

# Analysis of the Implementation of the Use of Hospital Management Information Systems (Simrs) in Hospitals Kindergarten IV Dr Sumantri Parepare

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## ABSTRACT

**Background:** TK Hospital management information system . IV DR Sumantri Parepare is not yet fully integrated and SIMRS must be developed to meet the criteria. **Objective:** This research aims to analyze the use of the Hospital Management Information System (SIMRS) at TK Hospital. IV DR. Sumantri Parepare, Parepare City. **Method:** The type of research used in this research is qualitative research and data collection using interviews, observation, documentation. With key informants and supporting informants using purposive sampling techniques. **Results:** The research results show that in terms of HR input the number of officers is sufficient and training has been given to officers regarding SIMRS, there are funds available, the availability of computers is not sufficient, SIMRS is not yet integrated , the infrastructure inadequate , inadequate implementation of SOPs and socialization Not yet done. The ability of medical records staff to use SIMRS is not optimal , there is incompleteness in filling out medical resumes and informed consent in SIMRS and reporting is carried out every month, quarterly and annually, but experiences delays. **Conclusion:** Improvement efforts that can be made include disseminating information about the importance or benefits of SIMRS in backing up and searching for data that is entered routinely.

**Keywords:** SIMRS, Hospital, Management, Reporting.

## INTRODUCTION

A hospital is a health service institution that provides complete individual health services, providing inpatient, outpatient and emergency services. In administering hospital services, an accurate information system is needed to improve services both to patients and operational services to all employees <sup>1</sup>. Hospitals have an important position in providing national health services. As a health institution, a hospital must be able to organize medical and non-medical staff, nurses who provide services 24 hours a day, 7 days a day. Thus, hospitals rely heavily on information intensively. The information system in a hospital is very important because hospitals play a role in providing community services. One of the supports for providing good community services in hospitals is the implementation of a Hospital Management Information System (SIMRS) that is reliable, effective and efficient and can always keep up with developments <sup>2</sup>.

Hospitals rely heavily on information intensively. The information system in a hospital is very important because hospitals play a role in providing community services. One of the supports for providing good community services in hospitals is the implementation of a Hospital Management Information System (SIMRS) that is reliable, effective and efficient and can always keep up with developments <sup>2</sup>. An information system is a system that provides information for the decision-making process at every level in an organization; and the hospital information system (SIRS) is also a system that integrates data collection, processing,

reporting and use of information needed to improve the efficiency and effectiveness of health services through better management at various levels of health services; while the hospital management information system (SIMRS) is an information system specifically designed to assist the management and planning of health programs <sup>3</sup>.

Regulation of the Minister of Health of the Republic of Indonesia (Menkes RI) Number 82 of 2013 article 3 concerning Hospital Management Information Systems (SIMRS), explains that all hospitals in Indonesia are required to use the Hospital Management Information System (SIMRS) to facilitate exchange and produce appropriate information , accurate and up-to-date within hospitals, between hospitals and the Ministry of Health. Based on this regulation, it is also stated that the Hospital Management Information System (SIMRS) application used can come from the Ministry of Health which is open-source or can be created by the hospital itself and must comply with the requirements set by the Ministry of Health <sup>4</sup>.

In supporting patient care and administration, SIMRS supports the provision of information, especially about patients, in a correct, relevant and up-to-date way, easily accessible to the right people in different places/locations and in a format that can be used. Transactional service data is collected, stored, processed, and documented to produce information about the quality of patient care and about hospital performance and costs. This suggests that hospital information systems must be able to communicate high-quality data between various units in the hospital. Apart from communication, another

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important goal of SIMRS is electronic data exchange between health service providers (practicing doctors, primary facilities and hospitals) so as to ensure the availability of comprehensive patient information and service efficiency <sup>5</sup>.

Based on initial observations by researchers with the TK Hospital IT Team. IV DR Sumantri Parepare that it is not yet fully integrated because there is still a lot that needs to be prepared to develop SIMRS to meet the criteria. The number of staff is still insufficient and the competence of human resources in implementing the use of management information system applications at TK Hospital. IV DR Sumantri Parepare. The Hospital Management Information System was created to assist hospital management in carrying out data entry, processing data and creating patient data reports. All staff who are connected to SIMRS are required to input patient data so that later the data can be entered into the IT section of SIMRS TK Hospital. IV DR Sumantri Parepare to recap. For administrative registration, at TK Hospital. IV DR Sumantri Parepare has implemented a service system based on Independent Registration Platform (APM) and online technology to overcome patient registration queues.

Several previous studies regarding the implementation of the Hospital Management Information System (SIMRS), among others, were conducted by <sup>6</sup> which aimed to determine and analyze the flow and process of receiving SIMRS which took place at the Cirebon Lung Hospital Lung Clinic. The results of this research show that the human resources available at the Cirebon Lung Clinic Outpatient Installation for patients are still lacking. The existing human resources in the hospital management information system unit are sufficient but the staff in the SIMRS application development and management section is still lacking. There are still some competencies of staff and officers at registration that do not match their competencies. There are still not enough computers and hardware at the Klink Lung Outpatient Installation in Cirebon. In the hospital management information system unit, existing computers and hardware are sufficient. Research <sup>7</sup> aims to determine and analyze the implementation of the Hospital Management Information System (SIMRS) from the aspect of human resources in the H.Badaruddin Kasim Hospital inpatient unit, Tabalong Regency. The research results show that in terms of human resources in the inpatient unit at H. Badaruddin Kasim Hospital, things are positive and are categorized as being implemented in terms of Human Resources.

## METHOD

The type of research used in this research is qualitative research. The aim of this research is to describe the conditions that occur in the implementation of the Hospital Management Information System (SIMRS) at TK Hospital. IV DR. Sumantri Parepare. This research uses *purposive sampling*, namely determining data sources selected based on consideration of certain objectives. The number of informants in the research was 10 (eight) people consisting of 4 key informants and 6 supporting informants.

## RESULTS AND DISCUSSION

### Results

This research aims to obtain further information regarding the use of the Hospital Management Information System (SIMRS) at TK Hospital. IV Dr. Sumantri Parepare. For more details, the characteristics of the informants can be seen in Table 1 below.

#### 1. Inputs

##### a. Man (Human Resources (HR))

Based on the results of the interview, it can be concluded that the human resources or officers in the unit are adequate. The number of

**Table 1. Table of Informant Characteristics.**

Informant Code	Age	Initials	Education	Position
1	25	M.P	D3 RM	Head of RM
2	24	WM	D3 RM	RM member
3	22	A A	D3 RM	RM member
4	24	NSD	D3 RM	RM member
5	24	S.N	D3 RM	RM member
6	32	m	D3 Nursing	RM member
7	30	AR	D3 IT	I.T
8	27	AML	Bachelor's Degree in Nursing	Head Nurse
9	42	SBM	Dentist	Head of Rumkit
10	39	JS	General practitioners	Deputy Head of Rumkit

Source: Primary Data, 2024

officers who manage SIMRS at Sandi Karsa Hospital is 6 people, with 1 head of the medical records installation and 5 members or staff.

This is proven by the results of officer interviews as follows:

*"I think that's enough, sir."*

(Respondent 3, 2024)

This statement was supported by other respondents:

*"13 people including the head of the room is enough sir"*

(Respondent 5, 2024)

*"That's enough, sir, according to the hospital's needs"*

(Respondent 6, 2024)

Based on this, it is known that the number of tasks are sufficient, with a sufficient number of tasks cause kine r j a n y a in do work is optimal and can be completed well. Another thing is related to the training received by officers where the officers have received training related to the Hospital Management Information System (SIMRS). This is proven by the results of the interview as follows:

*"All officers such as medical records, pharmacy and nurses are trained by IT Team officers for 2 days, sir."*

(Respondent 4, 2024)

*"Entering data using the SIMRS application"*

(Respondent 2, 2024)

This statement was supported by other respondents:

*"New patient data entry"*

(Respondent 5, 2024)

*"Entering inpatient patient data"*

(Respondent 6, 2024)

Based on the results of interviews and observations carried out by researchers, it was found that officers in the SIMRS section at TK IV Sumantri Parepare Hospital had previously participated in training activities related to SIMRS and were attended by all officers. The results of the review of documents related to human resources in implementing the use of SIMRS are generally adequate, to improve the quality of human resources, staff are given training related to the use of SIMRS.

##### b. Money (Operational)

The results of interviews with officers revealed the following information:"

*"Hospitals still incur costs for purchasing facilities and infrastructure needed to use the SIMRS application"*

(Respondent 1, 2024)

This statement was supported by other respondents:

*"What is paid for inpatient care is paper, folders and ink"*

(Respondent 2, 2024)

*"Yes, sir, it went well and the implementation was smooth."*

(Respondent 4, 2024)

Based on this quote, it can be concluded that although there is provision of funds or budget at TK IV Hospital Dr. Sumantri Parepare, the implementation is optimal. However, it is necessary to use additional funds to increase the optimality of management activities in implementing SIMRS. The aim is to support the smooth running of activities and improve the quality of infrastructure that supports these activities.

### c. Machine

The machines or devices referred to in this research are facilities that support SIMRS activities, such as computers and Hospital Management Information System (SIMRS) applications.

#### 1) Computer

The computers used in SIMRS management are integrated with reporting and are used to check patients who are going for treatment in the poly, emergency room or inpatient setting, however, the number of computers is not enough and sometimes they experience errors/slowness. This is proven by the results of interviews with officers, as follows:

*"It's normal when the power goes out, sometimes there's an error"*

(Respondent 1, 2024)

*"Sometimes it's slow if a lot of people use the Wifi"*

(Respondent 3, 2024)

This statement was supported by other respondents:

*"Sometimes, sir, especially in the computer medical records room, there are problems with the network, maybe the memory is full or the hard drive is damaged."*

(Respondent 6, 2024)

*"It depends on the computer we use, sir."*

(Respondent 5, 2024)

The results of interviews and observations show that the availability of computers is not sufficient to support/assist officers in carrying out their work and computers are sometimes slow or slow when used by officers. Not enough optimal number of computers can cause work to experience difficulties obstacle .

#### 2) SIMRS application

At TK IV Hospital Dr. Sumantri Parepare, the application has not been fully integrated from one unit to another. This is proven by the results of interviews conducted with officers, as follows:

*"Available for registration and knowing how many patients are receiving treatment "*

(Respondent 3, 2024)

*"We have designed electronic management but it is still difficult to implement because the number of computers and the internet is sometimes*

*still slow. "So for now, only registration is the same as the number of patients so we can summarize it per month or year."*

(Respondent 7, 2024)

*"Yes, sis, use it for registration and then link to the RM so you know who is coming for treatment."*

(Respondent 5, 2024)

Based on this quote, SIMRS at TK IV Hospital. Dr. Sumantri Parepare is available and has not been fully integrated from one unit to another, however SIMRS often experiences errors. This is proven by the following interview:

*"Sometimes when the lights go out, the network immediately disappears"*

(Respondent 4, 2024)

*"Once it happened that when we checked it turned out that the server had a problem"*

(Respondent 6, 2024)

*"Once, sir, when the lights went out"*

(Respondent 2, 2024)

*"Unstable Wifi network because many people use it"*

(Respondent 7, 2024)

The results of interviews and observations show that the hospital management information system (SIMRS) has not been integrated. SIMRS is already operating in its entirety and has not been utilized optimally. In reality, information systems are created to make it easier to manage and store data so that it will produce precise and accurate information.

### d. Infrastructure

Infrastructure at TK.IV Hospital Dr. Sumantri Parepare is quite adequate. This is proven by the following interview results:

*"The infrastructure is not adequate, just see what the situation is like now, regarding the sources."*

(Respondent 2, 2024)

*"It's not enough if someone manages part of the infrastructure"*

(Respondent 4, 2024)

*"Not yet, sir. "This computer is sometimes still slow, it should be able to increase its capacity."*

(Respondent 5, 2024)

*"I don't think the facilities are sufficient. From superiors you need to pay more attention. For example, the computer is slow, sir."*

(Respondent 3, 2024)

The interview excerpt above shows that the infrastructure at TK IV Dr Hospital. Sumantri Pare-pare is still inadequate even though there have been improvements over time. This was proven when the researcher made observations that the facilities were not optimal, one of which was a problem with the computer. This needs to get attention from superiors so that officers can maximize their work.

### e. Method (SOP)

Interview Results: Several officers did not know about the SOP for TK IV Dr. Hospital. Sumantri Parepare because there was no socialization carried out by the hospital. This is proven by the results of interviews with officers as follows:

"Never implemented"

(Respondent 1, 2024)

"In all the time I have worked, I have never been given socialization"

(Respondent 2, 2024)

This statement was supported by other respondents:

"Never, sir. While I work"

(Respondents 3 and 4, 2024)

"You haven't had your permission while I was working"

(Respondent 5, 2024)

This quote shows that the socialization of SIMRS Standard Operating Procedures (SOP) was only carried out verbally, and officers did not have direct knowledge of the form of the SOP itself. The results of the interview explained that the SIMRS SOP was not given to officers, there was never socialization of the SOP to officers, so they did not have a clear understanding of the contents of the SOP. Standard operational procedures are an important aspect in managing medical records.

## 2. Process

### a. Input

The data input officer at SIMRS is carried out by a medical records officer. This is proven by the following interview results:

"All the medical records officers did it."

(Respondent 4, 2024)

"All medical records officers who carry out the process of importing SIMRS data"

(Respondent 6, 2024)

Based on the results of the interview, it was discovered that input was carried out by all medical records officers. The impacts that arise if input does not go well are as follows:

"Data importing and report sending is not going well"

(Respondent 8, 2024)

"Delay in sending data and reports"

(Respondent 9, 2024)

"Medical record data and reports are late because they don't work well"

(Respondent 10, 2024)

The interview excerpt above shows the impact caused by delays in sending report data due to late input into SIMRS. Data input into SIMRS aims to improve the quality of hospital services. A hospital leader must pay attention to the hospital information system, one of which is by placing medical records and health information personnel in each section of the medical records unit, outpatient clinic, as well as inpatient units or wards.

### b. Data Logging

The recording process is carried out by officers and evaluation is carried out in the recording process. This is proven by the results of interviews with officers as follows:

"Every time and evaluation is carried out if there are things that are not understood and if there is input, there are no obstacles"

(Respondent 1, 2024)

Every time there is input an evaluation is carried out and there are no problems at this time

(Respondent 2, 2024)

*Every activity carried out must be evaluated and currently there are no obstacles*

(Respondent 3, 2024)

Based on the results of the interview, recording activities are carried out at any time and evaluation is carried out if there is an incorrect data recording process. Increasing user productivity in using the Hospital Management Information System (SIMRS) causes users to tend to continue using SIMRS both now and in the future. Users are confident that SIMRS facilities and infrastructure are complete and very helpful in saving time recording patient data.

## 3. Output

### a. Data completeness

The requirement for completeness of medical record files is 100%, however the completeness of filling in medical record files has not reached the specified target. This is proven by the following interview results:

"Usually this is because the doctor has not completed the resume and medical record files so that incompleteness occurs and reporting is hampered."

(Respondent 7, 2024)

"Health and medical staff do not comply with the specified time targets"

(Respondent 8, 2024)

This statement was supported by other respondents:

"Staff and doctors are usually late in inputting and usually not inputting on the same day"

(Respondent 9, 2024)

"The large number of patients usually means it's too late for us to input them"

(Respondent 10, 2024)

The interview results showed that several items were still found to be incomplete, namely medical resumes and informed consent. As you know, one of the purposes of medical records is the administrative aspect, which means that a medical record file concerns actions based on authority and responsibility as medical and paramedic personnel in achieving service goals. This will have an impact on poor management. Incompleteness in filling out medical records can hinder officers in inputting, processing data and making reports in the form of information on health service activities that are not timely.

### b. Reporting

Reporting at TK IV Hospital Dr. Sumantri Parepare involves collecting data from outpatient and inpatient care, which is then processed into hospital reports. Based on the results of observations and interviews, reporting has been carried out computerized via Microsoft Excel and has been integrated into the Hospital Management Information System (SIMRS). However, the reporting section still experiences delays. The Head of the Medical Records Installation as the officer responsible for making reports conveyed this.

"The current difficulty we are facing is that we are still learning about using SIMRS and in the future we hope that with the use of SIMRS there will be no delays in service and reporting"

(Respondent 1, 2024)

"There are no obstacles at this time because we are still in the learning stage. In the future, we hope that medical record officers can easily access medical record data."

(Respondent 2, 2024)



The interview excerpt above shows that the reporting was done by the installation head. Where reporting will be reported monthly, quarterly and annually. Reporting experienced delays caused by the speed of recording, inputting and completeness of the contents of the medical record file. If the return is correct then the reporting will be done quickly. This hampers the work of the installation head in carrying out cause reporting activities head of r e r e c a m installation medical h a rus menu n g g u t e r more formerly .

## DISCUSSION

### 1. Inputs

#### a. Man (Human Resources (HR))

Human Resources (HR) refers to individuals who play a key role as drivers within an organization or agency, whose ability to understand and respond to input<sup>89</sup>. They are considered assets whose capabilities need to be increased to support the implementation of organizational tasks. In the context of this research, the human resources in question are officers related to the Information Management System at TK IV Hospital Dr. Sumantri Pare Pare.

The research results show that the number of officers is sufficient and training has been given to officers regarding SIMRS where training is one of the steps to increase the efficiency of good SIMRS implementation. According to the Ministry of Health of the Republic of Indonesia (2008), every employee or officer on duty at a hospital is expected to receive a minimum of 20 hours of training every year. This is in line with research conducted by<sup>6</sup> which stated that human resources in the existing hospital management information system unit were sufficient, but staff in the SIMRS application development and management section were still lacking. There are still some competencies of staff and officers at registration that do not match their competencies. Likewise, with the competency of staff in the hospital management information system unit, there are still some who do not match their competency.

#### b. Money (Operational)

TK IV Dr. Hospital. Sumantri Pare Pare . Based on research results, although funds are available and implementation is optimal. However, it is necessary to use additional funds to increase the optimality of management activities in implementing SIMRS. The aim is to support the smooth running of activities and improve the quality of infrastructure that supports these activities. This is in accordance with research<sup>10</sup> which states that if funds are not sufficient to procure supporting equipment, the impact will be that activities will not run optimally.

#### c. Machine

##### 1) Computer

With the existence of a hospital management information system, data processing becomes more efficient because most of it is done using computers that have been programmed with various programs to handle certain applications<sup>11</sup>. Likewise, the success of its implementation at TK IV Hospital Dr. Sumantri Pare-pare relies heavily on support from quality information systems.<sup>11</sup> states that logical decision making requires a deep understanding of the problem and knowledge of various alternative solutions. More informed decisions will result from accurate information.

The results of interviews and observations show that the availability of computers is not sufficient to support/assist officers in carrying out their work and computers are sometimes slow or slow when used by officers. This cannot maximize the performance of each unit. TK IV Hospital Dr. Sumantri Pare-pare resolved this situation by calling the hospital IT Team to carry out a check. The goal is to determine whether the congestion originates from the hospital's internal network or from the server. For get information which is optimal, effect if And efisien diperlukan technology information which can berfungsi fluent and

able to provide contributions Which baik<sup>12</sup>. Not enough opt i mal n y a fun g si the computer may cause work in the Installation r e k a m medical experience obstacle. Not enough optimal nyafungsi computers can cause work to experience difficulties obstacle.

### 2) SIMRS application

SIMRS is a computerized system that is capable of managing data quickly, accurately, and producing a collection of interacting information to be provided to all levels of management in the hospital<sup>13</sup>.

In reality, information systems are created to make it easier to manage and store data, so they will produce precise and accurate information. The more system quality, information quality, service quality increases, the more system quality, service quality, information quality will increase, the system use and user satisfaction will increase<sup>14</sup>.

#### d. Infrastructure

Implementation of the Hospital Management Information System (SIMRS), the facilities and infrastructure used include hardware, software, networks, and SOPs (Standard Operating Procedures). The research results obtained were the infrastructure at TK IV Hospital Dr. Sumantri Pare-pare is inadequate. One of them is related to computers which need to receive more attention because this is an important thing to support SIMRS running well. This is in line with research conducted by<sup>6</sup> which found that problems related to supporting facilities such as hardware and software were quite good. However, there are still problems with the network which often experience interference or errors, and until now there is no quick solution to handle it. Likewise, problems related to the implementation of SOPs in hospitals have not been implemented properly, as revealed in the three journals.

Even though the facilities and infrastructure have been implemented computerized, some have fully supported it and some have not, so implementation has not run optimally. This research is not in line with the results of research conducted by<sup>15</sup> which stated that the cause of the problems that occurred was a lack of quality information which resulted in decreased user satisfaction, as well as a lack of monitoring and evaluation in the SIMRS implementation process.

#### e. Method (SOP)

Standard Operating Procedures (SOP) is a very important aspect in managing medical records where the SOP becomes a reference for officers in carrying out their work<sup>15</sup>. This is not in line with research conducted which states that socialization of SOPs. Based on research results, socialization of SOPs has been carried out by means of work orientation, officers are asked to read the SOPs and through more senior colleagues, paste work procedures in the medical records room<sup>16</sup>. Socialization is not carried out routinely and in a planned manner.<sup>17</sup> in his research stated that the socialization of Standard Operating Procedures (SPO) had a positive impact on employee performance. With SPO, it can show standards that must be adhered to by all employees.

Understanding and implementing Standard Operating Procedures (SOP) in work will ensure that there are formal references in an organization.<sup>16</sup> It is important to know and disseminate Standard Operating Procedures to all officers, because this is related to guidance in carrying out their duties. Based on the Decree of the Minister of Health of the Republic of Indonesia Number 333/MENKES/SK/XII/1999, it is stated that in the medical records unit there must be policies and procedural regulations that can be reviewed every 3 years. However, this was not implemented at TK IV Dr Hospital. Sumantri Pare Pare. The authority to determine service standards and policies should be exercised by the medical records committee<sup>18</sup>. The implementation of Standard Operating Procedures (SOP) should be pursued through annual evaluation activities<sup>16</sup>.

## 2. Process

### a. Input

Inputting is important in implementing SIMRD where the data obtained is input into SIMRS to produce information. Input is carried out by all medical records officers at TK IV Hospital Dr. Sumantri Pare Pare. However, the ability of medical records staff to use SIMRS in the medical records unit is still not optimal. Officers lack responsibility and discipline in the process of inputting patient data, so that the resulting data is incomplete. The impact if input does not go well is that internal and external reporting will be hampered. In SIMRS, data input aims to improve the quality of hospital services. What a hospital head should do is place medical records and health information personnel in each section of the medical records unit, outpatient clinic, as well as inpatient units or wards.

The results of research conducted by <sup>19</sup> showed four main factors, namely human, organization and technology. Lack of a sense of responsibility and discipline among staff in inputting patient data can cause a decrease in service quality. Meanwhile, according to <sup>20</sup> problems in implementing hospital management information systems in services can be seen from two aspects.

### b. Data Logging

SIMRS is a system that supports decision making for management in formulating strategies to achieve hospital management goals <sup>5</sup>. Data recording is an important aspect of SIMRS implementation. Medical records have a crucial role in supporting orderly administration in hospitals, which in turn contributes to achieving goals and effective planning.

The research results showed that recording activities were carried out continuously and evaluations were carried out periodically if there were errors in the process of recording data by the head of the room related to the Hospital Information Management System. Users feel that entering patient data using SIMRS is faster than manual recording. Users also consider SIMRS performance in work to be more effective and efficient compared to manual methods. This reduction in workload makes it easier for users to carry out their duties, so that productivity increases. Using SIMRS also allows users to reduce energy and costs, because paper usage is reduced or even becomes paperless. The ease of transferring information in the form of data can also be done in a shorter time. The results of research by <sup>18</sup> concluded that the perceived ease of using SIMRS has a positive and significant influence on the perceived benefits of information technology.

Administrative or administration information systems aim to ease the administrative burden involved in efficient implementation processes related to recording, calculations and reporting <sup>11</sup>. Therefore, Management Information Systems (SIM) can meet hospital needs in speeding up services, presenting data and recording data correctly, thereby improving the smoothness of patient care. However, here, data entry is sometimes carried out alternately by both doctors and nurses, which results in data entry not always being complete.

## 3. Output

### a. Data completeness

Information quality criteria include completeness, accuracy, readability, timeliness, availability, relevance, consistency, testability, data input methods, and quality. The quality of information depends on three factors, namely accuracy, timeliness and relevance <sup>21</sup>. Measurement of the overall service quality of a system or technology service provider's support including speed of response, service assurance, empathy, and service handling. User satisfaction is influenced by fast service from the vendor when needed, quality assurance from the vendor regarding the use of SIMRS, and the ability to resolve problems. Service quality in SIMRS implementation includes a usage guide, fast and responsive

service during service hours, fast response from developers, fast system repair process, SIMRS user documents, and helpdesk support <sup>21</sup>.

The research results showed that there was incompleteness in filling out the medical resume and informed consent at SIMRS. It is known that one of the purposes of medical records is the administrative aspect, which means that medical record files involve actions based on the authority and responsibility of medical personnel and paramedics in achieving service goals. This incompleteness can result in less efficient management. Incompleteness in filling out medical records in SIMRS can also hinder officers in inputting data, processing information, and making timely reports on health service activities. According to <sup>22</sup> There is poor compliance with record keeping in a South African dental hospital. This is not in line with research conducted by <sup>23</sup> which stated that hospital monitoring strengthens the relationship between absorptive capacity and the implementation of a health recording system which results in better operational cost performance. This has a direct impact on the quality of medical records and services provided by hospitals.

This is in line with research conducted by <sup>24</sup> which states that incomplete filling out of inpatient medical records (RM) at Ganesa Hospital in Gianyar City has the potential to hinder RM officers in inputting, processing data and making reports related to health service activities, which can cause delays in presenting information. This research is also in line with research at the Rizki Amalia General Hospital, which stated that the completeness of inpatient medical records had not reached 100%. This situation is often caused by the doctor in charge of the patient who has not completed the medical record form, so incomplete medical records must be returned to the nurse to be completed <sup>25</sup>.

### b. Reporting

According to the Ministry of Health of the Republic of Indonesia (2006), reporting aims to produce reports quickly, precisely and accurately. The Ministry of Health of the Republic of Indonesia (2006) divides hospital reporting into two types, namely internal reports and external reports that must be prepared. Research shows that reporting is carried out every month, quarterly and annually, but experiences delays due to inputting, recording and incomplete medical record files. Reporting is done computerized by taking data from SIMRS and done in Microsoft Excel. This is different from research conducted by <sup>26</sup> which stated that reporting at Mitra Sehat Situbondo Hospital was in accordance with the SOP for Reporting, although there were a few obstacles in its implementation, such as the length of time for data collection from the service unit. Despite barriers to data collection, hospital reports have not experienced reporting delays <sup>27</sup>.

## CONCLUSION

The research results show that in terms of HR input the number of officers is sufficient and training has been given to officers regarding SIMRS, there are funds available, the availability of computers is not sufficient, SIMRS is not yet integrated, the infrastructure inadequate, inadequate implementation of SOPs and socialization Not yet done. The ability of medical records staff to use SIMRS is not optimal, there is incompleteness in filling out medical resumes and informed consent in SIMRS and reporting is carried out every month, quarterly and annually, but experiences delays. Improvement efforts that can be made include disseminating information about the importance or benefits of SIMRS in backing up and searching for data that is entered routinely.

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## CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

## REFERENCES

- Polii, SVG, Ratag, GAE, & Fatimawali, F. (2022). Study of the Utilization of Hospital Management Information Systems in Pharmacy Installations and Procurement of Medical Equipment at RSU GMIM Siloam Sonder. *E-Clinic*, 11 (1), 124–135. <https://doi.org/10.35790/ecl.v11i1.44334>
- Aurelianne, Najib, M., & Winanda, RA (2023). Analysis of the Implementation of the Hospital Management Information System (Simrs) at Tzu Chi Hospital. *Journal of Nursing Communities*, 13 (2), 376–381.
- Dedy Setyawan. (2016). Analysis of the Implementation of the Use of Hospital Management Information Systems (SIMRS) at Kardinah Tegal Regional Hospital. *Indonesian Journal on Computer and Information Technology*, 1 (2), 54–61.
- Aula, AS, & Sulistyawati. (2020). Analysis of the Use of Hospital Management Information Systems at the Wonosari Regional General Hospital, Gunungkidul, Yogyakarta. *International Journal of Healthcare Research*, 3 (1), xx–xx.
- Molly, R., & Itaar, M. (2021). Analysis of the Utilization of Hospital Management Information Systems (SIMRS) at RRSUD DOK II Jayapura. *Journal of Software Engineering Ampere*, 2 (2), 95–101. <https://doi.org/10.51519/journalsea.v2i2.127>
- Sudiarti, T., Soepangat, S., & Wiyono, T. (2019b). Analysis of the Implementation of the Hospital Management Information System in the Lung Clinic Outpatient Installation at Cirebon Lung Hospital. *Journal of Health Management Foundation RS.Dr. Soetomo*, 5 (1), 57. <https://doi.org/10.29241/jmk.v5i1.138>
- Rijali, S., & Nadiya. (2021). Implementation of the Hospital Management Information System (SIMRS) Seen from the Human Resources Aspect in the Inpatient Unit of H. Badaruddin Kasim Hospital, Tabalong Regency. *Stiatabalong Journal*, 4, 583–595.
- ERI SUSAN. (2019). HUMAN RESOURCE MANAGEMENT. *Journal of Islamic Education Management*. <https://doi.org/10.35673/ajmpi.v9i2.429>
- Jain, N., Gottlich, C., Fisher, J., Campano, D., & Winston, T. (2024). Assessing ChatGPT's orthopedic in-service training exam performance and applicability in the field. *Journal of Orthopedic Surgery and Research*, 19 (1), 1–8. <https://doi.org/10.1186/s13018-023-04467-0>
- Oktavia, Nova, Djusmalinar, and D. (2017). Analysis of the Causes of Misfiles of Outpatient Medical Record Documents in the Storage Room (Filing) of Bengkulu City Regional Hospital in 2017. *Journal of Health Information Management*. <https://jmiki.aptirmik.or.id/index.php/jmiki/article/view/190>
- Setyawan, D. (2016). ANALYSIS OF THE IMPLEMENTATION OF THE USE OF THE HOSPITAL MANAGEMENT INFORMATION SYSTEM (SIMSRS) AT KARDINAH TEGAL HOSPITAL. 1 (2), 54–61
- Suranto, B., Hanum, FF and Haryono, K. (2014). *Sleman Regional Hospital Information System Audit for Monitoring and Evaluation of System Performance*.
- Muhimma, I. et al. (2013). Evaluation of Success Factors in Implementing the Hospital Management Information System at PKU Muhammadiyah Sruweng Using the Hot-Fit Method. *National Seminar on Medical Informatics (SNIMed) IV*, p. 78.
- Krisbantor. et al. (2015). Evaluation of the Success of Information System Implementation Using the HOT-Fit Model Approach. *National Conference on Systems and Informatics*.
- Ria Hutami Putri, & Dety Mulyanti. (2023). Literature Review Concerning Analysis of Implementation of Hospital Management Information Systems (Simrs). *Scientific Journal of Medicine and Health*, 2 (2), 14–28. <https://doi.org/10.55606/klinik.v2i2.1237>
- Nuraini, N. (2015). Analysis of the Medical Records Administration System in the Medical Records Installation of "X" Tangerang Hospital for the April-May 2015 Period. *Indonesian Hospital Administration Journal*, 1 (3), 147–158. <https://doi.org/10.7454/arsi.v1i3.2180>
- Shinta, S., HR, Nurul S. and Hakim, L. (2016). *The Effect of Implementing Standard Operational Procedures for Returning Medical Records at RSJ Dr. Radjiman Wediodiningrat*. <http://jkb.ub.ac.id/index.php/jkb/article/view/1680>.
- Saputra, AB (2017). Business Process Model and Identification of Success Factors for Implementing Hospital Management Information Systems. *Journal of Press Research and Development Communication*, 20 (2), 87–98. <https://doi.org/10.46426/jp2kp.v20i2.56>
- Husni, M., & Putra, DM (2019). Analysis of the Implementation of the Hospital Management Information System (SIMRS) in the Medical Records Work Unit at RSU 'Aisyiah Padang. *Lentera 'Aisyiah Health Journal*, 2 (1), 19–26. <http://ojs.akperaisyiahpadang.ac.id/index.php/jkla/article/view/31>
- Putra, Deni Maisa, and DV (2020). Analysis of the Implementation of the Hospital Management Information System (SIMRS) at TPPRJ Using the UTAUT Method at TK Hospital. III DR. Reksodiwiry Padang. *Administration & Health Information of Journal*. <https://jurnal.syedzasaintika.ac.id/index.php/abdimas/article/view/824>
- Setyorini, A., & Meiranto, W. (2021). ANALYSIS OF FACTORS INFLUENCING ACCEPTANCE AND USE OF REGIONAL MANAGEMENT INFORMATION SYSTEMS (SIMPDA) USING THE UTAUT 2 MODEL (Empirical Study of Users of Regional Management Information Systems (SIMSDA) in Salatiga City). 10, 1–15. <https://ejournal3.undip.ac.id/index.php/accounting/article/view/30182/0>
- Moshaoa, MAL, Taunyane, K., & Hlongwa, P. (2023). Audit of dental record-keeping at a university dental hospital. *Health SA Gesondheid*, 28, 1–5. <https://doi.org/10.4102/hsag.v28i0.2442>
- Malhan, A.S. (2023). Healthcare information management and operational cost performance: empirical evidence. *European Journal of Health Economics*, 10.1007/s10198 - 023 - 01641 - 3. <https://www.scopus.com/record/display.uri?eid=2-s2.0-85176572323&or igin=resultslist&sort=plf-f&src=s&sid=46b626b8461537b394966040c2a893a0&sot=b&sdt=b&s=TITLE-ABS-KEY%28filing +system+ of+medical+record%29&sl=29&sessionSearchId=46b626b8461537b394966040c2a893>
- Devhy, NLP, & Widana, AAGO (2019). Analysis of Completeness of Inpatient Medical Records at Ganesha Hospital in Gianyar City in 2019. *Journal of Medical Records and Health Information*, 2 (2), 106. <https://doi.org/10.31983/jrmik.v2i2.5353>
- Herissa, D.C. (2017). *Analysis of the Completeness of Inpatient Medical Records at Rizki Amalia Kulon Progo General Hospital Yogyakarta in 2017*. [http://repository.unjaya.ac.id/2115/%0A%20DYAS%0ACANDRA%0AAHERISA\\_1313034\\_besar.pdf](http://repository.unjaya.ac.id/2115/%0A%20DYAS%0ACANDRA%0AAHERISA_1313034_besar.pdf)
- TA Ayuningrum. (2019). System Approach in Managing Medical Records at Mitra Sehat Situbondo Hospital. *J-REMI: Journal*. <https://publikasi.polije.ac.id/index.php/j-remi/article/download/2199/1451>
- Muhamad Ganda Saputra1, Ari Kusdiana2, Dadang Kusbiantoro3, Rahayu Ainun K4, T. (2021). Analysis of the Medical Records Administration System in Hospital Medical Records Installations "X. *Journal Fkm*, 2(1) (1), 147–158.

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