

HIV- Positive Person - Marriage, Pregnancy and Perinatal/ Vertical/ Mother to Child Transmission: Awareness, Prevention and Recommendations

Nasreen Inayat Bughio¹

Human Immunodeficiency Virus (HIV) / Acquired Immunodeficiency Syndrome (AIDS) is a major global public health problem. At present, more than 40 million persons are living with HIV, and 42 million persons have died from AIDS-related opportunistic infections worldwide. HIV transmission is still ongoing in all countries affecting persons of all ages, gender, race, sexual orientation, behavior and socioeconomic status^{1,3}.

HIV infection is caused by a virus that destroys CD4+ immune cells and weakens the immune system. Without treatment, HIV infection leads to AIDS in 10-15 years. HIV is transmitted via sexual contact; body fluids including blood, semen, vaginal secretions, and breast milk; sharing HIV contaminated needles/syringes/surgical equipment; from mother-to-child².

HIV infection is for life. There is no cure, however, with free access to early diagnosis, effective antiretroviral therapy ART, Care and prevention measures, HIV has become a manageable chronic condition. Today, HIV-positive persons are living long and healthy lives in developed countries⁴. Despite the advancement in HIV treatment and prevention, HIV infection/AIDS related deaths are on the rise in developing countries including Pakistan⁵.

Perinatal / Vertical / Mother-to-Child Transmission (MTCT) of HIV

MTCT is the transmission of HIV from a HIV-positive pregnant person to a newborn baby during: (i) pregnancy via placenta; (ii) Childbirth, including labor and delivery; and/or (iii) Breastfeeding via milk⁶.

Without any interventions, MTCT can rise up to 45%, however, with interventions, the estimated risk of MTCT during pregnancy, childbirth, and breastfeeding are 5–10%, 10–20%, and 5–20%, respectively. The Joint United Nations Programme on HIV and AIDS (UNAIDS) 2030 goals and the World Health Organization (WHO) Triple Elimination Initiative set a MTCT rate benchmark of benchmark of <5% in breastfeeding persons^{7,8}.

Prevention of Mother to child transmission of HIV

Perinatal / Vertical MTCT of HIV is preventable⁹. Currently, several interventions are available to prevent HIV MTCT: (i) ART treatment for HIV-positive person during pregnancy, childbirth, and delivery and for a newborn baby immediately after

birth; (ii) Low Viral Load (u=u) – A person on ART treatment has a low, undetectable HIV viral load, therefore, the risk of MTCT is less than 1%; (iii) Delivery via Cesarean, in case of high HIV viral load in HIV-positive person; (iv) Early Intervention for babies – Newborns exposed to HIV receive appropriate ART within 6 hours after delivery; (v) HIV testing for both parents so appropriate measures can be taken to prevent MCTC preferably before conception, pregnancy; (vi) Breastfeeding - if a mother is on ART and has an undetectable viral load, breastfeeding may be an option, but the risks and benefits must be discussed with a healthcare provider. Breastfeeding if avoided in Developed countries; (vii) Maternal and Paediatric Health Care - HIV-positive pregnant persons must seek prenatal Care and consultation before and after delivery, with HIV & Pregnancy Specialist Health care provider.

A **Gynecologist / Obstetrician** plays a vital role in the prevention of MTCT throughout pregnancy and after childbirth: (i) Prenatal Care – responsible for monitoring mother's health and child development; (ii) Testing and Counseling - screening all pregnant persons for infections and providing Counseling on prevention strategies; (iii) Manage Labor and Delivery - implement strategies to reduce the risk of MTCT during labor and delivery, such as elective Cesarean sections for HIV-positive women with high viral loads or managing the duration of membrane rupture; (iv) Postpartum Care: provide guidance on infant feeding practices and ensure the mother and baby receive appropriate Care after delivery.

Challenges to Prevent HIV/AIDS & MTCT of HIV

Challenges to preventing mother-to-child transmission (MTCT) of HIV include (i) Lack of Education, Knowledge, Awareness about HIV / AIDS / MTCT; (ii) Reluctance or Avoidance of Educational Institutions / Educational Authorities / Media, to openly talk about HIV/AIDS to their students and general public or even include it into their academic curriculum; (iii) Non-disclosure of HIV status – partners or spouses are not open/honest to each other; (ii) Late initiation of HIV ART treatment; (iii) Non-adherence to HIV ART treatment; (iv) Stigma; (v) Cultural restrictions about breast feeding; (vi) limited or late or no access of general public to free HIV testing including PCR, and to HIV treatment/hospital health care services; (vii) Lack of access to the prevention of MTCT services, including testing, Counseling and ART; Lack of Reproductive HIV mother to child health care wards /

¹Medical Consultant & Policy Analyst / Research Scientist

-Federal Government of Canada, Canada

Correspondence: bughion@yahoo.com

doi: 10.22442/jlumhs.2025.01288



exclusive facility for HIV patients in the hospitals; (viii) Lack of Health care providers with HIV and Pregnancy for consultation and Care of HIV positive Mother and child.

Recommendations for Prevention of MTCT of HIV

- All women planning a pregnancy should be tested for HIV. If HIV positive, then they must receive HIV ART treatment immediately.
- All HIV-positive pregnant persons/partners counseled on HIV infection and the risks/benefits of ART treatment by **HIV and Pregnancy Specialists**.
- All medical staff managing HIV-positive pregnant persons should be familiar with the use of the local, national, and international guidelines for the Prevention of MTCT.

HIV/AIDS is a significant public health problem worldwide. It impacts all ages, all communities and require joint global efforts to stop the spread of HIV worldwide, and access to HIV ART treatment must be provided for all HIV-positive persons. Early detection and treatment save lives, and early treatment in HIV-positive pregnant persons can significantly reduce the risk of MTCT. For example, in European countries, 99.7% of babies born to HIV-positive persons are HIV-negative. With the advancement in HIV treatment, awareness, prevention and control efforts at the global level, today HIV-positive persons can marry, get pregnant, give birth to HIV-negative children, and with proper timely Care can lead healthy, normal lives. Please NOTE: HIV infection is manageable, however, once you have HIV it will stay with you for life. Therefore, HIV ART treatment is a lifelong commitment. Adherence to the HIV treatment allows HIV-positive persons to live long and healthy lives and protect others. Together we can stop AIDS. Be Proactive NOT Reactive.

REFERENCES

1. UNAIDS. Global HIV & AIDS Statistics – Fact Sheet. UNAIDS. 2025. Available from: <https://www.unaids.org/en/resources/fact-sheet>

2. Bughio NI. HIV Infection in Sindh, Pakistan: Outbreaks, Challenges, and Recommendations. JLUMHS. 2024; 23(2): 88-89. doi: 10.22442/jlumhs.2024.01169.

3. WHO. HIV & AIDS. World Health Organization. 2024. Available from: <https://www.who.int/news-room/fact-sheets/detail/hiv-aids#>

4. Trickey A, Zhang L, Sabin CA, Sterne JAC. Life expectancy of people with HIV on long-term antiretroviral therapy in Europe and North America: a cohort study. The Lancet Healthy Longevity. 2022; 3: S2.

5. Raza HA, Raja MHR, Khakwani MM, Jamil B. 2024 Pakistan's HIV high-risk populations: Critical appraisal of failure to curtail spread beyond key populations. IJID Reg. 2024; 11: 100364. doi: 10.1016/j.ijregi.2024.100364.

6. de-Lannoy LH, Fuentes A, Santos PC, Coelho R, Miranda AE. HIV in pregnant woman and children: Mother-to-child transmission of HIV in the Brazilian land border from 2010 to 2021. Int J Gynaecol Obstet. 2024; 166(1): 90-98.

7. UNICEF. Progress Report and Road Map for the Triple Elimination of Mother-to-Child Transmission of HIV, Syphilis and Hepatitis B in the Middle East and North Africa/ Eastern Mediterranean Region. UNICEF. 2024. Available from: <https://www.unicef.org/mena/media/25666/file/240626%20UNICEF%20Baseline%20Report%20and%20Road%20Map%20for%20the%20Triple%20Elimination%20Web.pdf.pdf>

8. Organization WH. Elimination of Mother-to-Child HIV, Syphilis and Hepatitis B Technical and operational guidelines. World Health Organization. 2022. Available from: https://cdn.who.int/media/docs/default-source/timor-leste-docs/3_emptct-hiv-syphilis-hep-b_02052023.pdf?sfvrsn=f267fa17_1

9. Centre for Health Protection. Scientific Committee on AIDS and STI(SCAS): Recommended Clinical guidelines on the prevention of mother-to-child HIV Transmission. Centre for Health Protection. 2024. Available from: https://www.chp.gov.hk/files/pdf/guidelines_on_pmtct_march_2024.pdf.

