

Optimization of Facilities and Infrastructure in Improving the Quality of Health Services at the Pratama Clinic of the Central Java Regional Police's Biddokkes Sendangmulyo

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ABSTRACT

This study aims to determine the availability, constraints, and efforts to optimize facilities and infrastructure in supporting the quality of health services at the Pratama Biddokkes Polda Jateng Sendangmulyo Clinic. The method used is a descriptive qualitative approach. The research participants consisted of medical personnel, administrative staff, and facility maintenance officers who were selected purposively. Data analysis was carried out through the stages of data reduction, data presentation, and drawing conclusions. The results of the study indicate that the availability of facilities and infrastructure at the Pratama Biddokkes Polda Jateng Sendangmulyo Clinic is generally adequate to support basic health services, but there are still several significant obstacles such as limited certain medical devices, damaged facilities, and lack of budget for routine maintenance. Administrative constraints in logistics management are also obstacles to optimizing facilities. Optimization efforts that have been made include gradual facility repairs, procurement of new medical devices, and increased coordination between work units. The active involvement of medical personnel and administrative staff in the process of evaluating facility needs is considered effective in increasing the efficiency of utilizing existing facilities. Optimization of facilities and infrastructure has a positive impact on improving the quality of service, reflected in shorter patient waiting times, more responsive services, and increased patient satisfaction levels. In order for optimization to run sustainably, management commitment is needed in allocating budgets and regular monitoring of the condition of clinical facilities.

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1. INTRODUCTION

Quality health services are greatly influenced by the availability and optimization of adequate facilities and infrastructure (Fajar & Rohendi, 2016). Health facilities need good infrastructure support in order to be able to provide optimal services to the community (Tiana et al., 2024). The main factors determining the quality of services include medical devices, treatment rooms, and competent medical personnel (Yassir et al., 2023). Many health facilities still face challenges in managing facilities and infrastructure, both in terms of availability, maintenance, and efficiency of use, thus having an impact on the accessibility and quality of patient services (Hidayah, 2015). Health facilities and infrastructure include physical buildings, medical equipment, and information systems that support operations, where inadequate infrastructure can hinder the service process and cause delays in diagnosis and medical procedures (Gusnita & Putri, 2023).

Information technology systems that are not optimal also reduce the efficiency of patient data recording and coordination between health workers (Susilawati & Efawati, 2024). The use of technological advances should be able to increase the effectiveness of services, but the implementation of digital systems is still constrained by the limitations of human resources capable of operating them (Murdowo et al., 2021). Good management of health facilities is needed so that all facilities function according to the needs and service standards (Purwadhi et al., 2024). The maintenance and maintenance process of facilities is an important aspect to maintain the continuity of services. Without scheduled maintenance, facilities can quickly deteriorate, reducing the effectiveness of services (Ngadiyono et al., 2019).

The challenge of optimizing facilities and infrastructure also comes from managerial and policy aspects. Unstructured management causes facilities to not be utilized efficiently, affecting the quality of services (Tarman et al., 2024). Budget limitations are the main obstacle, especially in areas with limited resources, so the budget and resource allocation strategy must be appropriate so that facilities can be used optimally (Pamungkas & Kurniasari, 2020). The facility and infrastructure optimization model offers an approach that not only focuses on new procurement, but also on improving the effectiveness of the use of existing facilities (Ratnasari et al., 2024). Collaboration between the government, health workers, and other stakeholders is needed to realize better services (Pardede et al., 2019).

The Central Java Regional Police Biddokkes Primary Clinic serves members of the police, families, and the surrounding community, but there are still obstacles related to the readiness of facilities and infrastructure. Less than optimal facility management causes obstacles such as delays in medical procedures, inefficiency of the recording system, and the use of service space that has not been maximized. Medical device inspections have not been carried out regularly, so there is a risk that they are not ready to use when needed. The KIA/KB poly room is not well organized, the drug stock is not organized, and the supporting technology devices are very limited. The administrative process is still manual, slowing down the workflow and increasing the risk of recording errors.

Previous research by (Gusnita & Putri, 2023) and (Masau, 2019) has discussed the quality of health services in terms of patient satisfaction and service models, but has not specifically highlighted the optimization of facilities and infrastructure as the main strategy. The focus of this research lies in optimizing the management of medical devices, reusing rooms, improving the drug stock system, and improving service support technology at the Central Java Regional Police Biddokkes Primary Clinic Sendangmulyo. This study offers an applicative solution based on real conditions, filling in the gap of previous research that highlighted quality factors without specific solutions related to the management of health facilities. The optimization of facilities and infrastructure is expected to increase efficiency, effectiveness, and patient satisfaction, and become a reference for other health facilities facing similar problems.

2. METHODS

The research design in this study uses a systematic framework that aims to direct all stages of research, from data collection, analysis, to presentation of final results. Sujarweni (2022) emphasized that research design plays an important role in ensuring the validity and reliability of findings, so that the results can be trusted and make a meaningful contribution to the development of science and practice in the field. This study adopts a qualitative approach which, according to Sugiyono (2021), is used to understand social phenomena in depth through descriptive and interpretive data.

This research carries a type of descriptive research, which according to Sugiyono (2021) aims to provide a detailed picture of a phenomenon without intervening in existing variables. The focus of the research is directed at describing the condition of facilities and infrastructure, obstacles in their management, and steps to optimize facilities at the Central Java Regional Police Biddokkes Primary Clinic Sendangmulyo. Moleong (2019) defines qualitative research as an interpretive process in which researchers study phenomena in the natural environment to understand the meaning that individuals give to those phenomena. This approach allows research to be conducted comprehensively by considering various points of view, so that it can produce a more complete understanding of the process of optimizing health facilities in the clinic.

Participants in this study consisted of individuals directly involved in the management and utilization of facilities and infrastructure in clinics, such as medical personnel (general practitioners, nurses, dentists, dental nurses), administrative staff, pharmacists, facility maintenance officers, and manual medical record room officers. Suriani et al. (2023) stated that participants were selected based on their in-depth knowledge of the topics studied as well as their active role in clinic operations. The selection of participants is carried out purposively, considering their competence, experience, and role in supporting the continuity of clinic operations. Their involvement is essential to gain a deep contextual understanding of actual conditions, constraints, and health service optimization strategies.

Data collection was carried out through three main methods, namely interviews, observations, and documentation. Sugiyono (2018) emphasized that the success of data collection is highly dependent on the ability of researchers to understand and dive into the social situation that is the focus of the study. Interviews were conducted with selected participants, observations were made directly on activities at the clinic, and documentation was used to complete the data obtained. Data analysis follows the stages of data reduction, data presentation, and conclusion drawing as described by Miles & Huberman (2018). The validity of the data is guaranteed through the source triangulation technique, which is comparing data from various sources to ensure the reliability and accuracy of the findings, as explained by Moleong (2019) and Sugiyono (2019).

3. FINDINGS AND DISCUSSION

Result

Availability of Facilities and Infrastructure to Support the Quality of Health Services

The availability of facilities and infrastructure at the Central Java Regional Police Biddokkes Primary Clinic Sendangmulyo is the main foundation in supporting the quality of health services provided to patients. Physically, there have been significant improvements to the building and the comfort of the clinic space after accreditation, including well-functioning air conditioning, clean toilets, and more suitable waiting rooms. However, the improvement of these facilities has not been fully offset by the completeness of medical equipment, the availability of certain medicines, and spatial arrangement in accordance with its service functions. Some rooms are not used as they should, and there are still inconsistencies between the needs of services and the presence of medical personnel on duty. This situation has consequences for the limited medical procedures that can be given directly in the clinic.

This is in line with the results of an interview by a general practitioner who showed that: "I think it's good enough... It's just that it is not complete because when there are patients with ear complaints, there is no otoscope (a tool to see the ear canal). In addition, for medicine, there is no ampoule for nebulizers for patients with an asthma diagnosis, so I have to refer patients to other health facilities." The absence of basic diagnostic tools and the limitation of drugs make patients have to be referred to other facilities even though the clinic already has other supporting equipment such as nebulizers. The dentist also conveyed similar problems related to the instrument that did not function optimally, namely: "the dental unit of the chair has been damaged, which cannot be lowered... So that when the patient's action must be in the same position, it also makes it difficult for the doctor to perform the action." The unergonomics of the tool have a direct impact on work efficiency and comfort for both medical personnel and patients.

The nurse who also gave a statement highlighted the inappropriateness of the use of the room, as conveyed: "the infrastructure here is quite complete, it's just that the arrangement is still not neat... the KIA/KB room is still messy for this year... because there are no KIA and family planning services at the clinic." The maternal and child health service room is not functioning as it should be due to the absence of midwives on permanent duty, while many patients who need these services come from the community of wives of members of the National Police around the clinic. The head of the clinic said that the obstacles in repairing or adding facilities did not come from internal negligence, but because the entire process had to go through higher structural authorization. He stated: "I did propose some that still need to be fixed or added... but still waiting for a decision because this clinic is under the Central Java Police Biddokkes... all procedures are through the approval of the leadership first." Dependence on these structural decisions slows down the process of meeting basic service needs.

The midwife added that facilities for family planning services and pregnancy checks are not available adequately. In his interview he said: *"there is no family planning medicine so yes I can't do family planning services, I can only do a simple pregnancy check... because ultrasound equipment like in the health center is also not available."* This limitation makes examinations that should be able to be handled in the clinic have to be referred to other facilities. The administrative staff complained about the work system that had not been fully integrated, as it was stated: *"there are only 1 computers, 1 laptop... both are only in the patient registration room... We lack computers in the doctor's room... So it's still mixed with manual recording."* Electronic medical records have indeed been implemented, but because they are uneven in all rooms, the process actually increases the workload and slows down the flow of services.

The facility maintenance officer stated that there are still many rooms that are not used according to their function, and the involvement of all employees in maintaining neatness is very lacking. He said: *"I ordered each room to clean up but they said it was still busy... That is the essence of every single one of them."* Good service is determined not only by the availability of tools and facilities, but also by the way they are managed collectively and consistently. If medical facilities, examination rooms, and administrative systems can be supported by the awareness and collaboration of all human resources, then the quality of service at the Biddokkes Primary Clinic of the Central Java Regional Police Sendangmulyo will experience a significant improvement without having to rely continuously on referrals to other health facilities.

According to the pharmacist, the availability of drugs at the Central Java Regional Police Biddokkes Pratama Clinic Sendangmulyo is quite complete, but there are obstacles in stock management and delivery frequencies that are not optimal. This was revealed in the results of the interview as follows: *"I think here is quite complete for the stock of drugs sent. it's just that the delivery process is not every month... can be d in stock once every 3-6 months.. Sometimes we run out of stock and types of antibiotics.. Likewise with the flu medicine, given that the stock is small.. Even though many patients need it with complaints of cough and cold.. There are even some vitamins in my opinion that are too much stock, even though they are rarely prescribed by doctors. so it is not optimal in my opinion.. And if there is a lot of leftovers, it will end up being wasted, if it has reached the expiration date but is not used."* This emphasizes the need for

improvements in stock management and drug delivery schedules so that the availability of drugs can meet the needs of patients appropriately and reduce waste due to expired drugs.

Obstacles to the Availability of Facilities and Infrastructure in Supporting the Quality of Health Services

Obstacles to the availability of facilities and infrastructure at the Central Java Regional Police Biddokkes Pratama Clinic Sendangmulyo significantly affect the quality of health services provided to patients. Although the clinic building has undergone renovation and updating of facilities in the context of accreditation, many functional aspects are still not fulfilled or have experienced disruptions. Obstacles arise in the form of damage to medical equipment, lack of medicines, irregularities in the use of service rooms, and limited supporting facilities such as computers and networks for electronic recording. This disruption not only slows down the service process, but also has an impact on the limitations of doctors and other medical personnel in handling patients completely on site. Some patients who should be treated directly end up having to be referred to other health facilities, which means that the clinic has not been able to carry out its role optimally as a first-level service facility.

This is in line with the results of an interview by a general practitioner who showed that: "yes, I couldn't follow up on asthma patients in children who were short of breath at that time because inhaled asthma medication (nebulizer) was not available so I had to refer the patient to another health facility." The absence of drugs that should be a complement to the nebulizer makes the existing device unable to be used optimally. A similar obstacle was experienced by the dentist who stated: "due to the dental unit whose chair cannot be adjusted up and down, I have a bit of difficulty in performing actions on the patient, although it can take a little longer, because the same position for a long time makes me have a low back pain." Equipment that is not ergonomic causes discomfort and potential work injuries for medical personnel, and has a direct impact on the efficiency and safety of patients when treated.

Nurses also have difficulties in carrying out services due to the absence of midwives and the lack of family planning tools and medicines, as revealed: *"quite a lot of patients around the clinic, especially the wives of members of the National Police... only come to the clinic to ask for referrals to other health facilities for examinations, especially those related to KIA and family planning because midwives are not on standby... In addition, all kinds of birth control drugs, both oral and injectable, are not available at this clinic."* The absence of direct KIA and family planning services makes the space provided not optimal, and the needs of patients cannot be met. The head of the clinic also conveyed the limitations in the fulfillment of facilities due to the centralized procurement system, as he said: *"I did propose some that still need to be improved or added... but still waiting for a decision because this clinic is under the Central Java Police Biddokkes... all procedures are through the approval of the leadership first."* This tiered process extends response time to urgent needs in the field.

The midwife also stated that her inability to provide services optimally due to the lack of tools and drugs needed, "there are no family planning drugs so yes I can't do family planning services, I can only check a simple uterus... because ultrasound equipment such as in the health center is also not available... Usually many are referred to other health facilities nearby." The position of midwives who are not on standby at the parent clinic and the limitations of equipment cause services that should be accessible directly to be disrupted. Obstacles were also felt by the administrative staff who handled medical records, as stated by staff 1: "there are only 1 computers, 1 laptop... both are only in the patient registration room... We lack computers in the doctor's room... So it's still mixed with manual recording." While staff 2 conveyed network constraints that had an impact on delays in recording and service processes: "when entering data sometimes there are network problems... both wifi networks or errors in the medical record application and the central BPJS application."

The facility maintenance officer said that cooperation between employees to maintain the room was still minimal, which triggered chaos in the arrangement of the room. He said: *"I ordered each room to clean up but they said it was still busy... so the awareness of each human resource is also important."* The problem does not stop at the technical or tool aspect, but also at the aspect of coordination between

staff and low work discipline. Not a few rooms are empty or misused, such as the breastfeeding room and KIA/KB which are used as storage places. These constraints on the availability of facilities and infrastructure indicate that although the clinic has undergone physical improvements, the system of maintenance, management, and procurement of facilities has not been able to answer the real needs in the field. Cross-unit collaboration and increased efficiency in the procurement mechanism are urgent aspects to be improved so that health services at the Central Java Sendangmulyo Police Biddokkes Pratama Clinic can run optimally and sustainably.

According to the pharmacist, "The obstacle during the service clearly exists, namely that there has been a certain type of antibiotic but the stock is out but it can still be circumvented by giving other types of antibiotics. But there was also a doctor who asked for medicine for nebulizers for asthma patients but never during my work here was there such a drug, even though the nebulizer device was there. So it's also a pity that the tool can't be used." This confirms that the constraints of the availability of certain drugs are still a significant obstacle in supporting the effectiveness of medical devices and the smooth flow of patient services.

Efforts to Optimize the Availability of Facilities and Infrastructure to Support the Quality of Health Services

Optimizing the availability of facilities and infrastructure at the Central Java Regional Police Biddokkes Primary Clinic Sendangmulyo is a strategic step to improve the quality of health services. Various service support components such as medical equipment, the availability of medicines, and the function of the service room must be arranged and adjusted to the real needs of patients and the work capacity of health workers. Optimization not only means adding tools, but also making the most of what is already available, repairing what is broken, and placing competent human resources appropriately. Coordination between units, accelerating the procurement process, and structuring an effective work system will greatly contribute to improving services. Clinics have the potential to develop into more independent primary service centers if the availability of facilities and infrastructure is supported functionally and sustainably.

This is in line with the results of an interview by a general practitioner who showed that: "it is necessary to add some tools that are not yet available here such as otoscopes, ECG devices and also if medicines, yes it was medicine for nebulizers... because the tool for the nebu already exists... But there is no cure... So we can't optimally utilize the tool so that patients can't be handled optimally." Optimization can be done by completing these shortcomings, not only in the hardware, but also in supporting equipment such as drugs. The dentist conveyed the need to replace the equipment that was no longer suitable, as he stated: "I think the dental unit with a chair that can no longer be adjusted up and down this needs to be repaired or replaced so that it is more ergonomic for the doctor to perform the examination." Optimization in this aspect will have a direct effect on the doctor's work comfort and the quality of service interaction with patients.

The nurse emphasized the use of the KIA/KB room which has not been functioned according to its designation, as she said: "it's good for the KIA/KB room to function as the name suggests... There are midwives who are on standby because nurses usually help GPs check many patients... so that patients who are specialized in obstetrics and family planning can be directly assisted by midwives." The placement of appropriate human resources and the procurement of medicines that support the family planning program will make the space function optimally and facilitate patient access to reproductive services. The head of the clinic underlined the need for synergy between employees in maintaining facilities and paying attention to equipment needs reports, "the awareness of every human resource who works... there must be human resources cooperation there to maintain neatness and take care of the equipment used." Optimization is not only technical, but also involves a collective work culture in maintaining the sustainability of existing facilities.

Midwives focus on the usefulness of space and the local needs of the residents around the clinic, the majority of whom are couples of childbearing age. He said: "It's good because near the dormitory there

is a midwife on standby at the Sendangmulyo Clinic... Many couples of fertile age in the dormitory... it is more useful if there is a medicine for family planning... so it can be optimized for human resources and the room." Optimization in this case is integrative, combining the presence of personnel, service provision, and space utilization to support reproductive health programs. In the field of administration, staff 1 suggested expanding the availability of IT devices to facilitate recording and speed up the service process: *"electronic medical records are good enough... We don't have a computer in the doctor's room. So it's still mixed with manual recording."* Meanwhile, staff 2 emphasized integration between work units as the key to efficiency: *"if there is already a computer in the doctor's room, it can be directly connected to the front computer, it should be doc..."*

The facility officer proposed that the large rooms that had not been used could be converted to support emergency services, as conveyed by staff 1: *"if proposed and approved, some of the large rooms here can be used as emergency rooms if possible... so that it doesn't look like an empty room."* Staff 2 added the need for the cooperation of all officers to arrange the space according to their functions so that the service is more comfortable and orderly: *"there is more cooperation from all officers so that it is neater according to their respective functions... It seems uncomfortable to use by both mother and baby."* Optimizing the availability of facilities and infrastructure in this clinic as a whole can be achieved through a systemic approach, starting from improving physical facilities, fulfilling appropriate tools and medicines, to managing space and labor in a structured, efficient, and collaborative manner.

According to the pharmacist, "Maybe from the Central Biddokkes more attention is paid to the number of drugs and types of drugs that are in accordance with the needs of the clinic, so what needs to be added a lot, those that are rarely used are sent less to be appropriate and optimal, reducing waste also for drugs that are rarely used." This statement emphasizes the importance of adjusting drug procurement based on the real needs of clinics so that drug stocks are more efficient and services can run optimally without waste.

Discussion

The availability of facilities and infrastructure at the Central Java Regional Police Biddokkes Primary Clinic Sendangmulyo has proven to play an important role in supporting the quality of health services. This clinic has undergone post-accreditation improvements through physical renovation of the building, procurement of basic medical equipment such as nebulizers and dental equipment, as well as special rooms for KIA/KB services. Organized service spaces, electronic recording system (ERM), and environmental comfort such as air conditioning and waiting rooms reflect the clinic's readiness to provide structured and professional services. Notoatmodjo's theory (2020) strengthens this by stating that adequate medical and non-medical facilities are pillars in the health service system. The quality of buildings, medical devices, as well as the management of drugs and service rooms are tangible indicators of the clinic's readiness to carry out comprehensive service functions.

Even so, obstacles in the provision and maintenance of facilities are still the main obstacles that interfere with service optimization. There are medical equipment that is damaged or cannot be used because it does not have complementary components, such as dental chairs that cannot be adjusted or nebulizers that are not equipped with inhaled drugs. The KIA/KB service room is not used according to its function due to the absence of midwives and family planning tools. Electronic recording systems are only available in the registration room, causing duplication of work and slowing down service. This is in line with the theory of infrastructure maintenance according to Notoatmodjo (2020) and Haryanto (2020) which emphasizes the importance of routine maintenance and integrated logistics recording. Limited coordination and lack of awareness of employees in caring for facilities also worsen the conditions of utilization of facilities that should support the performance of clinics.

Optimization of facilities and infrastructure then becomes a strategic focus in improving service quality. The clinic strives not only to add new tools, but also to improve and maximize existing tools, as well as adjust the placement of human resources such as midwives for the KIA/KB room. The damaged dental unit is planned to be repaired to support the comfort of working for medical personnel.

The use of space is also directed to support emergency functions such as the ER. Strengthening the information system through the provision of IT devices in the doctor's room is an important step in digitizing medical records. The optimization concept from Winston (2019), Taha (2020), and Hiller & Lieberman (2021) shows that resource limitations must be balanced with efficient utilization and structuring strategies to maintain service quality. Sutrisno (2020) emphasized that the effectiveness of services also depends on the appropriate use of space and tools.

This study shows alignment with the findings of Gusnita & Putri (2023) which highlight the importance of the availability of doctors, medications, and human resource development to improve patient satisfaction. Masau (2019) and Sodali et al. (2024) found that the quality of service is highly determined by the completeness of facilities, responsiveness of medical personnel, and clear SOPs. The clinic has adjusted to the RATER quality dimension (reliability, assurance, tangibles, empathy, responsiveness) by improving facilities, improving patient comfort, and accelerating services through information technology. Heryana & Mahadewi (2021) and Findari & Nugroho (2019) emphasized that queue management and efficient resource utilization play a role in improving quality, which is also reflected in the spatial planning strategy and recording system in the clinic.

4. CONCLUSION

In conclusion, the Central Java Regional Police Biddokkes Primary Clinic Sendangmulyo has experienced a significant increase after accreditation in terms of the availability of facilities and infrastructure, including the repair of physical buildings, the procurement of basic medical equipment, and the provision of supporting facilities that create a more professional and comfortable service environment. However, clinics still face various obstacles such as the limitation of certain medical equipment, the distribution of medicines that are not optimal, service rooms that have not been utilized according to their functions, and administrative systems that are not fully integrated, which have an overall impact on the effectiveness and efficiency of services. To overcome this, the clinic has made various optimization efforts, including by maximizing the use of available facilities, repairing damaged equipment, adjusting the placement of human resources according to service needs, strengthening information systems through digital technology, and rearranging the function of the space to be more efficient and support the quality of health services as a whole.

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