



BACKGROUND

In many resource constrained settings, access to ART may be minimal or non-existent. This puts service providers who are working with vulnerable populations and high rates of HIV infection, in a very difficult position. In the absence of any access to treatment, it may be difficult for service providers to convince their clients of the benefit of attending HIV testing services. If beneficiaries do attend HIV testing services, and test positive, service providers may not be sure how to advise them. This Information Brief provides some simple guidance-including gender-specific guidance for HIV-positive women-on ways in which service providers can support the health of their HIV-positive clients in situations where access to ART is constrained. These steps are not intended as a substitute for ART. Only ART has been shown to effectively control HIV infection. ART does not cure HIV. There is no cure for HIV.

WHAT ARE THE ISSUES?

PLHIV-including female drug users and the spouses of male drug users, may require access to ART in settings where ART access is restricted or non-existent.

EVIDENCE: GOOD PRACTICES

Key Information

Not everyone who tests positive for HIV requires ART:

WHO 2010 Recommendations state that PLHIV should begin ARV treatment when their CD4 count is ≤ 350 cells/mm³ or when they have WHO clinical stage 3 or 4 HIV, in situations where CD4 testing is not available. This represents a change from WHO's 2006 recommendations which state that PLHIV should initiate ART when their CD4 count is ≤ 200 cells/mm³.¹ In many low-resource settings, national governments have set the limit for initiating ART at ≤ 250 cells/mm³. Ideally, PLHIV should have access to services for CD4 counts to determine when they are in need of ART. In all cases, PLHIV must consult a doctor to determine if HIV infection has progressed to the stage of requiring ART. This is particularly important for women, because HIV-positive women tend to progress more quickly towards AIDS than HIV-positive men.

The advantages of testing for HIV even when ART is not available

Testing early and often gives people who test positive more time to take measures to preserve their health, even if ART is not available. Waiting to test until symptoms appear, increases the likelihood that a person will learn about their status when the infection is already at an advanced stage, and reduces the effectiveness of health preserving measures. Injecting drug users who test positive for HIV tend have lower CD4 counts at the time of testing, than do non-drug users who test positive, and this is particularly evident among IDU women who test positive for HIV in antenatal testing.²

Testing early and often gives people who test negative the opportunity to learn about HIV prevention measures that can help them to preserve their status.

¹WHO. 2010. Antiretroviral Therapy for Adults and Adolescents: Recommendations for a Public Health Approach, 2010 Revision.

²Claire Thorne, University College London, Access of IDU women to PMTCT services in Ukraine. Data from a 9 year prospective cohort study, Presentation the High-Level Consultation on Pregnancy, Drug Addiction and HIV in Eastern Europe and Central Asia: New viewpoints on service-provision for mother and child, UNICEF, UNODC, UNAIDS, WHO-Europe, 1-3 July 2009, Yalta

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Gender-specific information and advice for women who test positive

Mother-to-Child Transmission:

In the absence of any ARV treatment, there is a 35 percent change that an HIV-positive pregnant woman will transmit HIV to her baby. For women who do not breastfeed, the risk of transmission is reduced to 25 percent. With proper ARV treatment, MTCT risk can be reduced to less than 5 percent among women who breastfeed, and less than 2 percent among women who do not breastfeed. Women who become HIV infected during their pregnancies, or during the time they are breastfeeding, have a greater chance of transmitting HIV to their babies than women who were already infected before they became pregnant. For this reason, women who tested negative early in their pregnancy should be offered HIV testing again late in their pregnancy.³ **In addition, women who are high risk-such as women who use drugs or the spouses of male drug users-who test HIV-negative early in their pregnancies, should be counselled about the risks acquiring HIV during pregnancy and supported to practice safe sex during pregnancy.**

Preventing mother-to-child transmission of HIV:

Ideally, HIV-positive pregnant women should have access to ART for PMTCT during pregnancy and throughout breastfeeding, and women who require ART for their own treatment should continue to receive it for their lifetime. If a pregnant woman has not accessed ART for PMTCT during her pregnancy, WHO recommends single dose nevirapine (NVP) administered to the mother as soon as possible during delivery. Women who breastfeed should continue to receive appropriate ART for PMTCT during the time they are breastfeeding. Infants should receive NVP within 4-6 hours of birth or as soon as possible and continued NVP until 4-6 weeks of age if the mother does not breastfeed, or until one week after breastfeeding has stopped, for babies who are breastfed.⁴

HIV-positive women should be counselled about breastfeeding their baby:

Around one third of overall HIV mother-to-child transmission takes place in breastfed children up to the age of two.⁵ Ideally, HIV-positive new mothers would have safe access to baby formula and be in a position to

safely feed their babies exclusively on formula. In some settings, financial constraints or lack of access to baby formula may make this impossible. In addition, it may be culturally unacceptable for a woman not to breastfeed, or not breastfeeding could lead to suspicions about a new mother's HIV status and put her safety in jeopardy. For these reasons, new mothers may not be in a position to feed their babies exclusively on formula. In this case, WHO and UNICEF recommend ART for PMTCT for both mother and infant and exclusive breastfeeding for infants of mothers with HIV, for the first six months of the baby's life. This means no mixing whatsoever of other food for the baby until 6 months have passed. Studies among women who received nevirapine found that the risk of transmission during the first four months of the infant's life is halved when the mother breastfeeds exclusively and avoids mixed feeding.⁶ Modelling studies based on data from sub-Saharan Africa suggest that exclusive breastfeeding for six months, with promotion and support, would save nearly one in four HIV-exposed children, more than twice the number that would be saved with replacement feeding.⁷

Co-trimoxazole prophylaxis for pregnant and breastfeeding women:

Please see section on co-trimoxazole prophylaxis, ahead.

Gender-Sensitive Recommendations-adapted from WHO's 2008 Essential Prevention and Care Interventions for Adults and Adolescents Living with HIV in Resource Constrained Settings

Psychosocial Counselling and Support:

is extremely important for all HIV-positive drug users, and particularly for HIV-positive women IDU and spouses of male IDU in settings where HIV-positive women may face greater stigma and discrimination associated with HIV-status and drug use. Family counselling may be helpful in helping relatives to understand the implications of a female family member who uses drugs and requires life-long HIV treatment, and how to support this person.

Nutrition:

One of the greatest needs of people living with HIV is adequate nutrition. HIV infection is often associated with poor nutrition due to many factors, including increased energy needs, decreased appetite, symptoms of HIV or opportunistic infections that lead to swallowing difficulty and malabsorption, and environmental factors such as lack of resources and inaccessibility of foods. Research has established weight loss and wasting as independent risk factors for HIV progression and mortality. Low body mass index (BMI) is an independent predictor of mortality in people living with HIV. These factors may be particularly pronounced in settings where women may have less access to nutritional resources than men, and where women use drugs and may have less appetite or less access to resources to obtain food.

Energy requirements for adults with HIV who are not pregnant are 10-30 percent higher than for people without HIV, and can be even higher following acute illness due to opportunistic infection or if past food intake has been inadequate.

Health-care providers should measure the person's weight and weight change, height, BMI, and mid-upper arm circumference. They should look for symptoms related to appetite, difficulty swallowing, nausea, diarrhoea, and effects of drug-food interaction and assess the client's diet to ensure that she or he has adequate protein and micronutrients for their energy needs. Clients should also be evaluated for individual and household food security. The most common and cheapest supplementary foods are micronutrient-fortified, blended flour (such as corn-soy blend) that can be prepared as a porridge, but other forms (such as biscuits or pastes) may be used. Daily multi-vitamin supplementation has been recommended and commonly practiced in the United

States and Europe for PLHIV.

Pregnant and lactating women HIV-positive women require additional nutrients. The recommended intake of energy, protein and micronutrients is the same for pregnant and lactating women, whether or not they are HIV-positive. Recommended daily allowances of micronutrients should be consumed by adults with HIV through diversified diets, fortified foods and micronutrient supplements, as needed. Where it is difficult to provide a secure diversified diet, pregnant and lactating women may need multi-micronutrient supplements. **Vitamin A supplementation during pregnancy and lactation should not exceed the recommended daily allowances (RDA) as higher doses during lactation have been associated with increased rates in mother-to-child transmission of HIV.**

Co-trimoxazole prophylaxis:

is among the most cost-effective interventions available for people with HIV, and WHO recommends that it be a top priority among efforts to reduce the risk of opportunistic infections (OI) in PLHIV. Co-trimoxazole-a fixed-dose combination of sulfamethoxazole and trimethoprim, is a broad-spectrum antimicrobial agent. It has activity against *Plasmodium falciparum*, *Toxoplasma gondii*, *Pneumocystis jirovecii*, and many bacterial pathogens. The drug is widely available in both syrup and solid formulations at low cost, including in resource-limited settings. Evidence strongly supports the effectiveness of co-trimoxazole prophylaxis in reducing morbidity and mortality among people with CD4 counts less than 200 cells/mm³ and advanced HIV disease (WHO clinical stage 3 or 4, including tuberculosis). In some studies, co-trimoxazole prophylaxis also reduced morbidity and mortality in people with higher CD4 counts and less advanced HIV disease. A cohort study in Uganda also demonstrated reductions in mortality associated with co-trimoxazole prophylaxis for patients with CD4 cell counts <200 cells/mm³. A randomized controlled trial in Abidjan showed a significant reduction in severe adverse events (death or hospital admission) among people with symptomatic HIV disease, irrespective of CD4 count. Mortality reductions have not reached statistical significance for those with CD4 cell counts >350 cells/mm³.

A study of the prevention of **mother-to-child transmission of HIV** in Zambia analysed the birth outcomes from 1075 pregnant women living with HIV before and after co-trimoxazole was introduced as the standard of care for pregnant women with HIV, and found significant improvements in outcomes. If a woman requires co-trimoxazole prophylaxis during pregnancy, it

³WHO. 2010. Antiretroviral Drugs for Treating Pregnant Women and Preventing HIV Infection in Infants: Recommendations for a Public Health Approach.

⁴WHO. 2010. Antiretroviral Drugs for Treating Pregnant Women and Preventing HIV Infection in Infants: Recommendations for a Public Health Approach.

⁵Mbori-Ngacha, D., et al. 2001. Morbidity and Mortality in Breastfed and Formula-fed Infants of HIV-1-infected Women: A randomized clinical trial, JAMA, vol. 286, no. 19, 21 November, pp. 2413-2420.

⁶Kuhn, Louise, et al. 2007. High Uptake of Exclusive Breastfeeding and Reduced Early Post-natal HIV Transmission, PLoS ONE, vol. 2, no. 12, December, pp. 1365-1371.

⁷David, Sandra, et al. 2008. Promotion of WHO Feeding Recommendations: A model evaluating the effects on HIV-free survival in African Children, Journal of Human Lactation, vol. 24, no. 2, May, pp. 140-149; Coovadia, Hoosen M., et al. 2007. Mother-to-Child Transmission of HIV-1 Infection during Exclusive Breastfeeding in the First 6 Months of Life: An intervention cohort study, The Lancet, vol. 369, no. 9567, 31 March, pp. 1107-1116.

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should be started regardless of the stage of pregnancy. For pregnant woman with HIV who are receiving co-trimoxazole prophylaxis and who live in a malarial zone, additional sulfadoxine-pyrimethamine-based intermittent preventive therapy for malaria is not recommended. **HIV-infected breastfeeding women** should continue to receive co-trimoxazole prophylaxis.

General recommendations that may be useful in the South Asian context-adapted from WHO's 2008 Essential Prevention and Care Interventions for Adults and Adolescents Living with HIV in Resource Constrained Settings

Tuberculosis:

In many parts of the world, tuberculosis (TB) is the most common serious opportunistic infection in people with HIV and the most common cause of death. HIV increases the risk of TB-disease ten-fold, and although cure rates in those with and without HIV are similar, the risk of death, recurrence and specifically the risk of re-infection is increased in people living with PLHIV.

Prevalence of unrecognized TB is high in many health care settings where people with HIV may congregate such as antenatal clinics, voluntary testing-and-counselling centres, hospitals and HIV-treatment clinics. People who use drugs may tend to congregate in places to use drugs together and they are at risk of being incarcerated, and these are also situations in which TB infection spreads.

Efforts to recognize and treat TB are the primary means of controlling TB.

Preventing fungal infections:

The yeast-like fungus *Cryptococcus neoformans* is a significant cause of illness and death in people with HIV. Cryptococcal disease, especially meningitis, is common and, though treatable, is a frequent cause of death in resource-limited countries often due to the limited availability of appropriate diagnostic tests and treatment. Where antiretroviral therapy is not available, PLHIV who have been treated for Cryptococcal disease should receive lifelong suppressive therapy to prevent recurrences.

In areas where cryptococcal disease is common, **antifungal prophylaxis with azoles should be considered for people with advanced HIV infection (WHO clinical stage 4 or CD4 < 100 cells/mm³), whether or not they are on antiretroviral therapy.** Several randomized clinical trials have demonstrated that primary prophylaxis with fluconazole (200 mg per day to 400 mg per week), or itraconazole (200 mg daily) reduces the incidence of cryptococcal disease in adults with advanced or severe HIV disease, particularly those with CD4 counts < 50-100 cells/mm³. In Thailand, due to the high prevalence of cryptococcal disease and evidence of survival benefit, national guidelines recommend fluconazole (400 mg

weekly) for patients with CD4 counts of less than 100 cells/mm³. This was found to be cost saving in Thailand.

Active cryptococcal and other invasive fungal infection should be excluded before providing prophylaxis for people living with HIV, since the dosages of azoles used for prophylaxis might be insufficient for treating active disease.

Primary azole prophylaxis should be discontinued in people with HIV on antiretroviral therapy and with CD4 counts > 200 cells/mm³. In settings where CD4-testing is not available, discontinuation may be considered for people with HIV who have completed one year of ART, who are asymptomatic and have good adherence to treatment.

Primary azole prophylaxis should not be given to pregnant women with HIV.

Water, sanitation and hygiene:

Diarrhoea is a major cause of morbidity and mortality in people with HIV. In developing countries, lack of infrastructure to guarantee access to safe water and safe management of human waste expose people with HIV to increased risk of transmission of waterborne and other enteric pathogens. Simple, accessible and affordable interventions to guarantee the quality of household-based water, hygiene, and sanitation have been effective in reducing the risk of enteric diseases in controlled trials. Recent meta-analyses demonstrated a 44 percent reduction in diarrhoea with interventions focused on hand washing with soap. Although studies have not specifically addressed the efficacy of hand washing in diarrhoea prevention in PLHIV, people who are HIV-positive have a two-fold higher risk of diarrhoeal diseases than people without HIV. Health and hygiene education, and promoting hand washing with soap in the household, at critical times-after defecation and handling human or animal faeces, and before preparing food and eating, for example-along with the provision of soap are recommended for people with HIV and their households. Proper disposal of faeces in a toilet, latrine, or at a minimum, buried in the ground is recommended for people with HIV and their households.

Analysis has also shown reductions of 39 percent reduction in diarrhoea with point-of use household water treatment. Household-based water treatment methods that are effective in reducing diarrhoea and the storage of water in containers that minimise manual contact are recommended for people with HIV and their households.

WHO Recommendations that Are Addressed in Other Information Briefs-from WHO's 2008 Essential Prevention and Care Interventions for Adults and Adolescents Living with HIV in Resource Constrained Settings

Disclosure, partner notification and testing and counselling:

Please see Information Brief on Supporting safe and beneficial disclosure of HIV status for married IDU in low-resource settings-focus South Asia

Sexually transmitted and other reproductive tract infections:

Please see Information Brief on Prevention of Sexual Transmission of HIV for Women who Use Drugs and the Spouses of Male Drug-Users: Negotiating Condom Use in the Context of Drug Use in South Asia

Family planning:

Please see Information Brief on Supporting Access to HIV Services for the Female Spouses of Male IDU

Needle-syringe programmes and opioid substitution therapy:

Please see Information Briefs on Preventing Parenteral Transmission (sharing of contaminated injecting equipment) of HIV for Women Who Inject Drugs and Providing Services to Pregnant Drug Users in Low-Resource Settings

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WHO Recommendations that may be difficult or be of lower applicability in the South Asian Context-from WHO's 2008 Essential Prevention and Care Interventions for Adults and Adolescents Living with HIV in Resource Constrained Settings

Preventing malaria

Selected vaccine preventable diseases (hepatitis-B, pneumococcal, influenza vaccine, and yellow fever vaccines);

POLICY AND PROGRAMMING IMPLICATIONS

Select strategic advocacy points:

Access to ART for PMTCT, including paediatric ART, is a critical gender-specific need for FIDU and spouses and should be an advocacy focus. Similarly, access to evidence based drug treatment for pregnant HIV-positive women and for women postpartum is a critical gender-specific service. Where OST is available, efforts should be made to prioritise pregnant women and mothers.

Provide Co-trimoxazole prophylaxis to pregnant and breastfeeding HIV-positive women

Provide nutritional support to HIV-positive female drug users and spouses of drug users as needed, especially during pregnancy and breastfeeding.

Provide, as much as possible, alternate feeding (baby formula) to HIV-positive women with newborn babies

Provide family counselling, with client's permission, to families of women drug users and families of male drug users

Provide antifungal prophylaxis as needed

Provide hygiene, sanitation and clean water support, including education and soap to families of PLHIV

Support beneficial partner disclosure of HIV status

Provide safe sex education and condoms

Explore opportunities to support access for PLHIV to diagnosis and treatment of TB