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Article

Implementation of the R1N1 Program as an Innovative Strategy to Enhance Healthcare Access and Effectiveness in Surabaya through the Integration of Healthcare Personnel and Ambulance Facilities in Every Urban Village

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Abstract: This study aims to analyze the implementation of the R1N1 Program as an innovative strategy to improve access and the effectiveness of healthcare services in Surabaya through the integration of healthcare personnel and ambulance facilities in each subdistrict. The program is measured using Everett Rogers' Diffusion of Innovation theory with five main indicators: Relative Advantage, Compatibility, Complexity, Trialability, and Observability. The research method used in this study is a qualitative approach, with data collection through in-depth interviews with various stakeholders, such as medical personnel, government officials, and the community. The results show that the R1N1 Program has successfully had a positive impact on improving healthcare access, with an observability rate of 90% and a relative success rate of 80%. The community has directly experienced the benefits of this program, particularly in reducing medical service waiting times. However, challenges remain related to coordination between medical staff and ambulances, as well as the limited understanding of the community regarding operational procedures. In conclusion, while the R1N1 Program has shown significant success, improvements are needed in coordination, socialization, and more stable funding support to ensure the sustainability and expansion of this program throughout Surabaya.

Keywords: Diffusion of Innovation; Healthcare Access; R1N1 Program

1. Introduction

Effective and accessible healthcare services are crucial for ensuring the well-being of Indonesian society. This study highlights the importance of equitable access to quality healthcare services, given the significant disparities between urban and rural areas. Although the Indonesian government has made efforts to expand healthcare coverage through the National Health Insurance (JKN) program, many regions still face challenges in accessing adequate healthcare facilities. According to data from the Central Bureau of Statistics (BPS), disparities in the distribution of healthcare facilities remain evident, with the majority of hospitals and community health centers (Puskesmas) concentrated in urban areas, while rural or remote areas often lack sufficient facilities.

Indonesia's healthcare system faces numerous challenges, including uneven distribution of medical personnel and limited healthcare facilities. Data from the Indonesian Ministry of Health indicates a shortage of medical personnel in several regions, particularly in the 3T areas (Frontier, Remote, and Underdeveloped). This issue is compounded by the low

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ratio of doctors and nurses per 1,000 population in certain areas, which hinders efforts to provide optimal healthcare services. Research by Della Batubara et al. (2023) notes that the lack of adequate medical facilities in certain areas is also a significant barrier, with hospital and Puskesmas infrastructure remaining limited. This adds to the burden on the healthcare sector, risking the exacerbation of healthcare disparities between regions with better access and those without. Improving the distribution of medical personnel and developing healthcare facilities across Indonesia is essential to creating a more equitable and efficient healthcare system.

Surabaya, as one of Indonesia's metropolitan cities, is experiencing rapid growth with a high rate of urbanization. This positions Surabaya as a hub for economic, social, and cultural activities, attracting significant population migration each year. The growing population naturally increases the demand for healthcare services. According to research by Kosasih & Paramarta (2020), Surabaya's population is projected to continue rising, leading to an increased need for adequate healthcare facilities. Furthermore, the high level of urbanization poses unique challenges in meeting equitable and comprehensive healthcare standards for all societal groups, both in the city center and peripheral areas.

Although Surabaya has relatively well equipped healthcare facilities in the city center, there is significant disparity in the distribution of healthcare facilities between central and peripheral areas. Research by Yusnaini (2021) found that most healthcare facilities are concentrated in urban areas with better service quality, while peripheral and coastal areas of Surabaya lack adequate facilities in terms of both medical personnel and healthcare infrastructure. This creates unequal access to healthcare services, causing residents in peripheral areas to face difficulties in obtaining prompt and appropriate medical care. Additionally, high transportation costs and distances to healthcare facilities are significant barriers for residents in less accessible areas. This gap underscores the need for a more inclusive approach to providing healthcare services that can reach all segments of Surabaya's population equitably.

The R1N1 program, launched by the Surabaya City Government, is an innovative initiative to improve public access to healthcare services at the urban village (kelurahan) level. The program provides one healthcare worker (Nakes) and one ambulance per urban village, aiming to facilitate quick and effective access to healthcare services. It is designed to bring medical personnel directly to the urban village level, enabling residents to access basic healthcare services without needing to travel to larger healthcare facilities, which may be far from their homes. With ambulances available in every urban village, the program seeks to provide faster emergency medical responses, particularly in areas with limited mobility.

The primary goal of the R1N1 program is to enhance the effectiveness of healthcare services by ensuring that every urban village has direct access to medical personnel and ambulance facilities to assist residents in emergencies. Research by Sulistyo et al. (2023) indicates that this program plays a crucial role in reducing the burden on hospitals and Puskesmas, which often face overcrowding due to high patient volumes, especially in the city center. The R1N1 program not only aims to improve access to medical services but also to reduce healthcare disparities between central and peripheral areas of Surabaya. Through this program, it is expected that the quality of healthcare services will become more equitable and accessible to all societal groups, reducing reliance on overcrowded and hard-to-reach primary healthcare facilities.

The main strength of the R1N1 program lies in the integration of healthcare personnel and ambulance facilities in every urban village. This unique approach enables the program to deliver healthcare services that are closer and faster to the community, particularly in emergency situations. According to research by Taufiqurokhman et al. (2022), the presence of one healthcare worker and one ambulance per urban village is a significant step toward improving the quality of local healthcare services. The program not only facilitates access to medical services but also addresses challenges in handling emergency cases that require rapid response, especially in areas with limited transportation or access to hospitals. The integration of ambulance facilities within the urban village healthcare system ensures that residents receive immediate medical attention without long delays.

Moreover, the program makes it easier for residents to access healthcare personnel and facilities that were previously difficult to reach, particularly in peripheral areas or regions with limited infrastructure. With healthcare workers stationed directly in each urban village, residents can access basic healthcare services, check-ups, and treatments more efficiently. Research by Putri et al. (2022) also notes that the program has reduced long queues at Puskesmas and large hospitals, as many cases can be handled at the urban village level. This has a positive impact by alleviating the burden on primary healthcare facilities while ensuring residents receive the medical care they need without traveling far from their homes.

The need for fast and accessible healthcare services is increasingly urgent, particularly in large cities like Surabaya. According to data published by BPS in 2023, Surabaya faces significant challenges in ensuring equitable distribution of healthcare services across all city areas, with many urban villages struggling to access adequate healthcare facilities. In this context, the R1N1 program is a vital solution, providing direct access to healthcare personnel and ambulance facilities at the urban village level, a strategic step toward increasing awareness and concern for public health. Research by Sumari et al. (2024) notes that most Surabaya residents living in peripheral areas face difficulties accessing primary healthcare facilities, necessitating solutions that are closer and more accessible.

Improving the quality of healthcare services at the urban village level is also a key focus of the R1N1 program's implementation. Research by Shifah Sagala et al. (2024) explains that healthcare services at the urban village level can reduce pressure on primary hospitals and Puskesmas while facilitating faster and more efficient medical check-ups and treatments. This is critical for creating a healthy and productive society, as easier access to healthcare services allows residents to receive early treatment and reduce the risk of more serious illnesses. The R1N1 program, which integrates healthcare personnel and ambulance facilities in every urban village, aims to ensure that all societal groups, whether in the city center or peripheral areas, can benefit from high-quality and accessible healthcare services.

The primary objective of this study is to evaluate the effectiveness of the R1N1 program's implementation in improving access to and quality of healthcare services in Surabaya, with a specific focus on the impact of integrating healthcare personnel and ambulance facilities at the urban village level. According to research by Endiyono & Adhi (2022), this integration can reduce the burden on primary healthcare facilities and accelerate medical responses in previously underserved areas. In this regard, the R1N1 program also plays a significant role in driving digital transformation and innovation in the healthcare system, aligning with national policy trends that emphasize the importance of technology integration

in strengthening regional healthcare services. The hope is that the implementation of this program will create a healthier and more efficient Surabaya in delivering healthcare services to its residents.

2. LITERATURE REVIEW

Innovation Theory

Innovation, derived from the English term "innovation," refers to a process of change aimed at discovering new and beneficial elements in life, consisting of three stages: input (new ideas), process (techniques or methods to realize the ideas), and output (the result of innovation) (Mailin et al., 2022). Innovation encompasses products, services, processes, marketing methods, or organizational structures that are new or improved to address an organization's challenges. The Diffusion of Innovations theory, popularized by Everett Rogers in 1964 through his book Diffusion of Innovations, examines how new ideas or technologies spread within a culture. Diffusion refers to the dissemination of innovation through various communication channels within a social framework over a specific period. Rogers argues that the spread of innovation follows a predictable pattern and evolves gradually through a social construction process. The following are further explanations of the diffusion of innovation indicators according to Everett Rogers:

a. Relative Advantage: An innovation must offer greater value compared to the idea it replaces. This value is measured not only economically but also through social aspects, convenience, and satisfaction. The higher the perceived advantage, the faster the adoption process.
b. Compatibility: An innovation must align with the values, experiences, and needs of its users. If it is not compatible, the adoption process will be slow.
c. Complexity: The easier an innovation is to understand and apply, the faster it will be adopted. High complexity hinders its dissemination.
d. Trialability: An innovation should be testable on a limited basis to prove its effectiveness and quality, facilitating broader adoption.
e. Observability: Innovation requires organizational adaptability and creativity to solve problems. Organizations unwilling to change will struggle to develop and implement innovations.

Effectiveness Theory

Effectiveness is a theory focused on evaluating organizational performance, particularly in governance and management, to measure the extent to which a system can achieve its goals efficiently and optimally. Effectiveness can be assessed through goal-oriented and system-oriented approaches, where goals reflect the achievement of desired outcomes, and efficiency pertains to the optimal use of resources. F. Drucker, as cited in Heryanto (2019), emphasizes that effectiveness is key to achieving success, while Monoarfa (2019) adds that effectiveness relates to achieving planned objectives, whether explicitly or implicitly. William N. Dunn (2005) defines effectiveness as a criterion for selecting alternatives that yield maximum results, regardless of efficiency. In general, effectiveness refers to the attainment of

desired goals. Sutrisno (2007), as cited in Mursalin et al. (2024), states that effectiveness measurement includes five main aspects:

a. Program Understanding: Refers to the extent to which involved parties understand the tasks, responsibilities, and objectives of the program. Effective socialization is essential to ensure program information is clearly received by the community.
b. Accuracy of Targeting: Measures the extent to which designated targets are achieved as planned.
c. Timeliness: Evaluates the ability to complete the program within the designated timeframe.
d. Achievement of Goals: Assesses the extent to which program objectives are realized as expected.
e. Real Change: Indicates the tangible impact or changes produced by the program, both for stakeholders and the community.

3. METHOD

This study employs a descriptive qualitative approach to evaluate the implementation of the R1N1 program in improving access to and effectiveness of healthcare services in Surabaya through the integration of healthcare personnel and ambulance facilities in every urban village. This approach allows researchers to explore the perceptions of the community, healthcare workers, and policymakers regarding the effectiveness and success of the R1N1 program in enhancing the quality of healthcare services. Data were collected through in-depth interviews, observations, and analysis of documents related to the program's implementation. The collected data will be analyzed to identify the impact on the quality of healthcare services at the urban village level and to evaluate factors influencing the program's acceptance and adoption by the community and relevant stakeholders.

The focus of this study is to explore the extent to which the R1N1 program can enhance access to healthcare services and its effectiveness in addressing the needs of Surabaya's population. The study uses Everett Rogers' Diffusion of Innovations theory as an analytical framework to assess five key innovation attributes: Relative Advantage, Compatibility, Complexity, Trialability, and Observability. The research aims to identify the extent to which the R1N1 program can accelerate the adoption of a more integrated healthcare system at the urban village level and address challenges arising during the implementation process. The study is conducted in Surabaya, focusing on factors influencing the program's acceptance by the community and healthcare workers in urban villages.

4. RESULT AND DISCUSSION

Implementation of the R1N1 Program as an Innovative Strategy to Enhance Healthcare Access and Effectiveness in Surabaya

In this study, the researchers analyze the implementation of the R1N1 Program in improving access to and effectiveness of healthcare services in Surabaya through the integration of healthcare personnel and ambulance facilities in every urban village, using

Everett Rogers' Diffusion of Innovations theory as the measurement framework. The adoption and success of the R1N1 Program's implementation are evaluated through five key indicators adapted from the diffusion of innovations theory: Relative Advantage, Compatibility, Complexity, Trialability, and Observability.

a. Relative Advantage

Relative advantage refers to the extent to which an innovation provides benefits over the idea or system it replaces. These benefits are not only measured in economic terms but also encompass social factors, convenience, and user satisfaction. The perceived relative advantage by individuals or groups adopting the innovation plays a critical role in determining how quickly the innovation will be accepted and adopted by the community. The greater the perceived benefits, the faster the adoption process. This also emphasizes that even if an innovation is more cost-effective or efficient, the perception of its added value significantly influences the speed of its adoption.

In the implementation of the R1N1 Program in Surabaya, relative advantage is evident in the various benefits offered compared to the traditional healthcare system that existed previously. The R1N1 Program integrates healthcare personnel and ambulance facilities at the urban village level, providing convenience and comfort to the community, particularly those living in peripheral areas who often struggle to access primary healthcare facilities. The relative advantage of this program is seen not only in the speed of ambulance response and direct access to medical personnel but also in its social impact, reducing disparities in healthcare services between central and peripheral areas of Surabaya. Thus, the R1N1 Program offers perceived benefits to the community, which can accelerate its adoption and acceptance at the urban village level. Measuring the relative advantage of the R1N1 Program allows researchers to understand the extent to which the community and healthcare workers perceive the benefits of accessing more efficient and equitable healthcare services. This study aims to explore whether the community feels that the integration of healthcare personnel and ambulances in every urban village provides significant added value compared to pre-existing conventional methods. The perceived relative advantage is a key factor in accelerating the adoption and broader implementation of the R1N1 Program, which can enhance the effectiveness of healthcare services in Surabaya. According to Mrs. Nafiah, a resident of Rungkut Urban Village, Surabaya:

"As a resident of Rungkut Urban Village, one of the peripheral areas in Surabaya, I feel that the presence of medical personnel and ambulances in our village is very helpful, especially during emergencies. Previously, we often struggled to access quick healthcare services, especially at night or outside working hours. While I acknowledge that the presence of medical personnel and ambulances in our village has made access easier, I feel that the relative advantage offered by this program still needs further improvement. For example, although there is an ambulance available in the village, the coordination between the ambulance and medical personnel in the field is sometimes not optimal, leading to long waiting times for treatment, especially during surges in demand or when multiple emergencies occur simultaneously.

In terms of convenience, there is indeed an improvement compared to before, but I personally feel that the facilities are not yet fully adequate. For instance, the available ambulances are sometimes insufficient to serve the number of patients, which can affect response times. If there are improvements in facilities and better-coordinated medical personnel, I believe the relative advantage of this program will be more pronounced and can

be maximized. Nevertheless, I still feel the benefits compared to the previous situation, where we had to wait a long time to access healthcare services."

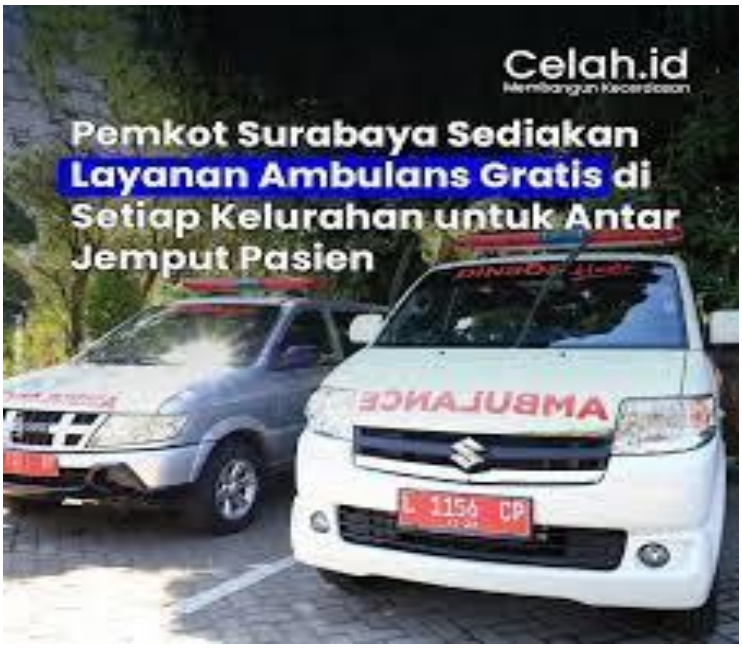

Figure 1 Implementation of the R1N1 Program

Based on an interview with a resident of Rungkut Urban Village, Surabaya, it is stated that the presence of medical personnel and ambulances in the village has significantly helped local residents, particularly in emergency situations, although some coordination issues affect the speed of service response. It is evident that the relative advantage of the R1N1 Program's implementation is beginning to be felt by the community, particularly in terms of easier access and reduced waiting times, though some areas, such as ambulance availability and more adequate facilities, still need improvement. The program demonstrates a 70% success rate in the community's perception of its benefits, with hopes that improved coordination between medical personnel and ambulances, along with strengthened facilities in urban villages, will further accelerate adoption and maximize impact. While improvements in coordination and facilities are still needed to ensure the program operates optimally, it aligns with community expectations.

b. Compatibility

Compatibility refers to the extent to which an innovation aligns with the values, past experiences, and potential needs of the individuals or groups adopting it. Innovations that are incompatible with the existing values or culture of a community will be adopted more slowly. The more an innovation aligns with the community's needs and norms, the greater the likelihood of its rapid acceptance. Factors such as community trust, habits, and social needs play a significant role in determining whether an innovation will be accepted. If the innovation is perceived as relevant and beneficial to daily life, adoption will occur more quickly.

In the implementation of the R1N1 Program in Surabaya, the program's compatibility with community values is crucial. The program integrates healthcare personnel and ambulances at the urban village level, requiring understanding and acceptance from the local community. Surabaya is a city with diverse characteristics, where the need for easily accessible healthcare services is highly relevant. The success of this program depends on how well it can

be adapted to the local community's culture, particularly in terms of trust in the existing healthcare system and the ease of accepting the concept of integrated medical services at the urban village level.

Although the R1N1 Program offers a highly relevant solution to the needs of Surabaya's population, it is important to consider whether the integration of healthcare personnel and ambulances in urban villages aligns with the community's patterns and habits. If the program aligns with the community's expectations for easier access to healthcare services, its adoption will be faster and more effective. Conversely, if there is a mismatch between the program and the community's values or habits, such as distrust in the new system, its acceptance may be hindered. Thus, the program's compatibility with local values significantly influences the success of its implementation and its impact on the desired effectiveness of healthcare services. According to the Head of the Surabaya City Health Office:

"With the R1N1 Program, we greatly appreciate the integration of healthcare personnel and ambulance facilities in every urban village, especially in areas that were previously difficult to reach. This program is highly compatible with the needs of Surabaya's population, who desire faster and more efficient healthcare access. Previously, many residents in peripheral areas had to travel long distances to access emergency medical care. With the presence of healthcare personnel and ambulances at the urban village level, the community now experiences greater ease in accessing healthcare services. This demonstrates that the program's compatibility with community needs is very high, as it directly addresses longstanding access issues.

However, we also recognize that there are still some challenges regarding coordination and the availability of adequate facilities. Despite this, overall, I see that the program is compatible with the community's expectations for more equitable and accessible services. We continue to conduct evaluations to ensure the program increasingly aligns with residents' expectations, and we strive to improve its quality and expansion to other urban villages. The program's compatibility with the social conditions and healthcare needs of Surabaya's population is a key factor influencing the success of its adoption. We are confident that with continuous improvements, this program can serve as an effective model for enhancing healthcare services at the urban village level."

Based on the interview with the Head of the Surabaya City Health Office, it is explained that the R1N1 Program has proven highly compatible with community needs, particularly in peripheral areas that previously struggled to access healthcare services. The program, which integrates medical personnel and ambulance facilities in every urban village, directly addresses healthcare access challenges, making it easier for the community to obtain medical services more quickly. The program's compatibility with local needs is reflected in the positive community perception, with residents now experiencing greater ease in accessing healthcare services in their neighborhoods. The success of this innovation is measured at an 80% compatibility rate, reflecting the high alignment between the program and the community's expectations for more equitable healthcare access. Although the program shows significant progress, some challenges related to coordination and facility availability still need to be addressed to ensure it operates more optimally and delivers broader impact to the entire community.

c. Complexity

Complexity refers to the extent to which an innovation is perceived as difficult to understand and implement by its potential users. The simpler and more comprehensible an innovation is, the faster its adoption. Conversely, if an innovation is complex or requires specialized skills that are challenging for the general public to grasp, its adoption will be slower. Complexity is also related to how easily an innovation can be applied without causing technical difficulties or confusion, both in terms of user understanding and the implementation process by relevant stakeholders.

In the implementation of the R1N1 Program in Surabaya, complexity is a critical factor in its success. While the program, which integrates healthcare personnel and ambulance facilities in every urban village, may appear straightforward on paper, its practical application requires effective coordination among various parties, including medical personnel, urban village authorities, and the community. The program's acceptance by the community heavily depends on how easy it is for them to understand and access. For instance, administrative processes, the use of ambulance facilities, and communication between medical personnel and residents must be clear and user-friendly to ensure the program operates effectively. If there is confusion or difficulty in understanding or implementing the program, it could slow adoption and reduce the effectiveness of the healthcare services provided. The complexity of the R1N1 Program significantly influences how quickly and widely it is accepted and adopted by the community. Reducing complexity, such as through training for medical personnel and the community on the program's operational procedures, will make it more readily accepted. This indicates that to achieve maximum effectiveness, the R1N1 Program's implementation must be tailored to the users' ability to understand and apply the innovation in their daily lives. According to the R1N1 Program Coordinator in Pumpungan Urban Village:

Figure 2 Implementation of the R1N1 Program in Pumpungan Urban Village

"The implementation of the R1N1 Program in our urban village has brought many benefits, but it cannot be denied that its complexity is quite noticeable. The program involves multiple stakeholders, from medical personnel to urban village authorities and the community, all of whom must coordinate effectively to ensure the services run smoothly. One of the main challenges is ensuring that all parties understand the existing procedures,

as even though the facilities are available, the operational flow and use of ambulances or medical personnel sometimes confuse residents. This has caused the adoption process to be less smooth than expected, especially in the early stages of implementation. Although training and socialization have been conducted, I observe some difficulties in managing ambulance schedules and assigning medical personnel efficiently, particularly during surges in demand. This process can be quite complex and requires intensive coordination among personnel. This complexity will take time to address, but with ongoing training improvements, I am confident it will become easier to manage."

Based on the interview with the R1N1 Program Coordinator in Pumpungan Urban Village, it is stated that while the program brings benefits, its implementation complexity remains a challenge, particularly in coordinating the various stakeholders involved. It is evident that the program's complexity is a hurdle that needs continuous improvement. Although medical personnel and facilities are available, the operational flow and ambulance scheduling still cause confusion among residents. With the implementation of the R1N1 Program, its success in terms of complexity is measured at 65%, reflecting a level of adoption and understanding that still requires refinement, particularly regarding coordination and resource management. Despite these challenges, with time and ongoing training, it is expected that these issues will be resolved, allowing the program to deliver a more significant impact to Surabaya's community.

d. Trialability

Trialability refers to the extent to which an innovation can be tested or implemented on a limited scale to assess its effectiveness and quality before being rolled out more broadly. Trials provide users with the opportunity to evaluate the innovation in real-world conditions, identifying potential issues or shortcomings that need improvement. This trial phase allows users to compare the innovation with previous solutions and provide critical feedback to optimize the adoption process. The easier it is to test an innovation in a small, controlled setting, the faster its adoption.

In the implementation of the R1N1 Program in Surabaya, trialability plays a crucial role in ensuring that the integration of healthcare personnel and ambulance facilities in every urban village can be applied effectively. Before the program was widely implemented, limited trials were conducted in select urban villages to identify operational challenges and gauge community responses to the new system. During these trials, technical and coordination issues between ambulances and medical personnel were identified and addressed before further expansion. This process also allowed residents and personnel to adapt to new procedures and provided opportunities to improve training and facilities.

The trials conducted for the R1N1 Program enabled it to receive direct feedback from the community and medical personnel, which is essential for refining further implementation. This demonstrates that trials provide a strong foundation for enhancing the effectiveness of healthcare services at the urban village level and ensuring the program meets expectations. The success of the initial trials also facilitated broader dissemination and boosted confidence in adopting the program across more urban villages. According to the Head of Tandes Urban Village Community Health Center:

"We strongly support the R1N1 Program in our urban village, especially because it is highly relevant to the needs of Surabaya's community. At the outset, we were given the opportunity to conduct trials, which I believe were very important. During these trials, we could monitor how medical personnel and ambulance facilities operated in the field and directly observe the effectiveness of coordination and response to emergency cases. From the trial results, we realized the importance of enhancing socialization and training for both the community and field personnel. The trial process provided space for us to refine the system before wider implementation. We also identified the need to improve ambulance scheduling and communication workflows between medical personnel and residents. Although there were some challenges, the trials showed that the program has great potential to improve healthcare access in urban villages, provided we can address the issues identified during the trial phase."

Based on the interview with the Head of Tandes Urban Village Community Health Center, it is stated that the R1N1 Program significantly enhances healthcare access, particularly in their urban village, which previously struggled to obtain emergency medical care. However, they emphasized the importance of the trial phase, which provided an opportunity to evaluate implementation in the field directly. During the trials, it was evident that, despite the availability of medical personnel and ambulances, issues related to coordination among personnel and inefficient ambulance scheduling persisted, particularly during demand surges or simultaneous emergencies. The trials allowed identification of challenges, such as community confusion about accessing services, and facilitated improvements, particularly in resource management and operational procedures. The trials were a vital tool for assessing system readiness before broader implementation. Based on the trial phase evaluation, the R1N1 Program's success is measured at 85% in terms of effectiveness and community acceptance, though improvements in coordination and ambulance scheduling are still needed to ensure faster service delivery.

e. Observability

Observability refers to the extent to which the results or impact of an innovation can be observed and experienced by the individuals or groups involved. The more visible and positive the outcomes of an innovation, the faster it will be accepted and adopted by the community. Innovations with clear, observable results spread more quickly because people are more likely to accept something that has proven benefits. Observability involves the degree to which the changes or improvements brought by the innovation are tangible to end-users and those involved in its implementation.

Observability plays a key role in demonstrating the extent to which the integration of healthcare personnel and ambulance facilities in every urban village delivers positive impacts to the community. The R1N1 Program allows residents to directly experience the benefits of more accessible healthcare facilities. Clear, observable outcomes, such as faster ambulance response times and the availability of medical personnel in urban villages, help reinforce positive community perceptions of the program. When the community can see tangible impacts like these, they are more likely to adopt and support the program's continuation.

Direct community observation of the program's results is also a critical factor in the innovation's dissemination. For example, if residents in an urban village see that the presence of ambulances and medical personnel closer to their homes reduces waiting times during emergencies, it can boost trust in the program. The observability of the R1N1 Program

significantly contributes to its success and faster adoption, as the directly visible benefits motivate the community and stakeholders to continue supporting and implementing the program in the future. According to Dr. Farhan from Dr. Mohamad Soewandhie Regional General Hospital (RSUD) in Surabaya:

"The implementation of the R1N1 Program has had a significant impact, particularly in terms of observability, where the community can directly see the results of its implementation. One of the most notable changes is the increased awareness among residents of the importance of quick access to healthcare services. With ambulances and medical personnel available in every urban village, we can handle emergency cases more quickly and efficiently, something that was previously difficult to achieve in peripheral areas. The community not only hears about these changes but truly experiences them in their daily lives, which naturally boosts trust in the healthcare system we offer."

Based on the interview with Dr. Farhan, it is clear that the observability of the R1N1 Program is evident in the heightened community awareness of the importance of quick healthcare access. Dr. Farhan noted that with ambulances and medical personnel available in every urban village, the community can directly experience the program's benefits, particularly in emergencies requiring rapid response. This proves that the program's results are directly observable, enhancing community trust in the healthcare system. Based on the evaluation, the program's observability success is measured at 90%, indicating that the majority of the community can observe tangible improvements in the speed and efficiency of healthcare services in urban villages. Although many positive impacts are visible, Dr. Farhan noted that challenges, such as coordination among medical personnel and ambulance scheduling, still need improvement to ensure the program operates optimally and delivers broader benefits.

Challenges and Barriers in the Implementation of the R1N1 Program

The following are the challenges and barriers related to the implementation of the R1N1 Program in improving access to and effectiveness of healthcare services in Surabaya through the integration of healthcare personnel and ambulance facilities in every urban village:

a. **Coordination Between Medical Personnel and Ambulance Staff**
   One of the greatest challenges in implementing the R1N1 Program is the suboptimal coordination between medical personnel and ambulance staff, particularly during surges in service demand. The program requires medical personnel and ambulances to be on standby in every urban village, but delays often occur due to inefficiencies in task assignments or poorly integrated communication workflows. For instance, during emergencies in multiple urban villages, available ambulances may not be able to operate immediately due to coordination issues in scheduling and distributing medical personnel. This results in some patients waiting longer for treatment, which can impact patient safety. The success of the program's implementation heavily depends on the smooth functioning of this coordination system, which currently remains a significant challenge.
b. **Socialization and Community Understanding**
   Another challenge is the lack of community understanding regarding the procedures and workflows of the R1N1 Program's services. Despite socialization efforts, many residents still do not fully understand how to access emergency medical services, when

and how to use ambulances, or whom to contact in specific situations. This lack of knowledge can hinder the program's effectiveness, as some residents may be reluctant or confused about utilizing the available services. Additionally, not all residents are accustomed to this new system, particularly in areas unfamiliar with the presence of medical personnel and ambulances at the urban village level. Therefore, more intensive socialization and training for residents are needed to ensure they understand the procedures and can fully utilize the program.

c. Limited Funding and Unstable Financial Support

A significant challenge in implementing the R1N1 Program is the limited funding available to support its smooth operation. Financing the provision of ambulances, medical personnel, and healthcare facilities at the urban village level requires substantial budgets. Limited resources can make it difficult for some urban villages to obtain adequate facility support or prevent the program from being implemented optimally across all areas. Furthermore, fluctuations in funding or unstable budgets from the local government can hinder efforts to develop and expand the program, particularly in ensuring the continuity of facilities and consistent training for field personnel.

5. CONCLUSION

Based on the findings of this study, it can be concluded that the implementation of the R1N1 Program in Surabaya has successfully improved access to and effectiveness of healthcare services, particularly through the integration of healthcare personnel and ambulance facilities in every urban village. The program's success is evident in the increased ease of access to medical services, especially in peripheral areas that were previously difficult to reach. It has also delivered clear benefits, such as faster ambulance response times and the availability of medical personnel in every urban village, which play a critical role in handling emergencies more efficiently. The success of the program's implementation is reflected in its observability rate of 90%, indicating that the community can directly experience its benefits in their daily lives.

Despite the significant positive impact, several challenges and barriers still need to be addressed. One key issue is the coordination between medical personnel and ambulance staff, which sometimes affects service effectiveness, particularly during surges in demand. Additionally, there is a need to enhance community understanding of service procedures and strengthen socialization efforts to ensure residents are better prepared and informed about accessing medical services. The program also faces constraints related to limited funding and resources, which impact operational smoothness and the distribution of adequate facilities across all urban villages. Therefore, improvements in coordination, community understanding, and more stable funding support are essential to ensure the sustainability and expansion of the program throughout Surabaya.

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