

# The Implementation, Coordination, and Supervision of Periodic Monitoring of Larvae as Part of The Dengue Hemorrhagic Fever Control Program in Pasuruan District

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## Abstract

The performance of recording and reporting of ABJ ("free from larvae" rate) by community health center in Pasuruan District in the period of 2014-2016 was still not optimal. The purpose of this study was to evaluate the implementation, coordination, and supervision of activities of PJB (periodic monitoring of larvae) as part of the DHF control program, with the unit of analysis ie the community health center in the Health Office of Pasuruan District. Data were collected by using questionnaires, checklists, interviews an document search at Health Office of Pasuruan District, then analyzed descriptively in the form of frequency accompanied by percentage. Based on the results of this study it can be concluded that the implementation, coordination and supervision in the activities of PJB in the Health Office of Pasuruan District still not satisfactory, thus requiring intensive improvement efforts.

**Keywords:** DHF, ABJ, PJB, implementation, coordination, supervision

## I. INTRODUCTION

Dengue Hemorrhagic Fever (DHF) is a disease caused by dengue virus infection transmitted to humans by *Aedes Aegypti* mosquitoes. DHF is characterized by sudden fever, headache, back pain in the eyeball, nausea and bleeding such as a rumple-leed test with positive results, nosebleeds and bleeding gums. DHF is still one of the major health problems in Indonesia. By 2014, there are 100,374 cases, and 907 of them have died. By 2015 there has been an increase in the number of DHF cases of 126,675 people and the number of people who died also increased by 1,229 people (Kemenkes RI, 2016).

The incidence of DHF in East Java in 2016 is still relatively high at 24,476 cases (IR = 61.93 per 100,000 people) and the mortality rate reaches 348 cases (CFR = 1.42%). In addition almost all districts / cities in East Java is endemic areas of DHF (Dinkes Provinsi Jatim, 2016).

Pasuruan is one of the districts in East Java province which is endemic area of DHF. In this district there are 21 districts (87.5%) which are endemic areas of DHF, with increasing 'incidence rate' and Crude Fatality Rate in the last five years. On the other hand, there is a tendency to decrease the number of ABJ (free from larvae rate) to less than 95%, indicating the low activity of *Aedes aegypti* control as vectors.

Tabel 1 Data of Dengue Hemorrhagic Fever in Pasuruan in 2012-2016

Variable	2012	2013	2014	2015	2016
Incidence of DHF	163	440	188	686	764
IR (<50 per 100.000 population)	10.53	28.26	12.01	47.51	47.82
CFR (< 1%)	3 (1.84)	9 (2.04)	6 (3.33)	28 (4.08)	27 (3.53)
ABJ (> 95%)	84.95	90.43	67.29	83.90	77.09

Source: Dinkes Kabupaten Pasuruan (2016).

The implementation of recording and reporting of ABJ was obtained from 11 community health centers (33.33%) in 2014, 8 community health centers (24.24%) in 2015 and 7 community health centers (21.21%) in 2016. These conditions indicate that the performance of the recording and reporting of ABJ was not yet optimal. Recording of ABJ involved health cadres. The number of health cadres in Pasuruan District was 9,465 people and 272 people (2.87%) of them had been trained on larva monitoring (Dinkes Kabupaten Pasuruan, 2016).

Health Office of Pasuruan District has implemented DHF control program. According to Kepmenkes RI No. 581/Menkes/SK/VII /1992, efforts to control and eradicate DHF focused on prevention efforts through the PSN (Mosquito Nest Eradication), DHF management by strengthening the capacity of hospitals, epidemiological surveillance and prevention of KLB (Extraordinary Incidents).

In the PSN activities are known 3M terms, which include: 1) draining the water reservoir at least once a week, 2) closing the water reservoir closely and 3) destroying potentially waterlogging materials such as used tin, scrap

plastic and so on. PSN can also be supplemented by other activities of monitoring and eradicating larvae, and avoiding *Aedes aegypti* mosquitoes, called 3M Plus.

PJB (Periodic monitoring of larvae) as part of the DHF Control Program in Pasuruan District has been conducted. Implementation of this program needs to be evaluated considering ABJ achievement that is still less than 95% and recording and reporting ABJ that not yet optimal. PJB is a system, consisting of various interconnected subsystems, therefore health workers associated with DHF control must coordinate with other parts to support the success of the program.. Supervision is a process that encourages members of the work unit to contribute positively to achieve organizational goals. The ability of supervisors to effectively employ a personal to achieve organizational goals is important. A good and structured supervision activity aims to ensure that PJB as part of the DHF control program in Pasuruan District can run better.

## II. METHODS

The purpose of this study was to evaluate the implementation, coordination, and supervision of PJB activities as part of the DHF control program in Pasuruan District, with the unit of analysis ie the community health center in the Health Office of Pasuruan District with criteria:

1. Had a low ABJ.
2. Had reported the activities of PJB in the last 3 years (2014 s / d 2016).
3. The village in the working area of the community health center had a stratification of DHF endemic villages by 2016.
4. There was PJB activity in the village in the working area of the community health center.
5. Executor of PJB was health workers and cadres actively doing PJB in village.

Research respondents were 47 people consisting of:

1. Structural Officials at Pasuruan District Health Office
2. Chairman of Public Health Center
3. Functional personnels were the managers of 'DHF control program' and sanitarian.
4. Jumantik cadres (larva monitoring personnel).

The instruments used for primary data collection were questionnaires and checklists. It also conducted in-depth interviews to complete the data. Secondary data was obtained through document tracing at Health Office of Pasuruan District. The data collected was categorical data so that it refers to Nugroho (2014) the data was analyzed descriptively in the form of frequency accompanied by percentage.

## III. RESULTS

### A. Implementation of PJB Activities In Pasuruan District

Table 1. Distribution of Implementation of PJB in Pasuruan District in 2016 (Per Dimension Data)

No	Implementation of PJB	Respondents' Answers								Total	%
		Always		Often		Rarely		Never			
		f	%	f	%	f	%	f	%		
1	Regular meetings	5	11.9	7	16.7	24	57.2	6	14.29	42	100
2	PWS (local area monitoring)	9	21.4	13	30.9	12	28.6	8	19.05	42	100
3	Training jumantik	2	4.8	10	23.8	18	42.9	12	28.57	42	100
4	Scheduling PJB	3	7.1	15	35.7	14	33.3	10	23.81	42	100
5	Routine larva examination	9	21.4	17	40.5	14	33.3	2	4.76	42	100
6	Landfill larvasida	7	16.7	13	30.9	17	40.5	5	11.90	42	100
7	Guidance on PJB	7	16.7	18	42.9	13	30.9	4	9.52	42	100
8	Counseling	9	21.4	25	59.5	6	14.3	2	4.76	42	100
9	Recording and Reporting	7	16.7	15	35.7	12	28.6	8	19.05	42	100
10	ABJ calculations	8	19.1	9	21.4	13	30.9	12	28.57	42	100
11	Report to community health center	15	35.7	18	42.9	6	14.3	3	7.14	42	100
12	Coordination of PJB	11	26.2	13	30.9	11	26.2	7	16.67	42	100
13	Evaluation of PJB activities	9	21.4	13	30.9	16	38.1	4	9.52	42	100

Table 2. Distribution of Implementation of PJB in Pasuruan District in 2016 (Composite Data)

Implementation of PJB	Range	Frequency	Percentage
Good	> 206.41	3	33.33
Enough	105.37-206.41	6	66.67
Less	< 105.37	0	0
Total		9	100.00

Table 3. Distribution of Coordination of PJB in Pasuruan District in 2016 (Per Dimension Data)

No	Coordination of PJB	Respondents' Answers								Total	%
		Always		Often		Rarely		Never			
		f	%	f	%	f	%	f	%		
1	Cross-program coordination	10	23,81	9	21,43	15	35,71	8	19,05	42	100
2	Reporting and information	20	47,62	16	38,10	5	11,90	1	2,38	42	100
3	Program integration	14	33,33	11	26,19	12	28,57	5	11,90	42	100
4	PJB simplicity	16	38,10	12	28,57	7	16,67	7	16,67	42	100
5	PJB synchronization	12	28,57	13	30,95	10	23,81	7	16,67	42	100

Table 4. Distribution of Coordination of PJB in Pasuruan District in 2016 (Composite Data)

Coordination of PJB	Range	Frequency	Percentage
Good	> 129.08	2	22.22
Enough	66.04-129.08	7	77.78
Less	< 66.04	0	0
Total		9	100.00

Table 5. Distribution of Coordination of PJB in Pasuruan District in 2016 (Per Dimension Data)

No	Coordination of PJB	Respondents' Answers								Total	%
		Always		Often		Rarely		Never			
		f	%	f	%	f	%	f	%		
1	Schedule notice	9	21.43	11	26.19	9	21.43	13	30.95	42	100
2	Behavior of supervisor	16	38.10	15	35.71	5	11.90	6	14.29	42	100
3	Resolving the problem	12	28.57	16	38.10	9	21.43	5	11.90	42	100
4	Follow up plan	14	33.33	13	30.95	9	21.43	6	14.29	42	100
5	Provide hints and suggestions	17	40.48	14	33.33	5	11.90	6	14.29	42	100

Table 6. Distribution of Coordination of PJB in Pasuruan District in 2016 (Composite Data)

Coordination of PJB	Range	Frequency	Percentage
Good	> 129.08	2	22.22
Enough	66.04-129.08	7	77.78
Less	< 66.04	0	0
Total		9	100.00

#### IV. DISCUSSION

##### A. Implementation of PJB

In the activities of PJB in the village there are usually several factors that cause the implementation of "jumantik" activity can not be effective that is the lack of availability as a pure jumantik cadre of community members, who formation and supervision of its performance under the responsibility of government. Jumantik cadres are recruited from the community according to the purpose and function as community mobilizer in eradicating mosquito breeding. Jumantik recruitment is performed by public health centers based on procedures established by the district government and stipulated in the Decree of the Head of the Health Office (Kemenkes RI, 2012).

Not all public health centers have implemented PJB properly and still many of them have not attended the meeting and training on larva monitoring. According to Wursanto (1987), the meeting is a form of group communication that is face-to-face. The more meetings or technical meetings about PJB, the new information and knowledge obtained will also increase.

According to Mathis & Jackson (2006) training is a process in which people have a certain ability to help achieve organizational goals. In a limited way, training teaches employees about specific knowledge in order to improve skills in carrying out the work. Therefore, the more the implementation of technical training on PJB, the skills of health workers and cadres in the implementation of PJB activities will increase.

According to Yukl (2010), skills show a person's ability to perform various types of cognitive or behavioral activities in an effective way. The higher the skill level of health workers and cadres, the better the implementation of PJB activities.

### **B. Coordination of PJB**

According Subardi (2001), coordination is a process of unifying and synchronizing different activities so that can be established cooperation in achieving organizational goals. This integration should begin at the planning stage. In this research, to achieve the integration carried out the improvement of cross-program coordination in community health center, community health center with district health office, and district health office with other sectors.

The results showed that communication and coordination across programs in the implementation of PJB is still not optimal and needs to be improved. According to Wijono (2007), effective communication for coordination is the availability of high-quality information, fast, sufficient, and timely. One aspect of organizational life that does not escape from the discussion by experts of organizational behavior is communication. That fact is based on the notion that effective communication is a basic prerequisite for the achievement of a predetermined goal.

The results of the study also indicate that schedule synchronization, program integration and simplification of PJB activities are also not optimal. Thus, these three things require improvement. According Purwowodagdo (2007), synchronization is an attempt to harmonize the function or part of the system so as to produce harmonic output in an effort to achieve the expected goal. Something harmonious will be easier to accept, to understand, to remember and to respond than to something messy and complicated.

Integration is also an important component of coordination. Integration is the process of integrating various tasks, functions or parts in order to work together and not contradict each other in an effort to achieve goals. Integration does not require uniformity but is complementary between components or functions.

Simplification is also an important component in coordination. According Purwowodagdo (2007), the effort of the simplification can be complicated for the perpetrators of the simplification, but this activity will produce something easier or simpler for the user. Similarly, in relation to communication, the message conveyed should be easy to accept, understand, remember and respond to, so that it can be realized a positive interaction in the implementation of follow-up.

### **C. Supervision of PJB**

The results indicate that it is still necessary to improve the management of supervision by the district health office that is supervision that is guiding and can help solve the problem. This is based on statement of Supriyanto & Damayanti (2007) that supervision is an instructional effort to provide guidance and suggestions after finding the existence of complaints of implementers in overcoming problems in order to increase work performance.

## **V. CONCLUSION**

Based on the results of this study it can be concluded that the implementation, coordination and supervision in the activities of PJB in the Health Office of Pasuruan District still not satisfactory, thus requiring intensive improvement efforts.

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