






Research Article

Analysis of Factors Contributing to the Failure to Utilize the Public Health Center Information Management Systems (SIMPUS) at the Burneh Public Health Center

Eka Suci Daniyanti^{1*}  | Eddy Moeljono²  | Muhammad Fikri Fahmi³ 

¹Health Administration, STIKes Ngudia Husada Madura, Indonesia

***Corresponding Author:**

Eka Suci Daniyanti, Health Administration, Institute Of Health Science Ngudia Husada Madura.

Email: ekasucidaniyanti@gmail.com

DOI: 10.33086/mtphj.v8i1.4774

Article History:

Received, July 24th, 2023

Revised, September 27th, 2023

Accepted, November 18th, 2023

Available Online: March 1st, 2024

Please cite this article as:

Daniyanti, Eka Suci et. al., "Analysis of Factors Contributing to the Failure to Utilize the Public Health Center Information Management Systems (SIMPUS) at the Burneh Public Health Center" Register: Medical Technology and Public Health Journal, Vol. 8, No. 1, pp. 36-45, 2024

ABSTRACT

The optimal Public Health Center Information Management Systems (SIMPUS) aims to reduce workload and improve service efficiency in Public Health Centers. However, the patient registration process at Burneh Public Health Center is still done manually due to the inability to use, the SIMPUS application after the computer is damaged and not promptly repaired. This manual medical record storage system adversely affects patient service duration. The objective of this study is to identify the reasons for the failure of SIMPUS usage. The method employed is descriptive with a qualitative approach. Interviews and observations serve as the research instruments. The results indicate several factors contributing to the failure of SIMPUS usage, including inadequate human resources (lack of competence officers and insufficient knowledge), unmet budgetary support for SIMPUS usage, absence of Standard Operating Procedures (SOPs) for usage, and inadequate facilities, infrastructure, and equipment to support effective SIMPUS utilization. Addressing these issues at Burneh Public Health Center can resolve challenges associated with SIMPUS.

Keywords: Failure, SIMPUS, public health center

INTRODUCTION

SIMPUS is a public health center management application primarily designed to process patient data, from registration to reporting. The inputted data is stored in the database and categorized by parameters required for various reports, including patient data reports, daily visit reports, drugs supply reports, and other essential reports for Public Health Center management.

SIMPUS aims to facilitate performance officers in recording medical specialty in-section reception patients at the Public Health Center. However, in implementation, several of the existing health centers have not yet optimized SIMPUS, particularly in the reception of patients. Earlier



research results mention that a constraint in SIMPUS operation is the insufficient stability of the internet network, which obstructs officer registration and the entry of patient data.

The results of other studies that mentioning obstacles to SIMPUS implementation are as follows: the SIMPUS application frequently experiences errors, which impact the completion of patient data entry. Additionally, SIMPUS usage is not yet thorough because manual services are still required (Aulia, 2018).

Research results by Fitriana et. Al, (2020) also mentioned that *Tanah Sareal* Public Health Center operates on two networks: one owned by *Tanah Sareal* Community Health Center and other by Diskominfo. However, SIMPUS often encounters problems, and the *Tanah Sareal* Community Health Center still uses the first version of SIMPUS, which is not integrated with P-care. Consequently, manual service provision remains necessary and significantly impacts patient care.

The observational study conducted at Burneh Public Health Center revealed that the center has implemented SIMPUS in its services. However, due to CPU issues, the utilization of SIMPUS has reverted to manual method. Manual registration places a burden on the staff as they must manually search for medical records of patients who do not bring their health index card (KIB). Therefore, the staff member must manually search through the registry book for each patient. Additionally, encountering patients with identical names poses a risk of errors such as retrieving the wrong medical record. The manual storage of patient data adversely affects service delivery. Based on the description and background, the researchers aim to analyze the factors contributing to the failure in implementing the Health Center Management Information Systems (SIMPUS) at *Burneh* Health Center by examining the variables including manpower, financial, methods, materials, and machinery.

MATERIALS AND METHODS

The research method employed in this research is descriptive research with a qualitative approach. The primary informant in this study is the officer responsible for medical records registration, with the head of medical records serving as the informant triangulation. Primary data is collected through structured interviews, while secondary data is obtained through observational sheets. The object of study in this research is the System Information Management Health Center (SIMPUS). The instruments used in this research include interviews and observations. The research will be conducted from June to July 2022. To measure the variables of manpower and financial resources, interviews are conducted to inquire about the educational backgrounds, staff knowledge regarding SIMPUS, and the availability of funds to support SIMPUS. For the variables of methods, materials, and machinery, measurements are obtained through interviews and observations. Regarding the method variable, inquiries are made regarding the existence and implementation of Standard Operational Procedure (SOP) at *Burneh* Health Center. Furthermore, evidence of SOP implementation in SIMPUS utilization is verified.

In terms of the material variable, inquiries are made regarding the availability of facilities and infrastructure, as well as any existing obstacles. Moreover, inquiries are made about whether *Burneh* Health Center possesses the necessary tools to support SIMPUS and the associated burdens. The scoring for each variable is described using the following criteria:

Table 1. Variable Interpretation

Variable	Sub variable	Skor
<i>Man</i>	Medical Record Graduates	1

	Non-Medical Record Graduates	0
	Knowing SIMPUS	1
	Not Knowing SIMPUS	0
<i>Money</i>	Fund Available	1
	Fun Unavailable	0
<i>Method</i>	SOP Available	1
	SOP Unavailable	0
<i>Material</i>	Facility and Infrastructure Available	1
	Facility and Infrastructure Unavailable	0
<i>Machine</i>	Tools Available	1
	Tools Available	0

RESULTS AND DISCUSSION

Results

Factor reason failure use System Information Management Health Center on aspects *man*

a) Education

Medical record officers responsible for recording medical data, especially in the registration department, lack of formal training in medical records management. While some possess undergraduate degrees, none have specific training in medical records management. The following quote illustrates the results of interview:

"...kalo petugas rekam medisnya ada, tapi bukan lulusan dari rekam medis semua, saya sendiri lulusan dari Sarjana Pendidikan.."

(Informan A)

The work unit officer records the medical center at the Public Health Center Burneh amount seven people however everything no graduate of record medical.

Statement officer record delivery medical if officer registration No graduates are also justified by the head record medical. Following quote results interview :

"...iya benar, petugas pendaftaran disini belum ada yang lulusan dari rekam medis."

(Informan B)

b) Knowledge

Knowledge officer record medical related use System Information Management Public health center Still belong low. Of officer record medical, only one officer only those who know and have operated SIMPUS. The following results quote the interview :

"Menurut saya, SIMPUS itu digunakan untuk mendaftarkan pasien secara online supaya lebih mudah, kalo pendaftaran pasien secara manual kan masih nyari satu satu di buku register"

(Informan A)

The head of the medical records department echoed the same statement, stating that only one officer is capable of operating SIMPUS. The following quote presents the results of the interview:

“Disini memang baru 1 orang petugas yang bisa mengoperasikan SIMPUS, karena dulu pernah pegang waktu awal - awal”

(Informan B)

Medical record officer on duty at the registration desk have some familiarity with SIMPUS. However, their exposure is limited to finding SIMPUS in the patient registration menu. The following quote presents the results of the interview:

“iya, tapi hanya tau di bagian menu pendaftaran pasien saja, karena yang dipakai hanya itu saja. Tidak sampai kebagian pelaporan”

(Informan A)

The officers are only aware that SIMPUS is used for service registration because the initial objective was to simplify and expedite the patient registration process. This statement was submitted by the head of the medical records department. The following quote presents the results of the interview:

“Untuk SIMPUS memang hanya sebatas pendaftaran saja baru digunakannya, lainnya belum”

(Informan B)

Training sessions focusing on SIMPUS utilization are deemed necessary for medical record officers. Such training could significantly enhance their understanding and proficiency in utilizing SIMPUS. One medical record officer at *Burneh* Public Health Center has previously attended SIMPUS related training. The following quote presents the results of the interview:

“pernah, pelatihannya dua sampai tiga hari”

(Informan A)

The head of the medical records department further emphasized the importance of prior training for officers using SIMPUS.. The following quote presents the results of the interview:

“sudah pernah ikutkan pelatihan SIMPUS, supaya tahu bagaimana pengoperasian SIMPUS”

(Informan B)

Factor contributing to the failure of using the Health Center Information Management Systems regarding aspects of financial.

The budget allocated for operating SIMPUS is insufficient, and these funds not yet been fulfilled for the implementation of SIMPUS activities. Additionally, there are tools and equipment required for SIMPUS operation that have not been acquired due to lack of funds. The following quote results from the interview:

“harusnya sih ada, tapi disini kekurangan dana jadinya alat dan barang yang dibutuhkan masih ada yang kurang”

(Informan A)

The officer in charge of medical records, as approved by the head of medical records, confirms that the funds allocated for SIMPUS operations are not yet fully fulfilled. The following quote results from the interview:

“sepertinya ada, tapi ya..itu, belum banyak jumlah dananya”

(Informan B)

The budget for SIMPUS operations, in addition to acquiring necessary tools and items, also includes funding for SIMPUS-related training. The following quote results from the interview:

“ada, waktu itu saya yang ikut pelatihan dibiayai puskesmas”

(Informan A)

Training for SIMPUS operation is funded by the *Puskesmas*. The following quote results from the interview:

“benar, dianggarkan oleh puskesmas untuk pelatihan petugas SIMPUS”

(Informan B)

There is currently no Standard Operational Procedure (SOP) for SIMPUS operation at *Burneh* Health Center. This is due to the Center’s lack of accreditation, which has prevented the formulation of the SOP for SIMPUS operation. The interview are as follows:

“...kalo SOP ga ada, soalnya waktu kita pernah nerapin SIMPUS itu belum akreditasi, jadi belum dibuatin SOP.”

(Informan A)

The absence of an SOP related to implementing SIMPUS in *Burneh* Public Health Center is because the accreditation process has not been completed, preventing the formulation of the SOP for SIMPUS operation. Consequently, the use of SIMPUS in *Burneh* Public Health Center has declined. The following are excerpts from the interviews:

“Kan SOP belum di buat, jadi belum pernah diterapkan”

(Informan B)

Factor contributing to the failure of using the Health Center Information Management Systems regarding aspects of *materials*.

Facilities and infrastructure supporting SIMPUS operations have not yet met the standard requirements. There is only one table and two chairs available in the patient registration section for the medical record officers, as mentioned in the interview:

“meja, kursi sebenarnya sudah ada, tapi masih kurang. Hanya ada 1 meja pendaftaran. Iya, masih kurang karena idealnya ada meja tersendiri untuk mengoperasikan SIMPUS tidak jadi satu sama meja pendaftaran, selain itu ruangnya sempit”

(Informan A)

The statement highlights lack of facilities and infrastructure, such as dedicated tables and chairs, to support SIMPUS operation adequately. This deficiency results in limited space for placing computers, CPUs, and printers in the cramped rooms, as confirmed by the head of medical records during the interview:

“meja, kursi sebenarnya sudah ada, tapi masih kurang. Hanya ada 1 meja pendaftaran. Iya, masih kurang karena idealnya ada meja tersendiri untuk mengoperasikan SIMPUS tidak jadi satu sama meja pendaftaran”

(Informan B)

Factor reason failure use System Information Management Public Health Center on aspects of machine

Supported devices for SIMPUS operations are limited to just one computer. There are no other supporting devices available for SIMPUS operations, as indicated in the interview transcript:

“...komputer ada tapi hanya 1, kalo UPS dan printernya gaada ...”

(Informan A)

The device used to support SIMPUS operations in the *Burneh* Public Health Center is limited to just one computer . There are no other devices available, such as printers or UPS, to support SIMPUS operations for optimal. Functionality. Additionally, there was initially a CPU, but it broke over time, as mentioned in the interview:

“...CPU nya sempat rusak tapi sudah diperbaiki dan sudah bisa, tapi untuk UPS dan printer belum ada ...”

(Informan B)

Discussion

1. Man Factor in implementing SIMPUS at Burneh Public Health Center

Human Resource Management at *Burneh* Public Health Center has yet to fully optimize the utilization of SIMPUS. There are 14.3% of medical record staff who are familiar with using SIMPUS, but only for registration purposes, not reporting. Additionally, there is no staff with a background in medical reporting. Therefore, this lack of expertise is the reason why they cannot operate SIMPUS.

According to PERMENKES number 43 of 2019, article 19, paragraph 1, every healthcare provider offering services at a Public Health Center must work according to standard professional and ethical principles. Unfortunately, this is not aligned with the situation at *Burneh* Public Health Center, where medical record officers lack a background in medical record educational. According to Fitriana (2020), individual elements can impact the quality of information delivered to patients. If officers convey information to patients with misunderstanding, it can lead to *miscommunication* between the officer and the patient. According to Sidik (2020), human resources are individuals with spiritual, *social, and intelligent skills*. Spirituality relates to beliefs, worship, or spiritual

activity, while social skills involve interactions within surrounding environment or society. Skills encompass expertise, abilities, and intelligence. Sinaga (2019) emphasizes the human resources are the primary driving force in every program. Public Health Center should have more human resources that understand about systems like SIMPUS, ensuring tasks are not overly burdensome to be able to perform optimally. The level of education is crucial for enhancing an officer's performance and facilitating job execution. Education is also a factor supporting system implementation at its best. The SIMPUS was designed to simplify the recording of medical data. When the officer responsible for recording duties understand the usage of SIMPUS, the implementation at Public Health Center become effective and optimal. Therefore, a suitable educational background and knowledge are essential for officers to facilitate their work and maximize performance. Education and training play a significant role in providing assistance to officers, helping them control specialized knowledge and skills to address shortcomings and minimize mistakes (Moeljono, 2022).

2. Financial Factor in implementing SIMPUS at *Burneh* Public Health Center

The budget for procuring goods and tools used to support SIMPUS becomes a constraint for *Burneh* Public Health Center. The absence of budget allocation (0%) is due to the lack of support from the head of *Burneh* Public Health Center, impacting the budgeting for SIMPUS needs.

The budget for procuring tools and items to support SIMPUS usage also possess constraint for *Burneh* Public Health Center. The lack of support from the head of *Burneh* Public Health Center related procurement of tools and items for SIMPUS usage has resulted in unmet budget required.

The availability of budget for the provision and management of medical records in support of JKN claims, as well as changes in in the medical record format, is routinely based on the work program of hospital (Saputro, Suryawati, Agushybana, 2020).

The financial element is an important factor related to the functionality of a system. A system requires tools to operate at its maximum capacity, including tools, goods, facilities, infrastructure, and device-supported devices. To reach all these necessities, sufficient funding is required. This ensures that the system can operate effectively.

3. Methods Factor in implementing SIMPUS at *Burneh* Health Center

The Standard Operational Procedure (SOP) for SIMPUS has not been established (0%). This is because, at the time *Burneh* Public Health Center implemented SIMPUS around 2010, there was no accreditation, resulting in the absence of SOP related to SIMPUS. The SIMPUS application has only been in use for about one year, and Standard Operational Procedures (SOP) related to SIMPUS have not been developed.

PERMENKES number 43 of 2019, article 19, paragraph 1, states that the health Center must operate following standard professional, service, operational procedure, and ethical standard for every health service provider. SOP serves as guidelines or references in the implementation of tasks and jobs, aligning with the functions of the work. All activities in a company can be designed and executed effectively with the presence of SOP in every activity. SOP is defined as describing daily operational activity with aim of ensuring work is done accurately, precisely, and consistently, producing products in line with standard (Gabriele, 2018).

The methodological element is crucial in the operation of the system. A system, with its own features and functions, requires specific policies regarding its usage procedure. If the feature runs the following function, then will produce maximum performance. Because it is necessary he made a policy regarding procedures using something system. SIMPUS was designed with distinctive features, each with its own meaning and function. If the features operate according to their intended

function, the SIMPUS application will function optimally. Policies regarding SIMPUS procedures, including frequent use SOPs, should be established and well-known to ensure the optimal implementation of SIMPUS.

4. Materials Factor in implementing SIMPUS at *Burneh* Health Center

Facilities and infrastructure, as supporters of the implementation of SIMPUS in *Burneh* Public Health Center, are already present but still incomplete. In the registration section for officer recording physician data using manuals, there is no specific table and chairs for SIMPUS use.

According to Rachmawati et al. (2020), materials *element* consists of both tangible and intangibles. In the business world, to achieve better results, besides having expert humans in the field, one must also utilize materials as a means. Checking the completeness of the internet network and the increasing bandwidth are essential activities undertaken by the head of medical records. This aims to process the registration of E- *Puskemas* patients systematically, making it easier for officers during the input and entry process of patient data (Handayuni, 2021)

Facilities and infrastructure are also factors supporting the operation of any system. Adequate facilities and infrastructure can enhance the comfort and efficiency of working officers. Starting with tables, chairs, cooler spaces, and dedicated area for SIMPUS usage in an agency can make officers more comfortable in their role, ensuring the smooth operation of the systems. Incomplete facilities and infrastructure can hinder the implementation of the system, causing discomfort for employees.

The devices used for the implementation of SIMPUS in *Burneh* Public Health Center include only one computer and CPU. There is no printer, UPS, or other devices to support the use of the SIMPUS application. Although *Burneh* Public Health Center already once owned the SIMPUS application stored on a CD, but the CD has been lost.

Incomplete facilities and infrastructure pose constraints in the SIMPUS application. Procuring additional items such as computers, printers, UPS, and obtaining the SIMPUS application itself still need attention.

5. Machinery Factor in Implementing SIMPUS at *Burneh* Health Center

The tools used to implement SIMPUS have not been completed yet (0%), which only one computer and one CPU available. There are no printers, UPS, or other devices to support SIMPUS. The lack of facilities and infrastructure becomes a burden in operating SIMPUS. Computer, printer, UPS, and SIMPUS applications are still being procured.

According to Kholifah et al. (2020) the machine or tool is something that can be used to provide convenience and increase efficiency in work, leading to greater profits. *A machine* is urgently needed in support work and simplify the service process. Fitriana et al. (2020) state that a quality system relates significantly related to SIMPUS performance, as the system is designed to satisfy user through a user-friendly interface. Based on Tiara and Subinarto (2019) computer research is the main tool to Run SIMPUS. Public Health Center Kalimas only owns one computer, and there are three registered officers. One officer operates a computer for managing the patients' queue and checking the Healthy Indonesia Card (KIS), while the other two officers check KIS in the onsite medical record storage room behind the registration area. They found this arrangement to be ineffective for operating SIMPUS. So, to operate SIMPUS the registration section, a Minimum of two computers is required.

The machine *element* is a very important factor for any system. The System needs additional devices to run properly. The SIMPUS requires supporting devices to implement SIMPUS optimally. If these supporting devices are available and complete, the SIMPUS application can operate at its

maximum capacity. Therefore, having supportive devices for the system is very important to ensure its optimal performance.

CONCLUSION AND SUGGESTIONS

The failure in implementing SIMPUS at *Burneh* Health Center is because of some factors, namely manpower, financial, methods, machinery, and materials. These five factors are interrelated. The educational background of the staff contributes to limited knowledge about SIMPUS, leading to a lack of skills in developing SOP for SIMPUS. The absence of a budget to support SIMPUS is also a burden in procuring tools and devices to operate SIMPUS. Staff recruitment with relevant educational background is urgently needed by *Burneh* Health Center. Additionally, *Burneh* Health Center also needs to communicate with the health Office to overcome the budget problem. Therefore, all the problems that occur in *Burneh* Public Health Center dealing with SIMPUS can be solved, and automatically the facilities and infrastructure of SIMPUS can be fulfilled.

ACKNOWLEDGEMENTS

The Institute of Health Science Ngudia Husada Madura is acknowledged for providing grants for internal research, enabling the researcher to conduct the study.

CONFLICT OF INTEREST

There is no conflict of interest in this study.

REFERENCES

- Aulia, NR (2018). Human, Organizational, and Technology Factors in Using the S Impus Application for Patient Registration at the Mulyorejo Health Center in Surabaya. *The Indonesian Journal of Public Health*, 12(2), 237. <https://doi.org/10.20473/ijph.v12i2.2017.237-248>
- Daniyanti, ES, & Moeljono, E. (2022). Analysis of the Factors Causing the Accumulation of Medical Records in the Filing Unit Using the Fish Bone Diagram at the Galis Health Center. P-ISSN: 2085-5931, 13(2), 87–90. <https://stikes-nhm.e-journal.id/NU/article/view/795>
- Fitriana, BRD, Hidana, R., & Parinduri, SK (2020). Analysis of the Implementation of the Puskesmas Management Information System (Simpus) with the Human Organization Technology (Hot)-Fit Model at the Tanah Sareal Puskesmas, Bogor City in 2019. *The promoter*, 3(1), 18. <https://doi.org/10.32832/pro.v3i1.3121>
- Gabriele. (2018). Analysis of the Implementation of Standard Operating Procedures (SOP) in the Marketing and HR Department of PT. Indo Persada Light. *Journal of AGORA*, 6(1), 1–10.
- Kholifah, AN, Nuraini, N., & Wicaksono, AP (2020). Analysis of Factors Causing Damage to Medical Record Files at Airlangga University Hospital. *J-REMI: Journal of Medical Records and Health Information*, 1(3), 364–373. <https://doi.org/10.25047/j-remi.v1i3.2104>
- Regulation of the Minister of Health of the Republic of Indonesia Number 43 of 2019. *Center for Public Health*. October 16, 2019. Jakarta. Ministry of Health of the Republic of Indonesia.
- Pinerdi, S., Ardianto, ET, & Dwi Elisanti, A. (2020). Analysis of the Level of Acceptance and Use of Health Center Management Information Systems in Jember Regency. *Indonesian Journal of Health Management*, 8(3), 136–147. <https://doi.org/10.14710/jmki.8.3.2020.136-147>
- Rahmawati, MA, Nuraini, N., & Hasan, DA (2020). Analysis of Factors Causing Delays in Provision of Outpatient Medical Record Documents at RSU Haji Surabaya. *J-REMI: Journal of Medical Records and Health Information*, 1(4), 511–518. <https://doi.org/10.25047/j-remi.v1i4.2000>

- Roziqin, MC, Mudiono, DRP, & Amalia, N. (2021). SIMPUS Acceptance Analysis in View of User Perceptions at the Mojoagung Health Center with the TAM Method. *Journal of Information Technology and Computer Science*, 8(1), 47. <https://doi.org/10.25126/jtiik.0812907>
- Saputro, A., Suryawati, C., & Agushyana, F. (2020). Analysis of the Medical Record Management System to Support National Health Insurance Claims for Inpatient Services at S Hospital Semarang City. *Indonesian Journal of Health Management*, 8(April 2020), 1–7.
- Tiara, LI, Kia, A., & Observations, I. (2019). Analysis of the Causes of Not Using the Puskesmas Management Information System (Simpus) in Accepting Outpatient Patients at the Kalimas Health Center, Randudongkal District, Pemalang Regency. 65–74.