

Implementation of Online Health Information System in Increasing Work Effectiveness at the Gowa Regency Health Office

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ABSTRACT

The implementation of the health information system uses online and offline systems. The purpose of the study is to determine the implementation of the Online Health Information System at the Gowa Regency Health Office based on input (man, machine), based on process (processing data, flow), and based on output (health data reports, employee satisfaction related to the implementation of the Online Health Information System). This research is a descriptive with a qualitative approach. The data was analyzed using content analysis. Interviews were conducted with 7 informants. The results of the Input research (Employees of the online information system are still lacking, the completeness of software and hardware is fulfilled but there are still network constraints to log in to the Komdat and Sikda generic. Process (Some health centers in Gowa Regency have not been able to reach the network due to very remote areas so the reporting process to the Gowa Regency health office must use an offline or manual system and result in delays in sending health centers to the center. Output (Employees are satisfied with the existence of online information system services compared to manual or offline because the use of online systems is very efficient. The conclusion of the input is that information system employees are still lacking, and reporting tools through Komdat and Sikda Generik. The process, namely data processing, is still partially using an offline system because some health centers do not have a network, which results in the process of sending reports that are constrained and untimely. The output is that all employees are satisfied with the use of online information systems because it makes it easier to work.

Keywords: Health Information System, Online, Work effectiveness.

INTRODUCTION

In Law Number 36 of 2009 concerning Health, it is stated that to carry out effective and efficient health efforts, health information is needed that is organized through information systems and across sectors. The purpose is that the data in the health center and other health service units can be integrated with the data in the Regency/City Health Office, the Provincial Health Office and the Ministry of National Health (Health Magazine November 1, 2014 Edition). Pasal 36 of Government Regulation of the Republic of Indonesia Number 46 of 2014 concerning the Management of Regency/City Health Information Systems which reads: "Regency/City Health Information Systems are managed by structural or functional work units in the Regency/City regional apparatus work units that carry out government affairs in the health sector". The World Health Organization (WHO) emphasizes that the Health Information System (SIK) must be used as an effective tool for management. WHO defines SIK as a system that integrates data collection, processing, reporting, and use of information to improve the effectiveness and efficiency of health services through better management at all levels of health.

According to the Decree of the Minister of Health of the Republic of Indonesia Number 837 of 2007 concerning the Development of Online Computer Networks for the National Health Information System. Several indicators are planned every year, namely: 1) The implementation of an integrated data communication network between 80% of district/city health offices and 100% of provincial health offices and

the Ministry of Health in 2007; 2)

Implementation of an integrated online data communication network between 90% of district/city health offices, 100% of provincial health offices, 100% of central hospitals, 100% of Central Technical Implementation Units (UPT) and the Ministry of Health in 2009; 3) The implementation of an integrated online data communication network between all district/city health offices, provincial health offices, central hospitals, and central UPTs with the Ministry of Health in 2010.

However, the information system that has been run so far is still manual in the health sector even though the legislation in the health sector has required the use of SIK Online. As a result, health data at the regional level is separate, resulting in overlap, duplication of data, difficult access to data, and inadequate data integration. This causes problems for decision-makers based on existing facts (evidence-based) such as policies that are made so that they are not on target because the data is not in accordance with the actual situation. Based on data from the Ministry of Health In 2007, the Data and Information Center has evaluated SIK using the Health Metrics Network-World Health Organization (HMN-WHO) tool. This evaluation includes 6 main components of SIK, namely resources (including management and resources), indicators, data sources, data management (data collection; data processing and analysis), data quality, data dissemination and use.

The results obtained were "there but not enough" for resources (47%), indicators (61%), data sources (51%), data quality (55%), data use and dissemination (57%) and "not adequate at all for data management (35%). In general, these results show that the overall SIK is still in the status of "There but not adequat" and still needs to be improved. Since the implementation of decentralization in 2004, quite a number of health centers, hospitals, district/city offices and provincial offices have invested funds in efforts to modernize SIK with the use of TIK without any guidelines or guidelines. As a result, there are currently several Regency/City Health Offices that have different application software in terms of data, structure, and functions collected so that the data cannot be recapitulated at the provincial level because the software cannot communicate. The lack of competent human resources in SIK management is also a factor that results in the weakness of SIK, especially in terms of data management. The number of human resources available in the field is still insufficient when compared to the number of initiatives to strengthen SIK manually or computerized.

The Gowa Regency Health Office has implemented the Regional Health Information System (SIKDA) whose use has been carried out since September 2018 and is the first district to implement Sikda in South Sulawesi Province. This Sikda is directly connected to the IT network of the Gowa Health Office so that it can easily directly monitor the condition of services in each health center, even though only 15 health centers treat Sikda because the 15 health centers are low-lying health centers that can be connected to the network provided by the health office from 26 health centers in Gowa Regency. Regarding human resources in the IT department, there is still a need for personnel who have the ability and expertise to operate Sikda online. The Gowa Regency Health Office has recruited through a two-day training with direct trainers from the Pusdatin of the Ministry of Health of the Republic of Indonesia.

METHODOLOGY

This type of research is qualitative, namely to explore information in depth by making observations about the implementation of online health information systems in increasing work effectiveness at the Gowa Regency Health Office. This research was carried out at the Gowa Regency Health Office and the South Sulawesi Provincial Health Office. The informants in this study consisted of 7 informants, namely 5 ordinary informants were the Head of the Planning Section, the Planning Subdivision totaling 1 person, the Staff in charge of the Planning Section totaling 2 people, the program and health information staff totaling 1 person at the Gowa Regency Health Office, and 2 key informants (Head of the Planning Program Subdivision of the Gowa Regency Health Office and the Head of Planning Subdivision of the South Sulawesi Provincial Health Office).

The data collection techniques used are observation, in-depth interviews, and documentation. The data sources in this study are primary data obtained through in-depth interviews and observations, and secondary data come from health workers in the Reporting and IT (Information Technology) section, previous research, books, journals, theses, and the internet. The data obtained from the interview results were processed manually by grouping the interview results according to the research objectives. This study uses content analysis.

RESULTS DISCUSSION

To achieve the purpose of the research, which is to obtain in-depth information about the online health information system at the Gowa Regency Health Office and the South Sulawesi Provincial Health Office, the researcher used theories from the World Health Organization (WHO), namely input (information system resources), processes (indicators, data sources, data management), and outputs (information products).

Input

Man

The availability of resources for employees of the existing health information system section is adequate, but with the addition of activities, it is necessary to add human resources, as for the training section, according to the Informant of the planning officer of the Gowa Regency Health Office, training is very important in development, here is an excerpt of the interview:

"Yes, that's enough, actually, if the pus is in the planning to carry out the planning activities, I have enough energy, but there are several other activities that are added, so it has to be forced to be less if that, like that, the BOK activities are managed there and JKN is also carried out there managed in the planning section, so it is indeed less energy still needs to be added"... "Ooh it's very important that training for planning is necessary, planning is dynamic anyway, he needs development, well this in the future is a challenge that is getting different anyway, so it must be improved, if the training is specifically planning, it is 1 time a year and it is also involved in the health center"

However, based on interviews with key informants regarding the availability of officers to implement the online information system, there is still a lack of work, while there is a lot of work. Meanwhile, the training of each section held training in accordance with the budget given. The following is an excerpt of the interview:

"The data collection staff at the South Sulawesi Provincial Health Office is lacking in the program subdivision, there are only 4 civil servants here while we have to handle all programs, 1 honorary staff. So all 5 people"... "The special training for employees, if the training of each of these sections has training, there is no special training section, but each has for example a subdivision of the program, after all, we train too, in the nutrition section, there are also those who train, in the eradication of infectious diseases, there are also each section, here the training depends on the budget if it is approved, we will carry it out."

The Health Office as a government organization in charge of organizing standard health development management supported by information technology and accurate data in the implementation of programs and activities is supported by the availability of proportional health personnel or Human Resources (HR), the fulfillment of the need for drugs and health supplies evenly and quality health service facilities.

The theory of Harold Konntz and Cyril O'Donnel affirms, "Manage-ment is the development of people, not the direction of thing." that humans are the essential element of management. Human beings cannot be equated with objects, they have roles, thoughts, hopes and ideas. His psychic reaction to his surroundings can have a further and deeper influence and is difficult to calculate carefully. Therefore, human beings need to always be considered to develop in a positive direction in accordance with their dignity and personality as human beings. In line with that view.

Based on in-depth interviews with informants, the planning and program subdivision that handles the health information system section is still lacking, there are very few health office officers plus they work on 2 methods, namely online and offline because the reporting section of all health centers still uses a manual training system is very important for improving employee performance, training at the Gowa Regency Health Office is carried out once a year.

Machine

completeness of software and hardware such as computers has been fulfilled by the health office. Based on interviews conducted with informants of planning officers of the Gowa Regency Health Office, the following is an excerpt of the interview:

"Like computers and their devices"

It is another matter with the statement of the key informant who said that applications and networks are the equipment or infrastructure needed in the process of implementing this online health information system so that it can run according to the desired purpose, by using the indihome network because it is cheap and can reach a wide area. The following are the results of the interview excerpts:

"Like the application, the application is infrastructure anyway, the application is provided by their center because of the needs of the center, ee while the network here provides itself, right, if the health information system ee has to provide wifi so the internet, so we provide ourselves using the regional budget APBD, wifi indihome, we have used it we have tried what is called what is not a paid topbell but expensive we don't want, If it's indihome, it can be 10 points, while if it's a topbell, it's 1 point, it's very expensive."

Infrastructure is everything needed for activities that are permanent such as buildings, fields in a company. Office machines are tools used as recording, processing materials in office work. This office machine works mechanically, electrically, and magnetically (Sri Mulyani, 2010:46).

Information technology is the means and infrastructure (hardware, software, useware) of systems and methods to acquire, transmit, process, interpret, store, organize, and use data meaningfully (Bambang Warsita, 2008:135).

Machines (computers and SIK applications) have an important role in the data processing process. A reliable computer/application will improve the data processing process. Computers and applications are tools to produce output. If the output is in accordance with the needs, it will increase the essence of the application of SIK in information management. For a data protection system from virus threats, more intervention is needed considering that this will affect the performance of the computer.

The theory expressed by Williams in information technology is a general form that describes any technology that helps generate, manipulate, store, communicate, and or convey information (Suyanto, 2005:10).

Based on interviews conducted by researchers, the implementation process itself sometimes has problems with the network. The health office has implemented an online system but there are still health centers whose locations cannot be connected because the network does not reach the highlands so they are forced to use a manual system, the network that supports the implementation process of the information system program is wifi indihome because according to informants using indihome can reach 10 points at an inexpensive price compared to other networks.

Procces

The implementation of the online health information system has been implemented in accordance with the standards imposed by the center. In the implementation process, it is fairly good, but there are some that still need to be improved, such as there are still several highland health centers that have not reached the network provided by the Gowa Regency Health Office, so the reporting is still in offline or manual form.

There are two processes for the online health information system, namely the process from the health center to the district health office and the process from the district health office to the province. This process will be explained through the conversation of the informant. The komdat application is used for sending data to the provincial health office in accordance with the statement of the officer informant below:

"Ooo the health center fills in the application and the application goes directly to the center, so if it comes here it is offline, then the district health office sends the data through the komdat to be verified in the province"

The delay in the process of sending reports from the Gowa Regency Health Office to the Provincial Health Office is very late and not timely because the old health center sends health data to the district health office, therefore the provincial health office is also late in submitting its report to the center. The following is an excerpt of the interview of the key informant:

"The community, friends in the city district fill in through using usernames and passwords, entering with the URL address that has been determined by the pusdatin. Actually, the city district collects not directly here but to each section, so in each section it is customary to complain if we ask if this data has not been entered. Why is it because the health center is also late to the health office, I am also confused until now why it is late from the health center to the health office even though I used to work at the health center, even though our feeling is that the health center used to deposit every 4th to the 5th but in reality there are also many health centers that are late who deposit, so it is set on the 5th to the city district health office, The City Regency Health Office deposits to Province ee no later than the 10th and we from Province to the center no later than the 15th. It's just that the city district health office sometimes has not deposited to the province, late we also deposit it to the center, this is the data that in 2018 alone there are still those who have not been collected"

System processing (process) is a system that has a processing part, which is in charge of converting inputs into outputs, so that the results can be used. An information system consists of data, people, and processes as well as a combination of hardware, software, and communication technology or known as information technology.

Information system users are involved in 3 (three) stages, namely data entry, processing, and informant disbursement. The data entry stage uses data forms or data sheets that may not have meaning. It is usually more efficient or cheaper to send data through communication channels, especially when the data has been organized through a computer, compared to the usual way of transmission. With the invention of the internet, various information can be accessed from home at a low cost. Data communication is actually a combination of two completely different techniques, namely data processing and telecommunications. It can be interpreted that data communication provides communication services with computer systems.

In the data processing program, the application is used, based on the Regulation of the Minister of Health of the Republic of Indonesia Number 92 of 2014 concerning the Implementation of Communication. Data in the Integrated Health Information System, Data communication is the exchange of data or online transfer to optimize the flow of data from and to districts/cities and provinces to the center, so that at the central level priority health data and certain other health data are available to meet the needs of health program leaders and managers.

Software consists of a comprehensive set of electronic instructions for doing something (Yakub, 2012:96). Software is a collection of commands/functions written with certain rules to order computers to perform certain tasks (Ladjamudin, 2013:20)

Before the health data and information is presented, the report from the health center is first consulted by the health information system manager of the Regency / City Health Office to the relevant fields and subdivisions after which the report is sent to the Provincial Health Office to be validated which will get the results approved and disapproved, if not approved it will be returned to the Regency / City Health Office to be corrected and if approved directly can be send it to the Ministry of Health as the manager of Data Communication (Komdat) for verification, after which health data and information can be presented or published (Kasman, 2018:32).

Based on the results of the interview, the implementation process uses the komdat application, namely, the health office staff enters the data and information into the application, then the provincial health office matches the data obtained so that after the data matches, it is verified and then sent to the center through the komdat application again and if there is a data error, the provincial health office will explain the error at a meeting with the district section. The obstacle found in the results of the study is the delay in sending data

from the district health office to the province because the data obtained by the district health office from the health center is not complete. So that the provincial health office was also late in sending the data to the center.

Output

The results given in the implementation of this online health information system have had a good effect

on health office officers because they can save labor, time and costs. According to some informants, they are satisfied with the use of the online system. Based on the interview with the informant about what he felt, the following is an excerpt of the interview:

"If I am satisfied with the online system but there are still things that make me still not satisfied, I definitely want to continue to make improvements if I personally want the results for now, I like it but I want the records to be the best, I want the health center to be on time to send everything"

Based on interviews with key informants who stated that the overall implementation of the online-based health information system has made him satisfied but is still hampered by the sometimes-slow network. The following is an excerpt of the interview:

"Regarding reporting, well, online, using the application was compassionate anyway, and of course we are satisfied with using online rather than offline because if it's online, just enter the data through it, the existing application is indeed provided and saves paper for printing and making thick reports as well, but that's usually problematic, the network is usually not good, so you have to be patient until you can enter"

The system output is the result of the input that has been processed, will be converted into a useful output. The results of the system output, in the form of information, in the form of reports (graphs, figures, narratives, pictures, and others), which can be used as input material in decision-making. The output produced from this application program is in the form of a print of the puskesmas report. Building patient satisfaction is at the heart of achieving long-term profitability and is a function of the difference between perceived and expected performance.

The implementation of the Health Information System (SIK) in the management of data and information at the Health Office of Pagar Alam City, South Sumatra Province, which said that what was previously done manually became automatic and this greatly reduced the use of time, energy and costs for labor (Kasman, 2018:31).

Based on the results of the interview, the informant said that the employees were satisfied with the service of this online information system compared to manual or offline, but the submission of the puskesmas report to the district health office still uses a manual system, so the informant of the district health office wants the delivery of the report to be online because the online system can provide effectiveness and efficiency and does not spend a lot of money and the lack of use of paper and transportation to the district health office.

CONCLUSION

Based on the research, it can be concluded that the input is that online information system employees still say that they are not seen in terms of work that continues to add, and there are some employees who do 2 jobs at once to help each other, while the completeness of software and hardware has been fulfilled by sending reports from the central government which are then submitted to the local government to be used as appropriate.

However, there are still constraints from the network or signal to log in to the Komdat and generic Sikda are sometimes disrupted. The process, namely that some health centers in Gowa Regency have not been able to reach the network due to very remote areas and cannot reach the network so that the reporting process to the Gowa Regency health office must use an offline or manual system, as well as the sending of data from the provincial health office to the center has been delayed. The output is that employees are satisfied with the

online information system service compared to manual or offline because the use of the online system is very efficient.

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