# **B-ICON Proceeding**



Proceeding Paper

# INNOVATION DIFFUSION IN HEALTH SERVICES: EVALUATING INDONESIA'S PICK SICK GO HOME HEALTHY' APPROACH

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#### **Abstract**

This article aims to describe and qualitatively analyze the diffusion of healthcare service innovations in the "jemput sakit pulang sehat" (homecoming healthy patient pickup) healthcare service in the city of Bengkulu. Drawing from the Diffusion of Innovations theory, this study utilizes one of its elements, knowledge, in conjunction with the Theory of Reasoned Action (TRA) to understand the behavior involved in the delivery and implementation of healthcare services, aimed at enhancing the quality of public services in Bengkulu. This research employs a qualitative descriptive approach, with data sources including interviews, direct field observations, and documentation. The findings of this study highlight the significance of knowledge as the foundation for the diffusion of healthcare service innovations. The results are expected to provide valuable insights for the local government of Bengkulu, particularly the Bengkulu City Health Office, which is responsible for providing healthcare services. Through the dissemination of knowledge among all relevant stakeholders, it is anticipated that they can play their respective roles in innovation diffusion, ultimately leading to the improvement of healthcare service quality through effective and efficient service delivery, with a focus on innovation objectives.

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## INTRODUCTION

Sangkala (2013) states that innovation in public sector management is defined as the development of new policy designs and new operational standards generated by organizations aimed at public policy

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issues. An innovation in public administration is about effectiveness, creativity, and unique responses to new problems or new solutions to old problems. According to Rogers (2003:12), a leading author on innovation, innovation is an idea, practice, or object considered new by specific individuals (a single unit) and adopted by others. Innovation, as one of the characteristics of organizational flexibility, goes beyond merely doing something new, discovering something new, or introducing a new idea, as is commonly defined.

According to Sherwood (2002:2), innovation as a process involves four stages: (1) the idea generation stage, where an idea is first conceived; (2) the evaluation stage of the idea to be pursued; (3) the development stage, which involves refining the concept into a tangible reality that produces something; and (4) the implementation stage, which involves the earnest effort to realize the idea. Innovation diffusion is the process of spreading innovation to members of a social system through communication channels within a specific time frame (Rogers, 1983). According to Rogers, there are four main elements in innovation diffusion: 1) Innovation, 2) communication channels, 3) a specific time frame, and 4) the social system. In this context, the understanding and key elements of public service innovation diffusion align with the delivery of public service innovations resulting from competition in public service innovation.

Several previous studies on innovation diffusion in various sectors, including healthcare, local government, technology, companies, and the environment, have found several challenges in implementing innovation diffusion, including: 1) incomplete diffusion due to the influence of knowledge and public acceptance of innovation; 2) diffusion being limited to social media and mass media within a small scope; 3) obstacles found in the field, such as budget constraints and human resources; 4) the ability to utilize technology affecting perceptions of innovation characteristics; 5) applications hindered by internet access network limitations; 6) factors affecting the success of innovation diffusion, including the need for clarity in benefits, leadership influence, culture, and the need for sustained support [2],[6],[16],[22],[27],[30],[32],[38],[43],[49],[50],[56].

The Bengkulu City Health Office, established institutionally based on Bengkulu City Regional Regulation Number 09 of 2008 regarding the Formation of the Bengkulu City Regional Organization Structure, has the main task of carrying out regional autonomy authority in the health sector. In improving the quality of healthcare services in Bengkulu, the government's efforts include adjustment through Regional Regulation Number 1 of 2011 concerning Healthcare Services in Bengkulu City. This regulation represents the support of the Bengkulu City Government to enhance the quality of public services, particularly in healthcare services in Bengkulu.

In this study, the researcher will utilize one element of Rogers' diffusion theory (1983), which is knowledge, to delve deeper into the diffusion of healthcare service innovations in Bengkulu City. The use of Rogers' innovation diffusion theory will help address field-related issues regarding the diffusion of healthcare service innovations. Furthermore, the researcher combines the Behavioral variable from the TRA theory as something new and distinctive from previous research. Based on previous studies, the researcher has not found any studies that use the Behavior (behavior) variable in researching Rogers' innovation diffusion (1983).

## MATERIALS AND METHODS

This research adopts a descriptive research design. The design involves the use of methodological triangulation, which is conducted through observation, interviews, and documentation [36]. The study was conducted in Bengkulu City from February to June 2023.

## Population and Sample in the Study

The data collection was intentionally conducted among government officials, community members, and organizations in Bengkulu City. The selected environment in Bengkulu City, with its large and continually growing population, attracts a considerable number of commercial, financial, educational, governmental, and other activities. This creates a significant potential for the adoption and use of innovative services. The selection of informants was carried out using the purposive technique, which involves selecting informants for specific purposes. In qualitative research, the number of informants is determined during the data collection process and reaches saturation, as described by Sugiyono (2009). Emzir (2012) explains that key persons are individuals who possess initial information and can help determine important figures to be informants. The primary consideration in selecting informants is their knowledge and relevance to the research topic. The informants included 13 community members as service recipients, 2 service providers such as nurses and therapists, and 6 community figures who would describe the implementation and diffusion of healthcare services. Among the community figures, the representatives were the Chairperson of the Neighborhood Association (RT) in Teluk Segara Subdistrict, the Chairperson of the RT in Selebar Subdistrict, the IEA Kota Bengkulu Rider Team, BazNas Kota Bengkulu, Drs. Faizal Anwar (Academician), and Nursanty (Academician and healthcare service researcher in Bengkulu City) [36].

#### **Data Collection**

The data sources included both primary and secondary data. Primary data were obtained through indepth interviews with key informants, such as the Head of the Bengkulu City Health Office and other

informants, including the Head of Healthcare Services and Resources Division of the Bengkulu City Health Office, the Head of Disease Prevention and Control Division of the Bengkulu City Health Office, the Head of the Bengkulu City Bappeda, the Head of the Bengkulu City Diskominfo Technology and Information Division, and the Assistant Representative Ombudsman of the Republic of Indonesia Bengkulu [36]. The researcher collected data for further description, elaboration, and indepth analysis based on observed conditions. Data were analyzed descriptively to provide an overview of best practices in healthcare services according to Rogers' diffusion of innovation theory (1983).

## **Informant Demographics**

Data were collected based on the perceptions and information provided by community members and government employees (as service providers) and individuals knowledgeable and skilled in information technology and science [36].

# **Research Analysis**

The analysis process involved data reduction, which is the process of selecting, focusing on simplifying, abstracting, and transforming raw data from research notes. Subsequently, data presentation was the process of creating a research report from the collected data to make it understandable, and then it was analyzed until the research objectives were achieved. In the conclusion phase, the researcher created a summary based on the analysis results in the research discussion (Sugiyono, 2016). The verification stage involved determining the truth of the research results using empirical methods and scientific testing (Miles, 2014) [36].



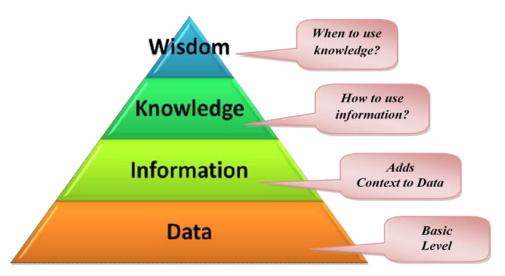
Figure 1. Health Service Innovation "take the sick home to be healthy"

Source: Mediakom, 2017

#### **RESULTS AND DISCUSSION**

The research findings indicate that the "jemput sakit pulang sehat" (homecoming healthy patient pickup) healthcare service innovation is a breakthrough innovation rooted in the local wisdom of the community. This policy has the ability to expedite healthcare service delivery without being trapped in the technocratic bureaucracy. The JSPS innovation is developed by involving the beneficiary community as partners and volunteers who act voluntarily without coercion.

Figure 2. DIKW Pyramid/Knowledge Hierarchy/Knowledge Pyramid. Hey (2004) in Kalia (2007).



Based on the DIKW Pyramid/Knowledge Hierarchy/Knowledge Pyramid by Hey (2004) as cited in Kalia (2007), when examining the study of the diffusion of the "jemput sakit pulang sehat" (homecoming healthy patient pickup) healthcare service innovation, individuals or groups go through stages of knowledge that begin with acquiring data. Data can be interpreted as the raw condition/facts observed in the field, either directly or indirectly. The second stage is information, which can be described as individuals or groups obtaining processed data in a clear, accurate, and reliable format. Information that can be accounted for regarding the "jemput sakit pulang sehat" healthcare service. Information can be obtained from the experiences of others, reading daily news from both local media and social media. In the third stage, there is knowledge, which can be obtained by making comparisons, observing and understanding consequences, connections, or conversations related to the "jemput sakit pulang sehat" healthcare service.

The final concept is knowledge, which can be described as the ability to act on information (information that has direction). In simpler terms, knowledge attempts to answer the question "how to utilize healthcare service information to pick up sick people and send them home healthy (how to use the information)?" However, not all individuals or community groups adapt to knowledge according to the DIKW Pyramid/Knowledge Hierarchy. Sometimes, limitations in understanding,

opportunities, and desires become obstacles in developing public knowledge about the JSPS innovation. As stated in an interview with a community member, AD, from Teluk Segara, one of the beneficiaries of the JSPS innovation:

"I have used the JSPS innovation before when I had to take my wife to the hospital. To be honest, I didn't know the details about the JSPS innovation, but I often saw the ambulance with the mayor's picture on it. I was assisted by the neighborhood association head (RT) to access the ambulance service. Alhamdulillah, it was very helpful." (Interview with community member AD, March 2, 2023)

The Bengkulu City Government, as the initiator of the innovation, plays an active role in the diffusion of the "jemput sakit pulang sehat" healthcare service innovation when related to the concept of knowledge. They involve the technology and information team from the Bengkulu City Diskominfo (Information and Communication Technology Office). Diffusion is primarily conducted through social media, such as the Bengkulu City Instagram media center. However, this involvement does not mean there are no challenges or obstacles. In reality, not many people are aware of Bengkulu City's social media presence. Despite many people having social media accounts, there is limited interest in seeking information. As mentioned by the Head of Technology and Information:

"Curiosity and concern are inherent in human nature. However, sometimes they are hindered by needs or the necessity of information. People will only seek information when they need it or when they are in urgent situations." (Interview with the Head of Technology and Information, March 1, 2023)

The research findings indicate that for the "jemput sakit pulang sehat" healthcare service innovation, people will be able to access healthcare service information if they are assisted in seeking it or if they feel the need to do so. Lack of awareness among the public is often due to a lack of desire or an absence of urgent needs. In the future, more in-depth socialization efforts for the public are needed, and regular activities can be organized at the neighborhood/district level to share information.

#### **Discussion**

In the context mentioned above, the diffusion of the "jemput sakit pulang sehat" (homecoming healthy patient pickup) healthcare service innovation requires the participation of various stakeholders, including the government, academics, industry/private sector, civil society, and the environment. This will create sustainable regional development innovations that align with the preserved local wisdom values (Caryannis, et al., 2012). In this context, participation and involvement can be realized through behavioral values, where the community, as service recipients, not only acts as receivers but also as disseminators of information and benefits they receive to a broader and sustainable audience.

The Theory of Reasoned Action (TRA) model is used to study human behavior. Research in the field of social psychology suggests that an individual's intention to engage in a specific behavior is a determinant of whether that individual will perform the behavior or not (Ajzen and Fishbein, 1975). TRA explains that beliefs can influence attitudes and social norms, which will affect the intention to engage in behavior, whether it is deliberate or spontaneous. This theory emphasizes the role of an individual's "intention" in determining whether a behavior will occur. TRA consists of two main constructs, namely (1) attitudes toward behavior and (2) subjective norms related to the behavior.

Based on Rogers' theory (1983) of innovation diffusion, to observe and confirm the occurrence of innovation diffusion, indicators of knowledge are crucial for both the public as service recipients and other stakeholders. Furthermore, to witness the diffusion of innovation, there must be direct behavioral actions that clearly demonstrate that innovation diffusion has taken place. Therefore, the researcher combines these stages with the concepts and theories from the Theory of Reasoned Action (TRA), namely, behavior. The following is an overview of the innovation diffusion process according to Rogers (1983):

Prior conditions:

1. Previous practice
2. Felt needs/problems
3. Innovativeness
4. Norms of the social system

Characteristics of the decision-making unit:

1. Socio-economic characteristics
2. Personality variables
3. Computation

1. Relative advantage
2. Compatibility
2. Rejection

Continued adoption
Later adoption
Discontinuance
Continued rejection

1. Relative advantage
2. Compatibility
2. Compatibility
3. Complexity
4. Trialability
5. Observability
5. Observability

Figure 3. The Process of Diffusion of Innovations By Rogers (1983)

Source: After Rogers (1995)

Based on the innovation diffusion process by Rogers (1983), which has been adapted to the field conditions, it is found that in the process of healthcare service innovation diffusion in Bengkulu City, considering the element of knowledge, it has not been fully maximized. In the final stage of diffusion, which is the adoption of a proposed innovation, in this case, the combination of the TRA theory with Rogers' theory (1983) is indeed appropriate and a factual alignment. Therefore, behavior is required to assess, demonstrate, and explain the extent to which the diffusion of healthcare service innovation has been carried out. Knowledge, when manifested in the behavior of healthcare innovation diffusion, significantly influences the desire and willingness to use the JSPS service. It is

not only about intention but also the movement towards the willingness to implement and contribute to the JSPS service. In reality, this has not been fully observed in the field.

## **CONCLUSION**

Based on the above, it can be concluded that the diffusion of healthcare service innovation in Bengkulu City has not been fully maximized. Based on the stages of innovation diffusion, particularly in the Knowledge stage, it is evident that the public will become aware of healthcare service information if they are assisted in seeking such information or if they feel the need, prompting them to actively seek the healthcare information they require. However, the lack of public knowledge and awareness, as well as their acceptance of healthcare services, particularly regarding outcomes that may seem less responsive, or feeling that they do not require the existing healthcare services, has led to a situation where the diffusion of healthcare innovation has not reached its full potential. Therefore, the researcher recommends combining elements of knowledge and behavior to create alignment in innovation diffusion, ultimately leading to the desired outcome of innovation adoption. This alignment is necessary to ensure that the adoption of the innovation can take place as intended.

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#### **Declaration of Interest Statement**

The authors declare that they have no conflict of interests.

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