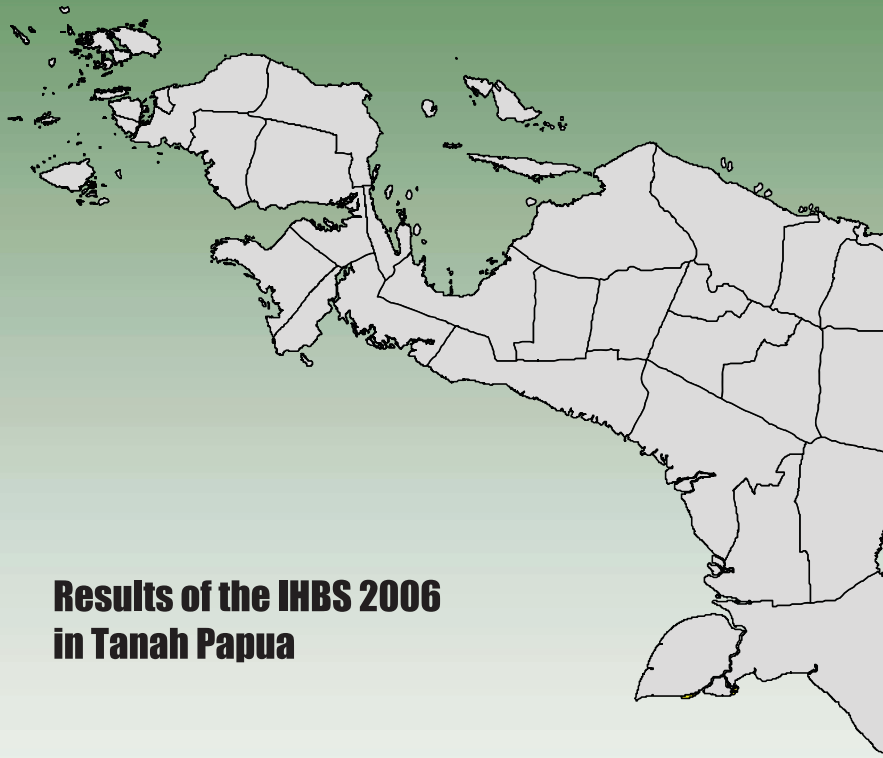




Risk Behavior and HIV Prevalence in Tanah Papua 2006



**Results of the IHBS 2006
in Tanah Papua**



A Collaboration between the
Ministry of Health
and the
Central Statistics Agency



World Bank
Human Development Sector
East Asia and Pacific Region

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I. Background

In response to the suspected high prevalence of HIV/AIDS among the general population in Tanah Papua, the Central Statistics Agency (BPS) collaborated with the Directorate General of Communicable Disease Control & Environmental Health–Ministry of Health, with funding and technical support from the World Bank and Family Health International (FHI), to carry out an integrated bio-behavioral and HIV surveillance survey in the middle of 2006. This activity was designed to cover Tanah Papua (the Land of Papua), and therefore included the provinces of Papua and West Papua, and was known as the Integrated Bio-Behavioural Surveillance 2006 (IBBS2006).

The IBBS2006 results showed that HIV prevalence in Tanah Papua was 2.4 percent among the population ages 15–49 years. It was higher among men (2.9 percent) than women (1.9 percent) and higher in rural (3 percent) than urban areas (1.5 percent); HIV was above 1 percent in every district surveyed. Early age of sexual debut and commercial sex appeared to be particularly important risk factors.

AIDS in Indonesia

In most parts of Indonesia, the HIV epidemic is still concentrated in high-risk sub-populations. Nevertheless, the AIDS epidemic has now spread to all parts of Indonesia. At the end of 2000, only 16 provinces had reported cases of AIDS, whereas by the end of 2003, reported cases had spread to 25 provinces. In 2006, there were 32 provinces reporting AIDS cases. The existing data also point to a significant increase in the number of AIDS cases reported by health service units.

As of December 2004, there were a cumulative total of 2,682 reported AIDS cases. In just one year, this figure rose by 100 percent, to 5,321 cases at the end of 2005. The number of AIDS cases has continued to escalate, and, by the end of September 2006, there were a cumulative total of 6,871 reported cases.

The HIV-AIDS Epidemic in Papua

Several studies have shown that the extent of the HIV-AIDS epidemic in Papua is much greater than in other parts of Indonesia, and they indicate that sexual behavior among the people of Tanah Papua is quite high-risk. For instance, the results of the Qualitative Study on Sexual Behaviour in Papua indicated that many in the Papuan community

have multiple partners, and that the majority begin to have sexual relationships at an early age. The results of a behavioral survey among civil servants in Jayapura in 2003 indicated that some 32 percent of male civil servants in Jayapura had paid for sex.

A number of smaller surveys suggest that HIV transmission has spread throughout the general population in Papua, prompting the need for a large-scale survey to gain a better understanding of HIV prevalence and the dynamics of transmission in Papua. The IBBS2006 of the residents of Tanah Papua was designed to give a clearer picture of the behavior and the spread of HIV among the population.

II. Survey Methodology

The IBBS2006 was carried out in several districts/cities in Tanah Papua and divided into three topographical regions: districts/cities in the highlands, districts/cities in easily accessible lowlands areas, and districts/cities in hard-to-access lowlands areas. It was according to these divisions that the selection of sample districts/cities was then made and covered:

- (i) In the Highland Districts/Cities: Jayawijaya District, Yahukimo District, Tolikara District, Pegunungan Bintang District, Puncak Jaya District, and Paniai District.
- (ii) In easily accessible Lowlands Districts/Cities: Jayapura City, Keerom District, Sarimi District, Jayapura District, Sorong City, Fakfak District, Biak Numfor District, Yapen Waropen District, Merauke District, Sorong District, Manokwari District, and Nabire District.
- (iii) In hard-to-access Lowlands Districts/Cities: Waropen District, Kaimana District, Asmat District, Mappi District, Boven Digoel District, Sorong Selatan District, Raja Ampat District, Teluk Bintuni District, Teluk Wondama District, Supiori District, and Mimika District.

The sampling design consisted of the following three steps:

Phase I: Selecting a number of sample districts/cities by PPS (probability proportional to size) with the opportunity proportional to the

total population according to P4B (the Ongoing Population Census). The number of selected districts/cities for each topographical area was proportional/comparable to the total population.

Phase II: Selecting a number of census blocks by PPS in each selected district/city, with opportunities for inclusion proportional to the total population.

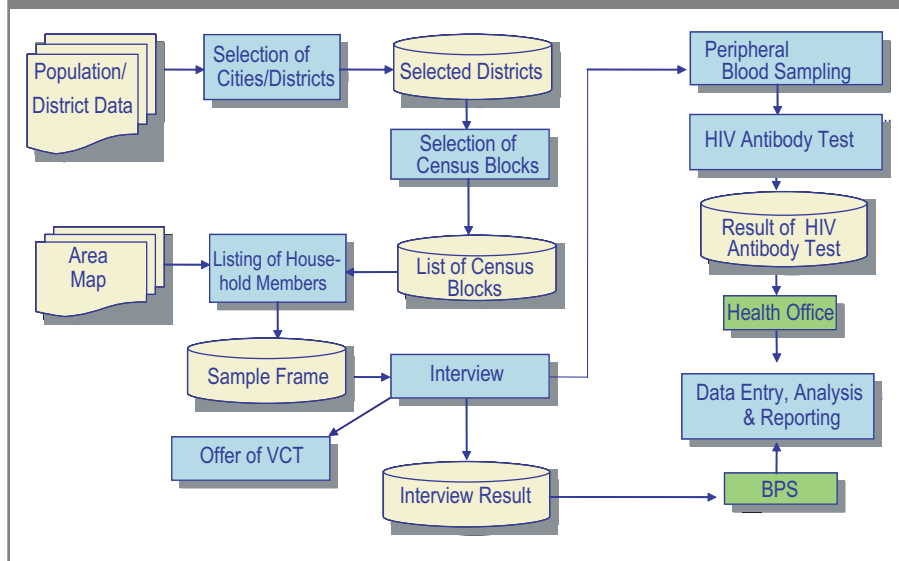
Phase III: Systematically selecting 25 respondents who fulfilled the criteria in each selected census block. Prior to sampling, individuals were ranked according to sex and age group.

The size of the sample was determined in such a way that the researchers would be able to arrive at estimates for each of the topographic areas: highlands, easily accessible lowlands, and hard-to-access lowlands. Ten target sample districts/cities were selected, which were then allocated to each topographic area in proportion to the number of residents. The target sample of respondents who fulfilled the criteria was 6,500, which covered 260 census blocks allocated to each selected district/city in proportion to the total population.

During data collection, the selected respondents were interviewed directly and samples of their blood taken by trained IBBS2006 officers. Interviews were conducted in one place, and respondents were not accompanied by any other person to ensure confidentiality.

A total of 6,305 respondents (97.0 percent of the target sample) met the criteria and were interviewed: 3,247 (94.8 percent of the target sample) were in the easily accessible lowlands strata; 1,311 (98.9 percent of the target sample) were in the hard-to-access lowlands strata; and 1,747 (99.8 percent of the target sample) were in the highland strata. Overall, the nonparticipation rate was 3.0 percent. Nonparticipation was caused in general by the respondents refusing or not being at home when the interviewing officer arrived. There was a somewhat lower participation rate in the easy-to-reach areas compared to areas that were more difficult to reach. This is because the residents in the easily accessible lowlands areas have relatively high mobility, which resulted in the officers experiencing some difficulty when trying to meet respondents.

Figure 1. Outline of Methodology for Integrated HIV-Behavior Surveillance Survey 2006



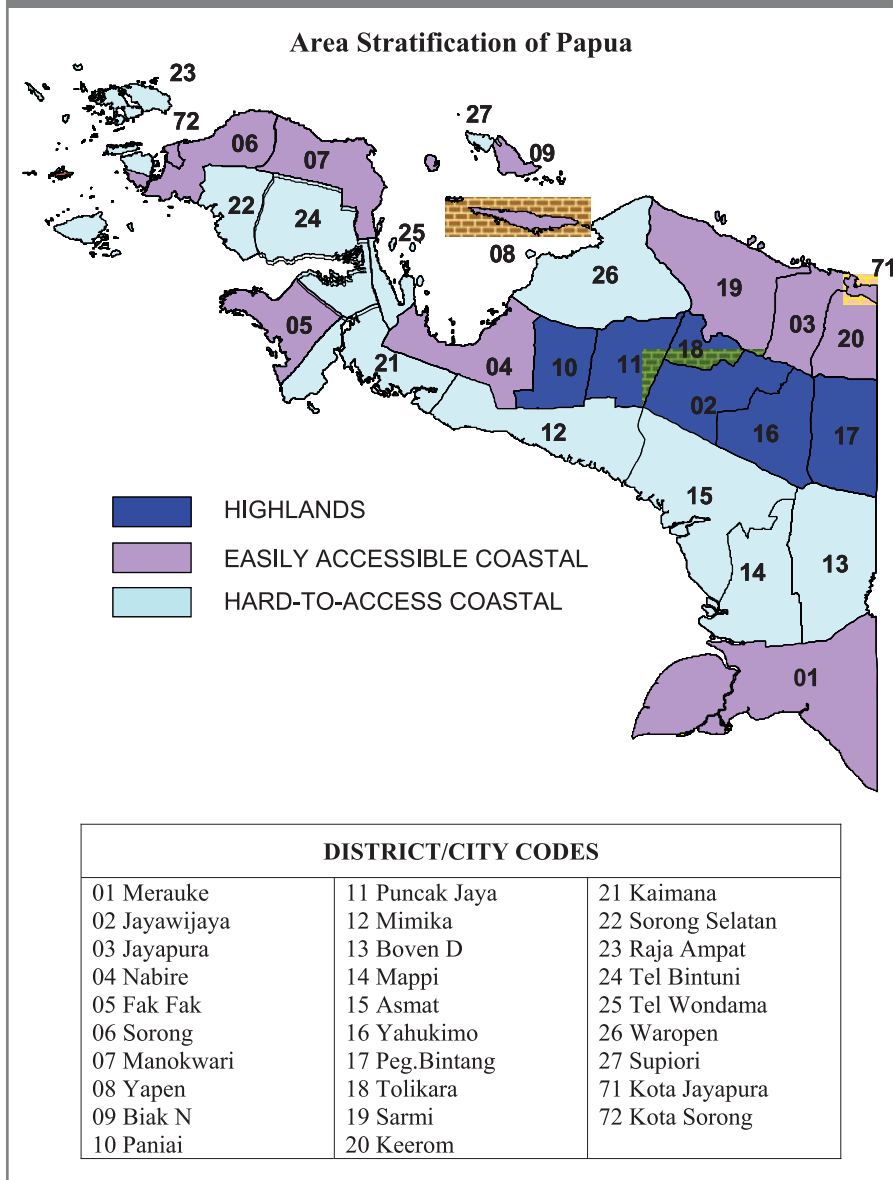
The specific objective of the IBBS2006 was to estimate HIV prevalence based on blood specimens, and to define the parameters of social indicators related to sexual behavior, injection drug use, perceptions of HIV risk, and so on. For HIV prevalence, the information was collected through testing blood specimens; for social behavior indicators, information was collected through interviews.

Of the 6,305 respondents interviewed about their sexual behavior, only 6,223, or 98.7 percent, were willing to have a blood sample taken to test for the HIV virus. The highest level of participation, 99.8 percent, was found in the highland strata, followed by 98.6 percent and 97.5 percent respectively for the easily accessible lowlands and hard-to-access lowlands.

III. Characteristics of the Sample

The topographic conditions of Tanah Papua in the IBBS2006 were divided into three categories: highlands, easily accessible lowlands, and hard-to-access lowlands (figure 2). More than 50 percent of the population lives in easily accessible lowlands areas, while some 28 percent live

Figure 2. Map of Tanah Papua



in the highlands. The remaining 20 percent live in hard-to-access lowlands areas.

The distribution patterns of the population of Papua by topographic area, sex, and age group show similarities. Also, similarities in the patterns of population distribution according to ethnicity are apparent across male and female residents. The ethnic Papuan population is bigger than the nonethnic Papuan population, with some 69 percent being ethnic Papuans and around 31 percent nonethnic Papuans.

The age range of the population surveyed in the IBBS2006 was 15–49 years. There were no significant differences between the average age of male residents and female residents; the average for males was 30.2 years and for females, 29.5 years.

A total of 32.2 percent of male residents had completed senior high school and university, while 26.3 percent of female residents had achieved the same level of education. However, many residents had either never been to school or had not completed primary school. For males this percentage was 29.2 percent, while for females it was much higher, at 42.3 percent.

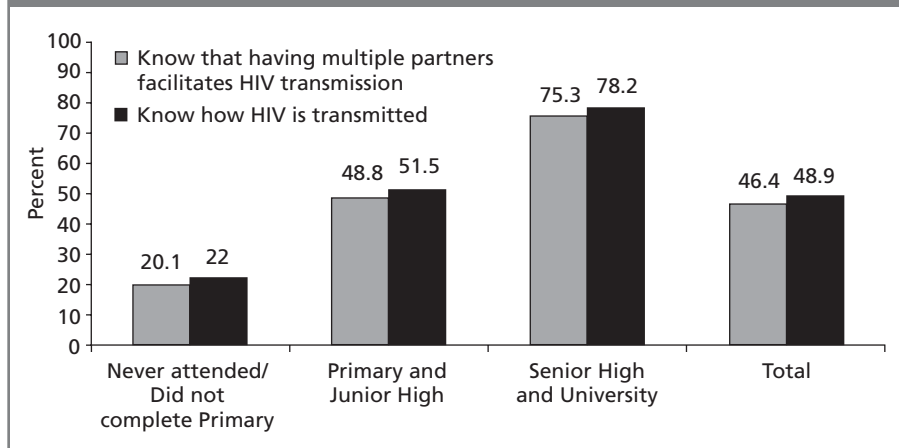
A total of 2.5 percent of male residents said that they were cohabiting; for female residents, the total was 4.5 percent. The percentage of unmarried residents was 32.6 percent for males, against 21.6 percent for females. Among the 40–49 age group, 2.0 percent were unmarried.

The largest percentage of the residents—40.2 percent of males and 38.6 percent of females—worked as farmers. There was a fairly significant difference in the “laborer/employee” category: 25.0 percent of the male residents reported this occupation, but just 9.5 percent of female residents. On the other hand, while 20.0 percent of males were in the “unemployed” category, the percentage of females with no job reached 43.2 percent.

Knowledge about HIV/AIDS

In Tanah Papua, 51.8 percent of the population had heard about, or had some information about, HIV/AIDS. Males had more information than females: 55.5 percent compared to 47.8 percent. And both males and females with higher levels of education were more informed about HIV/AIDS. Of the residents who had never been to school or had not finished primary school, only 26.3 percent had ever received information about HIV/AIDS, while for those who had completed primary and junior high, 54.7 percent had some information, and 79.2 percent of

Figure 3. Percentage of the Population Who Know that Having Multiple Partners Can Facilitate HIV Infection and Know How HIV is Transmitted, by Educational Background



residents who had finished senior high school knew something about HIV/AIDS (figure 3).

A total of 41.4 percent of the residents of Tanah Papua know that AIDS is caused by a virus. More males are aware of this than females, at 44.0 percent and 38.6 percent respectively. Among both male and female residents, those who are more educated are more likely to know that AIDS is caused by a virus. Of the residents who had never been to school or had not completed primary education, only 14.2 percent were aware of this fact, while of those who had completed primary and junior high school, 41.9 percent knew, and of those who had completed senior high school, 73.7 percent knew.

IV. Selected Results

One of the most important aspects of the IBBS2006 is the information it provides concerning the rate of HIV transmission in the community. HIV prevalence in the population of Tanah Papua is 2.4 percent, which represents a very high rate of transmission compared to estimates of HIV prevalence in various other parts of Indonesia. HIV prevalence among the male population is 2.9 percent, higher than the prevalence among the female population, which is 1.9 percent.

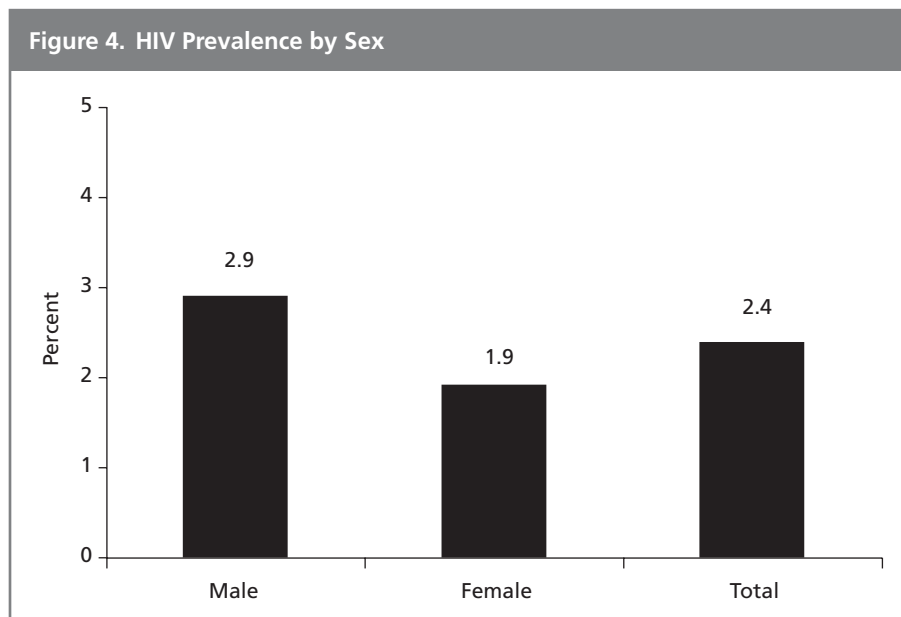
The highest HIV prevalence is found in hard-to-access lowlands areas, at 3.2 percent, followed by highland areas at 2.9 percent. The lowest

HIV prevalence is found in easily accessible lowlands areas, where it is 1.8 percent.

HIV prevalence among ethnic Papuans is almost twice as high as the prevalence among nonethnic Papuans, at 2.8 percent compared to 1.5 percent. Comparing levels of HIV prevalence based on ethnicity does not reflect a difference in vulnerability to HIV based on ethnicity alone. Rather, it reflects differences in the levels of knowledge about prevention and behaviors that pose a risk. It is hoped that prevention efforts and health services will reach all residents of Papua who are at risk, particularly where prevalence is higher.

HIV prevalence among residents of Papua aged 40–49 years is 3.4 percent. This figure is higher than in the 15–24 age group (3.0 percent) and the 25–39 age group (2.0 percent). A more advanced age reflects greater exposure over time to behaviors that pose a risk, and thus higher exposure to HIV infection (figure 4).

Early sexual debut can increase the risk of being infected with HIV not only because, biologically, younger people are more vulnerable but also because they are exposed to the sexual history of an often older more experienced partner. HIV prevalence among residents of Papua who have their first sexual intercourse between the ages of 10 and 14 years is 3.3 percent; among those who first experienced sex between



15 and 24 years, it is 2.3 percent; and among those whose first sexual encounter was at the age of 25 and above, it is 1.9 percent.

HIV prevalence among residents of Papua who have nonpermanent partners is 4.3 percent, higher when compared to residents of Papua who only have a permanent partner, which is 2.4 percent. The risk of being infected with HIV is definitely higher for those who do not have permanent partners.

In general, having multiple sex partners and frequently changing partners increases the risk of infection. HIV prevalence among residents with multiple sex partners (two or more) is higher, at 4.0 percent compared to 2.3 percent, among those who have only one sex partner or do not have a sex partner.

HIV prevalence is higher, at 5.1 percent, among residents who do not have permanent partners and have sex where payment is involved. This level of prevalence is twice as high as among those who have sex where no payment is involved.

A person's history of sexually transmissible infections (STI) can indicate that he or she not only has sex with several partners (possibly also with payment involved), but can also indicate—almost certainly—that the individual does not use a condom regularly. HIV prevalence among those with a history of STI is twice as high as among individuals who have no STI history.

Circumcision has been proven to reduce the risk of HIV transmission, because, biologically, an uncircumcised foreskin is more vulnerable to HIV infection. Some 5 percent of ethnic Papuans are circumcised, compared to 70 percent of nonethnic Papuans. HIV prevalence among residents who do not have permanent partners and are circumcised is 1.0 percent, while among those who are not circumcised it is much higher, at 5.6 percent.

V. Conclusions

(1) HIV prevalence among the population of Tanah Papua is 2.4 percent, higher than among populations in other areas of Indonesia, and it has apparently spread to all parts of Papua. Prevalence among the male population is much higher (2.9 percent) than among the female population (1.9 percent). Prevalence is highest in the 40–49 year age group, at 3.4 percent, followed by 15–24 year-olds at 3.0 percent.

(2) Based on topography, HIV prevalence is higher among those who live in areas where access is difficult and/or among those who live in the interior; HIV/AIDS prevalence in hard-to-access lowlands areas is 3.2 percent, and in the highlands, 2.9 percent, while in easily accessible lowlands areas it is 1.8 percent. This is consistent with the lack of knowledge about HIV/AIDS and low condom use in these relatively inaccessible areas.

(3) HIV prevalence among the ethnic Papuan population is higher (2.8 percent) than among nonethnic Papuans (1.5 percent). This does not mean that there is a difference in vulnerability based on ethnic group; rather, it is a reflection of differences in the level of knowledge about prevention and behaviors that pose a risk. Nevertheless, more in-depth research is needed to determine whether this is related to differences in circumcision status. HIV prevalence among residents who have not been circumcised is 5.6 percent, compared to 1.0 percent among those who are circumcised. Only approximately 5 percent of ethnic Papuans are circumcised, compared to 70 percent of nonethnic Papuans.

(4) In general, knowledge about HIV/AIDS among the people of Tanah Papua is still very low: 48 percent of the population had never heard of HIV/AIDS. Population groups that never attended school or did not complete a primary education have much lower levels of knowledge, with 74 percent never having heard of HIV/AIDS, compared to 20 percent of those who graduated from senior high school or university. Misperceptions about HIV/AIDS are still widespread among the majority of the population, and are spread evenly among those of all educational backgrounds.

(5) The main sources of information about HIV/AIDS are radio and television, which were the source for 54 percent of the population, most of whom were in the more highly educated population groups. Only a small portion of the population had ever attended a meeting about HIV/AIDS: just 8 percent of those with a low level of education and 26 percent of those with the highest levels of education.

(6) Among the younger residents, there were more who experienced their first sexual intercourse before reaching the age of 15 compared to

those in other age groups. This trend was much higher among females than males. The average age at which residents of Papua first have sex is 19; and it is lower for females (18.8 years) than for males (19.5 years). More than 50 percent had had sex for the first time with their spouse or permanent partner; 40 percent had sex for the first time with a friend, and 1.6 percent had sex for the first time with a sex worker.

(7) More of those in the younger age group, both males and females, had had more than one partner compared to those in older age groups. In general, in the last year more than 20 percent of male residents and 8 percent of female residents had had more than one sex partner. Around 16 percent of the population had had sex with a nonpermanent partner in the last year, or 25 percent of males compared to 7 percent of females. For more than half, some sort of payment was involved.

(8) Contrary to previous assumptions, alcohol does not play a significant role in the spread of this disease. Only 13.6 percent of the residents of Tanah Papua drink alcohol before having sex, and just 4.6 percent reported that they frequently or always consume alcohol before sex. Only 0.9 percent of female residents reported that they usually drank alcohol before having sex, while among males it was much higher, at around 7.6 percent.

(9) Condoms are difficult to obtain in all areas. Only around 17 percent of the population of Tanah Papua reported that it is easy to get condoms. Pharmacies and clinics are the main source of condoms. The very low level of condom use is linked to constraints on obtaining them.

(10) The percentage of residents with symptoms of sexually transmissible infections (STI) was higher among those who have multiple sex partners, and among those who pay for sex. In fact, the percentage of the population with HIV was twice as high among those reporting STI symptoms, at 5.9 percent compared to 2.7 percent. Health officers are the most popular option for STI treatment, particularly in the highlands, while in hard-to-access lowlands areas, 43 percent do not take any treatment action whatsoever.

VI. Recommendations

(1) HIV prevention education in Tanah Papua needs to be scaled up. Prevention efforts should focus on populations that engage in risky behaviors, particularly those who have multiple sex partners and those who pay for sex. Similar efforts should be made to reach young people throughout all areas of Tanah Papua.

(2) Access to, and availability of, prevention services, including condoms, needs to be expanded and improved throughout all areas of Tanah Papua. Additionally, STI treatment services need to be increased.

(3) More in-depth information is needed about the views, norms, cultures, and behaviors of the people of Papua; this will enable a more detailed understanding of the HIV epidemic that can support HIV/AIDS prevention efforts in Tanah Papua.

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