

Effectiveness of Using E-Puskesmas Application in Public Health Centre in the Work Area at Public Health Office

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Abstract: The use of e-Puskesmas is an effort to provide solutions to health service providers, namely Community Health Centers so that they can provide services to patients quickly; reporting activities to the Health Service are also faster due to the Online Reporting system, making it easier for previously manual activities to become digital, and of course save time at work. The E-Puskesmas application in Kota Metro is already running in 11 Community Health Centers. This research aims to determine the effectiveness of using the e-Puskesmas application in community health center services in the work area of the Dinas Kesehatan Kota Metro in 2023. This type of research is mixed research, namely qualitative followed by quantitative (mixed method). The population in this study determined the sources/informants using a purposive sampling technique of 20 people. This research was conducted on 6-11 August 2023. Data was collected using questionnaire filling, observation, and interview techniques. The results of qualitative research based on the results of interviews conducted with key informants at 11 Community Health Centers in Kota Metro regarding efficiency indicators in the effectiveness of using the e-Puskesmas application are less effective, this can be seen from the lack of adequate human resources in each Community Health Center which is not by their competence. The results of quantitative research based on the efficiency variable were 14 respondents (87.9%) with negative answers and 6 respondents (12.1%) with positive answers. Variable adequacy: 15 respondents (85.1%) answered negatively, and 5 (14.9%) answered positively. Alignment variable: 12 respondents (87.9%) answered negatively, and 6 (12.1%) answered positively. Responsiveness variable: 12 respondents (87.9%) answered negatively and 8 (12.1%) answered positively. Variable accuracy: 15 respondents (85.1%) answered negatively, and 5 (14.9%) answered positively. Suggestions should be made to first evaluate the puskesmas by related parties, regarding the preparation and availability of the puskesmas to implement the e-puskesmas application

Keywords: E-Puskesmas, Work Fatigue, Public Health Office

INTRODUCTION

According to WHO (2010), the Health Information System is one of the six "building blocks" or main components of a country's health system. The six components (building blocks) of the health system are service delivery (implementation of health services), medical products, vaccines, and technologies (medical products, vaccines, and health technologies), health workforce (medical personnel), health system financing (health financing system), health information system (Health Information System), leadership and governance (leadership and government). (1).

The most important part of the health system is one of the information subsystems. A health information system that functions well can increase analysis, productivity, and accuracy in using and disseminating health determination information, and improve health levels and health system performance. Timely and accurate information is crucial to improving clean water and sanitation, monitoring immunization programs, and eradicating infectious diseases such as tuberculosis and malaria. (2). The most fundamental problems in several countries related to health information systems are

inadequate policies, coordination mechanisms, comprehensive plans, health information workforce, and maximum investment. (3).

According to the research cited by Laudon, approximately seventy-five percent of all information system implementations in the US can be declared a failure. The manufacturing process spends much money and time but functionally only provides benefits that align with expectations. In several countries, research has found that in most systems in effect, the design needs to meet expectations, the data obtained must be completed and accurate, submitted but not used, and data is reworked or lost (4).

Law No. 36 of 2009 Concerning Health has mandated that to implement efficient and effective health efforts; health information is needed through cross-sectors and information systems. Each health facility provider, for example, those who organize health service facilities, must provide health information system infrastructure, including devices, institutions, human resources, and technology. (5). Entering the industrial revolution 4.0, which is fully integrated with the internet, information technology today has become difficult to separate from the needs of some or all humans in the world. Now, the trend of computerization is increasing, all costs regarding the use of equipment in the health sector that follow the development of the times must be aligned, improvements in the quality and efficiency of services will always be a crucial aspect to increase competitiveness in the health service industry(6).

Based on the health sector, several problems often arise that can affect decision-making. To prevent this, a technology is needed that can process large amounts of data in a fast time. The World Health Organization stated that there is one indicator of health development, namely a health information system whose purpose is to improve response, health, and efficiency so that the information system is an element that determines the success of the health framework (7). Based on the Regulation of the Minister of Health No. 92 of 2014 concerning the Implementation of Communication in Integrated SIK, SIK means a set of arrangements that include information, data, procedures, indicators, technology, devices, and human resources that are interrelated and managed in an integrated manner in directing decisions that are useful for supporting health development. SIK must be implemented by health facilities such as clinics, hospitals, and health centers (8-10).

Puskesmas is one of the primary health facilities implementing SIK called the Puskesmas Management Information System. Currently, Indonesia has 2 SIK management models: electronic and manual. There are several electronic-based Puskesmas Management Information System applications, for example, e-Puskesmas, a product produced jointly between PT. Telkom Indonesia and PT. Infokes Indonesia in 2013 (11). This application is a mobile and web-based application used to assist health center services or management, from registration to reporting to the health office, and is integrated with the Ministry of Health's Health Center Information System standard. E-Puskesmas is a type of utilization of information technology in the health sector (12).

The use of e-Puskesmas is an effort that provides solutions to health service providers, namely Puskesmas, which can then provide services to patients quickly, reporting activities to the Health Office become faster because there is an Online Reporting system, providing convenience in previous manual activities to digital, and of course, making work time efficient, and others (13) (14)—users of E-Puskesmas in Lampung Province based on data from PT. Infokes are currently only 2 districts/cities: the West Lampung Regency Health Office and the Metro City Health Office. E-Puskesmas has been running in 11 Puskesmas and the Metro City Health Office. 11 Health Centers that have used e-Health Centers are Margorejo, Metro, Yosomulyo, Karangrejo, Yosodadi, Mulyojati, Tejoagung, Iringmulyo, Ganjar Agung Health Centers, Purwosari Health Center, namely as a non-nurse health center and Banjarsari Health Center as a care health center (inpatient)(15).

METHODS

This type of research is a mixed method, namely qualitative followed by quantitative, carried out by filling out questionnaires, observations, and interviews about "The Effectiveness of Using the E-

Puskesmas Application in Services at Puskesmas in the Work Area of the Metro City Health Office in 2023". The study was conducted on August 6-11, 2023, at the Puskesmas in the Work Area of the Metro City Health Office. The population in this study, determining the informants using the purposive sampling technique is a technique for taking data source samples by considering a consideration, namely selecting informants who are able and willing to provide information related to the research topic.

The research informants numbered 20 informants divided into:

1. Key informants, namely those who understand or have important information needed. The key informants in this study were the Head of the Metro City Health Office and the Head of the Information and Public Relations Program Sub-Division of the Metro City Health Office.
2. Main informants, namely those who participate directly in social relations. The main informants in the study were the E-Puskesmas application operator officers at the Puskesmas,
3. Supporting Informants, namely those who can provide additional information to complement the analysis or discussion in the study. The supporting informants in this study were patients who were treated at the Puskesmas.

Data collection was obtained using questionnaire filling, observation and interview techniques.

In order to carry out data validation, triangulation was carried out, which included data sources and methods. The method used was in-depth interviews with direct observation. The source used different respondents in carrying out cross-checks and secondary data research. Data analysis compared the results obtained with a literature review. Informants were selected based on considerations that were considered to be able to provide data optimally and had knowledge related to the research object. This research could be realized, due to the willingness of informants to provide information through in-depth interviews. The informants in this study were 20 individuals, including 2 key informants, namely the Head of the Metro City Health Service and the Head of the Information and Public Relations Program Sub-Division, 11 (eleven) main informants, including 4 (male) health center employees, 7 females and 3 (three) male health center patients, 3 (three) females.

RESULT AND DISCUSSIONS

Qualitative Research

Based on the results of interviews conducted by researchers with key informants in 11 Health Centers in Metro City regarding efficiency indicators in the effectiveness of the use of e-health center applications that are less effective, this can be seen from the inadequate human resources in each Health Center that do not match their competencies. For example, in Tejoagung, Banjarsari, Metro, Mulyojati and Iringmulyo Health Centers, e-health center application operators are graduates from the health sector who should be holding programs according to their competencies. In addition, there has been no special training for e-health center application holders in all Metro City Health Centers. The problem that arises is that the available resources have not been optimally met to meet the needs required in e-health center services, starting from the available facilities and infrastructure that have not been maximized in meeting the needs required for e-health center services, so that service time cannot be minimized if the available

facilities are not running well. There is also a lack of employees on duty to provide e-health center-based services to the community .

The internet network sometimes experiences disruptions during the operation of e-health centers, resulting in a buildup of patients queuing at the registration counter or in the treatment polyclinic. In addition, there is no change in the service time provided to the community with e-health center-based services here, the researcher saw that there were still patients who received treatment starting from the registration process to picking up medicine at the pharmacy, which took up to 30 minutes, for example at the Karangrejo Health Center and Tejoagung Health Center. Efficiency is the ability of an organization to use or utilize available resources as minimally as possible to produce maximum expenditure. E-health centers can be used if an organization can provide facilities that support the application, such as electricity networks, internet networks, computer facilities, and other facilities that support electronic-based health services (16). Efficiency is related to how far the health center can provide input to produce quality service output and to reach the entire service process provided to the community (17).

Quantitative Research

The results of quantitative research based on the efficiency variable 14 respondents (87.9%) answered negatively, and 6 respondents (12.1%) answered positively. For the adequacy variable, 15 respondents (85.1%) answered negatively, and 5 (14.9%) answered positively. In the alignment variable, 12 respondents (87.9%) answered negatively, and 6 respondents (12.1%) answered positively. The responsiveness variable 12 respondents (87.9%) answered negatively, 8 respondents (12.1%) answered positively. In the accuracy variable, 15 respondents (85.1%) answered negatively, and 5 (14.9%) answered positively.

CONCLUSION

The results of the discussion show that the Use of E-Puskesmas Applications in Health Center Services in the Metro City Health Office Work Area and based on the conclusions of the five indicators that the researcher has explained above, it can be concluded that the Use of E-Puskesmas Applications in Health Center Services in the Metro City Health Office Work Area is said to be less effective. Because the form of service produced by e-puskesmas in Health Centers throughout Metro City can only be used by the health center, while the community can only receive it without being able to access it personally according to the initial purpose of e-puskesmas and also the facilities and infrastructure are not yet optimal. The facilities available are not by the capacity and competence needed to implement e-puskesmas both in terms of human resources and technical resources, even though when viewed from the response or response of the Health Center to the changes that have occurred, they have provided training and assistance to Health Center officers. The Health Center also cannot add or develop e-health center applications so that they can be used by the community personally because of the limited budget to develop e-health center applications, which makes the applications used in the Health Center still use the old model so that the services provided still use the old health center procedures and service flows without being equipped with e-health center SOPs. From the results of the study, obstacles were found in Health Centers throughout Metro City in the Use of E-Health Center Applications in Health Center Services in the Metro City Health Office Work Area, including the less than the optimal implementation of e-health centers, the absence of development of e-health center applications so that existing services lack training regarding electronic-based health services to the community in this case is the absence of socialization provided by the Health Center to the community about e-health centers.

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