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Analysis of Human Resources Competence in Optimizing the Use of E-Prescriptions in the Outpatient Pharmacy Installation of Datu Kandang Haji Balangan Regional Hospital Year 2024

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ABSTRACT
E-prescription is a system that allows doctors to write prescriptions electronically, which can then be accessed by pharmacists and patients through digital devices. The implementation of e-prescription aims to improve the efficiency of health services, accelerate drug access, and improve the accuracy and safety of prescriptions. This study aims to analyze the competence of human resources inthe use of e-prescriptions in the Outpatient Pharmacy Installation of Datu Kandang Haji Balangan Regional Hospital. Method:This research uses qualitative methods.The main informants consisted of specialist doctors and pharmacists, while the triangulation informants consisted of the head of the pharmacy installation, Head of Medical Support Services, Head of Quality and Non-Medical Service Resources and computer administrators.. Collection methodare observation, interviews and documentation. Data analysis includesthe process of organizing, analyzing, and interpreting non-numerical data into concluding information. Research Results:The study showed that human resources in the Outpatient Pharmacy Installation of Datu Kandang Haji Balangan Hospital have a fairly good understanding of work procedures and mastery of e-prescription technology, as well as a positive attitude towards change. Organizational support in the form of policies, training, and communication between staff is also quite optimal. However, there are still obstacles in the technological aspect, such as limited hardware and software, network instability, and lack of features that suit user needs. The lack of technical training also affects the effectiveness of e-prescription use. Increasing technological capacity and ongoing training are the keys to optimizing services. Conclusion: Increasing human resource training, organizational coordination, and strengthening infrastructure and technological features are essential to support more efficient and effective e-prescription use in the Pharmacy Installation of Datu Kandang Haji Balangan Hospital.

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INTRODUCTION

The development of information technology in the health sector has driven various innovations in medical services, one of which is the implementation of electronic prescriptions or e-prescriptions. E-prescriptions are a system that allows doctors to write prescriptions electronically, which can then be accessed by pharmacists and patients via digital devices. The implementation of e-prescriptions aims to improve the efficiency of health services, accelerate access to drugs, and improve the accuracy and safety of prescriptions.[1]. E-prescriptions are also considered more practical and support accessibility in pharmaceutical services, especially in outpatient pharmacy installations, where speed and accuracy are very important in serving patients en masse.[2]

E-prescription in Indonesia is an innovation in the drug prescription system that utilizes information technology to improve efficiency and safety in health services. The e-prescription system is expected to reduce prescribing errors, thereby increasing the safety of treatment for patients (*medication safety). Research at RSI Sultan Agung Semarang supports this expectation, showing that e-prescriptions are able to improve medication safety in the prescribing process by increasing prescription accuracy, recording of drug allergy history, awareness of unwanted drug interactions, efficiency of service time, and patient safety.*[3].

Other studies have also shown the potential for e-prescriptions to improve medication adherence compared to paper prescriptions.[4], and reduces illegible handwriting errors and facilitates real-time auditing of drug interactions and allergies, which strengthens patient safety.[5]. However, the implementation of e-prescriptions also faces challenges, such as incorrect data entry and system integration constraints.[6],and the limited evaluation standards for assessing treatment adherence which complicates the assessment of its effectiveness.[4].

RSUD Datu Kandang Haji Balangan as one of the regional general hospitals has the responsibility to provide quality health services to the community. In an effort to improve the quality of service, this hospital has adopted an e-prescription system as part of the digital transformation in health services. The use of E-prescription began in January 2024 where there was an addition of Internal Medicine Polyclinics to become Lung Polyclinics and Heart Polyclinics. The difference in minimum service standards in the pharmacy unit using manual prescriptions and E-prescriptions where there is a difference in optimal performance with waiting time standards met for manual prescriptions and e-prescriptions. E-prescriptions excel in preventing errors (100%), increasing formulary compliance (87%), and customer satisfaction (93%). With automation, e-prescriptions minimize the risk of manual errors, support accuracy, efficiency, and better quality of pharmaceutical services

The implementation of e-prescription at RSUD Datu Kandang Haji is a significant step in digitizing health services, which is in line with advances in information technology in the medical field. The e-prescription system is designed to reduce prescription errors, speed up the drug intake process, and facilitate monitoring of drug use, thereby increasing the efficiency and accuracy of health services. To ensure that these goals can be achieved, it is necessary to conduct an analysis of HR competency in the use of e-prescriptions, considering that the success of the implementation of this system is highly dependent on the level of

expertise and readiness of medical personnel and pharmacists in operating the technology.

In the service at the Outpatient Pharmacy Installation of Datu Kandang Haji Hospital, it shows high patient visits on Monday, Tuesday, and Thursday. High visits on these days put additional pressure on the e-prescription system to meet waiting time standards and improve service efficiency. Uneven visit data throughout the week is a challenge in itself in ensuring the readiness and capacity of the system in handling the spike in the number of prescriptions on certain days.

This study is unique in using the HOT-FIT model as an analytical framework to evaluate the implementation of the e-prescription system in the context of regional hospitals, especially in RSUD Datu Kandang Haji Balangan. This analysis is comprehensive, including human fit (HR competency), organization fit (organizational support), and technology fit (technology suitability). This is an important point because there is still a lack of empirical research evaluating the adoption and constraints of the e-prescription system in local referral hospitals. The emphasis on local contextual uniqueness and its relationship to the efficiency, accuracy, and safety of health services is an important point in this study.

The competence of human resources (HR) in the Outpatient Pharmacy Installation of RSUD Datu Kandang Haji Balangan needs to be evaluated comprehensively, because the success of e-prescription implementation is highly dependent on the ability of medical personnel and pharmacists to operate this system. Adequate technical skills, as well as a deep understanding of how the system works, are essential so that the potential benefits of e-prescription can be maximized. The competence of HR who are trained in the use of technology, clinical understanding of medicines, and managerial skills in managing the transition process to a digital system, are the main determining factors in the success of implementation. In addition, the readiness of the infrastructure, including hardware, software, and network connections, also affects how effectively e-prescription can be implemented. HR competency analysis must include sufficient training, continuous monitoring and evaluation, and the development of policies that support the adoption of this new technology. With a comprehensive analysis, RSUD Datu Kandang Haji can ensure that e-prescription will be implemented optimally, accelerating the achievement of the goal of improving the quality of health services, and providing greater benefits for patients and medical personnel.

Based on data from the Pharmacy Installation of Datu Kandang Haji Hospital, the number of prescriptions in accordance with the formulary at the Outpatient Pharmacy Installation of Datu Kandang Haji Hospital showed a significant increase from 2023 to 2024. In 2023, the total prescriptions recorded were 502,102 prescriptions, while in 2024, this figure increased sharply to 799,136 prescriptions. In its implementation, the implementation of E-Prescription is expected to increase efficiency, accuracy, and safety in the drug prescribing process. Datu Kandang Haji Hospital, as one of the referral hospitals in the region, has implemented the E-Prescription system since 2024. However, the effectiveness of using this system needs to be analyzed to determine the extent of its impact on the drug prescribing process and health services in the hospital.

Data from RSUD Datu Kandang Haji has 133 beds and serves around 800,000

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outpatients and 12,000 inpatients per year. Since the implementation of E-Prescription in 2024, there has been an increase in the use of this system reaching 80% of the total prescriptions issued. Based on the hospital's internal report, there has been a decrease in the waiting time for picking up drugs at the pharmacy from an average of 30 minutes to 15 minutes. Although there has been an increase in the number of prescriptions and the use of the E-Prescription system reaching 80%, the effectiveness of this system still needs to be analyzed to measure its impact on the quality of health services.

Based on a preliminary study conducted on 10 specialist doctors in the hospital, it was found that 6 of them still often use manual prescriptions. This indicates a dependence on conventional methods even though a digital system is available. Analysis of the use of e-prescriptions is needed to identify the extent to which this system has been used effectively by health workers, especially doctors.

Based on previous research, the HOT-Fit Model can be used to analyze the implementation of e-prescription in the Outpatient Pharmacy Installation of Datu Kandang Haji Balangan Hospital. This model assesses the alignment between three main elements: Human Fit (human resource competency in operating e-prescription), Organization Fit (policy support and training from the organization), and Technology Fit (technology suitability to user needs). This research is important to evaluate the readiness and competence of human resources in optimizing the use of e-prescription, as well as ensuring that technology and organizational policies support the success of the system, so that the goals of increasing efficiency and service quality can be achieved. Mit is necessary to conduct research on ""Analysis of HR competency in optimizing the use of e-prescriptions at the Outpatient Pharmacy Installation of Datu Kandang Haji Balangan Regional Hospital".

METHOD

The qualitative research approach is an approach that emphasizes more on the aspect of in-depth understanding of a problem rather than looking at the problem for generalization research. The research method uses in-depth analysis techniques, namely examining problems on a case-by-case basis because qualitative methodology believes that the nature of one problem will be different from the nature of other problems.[(7).]

This research will be conducted inOutpatient Pharmacy Installation of Datu Kandang Haji Regional Hospital. This study used an in-depth interview method (Indeph Interview) with 5 main informants consisting of 3 specialist doctors and 2 pharmacists, while the 5 main informants consisted of 1 head of the pharmacy installation, 1 Head of Medical Support Services, 1 Head of Quality and Non-Medical Service Resources and 2 computer technicians.

The data collected by researchers in this study were in the form of primary data sources and secondary data.Primary data is a type of research data that is collected for the first time through personal experience or evidence and is collected through several methods, such as observation, physical tests, questionnaires, surveys, and other types of personal interviews.[(8).]While secondary data is data collected from previously existing data such as

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books, reports that can help researchers to obtain relevant data. Data collection methodsThe methods used in this research are observation, interviews and documentation.

Qualitative data analysis, WhereThe results of in-depth interviews were recorded with the results of observations through SK, SOP, activity documentation, observations by researchers at the research location and existing theories. This study will also obtain ethics approval from Universitas Indonesia Maju Jakarta. This research has obtained an ethical approval letter from Universitas Indonesia Maju with letter number 2345/Sket/III/2023.

RESULTS

Qualitative Analysis

Characteristics of Informants

Research onHR competency analysis in optimizing the use of e-prescriptions in the outpatient pharmacy installation of Datu Kandang Haji Balangan Regional Hospital in 2024, which was conducted through interviews with 5 main informants consisting of 3 specialist doctors and 2 pharmacists, while the 5 main informants consisted of 1 head of the pharmacy installation, 1 Head of Medical Support Services, 1 Head of Quality and Non-Medical Service Resources and 2 computer technicians.

Table 1 Characteristics of research informants

Type of Informant	Role	Age	Years of service
IU1	Medical specialist	34 Years	6 years
IU2	Medical specialist	40 years	11 years old
IU3	Medical specialist	32 Years	5 years
IU4	Pharmacist	34 Years	3 years
IU5	Pharmacist	36 Years	11 years old
IT1	Head of Pharmaceutical Installation	45 Years	25 years
IT2	Head of Medical Support Services	41 Years	16 years
IT3	Head of Quality and Non-Medical Service Resources	58 Years	36 years old
IT4	Computer Administrator	35 years	11 years old
IT5	Computer Administrator	31 years old	1 year

Qualitative Analysis of VariablesHuman (Human Resources)

1. Competence and Knowledge

The results of interviews with key informants showed that the policies implemented in the use of the e-prescription system at RSUD Datu Kandang Haji Balangan were quite clear. IU1, a Cardiologist, explained: “Since I started working here, I have been using e-prescriptions, Ma'am, so it has made things very easy. Maybe if you also suggest that the e-prescription display be simplified like in other hospitals.” This statement shows that although the system is functioning well, there is room for improvement in terms of readability and speed of data entry. IU2 added: “Actually, when compared to the manual system, this e-prescription is much faster and easier to use.” This reflects a good understanding among medical personnel about the benefits of this new system. However, there is a need for more intensive training. IU3

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said: “If there are new changes, ideally there should be joint training before it is launched, not just word of mouth.” This shows that although the competence of officers is quite good, more structured and planned training is needed to maintain the quality of service.

2. Technical Skills and Abilities

Technical skills and abilities in operating the e-prescription system were also a major focus. IU1 stated: “Okay, the e-prescription is clear and very good.” However, technical challenges still arise, especially those related to the network. IU2 added: “Network problems often hinder, we think it has been sent but it hasn’t, and that wastes*time.”*This shows that even though technical skills have been built, external factors such as network infrastructure greatly affect the effectiveness of the system. IU4, a pharmacist, said: “It is quite good, but there are often problems with blood pressure measuring devices that are damaged.” This statement underlines the importance of better equipment maintenance and procurement to support the use of the system.

3. Attitude and Behavior

The attitudes and behavior of medical personnel towards the use of e-prescriptions showed a positive response. IU1 noted: “More open, no worries when switching from a manual system.” This shows that medical personnel are proactive and ready to adapt to the new system. IU5, a pharmacist, added: “In general, we feel more helped by this system, especially in terms of time efficiency.” This statement reflects the understanding that despite the challenges, the benefits of the e-prescription system are greater. However, several informants also expressed concerns about the lack of public understanding of the existing system and regulations. Triangulation informant 1 stated: “Although officers understand, there are some people who do not understand the importance of controlling hypertension.” This shows the need for increased socialization to the community to support this health program.

Results Qualitative analysis of human variables (human resources) can be concluded that the competence and knowledge possessed by medical personnel show a deep understanding of work procedures and good mastery of technology. However, there is still a need for increased training and development of specific skills, especially for new officers. Technical skills and abilities are generally adequate, but technical constraints such as network disruptions and availability of equipment are still issues that need to be addressed. The attitude and behavior of medical personnel who are open and responsive to the new system greatly support the implementation of e-prescriptions, although challenges in socialization to the community also need to be considered. By increasing training, improving infrastructure, and improving communication with the community, it is hoped that the effectiveness of the e-prescription program can increase overall.

Qualitative Analysis of Variables *Organization*(Organization)

1. Organizational Support

Organizational support for the use of e-prescriptions at Datu Kandang Haji Regional HospitalBalanganclearly seen from the results of interviews with various informants. IU1 stated: "Yes, there is, they always support with new programs." This statement shows that

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hospital management provides consistent support for innovations that aim to improve service efficiency. IU2 added: "Management is quite supportive of the use of this e-prescription, because with this e-prescription the patient's waiting time is much shorter than with manual prescriptions." This shows that management support is not only related to policy, but also has a direct impact on patient experience. Management support is also evident in policies that facilitate the use of technology in daily work. IU3 stated: "Yes, there is, from the medical support sector they provide facilities in the form of computers or laptops in all polyclinics." Adequate facilities are key to the successful implementation of the e-prescription system. Communication between hospital leaders, pharmacists, and doctors regarding the implementation of the e-prescription system also went well. IU4 noted: "If it's not all that directly, at most it's hierarchical, so if there are obstacles I report them first to the SIM RS section." This shows that even though there is a structure that must be passed, information can still flow well to overcome problems that arise.

2. Process and Workflow

The process and workflow related to the implementation of e-prescriptions in the Pharmacy Installation showed clarity in the division of tasks and stages of implementation. IU1 stated: "I think the work process is safe. Everything is in accordance, yes." This statement indicates that the e-prescription workflow has been well organized and can be followed without any obstacles. IU2 added: "It's very fast for this e-prescription, if compared to a manual prescription, of course the difference is very big." This shows that e-prescriptions not only speed up the process, but also reduce the possibility of errors. IU3 said: "So far there are shortcomings and advantages, but everything is in accordance with the procedure or SOP." This shows that although there are some challenges, overall, the e-prescription work process has been running according to theexpected. However, there are several obstacles that need to be considered. IU5, a pharmacist, stated: "In general, this e-prescription is very helpful for us, but there are problems with facilities and networks." This obstacle shows that the infrastructure that supports e-prescription needs to be improved so as not to hinder the overall workflow.

3. Organizational culture

The organizational culture at RSUD Datu Kandang Haji Balangan supports the adoption of new technologies such as e-prescriptions. IU1 noted: “From the hospital culture, it is more open, ready to accept changes, especially those for the advancement of the hospital.” This statement shows that the cultureorganizationopenness is an important factor in the acceptance of the e-prescription system. IU2 added: “Of course the organization is very supportive.” This supportive culture helps create a positive work environment, where change is seen as a step for the better. Changes in work patterns were also acknowledged by IU5: “Of course there are changes, because pharmacy colleagues have to get used to using technology in the development of this e-prescription.” This shows that the adoption of new technology brings changes in the way of working on a daily basis, and organizational culture plays an important role in facilitating this transition. However, despite the supportive organizational culture, there are still challenges related to facilities and infrastructure. IU4

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said: “Cultural barriers are not too much, everyone is welcoming and willing to learn.” This shows that despite the willingness to learn, adequate resource provision remains a barrier that needs to be overcome.

Results of qualitative analysis of variables*organization*(Organization) it can be concluded that organizational support for the use of e-prescriptions at the Outpatient Pharmacy Installation of Datu Kandang Haji Balangan Hospital is considered quite good. Hospital management has provided policies, facilities,Andtraining that supports the implementation of e-prescriptions. The process and workflow show clarity in the division of tasks, but there are still obstacles related to infrastructure that need to be improved. An organizational culture that supports the adoption of technology helps accelerate the transition from manual to digital systems. However, challenges in terms of facilities and infrastructure still need to be overcome to ensure that the implementation of e-prescriptions runs optimally.

Qualitative Analysis of Technology Variables (Technology))

1. E-Prescription System

The results of interviews with key informants showed that the e-prescription system implemented at RSUD Datu Kandang Haji Balangan has several advantages. IU1 said: "Yes, this system really meets the service needs, especially in the Polyclinic that I serve. So my patients don't have to wait long for the medicine queue." This statement shows that the e-prescription system has increased efficiency in the drug service process. IU2 also gave a positive assessment: "The quality and reliability of this e-prescription system are very good. I am very happy because I also practice in other hospitals that have already*formerlyusing e-prescription."*This shows that doctors who have experience in various hospitals can see the advantages of this system compared to previous methods. However, there are some suggestions for improvement. IU1 added: "If the features are good, but it can be added again like in other hospitals that I serve so that we can see patient history from several years ago." This shows that although the system is good, there is a need for additional features that can help doctors provide better services. Overall, the e-prescription system at RSUD Datu Kandang Haji Balangan seems effective in improving the accuracy and efficiency of the drug administration process, although there is room for further development.

2. Hardware and Software

The assessment of the hardware and software used to access the e-prescription system was also a focus of the interviews. IU1 stated: “The devices are sufficient to assist pharmacists.” This indicates that the existing infrastructure supports daily operations. However, there are several obstacles that need to be considered. IU2 stated: “Very often. It so happens that in this district, we often experience power outages or signal disruptions, so if there is a disruption, we wait first.” This obstacle shows that dependence on unstable infrastructure can hinder the service process. IU4 added: “If there is a disruption to the system, Net Medic cannot be accessed. Usually, we confirm with the group to find out the problem.” This shows that even though there is a mechanism to overcome problems, technical disruptions are still a challenge that needs to be overcome.

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3. Technology Barriers

Technological constraints are an important issue in the implementation of the e-prescription system. IU1 stated: “There are many constraints, but for now all of them can be overcome with the help of IT in our hospital.” This statement shows that the IT team plays an important role in overcoming technical problems, but there are still challenges to be faced. IU2 alsoadd: “Oh, IT is very supportive, but this is electricity that can't be done.” This shows that despite support from the IT team, the issue of electricity infrastructure remains a significant obstacle. IU4 said: “Yes, that's for sure, the system has been down. If that happens, we go back to using manual recipes.” This shows that system disruptions can cause inconvenience and slow down the service process. Overall, the technological obstacles faced include limited infrastructure, lack of user training, and unstable internet access. All of these can hinder the effectiveness of technology implementation in supporting operational activities.

The results of the qualitative analysis of the technology variable can be concluded that the e-prescription system used at RSUD Datu Kandang Haji Balangan has advantages in increasing the efficiency and accuracy of the drug service process. However, there are challenges that need to be overcome, including improving features in the system, as well as infrastructure problems such as electricity and internet networks. Increasing hardware and software capacity, as well as ongoing training for health workers, are needed to support the optimization of more efficient and accurate e-prescription services. Thus, it is hoped that the implementation of the e-prescription system can run more smoothly and provide maximum benefits for patients and health workers in the hospital.

Discussion

Human (Human Resources)

The implementation of e-prescription in the Outpatient Pharmacy Installation of Datu Kandang Haji Balangan Regional Hospital is highly dependent on the competence of human resources (HR) operating it. Based on the research results, the factors that influence the effectiveness of HR in the use of e-prescription can be analyzed through three main aspects: competence andknowledge, technical skills and abilities, and attitudes and behaviors.

a. Competence and Knowledge

HR competence in using e-prescriptions is greatly influenced by understanding work procedures and good mastery of technology. The Technology Acceptance Model (TAM) theory (Davis, 1989) explains that the perception of ease and usefulness of technology contributes to the acceptance of new technology. The results of interviews with medical personnel showed that the e-prescription system was considered faster and easier than the manual system, but there was input for a simpler and more accessible display. In addition, Social Cognitive Theory (Bandura, 1986) emphasized that mastery of technology will increase the self-efficacy or self-confidence of medical personnel in using e-prescriptions. Although the competence of medical personnel is quite good, there is still a need for more structured training. Several informants stated that changes to the new system should be followed by adequate training, not just informal

socialization. In this context, Human Capital Theory (Becker, 1964) emphasized that investment in training will improve HR performance and productivity. Therefore, more intensive and sustainable training is needed.

b. Technical Skills and Abilities

The skills of medical personnel in operating e-prescriptions are generally adequate. Informants stated that the e-prescription system is clear and easy to use. However, technical constraints are still found, especially related to the network and supporting devices. Informants stated that network disruptions often cause delays in sending prescriptions, which impacts service efficiency. In the Resource-Based View (RBV) perspective (Barney, 1991), technological infrastructure is a strategic resource that supports the success of e-prescription implementation. Therefore, improving the quality of the network and maintaining medical devices, including pharmaceutical information systems, is essential to support the effectiveness of this system. In addition, Contingency Theory (Lawrence & Lorsch, 1967) suggests that organizational strategies must be adjusted to existing technical constraints so that system effectiveness is maintained.

c. Attitude and Behavior

The attitudes and behavior of medical personnel and pharmacists towards e-prescriptions showed a positive response. Key informants stated that they were more helped by this system because it increased time efficiency and data accuracy. The Theory of Planned Behavior (TPB) (Ajzen, 1991) explains that positive attitudes, social norms, and perceived behavioral control will increase the intention of medical personnel to use technology, so that the implementation of e-prescriptions becomes more effective. In addition, the Diffusion of Innovation theory (Rogers, 2003) shows that openness of medical personnel to change is an important factor in accelerating technology adoption. However, several informants mentioned challenges in socialization to the community. There are still patients who do not understand the e-prescription system and related regulations, so further education is needed.

The Communities of Practice approach (Lave & Wenger, 1991) can be applied to improve the competence of medical personnel through collaborative learning and sharing experiences in the use of e-prescriptions. Thus, in addition to improving technical skills, socialization to patients also needs to be improved so that the e-prescription system can berecipecan be applied optimally.

Based on qualitative analysis, HR competency in the use of e-prescriptions at Datu HospitalPenHajj Balangan is quite good, but still requires increased training and ongoing assistance. Technical constraints, especially related to networks and devices, need special attention so as not to hinder the effectiveness of the system. The attitude of medical personnel who are open to technology greatly supports the success of e-prescription implementation, although education to the community still needs to be strengthened. With a combination of increasing technological capacity, strengthening HR training, and optimizing socialization to patients, e-prescription implementation can run more effectively and efficiently in the future.

Organization(Organization)

a. Organizational Support

Based on the research results, organizational support for the use of e-prescriptions at RSUD Datu Kandang Haji Balangan includes several important aspects, namely management support, communication between parties, organizational culture, and improvements in coordination and infrastructure. Each of these aspects plays a significant role in ensuring the success of e-prescription implementation in the hospital environment. Management support plays a central role in creating a conducive environment for the adoption of e-prescription technology. The research findings show that management has provided supportive policies, adequate facilities, and regular training for the staff involved. This is in accordance with the Transformational Leadership Theory (Bass, 1985), which states that inspiring leaders are able to direct members of the organization to adapt and accept innovation by providing strategic support. In addition, the Technology Adoption Model (Rogers, 2003) emphasizes that full support from management can accelerate the technology adoption process, which ultimately increases the effectiveness of e-prescription implementation.

Communication between parties is also an important element in the implementation of e-prescription. Research shows that communication between doctors, pharmacists, and the Management Information System (MIS) has been carried out routinely through meetings and discussion forums. According to Organizational Communication Theory (Roberts & O'Reilly, 1974), open and collaborative communication is essential to achieving organizational goals. Structured discussion forums provide space for sharing information, resolving obstacles, and aligning understanding between parties. The Social Interaction Model (Vygotsky, 1978) also emphasizes that routine discussions can improve HR skills and understanding of the use of new technology, thereby accelerating the process of adopting e-prescriptions in hospitals.

b. Process and Workflow

In terms of process and workflow, the implementation of e-prescription at RSUD Datu Kandang Haji Balangan still faces several challenges that need to be resolved. Although the system has been implemented, there are still several obstacles in coordination between staff and efficiency of service time. Based on the Coordination Theory (Malone & Crowston, 1994), more effective coordination can improve work process efficiency, reduce data input errors, and speed up service to patients. In addition, the Resource Dependence Theory (Pfeffer & Salancik, 1978) emphasizes the importance of resource management to support organizational sustainability. In this context, improvements in hardware, software, and other infrastructure can strengthen the implementation of e-prescription. This study found that the use of e-prescription can be more optimal if supported by a more responsive system, better data integration, and more intensive training for medical and pharmaceutical personnel.

c. Organizational culture

An organizational culture that supports the use of technology has also been formed in

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the hospital. This is indicated by the positive attitude and openness to innovation of all members of the organization. The Organizational Culture Theory (Schein, 1992) states that values, norms, and practices in an organization influence member behavior in dealing with change. A culture that is proactive towards technology motivates HR to participate in the implementation of e-prescriptions. Innovation Diffusion Theory (Rogers, 2003) also emphasizes that an organizational culture that supports innovation can accelerate the process of adoption and use of new technology. However, improvements are still needed in terms of coordination between staff and increasing supporting infrastructure so that the system can run more effectively and efficiently.

It can be concluded that strong organizational support for e-prescription greatly influences its success. Good policies and training can accelerate technology adoption, while a collaborative work culture increases efficiency. However, improving coordination between staff and improving infrastructure are still needed to support the sustainability and optimization of e-prescription use at RSUD Datu Kandang Haji Balangan.

Technology

The implementation of e-prescription at RSUD Datu Kandang Haji Balangan faces various challenges that need serious attention. One of the main challenges is the limited hardware and software available. According to the Resource-Based View (RBV) developed by Barney (1991), adequate resources are an important element in supporting the success of technology implementation. In this context, hardware and software act as the main resources that can affect the effectiveness of the e-prescription system. In addition, the Technology Infrastructure Theory introduced by Weill and Broadbent (1998) emphasizes the importance of a solid technological infrastructure to support system operations. Without adequate device support, the e-prescription system can experience technical constraints that hinder the service process.

a. E-Prescription System

   SThe e-prescription system implemented at RSUD Datu Kandang Haji Balangan is an innovation in pharmaceutical services that aims to improve the efficiency and accuracy of drug prescriptions. However, the results of the study showed that there were still various obstacles in the implementation of this system. Some health workers had difficulty adapting to new technology due to lack of adequate training. The User-Centered Design approach proposed by Norman (1986) emphasizes that technology systems must be designed based on user needs and preferences to improve the user experience. If the features in the e-prescription system do not meet the needs of health workers, this can cause frustration and potentially reduce work effectiveness. In addition, Task-Technology Fit introduced by Goodhue and Thompson (1995) highlights the importance of the fit between the tasks performed and the technology used. This mismatch can reduce productivity and operational effectiveness.

b. Hardware and Software

   The second challenge faced is the limited hardware and software available. According

to the Resource-Based View (RBV) developed by Barney (1991), adequate resources are an important element in supporting the success of technology implementation. In this context, hardware and software act as the main resources that can affect the effectiveness of the e-prescription system. In addition, the Technology Infrastructure Theory introduced by Weill and Broadbent (1998) emphasizes the importance of a solid technological infrastructure to support system operations. Without adequate device support, the e-prescription system can experience technical constraints that hinder the service process.

c. Technology Barriers

Another challenge faced is the instability of the internet network. This instability can cause disruptions in the electronic prescription delivery process, which risks errors and delays in service. Based on Network Theory (Barabási, 2002), a stable network is essential to ensure a smooth flow of information in an electronic system. Network instability can have a negative impact on the overall performance of the e-prescription system. In addition, in the Service Quality (SERVQUAL) model developed by Parasuraman, Zeithaml, and Berry (1988), reliability is an important component in service quality. Internet network instability that reduces system reliability can have a negative impact on user satisfaction. The lack of training and technical assistance for health workers is also a significant obstacle in the implementation of e-prescriptions. Based on the Human Capital Theory proposed by Becker (1964), training and skills development are important investments that can increase workforce productivity. In this case, adequate technical training can help health workers understand and use the e-prescription system better. In addition, the Social Learning Theory introduced by Bandura (1977) emphasizes the importance of learning through observation and assistance. With ongoing technical assistance, health workers can more easily overcome technical obstacles they may encounter during the use of the e-prescription system.

It can be concluded that the success of e-prescription optimization is highly dependent on the improvement of technological infrastructure and continuous HR training. With adequate hardware and software support and a stable internet network, the effectiveness of e-prescription use can be increased, so as to provide more efficient, accurate, and high-quality health services.

CONCLUSION

Based on the results of research at the Outpatient Pharmacy Installation of Datu Kandang Haji Balangan Regional Hospital, there are three important aspects that contribute to the effectiveness of using the e-prescription system. Human Aspect (Human Resources), HR competency shows a good understanding of procedures and technology, with an open attitude to change. However, obstacles such as network disruptions and data input errors still exist. Organizational aspect, support from the organization is seen through adequate policies, facilities and training, as well as good communication between parties. Technology aspect,

there are challenges related to hardware and software limitations, internet network instability, and lack of appropriate features, as well as minimal technical training that can hinder the optimization of e-prescription use.

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