



THE IMPLEMENTATION OF THE DENGUE HEMORRHAGIC FEVER (DHF) ERADICATION PROGRAM

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ARTICLE INFO

Article History:

Received : April 14, 2024

Accepted : May 03, 2024

Published: May 30, 2024

DOI:

<https://doi.org/10.26553/jikm.2024.15.1.132-148>

Available online at

<http://ejournal.fkm.unsri.ac.id/index.php/jikm>

ABSTRACT

Billions of people living in wet tropical climates are at risk of suffering from Dengue Hemorrhagic Fever. In 2019, until mid-December throughout Indonesia, there were 71,668 people with dengue fever, and 641 of them died. Indragiri Hulu Regency is an area with a wet tropical climate and it becomes an endemic area Rengat District. This study aims to analyze of the implementation of the Dengue Hemorrhagic Fever eradication program. The type of research is analytical qualitative with case study design. The research informant technique used purposive sampling with 11 people. From the results of research and observations, it is shown that human resources are limited in facilities, not enough infrastructure is available, funds are still limited, from fogging carried out when cases occur, Eradication of Mosquito Nests. Dengue Hemorrhagic Fever is still not actively carried out by the community, abate powder is not evenly distributed to the community, Counseling that is still interested in carrying out Eradication of Mosquito Nests for Dengue Hemorrhagic Fever. Minimally carried out and public awareness about the condition of the environment around the community which is still not clean, causing the development of dengue mosquito larvae. It can be concluded that the Dengue Hemorrhagic Fever eradication program at the Sipayung Health Center still needs to be improved. It is expected to make program innovations to increase public interest in carrying out Eradication of Mosquito Nests for Dengue Hemorrhagic Fever.

Keywords: dengue hemorrhagic fever, dengue eradication program, environmental mosquito nest eradication

Introduction

Indonesia has a tropical climate and is not spared from attacks by Dengue Hemorrhagic Fever (DHF). Especially in the rainy season, dengue fever becomes a severe incident. In a short time, dengue fever can cause many fatalities and is still a public health problem. Dengue infection has been endemic in Indonesia for two centuries, finally from mild symptoms and self-limiting disease. Several years lastly, this disease is getting worse as dengue hemorrhagic fever and the frequency of external events usually increases.¹ Dengue Hemorrhagic Fever (DHF) is a disease caused by the dengue virus, which enters the human bloodstream through the bite of a mosquito from the *Aedes* genus, for example, *Aedes aegypti* or *Aedes albopictus*. Dengue fever can appear throughout the year and can attack all age groups. This disease is related to conditions, environment, and community behavior.²

The number of people who died is far fewer cases than human deaths due to bird flu or avian influenza.³ In the world, it is estimated that the risk of dengue fever reaches 2.5 to 3 billion people living in urban areas in tropical and subtropical climates. At this time, dengue is estimated only to be a problem that arises in urban areas; in several rural areas in Southeast Asia, this problem is a significant problem. It is estimated that there are 100 million cases of fever in the Southeast Asia region. Dengue Hemorrhage Fever (DHF) occurs every year. It accounts for 500,000 cases of Dengue Hemorrhagic Fever (DHF), which requires treatment at home sick, and 90% of sufferers are children aged less than 15 years, with the death rate due to DHF reaching 5%, with an estimated 25,000 deaths each year.⁴

In 2019, until mid-December, Indonesia recorded 71,668 people suffering from dengue fever, and 641 of them died. This figure is lower than in 2018, with a total of 112,511 sufferers with deaths in the world, as many as 871 people. Although, in general, it has experienced a decline in dengue cases in 2019, several provinces have experienced an increase in dengue cases, including North Sumatra, Riau, DKI Jakarta, West Kalimantan, North Sulawesi, Bali, and North Kalimantan. Riau Province, especially Indragiri Hulu Regency, is an area where the climate is wet and tropical, so there are cases of dengue fever every year. The DHF program has long been implemented to support efforts controlling dengue fever in Indragiri Hulu Regency. However, based on reports of DHF cases during the last 3 (three) years, from 2019-2021, show that There are still some cases of dengue fever in every sub-district, and some are becoming an endemic area, one of which is in Rengat District.⁵

Dengue Hemorrhagic Fever (DHF) is one of the health problems in Indragiri Hulu Regency that tends to cause community concerns. Because the course of the disease is swift and can cause death in a short time and can cause extraordinary events (*Kejadian Luar Biasa* or KLB) or epidemics. All sub-districts in Indragiri Hulu Regency are endemic areas for dengue fever, where every year, there are cases of dengue fever. Extraordinary events are occurrences or significant

increases in the epidemiological incidence of morbidity and death in an area over a certain period, and these conditions can lead to outbreaks. At the same time, endemic is a disease outbreak that is consistently present but limited to specific regions. This makes the disease spread and level of the spread predictable.⁶

Research on program implementation studies eradication of the vector of DHF in the working area of the Tamalate Health Center, Makassar City, for the 2011-2016 period shows that there are many supporting and inhibiting factors. There is a lack of activities to implement the dengue eradication program community support and participation, seasonal patterns, provision of abate powder which does not match the dose frequency, the limited energy possessed by the person Community Health Center, and funding factors.⁷ Efforts to eradicate dengue hemorrhagic fever are being carried out by implementing dengue fever control activities, namely Surveillance Epidemiology, Case Finding and Management, Vector Control, Increased Community participation, Early Alert System and Outbreak Management, Counseling, Partnerships/work networks, Human Resource Development, Research and surveys, Monitoring and evaluation. Eradication efforts DHF is focused on mobilizing community potential to participate in eradicating dengue mosquito nests (*Pemberantasan Sarang Nyamuk* or PSN) dengue fever through 3M Plus (3M: *Menguras* (draining), *Menutup* (closing), *Mendaur ulang* (recycling used goods), and sowing larvicide (urbanization), raising larvae-eating fish, using wire mesh, avoid hanging clothes in the room, wear a mosquito net and use anti-mosquito medicine/lotion).⁸ Considering the importance of public awareness of the environment to avoid the spread of Dengue Hemorrhagic Fever and almost Every year dengue fever cases claim lives, so this study aims to analyze of the implementation of the Dengue Hemorrhagic Fever (DHF) eradication program at the Sipayung Community Health Center Rengat District, Indragiri Hulu Regency in 2022.

Methods

The design type of research used in this research uses an analytical-qualitative approach with a case study design., which is definitely visible data.⁹ Case study is a process of investigation or in-depth examination carried out intensively, detailed, and details on a particular event or analyzing a case that exists. The research method uses in-depth interviews and field observations of informants so that they know more clearly and more in-depth regarding the implementation of the Dengue Fever Eradication Program Dengue (DHF) at the Sipayung Community Health Center, Rengat District, Regency Upper Indragiri. Research participants were selected using purposive sampling, namely the technique used to select informants who were willing and able to provide information related to the research topic. The data collection process involved a total of 11 informants, consisting of 4 main informants and 7 support informants. The information of the informant is presented in Table 1.

Data analysis was carried out qualitatively. Qualitative data is presented in the form of interview results, event notes from observations, photos, video, and audio of events. The primary data is supplemented with secondary data to crosscheck and then analyze the factual events supported by the data. In qualitative research, data analysis is carried out from the beginning of the study and during the research process. Data is obtained, and then are collected for systematic processing. Qualitative data analysis techniques are carried out by reviewing all the data collected, studying the data, reviewing, and arranging them in units, which are then categorized at the next stage and checked for validity and as well interpreted with analysis according to your reasoning abilities researchers to make research conclusions.

There are several activities in data analysis. Namely, reduction can be interpreted as a process of selection, concentration, attention to simplification, abstraction, and transformation of data from written notes in the field. Data reduction takes place continuously and is in line with the implementation of research.⁹ Of course, this data reduction process doesn't have to wait. Collect all the data first before carrying out the analysis; it can be done since the data is still small. Apart from making it more accessible, researcher work makes it easier for researchers to categorize existing data. If this has been done, the data will be easily included in groups created by researchers. Data reduction means summarizing and focusing on things, which is essential in research. It looks for themes and patterns that provide a clear picture and makes it easier for researchers to look for further data and search for it when necessary.¹⁰

Data presentation is a collection of structured information that allows conclusions to be drawn and action to be drawn. Data reduction activities and presentation processes are related to the interactive model data analysis process.¹¹ Thus, these two processes take place throughout the process. The research is ongoing and will continue after the final results report research is compiled. The researcher understands the data obtained during the research made in the form of description or text that is narrative, chart, or table form.

Table 1. Research Informant

Information	Subject Research	Code Informant	Total
Informant Main	1) Head of Community Health Center Sipayung	IU 1	1 Person
	2) PC of DHF Program Sipayung Health Center	IU 2	1 Person
	3) PC of DHF Program at the Department of Health	IU 3	1 Person
	4) Surveillance Officer Community Health Center Epidemiology Sipayung	IU 4	1 Person
Informant Support	1) Village Head	IP 1	1 Person
	2) Jumantik cadres	IP K 1,2	2 Person
	3) Society that has been affected by dengue fever	IP M1,2,3,4	4 Person
Total Research Informants			11 Person

Notes: PC = Person in Charge; Flick Lighter (*Juru Pemantik Jentik* or Jumantik)

Results

Human Resources (HR) are significant; they cannot be separated from an organization, whether an institution or a company. Regarding input in the implementation of the dengue fever eradication program at the Sipayung District Health Center, the risk can be ascertained from interviews with informants the following:

"Epidemiological surveillance personnel, laboratory, dengue fever program officer's sanitarian health center, community health workers, health service dengue fever program administrators in the field of Prevention and eradication of infectious diseases (Pencegahan dan Pemberantasan Penyakit Menular or P2M) services, sometimes the head of the Sipayung Community Health Center participates, and with the village government or village government for program activities eradication of dengue fever" (IU-3).

"Those involved in the PSN program, surveillance officers, fogging officers, Head of DHF program at the community health center, community health officer, health service person P2M along with PC DHF, and if I have time, I will monitor it." (IU-1).

"If that's the case, usually the community health center is the one who goes to the PC Program section DHF, also from the health department, village heads, and if there is time. As a Jumantik cadre, I also came down." (IP-K1).

"What I know is from the community health center, the village head's health service." (IP-M1).

Based on the interview results, it can be seen that health workers involved in implementing the program eradicating dengue fever at the Sipayung Community Health Center are adequate; this is a current problem. This lack of Human Resources (HR) for PSN DHF program officers is still an extensive dual duty. Then based on results and field observations through characters, from the informant's perspective, there are basic educational aspects that are not suitable for him. For example, surveillance officers and PJs for dengue fever programs at community health centers and offices are nurses, not epidemiologists/public health experts. After that, based on in-depth interviews and field observations, it was concluded that there still needs to be more health workers in HR community health centers to support the implementation of the PSN dengue program at Sipayung Health Center.

Availability of facilities and infrastructure for program implementation eradication of Dengue Hemorrhagic Fever (DHF) in Community Health Centers Sipayung, Rengat District, Indragiri Hulu Regency, still not enough available can be seen from interviews with the following informants:

"The available facilities and infrastructure are sufficient abate powder, fogging machine, fogging liquid, mosquito net leaflet, PSN tool kit which does not have a deck for the Sipayung DHF Community Health Center." (IU-3).

"In terms of infrastructure, we have fogging equipment, fogging machines, fogging fluid, leaflets about dengue fever, dengue fever posters, calculus powder, mosquito nets, PSN kit tool" (IU-4).

"Usually, the abate powder is given from the community health center" (IP-1).

"Now Abate Powder is still being given." (IP-K2)

"So, the facilities are still incomplete. Because "Abate powder is given only after fogging." (IPM3).

Based on the results of the interview, the facilities and the infrastructure available at the Sipayung Community Health Center are not sufficiently available. There are still facilities that the community health center does not yet have supporting the DHF program for the use of PSN kits for Jumantik cadres, which has not been given because there has been no acceptance from the department, so if larval monitoring does not use soup, apart from that, a fogging machine which often crashes because it is rarely used. Based on the results of field observations, it was found that there is still limited availability of PSN kits for Jumantik cadres to go into the field if you carry out larvae checks at people's homes affected by a case of dengue fever.

Related to funds for implementing the eradication program Dengue Hemorrhagic Fever (DHF) at the Sipayung District Health Center, the risk can be ascertained from interviews with informants the following:

"Funds for dengue fever from Health Operational Assistance (Bantuan Operasional Kesehatan or BOK).."(IU-1)

"The funds come from BOK. Meanwhile, Fogging." (IU-2)

"Funds for epidemiological investigations from BOK, for fuel oil fogging and other." (IU-3)

"Funds for dengue fever activities from BOK." (IU-4)

Based on the interview results, it can be seen that funding for the dengue eradication program is from BOK. Meanwhile, for fogging, abate powder and others from JKN are used for the education program carried out by the Community Health Center Sipayung, but so far, the funding has been to support activities that eradication of dengue fever is still lacking and needs to be increased.

Regarding the process of implementing the program eradication of Dengue Hemorrhagic Fever (DHF) in Community Health Centers Sipayung, Rengat District, Indragiri Hulu Regency can This is known from interviews with the following informants:

"The dengue eradication program at the Sipayung Community Health Center includes Abatization, PSN, Extension, and Periodic Larval Inspection (Pemeriksaan Jentik Berkala or PJB). If it's from the department, it's the same Counseling, fogging; when it comes to PSN, people usually come from community health centers Counseling during Integrated Service Post (Pos Pelayanan Terpadu or Posyandu)." (IU-3)

"As far as I know, the program is fogging. Later, if the community health center wants a new fogging report to us. But there is also counseling every now and then. However, it's also rarely about dengue fever." (IP-1)

"Program from the first aid community health center for dengue sufferers. As for other programs, PSN, Periodic Larval Inspection (Pemeriksaan Jentik Berkala PJB), and fogging are the best if there are cases. If there is a reduction, we will give you time to educate and explain abate function". (IP-K2)

"The community health center program checks for larvae again during the dengue season." (IP-M3)

Based on the results of the interview, it can be seen that there is abatization when Counseling about dengue fever and implementation is given. This is only done in schools and not in public places. Based on the results of field observations, it was found that powder Abate's use is still not appropriate for some people. There are still people selling abate powder that they should get provided free of charge.

Regarding how PSN DHF activities are implemented, the Dengue Hemorrhagic Fever (DHF) eradication program in Sipayung Health Center, Rengat District, Indragiri Hulu Regency This is known from interviews with the following informants:

"If, for example, we find larvae at home, we suspect there is dengue fever, and we will check several houses to see if the larvae are positive too. Only after that do we provide deck counseling, 3M, PSN, and fogging, which is usually deck. Even if, for example, there is already a case of dengue fever, "We will immediately report it to the department so that fogging can be carried out." (IU-3)

"3M counseling, PSN, fogging is usually the deck. Even if, for example, If, there is a case of dengue fever, we will immediately report it to the department fogging was carried out." (IU-4)

"The program from the community health center is PSN DBD." (IP-1)

"There is counseling; we also play a role in PSN counseling dengue fever." (IP-K1)

"We don't even understand PSN DBD." (IP-M2)

"The DHF PSN that we understand is only rarely followed." (IP-M4)

From the results of the interview, it was found that PSN DBD was implemented around the houses of residents affected by dengue cases; this was also carried out after reports from residents. The 3M program could be running better because people are still reluctant to be actively involved in the dengue program. Based on the results of field observations, it was found that support from the community is still relatively low for the implementation of the PSN DHF program in the Rengat District.

Inspection periodic flick for already done by Public health center periodically. While based on the results of field observations, it was found that Officer Jumantik still needs to implement training activities. This has never been done to Jumantik cadres other than that. Society still reluctant to give case related reports dengue fever occurs in their environment and refused to checked his house. Regarding the process of larva monitoring activities, periodically implementing the Dengue Fever eradication program Dengue (DHF) at the Sipayung Community Health Center is known from an interview with the following informants:

"To monitor larvae, community health centers routinely go to homes residents to look at water reservoirs, bathtubs, drums, and water containers, as well as used rubbish such as cans, whether there are larvae or not..." (IU-1)

"Monitoring of larvae is carried out regularly and sometimes also. Come down and join the team to monitor larvae in residents' homes. If you report them, I don't know whether or not you always know about reporting PE." (IU-4)

"To monitor the larvae, cadres go out once a week to a community health center that goes to people's homes." (IP-1)

"We submit our report to the community health center directly." (IP-K2)

"There are people who monitor it, but only occasionally." (IP-M1)

"There are, but very rare." (IP-M2)

"I was never monitored." (IP-M4)

Based on observation field, Counseling (extension program) was carried out amidst society very minimally, and this was only done when the case occurred Just dengue fever. While based on interview, extension program about dengue fever rarely done on community. Regarding the process of implementing extension activities for the Dengue Hemorrhagic Fever (DHF) eradication program in Sipayung Health Center, Rengat District, Indragiri Hulu Regency can be known from interview questions with the following informants:

"There should be, but there hasn't been any counseling for a long time." (IU-2)

"There is counseling if dengue cases increase, but this year we haven't done anything yet. We don't have any funds for counseling yet." (IU-3)

"As for counseling, usually it's mostly done at posyandu regarding toddler nutrition." (IP-K1)

"For dengue fever, counseling is often done in schools." (IP-K2)

"Never had counseling." (IP-M1)

"There are, but very rare." (IP-M2)

"I never attended counseling, even though it was held." (IP-M4)

Regarding the output in implementing the eradication program Dengue Hemorrhagic Fever (DHF) at the Sipayung District Health Center Rengat Indragiri Hulu Regency for the success of the

program in implementation of the dengue fever program at the Sipayung Community Health Center can be found out from interview questions with the following informants:

"The community is not very active because we don't want to do epidemiologic investigations, for example, checks for larvae like that, people sometimes have them.

"Whether we want it or not, sometimes it's difficult for us to take samples." (IU-2)

"Yes, if we have provided counseling, they will be active at first. If other people don't participate, they will be lazy again." (IU-4)

"So far the program has been running well, but the community lack of participation, even though we already announced it." (IP-1)

"Overall the program is working." (IP- K2)

"The program exists, but there must be improvements." (IP-M1)

"I don't agree that the dengue fever program is successful." (IP-M4)

From the statement on Table 2, it can be seen that community involvement in supporting the dengue eradication program at the Sipayung Community Health Center is still very lacking, this is due to public awareness regarding health is still low in mutual cooperation participation carried out in residential areas, not many people participated role. There are also people who participate, but only just a little clean your home environment. For mutual cooperation programs it only runs once a month but the people involved don't many. Based on the results of field observations, it was found that low community involvement. They are afraid of dengue fever, however dirty environment. Apart from that, there needs to be more public awareness of the importance of a clean environment.

Table 2. Program Success Triangulation Matrix

Interview Deep	Observation Field	Conclusion	Suggestion
Success deep program Eradication dengue fever in Public health center Sipayung not yet successful (IU 1,2,3,4 ,GPA1,GPA 1.2, HDI 1,2,3,4)	Involvement low society. They're afraid same disease dengue fever though dirty environment.	Lack of awareness Public will important environment clean.	Public health center Sipayung is a must able to make program that able to invite society for more caring dengue management in the environment of the place live them.

Regarding the output in implementing the eradication program Dengue Hemorrhagic Fever (DHF) at the Sipayung District Health Center Rengat Indragiri Hulu Regency for internal program evaluation the implementation of the dengue fever program at the Sipayung Community Health Center can be found from interview questions with the following informants:

"If you do an evaluation every month there is, the first of every month is Wednesday the first week." (IU-2)

"As for evaluating the report given by the DHF officer, that is usually case reports, PSN, Periodic Larval Inspection (Pemeriksaan Jentik Berkala or PJB) deck. If you look directly at we never use the field, mostly the community health center people." (IU-3)

"From the report we gave, that person assessed it. If it goes down spaciousness has never occurred to me." (IU-4)

"The program evaluation went well." (IP-1)

" Overall the program is running well although still there is a shortage." (IP-K2,)

"There is program evaluation, but there must be improvements." (IP-M1)

From the statement on Table 3, community participation is very involved important in supporting the success of the dengue fever program by maintaining the surrounding environment does not seem to store used goods such as bottles used, used cans which will become a breeding ground for mosquitoes dengue fever. Apart from that, public awareness to actively carry out the 3M movement Less pluses like draining bathtubs and reservoirs water. Then based on the results of field observations, it was found that it was weak supervision and evaluation carried out by the Regency Government Indragiri Hulu in implementing the dengue fever program.

Table 3. Program Evaluation Triangulation Matrix

Interview Deep	Observation Field	Conclusion	Suggestion
Program evaluation in Eradication DHF at the Community Health Center Sipayung seen from case report (IU 1,2,3,4, GPA1, GPA 1.2, HDI 1,2,3,4)	Evaluate each the moon is there, every start Wednesday month Sunday first and just nature report	Weak supervision and evaluation which is conducted by Government Regency Upper Indragiri in implementation dengue program.	Implementation evaluation is a must capable give deep solution finish problem Which hinder walking dengue program

Regarding how to implement the DHF eradication program at the Sipayung Community Health Center, Rengat District Indragiri Hulu Regency can be identified from interview questions with the following informant:

"As a whole, most sub-district people know, because they know better when the community is involved or not." (IU-1)

"When it comes to community involvement, this is still a bit difficult. They are afraid of dengue fever but their environment is still dirty." (IU-3)

"Yes, if we have provided counseling, they will be active at first. If other people don't participate, they will be lazy again." (IU-4)

"People don't participate enough." (IP)

"The dengue fever program here has not gone well, the proof is in this case Dengue fever is still there." (IP-M2, Society)

Based on the results of field observations, it was found that still not yet implemented well, effectively and efficiently, implementation is weak DHF program carried out by the Sipayung

Community Health Center in implementation dengue fever program due to a lack of awareness and will community about the importance of a clean environment and the importance of handling it dengue fever. During this time, people tend to change their clean lifestyle if there has been a dengue fever outbreak in the area where they live.

Regarding the obstacles in implementing the program eradication of DHF at the Sipayung Community Health Center Rengat District, Indragiri Hulu Regency can be found from interview questions with the following informants:

"for the current obstacles to community participation in maintaining environment, low public education." (IU-1)

"We often encounter obstacles from public awareness to protect the environment, do not actively carry out PSN movements DHF, knowledge among the community is still low and lacking funds for the dengue fever prevention program." (IU-3)

"There is fragile public awareness about living cleanly and supports the community health center program." (IU-4)

"The obstacle that mothers often encounter is public awareness protecting the environment, non-routine PSN movements" (IP-K1)

Based on the results of interviews and field observations, it was obtained that there are still obstacles in implementing the dengue fever program in Sipayung Health Center has resulted in the program not yet being implemented DHF well, effectively and efficiently as well as weak program implementation DHF carried out by the Sipayung Community Health Center is due to obstacles such as lack of funds for dengue prevention, Lack of public awareness for clean living, still lacking PSN movement, implementation of coordination that could be better and low public education.

Discussion

Human Resources (HR) involved in activities eradication of Dengue Hemorrhagic Fever (DHF) in Community Health Centers Sipayung, Rengat District, Indragiri Hulu Regency Includes person in charge of dengue fever with educational background environmental health, responsible for epidemiological surveillance with a nursing educational background.¹² As for the existing human resources other than health workers who take part in implementing activities dengue eradication is a jumantik cadre with a graduate background senior high school and *Neighborhood Association (Rukun Tetangga or RT) / Citizens Association (Rukun Warga or RW)* who have the authority and power to mobilize people in their area to remember to eradicating dengue fever must involve all parties, including officers health, jumantik cadres, heads of environment and community.¹³ According to Muninjaya states that insight and cadres' work motivation should continue to be fostered so that their tasks are carried out assigned to them can be carried out

optimally. They must be made aware that their task is critical, it means to them development of citizens' health so that their task is not solely for interest program health.¹⁴

Based on the results of the interview, HR used to eradicate dengue fever is not as appropriate as it should be. This is because there are still human resources that are not used and play a role double to implement the dengue eradication program. According to Directorate General of human resources (HR) for eradication DHF includes health workers from the Health Service and Community Health Centers which includes implementing dengue case surveillance, cadres/Empowering Family Welfare (*Pemberdayaan Kesejahteraan Keluarga* or PKK) / Flick Lighter (*Juru Pemantik Jentik* or Jumantik), Community Health Center DHF program manager, DHF program manager at the Department District/City Health, spraying officers for fogging as well community leaders and the general Public.

Facilities and infrastructure available to carry out activities DHF eradication at the Sipayung Community Health Center still needs to be improved.¹⁵ There is no particular infrastructure used to do this dengue eradication activities due to dengue eradication activities not carried out in the Community Health Centers (*Pusat Kesehatan Masyarakat* or *Puskesmas*) building. Infrastructure used Activities include posyandu and mosque as infrastructure for extension, in other words, the infrastructure used is not facilities owned by the health center.

Facilities owned by the Sipayung Community Health Center for activities eradication of dengue fever is abate powder, leaflets and posters the number is minimal. It is said to be limited because the leaflet is distributed to the Public rather than for education, while posters about the 3M Plus movement are not available at the *Puskesmas*.¹⁶ The importance of this poster about 3M Plus is that it can reach people people who do not know information about the 3M Plus movement. On in fact, for the implementation of outreach activities about dengue fever in Sipayung Community Health Center working area, Community Health Center officers do not use leaflets or posters which are available tools available.¹⁷

Research inadequate facilities can cause late implementation of activities and activities not carried out appropriately existing standards. Facilities are a critical support for activities It is essential that activities can be carried out in accordance with the stated objectives set.¹⁸ The research results show that the facilities used for DHF eradication at the Sipayung Community Health Center needs to be improved. Wrong There is only one fogging machine available at the Community Health Center even then it was in a damaged condition. So far, fogging has been carried out using a fogging machine available from the Health Service, However, fogging machines are still available at the Health Service limited. Therefore, *Puskesmas* needs to equip all the facilities necessary to carry out dengue prevention activities in order to be able to running optimally.

In a program, funds are one of the resources which is very important in the success of a program. From the results interviews with all informants stated that funds were available in eradicating dengue fever at the Sipayung Community Health Center is funding which comes from DAK BOK and JKN funds. Based on interviews with the Head of the Community Health Center Sipayung BOK funds at the Sipayung Community Health Center were used for Counseling carried out in schools, counseling What is carried out is not only education about dengue fever, there is also other education such as nutrition for school children, drugs and dangers cigarette.¹⁸ Counseling is carried out only a few months, not every year Counseling can be done about 3 to 4 times. This is due to due to lack of funding for health workers in the program.

According to Jowett investigation of expenditure on services Health is helpful as a starting point in answering questions about financial access to health services, allocation efficiency resources, and financial sustainability of procurement service. By analyzing health financing based on financing scheme, it can be seen that the financial sustainability of the service procurement, analysis based on service function health, efficiency of resource allocation and looking at anyone funds are provided to provide health services.¹⁹

In the opinion of researchers, BOK funds at the Sipayung Community Health Center It should not only be for extension activities, it should be Existing funds can be used to complete the facilities needed by community health centers such as LCD for counseling and facilities laboratory for dengue examination.¹⁹ Sipayung Health Center should create a budget for program implementation eradicate dengue fever and submit a proposal to the Department Indragiri Hulu District Health to allocate funds operations to help with limited program operational costs eradication of dengue fever at the Sipayung Community Health Center. To get results for each performance, the organization must invest in existing activities. Individuals or teams will be lacking useless if there is no financial support to do the work.²⁰

Based on the results of interviews with all informants fogging is a program from the Health Service. Fumigation (fogging) was carried out by the Indragiri Hulu District Health Service if a dengue fever case has been found in the work area of the health center. This fogging is usually carried out if it has been done dengue fever cases are discovered based on the results of supporting examinations. A positive laboratory indicates that the patient is suffering from dengue fever.

According to Sungkar stated that fumigation too must be followed by abatement and PSN because fumigation is only effective for kills adult mosquitoes. If it is not followed by abatization and PSN, *Aedes aegypti* larvae cannot be eradicated and will grow become adult mosquitoes. Larvicide used for abatization (temephos) has a residual effect for 2-3 months. So, if not Abatization is carried out four times for a year of mosquito population will be controlled and can be suppressed as low as possible.²¹

In the researcher's opinion, the implementation of fogging must continue promoted by the Sipayung Community Health Center in order to eradicate dengue fever disease that is developing in the community, regardless of level Cases are still low. Current officers must remain alert and carry out fogging activities. Apart from that, it is used for fogging This must be done regularly once a week in the rainy season and once a month once in the regular season, this needs to be done in anticipation the occurrence of a reasonably large dengue fever outbreak.

Based on the results of interviews conducted by all informants stated that the administration of abate powder in the work area The Sipayung Community Health Center was carried out when a case of dengue fever was found and at Posyandu. The abatization is carried out by officers Community health centers assisted by trained juantik cadres. As for abatization program activities carried out by the Internal Health Center administering abate powder when a case of dengue fever is discovered. Abate powder is usually given at posyandu, on public places such as schools, mosques, churches etc. Should The abatement program was implemented before the case was discovered DHF, in order to reduce the proliferation of more dengue vectors beginning.²²

Currently, the strategy for eradicating dengue fever is at the Sipayung Community Health Center including by eradicating *Aedes aegypti* before the season transmission to limit the spread of dengue fever and prevent outbreaks. This eradication was carried out by mobilizing the community to eliminate mosquito nests (PSN) known as Clean Friday program.²³

Research stated that the increase public awareness is critical to support success PSN is the cheapest effort to eradicate dengue fever. Therefore, ongoing Counseling is needed to encourage the Public to become more aware of the dangers of dengue fever and the importance of PSN. Research stated that there is a lack of participation and cooperation between community members is a significant factor in the difficulty of controlling dengue fever.²³

In the researcher's opinion, there needs to be more community participation. This can be seen from the fact that there are people who are not involved in the implementation. Mutual cooperation held by the sub-district party was not available to check for larvae when officers came to the house For this reason, public awareness is needed to participate in dengue fever program activities. Apart from that, there must be activities regular Counseling is carried out by the Sipayung Community Health Center because lack of public knowledge about handling dengue fever caused by a lack of Counseling given to Public.

Periodic Larval Inspection (*Pemeriksaan Jentik Berkala* or PJB) in the *Puskesmas* working area Sipayung has been running well, but it has yet to be implemented adequately maximum because the community health center carries out periodic larvae checks if dengue fever cases have been found. As is known, implementation PJB is carried out every three months. In the opinion of researchers, the role of jumentik is vital in Early Warning System (*Sistem Kewaspadaan Dini* or SKD) DHF because it functions to monitor the presence and inhibit it early development of the

dengue vector. The activity of jumantik cadres monitoring the environment is an essential step for prevent the increase in dengue cases. Therefore, effort is required to increase Jumantik motivation through the motivation provided by the local health department.

According to Lahdji stated that the inspection program Periodic Flicking does not work well due to the lack of funds for program implementation; there still needs to be more cadre knowledge in filling in blanks and delays in collecting blanks from each cadre. In general, the role of jumantik cadres so far is already quite optimal in preventing dengue fever. However, there are some things that need to be considered when they take them to the field to carry out larvae checks at the homes of Jumantik cadre residents. They usually need to provide more information to the Public regarding DHF and dengue prevention.²⁴ According to Pratomawati, the role of jumantik is vital in the Early Warning System (*Sistem Kewaspadaan Dini* or SKD) vector density monitoring results.²⁵

Based on the results of interviews with health workers in Sipayung Community Health Center, counseling about dengue fever is carried out at Posyandu and when out in the field while conducting Epidemiological Investigations during home visits to dengue sufferers. Counseling conducted aims to provide information and knowledge to the community in the working area of the Sipayung Community Health Center.

In the opinion of researchers, the extension carried out in Posyandu and home visits to dengue sufferers are not programmed well, activities are carried out incidentally if discovered problems, or there are certain activities that are not planned activities from the start both in terms of material and time for carrying out activities For this reason, in the future there must be a joint commitment from all stakeholders involved in implementing the dengue fever program so that they can together to carry out the agreed program.²⁵

Conclusion

It is known that the input to the Dengue Hemorrhagic Fever (DHF) eradication program at the Sipayung Community Health Center has not been implemented optimally; this can be seen from the following obstacles: The health workers involved have not carried out their duties optimally in accordance with the responsibilities given, which are seen from the basics There is education that is not appropriate for surveillance officers and acting officers community health center dengue fever program, and the Department is a nurse and not an epidemiologist/public health expert. Apart from that, officers currently have only one environmental health, so no one has been involved yet maximally carried out tasks in accordance with the responsibilities given. Facilities that are available include fogging equipment and powder administration. Abate has not been appropriately utilized by DHF program officers from the Sipayung Community Health Center, and limited

budget funds for implementing the dengue fever program budgeted every year so that dengue fever can be eradicated a little hampered.

Acknowledgement

No Applicable

Funding

No Applicable

Conflict of Interest

The authors declare that they have no conflict of interest.

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