The Evaluation of Puskesmas Information System (Simpus) Implementation of Puskesmas X in Kediri City

[1*]Reny Nugraheni, [2]Katmini

[1] Institut Ilmu Kesehatan Bhakti Wiyata Kediri, Indonesia
[2] Institut Ilmu Kesehatan Strada, Indonesia
Corresponding email: reny.nugraheni@iik.ac.id

Abstract:

In accordance with the evaluation results of the Ministry of Health of the Republic of Indonesia in the Strategic Plan of the Ministry of the Republic of Indonesia in 2010-2014. The existence of data in the era of decentralization has become weak, the need for data and information for evidence planning is not available on time, even though the National Health Information System (Siknas) online has been integrated. Puskesmas is the spearhead of the National health data source. So it is important to evaluate the implementation of SIMPUS in the Puskesmas X Kediri City. Objective: To find out the Evaluation of the Implementation of Puskesmas Information System (Simpus) at Sukorame Puskesmas Kediri City in 2018. Method: The design of this research is quantitative descriptive. Data collection techniques were carried out by observation and interviews with the input variables, process, and output of the SIMPUS Puskesmas X Kediri City. Results: the study showed that the input aspects of SIMPUS were in accordance with the standards, namely there were HR data managers, namely the head of administrative staff, infrastructure facilities, namely computers and internet. For aspects of the Simpus process there is still incomplete patient data recording, and reporting online, week and month online is 80% late. For the aspect of Simpus output, which is that the accuracy of the data is still incomplete and the reporting time for incoming data at the Health Office for 1 year is 80% late. Conclusion: SIMPUS implementation in Puskesmas X Kediri City has not run optimally. Suggestion: The Health Office needs to create a simpler Simpus and each Puskesmas needs special experts for data managers.

Keywords:
health information system, health center, e`valuation

JEL: I10, I11, I13

PRELIMINARY

Law Number 36 of 2009 concerning Health states that to organize effective and efficient health efforts, health information is needed. Information or reports must have quality that is relevant, timely, and efficient in order to be useful for those who need it as a basis for decision making. Whereas information made manually means a smaller risk of accuracy and accuracy. The possibility of intentional or unintentional mistakes will be greater, so the accuracy of the information is reduced. The Health Information System provides the basics for decision making and has four main functions: data creation, data compilation, data analysis and synthesis, and data communication and usage. Health information systems collect data from the health sector and other sectors by analyzing overall relevant data and

timeliness and converting data into information for decision making (WHO, 2008). A system that lacks information will become whole, stunted, and ultimately fail. Information system is a certain way to provide information needed by an organization to operate successfully. Its activities consist of input to provide data, processes to process and process data, output to produce reports, storage to maintain and store data, and controls that guarantee an information system runs as expected (Mangaro and Setyowati, 2014).

One source of information on puskesmas (SIMPUS) in Indonesia is the Integrated Puskesmas Recording and Reporting System (SP2TP). Puskesmas is an official institution under the auspices of the City Health Office. The existence of Puskesmas is very close to the level of health with the majority of the community. This happens because the Puskesmas is the youngest health service institution reached by the community (Bastian, 2003). In accordance with the evaluation results of the Ministry of Health of the Republic of Indonesia in the Strategic Plan of the Ministry of the Republic of Indonesia in 2010-2014. Found a number of problems in the health information system in Indonesia. The existence of data in the era of decentralization is weak, the data and information needs for evidence planning are not available on time, even though the National National Health Information System (SIKNAS) has been integrated. But there are still factors that influence the success of information systems, including network availability, input from entry points in the regions, as well as the utilization of health facilities and the information generated is still very low (Supriyadi, 2011). The purpose of this study is to Evaluate the Implementation of Puskesmas Information Systems (Simpus) at Puskesmas X in Kediri.

RESEARCH METHODOLOGY

The research design used were observation and interview method. This type of research design is cross sectional. Cross sectional research is research that collects data only at that time. (Notoatmojdo, 2012).

RESULTS AND DISCUSSION

Results

1. Input

   a. Human Resources

   Human resources are people who devote themselves in a particular field in the work area of the puskesmas and require the authority to make certain types of efforts in the fields they are engaged in, including the empowerment of personnel in organizing health efforts as well as in organizing programs in the Puskesmas (Vidyanto, 2012). The person responsible for implementing the SIMPUS program carried out by the puskesmas is the head of the puskesmas, and the coordinator of the monthly report is the head of administration. The following is an interview excerpt from one of the informants:

   "*For those who coordinate the SIMPUS at the Sukorame Health Center, I deck and the person responsible is the Head of the Health Center, for implementers there are users in each poly or unit in the health center. For each obstacle usually reported to me and I report to the Department of Health*" (Informant BS. November 15, 2018).

Reny Nugraheni | *Institut Ilmu Kesehatan Bhakti Wiyata Kediri, Indonesia*
Katmini | *Institut Ilmu Kesehatan Strada, Indonesia*

Based on the results of interviews, it is known that the person in charge of SIMPUS is the head of the puskesmas who is aware of all reporting, activities in the working area of the puskesmas, the head of administration as the coordinator of the SIMPUS program, who then has the duty to deposit monthly reports to the Health Office.

The officer who recaps the monthly report is the head of administration or coordinator of SIMPUS and the user or executor of each unit or poly that recaps into one report. The following is an interview excerpt from one of the informants:

"*For the* recap *report, only users or implementers, such as dental rooms, KIA poly rooms, general polyclinics, laboratories and medicine, have finished collecting their reports, if it is complete, I will check who hasn't submitted their reports, who has."* (Informant BS. 15 November 2018)

Based on the results of the interview it can be concluded that there are no special officers to help smooth the SIMPUS program, of which there are all officers who work on this program, those who do the recording and reporting every month.

b. Facilities and Target

The readiness of facilities and infrastructure for the implementation of SIMPUS is in the form of supporting facilities available that help in the smooth running of SIMPUS program activities such as the existence of computer units in each room so that users can easily report their reports and the existence of a wifi network that helps online systems to the center, the existence of books guidelines and the existence of report formats.

The results of interviews about facilities and infrastructures that are complete at the puskesmas to run the SIMPUS program. The following interview excerpts:

"For advice and infrastructure in this puskesmas, each unit has fulfilled it, in each unit there is already 1 computer and network unit for the SIMPUS program itself from the Ministry of Communication and Informatics so the DHO works in collaboration with the Ministry of Communication and Information. If the facilities and infrastructure are no longer a problem " (Informant BS. November 15, 2018)

The same thing also conveyed by the administration. The following interview excerpts:

"The facilities and infrastructures here are quite complete, there's also wifi for SIMPUS. The computers of each unit are also complete. For me, the facilities and infrastructure are enough, so I can run SIMPUS well. " (Informant T., November 19, 2018)

Based on the results of the interview, it can be concluded that the facilities and infrastructures at the puskesmas are complete and fulfilled so that they can help smooth the SIMPUS program at the puskesmas.

c. System

The maximized system is the system used for the SIMPUS program activities from the Health Service that is given to each Puskesmas to run this SIMPUS program. However, in this SIMPUS system there are still many shortcomings or disturbances that are still felt by puskesmas staff who run the SIMPUS program. The following interview excerpts:

"If the system is from the Health Office, so we just need to run it anyway. But sometimes the system is often interrupted, like this long time loading there is also a number that likes to change when I want to save so we have to be careful before saving patient data , sometimes the system can't be used so I enter the patient data the next day " (Informant G. November 21 2018)

The same thing was conveyed by other officers who stated that the system still had a lot of disturbances in the implementation of the program. The following interview excerpts:

"If in general poly, there is still a problem with SIMPUS, for example like this the data does not come out, loading is sometimes too long, sometimes also the Sing Troble server and for printing reports directly, it cannot yet match for wifi itself for this SIMPUS" (Information U. November 19, 2018). Other complaints were also complaints by other officers. The following interview excerpts:

"In MCH, problems for the implementation of SIMPUS like this, when choosing the name of the midwife the examiner does not want to change, but if the name of the examiner is changed by a doctor or nurse it changes. There is also a problem with the counter entering the baby category while the original data is toddlers. So that the data is not entered" (Informant K. November 19, 2018)

"For the implementation in the laboratory, it is quite smooth because the data and diagnosis are given by general poly, KIA poly, dental poly so that the lab continues the examination given from the poly-poly. (Informant L. 21 November 2018)

For the pharmacy unit, there is no problem with the SIMPUS program. The following interview excerpts:

"For the implementation of SIMPUS itself we have no problems, the system also has no problems so far. If the general poly / kia / teeth do not send a prescription via SIMPUS then the drug cannot be taken. Common poly / kia / teeth are still using paper. So SIMPUS is also a paper yes, so it still makes 2 reports because the recipe uses paper or manuals and SIMPUS" (Information F. 21 November 2018)

From the results of interviews related to the system on the SIMPUS program it can be concluded that there are still many problems experienced by officers related to the SIMPUS program.

2. Process

    a. Recording

    The process of recording patient data is a series of activities to support the availability of data and information. The SIMPUS data processing process at the Sukorame Health Center has been running for almost a year using the SIMPUS program. The following interview excerpts:

"If the recording here has been started from the end of 2017, so the Health Office directs to use SIMPUS we immediately carry out. But sometimes there are still many officers who feel rigid and have not been proficient to run this SIMPUS program. Many also feel the benefits of this SIMPUS program. All units have felt the benefits of recording in the SIMPUS program." (Informant BS. 15. November 2018)

"The recording here is actually quite complete anyway, only sometimes there are obstacles the report does not enter. As there are several units that have not entered data in SIMPUS, it will be seen which ones have not entered data, because usually I check at the end of the week whether the poly-poly data correctly and completely. Because the admin will later process the dashboard given to DINKES." (Informant P. 15 November 2018)

Based on the results of the interview it can be concluded that the recording SIMPUS monthly report is the SIMPUS executive who carries out activities of each unit in the Puskesmas. All that is recorded will then be documented and used as information in the form of monthly reports. There is also an opinion about the number of items that must be noted in the SIMPUS program. The following interview excerpts:

"For recording itself there is no problem because the program has been running for 1 year so it is used to input patient data. But maybe each unit has a different problem. There are still those who still do not record complete patient data and fill in the incomplete data. Like the MCH for KIA lab data, diagnosis and medication are often not filled because they feel objected or too much patient data is filled in" (Informant U. 19 November 2018)

Based on the results of the interview it can be concluded that there are some obstacles at the time of recording and compiling monthly reports to be used as one report, namely because there are no recording barriers on various units. In addition, the large number of items that must be inputted and analyzed so that the data is large and requires long time recording.

b. Reporting

Reporting is an activity to compile a set of data the results of the recording to be submitted to related parties as a form accountability or notification of activities and results of activities that has been done. The results of interviews regarding the reporting conducted by the programmers to the head of administration then the head of administration then monthly report to the Head of the Puskesmas and Kediri City Health Office. The following interview excerpts:

"If the reports from each of my regular units are taken, if they have not been entered, so they can work quickly also for reporting to the Dinken. sometimes there are delays from the units I immediately ask so I know it's too late." (Informant BS. 15 November 2018)

"Actually, for reporting the simpus itself, it can be seen in days, weeks, months and years. We can see that data through the SIMPUS website. For self-reporting sometimes there are those who have not entered SIMPUS so that later it can be seen because there are usually 200 patients but there are no patients, it means that poly has not entered data into SIMPUS. That's the bias I ask, why isn't it entered yet." (Informant K. 15 November 2018)

Based on the results of the interview it can be concluded that for the reporting that occurred at Sukorame Puskesmas was carried out by the SIMPUS program implementers and the report was reported to the puskesmas administration section, then the puskesmas head reported for monthly reports to the City Health Office.

3. Output

Timeliness of reporting here can be interpreted timeliness Reporting to the City of Kediri Health Office, according to what date the report must be collected every month to the City of Kediri Health Office. For the output of SIMPUS itself is a dashboard produced by the health center. The following interview excerpts from the reporting from the City Health Office:

"For reports from puskesmas, it is usually in the form of exel, if the report addressed to the DHO and the head of the puskesmas is exel. From the DHO later it will be processed again as a dashboard to report it to the Head of Health Office and Mayor in the form of a dashboard so that it is easier to read it" (Informant K. 15 November 2018)

Based on the results of interviews related to SIMPUS reporting from puskesmas. Usually from the puskesmas it is reported to the Head of Puskesamas and the Health Office in the form of exel and from the City Health Office of Kediri reporting to the Mayor in the form of a dashboard that has been processed by the DHO.

Discussion

1. Input
    a. Human Resources

An organization in its implementation has different goals and expectations, with the goals and expectations can be achieved through the support of resources owned by the organization, the availability of adequate resources will increase excellence in implementing program activities in the organization (WHO, 2008).

Human resources are the most important input factor in achieving success. Like the puskesmas as a health service organization has full responsibility in organizing health services in the district. Including carrying out the recording and reporting of patient data which is information on the management of the puskesmas. With such a large role it needs to be supported by a good amount of human resources, as well as quality.

In fact, the readiness of human resources in particular SIMPUS management staff at Puskesmas Sukorame still sometimes have problems, both in terms of quality and quantity. In terms of quantity, there are already puskesmas that handle the SIMPUS program, namely the programmers in each unit, but in terms of quality it is not appropriate because the officers currently implementing the SIMPUS program are personnel who are focused on carrying out health service program activities. Meanwhile, to manage data, it is not a special officer who is a SIMPUS expert who should be a special officer who does it, indeed the head of the administration room who is the SIMPUS coordinator, the coordination carried out by the head of the administration room is quite good, the head of administration conducts a delivery or coordinator to remind the reporting time limit, after the reporting time ends the head of the administration occasionally monitors the program maker who manages the monthly report and orders for each programmer responsible and reports the SIMPUS report directly to the DHO.

The successful implementation of SIMPUS is largely determined by the human factors that carry out information system procedures. Knowledge and skills are basic things that must be possessed by officers in carrying out health information system

activities. For this reason, puskesmas should be equipped with competent and reliable human resources in order to carry out recording and activities SIMPUS reporting effectively and efficiently. Related to the unprepared human resources specifically the SIMPUS data manager. Sukorame Puskesmas requested special training or special SIMPUS personnel to be expected to further improve the quality of SIMPUS recording and reporting data at Sukorame Puskesmas.

b. Facilities and infrastructure

The media for sending SIMPUS reports from the Puskesmas to the Health Service is using online technology. So that the SIMPUS coordinator does not need to send more reports from the puskesmas to the Health Department using vehicles. The availability of technological support facilities and administration in supporting the implementation of the SIMPUS program in general has brought changes in providing SIMPUS data. There is a computer in each unit, 24-hour electricity, print in each unit and special wifi for the SIMPUS program. While administrative support facilities are available at Puskesmas such as the SIMPUS report format are generally available and are not a problem in the City of Kediri Health Office because they are in accordance with the format.

c. System

The system is one that is very influential on the performance and results of SIMPUS. The system is provided and used directly to achieve the objectives of the SIMPUS program activities.

The maximized system is the system used for the SIMPUS program activities from the Health Service that is given to each Puskesmas to run this SIMPUS program. However, in this SIMPUS system there are still many shortcomings or disturbances that are still felt by puskesmas staff who run the SIMPUS program.

To be able to carry out recording and reporting properly, it is necessary to fulfill these prerequisites such as the availability of a good system and not many disturbances, the existence of a system of implementing good activities is directly for implementing activities.

2. Process
   1. Recording

The process of recording data is a series of activities in support the availability of data and information. Recording activities done by recording observations, measurements and or calculation at each step / stage of activity in accordance with standardized operational procedures (SOPs) that have been standardized.

Recording of SIMPUS monthly report, namely SIMPUS implementers who carry out activities of each unit in the puskesmas. All that is recorded will then be documented and used as information in the form of monthly reports. In addition, the large number of items that must be input and analyzed so that the data is large and requires a long recording time. There are also officers who are still rigid in inputting SIMPUS data, which is one of the causes of delay in recording and reporting SIMPUS. One effort to improve staff knowledge and skills on the use of technology can be done through educational activities or training for officers who run the SIMPUS program.

2. Reporting

Reporting or making a report is an activity to compile a collection of data resulting from recording to be submitted to related parties as a form of accountability or notification of the results of activities that have been carried out (Fadlia, 2014).

Sending SIMPUS reports from the Sukorame Puskesmas to the Kediri City Health Office is indeed going better than the other Puskesmas, which is sent directly to the City Health Office by the SIMPUS coordinator or an officer ordered by the head of administration. Based on the findings in the field, sending reports from the puskesmas to the City Health Office in general is still not optimal. This condition is proven by the fact that there are still less than filling items in several poly which have not been completed by the SIMPUS program.

According to the problem, it was not separated from the coordination of SIMPUS officers and coordinators as well as the person in charge of the Puskesmas itself, the absence of special officers who conducted data analysis and data input which caused incomplete reports to be submitted to the Kediri City Health Office. This has an effect on the quality of the SIMPUS report. Jogiyanto (2015) said that information would be useful if information reported on time, complete, accurate and relevant. Information conveyed after the critical period has passed is only garbage because information is no longer valuable as material for planning and decision making. Related to the SIMPUS report problem, support is needed in the form of rewards that can be used as compensation for officers with multiple responsibilities, support for the provision of adequate facilities, improvement in the management of report delivery. As well as the procurement of specialists who work specifically programed SIMPUS who have received training first. This is expected to improve the quality pattern of the SIMPUS puskesmas report to the Kediri City Health Office.

3. Output

Timeliness of reporting is the submission / acceptance to be an important factor in the flow of reports on the basis of the consideration of the report needed for material decision making at certain times or periodically, the delay in submission / receipt of reports will interfere with the decision making mechanism (Mardia, 2016)

Timeliness of reporting here can be interpreted the timeliness of reporting reports to the City Health Office of Kediri, according to what date and in the form of an exel report should be collected every month to the City Health Office of Kediri. For the output of SIMPUS itself is a dashboard produced by the health center.

From the results in the field of SIMPUS reporting from the puskesmas. Usually from the puskesmas it is reported to the Head of the Puskesamas and the Health Service in the form of exel and from the City Health Office of Kediri reporting to the Mayor in the form of a dashboard that has been processed by the DHO in the time specified as the beginning of the month has been sent to the Health Service.

Some of the obstacles raised by the puskesmas the reason for the delay in reporting are the lack of facilities that support the smooth running of the program such as the absence of special officers who administer the SIMPUS program at the puskesmas, lack of good coordination, the amount of data that must be recapitulated in each unit, and the presence of undesirables such as loss of report data so that it is necessary to re-record the report.

Reny Nugraheni | *Institut Ilmu Kesehatan Bhakti Wiyata Kediri, Indonesia*
Katmini | *Institut Ilmu Kesehatan Strada, Indonesia*

SIMPUS report submission is currently going well because the City Health Office develops online report delivery media with the SIMPUS WEB intranet facility so that it can reduce the cost and time spent on the monthly report reporting process, the most important thing is that the report can be guaranteed secure and accurate and relevant.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Based on the results and discussion of the Evaluation of the Implementation of Puskesmas (Simpus) Information Systems at Sukorame Puskesmas, the following conclusions can be summarized.

For the implementation of SIMPUS from the input aspect, there are no special officers at the Sukorame Health Center in charge of carrying out the SIMPUS program, all of which are still being carried out by program developers in each room. For SIMPUS supporting facilities and infrastructure facilities at the puskesmas have fulfilled that each unit has 1 computer and other needs for the SIMPUS program and many complaints from the SIMPUS system are still lacking when inputting data or processing the power.

For the implementation of SIMPUS recording at the Sukorame Puskesmas, the recording is carried out by the program that has been developed by the Kediri City Health Office to carry out the SIMPUS program so that officers can make good records with the SIMPUS system aids. Whereas for SIMPUS reporting, the program is carried out to the coordinator or head of administration, to the maximum extent possible with accurate and relevant reporting.

From the results in the field of SIMPUS reporting from the puskesmas. Usually from the puskesmas it is reported to the Head of the Puskesamas and the Health Service in the form of exel and from the City Health Office of Kediri reporting to the Mayor in the form of a dashboard that has been processed by the DHO in the time specified as the beginning of the month has been sent to the Health Service.

Suggestion

Based on the results and discussion as well as conclusions it can be suggested as follows:

3. For the government of the Kediri City Health Office
   a. Planned and continuous training is needed in order to get skilled and professional human resources in embracing the SIMPUS program.
   b. It is necessary to develop the SIMPUS system from the health department to the puskesmas in order to facilitate the reporting of data between the puskesmas and the city health office in Kediri City
4. For the Puskesmas Sukorame
   For smooth reporting there should be coordination between officers and the SIMPUS coordinator that is good and integrated.

BIBLIOGRAPHY

Dinkes Kota. (2015). *Profil Dinas Kesehatan Kota Kediri Tahun 2014.* Kediri.

Fadlia. (2014). *Sistem Pencatatan Dan Pelaporan Tingkat Puskesmas*. (http://fadlianeukatjeh.wordpress.com/2014/01 /23/sistem-pencatatandan pelaporan-tingkat-puskesmas-sp2tp/ diakses pada tanggal 2 desember 2018 Pukul 21.00 WIB)

Jogiyanto. (2015). *Metodologi Penelitian: Sistem Informasi.* Yogyakarta: Penerbit Andi.

Mangaro,H.A; Setyowati,M. (2014). *Evaluasi Penerapan Simpus untuk Pencatatan dan Pelaporan Puskesmas di Puskesmas Pandanaran Semarang Tahun 2014.* Artikel Ilmiah. FKM Universitas Dian Nuswantoro. Semarang. (http://eprints.dinus.ac.id/6687/1/jurnal_13838.pdf diakses pada tanggal 27 November 2018, Pukul 16.00 WIB).

Notoatmodjo. (2012). *Metodologi Penelitian Kesehatan.* Jakarta : PT. Rineka Cipta Permenkes RI, 2014. *Peraturan Menteri Kesehatan Republik Indonesia Nomor 75 tahun 2014, tentang Pusat Kesehatan Masyarakat*. Jakarta.

Permenkes RI, (2004). *Peraturan Menteri Kesehatan Republik Indonesia Nomer 128 tahun 2004, tentang Kebijakan Dasar Puskesmas.* Jakarta

Peraturan Pemerintah, (2014). *Peraturan Pemerintah Republik Indonesia Nomer 46 tahun 2014, tentang Tata Cara Pengendalian Dan Evaluasi Pelaksanaan Rencana Pembangunan.* Jakarta

Peraturan Pemerintah, (2014). *Peraturan Pemerintah Republik Indonesia Nomer 39 tahun 2014, tentang Sistem Informasi Kesehatan.* Jakarta

Pusdatin Kemkes RI, (2015). *Rekapitulasi Puskesmas menurut Provinsi dan Kabupaten*. Jakarta.

Supriyadi, A. (2011). *Analisis Penerimaan Sistem Informasi Manajemen Puskesmas Elektronik (Simpustronik) dengan Pendekatan Technology Acceptance Model (TAM) pada Petugas BP (Balai Pengobatan Puskesmas di Kabupaten Situbondo*. Skripsi. FKM Universitas Jember. Jember (http://repository.unej.ac.id/bitstream/handle/123456789/353/Adhing%20Supriyadi%20 %20092 110 01136.pdf?sequence=1 diakses pada tanggal 30 november 2018 Pukul 09.00 WIB)

Tayibnapis, *Faradila* Yusuf. (2000). *Evaluasi Program.* Jakarta : PT. Rineka Cipta Umar, Husein. 2002. *Standar Evaluasi.* Jakarta : PT. Raja Grafindo Persada

Undang-undang, (2009). *Undang-undang Republik Indonesia Nomer 36 Tahun 2009, tentang Kesehatan.* Jakarta WHO, 2008, *Health Metrics Network: Framework and standards for country health information systems, World Health Organization, Second edition, Avenue Appia, Geneva*. (http://www.who.int/healthmetrics/documents/hmn_framework20080 3.pdf diakses pada tanggal 01 Desember 2018 Pukul 18.00 WIB)

76