

Fact Sheet 10 Women and HIV and mother to child transmission

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• **Introduction:**

Over 12.2 million women world wide have been infected with HIV since the start of the epidemic and women account for 42% of the 30.6 million adults now living with HIV. Because of the particular vulnerability of women, the risk of women contracting HIV is rising worldwide. Although these figures are increasing in industrialized and developing countries, in sub Saharan Africa there are already 6 women with HIV for every 5 men, with close to four-fifths of all

infected women being African.

In African countries, where young people (age 15-24) account for 60% of all new infections, HIV infection in young women outnumbers infection in young men by 2 to 1. More than four-fifths of all infected women get the virus from their male sex partner, often by their one partner (their husband). The remainder become infected from blood transfusions or from injecting drugs with a contaminated needle. Women with sexually transmitted diseases (STD) such as gonorrhoea are often unaware of the disease because the infection is silent. Conclusive proof now exists that STDs facilitate the spread of HIV. An untreated STD in either partner increases the risk of HIV transmission during unprotected intercourse (without a condom) ten-fold. AIDS prevention campaigns often fail women by assuming that they are at low risk, or by urging prevention methods that women have little or no power to enforce, such as condom use, abstinence and mutual faithfulness within a relationship (Fact Sheet 12).

Women continue to make strides towards equality with men. However, for millions of women, this is far from reality. These women are the most vulnerable to HIV infection. In many parts of the world, nurses and midwives suffer the same vulnerabilities as women in the general population.



In a Tanzanian hospital, a woman cares for her husband who has AIDS. The pandemic imposes a double burden on women. Already more vulnerable to HIV infection because of their subordinate status, they are also affected by the AIDS epidemic in their role as providers of care in the family and the community. (Credit: WHO, Gubb)

• The vulnerability of women

Biological vulnerability

Research shows that the risk of becoming infected with HIV during unprotected vaginal intercourse is as much as 2-4 times higher for women than men. Women are also more vulnerable to other STDs (multiplying the risk of contracting HIV tenfold). One major reason for this is that women have a larger surface area of mucosa (the thin lining of the vagina and cervix) exposed to their partner's secretions during sexual intercourse. Additionally, semen infected with HIV typically contains a higher concentration of virus than a woman's sexual secretions. Younger women are even more at risk because their immature cervix and scant vaginal secretions put up less of a barrier to HIV., and they are prone to vaginal mucosa lacerations. There is also evidence that women again become more vulnerable to HIV infection after menopause. In addition, tearing and bleeding during intercourse, whether from rough sex, rape, or prior genital mutilation (female circumcision), multiply the risk of HIV infection, as does anal intercourse, which is sometimes preferred to vaginal intercourse because it is thought to preserve virginity and avoid the risk of pregnancy. Anal intercourse often tears the delicate anal tissues and provides easy access to the virus.

Social and economic vulnerability

Prevention messages urging abstinence, fidelity (faithfulness to one partner), condom use, needle exchange programs (for intravenous drug users) and encouraging and enabling people to get prompt STD treatments have all helped avoid HIV (Fact Sheet 12). However, for millions of women, their ability to make these decisions and to act upon them is crippled by their socio-economic circumstances. The majority of women in the world lack economic resources, and are fearful of abandonment or of violence from their male partner. Thus they have little or no control over how and when they have sex, and hence have little or no control over their risk of becoming infected with HIV.

This vulnerability is compounded by:

Lack of education

Millions of young girls are brought up with little knowledge of their reproductive system or how HIV and STDs are transmitted and prevented.

REMEMBER! The Fact Sheets can be adapted for primary and secondary schools.

Sexual customs and norms

Typically, women are expected to leave the initiative and decision-making in sex to males whose needs and demands are expected to dominate. There is often a tolerance of predatory, violent sex, as well as a double standard where women are blamed or thrown out for infidelity (real or suspected), while men are expected or allowed to have multiple partners.

Lack of economic opportunities

There is a failure to respect women's right to equal access to education and employment opportunities, thus reinforcing their dependence upon men. Their reliance may be on a "sugar daddy," that is, a partner who may give gifts to pay for sex, a husband or stable partner, a few steady male partners who have fathered their children, or, for prostitutes, a succession of clients. In fact, in many cultures, sex is seen as a "currency."

Lack of control in relationships

Even when a woman suspects her partner has HIV, she often cannot risk losing his support by refusing sex, or insisting on condom use. She would be breaking the "conspiracy of silence" that surrounds extramarital sex by either partner. Although some men agree to use condoms, many react with anger, violence and abandonment.

Condom use and pregnancy

Couples wanting children need to know their HIV status. However, couples are often unwilling to openly discuss issues of sexuality, and voluntary HIV testing and counselling services are not always available (Fact Sheet 7).

STDs and HIV

Because STDs carry an especially heavy social stigma for women, they tend to avoid STD clinics and treatment. In addition, health care workers are often unsympathetic, judgemental, and unprepared to diagnose and treat STDs (Fact Sheet 6). Women are often socialized to accept ill health and women's troubles as their lot in life.

HIV and prostitution

Prostitutes have little power to protect themselves from HIV. In some countries, girls are forced into sex work, even before puberty. Such young girls are generally unaware of the AIDS risk and they are unable to take protective action, or run away. Women also turn to prostitution as an alternative to poverty, or because their lives have been disrupted by war, divorce or widowhood where, because of inequitable laws and customs, they have lost their property and their husband's earnings. Many sex workers risk violence or loss of income if they request the use of condoms. However, in some brothels, sex workers have banded together to insist on condom use.

• Fostering empowerment

Women's vulnerability comes from lack of power and control over their risk of HIV. One important remedy is to create opportunities to foster empowerment:

REMEMBER! The Fact Sheets can be adapted for teaching women's groups.

Combat ignorance

Improve education for women, including education about their bodies, STDs and AIDS, and the skills to say no to unwanted or unsafe sex. See fact sheet on prevention (Fact Sheet 12) and education (Fact Sheet 9).

Provide women-friendly services

Ensure that girls and women have access to appropriate health and HIV/STD prevention and care services at places and times that are convenient and acceptable to them. Expand voluntary testing and counselling (Fact Sheet 7) and teach about condom use and make condoms easily available without embarrassment.

Develop female-controlled prevention methods

Barrier methods that prevent HIV infection without the knowledge and cooperation of the male partner are urgently needed. Such methods might include the female condom and vaginal microbicides (a virus-killing cream or foam) that women can insert vaginally before intercourse. UNAIDS is facilitating the development of and access to these and other methods.

Build safer norms

Support women's groups and community organizations in questioning behavioural traditions such as child abuse, rape, sexual domination, and mutilation. Educate boys and men (Fact Sheet 9) to respect girls and women, and to engage in responsible sexual behaviour (Fact Sheet 12).

Reinforce women's economic independence

Encourage and strengthen existing training opportunities for women, credit programmes, saving schemes, and women's cooperatives, and link these to AIDS prevention activities.

Reduce women's vulnerability through policy change

At community and national levels (as well as through international initiatives), the rights and freedoms of women must be respected and protected. This will only be achieved when women have a greater political voice.

• Mother to child transmission of HIV

Mother to child transmission (MTCT) of HIV is the major means of HIV infection in children.

An estimated 600,000 children are infected in this way each year, accounting for 90% of HIV infection in children (Fact Sheets 2 & 5). Without preventive treatment, up to 40% of children born to HIV-positive women will be infected. Of those who are infected through MTCT, it is believed that about 2/3 are infected during pregnancy and around the time of delivery, and about 1/3 are infected through breast feeding. Most of the transmission in pregnancy occurs at the time of labour and delivery (more than 60%). Using the most widely available tests (see Fact Sheet 1), it is not possible to tell whether a newborn infant has already been infected with HIV. The child of an infected mother may have maternal antibodies in his/her blood until 18 months of age (Fact Sheet 5). Therefore, testing cannot be used to help make decisions about whether or not to breast feed.

• Antenatal care

Voluntary HIV testing and counselling (VCT) (Fact Sheet 7) should be available in antenatal clinics. Many HIV-positive women will be diagnosed for the first time during pregnancy, therefore, this service is critical to the ongoing treatment, care and support for the mother, her family and new born child. The benefits of VCT in antenatal care include:

Knowledge of a negative result can reinforce safer sex practices.

Women diagnosed with HIV can encourage their partners to be counselled and tested.

Knowing their HIV status enables women and their partners to make more informed choices related to breast feeding and future pregnancies

A woman (and her family) who knows she is HIV infected can be encouraged to enter into the continuum of care in order to seek early medical treatment and care of opportunistic infections for herself and her child (Fact Sheet 4 & 5), as well as be linked to other health and social services and resources (see Fact Sheet 3).

Widespread access to VCT can help normalize the perception of HIV in the community.

Knowledge of their HIV-positive status can enable women to access peer support.

Access to VCT is important in antenatal clinics because there are ways to prevent transmission, such as:

- **termination of pregnancy,**
- **antiretroviral therapy (ARV),**
- **modifying midwifery and obstetrical practices, and**
- **modifying infant feeding.**

However, prevention of MTCT is dependent upon the identification of the HIV-positive woman.

Termination of pregnancy

Where termination of pregnancy is both legal and acceptable, the HIV-positive woman can be offered this option. However, many women learn of their HIV status during pregnancy, and will not be diagnosed in time to be offered termination. If termination is an option, the woman, or preferably the couple, should be provided with the information to make an informed decision without undue influence from health care workers and counsellors.

Antiretroviral therapy (ARV)

A recent study showed that the administration of zidovudine (AZT) during pregnancy, labour, delivery and to the new born reduced the risk of MTCT by 67%. This regimen has become standard practice for HIV-positive women in most industrialized countries and many women are receiving a combination of ARV treatments. This long-course regimen is often not available for women in developing countries because of cost and lack of adequate infrastructure. However, there is a concerted effort to provide short term AZT to all HIV-positive pregnant women. Short course AZT is taken orally from 36 weeks of pregnancy through labour and delivery. This treatment does not prolong the life of the mother, but has been found to be effective in reducing transmission of HIV to the infant.

Nevirapine is a much cheaper antiviral drug than AZT, costing about \$4 per mother and baby treated. Recent studies have shown it to be effective in reducing MTCT if a single dose is given to mothers just prior to delivery and to newborns immediately afterwards. In terms of both cost and infrastructure requirements Nevirapine offers a more optimistic and realistic alternative for ARV for developing countries. Many countries are in the process of developing guidelines and an effective infrastructure to support ARV. Because ARV treatments vary considerably throughout the world and are still in the experimental stages, nurses/midwives are encouraged to learn more about the ARV treatments and protocols available within their community and country.

• Labour and delivery

About 60% of HIV transmission from mother to child is thought to occur around the time of labour and delivery. Several factors have been associated with an increased risk of MTCT at the time of labour and delivery. These include:

The mode of delivery

Vaginal deliveries are more likely to increase the risk of MTCT while elective Caesarian sections have been shown to reduce MTCT. However, the potential benefits have to be balanced against the risk to the mother. Higher rates of post operative death in HIV positive women have been reported, especially from infective complications. In addition, elective Caesarian sections are not available to the vast majority of women worldwide.

Prolonged rupture of membranes

Rupture of membranes for longer than 4 hours has been associated with an increased risk of transmission. Artificial rupture of membranes is practiced routinely in many countries. Membranes should not be ruptured artificially unless there is fetal distress, or abnormal progress in labour.

Episiotomy

Routine episiotomy is not recommended. This procedure should only be used where there are specific obstetric indications. Forceps deliveries and vacuum extractions do not necessarily require an episiotomy.

Intrapartum Haemorrhage

This has been associated with increased MTCT transmission in some studies. Should a blood transfusion be required, there is the added risk of receiving HIV contaminated blood (Fact Sheet 1).

Invasive fetal monitoring

Penetrating scalp electrodes may be associated with increased risk of transmission.

Multiple births

The first baby delivered of a multiple pregnancy has a higher rate of HIV infection than the subsequent births.

Other areas for consideration during labour and delivery include:

Universal Precautions

Fact Sheet 11 provides a detailed overview of Universal Precautions that should be followed by nurses/midwives in all aspects of care regardless of the HIV status of the woman or the nurse/midwife at the time of labour delivery. Frequent hand washing and glove use (whenever possible) are critical practices in precaution.

Vaginal cleansing

The use of chlorhexidine 0.25% to cleanse the birth canal after each vaginal examination and during labour and delivery has been shown to be effective in reducing MTCT transmission.

Education of traditional birth attendants

Traditional birth attendants (TBAs) play an important role in the labour and delivery of many women worldwide. Educating the TBA about HIV prevention (Fact Sheet 12) and care and the use of universal precautions (Fact Sheet 11) is often the responsibility of nurses/midwives. This education should include the use of ARV and STD treatments. They should also be encouraged to avoid traditional practices that may increase the risk of HIV transmission such as the use of vaginal herbal potions and scarification.

• Infant feeding

Approximately one third of infants who are infected through MTCT are infected through breast milk. Where alternatives such as replacement feeding exist, HIV positive mothers should avoid or limit breastfeeding their infants. For HIV-negative mothers, breastfeeding still remains the best option.

Where resources are limited, the option of using replacement feeding may be unavailable. Many communities do not have a safe water supply, have limited resources to provide sterile feeding equipment, and have no methods of refrigeration. Replacement feeding is also expensive and many families cannot afford this added expense. In addition, where breast feeding is the cultural norm, seeing a mother artificially feed her infant can lead people to suspect she has AIDS. One must also consider additional problems associated with gastro-intestinal infections, malnutrition, stigma and discrimination (Fact Sheet 6). Decisions about whether to breast feed or to provide replacement feeding must be made in light of the above considerations. If replacement feeding is an option, breast milk substitutes include: commercial infant formula, or home-prepared formulas which are made from animal milk, dried milk or evaporated milk with additional ingredients. Once the decision has been made about whether or not to breast feed, then other considerations must be taken into account:

For the non breastfed infant:

- Ensure access to an adequate supply of replacement milk substitutes, with adequate funds to pay for them, adequate utensils for feeding, and fuel for sterilizing equipment and heating the milk substitute.
- Educate the mother about safe preparation of replacement feeds, correct

cleaning of utensils, and methods of sterilization.

- Monitor the growth and development of the child to ensure adequate infant feeding and nutrition.
- Monitor the safe preparation of replacement feeds.
- Appropriate care of the mother's breasts to prevent engorgement.

For the breastfed infant:

- Teach the mother to inspect her child's mouth for thrush and breakages in the mucous membrane (an added risk for HIV transmission (see Fact Sheet 5).
- Teach the mother about the increased risk of HIV transmission should she suffer from mastitis, breast abscesses, and bleeding or cracked nipples.
- Discuss replacement feeding after three months (to reduce some risk of transmission).
- Stop breastfeeding after 6 months when the baby can be safely weaned.
- Use expressed milk that is boiled and then cooled. (Boiling kills the virus.)
- Use the breastmilk of other women who are HIV-negative (wet-nursing).

• Post-natal care of the HIV-infected mother and her infant

In many instances, the basic post natal care of the HIV-infected woman and her infant will be no different from routine postnatal care. However, the mother (and possibly partner/family) might need additional counselling and support (see Fact Sheet 7). Such counselling might include decisions on infant feeding (although this decision should have been made in the antenatal period), and advice on birth control. It is important that the woman and her family are involved in a continuum of care (Fact Sheet 3), so that comprehensive linking of resources and services can be provided where and when they are most necessary and effective. HIV-infected women are more prone to medical complications such as urinary tract infections, chest infections, episiotomy sepsis, and uterine and Caesarian section wound sepsis. Nurses/midwives should be alert for signs of infection such as fever, rapid pulse, episiotomy or lower abdominal pain, and foul smelling lochia (vaginal discharge). HIV infected women should be taught about perineal care and safe handling of blood and lochia.

Postnatal counselling:

Specific counselling for the HIV-infected mother might include:

Don't forget that the women's family -- close and extended -- and her community must be

· Contraceptive advice. The only contraceptive methods that will prevent the spread of HIV are barrier methods such as the male and female condom (Fact Sheet 12).

educated so that they support the women in their choices.

- Support for her infant feeding choice and further education as appropriate.
- Information about the possibility of infection in the child and details of how and where the child can be checked and treated (Fact Sheet 5).
- Discussion about disclosure of her HIV status to her partner, family, and trusted friends.
- Exploration of feelings, particularly guilt, grief, fear, and denial. It is also important to address the possibility of her having infected her infant (Fact Sheet 7).
- Encouragement to access peer support.
- Discussion on how to cope with possible stigmatization, particularly if not breast feeding (Fact Sheet 6).

Questions for reflection and discussion

Why do you think women are particularly vulnerable to HIV?

How can nurses/midwives help reduce vulnerability in women?

Have you experienced feeling vulnerable in your work or personal life? If so, what effect did this experience have on your ability to control the outcome of events?

What are the important considerations in caring for HIV-positive women in the antenatal period; during labour and delivery and during the post partum period?

What elements would you consider as you counsel an HIV-positive woman about whether to breast feed or not?

References

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