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Surveillance Implementation Of HIV/AIDS In Jember Regency

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A B S T R A C T

The number of people living with HIV/AIDS in Indonesia is increasing every year. HIV/AIDS surveillance is the most effective way to control the spreading of HIV/AIDS cases. This study aims to describe the implementation of HIV/AIDS surveillance in Jember. This paper was a descriptive study that included all public health centers (PHCs) conducting HIV/AIDS surveillance. The sample was the Jember District Departement of Health Office and four PHCs using purposive sampling. Variables in this study were input, process, and output. The data was obtained from an interview using a questionnaire. The results indicated that the four PHCs did not have an epidemiologist. Data collection mostly derived from Voluntary Counseling and Testing (VCT) and mobile VCT. Processing HIV/AIDS surveillance data utilized the HIV/AIDS and STDs Information System (SIHA) application and validated by the District Department of Health Office once a month. However, only two PHCs conducted analysis and data interpretation. Dissemination was only done by the District Departement of Health Office and 2 out of 4 PHCs. Hence, the components and process of surveillance needed to be optimized.

INTRODUCTION

Human Immunodeficiency Virus-Acquired Immuno Deficiency Syndrome (HIV/AIDS) is a chronic infectious disease that is still a significant global public health problem today. Worldwide HIV prevalence reached 36.9 million at the end of 2017, while the incidence rate was 1.8 million people. The mortality rate due to HIV globally was 940,000 in 2017 (WHO, 2018a). The number of new HIV cases in Indonesia was 30,935 cases in 2015, then increased to 41,250 cases in 2016, and decreased to 33,660 cases in 2017. So, the number of new HIV cases within three years was 105,845 people (Health Ministry of Indonesia, 2018). The number of AIDS cases in Indonesia up to 2016 was 86,780 cases. AIDS cases increased in 2016 compared to 2015, which was 7,491 cases.

The percentage of HIV/AIDS patients in males was more significant than in females in 2016. The rate of HIV male patients was 63.3%, and female was 36.7%. While the percentage of people with AIDS (Acquired Immune Deficiency Syndrom) a male was 67.9% and 31.5% for female (Health Ministry of Indonesia, 2017). East Java Province was the highest number of new HIV cases in Indonesia, with 15,931 patients during 2015 and 2017 (Health Ministry of Indonesia, 2018). In December 2016, the number of

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HIV cases in East Java Province was 36,881 cases, and the number of AIDS cases was 17,394 cases (Health Ministry of Indonesia, 2017).

Jember Regency was the fourth-highest Regency for HIV/AIDS cases after Surabaya City, Pasuruan Regency, and Malang Regency. The number of people with HIV/AIDS in Jember Regency, from 2004 to April 2018, was 3,786 cases. Meanwhile, the number of AIDS cases from 2004 to April 2018 was 943 cases. Districts with the highest HIV/AIDS prevalence in Jember Regency included Puger District (405 cases), Gumukmas District (247 cases), Kencong District (247 cases), and Wuluhan District (233 cases) (Jember Health Office, 2018).

One of the government's efforts to combat the spread and reduce HIV/AIDS cases is implementing an integrated surveillance system. Surveillance is the most effective way to control infectious diseases in the community through surveys (Candra B., 2009). It is a system that runs continuously and has four main activities, namely data collection, data processing, data analysis and interpretation, and data dissemination. The primary purpose of surveillance is to detect changes in trends or distribution to initiate investigations or take control measures (Amirudin R., 2017).

The Implementation of Health Surveillance must be carried out in every health facility and health agency, starting from the district/city to the central level (Indonesia, 2003). Indonesia has a comprehensive HIV/AIDS surveillance system and adheres to implementing Second Generation Surveillance since the early 2000s. The HIV/AIDS Surveillance System reports cases of HIV, AIDS, and STDs, estimates the number of populations at risk, Sentinel Surveillance, and the Integrated Biology and Behavior Survey (IBBS) periodically. Surveillance activities are carried out routinely by the Public Health Center reported to the District/City Department of Health Office and the Provincial Health Office (WHO, 2017).

A preliminary study conducted by the authors in the HIV/AIDS programs of the Jember Department of District Health Office stated that HIV/AIDS surveillance in 2018 had not been optimal. One of the factors that influenced HIV/AIDS surveillance was the lack of awareness in reporting. Primary Healthcare (PHC) did not regularly report the results of surveillance activities to the Jember District Department of Health Office. Besides, in AIDS cases, PHC only revealed to the Jember District Department of Health Office when AIDS cases had occurred.

The Implementation of health surveillance should be by the surveillance performance indicators. At least, surveillance performance indicators include report completeness, report accuracy, and other surveillance performance indicators defined in each program (Health Ministry of Indonesia, 2014). So this study aims to describe the implementation of HIV/AIDS surveillance in Jember Regency.

METHOD

This paper was a descriptive study. Respondents were the person in charge of HIV/AIDS surveillance at the Jember District Department of Health Office and Public Health Center's surveillance team. The

sample size was determined using the purposive sampling technique. The sample in this study was one person in each surveillance team of the Jember District Departement of Health Office, and the surveillance team from four PHCs selected out of fifty clinics that carry out HIV/AIDS surveillance. The PHCs were Puger PHC, Gumukmas PHC, Kencong PHC, and Wuluhan PHC from September to December 2018.

The variable in this study refers to the systems approach, including input, process, and output. Primary data was obtained through direct interviews with respondents using a questionnaire. Meanwhile, secondary data collection utilized the Jember District Department of Health Office documentation and the four PHCs. The data collected then processed and analyzed descriptively by comparing the study results with the theory and or program guidelines.

RESULTS

Table 1. Human Resources of HIV/AIDS Surveillance Based on Duty and Education Level

Health Facility	Human Resources	Educational Level
Jember District Departement of Health Office	1 Epidemiologist	S1 Public Health
Kencong PHC	1 HIV/AIDS Programmer	D3 Midwifery
	1 *Record and Report* (RR)	S1 Nursing
Gumukmas PHC	1 HIV/AIDS Programmer	D3 Nursing
	1 *Record and Report* (RR)	Senior High School
Puger PHC	1 HIV/AIDS Programmer	D3 Nursing
	2 *Record and Report* (RR)	Physician & S1 Nursing
	2 Counselor	D3 Nursing dan Senior High School
	1 laboratory assistant	D3 Health analyst
	1 Case Manager	Senior High School
Wuluhan PHC	1 HIV/AIDS Programmer	S1 Nursing
	1 *Record and Report* (RR)	D3 Nursing
	2 Counselor	D3 Midwifery & Physician
	2 Case Manager	D3 Midwifery & Senior High School
	1 Cadre	Senior High School

HIV/AIDS surveillance at Jember District Health Office was part of the Communicable Disease Prevention and Control Section (P2PM). The person in charge of HIV/AIDS surveillance at the Jember District Departement of Health Office was one epidemiologist who had a Bachelor of Public Health (S.KM). The four PHCs had a programmer for HIV/AIDS surveillance. Most of the education background for the HIV/AIDS surveillance team at PHCs was a diploma / D3, but it was still there human resources were with a senior high school as the education background (table 1).

Table 2. Components of HIV/AIDS Surveillance Implementation

Component	Jember DDHO	PHC			
		Kencong	Gumukmas	Puger	Wuluhan
Input					
Infrastructure					

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Component	Jember DDHO	PHC			
		Kencong	Gumukmas	Puger	Wuluhan
a. Computer	v	v	v	v	v
b. Communication (telephone etc.)	v	v	v	v	v
c. Reference for epidemiologist surveillance, research, and health studies	v	v	v	v	v
d. Guidelines for implementing epidemiological surveillance and computer application programs	v	v	v	v	v
e. Epidemiological surveillance data recording form according to the guidelines	v	-	v	v	v
f. Tools for implementing epidemiological surveillance at PHC	v	-	v	v	v
g. Transportation (motorcycle & car)	v	v	v	v	v
Financing					
a. APBD (The Regional Revenue and Expenditure Budget)	v	v	-	v	v
b. BOK (The Health Operational Aids)	v	v	v	v	v
Type of Implementation					
1. Implementation Method					
a. Integrated Routine Epidemiological Surveillance	v	-	v	v	v
b. Special Epidemiological Surveillance	-	v	-	-	-
c. Sentinel Surveillance	-	-	-	-	-
d. Epidemiological Studies	-	v	-	-	-
2. Data Collection Activities					
a. Active surveillance	-	-	-	v	v
b. Passive surveillance	v	v	v	v	v
3. Implementation Pattern					
a. Emergency Pattern	v	v	-	v	v
b. Patterns other than emergencies	-	-	v	v	v
Process					
Data collection					
1. Data Source					
a. VCT (Voluntary Counseling and Testing)	-	v	v	v	v
b. Mobile VCT	-	-	-	v	v
c. Antenatal Care (ANC)	-	-	-	v	-
d. Posbindu (the community health post for non-communicable diseases prevention activities)	-	-	-	v	-
e. PHC Report	v				
2. Data collection methods					
a. VCT Report	v	v	v	v	v
Data processing					
1. Data processing applications					
a. SIHA (HIV/AIDS Information System)	v	v	v	v	v
2. Data Validation					
a. Every one month	v	v	-	v	v
b. Every three months	v	-	v	-	-
3. Grouping data					
a. Age factor	-	-	-	v	v
b. Characteristics, region, risk factors, HIV/AIDS status, and death from AIDS	v				
Data Analysis and Interpretation	v	-	-	v	v
Surveillance Networks					
a. NGO	v	v	v	v	v
b. Village Midwife	-	v	v	v	v
c. Village Nurse	-	v	v	v	v
d. Clinic	-	v	v	v	v
e. Stakeholders	v	v	v	v	v
Output					

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Component	Jember DDHO	PHC			
		Kencong	Gumukmas	Puger	Wuluhan
Dissemination					
a. Internal mini-workshop (1x/month)	-	-	-	v	v
b. Regency workshop	v	-	-	v	v
Recommendations and Follow up Alternative	v	-	-	v	v

In the Jember District Department of Health Office, facilities and infrastructure met the quality and quantity requirements. Likewise, most PHCs, however, only Kencong PHC did not use forms and equipment packages in implementing surveillance (Table 2).

The financing source for implementing HIV/AIDS surveillance in Jember Regency from the District Revenue and Expenditure Budget (APBD) and Health Operational Assistance (BOK), which was part of the Communicable Disease Prevention and Control Section (P2PM) of the Jember Regency Health Office. Meanwhile, financing budget for four PHCs from the District BOK and or APBD (table 2). Especially at the Gumukmas PHC, the funding was used only from the BOK because this budget was sufficient for implementing the HIV/AIDS surveillance program in Gumukmas District. Meanwhile, according to the person in charge of the HIV/AIDS surveillance program at the Puger PHC and Wuluhan PHC, the budget from the BOK and the district APBD were insufficient for the surveillance program. Then related to the constraints in budgeting, the person in charge of the HIV/AIDS surveillance program at the Kencong PHC and Puger PHC stated that the disbursement of funds required a slow process and a relatively complicated bureaucratic problem.

The type of HIV/AIDS surveillance at the District Department of Health Office of Jember, Gumukmas PHC, Puger PHC, and Wuluhan PHC implemented an integrated routine epidemiological surveillance method, namely HIV surveillance and prevention become AIDS stage. The Jember District Department of Health Office has never conducted an epidemiological study to support HIV/AIDS surveillance. The activity of collecting surveillance data at the Health Office was passive through the PHCs reports. Whereas in the four PHCs, the majority came from VCT. The data collection consisted of two categories, active-passive and passive. When there is a new case in the population, the data collection becomes active. The pattern of implementing HIV/AIDS surveillance at the Health Office used an emergency implementation pattern, using a laboratory examination of the rapid test. Clinics and physicians also reported to the PHC before being reported to the District Department of Health Office. Most of the PHCs experienced obstacles in collecting surveillance data. The results of the interview stated that the most dominant reason came from the internal team. They did not regularly enter and process the surveillance data because officers also had multiple duties. It affected the discipline in data entry to hamper the quality of data generated from surveillance activities.

HIV/AIDS surveillance data processing utilized the SIHA application (HIV/AIDS Information System). Most of the PHCs validated every month, except for the Gumukmas PHC, which validated the data every three months. Validation was generally carried out at the Jember District Department of Health Office

every specific period. The Health Office validated the data by providing feedback on the data reported by the PHCs. Jember District Health Office, Puger PHC, and Wuluhan PHC classified data based on characteristics and risk factors, then presented the data by recapitulating using Microsoft Excel. Data presentation were tables, graphs, or diagrams as needed. Meanwhile, the other two PHCs, Kencong PHC and Gumukmas PHC did not classify cases yet.

The Jember District Department of Health Office carried out data analysis by analyzing the highest risk factors in HIV/AIDS cases and interpreting them on the annual report incorporated into the Infectious Disease Prevention and Control Section (P2PM) report. Meanwhile, Kencong PHC and Gumukmas PHC did not analyze and interpret HIV/AIDS surveillance data.

The Jember District Department of Health Office was active in building epidemiological surveillance networks such as cooperation and partnerships with Non-Governmental Organizations (NGOs) in Jember Regency that concern HIV/AIDS, such as KSD Pelangi, Laskar, and Ogawa. Likewise, the four PHCs had surveillance networks in carrying out HIV/AIDS surveillance, including NGOs, village midwives, village nurses, clinics, and cross-sectoral stakeholders.

The Health Officer disseminated the outputs of HIV/AIDS surveillance activities in the annual evaluation with all health facilities in Jember Regency. There was the dissemination of HIV/AIDS surveillance in Jember Regency to the Provincial Health Office. Of the four PHCs, only two PHCs carried out information dissemination in HIV/AIDS surveillance activities – Puger PHC and Wuluhan PHC through a once-a-month internal mini-workshop and a District Workshop (table 2).

The Jember District Department of Health Office has carried out recommendations and alternative follow-ups on HIV/AIDS surveillance results. PLWHA (people living with HIV/AIDS) must receive assistance and supervision by health workers to not reach the AIDS stage by consuming ARV routinely. Meanwhile, the Puger PHC provided recommendations and alternative follow-up actions. Its actions included the activity plan postponement when there was a lack of funds for HIV/AIDS surveillance and surveillance officers' training to maximize surveillance activities. Meanwhile, Wuluhan PHC provided recommendations and alternative follow-up with treatment assistance from start to finish for PLWHA and finding the solution for finding key populations. In this case, PLWHA assistance and active surveillance systems were still obstacles in implementing surveillance at Wuluhan PHC.

DISCUSSION

Surveillance has four main activities: data collection, data processing, data analysis, and interpretation, also dissemination. In the Implementation of HIV/AIDS surveillance in Jember District, most of the data collection came from VCT and mobile VCT. HIV/AIDS surveillance data processing used the SIHA application and was validated by the Health Office once a month. However, only half of the PHCs

conducted report analysis and data interpretation. The dissemination occurred at the District Department of Health Office, while the PHC only conducted report analysis.

The surveillance staffs were appropriate at the health district office level, but at the PHC level, there was no skilled epidemiologist. It is not in line with the Regulation of the Minister of Health of the Republic of Indonesia Number 45/2014. In the management of health surveillance, there must be support in the availability of competent human resources in epidemiology (Health Ministry of Indonesia, 2014). Previous research described that epidemiologists in carrying out HIV/AIDS surveillance were only at the district level, but at the PHC level were health workers such as nurses and midwives (Chandra H, 2018). Lack of epidemiologists can be circumvented by including health workers appointed as the surveillance team in surveillance training from the Ministry of Health or the Provincial Department of Health. PHC can apply for surveillance training at the Provincial Department of Health when there is no such training. Several PHCs complained that they had multiple duties, so they could not manage their time with other nurses' responsibilities at the polyclinic. It is necessary to formulate an SOP for the nurse/midwife at the PHC who is in charge of the surveillance team so what are their duties and duration become clearer and stated.

The facilities and infrastructure for carrying out HIV/AIDS surveillance in PHC were by the requirements based on the Regulation of the Minister of Health of the Republic of Indonesia Number 45/2014 (Health Ministry of Indonesia, 2014). The facilities and infrastructure for carrying out HIV/AIDS surveillance are essential to ensure the sustainable supply of commodities related to the HIV/AIDS program so that efforts are needed to ensure the continuity of an uninterrupted supply (Chandra H, 2018). Funding in the Implementation of HIV/AIDS surveillance is by the Regulation of the Minister of Health of the Republic of Indonesia Number 45/2014 (Health Ministry of Indonesia, 2014). Funding for HIV programs originating from government spending has increased rapidly, and sources of funding have expanded. District Department of Health Offices and Health Facilities do not only have funding sources from the APBD but have expanded to include funding sources from capitation fees, BOK, and Village Funds. There should be a new mechanism to meet the increasing demands for financing the HIV/AIDS program so that funding sources can be sufficient to implement HIV/AIDS surveillance (WHO, 2017).

PHC officers play an essential and crucial role in recording data accurately and completely. Because it is the first door or the first data collector, the data will then be analyzed and reported by the District Department of Health Office to a high level to the Ministry of Health. Thus, surveillance officers who do not regularly collect data significantly affect the quality of the data produced. Therefore, data collection barriers should be used as a material to evaluate HIV/AIDS surveillance. By WHO guidelines, the data collection process must pay attention to the quality of data collected by implementing practices that ensure the quality of data standards during data collection and monitoring the data entry process (WHO, 2018b). According to the Regulation of the Minister of Health of the Republic of Indonesia No.74 of

2014, the data collected must be valid (accurate, complete, and timely) to facilitate processing and analysis.

The Ministry of Health has developed the reporting application software, namely SIHA, or a management information system used to manage data on HIV-AIDS and STI (Sexually Transmitted Infection) control programs to capture data originating from health service units. Health facilities have widely used SIHA to support HIV/AIDS surveillance, making it easier for health workers to process data. In this case, the District Department of Health Office and the four PHCs have used the SIHA application in the data processing process. Data validation in HIV/AIDS surveillance activities dramatically affects the quality of surveillance data. Validation was carried out by the Jember District Department of Health Office every specific period. The quality of all data entered is highly dependent on the accuracy of the medical records. When the surveillance officer finds irregularities in the client's data during the entry process, the client's entry process is postponed and confirmed until the data is genuinely valid. This process makes data validation require a specific period. According to the Minister of Health Regulation No. 74 of 2014, each HIV Counseling and Testing (HCT) service is required to report data on the results of its activities according to the reporting format available every month to the District Health Office (Health Ministry of Indonesia, 2014). There are still PHCs that perform surveillance under the required standard.

Ideally, STD and HIV/AIDS programs in district/city and provincial should conduct a simple analysis to show trends in HIV prevalence in each sentinel sub-population by time and place into an electronic format. It uses an application or software that generates graphs or tables simple (WHO, 2018). However, in Jember Regency, this was only done by the District Departement of Health Office and two PHCs. PHCs that do not perform data analysis and interpretation show that surveillance officers do not understand their surveillance team's duties. So it is necessary to carry out surveillance training or scientific updates related to surveillance to health personnel appointed as the surveillance team. So regularly and continuously, the surveillance process can produce meaningful data and information. The form of presenting data according to the Minister of Health Regulation No. 74 of 2014 is a report.

The four PHCs carried out the Implementation in Jember Regency. In the surveillance network, the four PHCs conducted surveillance networks with village midwives. The village midwife was considered the stakeholder who knew the surveillance target's conditions closely. The village midwife network is an internal network of PHC supervised by the District/ City Health Office (Health Ministry of Indonesia, 2003). According to the Decree of the Minister of Health of the Republic of Indonesia Number 1116 / MENKES / SK / VIII / 2003, PHC is obliged to coordinate epidemiological surveillance with practicing doctors, private midwives health service units in their working areas. This networking makes it easy to carry out practical surveillance activities. Besides, PHC is required to coordinate epidemiological surveillance between adjacent PHCs (Health Ministry Indonesia, 2003). Each PHC had not done this yet.

The dissemination process is a vital process that can describe activity achievements within a period of one surveillance activity. Dissemination of data, information, and recommendations are the results of epidemiological surveillance activities. Parties responsible for disease control measures or efforts to improve health programs, research centers, study centers, and data exchange in epidemiological surveillance networks utilize these results (Health Ministry of Indonesia, 2017). District Departement of Health Office monitors reports on implementing HIV surveillance activities in all of their coverage areas through regular meetings to disseminate surveillance results in each district. Next, the District Department of Health Office makes a brief report on the surveillance results and distributes it to all concerned parties. However, the authors hope that the district department of health office conduct internal dissemination at the PHC because dissemination is essential as a basis for planning and evaluating the final results of interventions

CONCLUSIONS

In implementing HIV/AIDS surveillance in Jember District regarding input, the four PHCs do not have skilled epidemiologists. The Implementation of HIV/AIDS surveillance in Jember Regency includes data collection, mostly from VCT and mobile VCT. HIV/AIDS surveillance data processing use the SIHA application and was validated by the Health Office once a month. However, only half of the PHCs conduct report analysis and data interpretation. So, the district department of health office disseminate information on the output, while PHC only conduct report analysis.

We recommend that the surveillance officers are epidemiologists or provide surveillance training to health workers appointed as the surveillance team, so there woulb be optimization in data collection, processing, analysis, and interpretation. Then, there should be explanation and response on all obstacles in carrying out HIV/AIDS surveillance in the dissemination activity.

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