

INFLUENCE OF MANAGEMENT INFORMATION SYSTEM ON HEALTH CARE IN PUSKESMAS CIGEUREUNG TASIKMALAYA TOWN

Kiki Endah
Program of Government Sciences
Galuh University
Ciamis, Indonesia
Email: kiki_spt@yahoo.co.id

Irfan Nursetiawan
Program of Government Science
Galuh University
Ciamis, Indonesia
Email: irfan.nursetiawan@gmail.com

Endah Vestikowati
Program of Government Science
Galuh University
Ciamis, Indonesia
Email: vestiunigal@gmail.com

Abstract—*The globalization era has led to a new paradigm in the utilization of information technology as a catalyst in improving the quality of public services. The quality of relevant information will lead to proper decision making and provide information dynamically. Because the output of the Management Information System (MIS) illustrates what is important and what is less important in the service. Quality of information can also be the basis of improving public services, one of them in health services. The purposes of this research are to: (1) Test the hypothesis of the magnitude of the influence of Management Information System (MIS) to health services at Cigeureung Health Center Tasikmalaya Town; (2) to analyze health service at Cigeureung Health Center of Tasikmalaya Town; and (3) Providing inputs to local health authorities as providers of public services in the health sector. The research method used in this research is quantitative research method. Quantitative research is a form of scientific research that examines a problem of a phenomenon, and see the possibility of linkages or relationships between variables in the problem set. The result of hypothesis testing shows correlation between Management Information System (MIS) to health services obtained 0402, this means 40.2% of the data both are positively related. Furthermore the result of the correlation level of the data has a fairly strong relationship level, which is between 0.40 - 0.599. In addition, the correlation coefficient is very significant with the sign with a confidence level of 99%. The result of this research can be concluded that Management Information System (MIS) has positive and significant result of health service at Cigeureung Health Center in Tasikmalaya town. It means; the higher of Management Information System (MIS), then the health services will increase. Management Information System (MIS) includes; input, process and output. So that excellent service and effective and efficient service can be realized through the implementation of Management Information System (MIS) is correct.*

Keywords—*Management Information System, Health Services, Health Center*

I. INTRODUCTION

At the moment there are many issues about government service. One of them is in health service for society that is not yet optimal. The first, the slow of service process, the complexity of the procedures to be followed, the high cost to be paid for health services, the implementation of separated services and the lack of corrective action in the health service process. This can be seen from the form of public health services in Public Health Centers as health service providers are still not satisfactory.

Health Center as a health service center under the coordination of District Health Office can be used as a barometer of public health level in the vicinity. This is in line with the Regulation of the Minister of Health of the Republic of Indonesia Number 75 of 2014 on Public Health Center states that:

Public Health Centers, hereinafter referred to as Puskesmas, are health service facilities that organize public health efforts and individual health endeavors at the first level, by prioritizing promotion and preventive efforts, to achieve the highest degree of public health in their working areas.

Based on the background of the problem, then the problem relating to the influence of Management Information System (MIS), how much influence Management Information System (MIS) to health services at Cigeureung Health Center in Tasikmalaya town? And based on the formulation of the problem, the purpose of this study, namely to:

- a. To test the hypothesis of the magnitude of the influence of Management Information System (MIS) to health services at Cigeureung Health Center Tasikmalaya Town.

- b. Analyze health service at Cigeureung Health Center of Tasikmalaya Town.
- c. To provide inputs to the local Health Office as the organizer of public services in the health sector.

The result of this research is used to give contribution of thought or as adder of reference for progress in the field of governmental sciences and description about the influence of integrated management information system to create excellent service in improving optimal health service. In addition this can be used as the foundation for further research.

II. LITERATURE REVIEW

A. Concept of Management Information System

Systems within an organization have a role in achieving the goals of the organization itself. According to Ludwig (in Lantip, Diat, P 2013:3) suggests that "The system is a set of interplaying elements in one particular environment". While Lucas (In Lantip, Diat P P 2013:1) argues that "organizing interacting, interdependent and integrated in a unity of variables or components.

Information system is a system within an organization that brings daily transaction processing needs, support operations, managerial and strategic activities of an organization and provide certain outside parties with the necessary reports.

Thus the system is a network of data processing procedures developed and incorporated if deemed necessary in order to provide data to management every time required, both internal and external data, for the basis of decision making in order to achieve organizational goals. Management Information System (MIS) is the application of information systems within organizations or formal institutions to support the information required by all levels of management. According to George M. Scott (in Lantip D, Prasojo 2013:9) suggests that "MIS is a collection of interactions of information systems that provide information for both managerial and operational needs". In addition, according to Barry E. Cushing (Lantip D, Prasojo 2013:9) suggests that:

Based on these statements then the management information system plays a role in data processing to produce output in the form of information that can serve as a picture in improving the quality of an organization or health institution. However, management of the management information system needs a mature concept and has a purpose to be applied as one of the new models in health management.

In addition, according to Gordon B. Davis (in Lantip D, Prasojo 2013:9) suggests that "MIS is a human or machine system that provides information to support management operations and decision-making functions of an organization."

Thus management operations can produce a form of policy that is as a control in the management of a health institution. Management information systems relate to computer-based information processing (computer-based information processing).

In the implementation of management information systems in the health sector begins with system planning. Before an information system is developed generally first begins with the existence of a policy and planning data-based system development. Without good system planning, system development will not work as expected. In addition, without any policy by the leadership of the system development will not get support from top management. Support from top management is a very important element for the realization of development and development of information systems in health institutions.

The use or application of management information systems can be applied in various fields. One of the areas of health, namely the use of computers has now been used in various activities related to public health services. According Wibowo, Adik (2014:144-145) states, that information technology is applied to the activities:

1. Computer based medical record. Computer-based medical records are the use of databases to record all medical data, demographics and every event in patient management.
2. Portable data storage technology. A simple portable data storage application is a barcode.
3. Wireless technology. Through wireless networks, doctors can always connect to the patient database without having to be disrupted by mobility.
4. Personal digital assistant. Utilization of PDAs that have been accompanied by a telephone network allows doctors can still have access to patient databases through the internet network.

B. The Concept of Health Services

Service is one of the functions that must be run by the government, in order to meet the demands and needs of the community. Service is closely related to human life even in the extreme can be said that service cannot be separated with human life. They understand that customer trust largely determines the survival of the organization. The government's awareness to seize the public's trust is now increasingly needed as the paradigm of government changes.

All the interests of the public should be implemented and fulfilled by the government as a state organizer in various sectors, one of which is the community's needs. According to Lukman (1999:6) states whether, "Service is an activity or

sequence of activities related to other people or machines physically and provide customer satisfaction".

One of the functions of government in the implementation of government, namely providing health services for the community. According to Law no. 36 Year 2009 on Health states that health services, including:

- a. Promotional health services;
- b. Preventive health services;
- c. Curative health care;
- d. Rehabilitative health services; and
- e. Traditional health services.

Public Health Service is an integrated health service system developed by the government. In addition Public Health Service as a health service unit provides curative and preventive services in an integrated, comprehensive and easily accessible within the work area of the district and in urban areas. According to Wibowo, Adik (2014:30) states the main activities of Public Health Service, including:

- a. Maternal and child health;
- b. Family planning;
- c. Nutrition;
- d. Environmental health;
- e. Prevention of infectious diseases;
- f. Public health education;
- g. Treatment;
- h. Community health care;
- i. Nutrition health business;
- j. Health care health services;
- k. mental health;
- l. Laboratory; and
- m. Recording and reporting.

According to Mc. Leod (in Susanto, Azhar 2002:12) states that "The dimension of service quality is tangible, reliability, responsiveness, assurance of certainty and empathy". The quality of excellent health services is one of the expectations of the people in the current decentralization era. There are several dimensions in measuring the level of health services. According to Lori D.P, Brown (in Suparyanto, 2011:1) states that there are 8 (eight) dimensions of service quality:

- a. Technical competence is related to the skills, abilities and appearance of officers, managers and support staff. Technical competence relates to how officers follow the standard of service that has been established in terms of: compliance, accuracy, reliability, and consistency.

- b. Access to services is a health service not hindered by geographical, social, economic, cultural, organizational or language barriers.
- c. Effectiveness (effectiveness) is the quality of health services depending on the effectiveness of health care norms and clinical guidelines in accordance with the standard.
- d. Efficiency (efficiency) is an important dimension of quality because efficiency will affect the outcome of health services, let alone health service resources are generally limited. Efficient services in general will give optimal attention to patients and society. Officers will provide the best service with the resources they have.
- e. Continuity is the client will receive the required full service (including referral) without repeating unnecessary diagnostic and therapeutic procedures.
- f. Safety is to reduce the risk of injury, infection or other hazards associated with the service. Service security involves officers and patients
- g. Interpersonal relations is the interaction between health workers and patients, managers and officers, and between health teams and communities. Good human relationships instill trust and credibility by respecting, keeping secret, respecting, responsive, and giving attention.
- h. Comfort is a health service that is not directly related to clinical effectiveness, but it can affect patient satisfaction and is willing to return to a health facility for future care. Amenities also relate to the physical appearance of health facilities, personnel, and medical or non-medical equipment.

III. RESEARCH METHODS

The research method used in this research is quantitative research method. According to Indrawan, Rully (2016:51) states that "Quantitative research aims to gain clarity about the magnitude of meaning in the hypothesized model." This research is focused on analyzing the existing phenomena, either natural or human-made phenomena.

So this study examines the shape, activity, characteristics, changes, relationships, similarities and differences with other phenomena. Many behaviors, actions and events attract the attention of researchers in the context of quantitative research. Also in this study using a verifikatif approach that is a method performed to test the hypothesis by using statistical calculations with SPSS Software (Statistical product and Service Solutions) Ver.17.0 For Windows. This is in line with Taniredja's opinion, Tukiran, et al (2014:62) states, that "Quantitative data is data expressed in the form of numbers." So in the calculation of data required tool as a data processor and SPSS program is one tool to process the data is computerized data.

The research design in this case using quantitative research is often viewed as the antithesis or the opposite of qualitative research. Quantitative research quantifies the gradation of quality into numerical scales that allow statistical analysis. According to Prajitno, D. Subagio (2014: 4), states that "The other characteristic of other quantitative approaches is internal validity, meaning whether the research instrument really measures what should be measured. "The research design used in this study, the correlation design. So the design of this research leads to correlation analysis, where the relationship is linearly between one independent variable (X) with the dependent variable (Y). The tools and data collection techniques that researchers use in this study, as follows;

1. Library study.
2. Field study, namely data collection techniques by collecting data obtained directly in the location of research, namely by following way;
 - a. Observation, the technique of data collection by holding observations and recording directly to the object of research.
 - b. Questionnaire, is data collection techniques by providing a series of questions that are arranged systematically on the respondents.

In order to answer the problem and to reach the research objective and the benefit of this research, the sample selection is done by means of disproportionate stratified random sampling. According to Riduwan (2014: 11) states that "Disproportionate stratified random sampling is sampling of random and stratified members of the population, but some are less proportional to the division of heterogeneous population members." Thus the population members in this study are the total number of residents or the community residing in Nagarasari sub-district Cipedes sub-district Tasikmalaya town which is the recipient community of health service from Cigeureung Public Health Center of Tasikmalaya town. But with the limited funds and time, then taken the members of each population, ie taken by using the census technique is as many as 49 people.

Data processing techniques in this study consist of: (a) data verification; (b) classification and coding; (c) data entry; (d) statistical analysis and (e) create a view. (Indrawan, Rully.dkk, 2016: 162). To know the health service at Cigeureung Public Health Center of Tasikmalaya Town, the researcher conducted the measurement using questionnaire and contained 5 (five) alternative answers for each statement. This is in line with Riduwan's opinion (2014: 26) which states that "Likert Scale is used to measure attitudes, opinions and perceptions of a person or group about social events or phenomena." Thus the lowest score is given a score of 1 (one) and the highest value is given score of 5 (five). While statistical analysis using statistical analysis of two variables or bivariate analysis. The analysis

technique used in this research is Pearson correlation analysis. To know the relationship between variables used correlation technique. While the meaning of price 'r' will be consulted with interpretation table r value, as follows:

Table. 1
Interpretation of the Correlation Coefficient of Value r

Interval of coefficient	Correlation level
0,80-1,000	Very strong
Interval of coefficient	Correlation level
0,60-0,799	Strong
0,40-0,599	Strong enough
0,20-0,399	Low
0,00-0,199	Very low

Source: Ridwan (2014:218)

IV. RESULT AND DISCUSSION

Based on the data collected through questionnaires distributed respondents obtained the results of hypothesis testing through correlation analysis for (X) as independent variables, the Management Information System (MIS) and (Y) as dependent variable are health services, performed data processing with SPSS Statistics Version 17.0 Program. Hypothesis testing is done to determine the extent of the relationship between the two variables and the scientists used the formula correlation coefficient which results are presented in the following table:

Table. 2
Source: SPSS Ver. 17.0

Correlation of the influence of MIS on Health Services		MIS	Service
MIS	Pearson Correlation	1	.402**
	Sig. (2-tailed)		.004
	N	49	49
Services	Pearson Correlation	.402**	1
	Sig. (2-tailed)	.004	
	N	49	49

** . Correlation is significant at the 0.01 level (2-tailed).

The table shows the correlation matrix between two dependent variables and independent variables. The correlation between Management Information System (MIS) to health services is 0.402, this means 40.2% of the data are positively related. Furthermore the result of the correlation level of the data has a fairly strong relationship level, which is between 0.40 - 0.599. In addition, the correlation coefficient is very significant with the sign **, with a confidence level of 99%.

Based on the results of hypothesis analysis of the size of Management Information System (MIS) to health services is strong enough influence. Basically Management Information System (MIS) consists of input, process and output. So the emphasis of the Management Information System (MIS) is related to the delivery of quality information to customers (in this case the patient). This is in line with Ellitan's opinion, Lena, et al (2007: 51) states that "Quality of information is the main target in creating quality service information system." Quality of service is not separated from service dimension, tangible, reliability, responsiveness, assurance of certain and empathy. This is in line with Levey and the Contest (in Azwar, A: 1996: 1) states that:

Healthcare is any effort that is carried out by itself or jointly within an organization to maintain and improve health, prevent and cure disease, and restore the health of individuals, families, groups and or society.

Thus the quality of health services is something that refers to the level of perfection of health services, which on one hand can lead to satisfaction of each patient in accordance with the level of satisfaction of the average population, and on the other hand the procedure of implementation in accordance with the standards and codes of ethics profession.

V. CONCLUSION

Based on the result of research and discussion about the influence of Management Information System (MIS) to health service at Cigeureung Public Health Center of Tasikmlaya Town, it can be concluded that Management Information System (SIM) has a positive and significant effect on health service at Public Health Center IN Cigeureung Tasikmalaya town with correlation hypothesis bivariate 0.402 and the coefficient value is very significant, it is 99%. Meaning; the higher the Management Information System (MIS), then the health services will increase. Management Information System (MIS) includes; input, process and output.

REFERENCES

Books:

- [1] Azwar, Azrul (1996) *Menjaga Mutu Pelayanan Kesehatan*. Jakarta: Pustaka Sinar Harapan.
- [2] Davis, Keith, & Newstorm, W, John (2006). *Human Behaviour At Work: Organizational Behaviour*, New York: Mc Graw Hill International.
- [3] Ellitan, Lena. Dkk (2007) *Sistem Informasi Manajemen: Konsep dan Praktis*. Bandung: Alfabeta.
- [4] Eti, Rochaety. Dkk (2008) *Sistem Informasi Manajemen Pendidikan*. Jakarta: Bumi Aksara,
- [5] Idrus, Muhammad (2009). *Metode Penelitian Ilmu Sosial: Pendekatan Kualitatif dan Kuantitatif*. Jakarta: Erlangga.
- [6] Indrawan, Rully (2016). *Metodologi Penelitian: Kuantitatif, Kualitatif dan Campuran*. Bandung: PT. Refika Aditama
- [7] Prajitno, D. Subagio (2014). *Metode Penelitian Kuantitatif*. Bandung: UIN SGD.
- [8] Lantip, Diat. P. (2013). *Sistem Informasi Manajemen Pendidikan*. Yogyakarta: UNY Press.
- [9] Riduwan (2014). *Pengantar Statistika Sosial*. Bandung: Alfabeta.
- [10] Simarmata, Janner (2007). *Perancangan Basis Data*. Yogyakarta: CV. Andi Offset
- [11] Suhardan, Dadang. Dkk (2011). *Manajemen Pendidikan*. Bandung: Alfabeta.
- [12] Susanto, Azhar (2002). *Sistem Informasi Manajemen: Konsep dan Pengembangannya*. Bandung: Lingga Jaya.
- [13] Taniredja, Tukiran. Dkk (2014) *Penelitian Kuantitatif: Sebuah Pengantar*. Bandung: Alfabeta.
- [14] Wibowo, Adik (2014) *Kesehatan Masyarakat di Indoensia: Konsep, aplikasi dan tantangan*. Jakarta: PT. Raja Grafindo Persada.

Constitution

- [1] Undang-undang RI Nomor 25 Tahun 2000 tentang Propernas.
- [2] Undang-undang RI Nomor 36 Tahun 2009 tentang Kesehatan.

Website:

- [1] Ismail, M. 2009. *Konsep Sistem Informasi Manajemen*, (online) Tersedia: <http://www.usu.ac.id> [diakses pada hari Jum'at, 04 Agustus 2017, 22.43 WIB].
- [2] Pangestu, D.W. 2007. *Konsep Dasar Sistem Informasi Manajemen*, (online) Tersedia: <http://bangdanu.wordpress.com> [diakses pada hari Jum'at, 04 Agustus 2017, 22.55 WIB].
- [3] Pangudiluhur. 2009. *Slide Perkuliahan Sistem Informasi Manajemen*, (online) Tersedia: <http://www.pangudiluhur.ac.id> [diakses pada hari Jum'at, 04 Agustus 2017, 23.43 WIB].