

HIV/AIDS Diagnostic and Screening Testing in VCT Clinic of Umbu Rara Meha Waingapu Hospital

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Abstract

Acquired Immune Deficiency Syndrome (AIDS) syndrome is a set of symptoms of disease that arise as a result of immune deficiencies caused by HIV infection. In Indonesia, HIV/AIDS was first discovered in the province of Bali in 1987 and now HIV/AIDS has spread in 360 districts throughout Indonesia. Various government efforts have been carried out by the government in collaboration with various institutions in the country and abroad. East Sumba District is one of area in NTT which is often a local and international tourist destination so that it has the potential to increase HIV/AIDS infectious. The purpose of this study was to determine the results of HIV/AIDS diagnostic and screening tests in the VCT Clinic of Umbu Rara Meha Waingapu Hospital. This study used an experimental design by screening visitors. Population was 150 people and sampling technique used total sampling so that the sample was 150 people. Data collection techniques using a questionnaire. The results show that the screening results in patients who had symptoms when visiting were >3 symptoms of 40 people (38.8%) and <3 symptoms of 63 people (61.2%). Results of diagnostic test in the form of sensitivity 25 (62.5) specificity 35 (55.6) predictive value/positive predictions were 28 (44.4%) and the predictive value/negative predictions were 15 (37.5) and a likelihood ratio positive was $0.625 / 1 - 0.556 = 1.407$ likelihood ratio negative was $1 - 0.625 / 0.556 = 1.482$. Therefore we need special attention from the government to be involved in socializing this disease.

Keywords: Diagnostic Screening and Test, HIV/AIDS, VCT Clinic

1. INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) is a set of symptoms of disease that arise as a result of immune deficiencies caused by infection with the *human immunodeficiency virus*. As a result of the decline in immunity, the person is very susceptible to various infectious diseases (opportunistic infections) which are often fatal (Puspongoro *et al.*, 2002). Cases of infection with Human Immunodeficiency Virus (HIV) are increasing throughout the world in recent times (Kurniati, 2010). In Indonesia, HIV/AIDS was first discovered in the province of Bali in 1987. Until now HIV/AIDS has spread in 360 districts/cities throughout Indonesia. Data from the Indonesian Ministry of Health (2013) describes the highest number of HIV cases as many as 20,126 cases. The highest cumulative percentage of AIDS was in the age group of 20-29 years (46%), and the ratio of AIDS cases between men and women was 2:1 (men were 71% and women were 28%). And in 2014 according to the data obtained from the Directorate General of PP-PL Kemenkes RI there were 150,285 cases of HIV and 55,799 cases of AIDS in Indonesia (Sastroasmoro, 2002). Various efforts have been made in the response to HIV/AIDS both at public health center and hospitals or by non-governmental organizations (NGOs), but the transmission and increasing prevalence of the disease is increasingly like an iceberg phenomenon, which is an increasing asymptomatic case. Another effort is to provide integrated and programmed health education by social, government, mass media and electronic media agencies through social behavior, continuous basic health promotion for individuals and families, at tertiary level, treatment and recovery of diseases such as providing antiretroviral (ARV) drugs which will reduce the quantity of the HIV virus so that it does not develop into the stage of AIDS. While people with AIDS are given ARVs to prevent opportunistic infections with various complications (Sastroasmoro, 2002; Sarafino, *et al.*, 2006; Widjajanti, 2009). Decreased cases of PLWHA are highly doubted by government survey agencies and NGOs due to individual disobedience and ignorance of individuals in knowing the opposite sex when dating to the extent of having sex. This will increase the number of HIV/AIDS cases every year.

The current government program is to develop Voluntary Counseling and Testing (VCT) clinics in district and public health centers, hospitals to be able to detect HIV/AIDS cases early. In addition, the community is recommended to health facilities provided by the government such as VCT for consultation and counseling/screening tests until a diagnostic test is performed to examine blood samples to detect early and prevent an increase in new cases. In order for the results to be obtained close to the correct level of accuracy that is effective and efficient, the diagnosis is done with 4 (four) categories, namely correct diagnosis is positive (true pain) negative diagnosis (not really sick), incorrect diagnosis (false positive) and negative diagnosis (false negative) (Kubler, 2006; Widjajanti, 2009). Various government programs have been launched and implemented in reducing the level of HIV/AIDS prevalence and one of the programs is starting from the basic health care program at the public health centers, health clinics, Practicing

Doctors to Counseling Organizers at Hospital of East Sumba District. In involving various elements, institutions and resources to be able to detect early by conducting screening tests by recognizing signs/symptoms and then conducting laboratory tests to ascertain people with HIV/AIDS (PLWHA) (Sarafino, *et.al* 2006).

2. METHODS

The design of this study used an experimental design by screening visitors. Population of 150 people. The research was conducted on April-October 2016 in VCT Clinic of Umbu Rara Meha Waingapu Hospital, East Sumba District. The sampling technique uses total sampling so that the sample was 150 people. Data collection techniques using a questionnaire. Then the data obtained is analyzed by using SPSS package, and presented in the form of table and narrative.

3. RESULTS

Table 1 shows that the most visitors in 2016 were aged 25-28 years namely 39.3% and the least is the age of < 20 years 4 people (2.7%). This age is in the productive category so that every individual who feels his health is disturbed will immediately seek health services.

Table 1. Distribution Based on Age of VCT Clinic Visitors in Umbu Rara Meha Waingapu Hospital of Period April-October 2016

Number	Age (years)	Frequency	Percentage
1	<20	4	2.7
2	21-24	16	10.7
3	25-28	59	39.3
4	29-31	28	18.7
5	32-35	24	16.0
6	36-39	10	6.7
7	> 40	9	6.0
Total		150	100.0

Table 2. Distribution Based on Gender Visitors to VCT Clinics in Umbu Rara Meha Waingapu Hospital of Period April-October 2016

Number	Gender	Frequency	Percentage
1	Male	87	58.0
2	Female	63	42.0
Total		150	100.0

Table 2 shows that the highest number of visitors in 2016 was male sex at 87 people (58.0%).

Table 3. Distribution Based on Education Visitors to VCT Clinics in Umbu Rara Meha Waingapu Hospital of Period April-October 2016

Number	Education	Frequency	Percentage
1	Primary School	40	26.6
2	Junior High School	16	10.7
3	Senior High School	64	42.7
4	College	30	20.0
Total		150	100.0

Table 3 showed that the most visitors in 2016 were Senior high school, which was 42.7%. Education is one of the influential factors because this can help individuals or patients in choosing to choose a health service place.

Table 4 Distribution Based on Occupation VCT Clinic Visitors in Umbu Rara Meha Waingapu Hospital of Period April-October 2016

Number	Occupation	Frequency	Percentage
1.	Farmers	78	52.0
2.	Traders	2	1.3
3.	Fishermen	4	2.7
4.	Sailors	4	2.7
5.	Students	16	10.7
6.	Civil Servants	11	7.3
7.	Army/Police	0	0
8.	Housewife	35	23.3
Total		150	100.0

Table 4 showed that the most work is on farmers. The results of research conducted by Muriithi (2013) explain that one's work influences their consumption patterns. Someone who works tends to be higher to use health services than those who don't work.

Table 5. Distribution of images of the Screening Test at Patient Visits at the VCT Clinic in Umbu Rara Meha Waingapu Hospital of Period April-October 2016

Overview Test Filter	Frequency	Percentage
Cough > 2 wk	33	22.0
Pale	23	15.3
skin spots	23	15.3
Dropouts	24	16.0
Without symptom	47	31.3
Total	150	100.0

Table 5 showed that the picture of the most screening test was in patients who came to treatment without symptoms as much as 31.3%. This explains that this is the first stage of the development of this virus that encourages patients to carry out a screening test and if it is detected it can be done as early as possible to suppress the development of the virus.

Table 6. Distribution Based on Clinical features of Visitors with Screening Test at VCT Clinic in Umbu Rara Meha Waingapu Hospital of Period April-October 2016

Symptoms of diseases	Frequency	Percentage
> 3 symptoms	40	26.6
<3 symptoms	110	74.4
Total	150	100.0

Table 6 showed that the highest number of people using the services of the VCT Clinic in Umbu Rara Meha Waingapu Hospital were 74.4% or those who had <3 symptoms of the disease. Early detection and treatment of disease is very influential on the development of the disease.

Table 7. Sensitivity and Specificity Tests on the Overview of Clinical Visitors In Umbu Rara Meha Waingapu Hospital of Period April-October 2016

HIV Results	Make methods		Total
	Reactive >2	Non-reactive strips < 2 strips	
Positive (+)	25 (62.5)	28 (25.5)	53 (35.3)
Negative (-)	15 (37.5)	82 (74.5)	97 (64.7)

Total	40 (100.0)	110 (100.0)	150 (100.0)
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Table 7 showed that visitors who went to the Vocational Hospital of Umbu Rara Meha Waingapu Hospital were 35.3% detected HIV positive. This should be of particular concern to the government to better plan programs that are in accordance with the target, so that it can help reduce HIV development.

4. DISCUSSION

HIV/AIDS are things that cause health, social, economic and political impacts in a country. In Indonesia, HIV/AIDS is an iceberg phenomenon. This can be caused by increased premarital sex, or not having safe sex. Lack of information regarding this disease can pose a risk of contracting this disease. Several factors can influence someone to contract this disease.

4.1 Characteristic of Clinic Visitors

The majority of clinic visitors is the majority of age 25-28 years, namely 39.3%. Vulnerable to this age in the productive age category. This productive age greatly influences a person's behavior for healthy living (Notoatmodjo, 2010). The highest number of visitors in 2016 was male sex at 58.0%. The male sex is more susceptible to contracting this disease. This explains the occurrence of gender inequality which causes the inability of men to control their healthy behavior. This is also supported by a lack of knowledge, information and access to HIV prevention services (Deitelzweig, *et al.*, 2016). Table 3 showed that the most visitors in 2016 were high school education, which was 42.7%. Education is one of the influential factors because this can help individuals or patients in choosing to choose a health service place. Good education will affect the individual's mindset (Goal, 2014). Based on occupation, the most work was a farmers. Work can also affect someone in utilizing health services. Based on the results of this study, most of the respondents were unemployed. Respondents who did not work consisted of a housewife and school-aged children (Kusumawati, 2006).

4.2 Overview of the Filter Test on Visitors and Clinical Overview of Visitors

The assessment in this case was coughing for more than 2 weeks, pale, skin spots, white spots and without symptoms. In this study the most data was in patients who came to treatment without symptoms as much as 31.3%. Table 6 showed that the highest number of people using the services of the VCT Clinic in Umbu Rara Meha Waingapu Hospital are those who have < 3 (74.4%) symptoms of the disease. Early detection is a good step to reduce the amount of virus development. Symptoms of this disease if not resolved will affect human antibodies and will eventually decrease the human immune system (Castellone, 2007).

4.3 Sensitivity and Specificity in the Clinical Overview of Visitors

Table 7 showed that the number of visitors treated was 35.3% detected HIV positive. This situation is caused by the patient's unhealthy behavior (Beckeret.*et.al*, 2006). Most of the patients who were detected as HIV positive were patients who were in productive age. After detecting HIV positive patients are immediately given therapy and administration of vaccines to suppress the development of this virus (Kubler, R. 2006; WHO. 2010).

5. CONCLUSION

1. The patients who visiting with < 3 symptoms more than with > 3 symptoms. Diagnostic test in the form of sensitivity 25 (62.5) specificity 35 (55.6) predictive value/positive predictions were 28 (44.4%) and the predictive value/negative predictions were 15 (37.5) and a likelihood ratio positive was $0.625 / 1 - 0.556 = 1.407$ likelihood ratio negative was $1 - 0.625 / 0.556 = 1.482$. The conclusion of this study is that in the East Sumba region this disease began to spread. HIV/AIDS can attack patients without considering the age, education and occupation status.
2. Therefore we need special attention from the government to be involved in socializing this disease.

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