

Literature review: Analysis of the implementation at the public health center management information system

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ABSTRACT

This study is to evaluate and examine papers concerning the examination of the installation of the puskesmas management information system. The writing method used is a literature review with the type of Systematic Literature Review (SLR) which is carried out systematically and sourced from previous research. The databases used in the literature search were Google Scholar and Garuda Portal. There were 5 articles that met the inclusion criteria and were assessed using Duffy's Critical Appraisal Approach. Based on the 5 articles obtained, 5 articles discussed the implementation of the puskesmas management information system. 5 articles discuss SIMPUS's very important role in data processing, and overall the article (100%) states the result that SIMPUS plays a very important role in data processing, and 4 articles discuss the use of SIMPUS has been said to be effective in medical record services at puskesmas, and overall (100%) the article states the result that the use of SIMPUS has been said to be effective in medical record services at puskesmas. And overall (100%) the articles state the results that software, public facilities, human resources and officer behavior can hinder the implementation of the puskesmas management information system, which is supported by several journals that discuss the implementation of the PHC management system.

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INTRODUCTION

According to the Minister of Health Regulation Number 43 of 2019 Puskesmas is a health service facility that organizes public health efforts and first-level individual health efforts, by prioritizing promotive and preventive efforts in its working area (Rehatalanit & Nurwahyuni, 2021)(Agustinakhoeriyah et al., 2021)(Zaini et al., 2022)(Nurzamzami & Ayuningtyas, 2023).

In accordance with the new technology of information systems and the efforts to meet the needs of this new technology system in the world of health, many political parties are trying to

assemble this system for the latest services in computer-based health (Lestyaningrum et al., 2022)(Raharjo, 2022)(INDRA et al., n.d.)(Muhammad Wali et al., 2023)(Karim et al., 2023)(Bustam et al., 2024). The Department of Health (DINKES) has the time to select and implement this program and a complete and exploratory support system (Azahara, n.d.). Health institutions that produce information always focus on the input of health workers (Alfarizi, 2019)(Utarini, 2020)(Awalludin et al., 2022)(Ayuningtyas & Wibowo, 2024). In addition, computer systems must be easy to set up, accessible, and well connected to meet the specific needs of each health facility and serve the interests of business leaders, researchers, educators, and policy makers (DR HA Rusdiana, 2021)(Rusman & Suwardoyo, 2022)(Agustina & Azzahra, 2023).

The Puskesmas Information System is a framework that delivers information to facilitate decision-making in the administration of Puskesmas to achieve its operational objectives (Rahayu, 2019)(Vebraliana, 2021)(Syamil et al., 2023). As per the Regulation of the Minister of Health of the Republic of Indonesia Number 31 of 2019, Article 2, the objective is to: 1) Achieve the deployment of an integrated Puskesmas information system. 2) Guarantee the accessibility of high-quality, sustainable, and readily available data and information. Enhance the quality of health development in the operational region by fortifying Puskesmas management.

Puskesmas medical services must be supported by an appropriate management system that can be tailored to all the needs of the Puskesmas. To support the implementation of medical records and health information services at puskesmas, a system called the puskesmas management information system (SIMPUS) is used. SIMPUS is an arrangement that provides information to assist the decision-making process in carrying out health center management in achieving the objectives of its activities. The puskesmas management information system generally aims to improve the quality of puskesmas management in providing services through optimal utilization of data from the puskesmas integrated recording and reporting system (SP2TP) and other information that supports service activities using technological advances. The existence of this system will certainly greatly assist the community in terms of providing health services both in general, maternal and child health, pharmacies, etc. (Hartayu et al., 2020)(Renyonet & Rae, 2024).

Law No. 36/2009 on health states that to organize effective and efficient health efforts, health information is needed, which is organized through a health management information system. In addition to implementing central government programs through the ministry of health, local governments are also given autonomy to develop their information systems both at the level of health offices and health centers and hospitals in each region. Puskesmas carry out the activities of organizing, monitoring and assessing the activity plans that have been determined both mandatory and development effort plans in addressing health problems in the region. One form of monitoring is carried out using the Puskesmas Management Information System (SIMPUS). SIMPUS is an arrangement that provides information to assist the decision-making process in carrying out health center management in achieving its target activities (Sari & Daroini, 2020)(Utomo et al., 2021).

The Ministry of Health of the Republic of Indonesia in 2015 announced that resource management includes tools, drugs, funds and personnel, supported by the SIMPUS registration and reporting system which is one of the evaluation points for the incidence of impetigo. certification. SIMPUS software can also be used to manage patient information from registration, enrollment, examination (diagnosis) and patient care. The advantages of SIMPUS are the ease and speed of service, the creation of service standards and procedures, and the availability of accurate information (HAWADAH, 2021).

Based on the above background, researchers are interested in identifying and analyzing the implementation of the puskesmas management information system based on the results of the literature review.

RESEARCH METHOD

The method used is to collect and analyze research articles related to the analysis of the implementation of the Puskesmas management information system. The writing method used is a *literature review* with the type of *Systematic Literature Review* (SLR) which is carried out systematically and sourced from previous research. The purpose of the *literature review* aims to explain the application of the Puskesmas management information system. These articles were collected using two *search engines* including google scholar and garuda portal. Articles used in this study from 2019-2024 that discuss the application of the Puskesmas management information system in a format that is freely accessible, unpaid and available *full text*.

RESULTS AND DISCUSSIONS

Based on the search that has been carried out by researchers, there are 5 journals that have been selected properly.

Use of SIMPUS in Processing Data

Based on the results of the articles collected and analyzed, there are 5 journals or 100% that discuss the application of the Puskesmas management information system. Based on the journals found by the author according to Nilawati (2016), it states that the use of SIMPUS starts with registering, providing medical services, supporting examinations and pharmacies. input data through login by writing usernames and passwords. Data processing includes processing patient data and patient visit registration data. SIMPUS data reporting is carried out using a flash drive to upload data in accordance with the format provided to the Health Service application system. The results of research conducted by Wariyanti, et al in 2016 explain the process of inputting patient data using a computer with the SIMPUS application which is automatically integrated with the P-care application. Service data is inputted by doctors at the treatment center. The results of data processing produce reports on the number of patients who check per period, reports on the number of capitation patients, reports on the number of non-capitation patients, reports on the top 10 diseases per period, and reports on the number of patients referred.

SIMPUS or what is often called the Puskesmas Management Information System is software that provides information, which aims to facilitate the management process of health centers, one of which is for retrieving surveillance data and so on. Various information system services at the Puskesmas are widely used as technological advances in capturing these problems. Puskesmas Information System (SIMPUS), which was developed in each region according to their needs and capabilities. The Puskesmas Management Information System is carried out by medical record professionals, which explains that medical records are files that include records, documents about patient identity, observation of patient illness, therapy, and also service actions provided by health workers to patients, as stipulated in the Regulation of the Minister of Health of the Republic of Indonesia No. 269 (2008).

Medical records are data processing about patients in the form of primary data used in the form of health statistics. The scope of medical records is one of health data, therefore a person who has the responsibility of conducting medical records must be responsible for being able to manage the data processed into clear information without any pros and cons. In Regulation No. 75 of the year (2014) of the Ministry of Health concerning health centers that SIMPUS is a system that applies information to assist the health service process, one of which is the health center, providing information originally from patient data to achieve its business goals. Simpus plays an important role in national health development by making fragments of SIKNAS or (National Health Information System).

Research by Pramono, et al in 2018 found that SIMPUS was implemented in the registration department, general treatment center, dental treatment center, and maternal and child health. The dental consultation, psychological consultation, laboratory, sanitarian/environmental

health, and community health extension departments have not implemented the SIMPUS program. Data entered included social data and patient medical data. Data is entered based on the type of SIMPUS program.

SIMPUS plays a very important role that is not only focused at the national level, SIMPUS also functions in supporting the process of taking action at the local level. SIMPUS plays an important role in the direction of the national health establishment and is an important part of SIKNAS or National Health Information System. The important role of SIMPUS is not just focused at the national level, SIMPUS also serves an important function in supporting the decision-making process at the local level. SIMPUS is included in the evaluation of dental association accreditation, so improving SIMPUS plays an important role in advancing the quality of dental association health services. In addition to its important role in quality improvement, SIMPUS offers several advantages such as saving time and increasing efficiency in reporting. This was conveyed by Bhati in his research who conveyed that the main benefits of SIMPUS were improved employee performance and the availability of more complete information at the Puskesmas.

Based on the results of the analysis that has been carried out from several previous research journals, the researcher concludes the use of SIMPUS in processing data. This can be seen from the conformity between the results of previous studies with the theoretical aspects used and seen from the percentage of journals that agree that SIMPUS plays a very important role in data processing.

Effectiveness of SIMPUS Use in Health Center Medical Record Services

Based on the results of articles or journals collected and analyzed, it is known that there are 5 or 100% of articles that discuss the effectiveness of using the simpus in puskesmas medical record services, all of these articles agree that the use of SIMPUS has been said to be effective in medical record services at puskesmas.

This research is substantiated by Beni's (2016) study, which defines effectiveness as the correlation between output and objectives, serving as a metric for the extent of production relative to the organization's policy procedures. Effectiveness pertains to the extent of success of a public sector operation, whereby an action is deemed successful if it significantly influences outcomes.

The successful implementation of SIMPUS cannot be separated from the relationship between the components in the system. The need for support from organizational, financial, and other components so that a system runs well according to its objectives. The discovery of problems in organizational and other aspects certainly requires follow-up by all relevant parties, so that the evaluation results that have been presented are more functional.

Another study stated that bridging between SIMPUS and PCare has not been optimally implemented until now, the obstacles obtained include the lack of security of the system, the information system sometimes errors, then some items in the information system are not filled in due to differences in PCare and SIMPUS.

The effectiveness of SIMPUS is influenced by several factors, namely coordination, where puskesmas consisting of individuals must coordinate or work together in running SIMPUS. Because each individual has a different task. Another influencing factor is the ability of employees. Where humans (employees) are the main element that has an important role in the organization. SIMPUS cannot run if it is not run by employees. Therefore, in order to achieve the goals and success of SIMPUS, the puskesmas needs to properly manage the existing human resources (employees) so that they have good abilities in carrying out and completing work.

Based on the results of the analysis that has been carried out from several previous research journals, the researcher concludes that the use of SIMPUS has been said to be effective in medical record services at the puskesmas. This can be seen from the conformity between the results of previous studies with the theoretical aspects used and seen from the percentage of journals that agree that the use of SIMPUS has been said to be effective in medical record services at puskesmas.

Barriers to the Implementation of the Puskesmas Management Information System

The following are the inhibiting factors in the implementation of the puskesmas management information system based on the research results in the literature: Factors inhibiting SIMPUS at Jongaya Health Center Makassar City: human resources (Aripa & Ance, 2020).

Officers at Pajang Health Center input into SIMPUS only one type of drug, which should include all types of drugs prescribed by midwives/doctors. So it is necessary to re-enter the prescription drugs brought by the patient by the pharmacy staff completely. In addition, the input of patient data cannot be completed at one time, making the collection and reporting of data to the Surakarta City Health Office each month not timely.

Employee performance is a work achievement, both in terms of quality and quantity of work measured based on how responsible and ethical employees are in carrying out their duties. What happens at the puskesmas is communication or cooperation between employees when inputting SIMPUS data.

The data inputted into SIMPUS is incomplete so that health center reporting is hampered. According to the author of the reviewed journal, to optimize human resources, the puskesmas needs to carry out the staffing function properly. Because of the lack of educational background, there is still a need for additional workers with competent medical record education backgrounds. In addition, along with the development of science and technology, the puskesmas needs to facilitate employees for training so that employee abilities develop.

Software is a computer application that has a function to be a liaison or interaction tool between the user or user and hardware. In general, the use of software is intended to control hardware, run calculation processes, interact with other software and things that are more basic, such as programming languages, operating systems and others.

According to the author, a safe and comfortable work environment affects the quality of the results to be achieved. It is an obligation for health centers to provide adequate facilities to increase employee productivity. The work environment in the health center is very important for management to pay attention to. Because the work environment has a direct influence on employees. In addition, needs such as electricity also need to be considered to avoid inhibiting data entry on the computer.

Based on the results of the analysis that has been carried out from several previous research journals, according to the researchers, the inhibiting factors for the implementation of the puskesmas management information system. This can be seen from the conformity between previous research and theoretical aspects and seen from the percentage of journals that agree that *software*, public facilities, human resources and officer behavior can hinder the implementation of the puskesmas management information system.

CONCLUSION

Based on the results of the *literature review* study, it can be concluded that the results of the *literature review* study collected and analyzed were 5 journals or 100% that discussed the implementation of the puskesmas management system. Based on the results of the articles collected, it can be concluded that SIMPUS plays a very important role in data processing. The results of the *literature review* study collected and analyzed were 5 discussing the effectiveness of the implementation of the puskesmas management system. Based on the results of the articles collected, it can be concluded that the use of SIMPUS has been said to be effective in medical record services at the puskesmas. The results of the *literature review* study state that *software*, public facilities, human resources and officer behavior can hinder the implementation of the puskesmas management information system. Based on the results of the articles collected, it can be concluded that *software*, public facilities, human resources and officer behavior can hinder the implementation of the puskesmas management information system, which is supported by several journals that discuss the implementation of the puskesmas management system.

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