



Analysis of HIV/AIDS Mitigation Strategies through the Penta Helix Model in Surabaya

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Abstract

HIV/AIDS is a highly dangerous disease, thus posing a serious concern for the Surabaya city government, especially considering Surabaya has the highest cases in East Java. It is imperative for the Surabaya city government to address this health issue with special attention to prevent further spread. This research aims to analyze Prevention Transmission Strategies through the Penta Helix Model in Surabaya. The research methodology employed is qualitative descriptive. The study was conducted at the Surabaya City Health Office, Orbit Surabaya Foundation, Radio Republik Indonesia Surabaya, Academia, and Private sectors. The findings indicate that (1) Prevention strategies conducted by the Surabaya City Health Office in preventing the transmission of HIV/AIDS cases in Surabaya need improvement, particularly due to the increased number of HIV cases compared to the previous year. (2) Prevention of HIV/AIDS transmission in Surabaya through the Penta Helix Model concept has not been effectively implemented. (3) Prevention of HIV/AIDS transmission in Surabaya lacks collaboration with media, private sectors, and academia.

Introduction

The Human Immunodeficiency Virus (HIV) is a virus that attacks white blood cells in the body (lymphocytes), resulting in a weakened human immune system (Gunawan et al., 2016; Nizami & Mujeebuddin, 2020). The impact of the compromised immune system caused by the HIV virus leads to increased susceptibility to diseases or viruses, resulting in the accumulation of illnesses commonly referred to as Acquired Immune Deficiency Syndrome (AIDS). Acquired Immune Deficiency Syndrome, or AIDS, is a collection of disease symptoms caused by the decreased immune response due to HIV, first reported in the United States in 1981 (Bappenas, 2017). The HIV virus was initially transmitted from chimpanzees and gorillas to humans in Kinshasa, Democratic Republic of the Congo, in 1920. This event resulted in sudden deaths among several individuals with similar symptoms, though it was not considered a threat to humans at that time. However, in 1981, cases of lung infections affecting homosexual groups in Los Angeles were reported.

Since the first recorded case of HIV over 41 years ago, more than 38,400,000 people have been infected with HIV, with 1,500,000 new cases reported in 2021 alone. The latest data from 2021 indicates that Africa occupies the first position globally in terms of the highest number of people living with HIV/AIDS, with approximately 18,900,000 to 23,000,000 million cases. Several regions rank among the top five areas with the highest number of people living with HIV/AIDS globally.

Table 1. The Highest HIV/AIDS Prevalence Area in the World

Kawasan	Prevalence
Afrika Selatan dan Timur	18,9 Juta – 23 Million

Asia dan Pasifik	4,9 Juta – 7,2 Million
Afrika barat dan Tengah	4,5 Juta – 5,6 Million
Amerika Latin	1,5 Juta – 2,8 Million
Karibian	290 Thousand Hundred – 380 Thousand Hundred

Source: (UNAIDS, 2021)

The data is spread globally, meaning HIV/AIDS can be termed as an epidemiology for which a cure for individuals with HIV/AIDS (PLWHA) has not yet been found. The Asia-Pacific region ranks second as the highest area. This is quite surprising considering that several countries in the Asia-Pacific region can be categorized as developing countries. So, which countries have the highest number of people living with HIV/AIDS in the Asia-Pacific region? This will be presented in the table below.

Tabel 2. The Country with the Highest HIV/AIDS Prevalence

Country	Prevalence
India	760.000.000
Indonesia	146.000.000
Filipina	59.200.000
Vietnam	51.600.000
Iran	46.400.000

Source: (UNAIDS, 2022)

The above data represents the number of HIV/AIDS sufferers with a prevalence in the age group of 15 - 49 years. India, with a population of approximately 1.4 billion, occupies the top position, which is not surprising due to the low level of education and minimal hygiene standards of the population. However, what is quite surprising is that Indonesia is in second place. The country, with a population of approximately 274 million, is known as the country with the largest Muslim population in the world. According to Islamic principles, cleanliness is part of faith, and this applies to genital hygiene for Muslims. So, how did the virus manage to exist and spread in Indonesia?

HIV was first discovered in Bali in 1985 when it infected a 25-year-old woman who died that same year (Hidayana, 2012). However, the woman's death was not reported to the health department, and research on the virus was only conducted in 1986 by a task force established at one of Indonesia's renowned universities. In 1987, a foreign tourist in Bali died due to being detected with AIDS. The death of the 44-year-old man was immediately reported by the health department to the World Health Organization (WHO), and Indonesia officially became the 13th country in Asia to report such an incident. Within a year, in 1988, the Health Department reported another case of HIV infection in Indonesia (World Health Organization, 2001).

The development of HIV/AIDS in Indonesia can be reviewed over several periods. The first period is from 1997 to 2006, during which the cumulative number of PLWHA reported reached 13,424 cases. This number consists of 5,230 HIV cases and 8,194 AIDS cases. Over 10 years, from 1997 to 2006, the number of deaths related to AIDS reached 1,871 people. Reporting of HIV/AIDS cases in 1997 was only done by 22 provinces, while in 2006, reporting of HIV/AIDS cases had reached 33 provinces. What's interesting is the distribution of AIDS prevalence cases per 100,000 population by province, with Papua Province ranking first followed by DKI Jakarta.

Cases observed during this period include the emergence of AIDS cases in infants or children under 15 years of age. Children with HIV/AIDS can be infected through their mothers during

pregnancy, childbirth, or breastfeeding, blood transfusions/blood components, or as a result of sexual abuse by irresponsible individuals. According to the mode of transmission of AIDS cases reported until December 31, 2006, it turns out that the majority of cases occurred through injection drug use, followed by transmission through heterosexual relationships.

The second period is from 2007 to 2013. At the end of 2007, it was estimated that 4.9 million people had been infected with HIV in Asia. The prevalence of Gonorrhea and/or Chlamydia among FSWs was 56% and 49%. Overall, the prevalence of Gonorrhea and/or Chlamydia did not change compared to 2007, including in areas receiving PPB. The Ministry of Health estimated that without increased prevention efforts, treatment, care, and support in every region, the estimated number of PLWHA would increase to 501,400 people in 2014 from 227,700 in 2008. The number of HIV/AIDS cases in developing countries has sharply increased, which of course has an impact on morbidity and mortality rates among the productive population. As a result, the socio-economic development of a country suffers greatly, and life expectancy can decline or even collapse (Leon, 2011). This can endanger the lives of the population and also the nation.

Indonesia, which is the second-largest country with Human Immunodeficiency Virus sufferers among Asia Pacific countries (World Health Organization, 2003). The distribution of HIV Virus has grown by 16% annually. Based on data obtained from the Indonesian Ministry of Health throughout 2021, there were 36,902 new HIV cases in Indonesia, while there were 5,750 new AIDS cases in the same year. Cumulative figures up to 2021 recorded 558,618 people with HIV-AIDS in Indonesia. The number of people affected (Prevalence) by HIV is 69% of adults (25-49), with only 17% of people in treatment, 20-24 age group, recorded as 16.9% of people affected by HIV, and those above 50 years old are 8.1%. HIV patients are not only from the adult population but also teenagers. According to the UNAIDS report, there are 3.1% of patients aged 15-19, under 4 years old account for 3.1%, while the smallest percentage is in the 5-14 age group, which is 0.7%. About 15% of pregnant women living with HIV access antiretroviral (ARV) drugs to prevent virus transmission to their babies.

At the global level in 2021, there were 1,500,000 new HIV infections and 650,000 deaths due to AIDS-related illnesses. The number of deaths related to AIDS has increased by 60% since 2010, from 24,000 cases to 38,000 cases of deaths due to HIV/AIDS. Out of 620,000 adults living with HIV, 220,000 (35.48%) are women. Cumulatively, there are several provinces with the highest number of PLWHA discoveries in Indonesia. DKI Jakarta Province ranks first with a total of 71,473 PLWHA, followed by East Java Province (65,274), West Java (46,996), Central Java (39,978), and Papua (39,419).

Tabel 3. The Province with the Highest HIV/AIDS Prevalence

No	Province	Highest HIV/AIDS Prevalence
1	DKI Jakarta	71.473
2	Jawa Timur	65.274
3	Jawa Barat	46.996
4	Papua	39.978
5	Jawa Tengah	39.419

The development of the number of PLWHA in several provinces in Indonesia is caused by several factors. Referring to a journal written by (Handayani, 2018), some of the causes of this development are as follows: (1) Having multiple sexual partners, both homosexual and heterosexual; (2) Blood transfusion recipients; (3) Babies born to HIV-positive mothers; (4) Injection drug users; (5) Partners of AIDS sufferers or HIV-positive individuals; (6) High-risk

sexual behavior and the increasingly prevalent sex industry. Lack of information about HIV/AIDS transmission and cultural issues.

The central government needs to coordinate with local governments in addressing HIV/AIDS cases (Blaauw et al., 2003). The Jakarta Provincial Government has launched the Jak-Track application, which serves to record HIV/AIDS sufferers who will then receive health services. Additionally, the application aims to reach HIV/AIDS patients to ensure they receive optimal health services (Rajabiun et al., 2007).

Meanwhile, the East Java provincial government issued Regional Regulation No. 12 of 2018 concerning HIV and AIDS Prevention. The number of 43,399 is the data of detected HIV/AIDS sufferers, while it is believed that this number is not the total, meaning there are still many HIV/AIDS sufferers who have not reported themselves, and this number is likely to increase. People living with HIV and AIDS (PLWHA) face severe stigma from society because they are considered immoral and irresponsible by those who discriminate against them. As a result, PLWHA are viewed as sinful, cursed, and deserving of punishment (Antwi, 2020). Sadly, this perception still persists in society, whether revealed or not.

One of the main problems in addressing HIV/AIDS issues is that HIV/AIDS-affected communities do not report themselves to the government, resulting in suboptimal government health services. Cooperation between sectors is needed to address this issue. The East Java Provincial Government and District/City Governments must synergize to resolve HIV/AIDS-related issues. HIV/AIDS cases are not only a problem for the East Java Provincial Office but also for the District/City Governments. HIV/AIDS sufferers are spread across all Districts/Cities in East Java. Surabaya City has the highest number of HIV/AIDS sufferers in East Java Province, with a figure reaching 4,461. Malang City occupies the second position with a total of 1,586, followed by Banyuwangi with 1,238 patients and Lumajang with 486 patients.

Tabel 4. The Regency/City with the Highest Number of PLHIV in East Java

No.	Regency/City	The number of PLWHA
1.	Surabaya	4.461
2.	Kota Malang	1.586
3.	Banyuwangi	1.238
4.	Lumajang	486
5.	Malang	439
6.	Probolinggo	384
7.	Malang	347
8.	Tulungagung	303
9.	Sidoarjo	283
10	Trenggalek	247

Source: (Kominfo, 2017)

Surabaya City not only occupies the first position for the highest number of HIV/AIDS cases in East Java for the first time. Compared to other cities or regencies, this fact is quite surprising because Surabaya is known as the City of Heroes and has the highest UMK range in East Java. Below are the numbers of HIV/AIDS cases in Surabaya City over the past 5 years.

Tabel 5. The HIV/AIDS Cases in Surabaya

No.	Year	Amount
1.	2018	1.096
2.	2019	1.343
3.	2020	786
4.	2021	671
5.	2022	1.026

Based on information from the head of the Education Office gathered from several online newspapers, one of the factors that place Surabaya City in the first position is that the majority of people outside Surabaya City receive treatment or care within the Surabaya City area. However, according to the author, further investigation is needed regarding this statement because medical records are based on domicile according to the address on the Identity Card (KTP), meaning that even if patients receive treatment in Surabaya City, the data is still recorded based on the patient's residential address according to their KTP.

According to the explanation from the AIDS Prevention Commission (KPA), in Surabaya City, there are sub-districts of Sawahan and Krembangan which are areas where HIV and AIDS are spreading. One of the reasons is the presence of Dolly Brothels. Dolly Brothels are the largest prostitution center in Southeast Asia in the Sawahan District, and underground prostitution is also rampant in the Krembangan District, especially in the Dupak area, where HIV spreads. Dolly Brothel has been closed down by Mayor Tri Risma in 2014, and the area has been transformed into several Micro, Small, and Medium Enterprises (MSMEs) to replace the source of income for the community, which previously consisted of Prostitutes or Pimps in the Dolly area. However, the effect of this crackdown is not sufficient if the main indicator used is the existence of Dolly as a prostitution area because, until now, Surabaya City still ranks first as the area with the highest number of HIV/AIDS cases in East Java. The Surabaya City Government has made efforts to address this issue, one of which is the issuance of Mayor Regulation Number 29 of 2015 concerning HIV/AIDS Prevention which seeks to address HIV/AIDS issues in Surabaya. In the Mayor Regulation (PerWali), it is written that the steps in HIV and AIDS prevention efforts are carried out through activities as follows: (a) Health promotion; (b) Prevention of HIV transmission; (c) HIV diagnosis examination; (d) Treatment, care, support; and (e) Rehabilitation.

In addition to issuing Mayor Regulations, the Surabaya City Government demolished the Dolly prostitution area, which was the largest red-light district in Southeast Asia. One of the main components to reduce the potential for HIV/AIDS transmission is HIV/AIDS prevention. This is important because people living with HIV/AIDS cannot be cured, meaning that once someone is infected with HIV/AIDS, they will be sick for life. HIV/AIDS transmission prevention can be classified into three points. First is prevention of transmission through Sexual activities. Second is prevention of transmission through non-sexual activities, and the third is prevention of mother-to-child transmission. Prevention of transmission through sexual activities is divided into several aspects: (a) not engaging in sexual activity (Abstinence); (b) being faithful to one partner (Be Faithful); (c) consistent condom use (Condom use); (d) avoiding drug abuse (no Drug); (e) increasing prevention capabilities through education, including early treatment of STIs (Education); and (f) other prevention methods, such as circumcision.

Meanwhile, prevention of transmission through non-sexual activities is detailed in several points: a. screening of blood donors; b. prevention of HIV infection in medical and non-medical procedures that injure the body; and c. reducing the adverse effects on injectable drug users. Prevention of mother-to-child transmission is done through: a. sterile needle service programs with behavioral change counseling and psychosocial support; b. encouraging

injectable drug users, especially opiate addicts, to undergo residential therapy programs; c. encouraging injectable drug users to prevent sexual transmission; and d. HIV counseling and testing services and hepatitis prevention/immunization.

All three of these measures must be implemented to the maximum by the responsible parties in each stakeholder. However, based on field research in the dissertation written by Dio Wicaksono Putranto, it is stated that all offices have carried out primary prevention activities, but only the Health Office has conducted three types of activities, which may be the reason why Surabaya City still ranks first in the number of ODHA cases. The implementation of programs that are not optimal becomes a problem that must be immediately resolved. If indeed all agencies are responsible for implementing programs from the Surabaya City Government, then implementing stakeholders must comply with and implement them orderly.

The transfer of information about a policy from its creator to its implementer is called policy communication. Implementing policies requires communication between Leading Sectors, meaning that the Surabaya City Government needs to collaborate with Non-Governmental Organizations (NGOs) (Utari et al., 2023), Private Sector, academia, and Mass Communication Media. Because many parties are involved, especially policy implementing officials, communication is considered important in policy implementation. Through continuous and intensive communication, they must have a synergistic working relationship. Information transmission, clarity of information, and consistency of information are three important aspects in policy implementation communication. The researcher is interested in studying the strategic analysis of HIV/AIDS Prevention and Transmission Prevention in Surabaya through the Penta Helix Model to determine the role of other stakeholders in HIV/AIDS prevention. The researcher hopes that this research can be used as a model for problem-solving in HIV/AIDS Prevention and Transmission Prevention in Surabaya.

Methods

This research employs a descriptive qualitative approach to analyze the penta helix collaboration model in the Prevention and Transmission Prevention of HIV/AIDS cases in Surabaya. The data in this study utilizes both primary and secondary data gathered through data collection techniques including observation, interviews, and documentary studies. The research applies Data Analysis Techniques including Data Reduction, Data Presentation, and Data Verification.

Results and Discussion

The Government's Strategies for Preventing the Transmission of HIV/AIDS Cases

The Health Department itself has programs focusing on preventing the transmission of HIV/AIDS cases in Surabaya. One of them is related to expanding HIV/AIDS testing services, and in 2023, testing services were expanded at several points.

"Surabaya City has expanded HIV testing services to 122 service points. Among them are 63 community health centers, 57 hospitals, and 2 main clinics."

The Surabaya Health Department continues its efforts to prevent the transmission of HIV/AIDS cases. Despite a 27 percent increase in cases in 2023.

"The number of detected HIV cases in Surabaya until October 2023 reached 1,122 cases. Analysis of the distribution of HIV cases based on population status shows that Surabaya ID card holders reached 600 cases (53.47 percent), while non-Surabaya ID card holders reached 522 cases (46.52 percent). There was a 27 percent increase in

the number of HIV case discoveries compared to the previous year, where in 2022, there were 827 cases."

The distribution of cases found in Surabaya varies greatly, ranging from adults to children. This needs to be a major focus because the transmission of such cases is likely to increase every year.

"The distribution of HIV cases in children aged ≤ 14 years amounted to 7 cases. The indication of the risk of HIV transmission in children is due to the lack of adherence to ARV medication by mothers infected with HIV due to lack of support from partners (family), and the inability of a wife to address her health problems."

Transmission risks due to hereditary factors pose a new challenge for the Surabaya Health Department. According to data released by the Surabaya Health Department, in 2022, there were 44,012 pregnant women targeted in Surabaya. Of this number, 37,620 pregnant women have undergone HIV testing, equivalent to 85.47 percent. Controlling transmission needs to be tightly controlled to save the nation's generation. Nevertheless, the Health Department remains consistent and massive in its efforts to prevent transmission by maximizing screening efforts for all at-risk groups regardless of residency status.

The Health Department's efforts in preventing transmission are not only based on HIV/AIDS screening but also on disseminating prevention and transmission information involving students. Additionally, the Health Department dispatches officers to conduct education and HIV/AIDS screening for at-risk groups, targeting transgender individuals, men who have sex with men, injectable drug users (IDUs), and public entertainment workers (PEWs).

"We conduct mobile HIV testing targeting PEWs and suspected hotspot locations of at-risk groups. Subsequently, HIV testing services are provided by healthcare facilities, such as community health centers, government and private hospitals, as well as major clinics."

Furthermore, the Surabaya Health Department continues to conduct initial screenings for infants aged at least 6 weeks. They also regularly screen for HIV every 3 months for groups at risk of HIV infection. Free ARV Test and Treat medication is also provided, and efforts to expand access to HIV treatment at community health centers and hospitals are ongoing.

"We form peer support from the ODHIV community in the working area to provide psycho-social support. Additionally, we provide PMT support for ODHIV to maintain health conditions and improve immunity, counseling, and home visits (home care) to strengthen patients' psychological conditions."

The Health Department also collaborates with the Mahameru Foundation on World AIDS Day, which falls on December 1, 2023. Through Radio Republik Indonesia Surabaya's program "Surabaya Sore Ini Bincang Inspiratif" (Surabaya Afternoon Inspirational Talk) with the topic "Moving Together with Communities to End AIDS." In the discussion, it was mentioned that after Covid-19 was declared endemic, the Surabaya Health Department massively conducted HIV screening, not only among key populations but also among groups with specific risks. This action reflects the strong commitment of the Surabaya city government to early detection, which has proven to have a significant impact. Recognizing conditions early means providing faster treatment, which ultimately reduces the risk of transmission.

Indirectly, the Surabaya Health Department has utilized the media to promote and distribute information to provide education about the prevention of HIV/AIDS transmission in Surabaya. One of the objectives of disseminating information about HIV and AIDS to target groups is to change their behavior and mindset to become more aware of the importance of health check-

ups. Certainly, to maximize the prevention of HIV/AIDS transmission in Surabaya, it is not sufficient to rely solely on education but also to provide ARV medication to PLHIV (People Living with HIV)/PLWHA. The use of these drugs is what can control and suppress the spread of the virus within the human body. These ARVs are distributed directly by the central government.

"The treatment efforts we provide to PLWHA include providing free ARV drugs through the available PDP services in Surabaya. ARV medication is dispensed once a month. Actually, there is a regulation called MMD (Multi mand dispensing) where ARV drugs can be dispensed for more than one month, with a maximum limit of 3 months, but this depends on the patient's adherence, and if their viral load is undetectable."

Community health centers and hospitals in Surabaya provide ARV drugs according to the guidance of the Surabaya Health Department, considering that not all healthcare facilities provide these drugs. However, not all community health centers in Surabaya provide ARVs because their use requires supervision and adherence.

"Not all community health centers provide ARVs, so if there are PLHIV who need treatment, we refer them to the nearest PDP."

Tabel 6. The List of Treatment, Support, and Care Services (PDP) in Surabaya City

No.	Care Services (PDP) in Surabaya City
1	RSUD Dr. Soetomo
2	RSAL Dr. Ramelan
3	RSUD Dr. Soewandhi
4	RSUD Bhakti Dharma Husada
5	RS. Jiwa Menur
6	RS. Bhayangkara
7	RS. HaJI
8	RS. Universitas Airlangga
9	RS. Husada Prima
10	RS. Brawijaya
11	Puskesmas Putat Jaya
12	Puskesmas Perak Timur
13	Puskesmas Sememi
14	Puskesmas Dupak
15	Puskesmas Jagir
16	Puskesmas Kedungdoro
17	Puskesmas Kedurus
18	Puskesmas Kalirungkut
19	Puskesmas Gunung Anyar
20	Puskesmas Balongsari
21	Puskesmas Tanjungsari
22	Puskesmas Keputih
23	Puskesmas Tanah Kali Kedinding

Certainly, PLHIV must continue to take ARV regularly because these medications not only suppress the movement of the virus but also minimize its spread. Pregnant women who consistently take ARVs according to the procedure will minimize the risk of giving birth to HIV-positive babies. The Surabaya city government has provided treatment facilities for People Living with HIV/AIDS (PLHIV) with the aim of ensuring their compliance with

treatment. This is crucial considering that regular treatment plays a significant role in maintaining the survival of PLHIV, as HIV/AIDS cannot be completely cured. In fact, many PLHIV living outside Surabaya choose to seek treatment here because its healthcare facilities are considered better than those in other cities or districts. Here is the data regarding the number of PLHIV receiving ARV treatment in Surabaya:

Tabel 7. The data of people living with HIV/AIDS (PLWHA) in Surabaya who are undergoing treatment efforts

The number of PLWHA undergoing ARV treatment	The number of PLWHA undergoing Viral Load testing	The number of PLWHA achieving Viral Suppression
4.301 People	1.811 People	1.534 People

In the prevention and control of HIV/AIDS transmission, the Surabaya City Health Office is assisted by the Surabaya City AIDS Commission (KPA). The KPA of Surabaya was directly chaired by the Mayor, but currently, the KPA has been abolished nationwide.

"Previously, there was a KPA in Surabaya that facilitated a multisectoral forum. However, after the National KPA was abolished, the role of the KPA in each region ceased to exist. Therefore, this year the KPA in Surabaya was abolished and replaced by the Acceleration Team for Targeted Monitoring (ATM), which has been formed by Decree. This team involves various parties such as government agencies, stakeholders, and NGOs. Its focus is on the management of three infectious diseases."

Formerly, the existence of the KPA centralized the implementation process of HIV/AIDS prevention and control in Surabaya because it was the government body responsible and authorized specifically for all activities related to the control, prevention, and management of HIV/AIDS. However, with the abolition of the KPA, the responsibilities and roles previously undertaken by the KPA were transferred to the Health Office, resulting in a more focused approach.

"Currently, the HIV/AIDS program is managed by the Health Office, with cooperation from various agencies such as the Social Services Office related to socio-economic issues. Additionally, the Population and Civil Registration Office (Dispendukcapil) also plays a role, especially in cases of people with HIV born without identification, who require assistance in obtaining official documents such as Family Cards (KK) and Identity Cards (KTP). Collaboration is also carried out with the Women's Empowerment, Child Protection, Population Control, and Family Planning Office (DP3A), as well as the Education Office through programs in schools with the campaign 'I Am Proud, I Know', which is socialized to junior and senior high school students through community health centers every year. Furthermore, the Communication and Information Office (Kominfo) is involved in HIV/AIDS education, especially on World AIDS Day, through media such as television and radio."

In addition to the government's role, community participation is also crucial in addressing HIV in Surabaya. Collaboration with various parties, including NGOs or communities, is essential to support the success of HIV/AIDS prevention measures. The significant contribution of these NGOs in efforts to prevent the transmission of HIV/AIDS in Surabaya cannot be overlooked.

"We are grateful for the presence of many NGOs that still pay attention to HIV/AIDS issues in Surabaya. We realize that only the Health Office will not be able to handle all the necessary aspects. We consider not only support and assistance but also many other things that need to be considered. Therefore, we have always maintained good working relationships with NGOs for a long time. Some active NGOs in Surabaya include Orbit,

PKBI, and Mahameru. Although other NGOs receive funding from donations and volunteers, we still involve them because of their high commitment, such as Abdi Asih, Embun, Surabaya Plus, and Yabisa."

Non-Governmental Organizations (NGOs) are one of the stakeholders in the Penta Helix Model, so their role is crucial in realizing collaboration among sectors in addressing HIV/AIDS in Surabaya.

Community-Based Organizations (CBOs) play a significant role in maximizing HIV/AIDS prevention efforts in Surabaya.

The government and NGOs collaborate to address HIV/AIDS prevention and control in Surabaya. NGOs can utilize and channel government programs, and they also advocate to provide input to the government. Below are the results of an interview conducted by the author with Munib from Orbit Surabaya. Orbit is an NGO that has collaborated with the Surabaya City Health Office, with their partnership lasting for decades.

"It's been a long time since we've been cooperating with the Health Office, it's been decades since we've been collaborating with them."

The collaboration conducted is an extension of the Health Office's HIV/AIDS prevention program. In addition, Orbit also provides assistance to HIV/AIDS survivors. Orbit can also provide criticism and suggestions for programs implemented by the Surabaya City Health Office. However, during advocacy meetings, the Health Office only sends its staff.

"For example, when we advocate in meetings, it's not the head of the department who attends, but their staff. Then the response is, 'we will convey it to the leadership.'"

Orbit states that many HIV/AIDS prevention efforts implemented by the Health Office need to be evaluated.

"The policies are too chaotic that it makes me dizzy. It should all come from the top down, not the other way around. We should follow what becomes policy or regulations. Supervision should be centralized, from the central level to the district/city level, and even to the sub-district level. It requires joint discussions because the rules are from the central level to the regional level."

The prevention issue also needs to be highlighted, especially concerning education for the community. The organizational nomenclature of government agencies as extensions of the Regional Government should be utilized to the fullest extent possible, such as through Integrated Health Posts (Posyandu).

"There should also be access established from the level of Posyandu, where socialization can be conducted. Issues like drugs, HIV, now HIV doesn't seem like a sexy issue so it's not given much attention."

Evaluation of Surabaya City government policies regarding HIV/AIDS management is considered extensive. Apart from the perspective of people living with HIV/AIDS, social or family factors also need to be considered because the current transmission trend is through families. Moreover, the challenges faced by the Surabaya City Health Office at present are how to reach communities vulnerable to HIV/AIDS with high transmission rates, such as commercial sex workers. Furthermore, the development of localizations currently also extends to the use of technology or social media.

"Transmission through injections, now the transmission has shifted, like homosexual transmission, family transmission, because they usually often purchase online. Because

many localizations are closed, now how to reach them, for example, how to reach unreachable commercial sex workers through applications. In the past, they were easily reachable, for example, at karaoke places or in prostitution."

Moreover, as Surabaya is the city with the highest number of HIV/AIDS cases in East Java, it needs shelters like those in Solo. Even at the district level, Probolinggo has Temporary Shelters for people living with HIV/AIDS.

"Surabaya needs shelters or at least temporary shelters for people living with HIV/AIDS."

Certainly, the existence of shelters for people living with HIV/AIDS would be very beneficial, as it would at least minimize the transmission of HIV/AIDS cases in Surabaya. The role of Community-Based Organizations is crucial in maximizing the efforts to address HIV/AIDS in Surabaya. NGOs serve as instruments that extend the implementation of the Surabaya City Government's programs, especially those of the Health Office. However, in the Penta Helix Model, there are other instruments capable of enhancing collaboration among stakeholders in addressing HIV/AIDS prevention and transmission in Surabaya, such as the media.

Prevention Transmission Case Strategy by Media

The media is the third instrument to be discussed in this study; the author chose Radio Republik Indonesia Surabaya as the object of research. Radio Republik Indonesia is a media outlet under the Ministry of Communication of the Republic of Indonesia. Specifically in the handling of HIV/AIDS in Surabaya, RRI Surabaya plays an important role, especially in education. RRI Surabaya not only provides education but also conducts direct coverage on location.

"Media serves as an educational tool for the community because, whether acknowledged or not, all information can be obtained through the media. For example, regarding HIV/AIDS, RRI has indeed covered cases at Soetomo Hospital in Surabaya, revealing the existence of specialized facilities."

In addition to investigating Dr. Soetomo, RRI Surabaya has also visited the former Dolly red-light district. The investigative team discovered that there were children categorized as PLHIV (People Living with HIV) who were experiencing worsening conditions.

"When I asked the health center, HIV/AIDS patients did receive treatment, but their data did not mention it. We still maintained control. The question is, when the Dolly red-light district was closed, how far was the control?"

RRI Surabaya, as a media outlet, has other important roles besides reporting on HIV/AIDS in Surabaya. RRI Surabaya has also conducted dialogues, especially on World AIDS Day, inviting competent speakers from relevant fields.

"When there is information, for example, on December 1st, World AIDS Day, we hold dialogues with competent speakers, such as from the health department, communities, or NGOs. We delve into issues like the actual conditions in Surabaya or East Java."

RRI Surabaya not only reports but also follows up with relevant parties to broadcast the obtained information to the public.

"We follow up not only through reporting but also through broadcasting to present it to the public. These are the issues that arise."

At certain times, RRI Surabaya often organizes joint programs with youth communities concerning HIV/AIDS or youth delinquency issues. This can be seen in RRI Surabaya's Instagram posts collaborating with the Indonesian Family Planning Association in East Java,

involving peer volunteers from PKBI East Java. The program also involves high school students in East Java. Programs and activities like these are expected and capable of being implemented more effectively from the perspective of the Surabaya City Government apparatus.

The Surabaya Health Office (Dinkes) is the mainstay in the eradication or management of HIV/AIDS in Surabaya. In the concept of the Penta Helix Model, Dinkes should be able to form sustainable collaborations with specific media outlets to address HIV/AIDS prevention and education to the community. However, this has not yet been done by the Surabaya Health Office.

"There is no collaboration with the media yet. As far as I know, the collaboration conducted is not continuous, only during specific moments like World AIDS Day, for example."

Furthermore, RRI Surabaya also provides criticisms and suggestions to the Surabaya Health Office, especially regarding the management of HIV/AIDS in Surabaya. These criticisms are the result of reflections based on phenomenological analysis, especially concerning prevention, primarily education.

"Especially at key moments, we provide education to the public because many of them still do not understand. Again, education is important, especially at such moments. We do this with the health office; I don't know, on December 1st, they only started moving, whereas they should have been anticipatory. But again, we don't know when they will go to the field."

Media in the era of the Fourth Industrial Revolution can be the forefront of education. Millennials and Generation Z currently heavily use social media. Therefore, there should be a collaborative program between Surabaya City Government stakeholders and the media outlets in Surabaya.

The Prevention Strategy of Case Transmission by Academics

In the concept of the pentahelix, academics play a role as initiators who conduct research, support the identification and evaluation of potential, and highlight opportunities for development. They also have a responsibility to enhance knowledge and skills, acting as knowledge disseminators providing a range of current concepts, theories, and development models relevant to the current context. Academics should be given a role in managing the resources of People Living with HIV (PLHIV). PLHIV are often marginalized when in the community. They tend to face discrimination in attitude and behavior from close acquaintances and even family members. The Surabaya City Government, through the Department of Health (Dinkes), should involve academics in providing education to PLHIV, both in terms of soft skills and hard skills. This is to ensure that PLHIV receive comprehensive learning to improve themselves.

Essentially, the role of academics in the pentahelix concept is to provide insights and evaluate factual data in the field through research, analysis, and human resources development. Academics can be involved when teams from Dinkes go into the field to provide input to stakeholders on what steps could be taken next. Specifically, this pertains to prevention and education for the community. Certainly, the presence of academics will add value to the information provided on how to avoid HIV/AIDS and could help formulate new, more effective and efficient strategies for HIV/AIDS control.

The Department of Health minimally involves academics, both empirically and theoretically. The Surabaya City Health Office should be able to collaborate with State Universities in

Surabaya that have faculties of health, medicine, or even psychology. This cooperation should create an extraordinary collaboration so that the prevention of HIV/AIDS in Surabaya can be more optimal. This is akin to what the Faculty of Medicine and Doctoral Professional Education Program of the Faculty of Medicine, Airlangga University did in August 2023 by conducting outreach in the Kalisari Subdistrict. The activity aimed to reduce community stigma against PLHIV. Additionally, they conducted outreach on prevention, dangers, and impacts of HIV/AIDS to the community. Even after the event, they organized Volleyball, Sack Racing, and Balloon Pinning competitions with the Peer Support Group (PSG) Suara Berdaya Surabaya and residents of the Kalisari Subdistrict.

Meanwhile, Dr. Priyono Satyabhakti MS., MPH, one of the academics at the Faculty of Public Health, Airlangga University, revealed an interesting fact regarding the Prevention of HIV/AIDS Transmission Cases in Surabaya. At-risk groups can be managed in various ways, including approaching the transgender, gay, and commercial sex worker (CSW) communities in specific locations. They can then be given interventions such as sexually transmitted infection (STI) examinations and HIV tests. However, what about the clients, as they do not have communities or associations?

"Transgender and gay people have their communities that we can approach. The challenge lies with the clients. There are no client associations we can approach to provide interventions."

Approaching the prevention of HIV/AIDS transmission through CSW clients presents its own challenges. Therefore, an alternative is to approach the wider community. This approach can be done through lectures, stories from individuals living with HIV, stories of patients affected by HIV due to drug use, holding seminars on HIV prevention, and various other activities.

"We can hold general HIV lectures such as seminars on HIV and drug threats among fathers, women's groups, new students, and so on."

The prevention strategy for transmission cases that can be implemented is by conducting the ABC Campaign.

"Abstinence is aimed specifically at unmarried individuals to abstain from sex outside marriage. Then, be faithful, aimed at those who already have partners to be faithful, and finally, the use of condoms during sexual intercourse."

The Surabaya City Health Office does not collaborate with academics in the Prevention of HIV/AIDS Transmission in Surabaya. The numerous State Universities in Surabaya with faculties of medicine or health are not being effectively utilized by the Surabaya Health Office.

"To the government and other relevant parties, it is advised that combating and preventing the spread of HIV/AIDS must be done together. Collaboration between health, economic, religious, local leadership, and other sectors is essential."

Certainly, collaboration among stakeholders is needed to maximize the Prevention of HIV/AIDS Transmission in Surabaya. The Health Office, as the mainstay, cannot work alone; private sector involvement may be greatly needed.

The Strategy for Preventing Transmission Cases by the Private Sector

The private sector has a direct influence on productivity, especially with 80% of the working-age population employed within it. Work productivity is key to business sustainability. The workplace is a strategic location for providing education to employees about HIV prevention and mitigation efforts. Therefore, the work productivity of employees and business sustainability can be maintained. The role of the private sector in prevention efforts can be

carried out through two main aspects: firstly, providing socialization to workers within the company, and secondly, allocating Corporate Social Responsibility budgets to Non-Governmental Organizations or Government Agencies.

However, this aspect has never been utilized by the Surabaya City Health Department, even though if we observe, many private companies classified as the Big Four are located in the Surabaya area. The author found a fact that there is minimal communication and collaboration between the Surabaya City Health Department and the Private Sector for HIV/AIDS prevention efforts in Surabaya.

Conclusion

The prevention strategy implemented by the Surabaya City Health Department in preventing the transmission of HIV/AIDS cases in Surabaya needs to be enhanced. This is due to the increase in the number of HIV cases compared to the previous year. Furthermore, the development of HIV/AIDS transmission prevention in Surabaya with the concept of the Penta Helix Model has not been well-implemented. The role of Non-Governmental Organizations has not been maximized and seems to be limited to merely providing input on HIV/AIDS transmission prevention. There is a lack of participation and collaboration between the Surabaya City Health Department and academia, media, and the private sector to maximize the role of each stakeholder in preventing HIV/AIDS transmission cases in Surabaya. Based on these conclusions, the researcher recommends the implementation of the Penta Helix Model in developing HIV/AIDS transmission prevention strategies in Surabaya. The Surabaya City Government through the Surabaya City Health Department needs to initiate Penta Helix collaboration with various stakeholders. The prevention of HIV/AIDS transmission cases in Surabaya can be more effective if each stakeholder's role, including Non-Governmental Organizations, media, academia, and the private sector, can be maximized.

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