medical decisions, as well as provide more personalized and integrated care to patients [10]
The use of EMR is also a container for documenting nursing care, providing many advantages for nurses as one of its users. Several nurses in this study revealed the difference between using EMR and manually, one of which is that the data will not be lost or scattered, it is easy to access again and does not require large storage space. A partial statement in support of this:
"... What's easier is actually computer-based now, because ee we no longer need to look for status, sometimes this status is held by many people, sometimes nutrition, sometimes doctors, sometimes that, so now we are one container, so all one place is here., if in the past, for example, people write down

what the main thing is to look for status, (P2, lines 59-61,68)

In its implementation, manual documentation has many disadvantages, such as nurses writing more, using a lot of paper, and the risk of scattering and requiring a larger storage space. Participant statements that support this, such as:

"At that time, we used paper to write a lot of it, so it was painful to the point of pain,... Then for example, if the patient is treated for a long time, the paper can sometimes get messy, the storage also needs storage, the storage space must need storage space..." (P4, line 49,52,54)

"Now if it is manual once the patient registers, especially for patients who have often been treated by us or outpatients or inpatients, so from the medical record system EE takes time for us to wait for the file, it turns out that after this system once the patient registers, the patient's medical record number appears, as soon as the list appears on the nurse's EE computer at the nurse station..." (P6, lines 93,-96,98)

Some of the advantages felt by nurses since the use of EMR at Santa Maria Hospital, such as not taking long, being able to access the patient's disease history easily and others, such as the following participant statements:

"It can be minimized digitally..., with EMR we just have to look at enter the patient's medical record number, there we can record the patient's previous history such as what kind of medicine has been received, it is quite enough to summarize neatly in this EMR." (P7, lines 89-91, 93-95).

"… If now with a computerized system we can search for patient data easily, we can search for the patient's care history, for example patients who have been treated previously who come in now, the previous history can be easily obtained from EE this computerized system. In the past, we were still manual documentation, it was the storage of the documents of the files, right: 1. Occupy space, 2. It can be that patient data is either scattered, it is lost." (P3, lines 166-171).

The statements of some of the participants above show and confirm that the use of EMR makes it easier for nurses to carry out nursing care documentation. The time needed by nurses to carry out documentation is shorter. Nurses assessed that EMR had a positive impact on documentation.

Based on the results of the research that has been conducted, participants agree that EMR provides a lot of convenience in documenting nursing experiences electronically. When compared to manual documentation, its use is more risky such as loss, scattering, misperception, and it takes longer to document nursing care [11]. This research is in line with research conducted by Wulandari et al., (2019) where nursing care writing becomes repetitive, paper becomes smudged, bundles of patient status become thicker and lack of service to patients so that nurses feel that EMR provide efficiency and effectiveness in coordinating nursing care.

The results of this study are also supported by research conducted by Baumann et al., (2018) Where the use of electronic medical records reduces the use of paper and the processes of input, search, storage, reporting and coordination between units and data transmission become more effective. Use *EMR* In a hospital environment it has also been shown to save time, reduce the number of documentation errors and the risk of falls and infections [13].

Electronic documentation offers optimal patient care for nursing staff, more efficient and effective documentation, more integrated and (paperless) care,

which can reduce global warming and hospital costs. Although it is undeniable, the implementation of an electronic documentation system requires careful preparation [14].

2. Supporting Factors for EMR Implementation

Based on the results of interviews from 10 participants, themes related to factors that support the implementation of documentation of nursing care using *EMR* at Santa Maria Hospital Pekanbaru, namely infrastructure support, training support, and IT support.

Nursing documentation with electronic methods must certainly have supporting facilities and infrastructure. Every facility and infrastructure provided is intended to realize the integrated use of EMR. This provision must of course come from the agency that documents the EMR, including the provision of network services when accessing the EMR. This participant was in line with the expression of one of the participants:

"Because hospitals provide infrastructure facilities to us, such as providing computer facilities, yes, laptops are also yes" (P1, line 68).

Just like the theory of change mentioned by Lewin's that in making a change strength is needed. The provision of sufficient and adequate facilities in implementing the EMR documentation system is one of the strengths that hospitals have, this is supported by the following statements:

"Yes, Santa Maria Hospital is complete with infrastructure, while don't forget this computer, laptop, almost 1 nurse, so we are facilitated in such a way." (P6, lines 132-134).

The availability of facilities provided to support documentation activities such as laptops, pcs, tablets and networks is a supporting factor in the implementation of EMR in an institution, Santa Maria Hospital has tried to meet the needs of nurses in conducting electronic documentation as a form of support for the implementation of EMR recording evenly in each unit in the hospital. This is in line with the statements given by the participants:

"the addition of a computer in each laptop room according to the need for EMR work..." (P9, line 86).

The adequacy of the number of devices per unit with the number of nurses on duty is expected to provide efficiency in documenting nursing duties electronically so that they do not have to wait if the patient's status is being used by someone else.

Based on the results of the research, Santa Maria Hospital already has adequate infrastructure consisting of computers, PCs, and laptops as a means of supporting electronic nursing documentation. These results are in line with research conducted by Aldosari et al., (2018) Where infrastructure facilities are the most important part of the implementation of electronic documentation where this recording requires a device connected to a network so that it can access the features *EMR* virtually. According to each participant, Santa Maria Hospital has provided good support in supporting the effectiveness of the use of *EMR* in nurses. Adequate facilities affect the positive attitude of technology system users (Adriani, 2017). The effectiveness of the implementation of nursing care documentation is influenced by the ability of human resources to conduct electronic documentation (Nurjannah, 2017).

Healthcare infrastructure can be defined as a collaborative process in which all healthcare devices are used to provide professional services and healthcare delivery is carried out effectively and efficiently [16]. Previous research also stated that the available tools and infrastructure facilities are an important factor in the use of electronics to run optimally [17].

In addition to facilities and infrastructure, training is also one of the supports provided by hospitals to improve the

quality of nurses and complete EMR in accordance with the quality achievements that have been set. On the same occasion, the researcher received information from P3 where the training was given even before the EMR started in the Santa Maria Hospital environment, the full statement is as follows:

"But thankfully, before the launch of computerization, we were given a briefing with training" (P3, line 56.)

Participants said they were able to experience firsthand the benefits of training before EMR was conducted in the field. Training makes it easier for nurses to understand the overall features before applying them in the work environment. This training opportunity is carried out periodically so that it is hoped that when used, nurses can understand EMR as a whole as mentioned by the following sections, namely:

"Before we understand this computer, we are also explained how to do it, the applications, and we are given training on how to enter data into the computer" (P1, lines 69-71).

This EMR training was conducted to officially introduce EMR, introduce the available features, how to use it, and how to document electronically using EMR. Participants also hope that training will continue to be held to refresh nurses so that EMR is easier to use.

The results of the study found that Santa Maria Hospital routinely conducts training on the use of EMR in nursing services. This support is provided by hospital management to improve nurses in documenting with EMR. These results are supported by research conducted by Renanita & Himam (2020) where significant training for human resources increases the effectiveness of the use of information technology in hospitals optimally. Continuous training and development is an important element to ensure that human resources are always keeping up with technological and knowledge advances in the field of health [19].

Participant statements also provide an overview of how the training has helped them understand the features *EMR* first before it is carried out thoroughly in the hospital environment. Herfiyanti & Febriana (2023) added that the provision of EMR training in the hospital environment also takes into account the diversity of nurses' backgrounds and perceptions of EMR. Training is the main key to the success of the implementation of electronic health records where through training will give rise to the same understanding, and skills regarding electronic health records [21].

As for the part of the support for the implementation of EMR, it can be seen from the obstacles during the application of EMR. According to the participants, in the implementation of EMR, of course they felt obstacles or obstacles during the implementation of EMR. Based on the results of the interview, information was obtained that Santa Maria Hospital has an obstacle management and reporting flow for the implementation of EMR. Statement from one of the participants in case of obstacles in the field:

"Usually all nurses already know that once the network is loose, they immediately call IT" (P6, line 165).

Hospitals' awareness of the importance of the role of IT in maintaining network and device stability during the implementation of EMR is one of the forms of support provided by hospitals. Santa Maria Hospital has facilitated users with EMR PIC if problems are found during its implementation. The speed of response of the IT team to the reports received is one of the hospital's efforts to ensure that nurses can use EMR properly. Expressions from participants are as follows:

"Hmm if, for example, the network is slow or not, this is not the case, at least contact hmm, we contact IT" (P8, line 138).

The existence of IT is one of the supporters of the implementation of EMR where IT is an expert and is the answer if nurses find obstacles in the field. The ease of the reporting process and the speed of response to reports are one of the indicators of the achievement of the implementation of EMR at Santa Maria Hospital.

One of the supports for its implementation EMR inseparable from the role of the IT Team in providing a quick response when nurses experience problems while in the field. According to the researchers' assumptions, speed *Response Time* obstacles found in the field can improve service quality and reduce incidents *delayed treatment* because *EMR* completely dependent on the device and the wireless/Wi-Fi network. The IT team has certainly received further training and understanding when problems are found in using *EMR*. This statement is supported by research conducted by Effendy et al., (2024) where IT also has a contribution to improving cooperation between departments in hospitals. An interconnected information system facilitates better communication among doctors, nurses, pharmacists, and hospital management. This not only speeds up the operational process, but also improves the quality of care provided to patients.

Participants also stated that the hospital had issued a reporting SOP to immediately coordinate with the PIC to overcome the obstacles that occurred in the field. Internet network connection is one of the supporting factors as well as determining the smooth journey of electronic medical records in its application, especially in terms of real-time provision of patient medical data in hospitals. Based on the results of the research that has been conducted, it was found that every time a network problem occurs, participants have known the reporting flow to the PIC/IT Team. According to the participants, *the IT team's response time* to the problems found was fast so that nurses could again document using *EMRs*.

3. Factors Inhibiting the Implementation of EMR

During the implementation of EMR at Santa Maria Peknabaru Hospital, participants also mentioned the existence of inhibiting factors during electronic documentation, namely unstable networks, nurse ability, and nurse time management and nursing care services.

During the implementation of EMR, the use of this technology is not far from the word obstacle because it is closely dependent on the implementation of EMR in the hospital environment, participants in this study said that network constraints are one of the obstacles for nurses in carrying out electronic documentation because their implementation depends on the wireless network in the hospital.

Participants in this study mentioned that there is *a traffic hour* where at certain hours when all rooms are documenting EMR at the same time, there will be problems with the network in the form of data not being saved, *loading* too long, and not being able to access EMR. This is in line with the statement of one of the following participants:

"The problem is that it's rare if it's done while all the computers are being used" (P9, line 109).

The network is not only a supporting factor but also indirectly an obstacle to the proper implementation of EMR. EMR is directly dependent on the network so that if there is *a troubelshoot* on the network, it will certainly affect the performance of nurses on the implementation of EMR. Other participants mentioned that:

"... hmm the obstacle is sometimes our internet network has problems..." (P4, line 129).

The same problem is also experienced by other insertions related to the network suddenly not responding when in use, so documentation is delayed and has to wait until the network becomes stable.

"hmm is a bit sluggish, that's the signal, usually the trobel happens" (P6, line 126).

Documentation that is done electronically is of course very tied to the availability of networks in the field. *Traffic hours* are certainly inevitable considering that all units can document EMRs at the same time.

Network connections can be both a support and an obstacle to the implementation of *EMR* in hospitals. Unstable networks become a bottleneck when nurses experience slow connections so that data is difficult to store, access is not open so documentation has to be repeated from the beginning.

Network connectivity issues often occur when EMRs are used simultaneously and the power goes out [22]. One of the cases states that a sudden power outage can lead to data that was previously not stored and inaccessible. In addition to a slow internet connection, *EMR* takes a long time to load data.

In general, the implementation *of EMR* at Santa Maria Hospital Pekanbaru uses a WiFi/wireless network, where there are often interruptions that cause the nurse implementing *the EMR* to have to repeat the process of entering medical records that have not previously been stored in the system. This result is in line where this limitation results in the EMR implementation process being slow and inefficient, so that the expected convenience of the *EMR* system is not fulfilled properly [6].

Participants also mentioned the network constraints felt when all units were documenting at the same time so that the network tended not to respond and documentation was hampered.

In addition to EMRs that require good connectivity during their use, the ability of nurses to document EMRs also has a very important role so that EMRs can be carried out properly. The existence of generational differences in the nursing environment is considered to be one of the factors that can hinder the implementation of EMR.

In general, the younger generation will find it easier to master and understand information about electronics than the older generation. However, it is also undeniable that work experience can affect a person's ability to understand a given information. Sometimes senior nurses who are earlier and more frequently exposed to EMR training are able to understand documentation using EMR than nurses who have just experienced documentation using *EMRs*. The above statement is in accordance with the statement submitted by one of the participants:

> *"The difficulty is if, for example, these are new nurses, new nurses, of course they don't understand, so we need time to orient them again, and there are also nurses who are already a bit old, for example, they are a bit older, yes, they are a bit slower than nurses who are nurses today they are faster..."* (P4, lines 119-122).

In addition to the difference in working periods, generational differences are one of the factors that hinder the proper implementation of EMR. For older generations who are not used to the presence of technology, EMR is a new challenge so they need to adapt and adjust. This is in line with the statement of one of the participants, namely:

> *"Yes, the human resources here are in terms of one of them, yes, if that age is very influential as well, if for example the age found is relatively old, yes the ability to capture the ability to absorb men and actualize the implementation of EMR is also very influential, Susan"* (P5, lines 147-149).

Not only generational differences, experience and working hours are also factors where new nurses need assistance. As is well known, the younger generation of nurses today are more often exposed to technological advances when compared to previous generation of nurses, but sometimes the EMR system is new to them. The PIC and his team take the time to orient the EMR to each new nurse so that they can use it properly, as stated by one of the participants below:

"New nurses certainly don't understand it yet, so we need time to orient them again" (P4, line 120).

Based on the participants' presentations, the experiences felt by the participants described how the difference in age and generation affected the implementation of EMR at Santa Maria Hospital.

The main factor that determines the success of the application of information and communication technology in an organization is human resources, especially the users of information technology. This is done in order to have a positive impact on the organization, so first the information system must have an impact on the individual [23].

Nurses' understanding in using information technology during implementation *EMR* is the most basic thing to have. Based on the results of interviews with respondents, nurses' understanding in understanding the implementation *EMR* It is very limited, especially for nurses who are relatively old. Compared to nurses with a younger age and more up-to-date understanding related to information technology, the catchability of nurses with a relatively old age is slightly smaller so the introduction of information systems must also be done in depth. This is in line with research conducted by Petersson et al., (2022) Resistance to change is also one of the barriers for users. Many healthcare workers who have become accustomed to writing systems often find it difficult to adjust to new technologies, especially if the training they receive is inadequate.

Santa Maria Hospital itself has facilitated training as a provision for nurses in the implementation of *EMR*. However, it is undeniable that lack of experience and knowledge is a challenge in implementation *EMR* in the hospital environment. This is in line with research Apriliani et al., (2021) Where when users are basically used to manual documentation, then documentation using a computer becomes a new thing. When EMR was first applied, it was not uncommon to find errors when typing documentation because it was not usual to do the documentation by typing [21]. Electronic medical records can be an obstacle because they are not comfortable in typing or there are problems with medical record data that can harm patients.

Based on the results of the study, the researcher found that senior nurses have limited ability to understand the features provided by *EMR* faster than junior nurses who have been frequently exposed to electronics, so typing is a *basic skill* possessed by junior nurses. However, when delved deeper, generational differences are not the only obstacle in the implementation of *EMRs*. Some nurses stated that junior nurses also have the potential to be an obstacle to implementation because they are not used to electronic recording.

Another factor that can hinder the implementation of EMR is nurse time management. In terms of document completeness, basically EMR has provided all the data according to the needs. However, incomplete documentation was still found in the field.

Information obtained from participants, incompleteness in filling out the EMR is often caused by the nurse having to do other nursing care activities at the same time. While the nurse is doing documentation, the nurse also still has to fulfill the patient's bell calls, serve questions from patients and

families and also have to accompany the visiting doctor so that the documentation process is stopped.

The high activity in the treatment room is one of the factors that causes nurses to often forget to *save* data so that when nurses return to the *nurse station*, data that had been documented is lost. The simultaneous use of computers/laptops by nurses or other health professionals and the occurrence of *problems* with the device in the documentation process can also cause documentation to not be successfully saved, causing documentation to have to be repeated.

This statement is in line with the following participant statements:

"Trus EE when we serve a lot of patients, we type for a while that other patients need help, it is usually half the way we stop first so that may be our obstacle" (P4, line 84-85)

"Maybe when they want to document nursing care, now the bell rings, so they ring the bell and keep coming back and forgetting" (P4, lines 159-160).

The disadvantage of EMR documentation is that documentation must be done completely first so that it can be saved. When the nurse does documentation, there are times when the nurse leaves the computer/laptop, when it comes back it turns out that the computer has been used by another without *saving* data first. This will cause previously performed documentation to not be saved so you have to restart from the beginning. Each nurse has an account to access the EMR. While a nurse is activating her account, the nurse or other profession cannot log in through the account so no one can change or add results to the documentation that is being worked on.

With the lack of nurse understanding in the operation of the technology used for the implementation of *EMR*, the process of reporting medical records will be slow and inefficient [25]. The high frequency of services in the treatment room is often also an obstacle to the effectiveness of the implementation process *EMR*, at the time of implementation *EMR* There are situations where nurses are required to leave *Nurse Station* which causes the process of reporting medical records.

Based on interviews, it was also conveyed that there are often disturbances in the reporting system, where the system experiences *Reset* So that nurses have to re-report which results in the implementation process *EMR* becomes more time-consuming. Some nurses also said that the documentation of nursing care was hampered because *Mobile* and the provision of high nursing care in a unit so that when they return to the *Nurse Station,* Nurses forget the documentation they have done. This is in line with research conducted by Molly & Itaar (2021) Where high work mobility in hospitals can trigger stress and fatigue among health workers so that they often forget to do documentation.

Working time management is also an obstacle for nurses in the implementation *EMR*, where often nurses do not have time to report through the system *EMR* Because nurses run out of time during the treatment process Alzyoud (2021). The high activity of inpatient care causes a lack of free time for nurses to be able to report through *EMR* [28].

Based on the results of interviews conducted by researchers, this obstacle has the potential to reduce the quality of the information presented because the officers do not input complete data. Although scientifically, *EMR* helps provide convenience, researchers understand that with nurse work, especially rooms with high activity, the completeness of *EMR* becomes difficult to do.

The three inhibiting factors are interrelated, where the information technology used must be supported by adequate resources, both the internet and the users of the information technology itself. The effectiveness of *EMR* implementation is highly dependent on the nurse's understanding of the use of *the EMR* system,

where the higher the nurse's understanding of *the EMR* implementation, the more efficient the time required in the implementation *of EMR*. Increased resources are also needed to increase the effectiveness of the implementation of *the EMR* system, both from the technology and the users of the technology**.**

CONCLUSION

The experience of nurses in documenting nursing care using EMR at Santa Maria Hospital Pekanbaru revealed three main themes: the benefits of EMR in nursing services, supporting factors for EMR implementation, and inhibiting factors. Nurses reported that EMR improves efficiency, reduces paperwork, and facilitates communication between healthcare professionals. Supporting factors included adequate infrastructure, training, and IT assistance, while inhibiting factors involved unstable networks and variations in nurses' ability to use the system effectively.

From a hospital management perspective, these findings highlight the importance of maintaining and strengthening organizational support, including network stability, continuous training, and infrastructure improvements. Ensuring these factors are well-managed can help the EMR system become a standard documentation practice and optimize the delivery of nursing care, ultimately enhancing patient satisfaction.

For future research, it is recommended to explore strategies to overcome technological and human barriers in EMR implementation, as well as to assess the long-term impact of EMR on patient outcomes, continuity of care, and overall quality of hospital services.

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