



Innovation in Health Services During the Covid-19 Pandemic at the Health Center in East Kalimantan

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ABSTRACT

This study aims to determine and analyze health service innovations and the impact of health service innovations during the Covid-19 Pandemic at the Barong Tongkok Health Center in West Kutai Regency, East Kalimantan. This study uses a qualitative descriptive approach with observation, interview and document study methods. The results of the study indicate that the Barong Tongkok Health Center has implemented health service innovations including service process innovation, service product innovation, service method innovation, policy innovation, and system innovation with innovation characteristics; Relative Advantage, Compatibility, Complexity, Trialability and Observability. The results of the study also show the impact of the implemented health service innovations including expected and unexpected impacts, direct and indirect impacts, and anticipated and unanticipated impacts. The impacts obtained include increased performance and program coverage as well as national recognition for public service institutions that implement innovations. These innovations have a positive impact on both the Barong Tongkok Health Center and the community using the services.

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INTRODUCTION

The Covid-19 pandemic has had a widespread impact on health and health services. The government is trying to maintain a balance between the need to handle the pandemic and the need for routine health services so that there is no increase in cases of other diseases after the pandemic. Essential health services, which include basic and routine services, must continue to be provided by each health center to achieve the Minimum Service Standards (SPM) in the health sector. SPM is a provision regarding the type and quality of basic services that must be obtained by every citizen, as an indicator of the performance and quality of health services.

The Covid-19 pandemic has had a significant impact on patient visits to the Health Center and integrated health post activities, with a decrease in patient visits of up to 83.6%, the cessation of most integrated health post activities by 43%, and a decrease in coverage of 56.9%. The Barong Tongkok

Health Center also experienced a decrease in patient visits by 52% in 2020. This has an impact on the achievement of health programs and SPM, as well as the performance of the health center. This study aims to describe the innovations implemented at the Barong Tongkok Health Center and their impact on health services during the Covid-19 pandemic. The formulation of the problem raised is how to implement health service innovations and their impact on the performance and quality of health services at the Barong Tongkok Health Center during the pandemic (Ahmed & Kumari, 2022; Dinulhaq & Rudianto, 2023; Gultom, 2021; Iskanto et al., 2020, 2024).

Public service is an effort to fulfill the needs of the community in general, carried out by the government or other organizations to provide services according to applicable regulations (Kurniawan, 2005; Pasalong, 2010). Barong Tongkok Health Center as a public service provider unit in the health sector has the task of providing quality services according to community expectations. As a first-level health facility, community health centers play an important role in handling the Covid-19 pandemic in their working areas, but still prioritize the implementation of essential programs (Ministry of Health of the Republic of Indonesia, 2020). Health centers as public service providers are expected to be creative and innovative during the Covid-19 pandemic to facilitate public access to obtain health services according to their needs. The quality of public services is greatly influenced by the policies and service strategies implemented, and is an indicator of the success of government institutions in meeting the needs of the community (Kemenpanrb, 2020; Robi CK, 2016). The use of technology, information and communication that continues to develop can be used to meet the needs of the community for public services, so that restrictions on movement and the implementation of health protocols do not limit the community from obtaining quality services (Warsono and Taufik, 2020; Bakhri, 2021; Herispon & Anuar, 2023; Hidayah, 2022; Lussianda et al., 2021)).

Innovation is a new idea or concept that is adopted and developed creatively to improve the performance and results of product goods or services, and provide satisfaction to customers. Public service organizations require innovation in providing services to customers that aim to improve the quality and performance of the organization. According to Rogers (1983), innovation has attributes, namely Relative Advantage, Compatibility, Complexity, Trialability, and Observability.

Based on the type/typology of innovation, Mulgan and Albury (2003) mention 5 types of innovation; First; product/service innovation, namely the creativity in designing or updating the form of service that is more effective, efficient and more attractive than previous services, with the aim of overcoming problems and meeting customer needs and needs to be developed continuously. Second; process innovation is a renewal of the way an organization produces goods/services to customers/consumers so that they are more effective and efficient by utilizing technology. Third; service method innovation, namely the existence of new ways, techniques and new strategies in providing services to customers by improving the interaction process with consumers. Fourth; strategy or policy innovation is an organization's effort to make changes and improvements to aspects of vision, mission, goals and new strategies regarding the situation that occurs in the organization so that it requires renewal of service strategies and policies. Fifth; system innovation, namely the existence of changes in patterns or new ways of interacting with actors or other parties in managing the organization, so that common goals can be achieved synergistically (Jatmiko, 2022; Moses & Dicky, 2024; Syahsudarmi, 2022).

There are 3 factors that support innovation, namely Human Resources, Leadership and Organizational Structure (Ancok, 2012). Human Resources are a very potential factor in driving an organization/company, completeness of technology and other resources are supporters to facilitate human work. Leadership; the skills and abilities of a leader in managing and organizing an organization professionally will facilitate the implementation of innovation. Organizational structure; the

arrangement and arrangement of organizational structures and the division of tasks in driving an organization/company greatly influence employee performance and productivity.

Factors inhibiting innovation according to Mulgan and Albury (2003); risk aversion, resource constraints, bureaucratic structures and processes, leadership and support, lack of incentives, and isolation from external sources of innovation.

The impact of innovation according to Rogers (1995) can be classified into expected and unexpected impacts, direct and indirect impacts, anticipated and unanticipated impacts. The benefits of innovation include improving the quality of life, changes in the business world, increasing employee capacity, improving community welfare and a healthier environment. This study evaluates the effectiveness of public service innovation with a before and after comparison approach to see the changes that occur before and after innovation.

Measuring the impact of innovation or evaluating innovations that are directed at results can be done by analyzing the presence or absence of changes that occur in each type of service. Evaluation is a method of measuring the expected and desired results or deviations that occur due to the implementation of a policy or innovation. In other words, evaluation is an assessment of a policy/innovation, either in whole or in part, with the aim of improving the next program. Setyawan (2017)

RESEARCH METHOD

This study uses a qualitative approach with a descriptive method. This study aims to describe and explain the condition of the object in detail and naturally. Data collection was carried out using interview techniques, field observations, document analysis and data analysis. The results of qualitative research emphasize more on understanding meaning than generalization. This research was conducted at the Barong Tongkok Health Center, West Kutai Regency, East Kalimantan. The determination of the location of this study was based on the following reasons: the high rate of maternal and infant mortality and challenges in health services during the Covid-19 pandemic. Barong Tongkok Health Center is also the Health Center with the highest number of visits in West Kutai Regency. The data sources for this study were obtained from primary and secondary data. Primary data was obtained from direct interviews and observations with relevant informants. Secondary data is data obtained by reading, studying and understanding through other media sourced from literature, previous studies, books, libraries and other documents that are already available. The research informant is someone who is believed to know the most about the research object (key informant), consisting of the head of the Health Center and the head of TU. People directly involved in related activities (main informants) are health center UKM managers, health center doctors and program managers and patients. People who provide supporting information (supporting informants) are the head of the health service and the head of the service sector.

Data analysis is the process of searching for data, collecting data, systematically arranging data obtained from interviews, observations, field notes, and documentation in a manner organizing data, selecting which data is important to study and analyze, and drawing conclusions that can be presented to others. Data presentation or data display is a collection of data that has been reduced and arranged in the form of narrative text, matrices, graphs, charts and tables until the data display allows for drawing conclusions and making decisions. Making a conclusion and verifying data is the final stage in qualitative data analysis techniques. This stage is intended to find the meaning of the data that has been collected by looking for relationships, similarities, or differences to draw conclusions as answers to existing problems. Furthermore, to test the validity of the data, data triangulation can be carried out. Triangulation is a data validity checking technique that utilizes something else in comparing interview results with research objects.

RESULTS AND DISCUSSION

Innovation in Health Services during the Covid-19 Pandemic

Barong Tongkok Community Health Center, West Kutai Regency, East Kalimantan

Innovation in health services, especially during the Covid-19 pandemic, aims to improve the quality and performance of health services. The idea and creativity of health services at the Barong Tongkok Health Center is an effort to overcome health problems that occur. This innovation refers to new ideas that are creative, effective, and useful for improving the quality of health services to the community. The Barong Tongkok Health Center has implemented various innovations to deal with environmental and technological changes during the pandemic. Innovation is also needed to deal with various changes in the dynamic environment and technology. In order for organizations to survive in conditions of crisis, pandemics and environmental changes, innovation is needed to continue to compete in increasing the value and performance of the organization, Daft (1998)

Analysis of Health Service Innovation

Creative ideas or concepts in health services are efforts made to overcome health problems and improve the quality and performance of health services. Innovation is a new idea or concept that is creative and effective or the introduction of something new that is useful by introducing new ideas, techniques and methods in the form of products or services that have been modified to improve human life (Schon, 1967, Galbraith, 1973 and Jones, 2004). From the results of field observations, documentation, and direct interviews with the leaders of the Barong Tongkok Health Center and their staff, various data and findings related to innovations implemented during the pandemic were revealed. This innovation involves a process of change in the methods and forms of services to overcome various health problems.

Initial Innovation Idea

The Covid-19 pandemic has created a health and health service crisis. This condition requires appropriate actions and decisions in handling health care. In facing the Covid-19 pandemic, Barong Tongkok Health Center has attempted to implement the principles of public service which include Accountability, Transparency, Conditionality, Participation, Equal Rights, and Balance of Rights and Obligations. To realize this, Barong Tongkok Health Center is motivated to implement an innovation. Innovation is carried out to improve the quality of public services in facing challenges during the pandemic. The quality of service is reflected/implied from the characteristics and nature of a service that can provide satisfaction to customers Kotler (1997). The idea of creative ideas to implement innovation emerged when a crisis occurred such as the Covid-19 pandemic in an effort to find solutions (Everett Rogers, 1962)

Health problems

Health problems that occur include; a) decreasing patient visits to health centers and integrated health posts, b) high infant mortality and c) program and SPM achievements are not as expected. Patient visits decreased drastically by 52% from 27,362 in 2019 to 14,217 in 2020. The increase in maternal and infant mortality indicates the need for immediate action.

Innovation Process Implemented

The need to address health service problems in the form of public access to health services, encourages the Barong Tongkok Health Center to innovate. To implement an innovation, there are several innovation process and cycle that must be passed according to Roger (1983); 1) Knowledge

Stage. 2) Persuasion Stage, 3) Decision Stage, 4) Implementation, 5) Confirmation Stage. The application and development of health service innovation at the Barong Tongkok Health Center, begins with the following methods: 1) Analyzing and recognizing problems through monthly meetings (mini-workshops at the health center level, cross-sector meetings); 2) Socialization and technical guidance to employees; 3) FGD and training; 4) Socialization stage to the community/consumers; 5) Implementation/application of innovation; 6) Evaluation and development.

Several innovation processes are implemented at Barong Tongkok Health Center:

- a) **Triage**; separation of patient service counters based on the type of disease and urgency of treatment. This is done to avoid widespread transmission, if the patient experiences a respiratory tract infection, especially one that leads to Covid-19. The implementation of Triage innovation is a type of process and service method innovation, namely the change in the service process from one counter to several counters and the implementation of SOPs and the obligation to use PPE.
- b) **Telemedicine**; information technology-based health services for remote consultation, this facilitates access to health services for the community during the pandemic. This type of innovation is included in the category of process and service method innovation; namely the remote service process using SMS, WA chat and telephone communication technology methods. Triage and Telemedicine Innovations are types of process and service method innovations in line with the opinion of Mulgan and Albury (2003) regarding the types of innovation.

The following are innovations implemented by the Barong Tongkok Health Center based on statements from the heads of the Health Centers, namely the Teka Teki (Reduce and Reduce Maternal and Infant Mortality Rates) innovation, which is the parent of the following innovations aimed at reducing MMR (Maternal Mortality Rate) and IMR (Infant Mortality Rate);

Chabida Combo (Always chat with your midwife anywhere) This innovation is a forum for coordination, consultation and monitoring of pregnant women's health with midwives and Posyandu cadres through WA groups, SMS and telephone. Through the Chabida Combo innovation, midwives and Posyandu cadres in the midwife's respective supervised areas can consult on pregnant women's health problems. The Chabida Combo innovation is a type of service process innovation and service method innovation, namely the renewal of the way of interaction between patients and health workers and Posyandu cadres with the method of utilizing communication technology facilities (Mulgan and Albury, 2003). There are bureaucratic changes in the provision of public services which occur in the organizational dimension and the work system dimension as follows: research conducted Taufik and Warsono (2020) about: New Bureaucracy for the New Normal: A Review of Bureaucratic Change Models in Public Services in the Covid-19 Era. The Chabida Combo innovation has similarities with the e-Government-based health service innovation in Padang City at the Andalas Health Center in the research by Permana and Izzati (2020) which focused on handling Stunting. Research conducted by Kamulegeya, LH Bwanika, JM Musinguzi, D. Bakibinga, P. (2020) Continuity of health service delivery during the COVID-19 pandemic: the role of digital health technologies in Uganda, explains the use of digital technology in health services to the community, namely using mobile phones to convey health information, health promotion, medical consultations, and telepsychiatry services is very helpful and can overcome the limited access of the community to health service facilities during the pandemic.

Bridge (Pick Up and Drop Off Mothers Giving Birth) is a development and continuation of the Chabida Combo innovation in line with the opinion Osborne and Brown (2005) namely the existence of changes in service processes and methods with small and gradual changes. Bridge Innovation is a form of health service for pregnant women who are about to give birth, their whereabouts and condition are monitored

by midwives, then directed and taken to and from the birthing center to a health facility (Puskesmas) and handled by competent health workers. Bridge Innovation aims to increase the coverage of mothers giving birth assisted by health workers in health service facilities (faskes). BRIDGE Innovation is a type of product, process, method, strategy and service system innovation with changes in the method and form of health services for pregnant women who are about to give birth, the existence of policies set by the health center and the MOU between the Barong Tongkok Health Center and the village head, so that it can overcome the health problems of pregnant women who are afraid to give birth at the health center during the Covid-19 pandemic and the coverage of deliveries assisted by health workers increased from 2019 (480), 2020 (517) up 37%. The type/typology of Bridge innovation is in line with the opinion of Mulgan and Albury (2003) with the application of product, process, method, strategy and service system innovation. When viewed from the benefits, the Bridge innovation has increased the scope and reach of the program (Mulyono, 2008)

Boat Dipper (Midwives and Traditional Birth Control Monitor Maternal Health); innovation in health services for pregnant and postpartum mothers with their health monitored by midwives and traditional birth control, according to their respective capacities, traditional birth control can accompany mothers giving birth, but delivery assistance must be carried out by competent health workers. The Biduk Perahu Innovation is a type of innovation in the process, method and strategy of health services that involves traditional birth control in a mutual agreement according to their respective capacities and competencies. In implementing this innovation, midwives as health workers carry out interventions according to their competencies, while traditional birth control is tasked with monitoring and reporting to midwives.

Cenil (Hunting for Pregnant Women's Footprints) is an innovation in health services for pregnant women using a data collection method by health workers at midwife practices, practicing doctors and private clinics to find data on pregnant women who have not been touched by services from community health centers, who will then be monitored and handled by midwives and community health center doctors.

Kader Centil (Pregnant Women's Love Cadre) namely health cadres are required to visit every pregnant woman to record and monitor her health condition. This method is carried out to facilitate monitoring of the health and condition of pregnant women in the fostered area to increase the scope of services for pregnant women. The implementation of the Cenil (Berburu Jejak Ibu Hamil) and Kader Centil (Pregnant Women's Love Cadre) innovations are types of process and service method innovations. Of the several innovations that have been implemented at the Barong Tongkok Health Center, they refer to the theory of Mulgan and Albury (2003) on the types/typologies of innovation; service processes, service methods, service strategies and policies and service systems.

In order to increase the coverage of NCDs (Non-Communicable Diseases) and the coverage of Complete Basic Immunization (IDL), the head of the Barong Tongkok Health Center explained that there was a development of the Sepi Tanpamu (Mobile Screening) innovation due to the low achievement of the NCD program which only reached 3% (percent). The Sepi Tanpamu innovation was carried out by means of door-to-door screening, namely services and data collection for NCD patients who experience stroke, diabetes mellitus, coronary heart disease and hypertension from house to house, especially for patients who do not come to the Posbindu (Integrated Development Post) or who experience limited activities so that all targets can be served according to service standards. Through the innovation of Sepi Tanpamu, the achievement of the PTM program in 2020 increased from 3% to

16% in 2021. Next is the Kriing Imunisasi innovation, this innovation is carried out by health workers calling, SMS or WA to mothers of babies who should have received complete basic immunization to come to the Posyandu, or by visiting the homes of mothers who cannot come to the Posyandu to provide complete basic vaccine/immunization health services to babies. This effort is quite effective in overcoming the problem of the lack of baby visits to the Posyandu to get complete basic immunization according to the person in charge of UKM, there was an increase in immunization achievement from 72% to 90%. The innovations of Sepi Tanpamu and Kriing Imunisasi are categorized as types of process and service method innovations (Mulgan and Albury, 2003) which are different from before by officers being more proactive in visiting targets so that program achievements are more optimal.

In the application of health service innovation at the Barong Tongkok Health Center, if based on the attributes/characteristics of innovation according to Roger's theory (Suwarno, 2008), it can be explained that the innovation implemented by the Barong Tongkok Health Center has the following characteristics:

1. *Relative advantage*; innovation that has advantages/benefits that are beneficial for the Barong Tongkok Health Center because of the increased performance and for customers to get easy access to services during the pandemic. The head of the Balok village, Asa SN, said that telemedicine services, pick-up and drop-off services for mothers giving birth, PTM screening and Immunization are very helpful for his residents in health services at the Barong Tongkok Health Center.
2. *Compatibility* there is suitability, the innovations implemented are in accordance with the needs of the community and can be implemented during the Covid-19 pandemic, with the restrictions on community activities, the implementation of the Chabida Combo, Jembatan, Biduk Perahu, Cenil, Kader Centil, Kriing Imunisasi, Sepi Tanpamu, Triase and Telemedicine innovations are appropriate to be implemented according to the head of the Health Center because of urgent conditions, the need to adapt to PPKM, reducing the burden on health facilities, efficiency of health workers who require effective and fast efforts to overcome the problem of patient visits to health centers and other health problems during the Covid-19 pandemic and do not conflict with local customs and culture and are appropriate to be implemented by the Barong Tongkok Health Center staff.
3. *Complexity*; the existence of a process of change that shows a relative level of complexity, for some people there is complexity, but for others it is not something that is difficult to understand and implement. The Head of the Barong Tongkok Health Center, MS, said; in practice, there are no obstacles in the implementation of health services provided by implementing these innovations. Meanwhile, most patients can understand how the innovation works, while a small number experience difficulties and inability to use communication technology
4. *Triability*; innovations that can be tried and applied so that they can be tested and proven. Innovations that have been implemented using communication technology, involving the participation of the community, village heads, Pustu officers and village shamans according to the head of the health center can be implemented by the health center staff and can be applied to service users, so that useful and can improve program performance and achievements, even the Head of the West Kutai District Health Office appealed to other health centers to adopt the innovation implemented by the Barong Tongkok Health Center.
5. *Observability* namely the innovation process that can be observed and observed how it works and its effectiveness, so as to produce something that is of quality and can be measured, namely the innovation that is included in Teka Teki Namely; Chabida Combo, Bridge, Biduk Perahu, Cenil, according to the head of the health center can provide benefits in improving the performance of

the health center, especially the coverage of services for pregnant women. As expressed by Mrs. JN in Juhan Asa; that pregnant women in her village are members of a WA group that makes it easy to consult and they are very helped. Likewise with the innovations of Sepi Tanpamu and Kring Imunisasi which were socialized in Kampung Balok Asa, the village head said that the activity was still carried out by visiting homes.

Factors in the Implementation of Innovation

In implementing innovation at Barong Tongkok Health Center, it is supported by all levels within the scope of health services and management elements (internal) and also supported by the village government, health office and West Kutai district government in general (external). This support is in the form of commitment from all employees, health center leadership policies, readiness of village heads to cooperate, fulfillment of health worker needs and local government regulations (Regent's Decree) in line with Ancok's opinion (2012) that innovation can be implemented influenced by Human Resources, Leadership and Organizational structure. As expressed by the person in charge of UKM that there is support from the District Government in this case the health office, the existence of an MOU with several village heads, although not all of them. So far, Barong Tongkok Health Center innovation has entered the top 45 nationally. The tenacity, creativity and commitment of the Barong Tongkok Health Center staff in the role and activities of health services in the community, the existence of policies and leadership initiatives in dividing tasks and roles of employees in implementing innovation and the existence of cross-sector cooperation with the West Kutai Regency government in providing motivation so that the implementation of innovation can be carried out properly, this is in line with the opinion of Ancok (2012), there are 3 factors that support innovation, namely Human Resources; availability and ability of professional HR in creativity, Leadership; skills, policies and leadership abilities to make innovative decisions and Organizational structure; organizational structure that allows/is flexible to develop innovative solutions.

Barriers to Innovation Implementation.

Obstacles in implementing innovation include; lack of synergy among employees, service orientation, organizational readiness to change and leave the comfort zone. Organizational reluctance to stop failed programs, budget constraints, unpreparedness to face technological changes, dependence on high performance displays and not daring to take risks (Mulgan and Albury, 2003). In implementing health service innovations at the Barong Tongkok Health Center, leaders and implementing coordinators encountered several obstacles, as expressed by the person in charge of UKM who said the initial difficulty was the lack of the same perception and understanding of the innovation to be initiated. Funding factors are also an obstacle in implementing innovations such as the Bridge Innovation, especially the availability of Ambulances and Fuel. There are obstacles in implementing the Kring Imunisasi innovation when mothers who have babies are working at the same time as the baby immunization schedule at the Posyandu activities.

Impact of Innovation

The implementation of innovation in an organization is expected to bring changes towards a better direction in performance and quality of service that can be felt by both the service provider organization and customers. The impact of innovation can be positive and negative on the organization, both directly and indirectly and can be anticipated or unanticipated. The impact of innovation implemented by an organization consists of expected and unexpected impacts, direct and indirect

impacts, then anticipated and unanticipated impacts Rogers (1995). In its implementation, the initiators of innovation expect the impact of innovation that will bring changes and positive influences according to expectations and be useful, for individuals, organizations adopting innovation and beneficial to society. The expected impact felt by the ranks of the Barong Tongkok Health Center is quite significant, the head of the health center MS said that there were benefits from the innovation that had been implemented such as: Telemedicine provides easy access for the community to be served even though they do not have to come to the health center, there are home visits and pick-up and drop-off services carried out by health workers. Patients Mr. NS and Mrs. SM said they were very helped by the pick-up and home visits from health center officers. From the program's achievements, the head of the health center said there was an increase; such as PTM which was previously only 3% in 2020, could increase to 16% in 202, basic immunization which was previously 70% in 2020, has now increased to almost 90% in 202\

According to the midwife in charge of UKM, deliveries assisted by health workers have increased significantly, there is knowledge and awareness of pregnant women to give birth more safely and in accordance with health procedures to reduce the risk of maternal death, cooperation between health workers and traditional birth attendants has provided education to the community about the importance of examination and delivery at health facilities and assisted by competent health workers, so that it is hoped that MMR and IMR will decrease, K4 coverage will increase so that SPM achievement will increase.

Meanwhile, the unexpected impact so far according to the head of the Barong Tongkok Health Center MS is that there are complaints from residents whose areas do not have or experience disruption to internet networks / telephone networks, making it difficult to implement innovations based on digital technology, not to mention people who do not understand communication technology, especially people in remote areas. The Head of Geleo Baru said that internet access in his village is still difficult. The direct impact of the innovation that has been implemented according to the head of the health center is that patients feel the direct benefits by getting access to essential services that are easier and more affordable. Patients Mr. RD and PL said they felt the convenience and security with the home visits and pick-up services. The indirect impact of the innovation is a decrease in MMR, an increase in program coverage and SPM, an increase in NCD coverage and Complete Basic Immunization. Meanwhile, the anticipated impact is the lack of funds, but according to the person in charge of UKM, the lack of funds can be anticipated with self-reliance of health centers and villages, different perceptions and understanding of employees can be anticipated with socialization and assistance, and the unanticipated impact, so far according to the head of Barong Tongkok Health Center MS, is the condition of the internet network and the inability of residents to have and utilize communication tools, especially innovations based on communication technology.

Measuring the impact of innovation

To find out the impact or value of the innovations that have been implemented, it is necessary to evaluate or measure the impact of innovation. What needs to be understood about impact is the results or changes in the short and long term resulting from an innovation or a policy that is expected, unexpected, positive and negative, direct and indirect (Australian Gov; Department of Industry, Innovation, and Science, 2015). While the International Agricultural Development (IFAD); impact is a way to see the achievement of goals that are carried out, all of which can be achieved with one instrument (impact evaluation). Conceptually, the expected impact of a public sector innovation is better public value, efficient, effective and produces customer or employee satisfaction (OECD, 2014).

Measuring the impact of innovations that have been implemented by the Barong Tongkok Health Center conducted by analyzing the presence or absence of changes that occur in each type of service. Measurement of results is carried out by evaluating the expected and desired results and deviations that occur due to the implementation of a policy or innovation (Setyawan, 2017). From the results of data analysis carried out based on the results of interviews, field observations, and document studies, it was obtained;

Table 1. Measuring the impact of innovation

| INNOVATION | SERVICE CHANGES/UPDATES | IMPACT |
|-----------------------|---|---|
| Triage | Before the pandemic, services were carried out by accepting patients at the same counter without distinguishing the type of patient's illness. During the pandemic, patient admissions at the registration counter were separated based on the type of illness; if the complaint is of respiratory tract illness, patient handling is separated to prevent transmission if the patient is suspected of having Covid-19. The use of PPE is mandatory for both health workers, patients and other visitors. | Facilitate patient handling based on the level of urgency, type of disease and efficiency of patient handling. Minimizing the transmission of Covid-19 |
| Telemedicine | Before the pandemic, patient care at the Community Health Center was carried out face-to-face, during the pandemic, patient care can be carried out through consultation, education and conveying complaints through communication technology facilities between patients and health workers. | Access to services for patients can still be carried out even though PPKM is in place, so that health services are not hampered, although it only applies to certain patients (non-emergencies) |
| Chabida Combo | Previously, the coverage of services for pregnant women decreased during the pandemic, because pregnant women did not come to health facilities or integrated health posts. Through the Chabida Combo innovation, it provides easy communication between midwives and integrated health post cadres in providing health services for pregnant women. | Pregnant women can easily consult, convey complaints and receive health education from health workers. |
| Bridge | Previously, the care of mothers giving birth was carried out by village midwives in their homes, now mothers giving birth are picked up and assisted at health facilities by health workers. | There has been an increase in the coverage of mothers giving birth assisted by health workers in health facilities; 2018:470, 2019:481, 2020:517 |
| Boat Dipper | Previously, midwives and traditional birth attendants did not cooperate with each other in monitoring the health of pregnant women and women giving birth, with Biduk Perahu innovation, monitoring the health of pregnant women, women in labor and postpartum women is carried out together and with mutual respect according to their respective competencies with an agreement (MOU) | Coordination and cooperation between midwives and traditional birth attendants are well established in monitoring the health of pregnant, giving birth and postpartum mothers. |
| Cenil | Previously, data on pregnant women was not properly inventoried. With Cenil's innovation, health workers conducted data collection at private clinics and doctors' practices to record and inventory pregnant women who had received treatment at these health facilities. | Pregnant women in the working area of the Health Center are recorded and their whereabouts are monitored to facilitate health checks. |
| The Cute Cadre | Posyandu cadres are deployed to visit pregnant women to find out about their health conditions. | Pregnant women's health conditions are always monitored, |

| | | |
|-------------------------------|---|--|
| | | then reported to health workers in their areas of responsibility. |
| Lonely without you | Previously, only those who could come to the Posbindu (Integrated Development Post) were served by NCD sufferers. Now, NCD sufferers can be served even if they cannot come to the Posbindu, namely by visiting people with hypertension, diabetes mellitus, stroke, heart disease to undergo examinations and be given medication. | Home visits were made to PTM sufferers who were not served, resulting in an increase in PTM coverage from 3% to 16%. |
| Immunization Screening | Previously, babies who had not received complete basic immunization were not monitored, with the Kriing Immunization innovation, health center officers contacted via SMS, WA, telephone and visited mothers of babies who could not come to the Posyandu to provide vaccinations. | Complete basic immunization coverage increased from 72% to 90%. |

The measurement of the impact of innovations implemented by Barong Tongkok Health Center was carried out to assess the improvement in service quality and satisfaction for the community and service providers. The implementation of the innovations in the table above, according to the head of the health center, has provided satisfaction for his staff with the results of the implementation of innovations that provide easy access to health services, are effective and efficient in their implementation and increase program coverage. With the innovations implemented at Barong Tongkok Health Center, residents and village heads expressed their satisfaction and were greatly helped in obtaining access to health services. Increasing efficient, effective public value and customer satisfaction are the impacts of innovation measurement (OECD, 2014). Evaluation is a measurement of the desired results or deviations from an innovation/policy that has been implemented which is also used for assessment of previous innovations/policies intended for improvement or renewal and development of further innovations (Setyawan, 2014). The assessment of the impact of innovations implemented by Barong Tongkok Health Center resulted in improved performance and provided customer satisfaction.

CONCLUSION

From the formulation of the research problem regarding Innovation in health services during the Covid-19 pandemic at the Barong Tongkok Health Center, West Kutai Regency, East Kalimantan, researchers found and concluded as follows:

Health service innovations that have been implemented at the Barong Tongkok Health Center include: Triage, Telemedecine is a type of process and service method innovation, namely changes in the process and service method. Other innovations implemented by the Barong Tongkok Health Center are the Teka Teki innovations which include the development of Innovations; (1) Chabida Combo (Always Chat with Your Midwife Anywhere), (2) Jembatan (Pick Up and Drop Off Mothers Giving Birth), (3) Biduk Perahu (Midwives and Shamans Monitor the Health of Pregnant Women), (4) Cenil (Hunting for Pregnant Women's Traces), 5) Kader Centil (Cadres Must Visit Pregnant Women), 6) Sepi Tanpamu (Mobile Ptm Screening), 7) Kring Imunisasi (Immunization Screening), based on typology/type, innovations applied to Barong Tongkok Health Center include service process innovation, service method innovation, service policy innovation, service system innovation (Mulgan and Albury, 2003) with innovation characteristics; Relative Advantage, Compatibility, Complexity, Trialability and Observability (Rogers, 1995)

The impact of the innovations that have been implemented and developed by the Barong Tongkok Health Center includes: Expected impacts, unexpected impacts, direct impacts, indirect impacts, anticipated impacts and unanticipated impacts. Direct benefits by gaining easier and more affordable access to

essential services such as: (1) Increasing public access to health services at health centers (2) Reducing the Maternal Mortality Rate (MMR) and Infant Mortality Rate. (3) Increasing the scope of programs and SPM, (4) Increasing the scope of PTM programs (5) There is an increase in the achievement of Complete Basic Immunization (IDL) (6) Increasing public trust in health workers and reducing the number of deliveries assisted by village midwives, (7) Efforts to increase patient visits to the Barong Tongkok Health Center and integrated health posts, (8) Health centers continue to appreciate the role of midwives in the village by involving them in monitoring the health conditions of pregnant women together with midwives, (9) There is a sense of pride from the West Kutai Regency government for the achievement of being in the top 45 nationally in terms of health services at the Barong Tongkok Health Center, this is in accordance with the hopes of the community that the Health Center is a primary public service facility in the health sector..

This research also provides valuable experience for researchers, input for the government, development of public administration science, references for further research and becomes a reference for health centers or other health service facilities in innovating.. This research still has shortcomings in terms of limited analysis, information sources, research methodology and limited presentation methods.

Suggestions:

To the Barong Tongkok Health Center, to continue to consistently implement and develop other new innovations to improve health services not only during the pandemic, but more intensively in the post-pandemic period, so that they can achieve even higher achievements. The ranks of the Government, cross-sectors and the people of West Kutai to provide support and play an active role according to their respective roles and functions in the health sector. For traditional midwives in the village so that they do not feel rivaled by midwives, but continue to gain new knowledge to increase their skills and cooperation with the health center in monitoring the health of pregnant women.

Health centers and other health facilities in West Kutai Regency are expected to develop innovations in health services. For further researchers who are interested in conducting similar research, they can develop this research by implementing more innovative and comprehensive strategies for different types of innovation and innovation processes than before.

Thus the results of this research were made, pThe author acknowledges that there are still shortcomings and limitations in this research, therefore, in order to improve this paper, the author accepts suggestions and criticism from all parties. Thank You

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