

# Human Immunodeficiency Virus management in pregnant women at Kupang City Hospital East Nusa Tenggara

## Manejo del virus de inmunodeficiencia humana en mujeres embarazadas en el hospital de la ciudad de Kupang, este de Nusa Tenggara

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### SUMMARY

**Introduction:** Human Immunodeficiency Virus (HIV), syphilis, and hepatitis B are sexually transmitted infections (STIs) that can pass from pregnant women to their babies. Transmission of HIV, syphilis, and Hepatitis B to children from mothers' results in morbidity, disability, and death. Indonesia has adopted the Prevention of Mother-to-Child Transmission (PMTCT) as a national policy, following a voluntary counseling and testing approach.

**Objective:** This study aims to evaluate the process of HIV management in pregnant women in Kupang.

**Methods:** This research is a descriptive study using a survey method.

**Result:** The results showed that most pregnant women had been screened for HIV (91 %), a small proportion were infected (0.004 %), and most pregnant women infected with HIV had received treatment (80 %) also had the opportunity to be accompanied by companions from fellow sufferers with a good quality of life.

**Conclusion:** There are still some problems with the availability of reagents and the back-referral system that need further investigation.

**Keywords:** HIV, pregnant women, Kupang City

### RESUMEN

**Introducción:** El Virus de la Inmunodeficiencia Humana (VIH), la sífilis y la hepatitis B son infecciones de transmisión sexual (ITS) que pueden pasar de la mujer embarazada al bebé. La transmisión del VIH, la sífilis y la hepatitis B a los niños de las madres produce morbilidad, discapacidad y muerte. Indonesia ha adoptado la Prevención de la transmisión maternoinfantil (PTMI) como política nacional, siguiendo un enfoque voluntario de asesoramiento y pruebas.

**Objetivo:** Este estudio tiene como objetivo evaluar el proceso de manejo del VIH en mujeres embarazadas en Kupang.

**Métodos:** Esta investigación es un estudio descriptivo utilizando un método de encuesta.

**Resultados:** Los resultados mostraron que la mayoría de las mujeres embarazadas habían sido examinadas para el VIH (91 %), una pequeña proporción estaban infectadas (0,004 %) y la mayoría de las mujeres embarazadas infectadas con el VIH habían recibido

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*tratamiento (80 %). También tuvieron la oportunidad de ser acompañadas por compañeros de compañeros de sufrimiento con una buena calidad de vida.*

**Conclusión:** *Todavía existen algunos problemas en la disponibilidad de reactivos y el sistema de referencia inversa que necesitan más investigación.*

**Palabras clave:** *VIH, mujeres embarazadas, ciudad de Kupang.*

## INTRODUCTION

Human Immunodeficiency Virus (HIV) Acquired Immunodeficiency Syndrome (AIDS) is a collection of symptoms and infections associated with a decrease in the human immune system due to the HIV can be contagious and deadly (1). HIV, syphilis and hepatitis B are sexually transmitted infections (STIs) that can pass from pregnant women to their babies. All three have the same transmission route in the form of sexual, blood, and vertical contact from mother to fetus. It generally occurs during pregnancy, although it can occur during labor and breastfeeding with less frequency. Transmission of HIV, syphilis, and Hepatitis B to children from mothers results in morbidity, disability, and death (2).

The number of HIV cases in Southeast Asia in 2015 reached 5.1 million patients with 77 000 HIV pregnant women and 167 000 cases of syphilis in pregnant women (3). According to data for 2017, the number of syphilis patients in Indonesia reached an HIV prevalence rate of 0.39 percent, syphilis 1.7 percent, and hepatitis B 2.5 percent. This number is high and allows transmission from pregnant women to babies during pregnancy so more attention is needed to overcome it.

The Ministry of Health has a target of achieving zero by 2030. Triple Elimination is a program organized by the Ministry of Health of the Republic of Indonesia to tackle the transmission of HIV, syphilis, and hepatitis B in pregnant women to their babies. This activity is an activity adopted from the World Health Organization (WHO) program called triple elimination (4). The transmission rate can be reduced to 5 percent from the supposed 15 percent with preventive activities in the form of

testing for HIV, hepatitis B, and syphilis during antenatal care (ANC) (3).

Indonesia has adopted the Prevention of Mother-to-Child Transmission (PMTCT) as a national policy, following a voluntary counseling and testing approach (5). Assessing the implementation of programs in the province of Nusa Tenggara Timur (NTT), especially in the city of Kupang, as a barometer for the implementation of health programs in the province of NTT, it is necessary to survey the implementation of the Prevention of Mother to Child Transmission (PPIA) program implemented in hospitals. The purpose of this survey is to evaluate the process of HIV management in pregnant women in Kupang City.

## METHODS

This research is a descriptive study using a survey method, which was conducted at 3 PMTCT referral hospitals in Kupang City. The population is all pregnant women who checked at the research hospital in 2021. The sample was taken as a total population of as many as 3 938 people. Data collection used secondary data that is in the hospital report. Analysis was used to describe the management of HIV in pregnant women in the hospital. This research has received permission from the hospital with letter number DINKES.444.870/637/VI/2022.

## RESULTS

### HIV Screening in Pregnant Women

The survey conducted at 3 referral hospitals for the PMTCT program in Kupang City found that the program that had been implemented at the hospital, namely pregnant women who came to check their pregnancies, would be screened for 3E (HIV, Syphilis and Hepatitis B), so that if a mother was found if the screening result is positive, management was carried out immediately according to the SOP (Standard Operating Procedures). The results of Miyahara's study stated that increasing test coverage could reduce the number of cases due to well-integrated tests and immunization (6).

Figure 1 shows that in 2021 it was found that most pregnant women who checked themselves at the hospital had been screened for HIV, namely as many as 3 597 people (91 %), while 341 people (9 %) did not have screening. These results have not reached the target set by WHO, namely 95 % for HIV screening coverage in pregnant women (7). HIV screening coverage which is still low requires an increase in supporting resources consisting of human resources, facilities, and funds as well as collaborating and motivating private health services to support and implement policies (8). The willingness of pregnant women to carry out HIV testing is not only influenced by sources of information (9). Support from health workers for pregnant women to carry out PPIA examinations can be in the form of providing information, advice for post-examination examinations, and counseling (10). Ghoma et al., stated that the factors that influence the acceptance of pregnant women to want to be screened are good counseling because it will increase pregnant women's understanding of HIV and the importance of HIV screening in pregnant women (11). The results also found that the obstacles faced in screening pregnant women were reagents that were not available or had run out so screening could not be carried out when pregnant women had pregnancy checks. In addition, several pregnant women did not come to the hospital for screening after receiving referrals from the Public Health Center for various reasons, such as not having a permanent domicile.

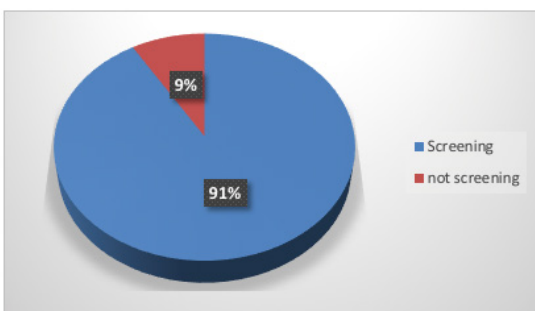


Figure 1. HIV Screening Data for Pregnant Women at Kupang City Hospital in 2021.

Laboratory tests have been carried out according to the available SOP. The availability of laboratory inspection equipment and facilities is complete, inspection forms for triple elimination are always filled in, and centrifuges are available, but the availability of consumables is not specified because there is no special separation for the PPIA program.

The evidence showed that in Indonesia there is a shortage of rapid testing and treatment supplies, trained staff including experienced counselors, provision of PMTCT guidelines, and private rooms for consultation and counseling (12). The availability of rapid test kits and treatment is a potential determining factor (13). The utilization of VCT (Voluntary Counselling and Testing) services is more at health facilities with good infrastructure availability than those that are lacking (14). WHO recommends that efforts to improve congenital syphilis surveillance and quality assurance of HIV and syphilis laboratories should be included as primary targets for country-based mother-to-child transmission programs as they are critical for the elimination of mother-to-child transmission EMTCT programs (15).

Figure 2 shows that based on the results of the screening that was carried out, it was found that most of the pregnant women were not infected with HIV, but there was a small number who were infected, namely 15 people (0.004 %). Mothers with HIV infection status before childbirth will be given ARVs (Antiretroviral) as soon as possible both for therapeutic purposes and prophylactic purposes (16).

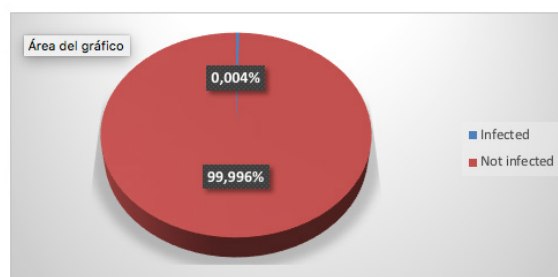


Figure 2. Data on pregnant women infected with HIV at Kupang City Hospital in 2021.

The survey results found that the Hospital already has a special poly-de-prescribing (PDP) based services, but some are still joining the internal poly. The hospital also has Standard Operating Procedures (SOP) 10 T, handling labor and postpartum in mothers with 3E and counseling sheets. The management of HIV in pregnant women has been carried out by VCT doctors. The results of another study found that the availability of infrastructure has a significant relationship with HIV testing behavior (17). Implementation of the PPIA program with antenatal services, facilities, and infrastructure is needed starting from outreach activities, screening, and referrals. Facilities for information through the media so that the delivery of messages is easily understood by mothers can be in the form of leaflets, flipcharts, banners, posters, and so on (18).

### Management of HIV in Pregnant Women

Figure 3 shows that not all HIV-infected pregnant women received treatment because there were still 3 people (20 %) who did not receive treatment because they lost contact after the screening. This is caused by various obstacles such as the domicile of pregnant women and the return referral system. These results do not meet the WHO recommendation target of 95 % treatment coverage for women diagnosed and living with HIV (19). The condition of pregnant women who have not received treatment with ARVs is very at risk of transmitting the virus to their babies during the delivery process (20).

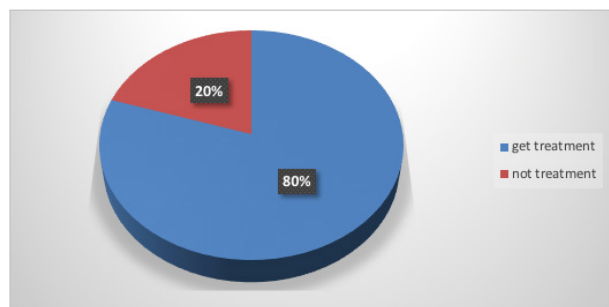


Figure 3. Treatment Data for HIV-Infected Pregnant Women at Kupang City Hospital in 2021.

Pregnant women who are HIV positive are an indication for lifelong ARVs. This administration must be done regardless of the CD4+ count (Cluster Differential 4, T-helper cells/T-cells). This is effective in preventing the transmission of HIV infection from mother to child (21).

Considerations for delivery assistance to HIV-positive pregnant women are still being considered today. Various research results suggest that delivery by cesarean section is very effective in preventing HIV transmission and pregnant women with a viral load of  $\geq 1\ 000$  copies/mL or unknown in the third trimester are recommended for cesarean section (22). The delivery method with elective cesarean section (ECS), can reduce the morbidity of HIV-infected mothers when compared to vaginal delivery and reduce the incidence of HIV-infected babies (22).

The results of the study found that the problem that occurred was that there were no return referrals from the hospital for HIV confirmation checks and treatment that had been obtained by pregnant women who were 3E reactive, so the health center staff found out this information from AIDS Concerned Residents (ACR), conducted by researchers in the Citizens Concerned AIDS (WPA). WPA is one of the efforts to prevent and control HIV/AIDS which involves community participation (23). In addition to WPA, the Provincial Government of East Nusa Tenggara and the City of Kupang in collaboration with Non-Governmental Organizations have established a companion group that is provided to accompany and help provide support and assistance for pregnant women with HIV to improve the quality of life for mothers and their babies. These companions also come from HIV sufferers who are in the Kupang City area, and who have undergone good and regular treatment throughout their lives.

Another study in Indonesia stated that to achieve the target of reducing the transmission of HIV, syphilis, and hepatitis B from mother to child threefold, strengthening the capacity of all primary healthcare providers in providing PMTCT services must be a priority. This includes better integration of private providers, particularly private midwives, into the Indonesian healthcare system (24). Screening activities require mother cards that are integrated with PMTCT and



reagents for HIV testing, while referral activities require two-way communication between MCH (Mother and Child Health Department) and VCT clinics (18).

### CONCLUSION

Most of the pregnant women who went to the hospital had been tested for HIV. The hospital also has SOPs and infrastructure for testing and treating HIV, but there are still problems with the availability of reagents. Most HIV-infected pregnant women have received standard treatment and have had the opportunity to be accompanied by fellow HIV sufferers with a good quality of life.

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