






## Service innovation in public health: A case study of an Indonesian local government

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### ABSTRACT

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This study aims to investigate the innovation and efficacy of the integrated 112 Call Centre service in Parepare City, Indonesia, precisely in delivering healthcare services to the local population. The study aims to comprehend the effects of the Call Centre 112 service, its assimilation by the community, and the obstacles encountered during its execution. The study employs a qualitative methodology to elucidate the nature of service innovation and its effects on the community. The analysis assesses the comparative benefits, compatibility, level of difficulty, and feasibility of implementing the Call Centre 112 service. Furthermore, the study examines the obstacles the local government encounters in implementing service innovation and enhancing service quality. The study's findings demonstrate that the community has responded favourably to the Call Centre 112 service, which has exhibited encouraging patterns in assisting patients, particularly during the COVID-19 pandemic. The service has demonstrated a comparative advantage in terms of compatibility, trialability, and observability, which has contributed to its success in delivering prompt health care to the residents of Parepare City. Nevertheless, the report also underscores difficulties associated with public awareness and comprehension of the program. This research enhances the academic discourse on service innovation in public administration by offering valuable insights into the effects and difficulties associated with the implementation of the 112 Call Centre service in the health sector. The results have practical consequences for local governments and public health agencies, highlighting the significance of visibility and community acceptance in effectively carrying out healthcare advancements.

**Contribution/Originality:** The study provides valuable insights into the impact of the healthcare innovation program, particularly in providing responsive health services to the community, especially during the COVID-19 pandemic. The originality is a qualitative approach to describe the impact of service innovation at the local level, offering valuable implications for health service providers.

## 1. INTRODUCTION

Developmentally, public services in the service sector are rapidly overtaking the manufacturing sector to form a dominant proportion in the implementation of government objectives (Randhawa & Scerri, 2015). Even from an economic perspective, the service sector increasingly dominates the world economy, accounting for more than 70%

of employment in the Organisation for Economic Cooperation and Development (OECD) countries and 58% of gross national product worldwide (Baltacioglu, Ada, Kaplan, Yurt, & Kaplan, 2007). This has led to innovation in services becoming increasingly important to develop. Such innovation aims to continue to ensure sustainable growth and competitive advantage. Innovation began to grow as a significant research discipline during the 20th century, focusing only on science and technology and new service product development approaches. This also linearly increased the understanding of the importance of the concept and practice of public sector service innovation.

Some researchers have focused on innovation in the service context over the past two decades. Service innovation today has evolved into a broad field that attempts to explore the study of intangible processes, dynamic interactions between technological system developments, and human roles that lead to managerial and organisational changes in services (Chan, Thong, Brown, & Venkatesh, 2020; Pratama, 2019; Randhawa & Scerri, 2015; Yunus et al., 2020). Innovation is generally defined as creating novelty to create products and services that focus on organisational change, including establishing new work practices (Marceau, 2008). In addition, the definition of innovation has also tried to link factors, elements, theories, and thoughts about technology, processes, products, services, organisations, markets, consumers, creativity, knowledge, learning, and culture that unconsciously add complexity. So, complexity provides the potential for novelty, which makes innovation, according to Keupp, Palmie, and Gassman (2012) in the form of new products or services, unique production process technology, new administrative structures or systems, or new plans or programs relating to organisational members.

Public services aim to provide quality services to meet customer expectations for services provided by public organisations. For this reason, in the Indonesian context, the national government has recently encouraged all regional governments to measure the quality of public services based on customer satisfaction in the public sector (Santosa, 2023). But as customer needs and preferences evolve, public sector organisations must adapt their services to meet changing demands. This can be seen from the fact that customer satisfaction with public services remains low (Johnson, 2020). For this reason, a service innovation is needed to create and implement better services by applying technology to make them more effective and easier to access. This is in line with the study of Vargo and Lusch (2016), who argue that service innovation is a process that involves the creation and implementation of new or better services to meet changing customer needs.

In Indonesia, public service delivery is becoming an increasingly strategic policy issue because public service improvement tends to run in place, while its implications, as is well known, are vast. It is believed to touch all public spaces in economic, social, cultural, and other ways. Specifically, in health services, this aspect is a concept used in providing services to the community. The primary efforts are preventive and promotional services (health improvement) targeting the general public and every effort to maintain and improve health, prevent and cure diseases, and restore the health of individuals, families, groups, and communities. The health system in Indonesia is inseparable from the development of health services; essentially, health services are all activities that aim to promote, restore, and maintain health with a fair distribution for all levels of society (Susanti, Iva, Yani, & Hidayat, 2022).

Service innovations through local governments in Indonesia began to receive attention since the birth of regional autonomy through Law Number 22 of 1999 concerning provincial government. This regulation automatically resulted in significant changes to the structure and management of the Indonesian government, especially the local government. The initial innovative step is reflected in the shift away from the concept of decentralization. Applying the idea of decentralization emphasises government development at the provincial, regional, and city levels. So, these changes are expected to enable local governments at the regional, regency, and city levels to create innovative ideas in the context of good governance. The law of the local government was later

amended and replaced according to the regional social-political dynamic of Indonesia, and the latest local government law is Law Number 23 of 2014.

Along with the birth of regional autonomy and guidelines for public service innovation, namely the formation or creation of innovations with the One Agency, One Innovation strategy, each ministry or agency and regional Government must create at least one Innovation every year. This certainly encourages each region to be able to take the initiative to compete, make new breakthroughs, and make improvements or replace old methods that are no longer relevant. The service innovation can be in the form of implementing a program that is part of a government strategy that encourages the realization of public satisfaction.

Nonetheless, implementing service innovation in local government encounters numerous obstacles that hinder its effectiveness. Local governments frequently need more financial resources and qualified personnel, which impedes their capacity to invest in and maintain new service programmes (Cinar, Trott, & Simms, 2019; Robinson, 2007). This can impact the progress and upkeep of sophisticated technical systems. The second difficulty pertains to the bureaucratic structures and deeply ingrained processes inside local government bodies, which may resist implementing service innovations (Bartlett & Dibben, 2002; Knill, 1999). The hesitancy to embrace novel approaches can hinder the effective execution of inventive resolutions. Inadequate technological infrastructure can delay the successful implementation of innovative services, serving as the third impediment (Tan & Taeihagh, 2020; Yao, Chu, & Li, 2012). Limited availability of digital tools and networks can restrict the range and availability of modernized services. Ultimately, a deficiency in efficient communication and cooperation with citizens might lead to the downfall of service innovations (Cinar et al., 2019; Mergel & Desouza, 2013). Gaining insight into the community's requirements and implementing easy solutions for users to navigate is paramount. Failing to involve citizens in the process might result in a lack of acceptance and utilization of new services.

This study aims to assess the ability of local governments to address the hurdles encountered in adopting service innovations and improve service quality through innovation. This study examines the implementation of service innovation in the health service sector by the Parepare City government, one of Indonesia's local governments. The Government's efforts in this area have been practical, leading to an award from the Ministry of State Apparatus and Bureaucratic Reform. This study enhances the academic discussion by providing valuable insights into the qualitative aspects of innovation in delivering public health services. The study offers insights into implementing theoretical frameworks and their concrete influence on community well-being.

## **2. LITERATURE REVIEW**

Recently, call centres have become more critical worldwide for emergency assistance and healthcare. People are becoming increasingly interested in how call centres affect public health in developing countries, which have various health problems. A thorough literature study shows essential details about how call centres affect healthcare services and emergency response systems in many ways.

First, Glatman-Freedman et al. (2020) study stresses how important call centres are for making it easier for people to contact healthcare providers during public health crises. According to the research, good communication lines are crucial for coordinating responses and ensuring that healthcare interventions happen on time, especially in places with limited resources.

In addition, a study by Willis et al. (2020) sheds light on the problems people who work in call centres face by examining how they affect the mental health and well-being of people who answer emergency calls. Emergency call takers are significant for getting people to medical help, and it's essential to understand how their mental health affects them to improve their performance and ensure that emergency response systems will last.

Also, a study by Duijster et al. (2020) shows that data from emergency call centres can be used to improve public health surveillance. When call centre data is added to public health frameworks, it gives policymakers helpful information about how people use healthcare, which helps them make intelligent choices and use resources well.

In the specific case of emergency ambulance services, [Evans et al. \(2024\)](#) look at the thoughts and feelings of people who call for these services a lot. This study stresses that call centres are only used as a last option for people who need urgent care, showing how important they are for connecting people with emergency medical services.

Moreover, a narrative review by [Fox et al. \(2023\)](#) looks at how healthcare is provided to people who work in the oil and gas business, considering a more comprehensive range of health conditions and needs. This study doesn't directly talk about call centres, but it does talk about how important it is to have customised healthcare delivery models, which could be affected by effective contact channels like call centres.

A study by [Lawn et al. \(2020\)](#) also looks at how emergency calls affect ambulance call-takers' mental health and well-being in great detail. This study gives us essential personal information about the problems that first responders face. Understanding the psychological parts of answering the phone is necessary for setting up support systems that protect the mental health of people who answer emergency calls.

Given the insightful data provided by [Lawn et al. \(2020\)](#) regarding the psychological effects of emergency calls on ambulance call-takers, it is obvious that understanding the intricate psychological factors involved in responding to these calls is of utmost importance. This comprehension illuminates the difficulties encountered by first responders and emphasizes the importance of developing strong support networks to protect their mental well-being. Shifting from an individual standpoint to a broader systemic one, implementing call centre services in the healthcare sector of emerging nations becomes a vital undertaking. Although improving accessibility and communication among varied and geographically spread-out populations is commendable, introducing contact centre services in undeveloped healthcare systems poses numerous obstacles. The presence of several hurdles, such as technology limits and workforce management issues, requires a careful and sophisticated approach to successfully incorporating call centre services into the healthcare infrastructure of developing nations.

The study by [Loganathan, Rui, Ng, and Pocock \(2019\)](#) sheds light on a significant obstacle: the barrier to healthcare that undocumented immigrants faced. Although the study did not directly focus on call centres, it highlights the broader concerns over the availability of healthcare services. This impediment could affect individuals who depend on contact centres for healthcare information.

A notable challenge arises from the working environment at contact centres, as highlighted in a comprehensive study conducted by [Charbotel et al. \(2009\)](#). It is essential to recognise the significant influence of working circumstances on the health of telephone call centre staff. Call centre staff may experience burnout due to high-stress conditions, extended working hours, and demanding job tasks, which can negatively impact the quality of service provided to healthcare searchers.

In addition, a study conducted by [Odhus, Kapanga, and Oele \(2024\)](#) emphasises the obstacles to enhancing the quality of primary healthcare in settings mostly seen in low- and middle-income nations, such as Indonesia. These obstacles may impede the seamless integration of call centre services into the more comprehensive healthcare system, affecting the overall healthcare provision standard.

[Taylor, D'Cruz, Noronha, and Scholarios \(2013\)](#) examine the primary difficulties encountered by the call centre industry, illuminating the possible hurdles confronted by call centres in India. Technological constraints, communication disparities, and challenges in managing the workforce impede the smooth implementation of call centre services in the healthcare sector, impacting the prompt distribution of vital health information.

[Stoumpos, Kitsios, and Talias \(2023\)](#) investigate the attitudes and obstacles related to telemedicine in healthcare, which may apply to the challenges encountered by call centres in providing healthcare services digitally. The efficacy of call centre services in delivering healthcare information and support may be affected by technology-related obstacles, such as difficulties in adopting telemedicine.

Finally, [Rinawan et al. \(2021\)](#) did a hybrid action study in Indonesia to investigate the advancement of mobile applications for community-based services related to maternal and child health (MCH). Although not directly about contact centres, the study emphasises the difficulties encountered in incorporating technology-driven solutions into

Indonesia's healthcare system. This offers valuable insights into the potential hurdles that may arise in implementing call centre services.

While [Rinawan et al. \(2021\)](#) study focuses on mobile applications for maternal and child health services, it also provides essential insights into potential obstacles to call centre service implementation. These insights help shed light on the difficulties faced in introducing technology-driven solutions to Indonesia's healthcare system. The current investigation highlights the intricacies of incorporating technology and lays the foundation for comprehending the broader consequences of healthcare advancement in Indonesia.

Expanding upon this basis, incorporating call centre services into emergency response and healthcare provision in Indonesia emerges as a significant focus for public administration. [Brice et al. \(2022\)](#) highlight the current advancements in pre-hospital and emergency services, indicating a favourable time for the deliberate incorporation of contact centre services into the country's healthcare system. Public managers are encouraged to carefully synchronise emergency response strategies with the capabilities provided by contact centre technologies, acknowledging their potential for transformation. In addition, the study conducted by [Sutrisni et al. \(2023\)](#) explores the difficulties encountered by healthcare practitioners in remote areas, offering valuable observations on the practicality of utilising contact centre services to address healthcare shortages.

The optimization of emergency services, particularly in the context of health catastrophes such as the COVID-19 pandemic, is of paramount importance. The study by [Makmuriana, Sari, and Nogueyan \(2022\)](#) examines the efficacy of emergency services for COVID-19 patients in Indonesia. It emphasizes the importance of coordinated actions by public administration to utilize call centre innovations to respond more efficiently to health emergencies. This entails the establishment of efficient communication lines between emergency services and healthcare professionals, assisted by contact centre infrastructure.

In addition, [Leach, Vivekanantham, Kwong, Aldridge, and Buntine \(2020\)](#) emphasise the significance of hospital contact centres in enhancing patient experience. It underscores public administration's importance in adopting patient-centric strategies in healthcare delivery. This necessitates a change in administrative approaches to allow the incorporation of call centres, which are used for emergency response and regular healthcare services.

The study by [Messias, Barrington, and Lacy \(2012\)](#) examines the expectations of survivors for disaster nurses and emphasizes the value of effective communication in emergencies. Call centres can function as a centralized communication hub, assisting public administration in distributing vital information during disasters and emergencies and guaranteeing a synchronized response.

The study by [Castleden, McKee, Murray, and Leonardi \(2011\)](#) emphasises the need for trust and resilience in dealing with health emergencies. Public managers must give priority to establishing public trust in contact centre services. This involves ensuring that the people see them as reliable sources of information and support during health crises. To establish trust, it is necessary to have a thorough grasp of the specific local conditions, cultural subtleties, and dynamics within the community. This highlights the importance of implementing customised public administration tactics.

Shortly, public managers must strategically examine the implementation of call centre services in healthcare and emergency response. Public administration must address many possible benefits, problems, and development areas to optimise this service innovation's impact. Public administrators are crucial in creating regulations and promoting collaboration to ensure that call centres are effectively integrated into the healthcare system. They also play an essential role in ensuring that healthcare delivery and emergency response are responsive and patient-centric.

### **3. RESEARCH METHODS**

This study uses descriptive research with a qualitative approach. Qualitative descriptive research aims to describe and describe events and phenomena that occur in the field and present data systematically, factually, and

accurately regarding facts or phenomena that occur in the field. This qualitative, descriptive research answers the problems to be studied in detail.

This research focuses on service innovation in Call Center 112 health services in Parepare City. The study applies the service innovation concept of Rogers (2003) which examines innovation based on the following elements: relative advantage, compatibility, complexity, trialability, and observability. The sources or informants in this research are those. There are 30 informants interviewed who are directly related to the research problem to obtain more accurate data and information. They consist of three groups: the government informant group, service users, and the community. The data was analyzed using an interpretative approach to analyze and categorize the patterns and relationships of data in answering the research problem.

## 4. RESULTS AND DISCUSSION

### 4.1. Call Center 112 Service Mechanism

In the call center 112 health service process in Parepare City, the service flow is differentiated according to the type of service the community needs as patients. Receiving the patient's information and relaying it to the on-duty Call Center operator starts the Call Center 112 service flow. This information is received via a telephone connection. Call Center 112 operators receive calls every second ring, and the receiving operator always asks the same question for the first greeting in the form.

"Call Center 112, with me ..... (mention the operator's name) how can I help you?"

Then, the operator asks more specific questions, such as the patient's name, patient address, type of service requested (emergency services, traffic accident services, or healthcare services), and the patient's telephone number.

When the information is deemed sufficient for emergency services and traffic accident services, the data is given to the field team, which consists of nurses, doctors, midwives (if needed), and drivers to go to the patient's location.

Researchers interviewed one of the medical teams on duty, who said that:

"We not only serve sick people or patients who ask for help to be taken to the health centre or hospital, but we also provide services to deliver corpses, if residents need it." (Interview with informant HS).

This interview confirms that the Call Center 112 service prioritises the safety of the people served by Call Center 112 officers who need help. Regarding the implementation, so that the services provided can run according to the established standard indicators, human resources are required, namely doctors, midwives, and nurses, who play a significant role in this. The following interview with the General Coordinator of Call Center 112 states that:

"This is, of course, equipped with several doctors who have been given special training for emergency matters; the forms of service are expected to be accepted by the community according to their needs." (interview with informant RH).

The interview above confirms that having a large number of human resources, such as doctors, midwives, and nurses, is very important to provide maximum service to people who need it. Researchers conducted interviews with the medical team regarding the service mechanisms offered upon arrival at the location:

"Upon arrival at the patient's location, the doctor or other medical team immediately examines and diagnoses the disease and then determines further treatment at the health centre or the hospital. "But if the illness is mild, they will just be given medication and no longer be referred to the health centre or hospital" (interview with informant JH).

The following interview was conducted with one of the people in the West Bacukiki sub-district:

"That was the day my asthma flared up, and I got help from an ambulance because my cousin called me. At that time, I received oxygen support; my illness was in the mild category, so it could be treated without needing to be referred." (interview with informant MJ).



Researchers conducted interviews again and asked about the differences between Call Center 112 services and community health centres:

"There are several differences; if the community health centre is more focused on work programs, 70% of the community health centre's programs run activities outside the building, such as community health centres, which are more distributed to the community, whereas for clinical services, approximately 30% are in the building. "For the Call Center itself, emergencies are more important." (interview with informant HS).

Informant HW from the Agency of Health Service also supports this:

"Health Service Center (Puskesmas) is a basic service, the orientation of basic service programs (preventive and promotive) is cumulative  $\pm 25\%$ , while the Call Center is a cross-referral triage of patients treated at home in the Health Service Center (Puskesmas) and hospital. Promotional and preventive activities in coordination with community health centres or health services, such as outreach, aim to prevent community health centres from becoming giant health centres." (interview with informant HW).

The interview above confirms that the community health centre carries out its duties based on a predetermined work program, while Call Center 112 handles more emergency and non-emergency problems, and it aims to help the community health centre carry out its duties regarding referral and patient handling issues.

#### *4.2. Relative Advantage*

Regarding relative advantage, an innovation must have advantages, more value than previous innovations, and a novelty value inherent in the innovation. The Call Center 112 innovation aims to provide the fastest and leading service for every disaster or calamity that befalls the community. This Call Center is needed as a preparedness effort in dealing with every catastrophe or accident, especially for victims who are far from the reach of doctors or are hampered by means of transportation because they do not have vehicles. The relative benefits are community satisfaction with Call Center 112 health services and the availability of facilities and infrastructure to support the health service system. In general, Call Center 112 is here to respond to every emergency or non-emergency disaster or event. Then, the researcher interviewed with the medical team:

"Through the Call Center 112 program, we as a medical team always try to provide fast and responsive service to the people of Parepare who need our help. All services provided are free, and medicine is also free." (interview with informant FD).

Researchers interviewed one of the residents, who stated the relative advantages of Call Center 112:

"There are many things; for example, access to health services is smoother and freer, and services are faster and easier, thereby reducing the death rate during a disaster because now services are no longer late." (interview with informant SN).

The results of the interview above show that the relative advantage of Call Center 112 in the city of Parepare is that it has a free health service system and provides health services in the form of emergency and non-emergency services 24 hours a day if people need this Call Center health service. Apart from that, it is supported by the Government's strong commitment to providing health services to the people of Parepare. The Health Service specifically provides Call Center 112 services as a public organisation, in this case, providing good health services to the community.

The results of interviews conducted by researchers related to the relative advantage variable provided to the people of Parepare City free of charge and with the facilities owned by the technical implementation unit of Call Center 112 Parepare City. From the aspect of community satisfaction, the author sees that this Call Center is here to help the community by providing emergency services; Call Center 112 is here to provide health services evenly for the people of Parepare City who need services. The author saw in the provision of services how the medical team went to the location with sincerity and enthusiasm to provide the best service, and the people served also felt satisfied with the services offered. Based on the results of interviews and observations, researchers can conclude

that the provision of health services through Call Center 112 is satisfactory. Providing health services through Call Center 112 provides free facilities for patients who contact them when they need health services.

#### 4.3. Compatibility

Compatibility is conformity with the recipient's values, past experiences, and needs. Conformity is the degree to which innovation is considered consistent with the prevailing values, past experiences, and adopters' requirements. For example, if a particular innovation or new idea is not under applicable values and norms, then the innovation cannot be adopted as quickly as compatible innovations. Call Center 112 is a training centre equipped with teaching aids for emergencies and non-emergencies so that it can produce many skilled workers in emergency management. Researchers interviewed with one of the Call Center 112 medical teams:

"This call centre is a form of service provided to the community. The primary emergency was formed to deal with emergencies in collaboration with the Parepare City Police under the auspices of the Parepare City Health Service.

"The services provided to the community last 24 hours." (Interview with informant JH).

Researchers conducted interviews with general coordinators:

"Related to medical personnel from the health service, they continue to carry out training to improve the human resources of the 112-call centre." (interview with informant RH).

Researchers conducted interviews with people who said:

"The Call Center 112, which provides health services, greatly aids us. We just call the Call Center, and doctors and nurses will immediately come to the location" (interview with informant SN).

From the interview results above, the 112 Call Center service is an intermediary medium between patients and other health services such as hospitals or health centres. A form of service that comes to the patient and provides first aid, as well as carrying out further treatment by taking the patient to the hospital or health centre if necessary. The author can observe the compatibility aspect of the Call Center 112 service in that the offered services are precise and do not make distinctions between patients when providing first aid or additional treatment.

The writer sees that the team of doctors on duty at the Call Center are active doctors working at community health centres or hospitals. The author noticed that providing the same health services to each patient according to the patient's needs was provided by the Call Center 112 medical team through its team of doctors. As a result of observations and interviews conducted by researchers regarding the knowledge, officer abilities, skills, and achievements of the Call Center 112 team, the community is beneficial and does not hesitate to contact Call Center 112 when they want to receive health services. There are some innovations that adopters can understand and use with ease, and there are others that are different from the opposite or are challenging for adopters to understand and use.

#### 4.4. Complexity

Complexity is the difficulty level in understanding and using the innovation for the recipient. Complexity is the degree to which an innovation is perceived as challenging to understand and use. The easier adopters understand and comprehend it, the faster an innovation can be adopted. The difficulty level is related to a person's knowledge and ability to learn the terms in the innovation.

One of the complications is Call Center 112, which must be socialized. The researcher again interviewed informant RH, who is the general coordinator of Call Center 112:

"The main problem is that people still don't know how to contact the 112 Call Center even though this program has been running for five years, but while it is running, we continue to carry out outreach such as caring Fridays and outreach on social media." (interview with informant RH).

Another informant, KS, who is the operator, stated:



"If the problem is that contacting the Call Center is free, many people are guilty of calling and then being hung up again. Sometimes, they get a call in the middle of the night, and then the team goes to the location, and it turns out the address sent is a lie." (interview with informant KS).

"Another obstacle is that people do not provide the patient's location or address, so Call Center 112 officers are also confused about getting to the location of the patient they want to refer to." (interview with informant KS).

Society brings up the complexity:

"It's not complicated, but usually, if there is an emergency, sometimes we call the Call Center, but it doesn't connect, whether it's on the network or someone is calling too." (interview with informant MJ).

From the results of the interview above, it can be concluded that there are still many people who do not understand the process of the service program provided by the 112 Call Center and with the complimentary telephone costs, there are still people who abuse this, and there are still people who do not know the existence of the 112 Call Center service.

#### 4.5. Trialability

Triability is whether or not the recipient can try an innovation. Testability, or trialability, is the degree to which an innovation can be tested within certain limits. An innovation tested in an authentic setting will generally be adopted more quickly. So, to be rapidly adopted, an innovation must demonstrate its superiority. Testability aims to reduce uncertainty. Has the possibility of being tested first by adopters to reduce their uncertainty about the innovation. Researchers interviewed informant RH, who is from the Call Center 112:

"The existence of Call Center 112 is a form of our commitment to continue to provide excellent service to the people of Parepare City. The regional government has combined emergency call services from the Call Center 112 unit, the Fire and Rescue Unit, and the Regional Disaster Management Agency unit. This integrated Call Center service is combined in Call Center 112 with several telephone lines according to needs." (interview with informant RH).

Another informant, HW, who is an employee of the Agency of Health Service, further states that:

"The Parepare city government continues to innovate in developing the Call Center 112 service program. After focusing only on the health sector, Call Center 112 has become an integrated emergency response service. This includes health services, fire, and disasters." (interview with informant HW).

"So later, there will be a separate operator who will divert the destination of calls made by the public. "So handling accelerated service remains the main thing in this integrated 112 Call Center." (interview with informant HW).

From the interview results above, it can be concluded that the Parepare City Government continues to innovate in developing the 112 Call Center service. We can see this in the formation of the integrated 112 Call Center service. Researchers have noticed that the government continues to make breakthroughs. This can be seen from the construction of the new integrated Call Center 112 building in Parepare. The Integrated 112 Call Center aims to bring services closer to the community.

#### 4.6. Observability

Observability is whether or not the recipient can easily observe the results of an innovation. Observability is the degree to which others can see the results of an innovation. The easier it is for someone to see the results of an innovation, the more likely that person or group of people is to adopt it. So, the greater the relative advantage, suitability (compatibility), ability to be tested, and ability to be observed, and the smaller the complexity, the faster it is likely that the innovation can be adopted. The ability to be followed will encourage adopters to assess whether the innovation can improve their social status in front of others so that they will be considered innovative.

What the researchers observed in Call Center 112 were response times and the results of interviews regarding this response time:

Researchers interviewed with the general coordinator of Call Center 112:

"Fast is our obligation in providing services because Call Center 112 is a health service required for that, especially when an emergency patient calls. Therefore, we are on duty 24 hours a day, consisting of 3 shifts. The team left for the patient's location less than 5 minutes after the operator received a report from the public. (Interview with informant).

Another informant, IS, who is the operator of Call Center 112, stated that:

"The SOP for Call Center 112 response time is  $\pm 15$  minutes to arrive at the location and immediately take action." (interview with informant KS).

Researcher interviews with one of the residents:

"I once called the Call Center because my child had an accident, and about 5 minutes later, the Call Center team came and immediately gave me a bandage and immediately took my child to the hospital. (interview with informant IS).

Researchers used the observability variables to obtain the aforementioned interview results regarding the efficiency and accuracy of the Call Center 112-unit team in providing health services to the people of Parepare City. From the first aspect, namely the speed of the Call Center 112-unit team, the author looks at calculating the duration of time needed for a patient to receive health services from the Call Center 112 Technical Implementation Unit Team, starting from providing information from the patient, then clarifying the information. Given by the operator to the field team on duty up to the time needed by the field team to get to the patient's location. The stages of receiving information and arriving at the patient's location only take approximately 5 minutes.

From the results of the observations and interviews above, researchers can conclude that this dimension of observability is related to performance, which must be under patient expectations, which means the readiness of staff when needed, punctuality in providing health services, non-discrimination in services, and carrying out work under standards. The team's ability to deliver health services has been reflected in the Call Center 112 Parepare City health services; we can see this from the comments from the public, who are also patients, in providing timely health services at Call Center 112.

## 5. CONCLUSION

Based on the research and discussion presented in the previous chapter regarding the attributes of Call Center 112 Health Service Innovation in Parepare, the relative advantage is that providing health services through Call Center 112 is satisfactory. We can see that providing health services through Call Center 112 provides free facilities for patients who call when they need health services.

Compatibility in knowledge, ability of officers, skills, and achievements of the Call Center 112 team, the community is helped, enjoys this service and does not hesitate to contact Call Center 112 when they want to receive health services. In terms of complexity, the study suggests that there are still many people who do not understand the process of the service program provided by the 112 Call Center, and with the complimentary telephone costs, there are still people who abuse this, and there are still people who do not know the existence of the 112 Call Center service.

In the trialability aspect, the study shows that the city government as a service provider continues to make breakthroughs. We can see this from the construction of the new integrated Call Center 112 building in the city of Parepare. The Integrated 112 Call Center aims to bring services closer to the community.

Lastly, in the observability element, the study presents that the team providing health services has been reflected in the health services at Call Center 112 Parepare City, and we can see this from the comments from the public who are also patients in the process of providing timely health services at Call Center 112.

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**Transparency:** The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

**Data Availability Statement:** The corresponding author can provide the supporting data of this study upon a reasonable request.

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