

**ANALYSIS OF LABORATORY MANAGEMENT IMPLEMENTATION AND
THE LEVEL OF ACCURACY OF THE EXAMINATION RESULTS IN
HIV/AIDS COMMUNITY HEALTH CENTERS
IN THE TULUNGAGUNG DISTRICT**

Hariyanto¹, Indasah², Sandu Siyoto³

Majoring Post Graduate Kesmas SIKes Surya Mitra Husada Kediri

Email : hariyanto696@gmail.com

ABSTRACT

The community health Centers is the first-level health facilities (FKTP), which is responsible for health community districts (Kemenkes, 2016). The dynamics of the health problems facing the community is very diverse from various aspects can be seen overall demen Bio Social Sepiritual Neorologis. The type of research used in this research is observational analysis is a method of research conducted with the observations of behaviour, to create a picture of a State specific populations that are systematic and accurate. Observational research is research that explores how and why the quality management is correlated against the results, then do the analisia dynamics of the correlation between the factors that affect the accuracy of those results. In this study using a research korelasional that can be interpreted as a process of systematic investigation to find out the relationship between two or more variables (Sulistyaningsih). Statistics Regression test on logistics, obtained significant value of 0.00 (value p), valued at $p = \alpha = 0.05$ $0.00 < \rightarrow H_0$ is rejected, meaning that there is a correlation, laboratory management implementation and the level of accuracy of the inspection results HI Classification indicates the value of the overall percentage of 97.4%, which means that the accuracy of these studies amounted to 97.4%. This is because nearly all Clinics and Ngunut Campurdarat shows results as SOP by 25% (29 respondents), 18.97% of clinics Ngantru results (22 respondents). Meanwhile Clinics Simo 15.52% result (18 respondents) the results as SOP and 9.48% (11 respondents) the results is not appropriate.

Keywords: *Laboratory Management, accuracy of results, Public Health Center.*

INTRODUCTION

Community health centers that are known by the term first-level health facilities (FKTP), which is responsible for public health in the region of its performance on an area or part of the Sub-District (Kemenkes, 2016). Clinics in order to melaksana good service good service and quality as well as satisfy Subscriber.

The demands of today's society would be good quality health services. This along with rising income and level of education of the community. Health centers are expected to provide quality health services and provide satisfaction for the community. (Kemenkes, 2016).

With the change in policy was the inaugural health, including Health Minister regulation Number 75 Year 2014, Indonesia Healthy Program with the approach of the family life cycle-based Subtangible Development Goals (SDG's), and the dynamics of the health problems in dealing with the community is very diverse from various demensi in its entirety can be seen from the aspect of Social Sepiritual Bio Neorologis. As for one program of health care for HIV/AIDS merupakan an infection of an infectious disease that more vigorous dl worked. Considering his case continues to rise there as the phenomenon of icebergs in the ocean, the longer the more wax figures in pain. In handling this program one should note is the quality of the existing management in public health related to HIV/AIDS must also be at work in a professional manner by officers-officers provider of health numbers increasing year growing a lot in

Tulungagung district who had a vision: a society Independent of Tulungagung for healthy living. Must be supported in every health care Unit in the entire Health Service Unit including clinics in the territory of the district. In Tulungagung, there are 19 health centers, 257 villages, and 14 Subdistricts. The data gleaned HIV case numbers in pain/as many as 257 cases up to the year 2015 is handled by 19 Clinics and two hospitals in Tulungagung district. According to the minimum service standard Service Kesehatan Tahun 2016 obtained results that do not meet the targets on HIV/AIDS Programs, the eradication of Disease control programs, Basic of Service Health programe is reserved and almost every Reference Clinics accredited yet because it is still waiting for a policy of health service Tulungagung district {HIV Human Immunodeficiency Virus} is the virus that menyerangsistem human immune and can lead to AIDS. HIV invades a type of white blood cell that ward off infection. These white blood cells are mainly lymphocytes that have CD4 (T helper lymphocytes) as a marker or markers that are on the surface of cells of lymphocytes CD4 values decreased due to (T helper lymphocytes) in the human body shows the depletion of cells white or blood lymphocytes are supposed to play a role in overcoming the infection enters the human body. In people with good immune systems, CD4 values ranging between 1400-1500. Whereas in people with impaired immune systems (e.g. in people infected with HIV) value of CD4 (T helper lymphocytes) will soften the

longer (in some cases even get to zero) (KPA, 2007). Maternal mortality of 107 per 100,000 live births Since the discovery of the disease AIDS (Acquired a Nutriant Imuno Syndrome) virus and the cause of the HIV (Human Immunodeficiency Virus), such a broad impact appeared dimasyarakat. The number of people with HIV continues to rise and is widespread throughout the world. In Indonesia beginning in 1987, a 44-year-old tourist origin Netherlands died at sanglah hospital, Bali. The foreign man's death caused AIDS. Until the end of 1987, there were six people who were diagnosed as HIV positive, two of them suffered from AIDS. Since 1987 until June 2015 the total number of HIV-AIDS is increasingly growing. East Java, the number of HIV-AIDS sufferers by the end of 2010 there are 681 sufferers, up to the end of June 2015 sufferers amounted to 890 people (East Java Health Office 2010.2015). Each year the numbers always show a rise in the number of cases, like the phenomenon of iceberg in the middle of the ocean, thus the researcher intends to hold a research on "analysis of the implementation of the Laboratory Management and the level of accuracy of the results of the examination of HIV/ AIDS in the Puskesmas Tulungagung district Region ". As for the solution to do i.e. capture HIV through suspek examination of pregnant women and patients who have a background in accordance with the category of HIV disease who want to check in the Clinics or VCT checked his blood as suspek coverage HIV.

METHODS

Research Methods to load materials, subject or research material, equipment, course of study, variable, and the variable definition of operational, as well as analysis. In part this comes a chart or a scheme of research.

Research Design

This type of research used in this research is research. Observational analysis is a method of research conducted with the observations of the behaviour of, the main objective to create an overview or of a State or area specific populations that are systematic and accurate. Analysis of Observational research is research that explores how and why quality management influence on results, further analysis of the dynamics of correlations between the factors that affect the accuracy of the results . Analytic studies can be classified based on the purpose of his research, i.e. research korelasional research and differences/comparisons are causal. In this study researchers use research korelasional that can be interpreted as a process of systematic investigation to find out the relationship between two or more variables (Sulistyaningsih, 2011).

THE RESEARCH RESULTS

1. The Laboratory Officer/HR Officer laboratory characteristics

Table 1. Officer laboratory characteristics Puskesmas

Puskesmas	L/P	Age	Educational		Certified	Description
			D3 Analisis	SMAK		
Ngunut	P	44	V		V	accord
Ngantru	P	46	V		V	accord
Simo	P	40		V		not appropriate
Campurdarat	P	47	V		V	accord
the amount	4		3	1	3	

Based on the above table that the laboratory human resources aged 35-40 years as much as 3 people (75%) and the smallest age 30-35 years as much as 1 person (25%). The sex of all female human resources as much as 4 people (100%) and male-resource does not exist.

The Academy educated Health Analysts (AKK) who is trained and certified by as much as 3 people (75%). While the high school educated Health Analysts (SMAK) that are not certified as much as 1 person (25%).

SOP and implementation Management Laboratory

Table 2. SOP and implementation

The criteria of SOP	competencies		Description
	supposed	the very fact	
education	D3 health Analysts who have certificates	In fact there's a SMAK and not certified	D3 Analysts In Accordance SMAK doesn't match
Reagent	Nothing more than a date expired date	In fact there are over expired date	not appropriate
Responstime	Reading time 7 minutes after the completion of the examination	In fact there are read more than 7 minutes	not appropriate
The use of reagent	Use reagents 1, II, III who had a superior specificity and high sensifitas	All using appropriate SOPS	Accord
Methode	Should wear method imunocromatografi	All wear method imunocromatografi	Accord

Reagensia

Table 3. M must reagent for diagnosis (WHO)

Variable	Frekuensi	Prosentase
Reagent I (sensitivity > 99%)	4	100
Reagent II (specifications > 98%)		
Reagent III (Sensitivitas and specifications > 99%)		
the amount	4	100

The reagent must be used for diagnosis in 4 puskesmas, for wearing Reagent I 99% > sensitivity as much as 4 clinics (100%)
Reagent II Specifications > 98% 4 clinics (100%)
Reagent III sensitivity and 99% > specifications 4 100% of clinics.

1. Data supporting research

a. The distribution of human resources Handles Respondent

Table 4. HR Distribution Handles Responde

Puskesmas	The number of staff per Clinic	Criteria of SDM				The amount of Respondent	%
		Good	%	Sufficient	%		
Ngunut	1	29	25,00	0	0,00	29	25
Ngantru	1	29	25,00	0	0,00	29	25
Simo	1	0	0,00	29	25,00	29	25
Campurdarat	1	29	25,00	0	0,00	29	25
The amount		87	75,00	29	25,00	116	100

From table 4 above shows that of the four Clinics that conducted the research, three of them namely Clinics Ngunut, Ngantru, health centers and clinics Campurdarat, officers conducting the examination

of respondents (respectively 29 respondents) with good results (75%). Meanwhile, the health officer Simo show results sufficient in dealing with respondents.

b. The distribution of the inspection results using the SOP

Table 5. Distribution of inspection results using the SOP as examination requirement of accurate

No	Puskesmas	The results of examinations SOP				The amount of Respondent	%
		Good	%	Not good	%		
1	Ngunut	29	25,00	0	0,00	29	25
2	Ngantru	22	18,97	7	6,03	29	25
3	Simo	18	15,52	11	9,48	29	25
4	Campurdarat	29	25,00	0	0,00	29	25
The amount		98	84,48	18	15,52	116	100

From the table above 4.7 indicating inspection results according SOP, health centers and clinics Ngunut Campurdarat shows good results match each SOUP by 25% (29 respondents), Clinics Clinics Ngantru 18.97% show results (22

respondents). Meanwhile Clinics Simo 15.52% show results (18 respondents) for good results according SOP and 9.48% (11 respondents) for the results was not good.

c. The distribution of the Reagent used

Table 6. distribution of reagent used for the examination of suspek HIV/AIDS in Clinics

No.	Puskesmas	Criteria of reagent				The amount of Respondent	%
		Good	%	Not good	%		
1	Ngunut	29	25,00	0	0,00	29	25
2	Ngantru	29	25,00	0	0,00	29	25
3	Simo	25	21,55	4	3,45	29	25
4	Campurdarat	29	25,00	0	0,00	29	25
The amount		112	96,55	4	3,45	116	100

From the table above shows the criteria reagent which is used at the time of the inspection, health centers, Clinics and Ngantru Ngunut Clinics Campurdarat indicates that the reagent used each of these Clinics is

good, each of 25% (29 the respondents). While Clinics Simo there are 4 respondents (3.45%) who use the pemeriksaannya reagent is not a good.

d. The distribution method used

Table 7. the distribution method that is used for

No	Puskesmas	The Suitability Of The Method				The amount of Respondent	%
		Good	%	Not good	%		
1	Ngunut	29	25,00	0	0,00	29	25
2	Ngantru	29	25,00	0	0,00	29	25
3	Simo	29	25,00	0	0,00	29	25
4	Campurdarat	29	25,00	0	0,00	29	25
The amount		116	100,00	0	0,00	116	100

From table above shows the suitability of the methods used when examination of the respondents in the

four Clinics showed a good method or appropriate (100%)

e. The Distribution Of The Accuracy Of The Results

Table 8. implementation Distribution Management Laboratory (HR, SOP, reagents and methods) against levels of accuracy of results

No	Puskesmas	Accuracy rate				The amount of Respondent	%
		Hight Accuracy	%	Is not accurate	%		
1	Ngunut	29	25,00	0	0,00	29	25
2	Ngantru	22	18,97	7	6,03	29	25
3	Simo	17	14,66	12	10,34	29	25
4	Campurdarat	29	25,00	0	0,00	29	25
The amount		97	83,62	19	16,38	116	100

From table above, health centers and clinics Ngunut Campurdarat accuracy examination of results respondents showed a high degree of accuracy (100%). While Clinics Ngantru showed high accuracy level of 18.97% (22 respondents) and

inaccurate amounting to 6.03% (7 respondents). Clinics demonstrate Simo inaccurate amounted to 10.34% (12 respondents) and high accuracy results amounted to 14.66% (17 respondents)

C. Implementation Of Variable Characteristics

1. Karakteristik Variable based on the Implementation of the human resources (HR) in Clinics.

Table 9. karakteristik variable implementation of human resources

No	Competencies	The frequency	%
1	Accord	87	75
2	not appropriate	29	25
The amount		116	100

Based on table human resources health centers that serve the respondent almost entirely has

characteristics appropriate competence, namely 87 respondents (75%).

2. Implementation Of Variable Characteristics Based On Facilities And Infrastructure

Table 10. Reagent used for the examination

No	Reagent	The frequency	%
1	Accord	112	96.5
2	not appropriate	4	3.5
The amount		116	100

Criteria based on the reagent used for inspection according to the respondents was almost

entirely have characteristics appropriate for the examination, of 112 respondents (96.5%).

3. Implementation Of Variable Characteristics Based On The Method Of Examination

Table 11. Method of examination

No	Method	The frequency	%
1	Accord	112	96.5
2	not appropriate	4	3.5
The amount		116	100

Based on table according to respondents showed that nearly all methods of examination have

characteristics appropriate i.e. 112 respondents (96.5%).

4. Implementation Of Variable Characteristics Based On Examination Of HIV Based On SOP.

Table 12. Examination based on SOP.

No	SOP	The Frequency	%
1	Accord	98	84.5
2	not appropriate	18	15.5
The amount		116	100

Based on table according to respondents that the examination is almost entirely based on SOP

that has appropriate characteristics i.e. 98 respondents (84.5%).

D. Identification Of The Level Of Accuracy Of Results

1. The distribution of human resources Handles Respondent

Table 13. Handling human resources Distribution of respondents

No	Puskesmas	The criteria of SDM				The amount of Respondent	%
		Good	%	Sufficient	%		
1	Ngunut	29	25	0	0	29	25
2	Ngantru	29	25	0	0	29	25
3	Simo	0	0	29	25	29	25
4	Campurdarat	29	25	0	0	29	25
The amount		87	75	29	25	116	100

From the table above 4.15 shows that of the four Clinics that conducted the research, three of them namely Clinics Ngunut, health centers and clinics Ngantru Campurdarat, the officer conducting the examination of respondents (respectively 29 respondents) with good results (75%). Meanwhile, the health officer Simo show results sufficient in dealing with respondents.

1. Distribution of the inspection results using the SOP

Table 14. Distribution of inspection results using the SOP as examination requirement of accurate.

No	Puskesmas	The results of examinations SOP				The amount of Respondent	%
		Good	%	Not good	%		
1	Ngunut	29	25,00	0	0,00	29	25
2	Ngantru	22	18,97	7	6,03	29	25
3	Simo	18	15,52	11	9,48	29	25
4	Campurdarat	29	25,00	0	0,00	29	25
The amount		98	84,48	18	15,52	116	100

From the table above shows the result of the examination of 4.16 according SOP, health centers and clinics Ngunut Campurdarat shows good results match each SOUP by 25% (29 respondents), Then Ngantru

shows the result of 18.97% (22 respondents). Meanwhile Clinics Simo 15.52% show results (18 respondents) for good results according SOP and 9.48% (11 respondents) for the results was not good.

2. Distribution of the Reagent used

Table 15. Distribution reagent used for the examination of suspek HIV/AIDS in Clinics.

No	Puskesmas	Criteria of reagent				The amount of respondent	%
		Good	%	Not good	%		
1	Ngunut	29	25,00	0	0,00	29	25
2	Ngantru	29	25,00	0	0,00	29	25
3	Simo	25	21,55	4	3,45	29	25
4	Campurdarat	29	25,00	0	0,00	29	25
The amount		112	96,55	4	3,45	116	100

From the table above shows the criteria reagent which is used at the time of the inspection, health centers, Clinics and Ngantru Ngunut Clinics Campurdarat indicates that the reagent used each of these clinics is

good, each of 25% (29 respondents). While Clinics Simo there are 4 respondents (3.45%) who use the pemeriksaannya reagent is not a good.

3. The distribution method used

Table 16. Distribution method that is used for

No	Puskesmas	The Suitability Of The Method				The a amount of Respondent	%
		Good	%	Not good	%		
1	Ngunut	29	25,00	0	0,00	29	25
2	Ngantru	29	25,00	0	0,00	29	25
3	Simo	29	25,00	0	0,00	29	25
4	Campurdarat	29	25,00	0	0,00	29	25
The amount		116	100,00	0	0,00	116	100

From table 4.18 above shows the suitability of the methods used when examination of the

respondents in the four Clinics showed a good method or appropriate (100%).

DISCUSSION

- Based on the results of our field Observations and penenelitian obtained the following data: • the observations have been peniliti mentioned above in chapter IV so that research results can be used

as a result of the findings, then researchers in this chapter outlines with based on relevant theories has been done by previous researchers

Analysis Of Laboratory Management Implementation And The Level Of Accuracy Of The Examination Results In HIV/AIDS Clinics, Se Tulungagung District

- Data examination results of HIV/AIDS in the Health Program Implementers 4 VCT in Clinics se Tulungagung district in August-September.
 1. Clinics Ngunut 29 Reactive sample as much as 1 a Non Reactive samples and as many as 28 sample
 2. Clinic Ngantru Reactive sample as many as 29 3 sample and Non Reactive sample 26
 3. The clinic Simo, who Simo 29 Reactive as much as 3 sample and Non Reactive sample 26
 4. Then mix the 29 Samples, no sample is reactive Non Reactive, and as many as 29 samples.
- Data Management
 1. Clinics Ngunut, its staff members of an educated and certified Health Analyst D3.
 2. The clinic Ngantru, its staff members of an educated and certified Health Analyst D3.
 3. Clinic Simo, its staff members are an educated SMAK and not certified.
 4. Seek Campurdarat, its staff members of an educated and certified Health Analyst D3.
- From usage data of the PERSONAL self protective Tools 4 Clinics do not always use the APD officers all the time checking for HIV/AIDS as a means of self security officers themselves, but from most Imperative over the regulations must comply with by the officer in Laboratories with the reason no less painstaking attention to personal safety.
- Data from human resources 4 clinic. There's still an educated person 1 SMAK and not certified. Because the senior so keep already placed at the Lab so that the competencies he must need to have updated with ditugas belajarkan higher education dijenjang according Kopetensi.
- Use of data From 3 different Reagents and has high sensitivity and high superior specificity in accordance with the advice of the WHO in SOP HIV/AIDS checks already carried out by 4 Clinics.

A. Based On The Implementation Of The Laboratory Management, Human Resources, Infrastructure, And The Method Of Examination Of HIV/AIDS In Clinics

Based on the implementation of the laboratory management, human resources, infrastructure, and the method of examination of HIV/AIDS on the health human resources health centers that serve the respondent almost entirely melaukan in accordance with the methods of examination, that is 112 respondents (96.5%). AIDS is an infectious disease that is more heavily funded. Considering his case continues to rise there as the phenomenon of icebergs in the ocean, the longer the more wax figures in pain. in handling this program one should note is the quality of the existing management in public health related to HIV/AIDS must also be at work in a professional manner by officers-officers of the health provider was further given the sheer numbers of the year growing a lot in Tulungagung district. Basically the knowledge management laboraturim implementa still low owned Clerk 4 (25%) of the management dimension of the implementation of the infrastructure, in research this question asked by researchers

there is a small part of HR demensi answer doesn't match the competencies. According to the minimum service standard Health Office the year 2016 obtained results that do not meet the targets on HIV/AIDS programs, the eradication of disease control programs, basic health services program, the program is reserved and the reference service of almost every Clinics have not been accredited because it is still waiting for a policy of health service Tulungagung district. According to the G, R, Terry is the process by Which consist of planning. Organizing, implementing and monitoring in specified through the utilization of human resources and others. From the explanation above for the institutions fact in this institution of the clinics se Tulungagung district, we recommend that you do the jababatan analysis especially for medical analyst officer needs energy analysts expect can be fulfilled throughout the area se of clinics Tulungagung District Health Office work.

B. Characteristics Accuracy Results

For dimensional accuracy of results showed that of the four Clinics that conducted the research, three of them namely Clinics Ngunut, Ngantru, and the officer checks Campurdarat, against the respondents (respectively 29 respondents) with the results good (75%).

Management comes from the concept of Terminology management is an activity or in taking care of art, lead, reach, govern, guide, direct, and control, of doing things a particular skill activities. can be defined also as the results of the evaluation of the job done

employees compared to existing criteria and set out together, according to researchers in

melaksanakan tugasnya always use the SOP.

C. the influence of HUMAN RESOURCES, infrastructure, Laboratory SOPs, methods of accuracy inspection results against HIV/AIDS.

1. On the test statistic Regression Logistic, obtained significant value of 0.00 (p value), so: the value of $p = 0.00 < \text{pronounced} = 0.05 \rightarrow H_0$ is rejected, meaning that there is a relationship, laboratory management implementation

and the level of accuracy of the results of the examination of HIV/AIDS. Classification table shows the value of the overall percentage of 997.4%, which means that the accuracy of these studies amounted to 97.4%.

CONCLUSIONS AND SUGGESTIONS

A. CONCLUSIONS

For The Implementation Of The Management

1. Results from 116 respondents showed that of the four Clinics that conducted the research, three of them namely Clinics Ngunut, health centers and clinics Ngantru Campurdarat, the officer conducting the

examination of respondents (respectively 29 the respondents) with good results (75%). Meanwhile, the health officer Simo show results sufficient in dealing with respondents.

For Advice On Infrastructure

2. Results of the 116 respondents based on infrastructure/reagent used for examination according to the respondents was almost entirely have characteristics appropriate for the examination, of 112 respondents (96.5%).
3. From 116 Respondents showed that nearly all the inspection method using appropriate Reagents SOP has characteristics appropriate i.e. 112 respondents (96.5%).
4. Based on the accuracy of results from 116 Respondents showed that of the four Clinics that conducted the research,

three of them namely Clinics Ngunut, Ngantru, health centers, and clinics Campurdarat, the officer conducting the examination of respondent (each of the 29 respondents) with good results (75%). Meanwhile, the health officer Simo show results sufficient in dealing with the respondent. Statistics Regression test results of logistics, showed that significant value of 0.00 (p value), so: the value of $p = 0.00 < \text{pronounced} = 0.05 \rightarrow H_0$ is rejected, meaning that there is a correlation,

laboratory management implementation and the level of accuracy of the results of the examination of HIV/ AIDS Classification table shows the

value of the overall percentage of 997.4%, which means that the accuracy of these studies amounted to 97.4%

B. Theoretical Suggestions

The researchers expected to add/researching new variables

C. Practical advice

1. For health services / clinic
 - a. According to research we did to produce the level of accurate laboratory examination results need to be supported with good management.
 - b. Place the power D III a competent Health Analysts
2. For the laboratory officer
 - a. code of conduct using APD in working deals with Infectious
 - b. Works using the SOP in accordance with.
3. For Institutional STIKes Surya Mitra Kediri
 - a. Add enriched references in The STIKes library.

namely variables, Subscriber Satisfaction

and certified laboratory clinic.

- c. Complementary infrastructure examination of HIV/AIDS and distribute it to clinics is right on target.
- d. Conduct training in House training on HIV/AIDS and includes officers follow external training.
- c. Officers understand about UPS (Universal Precaution) and apply the HSE laboratory.
- d. Officers must be able to dispose of waste properly and safely

BIBLIOGRAPHY

- Amier Faisal. Mitra Wacana Media. Jakarta. 2015. *Memahami Evaluasi Kinerja Karyawan Konsep dan Penilaian Kinerja di Perusahaan*
- Amron. 2017. *Peningkatan Kerja Karyawan Melalui Kepemimpinan Lingkungan Kerja Komitmen Organisasi dan Motivasi*. Diakses pada tanggal 10 Maret 2017. <http://eprints.dinus.ac.id>
- Astari L, Sawitri, Safitri YE, Hinda D. *Viral load pada infeksi HIV*. Berkala Ilmu Kesehatan Kulit dan Kelamin. 2009; 21(1):31-8.
- Depkes RI, 2005. *Pedoman Monitoring dan Perawatan Pasien HIV/AIDS dengan Antiretro viral (ARV)*
- Dirjen P2MPL Depkes. *Laporan Bulanan HIV-AIDS*. Pebruari 2010. Jakarta 2010
- Djoerban Z, Djauzi S. "HIV/AIDS di Indonesia". In: *Buku Ajar Ilmu Penyakit Dalam Edisi V*. Editor: Sudoyo AW, Setiyohadi B, Alwi I, Simadibrata M, Setiati S. Jakarta: Pusat Penerbitan IPD FKUI. 2009; p. 2861.
- Dwi, SeptiAtiningtyas. 2012. *Pengukuran Kinerja Puskesmas Berdasarkan Kepmenkes RI No. 828/Menkes/SK/IX/2008 di Kabupaten Bojonegoro*. Universitas Negeri Surabaya. Diakses tanggal 13 Februari 2017. <http://ejournal.unesa.ac.id>
- Eskaryot, Endik. *Gambaran Manajemen Program Pelayanan Kesehatan di Puskesmas Semboro Kabupaten Jember*. Diakses tanggal 10 Maret 2017. <http://repository.unej.ac.id>
- Hendrata, Adi Pramonodr. SpPK. 2007. *Modul Alur Pemeriksaan Anti-HIV*. Balai Besar Laboratorium : Surabaya.
- Iriantosanco A, S.Kep.Ns. Kewaspadaan Universal (Universal Precaution). Diakses tanggal 28 Maret 2017. <http://keperawatanku.blogspot.co.id/2010/08/kewaspadaan-universal-universal.html?m=1>
- Komisi Penanggulangan AIDS Nasional. *Info HIV dan AIDS*. Jakarta; 2010.
- Muninjaya, A. 2012. *Manajemen Kesehatan Edisi 2*. Jakarta: EGC
- Nasronudin. *HIV/AIDS. In: Penyakit infeksi di Indonesia solusi kini dan mendatang*. Editor: Hadi U, Vitanata, Erwin AT, Suharto, Bramantono, Soewandojo E. Surabaya: Airlangga University Press. 2007; p. 15 – 7.
- RI.Permenkesno.15,2015. *Pelayanan Laboratorium Pemeriksaan HIV Dan Infeksi Oportunistik*.
- RI,Depkes, 2010. *Pedoman Pelayanan Laboratorium yang Benar*. Direktorat Jendral Pelayanan Medik Kemenkes : Jakarta.

RI,Depkes. 2006. *Pedoman Standar PelayananLaboratorium untuk Pemeriksaan HIV dan Infeksi Oportunistik*. EGC : Jakarta.

RI,Depkes.2008. *Pedoman Kewaspadaan Universal Precaution*. EGC : Jakarta.

Siyoto, Sandu dr. S.KM.,M.Kes., S. Supriyanto Prof. Dr. dr. M.S. 2014. *Kebijakan & Manajemen Kesehatan*. Andi: Yogyakarta

SilfaBonasAnshar, *Pengelolaan Sampah/Limbah Rumah Sakit dan Permasalahannya*. Diakses tanggal 25 maret 2017, <https://ansharcaniago.wordpress.com/2013/02/24/pengelolaan-sampahlimbah-rumah-sakit-dan-permasalahannya/>

Sofro MAU, Anurogo D. *Kewaspadaan universal dalam menangani penderita HIV/AIDS*. In: *5 Menit Memahami 55 Problematika Kesehatan*. Editor: Wee D. Jogjakarta: D-Medika; 2013. p. 143-8.

WHO. *HIV/AIDS*. Available from : http://www.who.int/topics/hiv_aids/en/