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A. Judul Monitoring and Evaluation of E-DHF Program Usage in Pasuruan City East Java Indonesia
B. Bukti Korespondensi

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DOCTORAL PROGRAM OF HEALTH SCIENCE
Committee of *The 2nd International Symposium of Public Health*
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Author	**: Sri Widati**
Co-Author	**: Rachmah Indawati, Lucia Y. Hendrati**
Address	**: Faculty of Public Health, Universitas Airlangga**
Abstract Number	**: O-T1363**
Title	**: Monitoring and Evaluation of E-DHF Program Usage in Pasuruan City East Java Indonesia**
Date	**: October 5th, 2017**

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Contact person:
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Author

Name : SRI WIDATI
Email Address : widatisantoso@gmail.com
Contact Number : 081231251006
Institution : PHP UNIVERSITAS AIRLANGGA

Co-Author(s)

Name : RACHMAH INDAWATI
Email Address : rachmah97@yahoo.com
Contact Number : 085853033566
Institution : BIOSTATISTIKA & KEPENDUDUKAN FKM UNIV. AIRLANGGA

Name : LUCIA Y. HENDRATI
Email Address : hendratilucia@yahoo.com
Contact Number : 0898 3800051 / 082230600156
Institution : DEPT. EPIDEMIOLOGI FKM UNIVERSITAS AIRLANGGA

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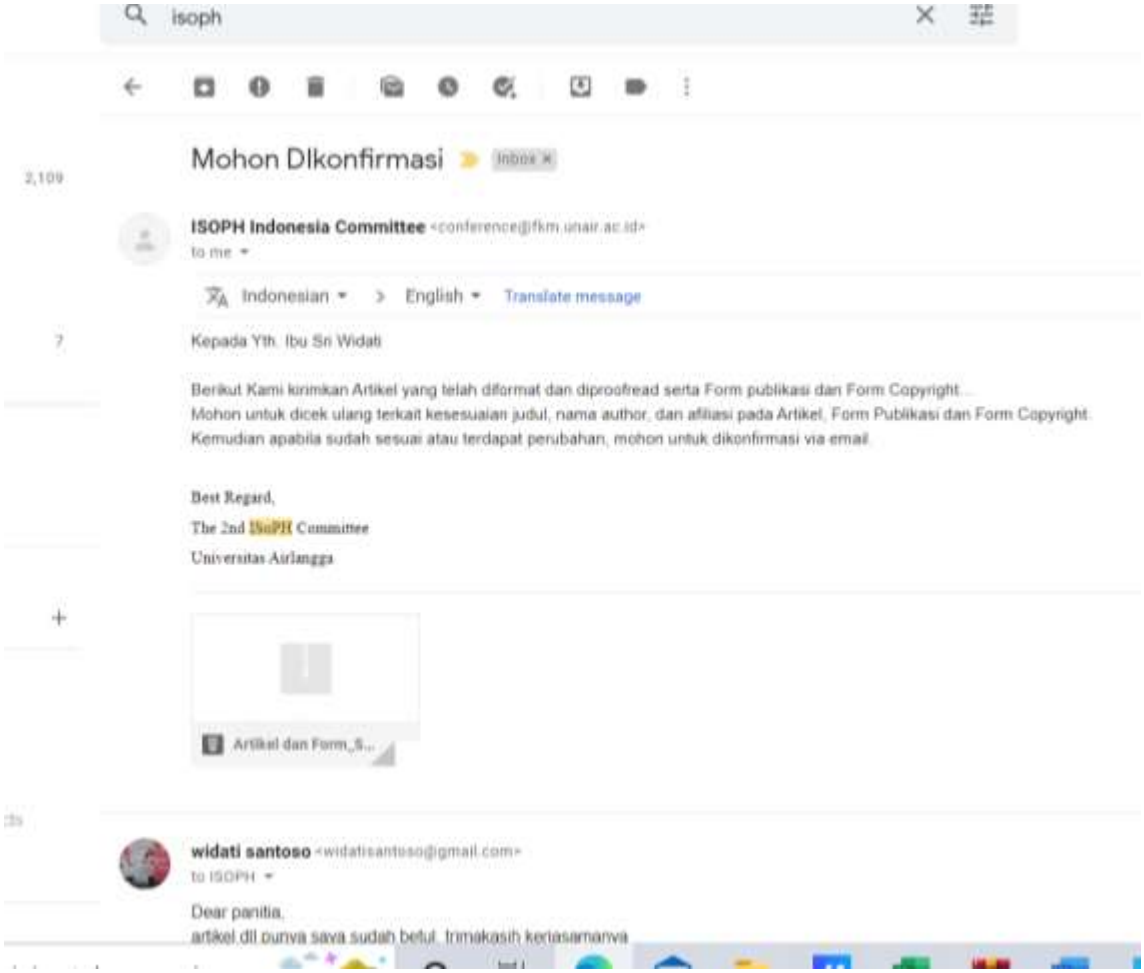
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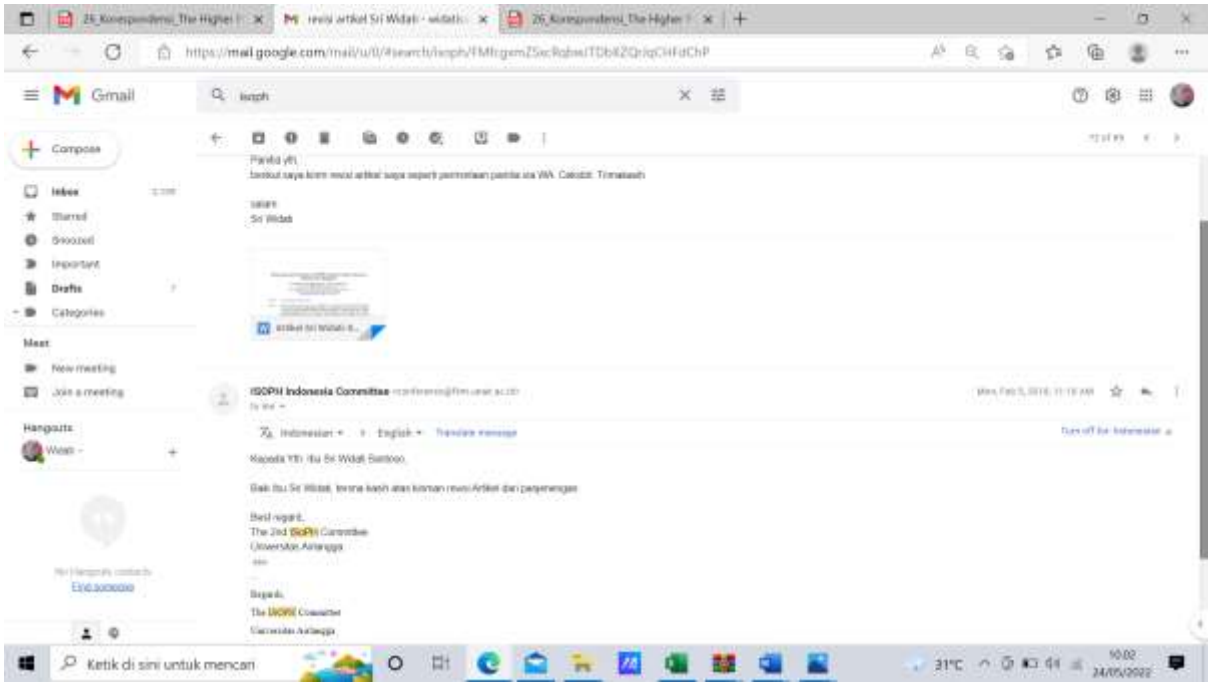
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THE 2ND INTERNATIONAL SYMPOSIUM OF PUBLIC HEALTH
Surabaya. 11th – 12th November 2017

Best Western Papilio Hotel
Jl. Ahmad Yani 176-178 Surabaya Indonesia

TITLE/AUTHOR : **Monitoring and Evaluation of E-DHF Program Usage in Pasuruan City East Java Indonesia / Sri Widati, Rachmah Indawati, Lucia Y. Hendrati**
CATEGORY : **Oral**

Comment to The Author		
Parts	**Revision**	**Status**
• Title	ok	almost
• Introduction and Aims	Background statements should be short but well informed. The research aims should be monitoring and evaluation of online program (E-DHF Program), or evaluation only?	fair
• Method	What kind of method for monitoring (instrument, participants, ect) ?	not yet
• Results	How about the results for monitoring variable?	not yet
• Discussion/Implications	ok	almost
• Keyword	Please add the monitoring and evaluation	almost
Overall Qualification		
☐ Acceptable	☑ Acceptable with revision	☐ Rejected

Monitoring and Evaluation of E-DHF Program Usage in Pasuruan City East Java Indonesia

Sri Widati[1], Rachmah Indawati[2] and Lucia Y. Hendrati[3]
[1]*Department of Health Promotion and Behavior Science, Faculty of Public Health Universitas Airlangga, Mulyorejo, Surabaya, Indonesia*
[2]*Department of Biostatistics and Demography, Faculty of Public Health Universitas Airlangga, Mulyorejo, Surabaya, Indonesia*
[1]*Department of Epidemiology, Faculty of Public Health Universitas Airlangga, Mulyorejo, Surabaya, Indonesia*
widatisantoso@gmail.com, rachmah97@yahoo.com, hendratilucia@yahoo.com

Keywords: e-DHF, outbreaks, Dengue, Pasuruan

Abstract: Outbreaks of Dengue occur because of the lateness in detecting cases. This research aims to create an online program that can speed up the reporting of Dengue cases. It can be detected as early as possible. This research is an action research. Respondents are attendant health centers, clinics, hospitals and the Health Service as much as 14 people. Sampling was done by using a purposive sampling technique. ~~E~~ and the evaluation method ~~using~~ used a questionnaire. In the first meeting, all of the respondents discussed about the E-Dengue Program in a Focus Group Discussion. In the second meeting, they were trained and tried to use the E-Dengue program. In the third meeting, they reported and evaluated the E-Dengue Program. The study was conducted during 11 months. The results of the evaluation showed that e-DHF was effective in identifying and analyzing and predicting Dengue outbreaks both in terms of input, process and output. ~~To~~ All of the respondents said that the E-Dengue program is easy to use and helps them to report quickly. ~~Provider~~ The provider hospital/-clinic, health center, and the Local Health District will ~~do~~ have an active role in the e~~E~~-Dengue program. E-DHF can identify the accuracy of data collected and accelerate the analysis, presentation and reporting of Dengue cases. E-DHF is effective ~~to~~ in detecting outbreaks of ~~dengue~~Dengue.

1 INTRODUCTION

For tropical countries~~,~~ such as Indonesia, cases of Dengue fever (DHF) still ~~becomes~~ become a health problem that causes death. Deaths due to Dengue fever can be caused by several factors such as host, environment and agent. The variables of host factor are the nutritional status, knowledge, health services, and reporting Dengue cases from hospitals and clinics. The variables of environmental factors are the cleanliness, the free water reservoirs of mosquito larvae as well as being free of clothes hanging. Environmental factors ~~is to facilitate~~help the agent to multiply. For the sake of survival, the virus must compete with human cells as a host, especially in ~~meet~~ the need for protein. Competition is highly dependent on the durability of the host, if the durability is low then the course of the disease ~~became~~ becomes more severe and can even cause death (Soegijanto, 2003).

Pasuruan is in the category of outbreaks of Dengue Fever. Until April 2016, there are 11 patients who died because of Dengue. In September 2016 there ~~are~~ were 7 patients with Dengue and one of them died (Hartik, 2016~~). Even~~). Even in the period from August to November 2016, there ~~will b~~were 11 people who died due to Dengue.

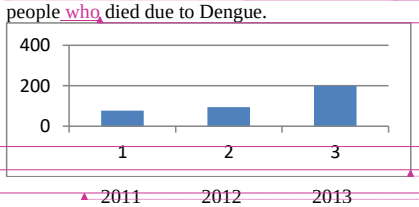

Figure 1: The distribution of ~~dengue~~Dengue cases of Pasuruan.

Over a period of 3 years, the incidence of Dengue hemorrhagic fever (DHF) in the City of Pasuruan ~~tends~~ tended to increase as shown ~~by~~ in Figure 1. In

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2010, as many as 85~~,~~.3% of villages (29 out of 34 villages) in the City of Pasuruan turned into ~~a~~ villages of endemic Dengue. This figure is an increase of 8.8% compared to the previous year. However, in 2012 and 2013 decreased to 58.8% (Dinas Kesehatan Kota Pasuruan, 2014~~).There~~). There are 6 health centers in the City of Pasuruan, which still has a village endemic Dengue, the health center Karangketug, Singkil, Sekargadung, Kebonagung, Bugul Kidul and Kebonsari. As much as 75% of the territory of each puskesmas is considered to have endemic Dengue. ~~Only~~ It is only the health center Trajeng and health Kandangsapi that does not have a village endemic Dengue. This condition is possible because of the still high density of mosquitoes in the City of Pasuruan. In 2013, Numbers Free Flick (ABJ) in all the villages of~~,~~ Pasuruan were still under the target (80%).

Risk factors ~~is one~~are some of the main pieces of information in terms of surveillance, the information about the person, place and time (Departemen Kesehatan RI, 2008~~).One~~). One of the risk factors in the incidence of Dengue is a delay in early detection. Early detection is also a major problem in the City of Pasuruan. The presence of a delay in early detection of Dengue ~~dragging~~ drags the city towards the case of extraordinary ~~E~~events (outbreaks). One of the causes is the slow reporting from upstream to downstream. This occurs because the information system is still done manually~~. R~~ by reporting the incidence ~~submitted~~ in writing every month, so there is a time lag between occurrence and reporting.

The information system is still done manually due to limited resources, unavailability of variable risk factors, as well as weak coordination across related sectors. The Information system ~~can not~~cannot provide the facilities to improve the speed of reporting, the behavior of the treatment, the frequency of draining the water bath and the presence of trash that can hold water that cause the incidence of Dengue.

In this world, there are a wide variety of information systems, ranging from the simplest to the most sophisticated. Today, documentation of the results of the analysis of the system can be in the form of a flowchart, chart and data flow diagram (data flow diagram). A data flow Diagram or data flow diagram (DFD) is a graphical representation of a system that uses a number of forms and symbols to depict the flow of data through a process of relating (McLeod, 2001). T~~t~~he ~~Purpose~~ purpose of this study is to evaluate the effectiveness of the implementation of the e-DHF program in the City of Pasuruan.

2 METHOD

This study is the third stage of the circuit stages of the research within 3 years. This research is action research ~~that is research that~~which focuses on improving the quality of the organization which, in this case, is the Department of Health Pasuruan City as well as the performance of the surveillance system of Dengue fever. The system is developed with the involvement of other agencies as a part of the efforts of the vigilance of early incidence of outbreaks of Dengue fever with partner hospitals/clinics and health centers. The research that has been done in the first year has resulted in the identification of communities and institutions in the City of Pasuruan as the material to make the information system e-DHF. Research in the second year produces Software e-DHF, i.e. an online information system that involves the provider and the department of health, and the ~~Software~~ software have been analyzed and operationalized. The flow of reporting is depicted in ~~figure~~ Figure 2.

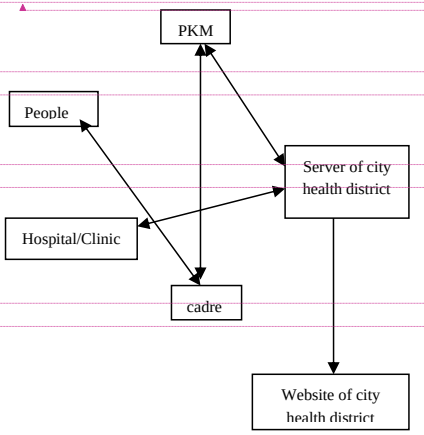

Figure 2: Path of reporting.

The activities of the third year ~~is~~are the monitoring and evaluation of the implementation of the software e-DHF and the rate of such a system includes input, process, and output. Study in the third year is intended to evaluate the implementation of the program e-DHF. Evaluation of the implementation ~~using~~ used a questionnaire. Respondents ~~are~~ were as many as 14 officers of health centers, clinics, hospitals and Health ~~Department as many as 14 people~~. Sampling was done using purposive sampling technique. The study was conducted during the 11

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months from January 2016. There are 3 stages in this phase. Firstly, the respondents tried using and then implementing e-DBD and implementing it, and both of them evaluated the implementation of e-DHF, the second revised e-DHF based on the feedback from the respondents of the study. Once evaluated and revised, then the information system of e-DBD is then implemented. Evaluation and monitoring is done during implementation and the results of the evaluation are presented in the research results. In the third stage there were 3 meetings. In the first meeting, all of the respondents discussed about the E-Dengue Program in a Focus Group Discussion. In the second meeting, they were trained and tried to use the E-Dengue program. In the third meeting, they reported and evaluated the E-Dengue Program.

3 RESULT

This research was conducted in 3 stages. Stage 1 was conducted in the year 2014. Stage 1 is donewas achieved by distributing questionnaires to a sample of 130 families obtained from the software CSurvey. The respondent is the head of the family head (father or mother). Data is was also collected by conducting a FGD. The population of the FGD are all community leaders, religious leaders, and health workers, which is infrom the region of Pasuruan city. The sample for the FGD participants taken took 1 people person from the community leaders, 1 from the religious figures, and 1 from the health workers in the region work puskesmas and representing in each village. Participants of the FGD came from the Village Karangketuk, Petahunan, Randusari, Krapyakrejo, Kebonagung, Purutrejo, Purworejo, Bugul Kidul, Kepel, Tapaan, Going, Krampyangan, Blandongan, Trajeng, Tambaan, contemporary styles, and Ngemplakrejo.

The conclusion of the research from Sstage 1 indicates that the knowledge society in the City of Pasuruan on the prevention and control of Dengue has been good although but community action is still lacking. The results of the research stage one also showed that the Department of Health Pasuruan City has developed a surveillance system by collecting data on the Office Plague and Disasters the Department of Health of the City of Pasuruan. But However, all pelaporan and the data hais not yet been computerized so that the information produced is still yet to be delivered quickly and on time.

During this time, the data collected by the Department of Health is the data for the number of cases and place of the incident. Flow reporting starts from the patient Dengue, which is detected by the local medical center, hospitals/clinics are then reported to the Office of Plague and Disasters at the department Department of healthHealth. The Data data will be followed up with the a command to do fogging in the area of the case. Because the reporting is still done manually, then often this reporting takes a lot of time and, as a result, slow action is performedprogress is made. The results of this study also identify the presence of problems of the input of the information system, namely the problem of the lack of the ability of officers in data processing and the interpretation of data as well as making chart patterns show minimum and maximum as a tool in monitoring the early detection of outbreaks of dengueDengue fever. At the this stage of the process of reporting, accuracy, and completeness of the data collection can be considered still low. Acceptability for information is also still low.

Table 1: The frequency of distribution of the respondents E-DHF fever in the city of Pasuruan.

Institution	F	%
Health DistricDistrict	2	14,3
Hospital	1	7,1
Puskesmas	8	57,1
Clinic	3	21,4
Respondent opinion's about CPR Output	F	%
Need to increase	4	28,6
No need to increase	10	71,4
E-DHF Information about early detection of DHF	F	%
Not Good	1	7,1
Good	13	92,9
Easy to evaluate probabilityprobability to be DHF outbreaks	F	%
No	2	14,3
Yes	12	85,7
Easy to evaluate of E-DHF Coverage	F	%
No	1	7,1
Yes	13	92,9
Easy to evaluate relationship	F	%
No	2	14,3
Yes	12	85,7
Respondent's opinion about the simplicity of E-DHF	F	%
No	1	7,1
Yes	13	92,9
Easy to fill the form of E-DBD	F	%
No	1	7,1
Yes	13	92,9
Easy to send data in E-DHF	F	%
No	1	7,1
Yes	13	92,9

E-DHF could givecould give		
Surveillance Indicator	F	%
No	2	14.3
Yes	12	85.7
Easy to Read Case Fertility Rate	F	%
No	3	21.4
Yes	11	78.6
Easy to Read Incidents Risk	F	%
No	3	21.4
Yes	11	78.6
Easy to Read Graphic	F	%
No	3	21.4
Yes	11	78.6
Easy for Data Analysis	F	%
No	1	7.1
Yes	13	92.9

System the right information, quickly, accurately expected to detect early incidence of

SThe system is used to get the right information, quickly, accurately and is expected to detect early incidence of Dengue, so that it can be done immediately to the prevention of the spread of the cases can be done immediately. With early detection, the incidence of Dengue can be suppressed and its occurrence can be minimized, its occurrence so that the mortality rate can also be decreased.

Research phase 2 was conducted in the year 2015. Research tThe second phase of this research has resulted in the software e-DBD, which can be operationalized by the health care system and public health authority. E-tThis e-DBD system is online with the approach of a cloudecloud computer. Such a system can function inwork to collecting and storing store data and presents the chart of the forecast of minimum and maximum. Thus, the stability of the stored data can be maintained. In addition, with the e-DBD, it is easy to report and more simple. Data processing can be done easily because the system has been complemented by the presentation of chart patterns minimum and maximum. The Output output that is produced automatically generate generating indicators that can be used to establish the extraordinary events based on the criteria of outbreaks.

In stage Stage 3, the study was conducted with the objective to monitor and evaluate whether the software e-DHF can be applied as information systems early warning is a remarkable occurrence of Dengue in the city of Pasuruan. With the special purpose to analyze the results of the application of e-DHF with a systems approach (input, process, output), identify the role as well asand the provider (hospital/clinic, health center, health), as well as identify identifying the timeliness of the data collected (timelines).

Respondents in the study stage 3 from the district District Health Office, health centers and Clinics in Pasuruan. They are the users of the service e-DHF. As shown tin Table 1, the number of respondents derived most littlethe least derived from the hospital because there is only 1 hospital in the City of Pasuruan. Most respondents came from the health center because there are 17 health centers in the City of Pasuruan with the 6 health centers that have the Dengue endemic Dengue.

Most of the respondents consider there is no difficulty either in terms of time and technical program in terms of charging data of e-DHF. They can do because it is part of their duty to report the incidence of Dengue to the Health Department. HoweverHowever, there are 2 respondents who are having difficulty in doing the data entry of e-DHF. This happens because the two respondents did not follow the training that was held. Because there are respondents who do not follow the initial training, then these respondents felt that there was a slight difficulty in operating the e-DHF. As much as 100 percent of the respondents argued that the coverage area of the e-DHF was less extensive because it onlywas only in the City of Pasuruan. All respondents expect that e-DHF can be expanded and enforced in across the whole of East Java, even in Indonesiathroughout Indonesia.

Table 1 shows that the respondents are of the opinion that e-DHF needs to be added a variable so that it increaseincreases the limit of the Output of the CPR. The variable in question is of variable area and distance range. However, Table 1 also shows that the respondents think the information shown e-DHF can be a means to detect outbreaks of dengueDengue fever early.

All respondents argue that by using e-DHF then the process of data collection becomes faster in addition to easier data collection. All respondents also argue that with the e-DHF then the presentation of the data to be precise and easy. In addition to more quickly, easily, and accurately, the respondents also argue that the e-DHF facilitate in performing the comparison, as shown in Table 1.

E-DHF also facilitate the respondents in view of the tendency of the occurrence of dengueDengue fever and gives ease in seeing the coverage the incidence of dengueDengue. According to the respondents, e-DHF can also help the respondents in view of the relationship between the variable occurrence of DHF, as shown in Table 1.

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Most of the respondents are of the opinion that the e-DHF makes it simple and easy ~~in to filling~~ fill in the form. Respondents state that there is no question at all ~~no~~ of having any difficulty in filling the ~~form~~ e-DHF form~~and there is no question at all~~. In terms of data delivery of the e-DHF, the respondents also argue that the process is easy and not difficult. From Table 1, one can also be aware that most of the respondents perceive e-DHF ~~can~~ to be able to produce indicators of the surveillance so, through e-DBD, the possibility of an outbreak of Dengue can be detected ~~the possibility of an outbreak of dengue~~. E-DHF also facilitates in assessing the Case Fertility Rate and Incident Rate.

E-DHF also provides a means of drawing a graph that shows the incidence of Dengue in all regions in Pasuruan. From these Graphs, the reader can see and estimate where ~~it will~~there are ~~be~~ going to be outbreaks of ~~dengue~~Dengue fever. According to the respondents e-DHF, this ease in reading the chart the incidence of Dengue fever makes it~~so it is easy~~ easier ~~in~~ to predict the occurrence of outbreaks.

All respondents argue that the data ~~is~~ stored by e-DHF is stable enough and that e-DHF greatly helps in the data analysis as shown in Table 1. Almost all respondents argued that the e-DHF is able to help them in analyzing the data related to Dengue fever and outbreaks of ~~dengue~~Dengue~~-~~ fever. In general, e-DHF greatly assists officers in detecting an impending outbreak.

Although, overall, e-DHF greatly helps health workers, ~~but~~ there ~~are~~ were 3 respondents who ~~have~~ had difficulty in terms of the availability of a computer in ~~their his~~ offices. ~~The~~ A computer is needed for the purposes of data entry and to read the results. ~~The~~ An effort ~~that~~ has been ~~done is~~made ~~advocate~~to advocate for the institution to provide computer facilities for e-DHF. ~~Other issues that appear in~~ In addition to the availability of computers, another issues that appears is that the internet connection is substandard~~.~~ For institutions ~~that its~~where the internet connection is less smooth~~ly~~, al~~th~~ough this research has provided the modem for them.

All respondents argued that the e-DHF should be continued and developed. They are very supportive to e-DHF ~~applied~~being applied in all regions in Indonesia. All the respondents also argue that the e-DHF that has been made is the right method to help early detection of cases of outbreak of ~~dengue~~Dengue.

4 DISCUSSION

~~The~~ In the natural environment of the tropics, sanitation is poor and the ~~number~~ size of the population as well as low awareness of the community ~~to be~~ are the main reasons why ~~dengue~~Dengue is rampant. Indonesia even ~~occupy~~ occupies the highest position in the case of Dengue disease in Southeast Asia with 10,000 cases in the year 2011 (Zakia, 2012~~). Speed~~). Speed in reporting will affect the speed in an effort to prevent the spread of ~~dengue~~Dengue. Information system-based electronics will speed up the process of reporting information and analysis of the case. As expressed by Hill and Irwin (~~2005)that~~2005), the information system is an orderly combination between people, hardware (machine and media), software (programs and procedures), data (basic data and knowledge), networks (communications media and network support) and data resources that collect~~s~~, transform~~s~~, and disseminate~~s~~ information in an organization.

The needs of information dissemination of ~~dengue~~Dengue fever ~~is~~are required by various parties such as the Department of Health, health centers, Kliik and hospitals. The respondents in this study have met the prerequisites~~. B~~, both in identification and implementation and evaluation has involved various parties from the Department of Health, health centers, ~~Clinics~~ clinics and hospitals in Pasuruan. They are the users of the service e-DHF. Before e-DHF is created, they are identified and then analyzed. The results of the analysis became the basis for the creation of e-DHF.

Coordination between related sectors is very difficult to do when using the manual way which is traditional. The use of information technology or the computer can be applied to facilitate the coordination and communication of data for the relevant institutions. The use of computers also ~~facilitate~~facilitates the analysis of the data. Surplus computers ~~is~~are the speed and effectiveness of processing data and are able to produce various kinds of output expected. Computer technology can also ~~can~~ be used

The e-DHF Program ~~e-DHF~~ recently completed ~~on~~ in the year 2015. Hence, ~~since the~~between 2013 and 2015, no one ~~provider~~ provided a better ~~Hospital~~hospital/clinic, health center or Health Department that plays a role as well. From 2013 to 2015, the data is still blank and not filled back by the provider. The number of tasks and workload ~~other~~ may also be the reason for the provider not to enter the data of the last 3 years.

New ~~at~~ from the beginning of the year 2016, there ~~are~~ were 2 clinics to participate actively in the program e-DHF, i.e. the Clinic Al Aziz and

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Company. , Wwhile other providers, such as health centers and Health Department, only utilize such data for the purposes of the database. NeverthelessNevertheless, the provider has active access to e-DHF and uses it for several purposes such as the reporting of DENGUE cases.

There is some information that is loaded by e-DHF which includes:

- patient name,;
- address,;
- date of identifiable Dengue fever,;
- lab results Dengue fever; and
- the diagnosis.

Information is data that has been processed into a form that is more useful and more meaningful for the recipient, whereas data is a source of information that describes an event. According to Siregar (2006), an information system is the order of the change changing of data into information that can be used for decision making so a variety of actionsit can be done variety action to support health development.

Most of the respondents consider that there is no difficulty either in terms of time and or in terms of technical data charging e-DHF. On the contrary, almost all respondents consider that e-DHF is easy and it helps them in performing the task of reporting. For this is indeed the respondent who was the one who always makes a report of the incidence of DHF per month. They make reports manually and then sent send them manually to the office of the Department of Health. System The feel that the manual system amnual this according to them is difficult because it requires a lot of time that in travel and transportation from the location of heading to the office of the Department of Health. Information The information system for e-DHF this is a system that meets the needs identification, processing and analysis of data that is managerial and could be the strategy of the Department of Health. System e-DHF is in compliance with the character of such a system which is said to Jogiyanto (2005) that the character of the system includeincludes system components, a system boundary, the environment outside the system, liaison system, input system, output system and the target system. It is also in line with Siregar (1992) that a systems approach is the perspective of the object that is learnt as a system. A systems approach is used to study the function of the following system elements of the system in it. A systems approach is also useful to view the issues concerning cross-sectoral. This information system is required by all parties and has become an important part of the prevention of infectious diseases (Witten, 2004)

According to the respondents, processing the data through e-DHF is easily done. System e-DHF has been compiled based on the needs in the field. Already It is already customized to your needs so that data processing does not need to be done manually. Just click a button required in accordance with the purposes of the data processed automatically. Mapping areas of threatened endemic dengueDengue was immediately can immediately be seen and read in the chart. In addition to processing data, which is easy to do, e-DHF also facilitates in presenting the data according to a person, place and time. Stay clicked on the people or the place or the time then the presentation of the data havehas been arranged according to which what is cooled. No We no longer need to do the presentation manually. Thus e-DHF has meet the system requirements as revealed by Siregar (1992) in that the information system of the Science of health records data of a state of health in a place and at a specific time. The System e-DHF system have has also been able to give feedback to planning and control. This is consistent with Witten (2004) and the idea that all systems and subsystems isare interdependent and related to each other. In the feedback system is a form of control system used for planning and control to manage resources.

According to Jogianto (2005), system analysis is the decomposition of the system into system components to identify and evaluate problems and needs, so that improvements can be proposed. From the results of the analysis of the system, it can be evaluated that although e-DBD is easy or not complicated, but training for officers is still needed training for officers before using it. This is shown by the existence of 2 respondents who experience difficulty in doing the data entry of e-DHF. Their difficulty is because two respondents did not follow the training that was held earlier.

In this study, respondents argue that the coverage area of the e-DHF is less extensive because it is only in the City of Pasuruan. Respondents recommend that the e-DHF can beis expanded and enforced in the whole of East Java. With regard to the coverage of the region, actually e-DHF can actually be developed by using the method of PostGIS. PostGIS is a system to store geographic data in the relational database postgreSQL. PostGIS is developed by flattrchattr research apps Research. PsotGIS and creates a spatial object, in the form of points, lines and polygons. This can be stored in the database and then can then be used to detect the occurrence and the possibility of its spread (Mitchell, 2005).

In the e-DHF a variable area and distance range need to be added variable area and distance range.

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The distance range can be developed by using GIS systems (Geographic Information System). This system can capture, store, ~~analyse~~analyze, query and display geographical data (Kang, 2002~~).Thus~~). Thus ~~The~~ the accuracy of the region that is attacked can be identified with the right. This can be developed for further research.

Early detection through e-DHF allows ~~to do~~this to be done, because the data collection process becomes faster and reporting is also faster through e-DHF ~~then the data collection process becomes faster and reporting is also faster~~. The analysis process is also greatly assisted by the automated systems that ~~add up~~compete the case and detect the incidence of cases per region. In ~~addition~~addition, ~~it method~~ the graphs are presented to make the analysis easier and faster.

Various trends that will occur can also be ~~analysed~~analyzed through the E-DHF. E-DHF has been designed to see the trend. The relationship between variables can be seen in this system. The addition of GIS ~~and the GIS~~ will ~~facilitate~~ help the officers to analyze and decide the next action to be ~~done~~taken. In addition, the simplicity and ease of an information system became an important part of the smooth running of the system. ~~Program~~ The e-DHF program is relatively simple and easy in filling the form. There is no difficulty that respondents perceived except in the case of procurement of computers and the ~~wifi~~Wi-Fi network. Procurement of computers and the ~~wifi~~Wi-Fi network is a burden that must be borne by each institution. Budgeting should begin to be held next year. Efforts to advocate for the institution has been done. For institutions ~~that its~~whose internet connection is less smooth~~ly~~, they have assisted with the provision of the modem through research.

In terms of speed of data collection, e-DHF is very rapid. The e-DHF system is an online media that connects one institution with other institutions. The same as the characteristics of the other online media, it is reasonable if the e-DHF plays a ~~role~~ fast role in terms of speed of data collection. Institutions do not need to meet offline to report~~ing~~. ~~Does~~ It does not require a lot of time and a certain place so the data is immediately reported well and to quickly and accurately.

Program e-DHF can also produce indicators of surveillance. This is because the e-DHF also allow and facilitate in assessing the Case Fertility Rate and Incident Rate. The case of the death and the incident can be accumulated, analyzed and used as a prediction of the incidence of the next. In addition, e ~~-~~DHF is stable enough. The stability of a program is needed so that the collected data is complete and analysis can be done with the right information.

Dignan (1992) says that there are three basic concepts of evaluation~~.~~:

1. ~~The first, e~~Evaluation is the investigation or analysis of a program that has been run.
2. ~~Second, T~~the evaluation in principle focus on the identification of program performance.
3. ~~Third,~~ Evaluation is done based on the standard of comparison, depending on the initial design adjust the objectives of the program.

The results of the evaluation are based on the theory of Dignan. ~~shows a~~All the results of this study show that e-~~dengue~~Dengue should be continued and developed. Program e-DHF can also ~~possible to~~ be applied in all regions in East Java, even in Indonesia. From all these results, it could be concluded that e-DHF is very useful for the community and health workers. E-DHF is seen to be able to help early detection of cases of outbreak of ~~dengue~~Dengue fever in the City of Pasuruan.

5 CONCLUSIONS

E-DHF is effective in recognizing and analyzing as well as predicting the occurrence of outbreaks of ~~dengue~~Dengue fever ~~both~~ in terms of input, process and output. The ~~P~~provider Hospital/clinic, health center, and the Department of Health all want to play an active role in the program e-DHF. E-DHF can identify the accuracy of the data collected and quick in analysis, presentation and reporting of ~~dengue~~Dengue cases. ~~Recommendations~~ The recommendation from this study is that the Department of Health Pasuruan City should apply e-DHF as an effort to assist in the early detection of cases of outbreak of ~~dengue~~Dengue fever. Thus the expected case of outbreaks of ~~dengue~~Dengue fever decreased and the endemic of Dengue is eliminated from ~~City~~the City of Pasuruan ~~is eliminated from endemic Dengue~~.

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