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## **The Factors Affecting of Adherence Drug Medicine ARV to Patient With HIV/AIDS at Paniai Regency**

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### **Abstract**

Disease HIV/AIDS in Indonesia have come into question health needing many growth and attention of the amount of which suffering progressively day progressively increase the including in Paniai Regency. State of WHO ARV terpahy can up of age HIV/AIDS patien and that be preventive of infection HIV/AIDS with quickly, so can be down health fund. Goal of research: To knowing the factors affecting of adherence drug medicien arv to patien with HIV/AIDS at Paniai Regency. Correlation with sectional cross study design is used within this paper. Population is patient HIV/AIDS in Paniai generalhospital got ARV therapy with total sampel as much 130 people. Research at Paniai general hosptila in October 2016 by using questioner. Analyzed data by chi square and regresi binari logistics. The results of this research shows that factor influencing of adherence take medicine ARV Paniai regency is female, education, knowledge, history change ARV, side effects history, accessing health service and family support, while factor which not have an effect on to adherence take medicine ARV Paniai general hospital is age, work, long medication and health employment support to adherence druge medicine ARV Paniai regency. Dominant factor to adherence drug medicine ARV in Paniai regency is side effects history.

**Keyword:** ARV; Adherence; ODHA.

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## **1. Introduction**

AIDS is a disease caused by a virus called Human Immunodeficiency Virus (HIV). Ongoing HIV immune damage. A healthy immune system controls the germs (infection of follow-up), approximately 7-10 years so as not to cause disease. However, after some time, the immune system becomes so damaged that germs cause disease and eventually death. AIDS occurs when the immune system decreases. To combat opportunistic infections, people living with HIV must take medication after infection by HIV. AIDS cannot be cured, but the infection can be controlled with medication Anti Retro Virus (ARV) [1]. HIV disease in Indonesia is already becoming a health problem that requires a lot of attention and growth in the number who suffer from increasingly growing. Saai yaang no country is free from the problem of HIV / AIDS. The spread of HIV infection continues to grow and take place to any country because suffering from HIV / AIDS are in the productive age. According to the Directorate of Community Pharmacy and Clinical DG of Pharmaceutical and Medical Devices (2006: 12) Cases of HIV / AIDS in Indonesia is increasing. In Indonesia since 1999 there has been a growing number of people with HIV / AIDS (PLWHA) in certain sub-populations in some provinces where HIV prevalence is high enough. This increase occurred in the group of high-risk behavior of people infected with HIV are commercial sex workers and users NAPZA injection in 6 provinces: Jakarta, Papua, Riau, Bali, West Java and East Java (concentrated level of epidemic). If this problem is not addressed immediately, the epidemic will likely move into a thorough and severe epidemics. The whole world in 2015 there are 36.7 million people living with HIV covering 16 million women and 3.2 million children aged <15 years. The number of new HIV infections in 2015 amounted to 2.1 million consisting of 1.9 million adults and 240,000 children aged <15 years. The number of deaths from AIDS as much as 1.1 million consisting of 1.3 million adults and 190,000 children aged <15 years. 17 million people are living with HIV / AIDS mendapatkan ARV therapy. The prevalence of antiretroviral treatment compliance in negaraberkembang including Indonesia was under 95%, which is about 45% - 70% [2]. The cumulative number of HIV sufferers in Indonesia the cumulative number of 1987 until September 2016 as many as 269 013 people, while the total cumulative AIDS cases and AIDS 191.073orang many as 77 940 cases. The pattern of the spread of HIV / AIDS berdasarkan sexes have a similar pattern in the last 7 years that is more common in males than in group perempuan (MoH RI, 2014). Number of people living with HIV / AIDS in Indonesia in 2016sebanyak 40 575, consisting of 32 711 HIV sufferers and 7864 cases of declared AIDS. This figure is certainly much improved the last five years in 2010, as many as 21 591 people living with HIV and AIDS as many as 6845 people (MoH RI, 2016). While data of HIV / AIDS in Papua Province as of September 30 2016 and is the third of people with HIV / AIDS as much as 25 349 cases, consisting of as many as 9371 cases of HIV and AIDS 15 978 [3]. In 2016 from the monthly report HIV and AIDS care in Indonesia recorded the number of PLWHA who receive antiretroviral therapy as much as 49 217 of the 34 provinces and 300 districts / cities (Spritia, 2016) .Prinsip ARV provision is a need to use three drugs three have absorbed and are within the therapeutic dose in the blood, known as highly active antiretroviral therapy (HAART). The term HAART often shortened to ART (antiretroviral therapy) or ARV therapy. The government set the alloys used in the treatment of ARVdengan based on five aspects of effectiveness, efeksamping / toxicity, drug interactions, adherence and price obat.Konseling adequate therapy is crucial for long therapy hidupdan successful long-term therapy. The contents of counseling therapy inintermasuk: medication adherence, potential / possible risks efeksamping or

unwanted effects or syndrome pulihimun (Immune reconstitution inflammatory syndrome / IRIS) after memulaiterapi ARVs, especially in HIV-positive people with advanced clinical stage [4,5]. People with HIV / AIDS should receive information and counseling benardan enough about antiretroviral therapy before the start. It inisangat important in maintaining ARV adherence karenaharus drunk during his lifetime. Factors affecting the provision of ARV ARV kepatuhanminum freely, kemudahanminum drugs and readiness to drink it. After Counseling compliance, PLWHA asked committed to undergo ARV treatment on a regular basis for a long term. counseling includes how and precision to take medication, side effects may occur, interactions with other drugs, monitoring of clinical state ARV treatment on a regular basis for a long term. counseling includes how and precision to take medication, side effects may occur, interactions with other drugs, monitoring of clinical state and monitoring periodic laboratory tests including CD4 (Minister of Health Decree no. 87 of 2014). Papua entered widespread epidemic with HIV prevalence 2.3%, so it developed a Comprehensive Service Sustainable (LKB) denganmelibatkan active role of the community approach strategies to provide antiretroviral drugs for prevention of HIV infection danpengobatan (Minister of Health Decree no. 87 of 2014). Patients who are diagnosed with HIV / AIDS directly given ARV therapy without pre antiretroviral counseling memadaimengingat of the epidemic is increasingly widespread. According to MoH RI [5,7], ARV therapy for people with HIV / AIDS antiretroviral therapy to reduce mortality and morbidity, improve the quality of life of people living with HIV and increasing public expectations. PengobatanAnti Retro Virus to lower the amount of HIV virus in their bodies so as not to enter into the stage of AIDS, while in people with AIDS itself require ARV treatment to prevent infections and complications that exist accompany the patient. According to Steel in Galistiani & Mulyaningsih, [7] Adherence to ARV treatment has been identified as a critical component for the success of a program which is optimal therapy. Research on such compliance in developed countries shows that high levels of adherence closely associated with virological and clinical improvement. Adherence to therapy is critical to get the full benefit of ARV therapy including maximizing long and suppression of the viral replication, mengurangikerusakan CD4 cells, the prevention of viral resistance, improved immune back, and slow disease progression. According to official reports section Clinic of integrated hospitals Paniai until 2015 there were 938 people who had done the initiation of pretreatment Anti Retro Virus (ARV) and 378 already carried out ARVs and 123 lose follow-up (LFU) in 2015 and september 2016 66 people , bringing the total in the box seat of follow-up (LFU) as many as 189 people. The reason researchers mememilih this title, because compliance is a condition in which patients adhere to the use of drugs on the basis of its own kesadaaran not only because memathui orders from doctors. This is very important because with the compliance in taking ARV drugs is expected to further increase the patient compliance in taking the drug. Compliance in the use of antiretroviral drugs should be monitored and evaluated by medical personnel regularly in every meeting. Based on the above background, researchers interested in conducting research with the heading "Factors Affecting Non-compliance of drinking obatAnti (ARV) On People With HIV / AIDS In Paniai".

## **2. Materials and Methods**

Research using quantitative methods in this study are included in the category of correlation study. As is the correlation study by Arikunto (2010) is a study conducted by the researchers to determine the degree of relationship between two or more variables, without making any changes, additions, or manipulation of the data that was already there. This study uses a cross-sectional study design, the data collection is done at the same

time (Swarjana, 2013) .Penelitian This is done by taking the Integrated Clinical research sites in Paniai Hospital. As for the time of the study in September 2016.Populasi in this study were all HIV / AIDS patients in the initiation ever taking ARVs in Integrated Clinic 2015 until September 2016 as many as 189 people. Based on the total population 189orang with HIV / AIDS. Data collection techniques in this research is a questionnaire distributed to respondents. The data analysis uses the chi quare and binary logistic regression.

### 3. Results

#### 1. Independent and Dependent Variables

**Table 1:** Distribution of respondents in Paniai

No	Variabel	Frekuensi (n)	Presentase (%)
1	<b>Age</b>		
	16 – 29 year	78	60
	≥ 30 year	52	40
2	<b>Sex</b>		
	Male	58	44,6
	Female	72	55,4
3	<b>Education</b>		
	Low	71	54,6
	High	59	45,4
4	<b>Occupation</b>		
	Not work	62	47,7
	Work	68	52,3
5	<b>Treatment period</b>		
	Long	108	83,1
	New	22	16,9
6	<b>Knowledge</b>		
	Less	75	57,7
	Good	55	42,3
7	<b>ARV change history</b>		
	Ever	60	46,2
	Never	70	53,8
8	<b>Effect side history</b>		
	Ever	92	70,8
	Never	38	29,2
9	<b>Health services access</b>		
	Difficult	91	70
	Easy	39	30
10	<b>Family support</b>		
	Not support	89	68,5
	Support	41	31,5
11	<b>Health staff support</b>		
	Not support	25	19,2
	Support	105	80,8
12	<b>Medicine drinking obedience ARV</b>		
	Not obey	72	55,4
	Obey	58	44,6
	Number	130	100

Sumber: Data Primer, 2016

Based on Table 1, shows that most respondents aged 16-29 years as many as 78 people (60%) <female sex as much as 72 people (55.6%), low education as many as 71 people (54.6%), working as many as 68 people (52.3%), the length of treatment time as many as 108 people (83.1%), lack of knowledge about ARVs as many as 75 people (57.7%), never replace the history of ARV many as 70 people (53.8%), once have a history of side effects as many as 92 people (70.8%), access to health services is difficult as many as 91 people (70%), family support does not support as many as 89 people (68.5%) and support of health workers that support as many as 105 people (80, 8%). The level of non-compliance taking antiretroviral drugs mostly do not comply as much as 72 people (55.4%).

2. Analysis Bivariat

a. Effect of Age Against Disobedience taking antiretroviral drugs

**Table 2:** Effect of Age Against Disobedience taking antiretroviral drugs in Paniai

No	Age	Disobedience of medicine drinking				n	%
		Not obey		Obey			
		N	%	n	%		
1	16 – 29 year	43	55,1	35	44,9	78	100
2	≥ 30 year	29	55,8	23	44,2	52	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 1,000; <i>RP</i> = 0,989; <i>CI</i> 95% (0,722 – 1,353)							

Sumber: Data Primer, 2016

Table 2 shows that out of 78 people aged 16-29 years, as many as 43 people (55.1%) non-adherent taking ARV drugs, and 35 (44.9%) dutifully taking antiretroviral drugs. While 52 people aged > 30 years, as many as 29 people (55.8%) non-adherent taking antiretroviral drugs and 23 people (44.2%) dutifully taking antiretroviral drugs. The test results on the value of chi square statistic significance of 95% ( $\alpha = 0.05$ ) was obtained *p-value* 1,000 or  $p > \alpha$  (0.05), thus there is no effect of age on non-compliance with drinking obatARV in Paniai. When viewed from the *RP* = 0.989; *CI*95% (0.722 to 1.353) were not significant.

b. Influence of Gender Against Disobedience taking antiretroviral drugs

Table 3 shows that of the 58 sex male - male, as many as 39 people (67.2%) non-adherent taking antiretroviral drugs and 19 (32.8%) dutifully taking antiretroviral drugs. Meanwhile, from 72 female, 33 persons (45.8%) non-adherent taking ARV drugs, and 39 (54.2%) dutifully taking antiretroviral drugs. The test results on the value of chi square statistic significance of 95% ( $\alpha = 0.05$ ) was obtained *p-value* 0,024 or  $p < \alpha$  (0.05), thus no influence of gender non-compliance taking antiretroviral drugs in Paniai. When viewed from the *RP* = 1,467; *CI*95% (1.077 to 1.998) which interpreted that people with HIV / AIDS-sex male - male berisikog wayward taking ARV drugs 1,467 times higher than the HIV / AIDS-sex male - female.

**Table 3:** Influence of Gender Against Disobedience taking antiretroviral drugs in Paniai

No	Gender	Disobedience of medicine drinking				N	%
		Not obey		Not obey			
		N	%	n	%		
1	Male	39	67,2	19	32,8	58	100
2	Female	33	45,8	39	54,2	72	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 0,024; RP = 1,467; CI95% (1,077 – 1,998)							

Sumber: Data Primer, 2016

**Table 4:** Effect of education Against Disobedience taking ARV drugs in Paniai

No	Education level	Disobedience of ARV medicine drinking				n	%
		Not obey		Not obey			
		n	%	N	%		
1	Low	57	80,3	14	19,7	71	100
2	High	15	25,4	44	74,6	59	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 0,000; RP = 3,158; CI95% (2,010 – 4,962)							

Sumber: Data Primer, 2016

Table 4 shows that of the 71 people with a low education level as many as 57 people (80.3%) non-adherent taking ARV drugs, and 14 (19.7%) dutifully taking antiretroviral drugs. While 59 people with higher education levels, as many as 15 people (25.4%) non-adherent taking antiretroviral drugs and 44 (74.6%) dutifully taking antiretroviral drugs. The test results on the value of chi square statistic significance of 95% ( $\alpha = 0.05$ ) was obtained  $p$ -value 0,000 or  $p < \alpha$  (0.05), thus there is the effect of educational level on the non-compliance taking antiretroviral drugs in Paniai. When viewed from the RP = 3.158; CI95% (2.010 to 4.962) which interpreted that people with HIV / AIDS with low education levels berisikog not obedient to take medication ARV 3.158 times higher than the HIV / AIDS with a higher education.

c. Effect of Work Against Disobedience taking antiretroviral drugs

Table 5 shows that of the 62 people who do not work as many as 38 people (61.3%) non-adherent taking antiretroviral drugs and 24 people (38.7%) dutifully taking antiretroviral drugs. While 68 people with working, as many as 34 people (50%) non-adherent taking ARV drugs, and 34 (50%) dutifully taking antiretroviral drugs. The test results on the value of chi square statistic significance of 95% ( $\alpha = 0.05$ ) was obtained  $p > \alpha$  (0.05), and thus no influence on the work of non-compliance taking antiretroviral drugs in Paniai. When

viewed from the  $RP = 1.226$ ;  $CI95\%$  (0.900 to 1.670) were not significant.

**Table 5:** Effect of Works Against Disobedience taking antiretroviral drugs in Paniai

No	Occupation	Disobedience of ARV medicine drinking				n	%
		Not obey		Not obey			
		n	%	n	%		
1	Not work	38	61,3	24	38,7	62	100
2	Work	34	50	34	50	68	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 0,264; $RP = 1,226$ ; $CI95\%$ (0,900 – 1,670)							

Source: Data Primer, 2016

d. Effect of Duration of treatment against non-compliance taking antiretroviral drugs

**Table 6:** Effect of Duration of treatment against non-compliance taking antiretroviral drugs in Paniai

No	Treatment length	Disobedience of ARV medicine drinking				n	%
		Not obey		Not obey			
		n	%	n	%		
1	Long	60	55,6	48	44,4	108	100
2	New	12	54,5	10	45,5	22	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 1,000; $RP = 1,019$ ; $CI95\%$ (0,671 – 1,546)							

Source: Data Primer, 2016

Table 6 shows that out of 108 people with a long duration of treatment of 60 people (55.6%) non-adherent taking antiretroviral drugs and 48 people (44.4%) dutifully taking antiretroviral drugs.

While 22 people with the old new treatment, as many as 12 people (54.5%) non-adherent taking antiretroviral drugs and 10 people (45.5%) dutifully taking antiretroviral drugs.

The test results on the value of chi square statistic significance of 95% ( $\alpha = 0.05$ ) was obtained  $p\text{-value}1,000$  or  $p > \alpha$  (0.05), and thus no longer influence the treatment of non-compliance taking antiretroviral drugs in Paniai. When viewed from the  $RP = 1,019$ ;  $CI95\%$  (0.671 to 1.546) were not significant.

e. Influence Knowledge Against Disobedience taking antiretroviral

**Table 7:** Effect of Knowledge Against Disobedience taking antiretroviral drugs in Paniai

No	Knowledge	Disobedience of ARV medicine drinking				n	%
		Not obey		Not obey			
		n	%	n	%		
1	Less	61	81,3	14	18,7	75	100
2	good	11	20	44	80	55	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 0,000; <i>RP</i> = 4,067; <i>CI</i> 95% (2,371 – 6,975)							

Source: Data Primer, 2016

Table 7 shows that of the 75 people with less knowledge of as many as 61 people (81.3%) non-adherent taking ARV drugs, and 14 (18.7%) dutifully taking antiretroviral drugs. While 55 people with a good knowledge of, as many as 11 people (20%) non-adherent taking ARV drugs, and 44 (80%) dutifully taking antiretroviral drugs. The test results on the value of chi square statistic significance of 95% ( $\alpha = 0.05$ ) was obtained *p-value* 0,000 or  $p < \alpha$  (0.05), thus there is the influence of knowledge on the non-compliance taking antiretroviral drugs in Paniai. When viewed from the *RP* = 4.067; *CI*95% (2.371 to 6.975) which interpreted that people with HIV / AIDS with less knowledge berisikog wayward taking ARV drugs 4.067 times higher than the HIV / AIDS with good knowledge.

f. Effect of changing history taking medication adherence Against ARV ARV

**Table 8:** Effect of changing history ARV Against Disobedience taking antiretroviral drugs in Paniai

No	ARV change	Disobedience of ARV medicine drinking				n	%
		Not obey		Not obey			
		n	%	n	%		
1	Ever	45	75	15	25	60	100
2	Never	27	38,6	43	61,4	70	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 0,000; <i>RP</i> = 1,944; <i>CI</i> 95% (1,398 – 2,704)							

Source: Data Primer, 2016

Table 8 shows that of the 60 people never replace ARVs, as many as 45 people (75%) non-adherent taking ARV drugs, and 15 (25%) dutifully taking antiretroviral drugs. While 70 people never replace antiretrovirals, as many as 27 people (38.6%) non-adherent taking antiretroviral drugs and 43 (61.4%) dutifully taking antiretroviral drugs. The test results on the value of chi square statistic significance of 95% ( $\alpha = 0.05$ ) was obtained *p-*



value 0,000 or  $p < \alpha$  (0.05), thus there is the effect of changing history of non-compliance taking ARV ARV drugs in Paniai.

When viewed from the  $RP = 1,944$ ;  $CI95\%$  (1.398 to 2.704) which interpreted that people with HIV / AIDS who never replace non-compliant drinking berisikog ARV ARV drugs 1,944 times higher than the HIV / AIDS patients who never replace antiretrovirals.

g. Effect of History Against the side effects of taking medication adherence ARV

**Table 9:** Effect of History Against the side effects of taking medication adherence ARV in Paniai

No	Side effect history	Disobedience of ARV medicine drinking				n	%
		Not obey		Not obey			
		n	%	n	%		
1	Ever	71	77,2	21	22,8	92	100
2	Never	1	2,6	37	97,4	38	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 0,000; $RP = 29,326$ ; $CI95\%$ (4,226 – 203,501)							

Source: Data Primer, 2016

Table 9 shows that of the 92 people have ever had a history of side effects, as many as 71 people (77.2%) non-adherent taking ARV drugs, and 21 (22.8%) dutifully taking antiretroviral drugs. Meanwhile, from 38 people who had no history of side effects, as many as 1 (2.6%) non-adherent taking antiretroviral drugs and 37 (97.4%) dutifully taking antiretroviral drugs.

The test results on the value of chi square statistic significance of  $95\% = 0.05$ ) was obtained  $p\text{-value} 0,000$  or  $p\alpha (< \alpha (0.05))$ , thus there is a history of adverse reactions to the influence of non-compliance taking antiretroviral drugs in Paniai.

When viewed from the  $RP = 29.326$ ;  $CI95\%$  (4.226 to 203.501) interpreted that HIV / AIDS patients who have had a history of non-compliant drinking efeksamping berisikog ARV drugs 29.326 times higher than the HIV / AIDS patients who never replace antiretrovirals.

Effect of Health Care Access Disobedience Against taking antiretroviral drugs

Table 10 shows that of the 91 people with access to health services is difficult, as many as 70 people (76.9%) non-adherent taking ARV drugs, and 21 (23.1%) dutifully taking antiretroviral drugs.

While 39 people with easy access to health care, as many as 2 (5.1%) non-adherent taking antiretroviral drugs and 37 (94.9%) dutifully taking antiretroviral drugs.

**Table 10:** Effect Against Health Care Access Failure to take medication ARV in Paniai

No	Health services access	Disobedience of ARV medicine drinking				n	%
		Not obey		Not obey			
		n	%	n	%		
1	Difficult	70	76,9	21	23,1	91	100
2	Easy	2	5,1	37	94,9	39	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 0,000; RP = 15,000; CI95% (3,871 – 58,127)							

Source: Data Primer, 2016

The test results on the value of chi square statistic significance of 95% ( $\alpha = 0.05$ ) was obtained  $p\text{-value} = 0,000$  or  $p < \alpha (0.05)$ , thus no influence access to health services for disobedience taking antiretroviral drugs in Paniai. When viewed from the RP = 15,000; CI95% (3.871 to 58.127) interpreted that people with HIV / AIDS that are difficult to access health services berisikog wayward taking ARV drugs 15 times higher than the easier access to health services.

Effect of Failure to take medication keluarga Terhadap Support ARV

**Table 11:** Effect of Family Support Against Disobedience taking antiretroviral drugs in Paniai

No	Family support	Disobedience of ARV medicine drinking				n	%
		Not obey		Not obey			
		n	%	n	%		
1	Not support	60	67,4	29	32,6	89	100
2	Support	12	29,3	29	70,7	41	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 0,000; RP = 2,303; CI95% (1,401 – 3,787)							

Source: Data Primer, 2016

Table 10 dari 89 family support does not support, 60 (67.4%) non-adherent taking antiretroviral drugs and 29 (32.6%) dutifully taking antiretroviral drugs. While the support of 41 family support, 12 (29.3%) non-adherent taking antiretroviral drugs and 29 (70.7%) dutifully taking antiretroviral drugs. The results of chi square test of significant value 95% ( $\alpha = 0.05$ ) was obtained  $p\text{-value} = 0,000$  or  $p < \alpha (0.05)$ , thus there is the influence of family support for non-compliance taking antiretroviral drugs in Paniai. Rated RP = 2,303; CI95% (1.401 to 3.787) are interpreted with HIV / AIDS do not get family support berisikog wayward taking ARV drugs 2,303 times higher than the family support.

## h. Effect of Failure Support kesehatan Terhadap officers taking antiretroviral drugs

**Table 12:** Effect Against Disobedience Support health care workers taking antiretroviral drugs in Paniai

No	Health staff support	Disobedience of ARV medicine drinking				n	%
		Not obey		Not obey			
		n	%	n	%		
1	Not support	16	64	9	36	25	100
2	Support	56	53,3	49	46,7	105	100
Total		72	55,4	58	44,6	130	100
<i>p-value</i> = 0,459; RP = 1,200; CI95% (0,851 – 1,693)							

Source: Data Primer, 2016

Table 12 shows that of the 25 people who did not have the support of health workers, as many as 16 people (64%) non-adherent taking ARVs and 9 (36%) dutifully taking antiretroviral drugs. Meanwhile, of the 105 people with the support of health workers to support, as many as 56 people (53.3%) non-adherent taking antiretroviral drugs and 49 individuals (46.7%) dutifully taking antiretroviral drugs. The test results on the value of chi square statistic significance of 95% = 0.05) was obtained  $p\text{-value} = 0,459$  or  $p\alpha(> \alpha (0.05))$ , and thus no influence support for health workers to the non-compliance taking antiretroviral drugs in Paniai. When viewed from the RP = 1,200; CI95% (0.851 to 1.693) are not meaningful.

## 3. Multivariate Analysis

Multivariate analysis is used to obtain answers to the factors which affect the non-compliance taking antiretroviral drugs, it is necessary to bivariate analysis  $p$  value  $< 0.25$  were included and followed on multivariate analysis using logistic regression.

**Table 13:** Bivariate Analysis Between Dependent and Independent Variables

No	Variabel	p-value
1	Age	1,000
2	Sex	0,024
3	Education level	0,000
4	Occupation	0,264
5	Treatment length	1,000
6	Knowledge	0,000
7	ARV change history	0,000
8	Side affect history	0,000
9	Health service	0,000
10	Family support	0,000
11	Health staff support	0,459

Source: Data Primer, 2016

Table 13. The above variables gender, level of education, knowledge, history replace antiretroviral drugs, a history of side effects, access to health care and family support in the category p-value <0.25, so get into the multivariate model and tested together - the same as the binary logistic test using backward method. Multivariate analysis results obtained p-value <0.05 as shown in Table 14 below.

**Table 14:** Analisis Variable Multiple Logistic Regression

No Variabel	B	P-value	OR	95% C. I. for Exp (B)	
				Lower	Upper
1 Side affect history Knowledge education level	3,621	0,002	37.370	3.833	364.298
2 family support sex	2,105	0,001	8.207	2.462	27.351
3	1,498	0,016	4.475	1.329	15.067
4	1,538	0,024	4.655	1.226	17.672
5	1,399	0,032	4.049	1.128	14.540
Constant	-	0,000			
	13,928				

#### 4. Discussion

##### 1. Effect Umur Terhadap Ketidapatuhan taking antiretroviral drugs

The result showed that there was no effect of age on non-compliance taking antiretroviral drugs in Paniai (p-value 1,000). The results are consistent with research Ubra (2012) in Mimika in patients PLHIV revealed no effect of age with ARV treatment adherence.

The results of this study obtained the largest age between the ages of 16-29 years (60%) of the amount of people living with HIV patients who receive ARV therapy. Age as one of the characteristic properties of the people are quite important because many diseases are found in a variety of frequency variations caused by age [8]. Base on report statistical data that age is the most widely used drugs are the age group 20-29 years , In addition, the age also has morbidity and mortality rates are high. Basically, this age is called the Young adults are more difficult to adhere to treatment regimens than in older adults [9] . Results of the analysis showed that responden aged 16-29 years, as many as 43 people (55.1%) non-adherent taking ARV drugs, and 35 (44.9%) dutifully taking antiretroviral drugs. While respondents aged > 30 years, as many as 29 people (55.8%) non-adherent taking antiretroviral drugs and 23 people (44.2%) dutifully taking antiretroviral drugs. This suggests that at the age of

16-29 years and above 30 years of age the same - the same drink berisikog wayward antiretroviral drugs.

Lack of influence between age and non-compliance taking antiretroviral drugs due to a strong factor affecting the patient's age PLWHA to adhere taking antiretroviral drugs. Social perspective on the age group can not help understanding that health and pelayanankesehatan not merely as isumedis, but also a social approach to the issue's social and pendekatanmedis done together, then the emphasis is not only on prososial terjadinyasuatu disease and illness, but also padaintervensi in danbudaya social structure to prevent or even cure the disease, and so we need the support of family or those closest in age group of people living with HIV / AIDS.

## 2. Effect of Gender Against Disobedience taking antiretroviral drugs

The result showed that there was the influence of gender on the non-compliance taking antiretroviral drugs in Paniai (p-value 0.024). The results of this study are not consistent with research conducted Martoni (2013) reveals that there is no correlation with gender ARV adherence consumption because only a slight difference between adherence men and women overall. Several studies have found that men and women are more or less have the same tendency to run their treatment program. But the results of this study are supported by research Ubra [10] in Mimika that there is the influence of gender on the non-compliance taking antiretroviral drugs.

Results of the analysis showed that the respondents were male gender - male, as many as 39 people (67.2%) non-adherent taking antiretroviral drugs and 19 (32.8%) dutifully taking antiretroviral drugs. Meanwhile, from 72 female, 33 persons (45.8%) non-adherent taking ARV drugs, and 39 (54.2%) dutifully taking antiretroviral drugs. This shows disloyalty adnaya tendentious taking ARV drugs is higher in women, where people with HIV / AIDS-sex male - male berisikog wayward taking ARV drugs 1,467 times higher than the HIV / AIDS-sex male - female. Butt [11] on research in Mountainous Papua revealed that women undergoing ARV treatment secrecy about their drug rules in a way that is quite special. On the men - men lack access to antiretroviral drugs than women, this shows that men - men are particularly concerned about the potential loss of social status that comes through disclosure. The influence of gender non-compliance taking antiretroviral drugs in Paniai, because women who suffer from HIV / AIDS as likely to have access to health care in ARV treatment programs such as prevention of mother to child transmission and HIV / AIDS programs in general such as reproductive health programs, so that more women are getting information about HIV / AIDS and ARV therapy treatment, thereby affecting knowledge with implications for the non-compliance taking antiretroviral drugs. This is consistent with the theory Notoatmodjo [12], the banya information obtained higher knowledge.

## 3. Effect of education Against Disobedience taking anti-HIV drugs

The result showed that there was the influence of education level of the non-compliance taking antiretroviral drugs in Paniai (p-value 0,000). The results are consistent with research conducted by Martoni and his colleagues (2013) revealed that the educational effect on compliance. This is due to the higher education easier in receiving the information submitted. But the result of this study is different from the research Safira [13], that education has no effect on non-compliance taking antiretroviral drugs due to the support of health workers and ease of information is conveyed about the benefits of non-compliance taking antiretroviral drugs, so patients

with low levels of education can determine the impact of non-compliance taking antiretroviral drugs. According Notoatmodjo (2010), education serves to develop skills and character development and civilization of the nation's dignity in the context of the intellectual life of the nation, which is aimed at developing students' potentials in order to become a man of faith and fear of God Almighty, noble, healthy, knowledgeable, skilled, creative, independent, and become citizens of a democratic and accountable.

Results of the analysis showed that respondents with lower education levels sebanyak 57 people (80.3%) non-adherent taking ARV drugs, and 14 (19.7%) dutifully taking antiretroviral drugs. While 59 people with higher education levels, as many as 15 people (25.4%) non-adherent taking antiretroviral drugs and 44 (74.6%) dutifully taking antiretroviral drugs. This suggests that highly educated respondents who have high levels of medication adherence ARV lebih tinggi. This is proven by the prevalence ratio test that low education levels berisiko not obedient to take medication ARV 3.158 times higher than the HIV / AIDS with a higher education.

This is in accordance with the opinion of Mubarak (2011) that education means the guidance given one person to another in order to understand something. The higher a person's education, the more easily the information they receive, and ultimately the knowledge he has will be more and more. Conversely, if a person has a low level of education, it will hinder the development of the person's attitude towards receiving information and values of the newly introduced [14].

The influence of education on taking medication noncompliance in Paniai caused respondents who have educational rendah sulit receive information delivered so gain knowledge about antiretroviral drugs, where it is known that the less educated respondents most (54.6%) lower education. It certainly needs to be considered in counseling or providing information about antiretroviral drugs with communication simple and easy to understand, so the less educated respondents can more easily understand the content delivered dari materi about HIV / AIDS.

#### 4. Effect Pekerjaan Terhadap Ketidapatuhan taking antiretroviral drugs

The results were obtained no effect on the work of non-compliance taking antiretroviral drugs in Paniai (p-value 0,264). The results of this study are not consistent with research conducted Ubra [10] and Safira [13], reveals that there is influence of work on non-compliance taking antiretroviral drugs. Work is something you do for a living, livelihood (Prayoto, 2014). Work environment can make a person gain experience and knowledge, either directly or indirectly [14]. Respondents HIV / AIDS in Paniai of 130 respondents who work as much as 52.3% and 47.7% did not work. The results of the analysis showed that respondents who do not work as many as 38 people (61.3%) non-adherent taking antiretroviral drugs and 24 people (38.7%) dutifully taking antiretroviral drugs. While 68 people with working, as many as 34 people (50%) non-adherent taking ARV drugs, and 34 (50%) dutifully taking antiretroviral drugs. This indicates that respondents who did not work and cooperate - together berisiko wayward taking antiretroviral drugs. The absence of the effect of work resulting from the revenue it receives. Where respondents who work mostly farmers who do not have a fixed income, while the rest worked as a civil servant. ARV treatment by the government in Papua Province is given for free.

However, the income will certainly affect the cost of accommodation to access health services. From the analysis it was found that respondents who work and do not work is found obedient taking antiretroviral drugs.

#### 5. Effect of Duration of treatment against non-compliance taking antiretroviral drugs

The research result was no longer influence the treatment of non-compliance taking antiretroviral drugs in Paniai (p-value1,000). The results of this study are not consistent with research conducted Fitriah [15] in Panti Wilasa Citarum Hospital Semarang, that respondents who answered a reason not to take medication because they feel saturated ARV treatment will ever be done for life. The results showed that patients receiving antiretroviral therapy by as prolonged treatment for more than 6 months were 108 people (83.1%). Respondents with a long duration of treatment of 60 people (55.6%) non-adherent taking antiretroviral drugs and 48 people (44.4%) dutifully taking antiretroviral drugs. While 22 people with the old new treatment, as many as 12 people (54.5%) non-adherent taking antiretroviral drugs and 10 people (45.5%) dutifully taking antiretroviral drugs. This indicates that respondents who long new treatment and the same - the same drink berpeling wayward antiretroviral drugs.

The absence of long influence of medication non-compliance taking ARV drugs from observations of investigators in patients old and new alike - the same experience side effects, but there are also patients who did not experience side effects from taking the medication ARV therapy. It is also due to stage patients with HIV / AIDS were newly diagnosed high with old criteria of the new treatment, so feel strong side effects. Besides policy in Papua in the provision of antiretroviral drugs administered without pre ARV adequate counseling and immediately given if diagnosed with HIV / AIDS, so that the knowledge of the patient is very supportive of the non-compliance taking antiretroviral drugs. Patients who have a good knowledge, although experience side effects and the long consuming taking the medication will remain adherent to drink antiretroviral drugs for their own health. Patients who do not comply in patients old and new often have beliefs less, considering the drug is taken for life, so that patients feel adherent and non-adherent this disease will continue to nerves in her life, consequently lead to saturation or bored and cause keputusanasaan, so the same - the same the risk of not abiding to take medication.

#### 6. Knowledge Effect Against Disobedience taking antiretroviral drugs

The research result was no effect of knowledge of the non-compliance taking antiretroviral drugs in Paniai (p-value0,000). The results are consistent with research conducted by Martoni (2013) showed that the variables of knowledge is an influential factor terhadap noncompliance taking antiretroviral drugs. Domain knowledge is very important for the formation of a person's actions (overt behavior). Based on the experience and the study was conduct based on knowledge will be more lasting than the behaviors that are not based on knowledge [12]. Lack of knowledge on the respondent of the respondents' answers about getting ARVs at government hospitals and health centers, do not know the frequency of taking medication and the impact and danger of the wayward taking antiretroviral drugs. While knowledge both by respondents mostly unknown is perceived side effects of taking ARV drugs. Lack of knowledge about treatment and how to drink implications for the non-compliance taking antiretroviral drugs.

The results of the analysis showed that respondents with less knowledge of as many as 61 people (81.3%) non-adherent taking ARV drugs, and 14 (18.7%) dutifully taking antiretroviral drugs. Respondents with good knowledge, as many as 11 people (20%) non-adherent taking ARV drugs, and 44 (80%) dutifully taking antiretroviral drugs. This indicates a low non-compliance with taking the drug in patients who have less knowledge PLWHA. It is evident from the test results rasioprevalensi that people with HIV / AIDS with less knowledge berisikog wayward taking ARV drugs 4.067 times higher than the HIV / AIDS with good knowledge.

According Yuniar (2013), people with HIV / AIDS who have a high level of knowledge usually more compliant because they already know the severity of the illness they experience and adherence to ARV therapy have of giving improvement to their quality of life both physically, psychologically and socially. Physically PLHIV feel fresh and not limp. Psychologically healthy feel like have not been exposed to HIV and more confident to live longer. Socially they can move normally as before. The results also showed that there is also a good knowledge wayward taking antiretroviral drugs. This is due to lack of support, so feel despair that can be caused due to drug side effects. This is in line with research Walter (2010), but also can inhibit a healthy feeling of obedience as experience side effects of drugs.

#### 7. Effect of changing history taking medication adherence Against ARV ARV

The research result was no effect of non-compliance history of side effects taking antiretroviral drugs in Paniai ( $p$ -value 0,000). The results are consistent with research Martoni (2013), revealed that the history of the variable side effects of taking ARV drugs is the most dominant factor related to compliance of patients with HIV / AIDS on Anti therapy (ARV). Some medications have side effects in some patients which can provide significant symptoms. The side effects arising from the use of drugs Anti Retro Virus (ARV) can be symptomatic of symptoms that can be eliminated by administering drugs - drugs until symptoms of toxicity that led to the use of the drug should be discontinued. Side effects that can reduce compliance of drug use [6]. Results of research conducted perceived side effects include nausea, fever, rashes on the skin due to itching and scratched, like a drunk headache, diarrhea and others. In the early days of taking the medication majority of people living with HIV do not bear the side effects of drugs. The results of the analysis showed that respondents who had a history of side effects, as many as 71 people (77.2%) non-adherent taking ARV drugs, and 21 (22.8%) dutifully taking antiretroviral drugs. Meanwhile, from 38 people who had no history of side effects, as many as 1 (2.6%) non-adherent taking antiretroviral drugs and 37 (97.4%) dutifully taking antiretroviral drugs. This shows once diraskan side effects many patients who do not abide PLWHA taking the drugs. The test results that the prevalence rate of HIV / AIDS who have had a history of non-compliant drinking efeksamping berisikog ARV drugs 29.326 times higher than the HIV / AIDS patients who never replace antiretrovirals. The influence of side effects of poor adherence in the district taking antiretroviral drugs often to replace a patient's medical menjadialasan ataumenghentikan ARV therapy. Many ODHAYang not stand the side effects of medication, so it shuts itself terapinya. Efek side may arise in the treatment of anemia due to zidovudine causes such as dizziness, nausea, vomiting and or long-term sepertilipodistropi (shrinkage or penumpukan lemak body on certain parts), so that the pasien lama and new found non-compliant drinking antiretroviral drugs.



#### 8. Effect Against Health Care Access Failure to take medication ARV

The results were obtained no influence access to health services for disobedience taking antiretroviral drugs in Paniai (p-value 0,000). Penelitian is in line with research conducted by Ubra in 2012 [10], in Mimika that the difficulty of access to health care led to patient non-compliant drinking PLWHA drug. The results of the analysis showed that respondents with access to health services is difficult, as many as 70 people (76.9%) non-adherent taking ARV drugs, and 21 (23.1%) dutifully taking antiretroviral drugs. While 39 people with easy access to health care, as many as 2 (5.1%) non-adherent taking antiretroviral drugs and 37 (94.9%) dutifully taking antiretroviral drugs. This indicates that respondents who have difficulty accessing health services have a high proportion of non-adherent taking antiretroviral drugs. It is evident from the test results that the prevalence rate of HIV / AIDS that are difficult to access health services berisikog wayward taking ARV drugs 15 times higher than the easier access to health services.

Geographical conditions were quite difficult for patients living with HIV, making it difficult to access health services coupled with the lack of means of transport and transport costs required to obtain antiretroviral drugs although antiretroviral drugs are given free. Of the respondents' statements that the difficulty of access to health services due to the far distance health services. While the provision of antiretroviral drugs are always available. Provision of antiretroviral therapy in Paniai only focused on hospitals and pukesmas appointed and not well coordinated. Therefore, the registration of people with HIV / AIDS based on residence referable to distribute ARVs through the nearest health services for people with HIV / AIDS to obtain antiretroviral drugs.

#### 9. Effect of Failure to take medication keluarga Terhadap Support ARV

The research result was no effect of family support for non-compliance taking antiretroviral drugs in Paniai (p-value 0,000). The results are consistent with research conducted Ubra in 2012 [10] in Mimika that affect family support noncompliance taking antiretroviral drugs in HIV / AIDS. The results of the analysis showed that responde who do not have family support, 60 (67.4%) non-adherent taking antiretroviral drugs and 29 (32.6%) dutifully taking antiretroviral drugs. While the support of 41 family support, 12 (29.3%) non-adherent taking antiretroviral drugs and 29 (70.7%) dutifully taking antiretroviral drugs. It shows the proportion of non-compliant drinking ARV drugs is high on respondents who do not have family support. It dibuktikandari hail prevalence ratio test that respondents who do not have family support berisikog wayward taking ARV drugs 2,303 times higher than the family support. Respondents' family support room is reminiscent of the objectives, benefits and effects of dietary drugs that are being undertaken (37%), 33% did not provide financial assistance during treatment and 39% did not rebuke the patients if they did not obey the rules of eating a drug that has been set. It can also occur due to HIV / AIDS patients are not open about HIV / AIDS suffered.

One way to help manage problems that create feelings of anxiety / stress to avoid a negative impact on health is social support. Research conducted by Mahardining in 2010 says that there is a relationship of social support with which the ARV therapy adherence, support from family members and close friends is one of the much-needed support to the implementation of ARV therapy and have a big impact for people living with HIV to spur the spirit of his life.

The influence of family support for non-compliance taking antiretroviral drugs in HIV / AIDS in Paniai due to saturation / bored in taking medicine ARV dialami by people living with HIV in this study. Halini occur because people living with HIV must take medication all his life every day and not bolehterlewat. Therefore it takes dukungandari families to people living with HIV do not despair. Lack of family support can not increase the spirit of people living with HIV / AIDS, so that people living with HIV / AIDS increasingly desperate to health problems that it faces. Conversely people with HIV / AIDS family support memberian positive effects in living life to rise a strong desire to obediently take medicine to live the rest of his life is not too long.

## **5. Conclusions**

1. There was no effect of age on non-compliance taking antiretroviral drugs in Paniai (p-value1,000; RP = 0.989; CI95% = 0.722 to 1.353)
2. There is the influence of gender on the non-compliance taking antiretroviral drugs in Paniai (p-value0,024; RP = 1,467; CI95% = 1.077 to 1.998).
3. There is the effect of educational level on the non-compliance taking antiretroviral drugs in Paniai (p-value0,000; RP = 3.158; CI95% = 2.010 to 4.962).
4. There was no effect of work on non-compliance taking antiretroviral drugs in Paniai (p-value0,264; RP = 1.226; CI95% = 0.900 to 1.670).
5. There is no effect of duration of treatment non-compliance taking antiretroviral drugs in Paniai (p-value1,000; RP = 1,019; CI95% = 0.671 to 1.546).
6. There is the influence of knowledge on the non-compliance taking antiretroviral drugs in Paniai (p-value0,000; RP = 4.067; CI95% = 2.371 to 6.975).
7. There is the influence of changing history of poor adherence taking ARV ARV drugs in Paniai (p-value0,000; RP = 1,944; CI95% = 1.398 to 2.704).
8. There is a history of adverse reactions to the influence of non-compliance taking antiretroviral drugs in Paniai (p-value0,000; RP = 29.326; CI95% = 4.226 to 203.501).
9. There is influence access to health services for disobedience taking antiretroviral drugs in Paniai (p-value0,000; RP = 15,000; CI95% = 3.871 to 58.127).
10. There is the influence of family support for non-compliance taking antiretroviral drugs in Paniai (p-value0,000; RP = 2,303; CI95% = 1.401 to 3.787).
11. There is no support for health workers to the influence of non-compliance taking antiretroviral drugs in Paniai (p-value0,459; RP = 1,200; CI95% = 0.851 to 1.693).
12. The dominant factor of the non-compliance taking antiretroviral drugs in Paniai is is sex, level of education, knowledge, history of side effects and support the family, where the highest dominant factor is a history of side effects of taking ARV drugs.

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