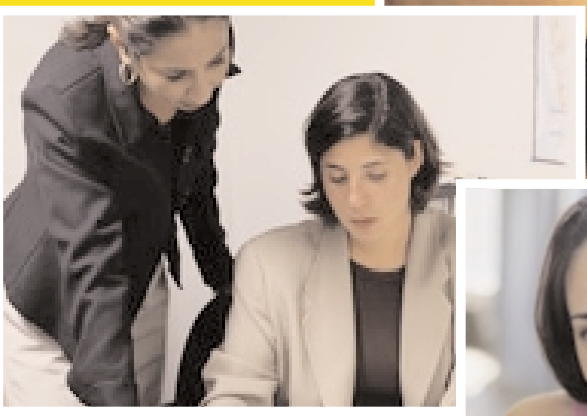
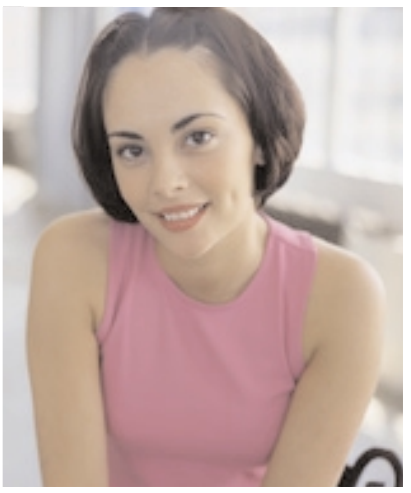
hiv aids building blocks





Women and HIV/AIDS:

Prevention and Care Strategies

Pan American Health Organization
Pan American Sanitary Bureau
Regional Office of the
World Health Organization

WOMEN & HIV/AIDS

Prevention and Care Strategies

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Acknowledgements

The text of this document was prepared by Dionne Patz in collaboration with Dr. Rafael Mazin and Dr. Fernando Zacarias, Regional Program on AIDS/STI, Division of Disease Prevention and Control, Pan American Health Organization (PAHO).

The author would like to thank Ms. Martina de Schutter, Division of Health and Human Development, PAHO, and Ms. Carol Collado, Division of Health Promotion and Protection, PAHO, for their valuable input. In addition, Ms. Maria-Eugenia Gutierrez, Regional Program on AIDS/STI, for her assistance in preparing the document. Finally, to the Female Health Company and the Program for Appropriate Technology in Health (PATH) for permission to use the female and male condom illustrations, respectively.

FOREWORD

The Women and HIV/AIDS: Prevention and Care Strategies manual is part of the Building Block series for HIV/AIDS comprehensive care (refer to *Building Blocks: Comprehensive Care Guidelines for Persons Living with HIV/AIDS in the Americas, Summary Report, PAHO/WHO, 2000*). The Building Block Framework evolved from a series of consultations held in response to numerous requests from health authorities in the Region of the Americas on how they can ensure improved care and, specifically, wider access to antiretroviral therapies for persons living with HIV/AIDS.

The Women and HIV/AIDS: Prevention and Care Strategies document may be used as a reference manual for the following HIV/AIDS comprehensive care interventions:

- Clinical diagnosis of HIV in women
- Mother to child transmission (MTCT) interventions
- Voluntary and confidential counseling and testing
- Sexual health, including safe sex
- Family planning
- Emotional support and counseling
- Personal and environmental hygiene
- Universal precautions
- Food safety

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WOMEN & HIV/AIDS: Prevention & Care Strategies

1.0 PURPOSE

The purpose of the manual is to provide information that can be used to develop training programs and workshops that enable health care workers to respond competently and compassionately to HIV affected women, their partners and their families.

2.0 INTRODUCTION

The prevention and care of women with HIV/AIDS require special attention. Globally, the number of new infections among women is increasing faster than in men as a result of several interrelated factors (biological, socioeconomic and cultural). Care of women with HIV/AIDS has certain complexities related to biological aspects (menstruation, pregnancy, labor); specific clinical manifestations of HIV disease (vaginal yeast infections, chronic pelvic inflammatory disease, cervical cancer); social constraints and limitations (land tenure, legal rights); economic circumstances (loss of income, loss of health insurance, abandonment by partner); cultural factors (sexual roles and responsibilities, communication); and, quality of health care for women (lack of access to health services and medications, including antiretroviral therapy).

Several interrelated factors act to increase the complexity of providing appropriate care to women: biological aspects, clinical manifestations of the disease, social constraints and limitations, cultural barriers and quality and availability of health services.

3.0 WOMEN AND RISK OF HIV/AIDS

Most women in developing regions who have been infected with HIV have only ever had sexual intercourse with their spouse or regular partner.

Globally, the primary HIV risk behavior for women is engaging in sexual activity. Over 90% of women infected with HIV/AIDS in developing regions have contracted the virus as a result of heterosexual transmission. In most cases, these women had sexual intercourse only with their husband or regular partner. Therefore, the vulnerability of women to contracting HIV infection is often a direct result of their partner's behavior (bisexuality, using injectable drugs, having multiple sex partners) rather than their own. However, even when the partner is responsible for bringing HIV into the family, a woman may find herself being blamed for the transmission of the virus.

Education and prevention strategies that emphasize the importance of mutual monogamy, fidelity or sexual exclusivity in relationships are not practical or effective for women who cannot ensure that their partner is faithful. Women may not be aware they are at risk of contracting HIV because they practice monogamy. Therefore, they do not recognize they may be in jeopardy and, consequently, do not take necessary precautions. Even if they do recognize they are at risk, they often lack the power and support to take preventive actions to protect themselves.

Vulnerability of Women

There are several reasons why women are more vulnerable than men to contracting HIV infection. Health care workers (HCWs) need to be aware of these factors and be able to create an understanding and empathetic environment in order to explore these issues with their clients.

- **Sexual transmission of the virus is several times more efficient from men to women than from women to men.** Younger women are even more vulnerable as the tissue lining their genital tract is not fully developed, thus their thinner mucosa is less protective than that of older women. After menopause, the tissue lining again becomes thinner thus increasing the risk of HIV transmission in post-menopausal women

- **Women suffer from more asymptomatic sexually transmitted infections (chlamydial infections, gonorrhoeae) than men do.** These infections often remain undiagnosed which increases their risk of contracting HIV

- **Young women and girls are culturally vulnerable to contracting HIV infection** as it is common for men to select significantly younger women as partners and wives

- **Due to their economic, social and emotional dependence on men, it is difficult for women to refuse unsafe sex or negotiate safer sex.** Thus, insisting that all women demand abstinence or refuse non-protected sex is not practical

- **Double standards that encourage men to have many sexual partners are common**, with the result that more women (even those that are monogamous) are placed at risk of infection

- **Cultural expectations of female submissiveness and male dominance in sexual relations** limit women's ability to exert control over their sexual and reproductive health

- **Poor communication between men and women concerning sexual and reproductive health matters** which results in the inability to foster shared responsibility in sexual and reproductive health decision-making

- **Lack of an affordable, widely available, woman-controlled method of prevention.** For all women, using male condoms or practicing nonpenetrative sex as a contraceptive method requires male cooperation, which implicitly means male control. Female condoms may give women more control over the protection of their sexual and reproductive health but also require male participation. Female condoms are not yet widely available and affordable in all developing areas

The unequal social status of women places them at a disadvantage not only in negotiating sexual encounters, but also in seeking and utilizing health and educational services. Women's lack of equal access to health, education, training, independent income, property and legal rights affects their access to knowledge about HIV and AIDS and, subsequently, their ability to protect themselves from infection.

In order to protect their sexual and reproductive health and prevent infection, women need to be provided with adequate information and appropriate tools by HCWs. These must enable women to recognize high risk sexual situations and activities and to develop a plan of action and the necessary skills to avoid these circumstances. This plan may include learning ways to negotiate safer sexual prac-

The recognition of a woman's right to knowledge is critical to ensure she makes informed choices and takes appropriate actions regarding HIV prevention and protection.

tices with their partners (non-penetrative sex, condoms, abstinence, etc.), how to properly use condoms (male and female condoms) and how to seek external support if needed (self-support groups, professional services, counseling).

To ensure women have the most comprehensive and current information available, HCWs need to promote an environment of open and direct communication with their clients and provide them with frank dialogue, group discussions and up-to-date information and materials (e.g. pamphlets, referral lists, videos, etc.).

Educating women about human sexuality and providing them with access to information on HIV prevention is the first step to fostering successful sexual negotiations. Programs need to provide women and girls with basic education about their bodies, about male bodies and development and specific information about HIV and other sexually transmitted infections (STIs).

Women also need to be provided with opportunities for group interaction, such as group counseling or peer group education sessions, so they can share personal experiences with other women and model new behaviors and skills in a non-threatening environment.

Participation of Men in Sexual and Reproductive Health Strategies

Safer sex requires male understanding, participation and cooperation.

Effective communication between women and their partners is essential for the adoption of safer sex practices. The social inequality between the genders is often reflected in sexual interactions where men are more likely than women to initiate and control sexual relations and reproductive decision-making.

Adopting and maintaining long-term safer sex practices require the participation and cooperation of a woman's partner or spouse. Therefore, it is critical to educate and involve men and boys in human sexuality and reproductive health issues and to provide services and interventions that address their specific health needs as well as those of their partners.

Studies have shown that a supportive and informed male partner greatly improves the use of safe and effective family planning methods. Ensuring effective prevention against STIs, including HIV, will require the promotion and development of an environment of mutual respect and willingness of both men and women to accept the consequences of sexual behavior.

The formation of men's groups and programs should be supported in an effort to improve communication skills and shared decision-making between men and women. In particular, men need to become more aware of their role and responsibility in reproductive decisions and in reducing STIs.

To achieve this goal, it is necessary to provide information and education on the importance of fostering awareness and concern for their partner's health and well-being, responsible child-rearing and parenthood, eliminating harmful sexual activities (including violence and coercion), and their role and responsibility in reducing unplanned pregnancy and the **transmission of sexually transmitted infections including HIV.**

Health care workers should encourage women to ask their male partner to accompany them to health services to discuss sexual health and reproductive health issues.

4.0 A REVIEW OF HIV INFECTION AND HIV DISEASE

The human immunodeficiency virus (HIV) causes AIDS, which means acquired immunodeficiency syndrome. When HIV enters the body, the virus selectively infects and destroys an integral part of the body's immune system --- the white blood cells (in particular the CD4+ cells) --- where it grows and multiplies. The function of these cells is to protect the body from germs such as viruses, bacteria, parasites and fungi. Over time the virus slowly kills these cells and as more and more of these cells die, the body's ability to fight infection weakens.

A person with HIV infection may look like she is healthy for many years. People with HIV infection are said to have HIV disease, or AIDS, when they are sick with serious illnesses and opportunistic diseases and infections such as tuberculosis, which can occur with HIV.

HIV Disease

In the early stages of HIV infection (within weeks), a person may develop a flu-like illness with fever and skin rashes. The person may get well after a few days but during these early stages of infection she can pass HIV on to another person.

AIDS is caused by the human immunodeficiency virus (HIV). It infects the white blood cells by inhibiting their ability to protect the body from the invasion of germs, such as viruses, bacteria, parasites and fungi.

It is important to remember that a person with HIV infection can pass on the virus to another person even if she looks healthy.

It is not unusual for the period of time between being infected with HIV and developing any of the illnesses that define AIDS to be eight or nine years --- sometimes it is as long as fifteen years. The length of time between contracting HIV infection and developing AIDS varies widely in different people and can depend on how well a person takes care of her physical and mental health (proper rest, appropriate nutrition, good personal and environmental hygiene, management of stress, regular exercise, appropriate medications).

Initial symptoms of HIV infection include low-grade fever, rashes, yeast infections of the mouth (oral thrush) or vagina, diarrhea, nausea and weight loss. People with HIV who develop AIDS will experience episodes of opportunistic diseases and infections, such as tuberculosis, pneumocystis, pneumonia, persistent diarrhea, cancers and infections of the brain that cause headaches, fits and mental confusion (dementia). Eventually, the person cannot fight any more illnesses, her health continues to deteriorate and she dies.

Factors that may extend the length of time between contracting HIV and developing AIDS include getting adequate rest, eating properly, practicing good hygiene, managing stress, exercising regularly and taking appropriate medications.

5.0 HOW IS HIV TRANSMITTED?

Most of the HIV cases worldwide are transmitted sexually. Other routes of transmission include perinatal infection (during pregnancy, childbirth or breastfeeding) or contact with infected blood (transfusion of contaminated blood and blood products, reuse of contaminated syringes by injecting drug users, reuse of unsterilized needles and other instruments in medical settings and contact with open sores or wounds).

Body fluids known to be infectious include blood, semen, vaginal secretions and breast milk.

The following four factors have been shown to greatly increase a woman's probability of acquiring HIV infection:

- **Having sex when she (or her partner) has other STIs.** Untreated STIs increase the risk of HIV infection during sexual intercourse. People who currently have STIs are 2 to 9 times more likely to be infected with HIV. Untreated ulcerative STIs (herpes, syphilis, chancroid) greatly increase the risk of HIV transmission with each sexual contact: the lesions caused by these infections provide a ready gateway for the transmission of HIV, whether the lesions are on the HIV-infected or the uninfected partner. Primary infection with chlamydia and Neisseria gonorrhoeae in women are often asymptomatic and remain undiagnosed which increases the risk of transmission of HIV

- **Engaging in unprotected sexual intercourse.** Using latex condoms and obtaining treatment for STIs lowers the possibility of transmission through sexual contact

- **Having multiple sexual partners (or her partner having multiple sexual partners).** The risk of getting infected with HIV increases with the number of sexual partners and the number of sexual acts. The higher the rate of partner change, the greater the likelihood that the virus will pass from infected to uninfected persons

- **Sharing needles and syringes for injecting drug use.** Infected blood can be transmitted to uninfected persons when "works" and other drug injection equipment are shared between users

Ways that HIV Cannot be Transmitted

At this point, it is important to review the ways that HIV cannot be transmitted. HIV **cannot** be transmitted through casual, everyday contact, such as:

- being in the same room
- sharing drinks, food or eating utensils
- coughing or sneezing
- hugging, (dry) kissing or shaking hands
- swimming or bathing together
- sharing bed linens or towels
- insect bites
- using a telephone
- touching a doorknob
- using toilets
- donating blood, when sterile, new needles and equipment are used each time

6.0 WAYS TO AVOID CONTRACTING HIV THROUGH SEX

Due to the risk of contracting HIV/AIDS, HCWs need to clearly explain to women the sexual practices that are known to carry a risk of HIV transmission and those that do not. The surest way to avoid contracting HIV is to abstain from penetrative sex (penis enters the vagina, rectum or mouth). The next best way is to limit sex to one partner who is known not to be infected (and who has received counseling and testing). HCWs should encourage a woman to use condoms each time she has sex, as using them correctly and consistently will reduce her risk of contracting HIV and other STIs.

How to Explain "Safer Sex" to Clients

Safer sex refers to any sexual practice that **reduces** the risk of transmitting HIV from one person to another. The best protection is obtained by choosing sexual activities that do not allow semen, vaginal secretions (fluid) or blood to enter the vagina, anus or mouth of either partner or not touching the skin of a partner where there is an open cut or sore.
Safer sexual practices include the following:

- abstaining from sexual intercourse
- staying in a monogamous relationship (where both partners are known to be free from STIs, including HIV)
- using a condom for all types of sexual intercourse (vaginal, anal or oral) so that the body secretions that contain HIV do not come in contact with the skin or mucous membranes of either partner
- avoiding sex when either partner has open sores or a STI
- avoiding penetrative sex, for example by replacing sex with masturbation, massage, dry kissing and hugging

HCWs should encourage a woman to discuss safer sex practices with her partner before she engages in sexual intercourse. Within the setting of the health clinic, a HCW can review negotiation strategies with a client which may include role-playing and a discussion of possible obstacles and solutions to practicing safer sex. A review of the risk of various sexual activities is outlined in **Annex 1.**

When and How to Use Condoms

Using a condom correctly and consistently each time during sexual intercourse will reduce the risk of becoming infected with HIV and other STIs. Male and female condoms are an effective protection against HIV and STIs as well as pregnancy as they stop semen, vaginal fluid and blood from passing from one person to another during sex. Incorrect use of condoms reduces their effectiveness, for example, they may break, become loose and leak.

Women have the right to express their sexuality in a manner they find acceptable. A woman has the right to negotiate with her partner and to refuse to participate in sex if he does not respect her rights and decisions.

Condoms should be used each time a woman engages in sex with a partner that she is not 100% certain is HIV negative or with a partner she knows is HIV infected.

Instructions on how to use a Male Condom

1) Carefully open the package so that the condom does not tear. Do not unroll the condom before putting it on.
2) If you are not circumsized, pull your foreskin back. Squeeze the tip of the condom and put it on the end of your hard penis.
3) Continue squeezing the tip while unrolling the condom until it covers your entire penis.
4) Always put the condom on before entering your partner.
5) After ejaculating (coming), hold the rim of the condom and pull your penis out before it gets soft.
6) Slide the condom off your penis without spilling the liquid (semen).
   DO NOT REUSE THE SAME CONDOM
7) Wrap the condom in paper and throw the condom where children cannot find it.

Male Condoms

The male condom is a barrier method that is used by men during sex to prevent the transmission of ejaculate (semen) to a partner (refer to **Diagram 1**). The best type of condoms to use are those made of latex rubber as they are less likely to break or leak than animal-skin condoms or thinner "more sensitive" condoms. Use of polyurethane condoms is associated with a higher frequency of breakage and slippage.

If possible, choose condoms with lubrication (liquid or gel) already on them as this makes them less likely to tear during handling or use. Never use an oilbased lubricant like vaseline with a condom. If a lubricant is needed, use a water-based one (KY Jelly, glycerin).

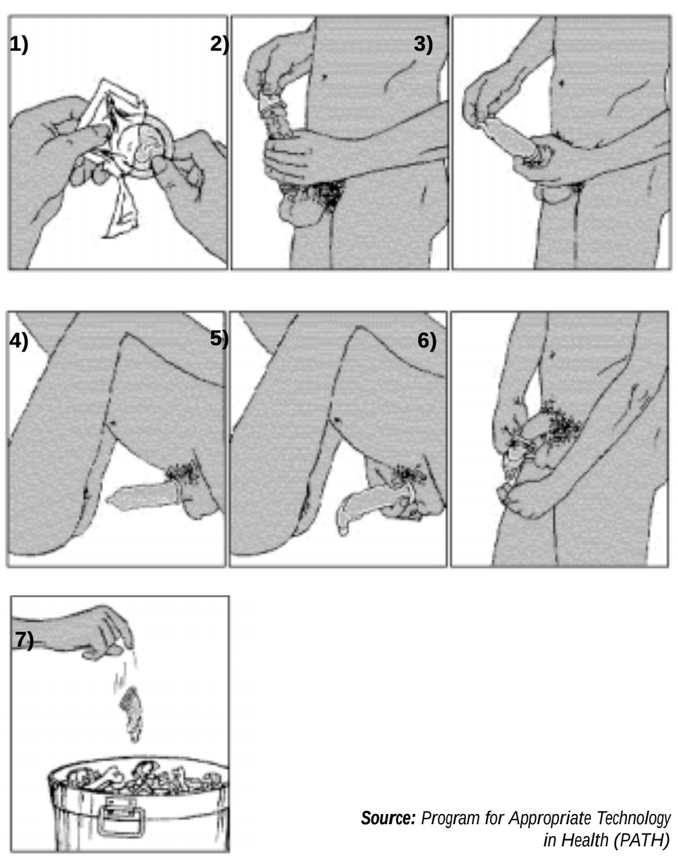


DIAGRAM 1

Source: *Program for Appropriate Technology in Health (PATH)*

The following box provides a checklist of the information a woman and her partner need to know to properly use male condoms and prevent condoms from breaking or tearing.

MALE CONDOM CHECKLIST

- ❑ Be sure you have a condom before you need it
- ❑ Each time you have sex, a new and unused condom should be put on the penis before it enters the vagina, rectum or mouth. **DO NOT REUSE THE SAME CONDOM**
- ❑ Put the condom on only when the penis is erect
- ❑ When putting on the condom, hold it so that the rolled rim is on the outside. If the male is not circumcised, first pull the foreskin of the penis back
- ❑ Do not pull the condom tightly against the tip of the penis but pinch the end of the condom when unrolling it --- this leaves a small, empty space to hold the semen
- ❑ Unroll the condom all the way to the base of the penis
- ❑ If the condom tears during sex, the penis should be withdrawn immediately and a new condom put on
- ❑ After ejaculation, the male partner should hold on to the bottom of the condom as the penis is pulled out, so that the condom does not slip off. Carefully take the condom off without spilling any semen
- ❑ Wrap the condom in paper (such as tissue paper or newspaper) until it can be disposed of in a toilet, a pit latrine, a closed garbage bag, or by burying or burning it

The following tips will help prevent condoms from breaking or leaking:

- ❑ If lubricant is needed, use a water-based one (KY Jelly, glycerin). Do not use a lubricant made with oil, like vaseline
- ❑ Store condoms in a cool, dark, dry place. Heat, light and humidity can damage condoms
- ❑ If possible, choose pre-lubricated condoms that are packaged so that light does not reach them
- ❑ Open the wrapper carefully so that the condom does not tear (don't use teeth, scissors or a knife to open the package)
- ❑ Do not use condoms that are sticky, brittle, discolored or damaged in any way

Female Condoms

The female condom is the only contraceptive method, other than the male condom, that provides protection against HIV, STIs and unplanned pregnancy. It has no side effects and can be used by women of all ages. Like the male condom, the female condom is effective only when it is used correctly and consistently each time during sexual intercourse.

The female condom is a barrier method that gives women more control over the protection of their sexual and reproductive health. In particular, it provides a method that empowers women who practice monogamy but have partners who may have other partners. In addition, in situations where a woman cannot use the male condom due **to fear of violence from or rejection by** her partner, the female condom may be an option to prevent pregnancy and the transmission of STIs.

The female condom is a viable contraceptive alternative for HCWs to recommend to sexually active women who:

- have partners who won't wear male condoms
- have sex with more than one partner
- have partners who have sex with other partners
- are in serial monogamous relationships
- want a barrier method of contraception
- are allergic to latex

To ensure the effectiveness of this method, it is suggested that HCWs provide information and education to both women and their partners about how to properly use the female condom, its effectiveness and its safety.

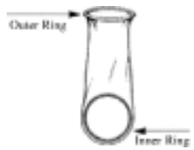
How to Use the Female Condom

The female condom is a strong, soft transparent sheath that lines the vagina to protect against unplanned pregnancy and the transmission of STIs. The sheath is made of polyurethane and has a flexible ring at each end — one is used as an anchor inside the vagina and the other remains outside the vagina.

The inner ring at the closed end of the condom is used for insertion and helps keep the device at the upper end of the vagina — this ring is removable. The larger and thinner outer ring of the condom remains outside the vagina when the condom is inserted and anchors the condom so that the sheath covers the external genitalia as well as the base of the penis during sexual intercourse. It is prelubricated with a non-spermicidal, silicone-based fluid. The lubricant is needed to facilitate insertion and for easy movement during intercourse.

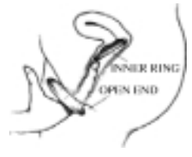
DIAGRAM 2

Instructions on how to use the female condom



1. Open end (Outer Ring). The open end covers the area around the opening of the vagina. The inner ring is used for insertion, and to help hold the sheath in place. Rub condom to spread lubricant.

2. How to hold the sheath.
(a) Hold inner ring between thumb and middle finger. Put index finger on pouch between other two fingers, or
(b) Just squeeze.



3. How to insert the condom. Squeeze the inner ring. Insert the sheath as far as it will go. It's in the right place when you can't feel it. Don't worry-it can't go too far, and it won't hurt!

4. Make sure placement is correct. Make sure the sheath is not twisted. The outer ring should be outside the vagina.

5. Removal. Remove before standing up. Squeeze and twist the outer ring. Pull out gently. Dispose with trash, not in toilet.

Source: *THE FEMALE HEALTH COMPANY*

The following box provides a checklist of the information that a woman and her partner need to know to properly use female condoms.

FEMALE CONDOM CHECKLIST

- ❑ Make sure the condom is completely lubricated on the outside and the inside. Rub the condom to spread the lubricant
- ❑ While holding the sheath at the closed end, grasp the soft, flexible inner ring and squeeze it with your thumb and middle finger so it becomes long and narrow
- ❑ With the other hand, separate the outer lips of the vagina
- ❑ Gently insert the inner ring into the vaginal canal --- it should be possible to feel the inner ring go up and move into place
- ❑ Place the index finger on the inside of the condom, and push the inner ring up as far as it will go. Make sure the sheath is not twisted
- ❑ The outer ring remains on the outside of the vagina
- ❑ During sex, gently guide the penis into the vagina. Make sure that the penis is not entering to the side of the sheath
- ❑ If the condom is pulled out or pushed in, there is not enough lubricant. Add more to either the inside of the condom or to the outside of the penis
- ❑ To remove the condom, twist the outer ring and gently pull the condom out. Pull it out before standing up to avoid any spillage

Other important points to remember:

- ❑ The female condom can be placed in the vagina several hours before sexual activity (up to 8 hours) or immediately before intercourse
- ❑ The female condom does not have to be immediately removed after intercourse — there is no need for immediate withdrawal after ejaculation
- ❑ Each condom is currently effective for one use --- a new condom is necessary for each act of sexual intercourse. **DO NOT REUSE THE SAME CONDOM**
- ❑ Practice inserting the condom several times prior to having sexual intercourse to feel comfortable with how it works
- ❑ For protection against STIs, it can be used at the same time as the IUD, hormonal methods and sterilization
- ❑ The female condom can also be used as a barrier method for anal intercourse
- ❑ It should not be used at the same time as the male condom as friction will cause the male condom to slip off and the female condom to be pushed in
- ❑ The female condom is made of polyurethane which is not affected by differences in temperature and humidity --- therefore, no special storage con-

7.0 COUNSELING AND TESTING

During a personal health and medical history, HCWs should assess both a woman's present and past risk of contracting HIV and other STIs. Counseling and testing for HIV should be offered and provided to any woman who answers "**yes**" to the following questions during a health care interview. Does the women have:

- symptoms suggestive of HIV (frequent yeast infections, precancerous lesions of the cervix, unexplained weight loss, chronic diarrhea, intermittent or persistent fever, persistent cough, swollen glands, oral candidiasis (yeast infections), night sweats, fatigue, dementia)
- other STIs, for example, herpes, genital warts or pelvic inflammatory disease. The presence of other STIs increases the risk of transmission of HIV, and the symptoms of STIs are more severe in HIV infected women
- a history of intravenous drug use
- a partner or child with HIV-related symptoms or AIDS
- a history of blood transfusion that may have been contaminated with HIV
- multiple sex partners
- a partner who is bisexual, has had multiple sex partners or is an IV drug user
- history of physical abuse, including domestic violence, rape and other forms of sexual abuse

RISK ASSESSMENT CHECKLIST

- *Presence of HIV symptoms (p. 26-28; Annex II)*
- *Presence of other STIs*
- *History of IV drug use*
- *Partner/child with HIV/AIDS*
- *History of blood transfusions*
- *Multiple sex partners*
- *Partner who has/had multiple sex partners or is bisexual*
- *Partner who uses IV drugs*
- *History of physical abuse including sexual violence*

HCWs need to be aware of the increased risk of STIs, in particular HIV, associated with gender based violence. This type of violence is not only physical, but also includes psychological violence. Sexual violence, including rape, increases the risk of STI transmission by increasing a woman's biological susceptibility to contracting infection due to trauma to the vaginal mucosa (tissue lining damage, increased blood flow).

This type of violence also decreases a woman's sense of self-esteem, makes her feel ashamed and reduces her faith in others which increases the likelihood she will participate in HIV-risk behavior (prostitution, drug use, unprotected sex).

Most recent global studies suggest that approximately 16 to 52 percent of women have been physically assaulted by an intimate partner at least once in their lives. This type of assault is associated with sexual violence, including rape. The abuse may involve partners, male relatives, classmates or neighbors.

As a HCW, it is necessary to provide a woman who has experienced gender violence and who may be at risk of HIV infection (unprotected intercourse with a partner who is definitely or likely to have HIV) with prompt and appropriate medical attention. This includes offering post-exposure prophylaxis (PEP) with antiretroviral drugs (zidovudine or AZT) within 72 hours of exposure and ensuring she receives appropriate psychological, social and legal support. In addition, a woman will need follow-up care that may include counseling and testing for HIV and associated support services.

How to Explain the HIV Antibody Test to a Client

Shortly after the body is infected with HIV, it starts to respond by making antibodies against the virus. These antibodies usually begin to be produced within 3 to 8 weeks. An HIV antibody test is a blood test that can find out if these specific antibodies are present in the blood --- it does not detect the virus itself.

Be sure to emphasize that the HIV test does not:

- provide information about a person's present state of health
- determine if a person has HIV-related infections and diseases

- show when or how a person became infected with HIV
- tell whether a person with HIV infection has transmitted the virus to anyone else

Explain in simple language that a **positive** test result means that:

- a person has antibodies against HIV, and is thus infected and can transmit the virus to others

Explain in simple language that a **negative** test result means that:

- a person is not infected with HIV OR
- a person is infected with HIV, but has not yet made antibodies against the virus (this is called the window period)

As the results of an HIV test can have a major impact on families, relationships, a woman's overall well-being and employment, it is important to ensure that women are tested only with their informed consent, that they receive counseling before testing (pre-test counseling), that they receive counseling after testing (post-test counseling) and that the test results be kept confidential i.e. shared only with the woman, or others as indicated by her.

For infected women, knowledge of their HIV status provides opportunities to:

- obtain early diagnosis and treatment for themselves and their infants
- make informed reproductive decisions
- use methods to reduce the risk of perinatal transmission (antiretroviral drugs, proper nutrition, breastfeeding alternatives, cesarean section, vaginal lavage)
- receive information on how to prevent HIV transmission to others
- receive information on support services, if needed

Knowledge of HIV status gives a woman the power to make informed decisions and to take appropriate actions to protect herself and others.

Pre-test Counseling

Before conducting an HIV test, it is important to provide counseling to a woman about:

- the test procedure itself and the many factors involved in testing, including emotional, social and medical consequences of a positive or negative test result
- the advantages and disadvantages of being tested
- if a woman is pregnant, information about the interaction between pregnancy and HIV, the risk of transmitting HIV to the baby, ways to reduce this risk and the prognosis for infants who become infected

A HCW should ensure that a woman's decision to be tested is made after a careful consideration of all known factors and must only be done with her consent.

Post-test Counseling

What are the Recommended Steps if the Test is Negative?

If the HIV test is negative (i.e. the patient is seronegative), a HCW should provide risk-reduction counseling. This includes discussing the importance of the prevention of HIV and STIs with a woman to reduce her risk of infection in the future. The discussion should cover not only the methods available for practicing safer sex but also consider a woman's individual situation, concerns and attitudes that may influence whether or not certain methods are feasible, acceptable and will be used.

During seronegative post-test counseling, a HCW should:

- reinforce and review risk elimination and reduction strategies for the prevention of HIV and STI transmission
- confirm that the last possible exposure was not within the last 6 months. If it was, encourage retesting in 3 months
- provide information and referral to emotional and spiritual and other support services, if needed

What are the Recommended Steps if the Test is Positive?

If the test result is positive (i.e. the patient is seropositive), a HCW should discuss with a woman all of the above issues outlined in seronegative post test counseling in order that she avoid infecting her partner and reinfecting herself. In addition, a HCW should offer a woman compassion, support and practical advice to help her cope with stress and anxiety and help her to make personal decisions. HCWs should have follow-up sessions to ensure meaningful, consistent and long-term support to an infected woman, her family and caregivers.

During seropositive post-test counseling, a HCW should:

- assess a woman for mental distress. Assess the availability of her personal support system (family, friends). Provide information about and referral to additional counseling and support services
- review the guidelines for eliminating or reducing the risk of transmission to others
- discuss the signs and symptoms of HIV-related illnesses and progression of the disease
- discuss the importance of avoiding additional infections which will add stress to the immune system, such as other STIs, colds, flu and other infections
- review the principles of maintaining good health such as, nutrition, exercise, stress reduction and management, sleep, hygienic practices (see **Annex III**)
- discuss a plan for notification of partner(s)
- review the risk of a violent reaction from her partner upon informing him of her HIV status
- provide educational materials as appropriate. This includes booklets, videos and other materials
- encourage follow-up sessions for care, counseling and social support

8.0 MANAGEMENT OF WOMEN WITH HIV/AIDS

The effective management of women with HIV/AIDS requires the development of a continuum of care between hospitals, clinics, hospices, community organizations and home-based care that will enable HCWs, family members, neighbors and others to help women living with HIV/AIDS and their families when appropriate and when requested (either by individual, family or referral).

A comprehensive approach to providing care consists of four interrelated elements:

- Clinical management (early diagnosis, which includes testing, prophylaxis for opportunistic infections and diseases, rational treatment and follow-up care)
- Nursing care (personal hygiene and nutrition, palliative care, home care and education to care providers at home and family, adoption of universal precautions)
- Counseling (psychosocial and spiritual support, risk reduction planning and coping mechanisms, future planning for family members etc.)
- Social support (information, provision or referral to peer support, welfare services, spiritual support and legal advice)

To be effective, comprehensive care programs must address the special clinical concerns and emotional needs of women living with HIV/AIDS and provide a supportive environment so that HIV infected women will return for follow-up visits.

Clinical Course of HIV Infection in Women

Women with HIV often have a very different clinical course of HIV infection from that of men. The first signs of HIV infection in women are often gynecological and are not readily identified by HCWs as being HIV-related. These gynecological problems may include changes in a woman's period (menstruation), earlier menopause, frequent yeast infections, herpes, genital warts or precancerous lesions of the cervix.

In the early stages of HIV disease, bacterial infections predominate. These include pneumonia, sinusitis, bronchitis and urinary tract infections. As the number of white blood cells (CD4+ cells) decreases, the risk of developing opportunistic infections increases.

Recurrent vaginal candidiasis (yeast infections), cervical dysplasia (precancerous lesions) and pelvic inflammatory disease (PID) are very common gynecological symptoms of HIV infection in women. Recurrent herpes simplex virus (HSV) and human papillomavirus (HPV) are common STIs among HIV positive women.

The symptoms that may occur in women infected with HIV include the following (summarized in **Annex II**):

- a thick whitish coating of the tongue or mouth (oral thrush) that is caused by a yeast infection and is sometimes accompanied by a sore throat
- severe or recurring vaginal yeast infections
- chronic pelvic inflammatory disease
- marked changes in menstruation patterns
- periods of extreme and unexplained fatigue that may be combined with headaches, lightheadedness and/or dizziness
- rapid loss of more than 10 pounds of weight that is not due to increased physical exercise or decreased food intake
- recurring or unusual skin rashes
- bruising more easily than normal
- long-lasting occurrences of diarrhea
- recurring fevers and/or night sweats
- swelling or hardening of glands located in the throat, armpit or groin
- periods of continued, deep, dry coughing

Women with HIV often have a very different clinical course of HIV infection from that of men. The first signs of HIV infection tend to be gynecological in nature and are often mistaken for those of less serious conditions.

Recognition of the clinical signs of HIV in women is critical to provide appropriate and timely management of symptoms and disease.

- increasing shortness of breath
- the appearance of discolored or purplish growths on the skin or inside the mouth
- unexplained bleeding from growths on the skin, from mucous membranes or from any opening in the body
- severe numbness or pain in the hands or feet, the loss of muscle control and reflex, paralysis or loss of muscular strength
- an altered state of consciousness, personality change or mental deterioration

It is important to note that all of the above symptoms can occur unrelated to HIV disease. In fact, when symptoms of HIV disease appear in women they are often mistaken for those of less serious conditions. Recognition of these clinical conditions as indicators for HIV in women is essential in order to provide appropriate and timely symptom management.

Moreover, as the presence of other STIs increases the risk of transmission of HIV, and the symptoms of STIs are more severe in HIV infected women, it is very important to **effectively manage and control the spread of sexually transmitted infections**.

Menstruation

Loss of menstruation and irregular or erratic bleeding occur in many diseases including HIV disease. If a woman loses a lot of weight her periods may stop altogether or become infrequent. Loss of menstrual bleeding can have many causes (including pregnancy) and is often seen in women with AIDS. If a woman misses one or two periods, she should be thoroughly examined to determine the underlying cause of the loss of menstruation.

A woman may feel that loss of menstruation represents a loss of capacity to bear children or a loss of femininity and may feel sad or even depressed. Such a person can be helped to fight this loss of self-esteem by reassuring her that many women, for a wide variety of reasons, experience the loss of menstruation. Women should be encouraged to be with friends, to involve themselves with the people and activities around them, and to remember that they are still worthwhile and have a great deal to give to themselves and others.

Women should be encouraged by HCWs to seek early treatment for STIs if they have any signs or symptoms or suspect they may be infected. Proper treatment of curable STIs can reduce HIV transmission by nearly one-half.

Antiretroviral Therapy

The beneficial effects of combined antiretroviral (ARV) therapy include fewer AIDS-related deaths, less hospitalizations, decreased incidence of opportunistic infections and diseases and the increased ability of many persons living with HIV/AIDS to return to or maintain normal functions of daily living. Currently, there are approximately fifteen ARV drugs available in different parts of the world. Although ARVs can be purchased in many developing regions, the majority of persons with HIV have yet to receive their benefit. Issues surrounding their access include high cost, lack of knowledge and experience of health providers, complicated dosage regimens, possibility of developing HIV resistance, ethical concerns, among many others.

Although ARVs provide many therapeutic benefits, it is important that they are not perceived as the solution to HIV, but as one of the essential components of providing effective clinical management of the disease. Access to ARV treatments should be improved within the provision of a comprehensive continuum of care. To fully combat the spread of the disease, a spectrum of care needs to be available and accessible that consists of prevention, education, counseling, access to HIV testing, prophylactic treatment of opportunistic infections and diseases, treatment of STIs, nutritional interventions, management of stress and emotional and social support (refer to *Building Blocks: Comprehensive Care Guidelines for Persons Living with HIV/AIDS in the Americas, Summary Report, PAHO/WHO, 2000*).

9.0 PREGNANCY AND HIV

Most women discover that they are infected with HIV or have AIDS during their pregnancy, just after the delivery of their baby or when their baby becomes ill. For many women, becoming pregnant initiates their first contact with a health care clinic or worker.

In general, pregnancy does not affect the progression of HIV disease in women who are infected but whose immune systems have not yet been compromised by HIV and are still healthy. If a woman develops opportunistic infections characteristic of HIV during her pregnancy, treatment should be determined on a case by case basis as some medications may be harmful to the fetus (see Clinical Course of HIV Infection in Women, p. 26-28 or **Annex II**). For example, recommendations for treating tuberculosis in pregnant women have been modified due to the potential teratogenic effects of specific medications (streptomycin and pyrazinamide). **Annex 4** presents a review of the basic recommendations for the care of a pregnant woman and her infant.

Currently, there is no evidence that HIV harms the development of the baby. However, the risk of miscarriage (spontaneous abortion) is higher in HIV infected women. In general, if a woman has HIV/AIDS, she is more likely to have complications such as:

A pregnant woman with HIV/AIDS is more likely to have a miscarriage, fever and infections, premature labor, a low birth weight baby and severe post-labor infections than a non-infected pregnant woman.

- miscarriage - loss of the baby during pregnancy
- fever and infections
- premature labor
- baby with low birth weight
- severe infections after birth - women who have HIV are more likely to have infections after delivery that do not respond to the usual treatment with antibiotics

In the absence of ARV therapy during pregnancy, the risk of a woman having an HIV-infected child is between 25 to 35 percent. Children who contract HIV may be infected in the womb, during delivery or through breastfeeding. If born infected, nearly 80 percent of children will die before the age of 5 years as a result of HIV-aggravated malnutrition, diarrhea and respiratory infections.

The risk of an HIV infected woman having an HIV infected child is approximately one in three (33 percent).

Counseling and Testing

A risk assessment for HIV should be conducted by a HCW during the antenatal care interview. Refer to the previous section on Counseling and Testing (p. 21-25) for the list of appropriate questions and an overview of pre-test and post-test counseling requirements.

Reproductive Counseling

A woman who is pregnant and infected with HIV has several reproductive options:

- continuing the pregnancy
- continuing the pregnancy and taking antiretroviral drugs (zidovudine)
- interrupting the pregnancy[1]

If a woman learns during pregnancy that she is infected with HIV, the first responsibility of HCWs should be to offer her emotional support.

Nondirective[2] and **nonjudgmental**[3] reproductive counseling should be provided so that a woman can make informed choices regarding the continuation of her pregnancy and adapt her behavior to prevent transmission to others. Issues to discuss with a pregnant woman who is infected with HIV include:

- how HIV will affect her pregnancy
- the risks of transmitting HIV to the baby
- ways to reduce these risks
- the prognosis for infants who become infected

1 In accordance with the legal and medical indications and options available in a particular setting and/or country.
2 Counseling and/or interviewing in which the counselor (interviewer) refrains from interpretation or explanation but encourages the client to express herself freely.
3 Avoiding judgments based on one's personal and, especially, moral standards.

- the benefits and risks of antiretroviral therapy

- infant feeding counseling (breastfeeding versus replacement feeding)

The decision whether to continue a pregnancy has to be made by the woman herself. If a woman has a supportive, understanding and open-minded partner, she may consider discussing her reproductive options with that person.

Health care workers should be respectful and supportive of any reproductive decision a woman makes.

It is important to encourage women to accept help from others while at the same time recognizing their unique role within their families. Many times, women put their children's or partner's health first and neglect their own health concerns. In many cases, women serve as the primary caregivers in a family and balance their caregiving responsibilities with employment and/or taking care of children.

Women with HIV are likely to fear the loss of their roles as mother and caregiver and may experience extreme guilt if any of their children are also infected. They also may have strong feelings of anger at the individual who infected them.

Social support systems need to be made available to women within their own communities. Support services should include peer support groups (that allow women to exchange information and personal experiences), education, counseling (individual, couples[4], grief and bereavement[5]), home care, child care, spiritual support and hotlines to assist women living with HIV/AIDS and their families in managing the emotional aspects of the situation and disease progression. Family caregivers will also need support and opportunities for rest periods from a caregiving situation to avoid experiencing "burn out" (respite care, adult day programs).

One of the primary concerns for many infected women is the present and future support and care of their children, as often their partner is also infected or has passed away. Assistance with arranging surrogate childcare should be offered as part of supportive counseling services.

[4] Infected individuals and their partners are counseled and educated at the same time about behaviour change.
[5] Grief and bereavement counseling deals with an individual's personal sense of loss such as, the loss of a loved one (death, divorce) or the loss of dreams (e.g. of a long future).

10.0 PREVENTING THE PASSAGE OF HIV FROM MOTHER TO BABY

Risk Factors

There are several risk factors that have been found to be associated with an increased risk of HIV transmission from the mother to the infant. These include:

Maternal factors

- poor maternal nutritional status

- recent infection with HIV. A woman who has been infected with HIV within the last 2 to 3 months is more likely to transmit the virus to her infant

- advanced stage of HIV infection or AIDS

- low number of white blood cells (low CD4+ cell counts)

- high viral load

- presence of p24-antigenemia (a component of HIV detected in blood)

- infection with certain sexually transmitted infections (herpes, syphilis, chancroid)

- lack of access to antiretroviral drugs

Obstetrical factors

- premature delivery of the baby (less than 37 weeks)

- premature rupture of membranes. The risk dramatically increases when the membranes have been ruptured for more than 4 hours

- inflammation of placental membranes

- use of instruments during labor and/or delivery

Postpartum factors

- breastfeeding
- duration of breastfeeding
- unhealthy breast conditions. Cracked or bleeding nipples increase the risk of transmission

Preventive Strategies

There are several preventive strategies that reduce, or may reduce, the risk of a mother passing her HIV infection to her unborn infant. These include antiretroviral medication, proper nutrition, replacement feeding for infants, intrapartum management, elective cesarean section and vaginal lavage.

Antiretroviral Therapy

The chances that an HIV infected woman will transmit HIV infection to her infant are greatly reduced by using antiretroviral (ARV) drug therapy. The first indication that ARV treatment can help prevent the transmission of HIV came with the results of the ACTG 076 study published in 1994. In this study, zidovudine (or AZT) treatment during pregnancy reduced the risk of mother to child transmission of HIV by as much as two-thirds (from 25 percent to 8 percent).

Zidovudine is taken orally by the mother **after 14 weeks** of pregnancy and is continued throughout the pregnancy and during birth by intravenous therapy. Zidovudine syrup is given to the newborn every 6 hours beginning 8 to 12 hours after birth and continued for the first 6 weeks of her or his life.

Recent studies have shown that a short course of AZT therapy, given late in pregnancy and during delivery, reduces the rate of HIV transmission from infected mothers to infants by one half (51 percent) and is safe for use in developing regions. Compared to the above schedule, this regimen involves a much shorter course of therapy during pregnancy, an oral dose rather than an intravenous dose during delivery and no infant dose. In addition, this short course AZT treatment is 10 times less expensive and thus more affordable for developing regions than the 076 protocol.

The regimen involves the mother taking 300-mg *zidovudine* orally twice daily from 36 weeks gestation (generally, the last 4 weeks of pregnancy) until the onset of labor and 300-mg *zidovudine* every three hours from the onset of labor until delivery. It is important to note that in these studies all women were advised not to breastfeed, were provided with infant formula and had high adherence to ARV therapy.

The PETRA trial, has shown that an even briefer treatment given at labor and followed by a week of combined drug therapy (AZT and 3TC) for both mothers and infants reduced the rate of HIV transmission by 37 percent. Women took the double-drug pills twice a day, once in the morning and again in the evening, and the infant took the drugs in syrup form for one week.

This form of drug therapy is estimated to cost 1/5 of the price of the previous short course treatment. However, the study only followed the children for six weeks after birth and did not address the issue of breastfeeding. Nevertheless, it provides evidence that treating women at the time of labor, which in many developing regions is the first time expectant women seek medical assistance, can be effective in preventing mother to child transmission of HIV.

The most recent study conducted in Uganda (HIVNET 012) involved the use of nevirapine to prevent the transmission of HIV from mother to infant. Nevirapine lowered the risk of HIV transmission by nearly 50 percent in a breastfeeding population at 14 to 16 weeks of life. The risk at later ages, in infants that continue to breastfeed, will be determined through follow-up until they are 18 months of age.

In this study, women received 200 mg of nevirapine orally at the onset of labor and 2 mg/kg was administered to babies within 72 hours of birth. Nevirapine has the advantage compared to other forms of drug therapy of being less costly (approximately $ 4.00 per mother-child pair) as well as being administered in a single dose. However, at the present time, this therapy is not widely recommended although it is being used in some countries in developing areas.

In all cases, recommendations for ARV therapy should be discussed with the pregnant woman within the context of possible risks and benefits to her and the baby before starting any drug treatment. To date, no studies have shown an increased risk of birth or growth problems in children exposed to AZT.

Nutrition

The importance of good nutrition should be stressed to the mother throughout her pregnancy. Lack of adequate nutrition has been shown to increase the rate of transmission of HIV from a mother to her baby. Infants become infected because their mothers either do not have enough food to eat (low caloric intake) or are not eating the right types of foods (poor micronutrient status).

Good nutrition helps the body fight infections, enhances pregnancy outcomes (proper birthweight babies, decreased infant mortality), enables HIV-fighting drugs to work properly and, in some cases, may ease drug related side effects. Pregnant women should also be educated about the importance of following food and water safety precautions to avoid contamination and subsequent infections (see **Annex V**).

Several studies have shown that women who are deficient in vitamin A during pregnancy may be more likely to have HIV infected babies, infants with increased mortality and children with growth failure (in height and weight). Eating foods rich in vitamin A (e.g. green leafy vegetables, carrots, yellow vegetables, red and chili peppers, mangos, papayas, cantaloupes, eggs, chicken and other animal liver, kidney and dairy products) and taking supplements may help to reduce the transmission of HIV from mother to infant. As an excess of vitamin A intake can be toxic, supplementation with beta-carotene (the precursor to vitamin A) is recommended.

A recent study has also shown that taking a multivitamin during pregnancy reduces adverse birth outcomes. HIV-1 infected pregnant women who took multivitamins between 12 and 27 weeks of gestation had improved pregnancy outcomes and increased CD4+ cell counts compared to women who did not take any vitamins or took only vitamin A supplements. However, this study did not examine the impact of taking multivitamins on the transmission of HIV from mothers to their infants.

Breastfeeding

For women who are not infected with HIV or who do not know their HIV status (i.e. have not yet been tested for HIV), breastfeeding is the best infant feeding choice. Breastfeeding provides many benefits for the mother and the baby:

- protects infants against both respiratory and intestinal infections, allergies and diarrhea due to anti-infective properties in breast milk

- provides important nutrients and antibodies
- reduces the risk of postpartum hemorrhage
- enhances the physical and emotional health of mother and infant
- promotes birth/family spacing
- promotes correct teeth, jaw and speech development

However, pregnant women who have been diagnosed with HIV infection should be advised not to breastfeed their infants in order to reduce the risk of HIV transmission to their infants. They should receive counseling about the possible benefits and risks of breastfeeding and be offered feeding alternatives (commercial infant formula, dried milk powder and evaporated milk, modified animal milks, heat treated-breastmilk). Both women and their partners need to be counseled on appropriate hygiene and mixing techniques and taught how to use cups to feed their infants.

To ensure sufficient nutritional benefits, breastmilk substitutes need to be made available continuously to the mother for at least 6 months. The provision of feeding substitutes should be linked to follow-up visits by HCWs to monitor infant health and growth (ideally at 2 to 4 week intervals). Follow-up services should be provided to infants until, at least, 18 months of age.

The following are PAHO/WHO recommendations for HCWs on HIV and infant feeding:

- women who do not know their HIV status should be advised to seek counseling and testing to determine their HIV status. Women cannot make informed choices about infant feeding if they do not know their HIV status
- women who know they do not have HIV infection should be advised to breastfeed
- women who know that they have HIV infection need to be provided with counseling on alternate feeding methods. This counseling must include the possible benefits and risks of breastfeeding and breastmilk substitutes as well as an assessment of the mother's ability to access feeding substitutes. Possible barriers include: lack of availability, high cost, contaminated water supply and poor sanitation.

In all cases, pregnant women need adequate information and education to determine the most appropriate feeding strategy for their infants. All women must be supported in their choice of infant feeding method whether they choose to breastfeed or not.

Intrapartum Management

HCWs need to ensure careful maintenance of universal body fluid precautions (see **Annex VI**). Gloves should be used at all times and all open wounds, sores and cuts on hands and arms should be covered.

The use of scalp electrodes or fetal scalp sampling during labor and delivery should be avoided unless absolutely necessary. The prolonged rupture of membranes should also be avoided. If the membranes are ruptured, intravenous *zidovudine* (AZT) therapy should be started and delivery of the infant facilitated.

Elective Cesarean Section

In general, cesarean sections (C-sections) should be reserved for obstetrical indications. However, recent studies have shown that performing *elective* C-sections before the onset of labor may have a potential role in reducing the risk of passing HIV infection from the mother to the newborn.

A large study has shown that pregnant women infected with HIV can reduce the risk of transmitting the virus to their infants if they deliver by elective C-section — before they have gone into labor and before their membranes have ruptured. It is important to note that HIV-infected women who were breast feeding their infants were not included in this study.

The study found that the likelihood of mother to infant transmission of HIV was decreased by approximately 50 percent among children whose mothers delivered by elective C-section. This finding was consistent when the following factors were taken into account: infant birth weight, stage of mother's HIV-related disease and receipt of antiretroviral drugs by the mother and child.

Of the mothers who did not receive *zidovudine* (AZT) or other antiretrovirals during pregnancy and during labor and whose children did not receive such drugs during the first few weeks of life, 10.4 percent of the mothers who delivered by elective C-section transmitted the virus to their infants, as compared to 19 percent of the women who delivered by other modes of delivery.

Of the mothers who did receive ARVs during pregnancy and during labor and whose children received drugs during the first few weeks of life, 2.0 percent of those who delivered by elective C-section transmitted the virus to their infants, as compared to 7.3 percent who delivered by other means.

However, the potential benefit of cesarean delivery in reducing HIV transmission must be weighed against the possibility of increased post-operative infections, other complications among HIV-infected women and cost. **In all cases**, women need to receive counseling about the possible benefits and risks associated with an elective C-section to ensure they make an informed decision regarding this choice of delivery as a preventive option.

Vaginal Lavage

There are several studies being conducted on the potential of vaginal lavage to prevent the perinatal transmission of HIV. Studies have shown that cleaning the birth canal with chlorhexidine at delivery results in favorable birth outcomes for women whether they are infected with HIV/AIDS or not.

Although the intervention does not significantly reduce perinatal HIV transmission, it has been shown to reduce perinatal transmission when a woman's membranes are ruptured for longer than 4 hours (38.8 percent to 24.4 percent).

A woman's birth canal is cleansed manually with a cotton pad soaked in 0.25 percent chlorhexidine on admission in labor and every four hours until delivery. Vaginal washing with chlorhexidine is associated with the following health benefits:

- fewer admissions of infants to the hospital due to neonatal problems
- a lower rate of postpartum infections in women regardless of their HIV status
- a shorter postpartum hospital stay for women

11.0 SPECIAL ISSUES CONCERNING CHILDREN WITH AIDS

In children HIV/AIDS is more difficult to diagnose correctly because maternal antibodies to HIV are passed to virtually all infants born to HIV infected women through the placenta. Therefore, the presence of antibodies in the infant does not necessarily indicate infection with HIV.

Maternal antibodies can remain in the child for up to 15 to 18 months (median age at seroreversion is 10 months). Thus in some cases, depending on the type of testing method used[6, 7], it may be 15 months before the child's HIV status can be determined with certainty. For parents, this waiting period can be a very emotionally distressful time. It is important to emphasize to parents that even if a child is infected there can be many years of life and things that can be done to make those years as healthy and fulfilling as possible.

Mothers, fathers and caregivers need to be provided with information about HIV infection and AIDS in children to help them understand the facts. They also need support to help them cope during this time of uncertainty by focusing on their child's life and health rather than on the fear of illness or death.

Babies that are infected with HIV usually develop the symptoms of AIDS more quickly than adults do. This is because their immune systems are less developed and therefore they cannot resist HIV or fight opportunistic infections as effectively as adults. They often have fever, diarrhea and coughing, ear and throat infections and do not gain weight properly, but these are common symptoms that may have other causes. To monitor a child's growth progress, HCWs should provide follow-up services to children at least until 18 months, especially for nutritional status and childhood illnesses.

6 For reasons of cost, the Elisa test is most commonly used to determine HIV status. Using this testing method, it usually takes 9 to 12 months to determine infection status.

7 The polymerase chain reaction test (PCR) can determine a child's HIV status quicker, but is more expensive to use. To rule out infection, it is necessary to conduct a PCR test every 3 months up to a 2-year time frame, if necessary. Two successive negative PCR results indicate a child is not infected (99.9 percent acccuracy rate).

Immunization schedule

All infants including those with HIV and AIDS should be given the standard vaccines against diphtheria, pertussis (whooping cough), tetanus (DPT vaccine), poliomyelitis (polio) and measles. This should be done in accordance with the immunization schedules of your country. In many countries, the BCG vaccine is given to all infants at birth to prevent tuberculosis. The only exception is when an infant has clinical symptoms of AIDS, such as failure to thrive and frequent infections, she or he should not receive BCG, as it is a live attenuated vaccine. The infant should, however, receive all other vaccines.

Common Infections

Avoiding common infections is very important for all individuals with HIV or AIDS. However, protecting children with AIDS from contracting other infections is more difficult than protecting adults because children tend to put things in their mouths and they are exposed to more illnesses that are new to them. As children become older they will need to learn how to take precautionary measures for themselves, for example washing their hands after going to the toilet or latrine and before eating.

It is advisable to encourage a family who has a child infected with HIV to go to the same health care setting to receive immunizations, for treatment of childhood illnesses as well as for treatment of AIDS symptoms. This way, HCWs will have a more complete health history for the child that will allow for better management of her or his care.

Normal Daily Life

Many of the infants who are infected with HIV will have months or years of life without experiencing any symptoms. It is important to emphasize this fact to the parents and caregivers of the infected child as every effort should be made to help them lead as normal a life as possible. This includes letting them spend time with other children. HIV cannot be spread by the child's urine, saliva, feces or vomit and a child with HIV cannot infect others by playing with them or sharing toys. Children should go to school as usual, except when there is an outbreak of infection in other children as this may put the child with HIV at risk of becoming ill.

12.0 CONCLUSION

The management of women with HIV/AIDS requires HCWs to pay special attention to factors that may interact to impact the effectiveness of prevention, treatment and care approaches. Women are more vulnerable than men to contracting HIV due to several factors: specific biological aspects, social constraints and limitations, economic circumstances, cultural barriers and the accessibility and quality of health care available to women. The effect of these components must be taken into consideration by HCWs when developing appropriate care strategies.

To effectively meet the requirements of women infected with HIV, a comprehensive care approach is needed that recognizes the special clinical course of HIV infection in women, addresses their emotional needs and provides a wide variety of care options. HCWs need to provide education, counseling, nursing care and social support to women with HIV/AIDS and their families. Women must be provided with the information, knowledge and skills to make informed decisions and take appropriate actions regarding their HIV prevention and protection options.

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ACRONYMS & ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
HCW	Health Care Worker
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
HSV	Herpes Simplex Virus
PCR	Polymerase Chain Reaction test
PID	Pelvic Inflammatory Disease
STI	Sexually Transmitted Infection

ANNEX I: Review of the Risk of Various Sexual Activities

Sexual Activities with No Risk

Practicing the following activities will prevent a partner's blood, semen or vaginal secretions from getting into contact with a woman's blood and mucous membranes and therefore prevents the transmission of HIV:

- masturbation
- massage
- rubbing
- hugging
- touching

Sexual Activities with Low Risk

While only a small number of people have contracted HIV through these activities, the following are considered to carry some risk:

- oral sex (vaginal secretions, blood or semen not taken into the mouth)
- deep, wet kissing

Sexual Activities with High Risk

Practicing the following activities is a definite risk:

- anal sex
- vaginal sex
- any sexual activity that causes bleeding
- vaginal secretions, semen or blood taken into the mouth during oral sex

ANNEX II: Clinical Symptoms That May Occur in Women Infected with HIV

CLINICAL SYMPTOMS OF HIV IN WOMEN

- A thick whitish coating of the tongue or mouth (oral thrush) that is caused by a yeast infection and is sometimes accompanied by a sore throat
- Severe or recurring vaginal yeast infections
- Chronic pelvic inflammatory disease (PID)
- Marked changes in menstruation patterns
- Periods of extreme and unexplained fatigue that may be combined with headaches, lightheadedness and/or dizziness
- Rapid loss of more than 10 pounds of weight that is not due to increased physical exercise or decreased food intake
- Recurring or unusual skin rashes
- Bruising more easily than normal
- Long-lasting occurrences of diarrhea
- Recurring fevers and/or night sweats
- Swelling or hardening of glands located in the throat, armpit or groin
- Periods of continued, deep, dry coughing
- Increasing shortness of breath

- The appearance of discolored or purplish growths on the skin or inside the mouth
- Unexplained bleeding from growths on the skin, from mucous membranes or from any opening in the body
- Severe numbness or pain in the hands or feet, the loss of muscle control and reflex, paralysis or loss of muscular strength
- An altered state of consciousness, personality change or mental deterioration

ANNEX III: Hygienic Practices

Personal Hygiene

It is important for women to maintain personal hygiene by cleaning teeth daily, bathing daily and changing clothes. Women need to keep clean during menstruation by using clean pads (hygienic towels) or clothes and keeping genitalia clean to prevent infections of the vagina and womb. Hygienic towels should be changed frequently during menstruation.

General Hygiene

There is no risk of acquiring HIV from people infected (or people with AIDS) in the home situation provided certain precautions are followed. Individuals providing home care should be taught to follow these basic rules:

- wash hands with soap and water after changing soiled bed sheets and clothing, and after having contact with body fluids

- keep wounds covered. Both caregivers and people with HIV/AIDS should cover any open wounds they may have on their hands or other places likely to have contact with other people, their bedding or clothing. Cover open wounds with a bandage or cloth

- if blood from an infected person is spilt, it should be cleaned immediately with a disinfectant such as bleaching powder (1% solution). Household gloves (rubber gloves) should be worn and if gloves are not available, then the hands should be covered with paper or polyurethane (plastic) bags. Hands should always be cleaned afterwards with soap and water

- use a piece of plastic or paper, gloves or newspaper to handle soiled items

- keep bedding and clothing clean. This will help keep sick people comfortable and prevent skin problems

- if the first 2 rules are followed, the risk of transmission through contact with soiled clothing or linen is very low. To clean clothing or sheets stained with blood (including menstrual blood), diarrhea or other body fluids:
  - keep the stained items separate from other household laundry
  - rinse off any blood or diarrhea with water, holding an unstained part of the item. Be particularly careful if there are large amounts of blood, such as after childbirth. If possible, the blood stained clothes should be soaked in bleach solution for twenty minutes
  - wash in soapy water, hang to dry and fold or iron as you would normally

- don't share sharp skin-piercing instruments. Don't share toothbrushes, razors, needles, or anything else that can cut or come into contact with blood

Avoiding Other Infections

People with HIV/AIDS have a weak immune system and thus their body's resistance to fighting infections is low. Each infection they get weakens their immune system even further. Ensuring good hygiene (cleanliness) in the home is an important part of protecting against infections and diseases such as diarrhea and respiratory infections. However, as many organisms that cause opportunistic infections already live in the body, avoiding contact with healthy people is not necessary.

The following provides information on what individuals can do in their homes to protect everyone (including the person with AIDS) from common infections.

GOOD HYGIENIC PRACTICES

Always wash hands before:

- cooking
- eating
- feeding another person
- giving medicine
- caring for a baby

Always wash hands after:

- using a toilet
- changing diapers
- caring for pets or animals
- working

Other practices that ensure good hygiene:

- washing eating utensils, including items for babies, with soap and water
- washing fruit and vegetables thoroughly and soaking them in a sink full of water (preferably boiled) with a teaspoon of iodine added to minimize (kill) any surface bacteria (see **Appendix V**)
- removing the skin or the peel from fruits and vegetables before eating them
- keeping food covered to prevent contact with insects
- washing objects that a child or infant frequently puts in its mouth with soap and clean water

- storing food properly to prevent it from spoiling and causing infection
- getting water for drinking from a safe source
- storing water in a clean container, covered with a clean lid and using a ladle to take out water
- washing bed linen, towels and clothes with soap and water
- keeping the house and surroundings clean so that no flies or mosquitoes breed
- covering mouth when sneezing or coughing
- avoiding spitting or always spit into a container, not on the ground
- kissing babies on the tops of their heads or cheeks, not on their lips
- disposing of waste properly by:
  - putting soiled items like diapers, used tissues, other soiled objects and household waste out of the reach of children until they can be removed from the home by putting them in a container that is difficult to open until you can clean or dispose of them properly
  - using a pit latrine, burning or burying trash
  - using a latrine to pass stools to avoid breeding of flies and to keep water sources safe from contamination
- disposing waste water safely to prevent mosquitoes from breeding by using proper drainage or building soakage pits

ANNEX IV: Care of a Pregnant Woman and her Infant

Antenatal Care

Women with HIV/AIDS should be advised to follow the routine recommendations for all pregnant women:

- to only take medicines prescribed by a HCW. Some medicines can be harmful to both the mother and the developing baby so it is best not to take any risks
- to eat well for herself and her baby. In particular, to eat foods rich in vitamin A (p. 36)
- to take iron and folic acid supplements daily. This is important, as it will prevent anemia in both the mother and the child. Anemia causes complications such as heavy bleeding after childbirth, which may require blood transfusions
- if possible, not to lift heavy weights or participate in heavy work as doing so may lead to premature labor and increase fatigue
- to practice good hygiene (see **Annex III**). Other practices to avoid infection include adopting universal precaution measures (see **Annex VI**)
- to practice safe sex throughout pregnancy. It will protect both the pregnant woman and baby from contracting other infections
- To visit a health center/clinic at least three times during the pregnancy for a check-up to ensure she is healthy and the baby is growing properly
- to ensure proper immunization against tetanus to protect both herself and the baby (two doses if she has not been immunized earlier and one dose if immunized within the past five years)

Labor and Delivery

Whenever possible, the mother with HIV/AIDS should be encouraged to give birth in a health center or hospital. If not, the home should be prepared for delivery so that it poses as little risk as possible to the mother, the baby and those who help with the delivery (midwife, birthing attendant). To minimize any risks it is best:

- to advise people to prepare beforehand the things which they will need for a safe delivery
- to identify a separate room or part of a room where the delivery will take place. The place should be kept clean and warm
- if possible, to procure a disposable delivery kit from the health center or from the market for use during delivery. Use of a disposable kit is important for prevention of tetanus and other infections in the newborn and in the mother. The disposable kit should contain a piece of soap for washing the hands of the birth attendant and for washing the genitalia of the woman, a razor blade for cutting the cord, two nail sticks for cleaning the nails of the birth attendant, two gauze pieces for drying the cord stump, two cotton swabs for cleaning the eyes of the baby and three cord ties for tying the cord.

If a disposable delivery kit is not available, then the following should be arranged:

- two clean thick threads for tying the umbilical cord
- one new razor blade for cutting the cord
- soap to clean the mother and the baby

In addition, the following items should be kept at hand:

- gloves or plastic bags for the delivery assistant and for handling the afterbirth
- several large pieces of cloth for wiping and wrapping the baby (about 1 meter by 1.5 meters each)
- one meter plastic sheet or old cloth to put under the mother

- one container of antiseptic solution such as iodine solution of gentian violet
- cotton wool or clean cloths for applying antiseptic solution to the cord stump
- one container of clean (boiled and cooled) water for cleaning the mother, baby and the assistants hands and arms
- pads for the vaginal area of the mother to catch drainage following the birth. These can be made from pieces of old, but clean, cotton cloth
- warm clean clothing for the baby following birth
- clean clothing for the mother to change into after the delivery
- a packet of household bleaching powder
- a bucket for making the bleach solution

The process of labor and delivery may involve extensive contact with blood, which presents risk of HIV infection. Precautions should be taken to minimize contact with the mother's blood by the baby and those attending the mother (see **Annex VI**).

ANNEX V: The World Health Organization Golden Rules for Safe Food Preparation

1. **Choose foods processed for safety**
   While many foods, such as fruits and vegetables, are best in their natural state, others are simply not safe unless they have been processed. For example, always buy pasteurized as opposed to raw milk and, if you have the choice, select fresh or frozen poultry treated with ionizing radiation. When shopping, keep in mind that food processing was invented to improve safety as well as to prolong shelf life. Certain foods eaten raw, such as lettuce, need thorough washing.

2. **Cook food thoroughly**
   Many raw foods, most notably poultry, meats, eggs and unpasteurized milk, may be contaminated with disease-causing organisms. Thorough cooking will kill the pathogens, but remember that the temperature of all parts of the food must reach at least 70 C (158 F). If cooked chicken is still raw near the bone, put it back in the oven until it's done - all the way through. Frozen meat, fish and poultry must be thoroughly thawed before cooking.

3. **Eat cooked foods immediately**
   When cooked foods cool to room temperature, microbes begin to proliferate. The longer the wait, the greater the risk. To be on the safe side, eat cooked foods just as soon as they come off the heat.

4. **Store cooked foods carefully**
   If you must prepare foods in advance or want to keep leftovers, be sure to store them under either hot (near or above 60 C (146 F)) or cool (near or below 10 C (50 F)) conditions. This rule is of vital importance if you plan to store foods for more than four or five hours. Foods for infants should preferably not be stored at all. A common error, responsible for countless cases of foodborne disease, is putting too large a quantity of warm food in the refrigerator. In an overburdened refrigerator, cooked foods cannot cool to the core as quickly as they must. When the center of food remains warm (above 10 C (50 F)) for too long, microbes thrive, quickly proliferating to disease causing levels.

5 Reheat cooked foods thoroughly

his is your best protection against microbes that many have developed during storage (proper storage slows down microbial growth but does not kill the organisms). Once again, thorough reheating means that all parts of the food must reach at least 70 C (158 F)).

6. Avoid contact between raw foods and cooked foods

Safely cooked food can become contaminated through even the slightest contact with raw food. This cross-contamination can be direct, as when raw poultry meat comes into contact with cooked foods. It can also be more subtle. For example, don't prepare a raw chicken and then use the same unwashed cutting board and knife to carve the cooked bird. Doing so can reintroduce the disease causing organisms.

7. Wash hands repeatedly

Wash hands thoroughly before you start preparing food and after every interruption especially if you have to change the baby or have been to the toilet. After preparing raw foods such as fish, meat or poultry, wash again before you start handling other foods. If you have an infection on your hand, be sure to bandage or cover it before preparing food. Remember too, that household pets - dogs, cats, birds and especially turtles - often harbor dangerous pathogens that can pass from your hands into food.

8. Keep all kitchen surfaces meticulously clean

Since foods are so easily contaminated, any surface used for food preparation must be kept absolutely clean. Think of every food scrap, crumb or spot as a potential reservoir of germs. Cloths that come into contact with dishes and utensils should be changed frequently and boiled before re-use. Separate cloths for cleaning the floors also require frequent washing.

9. Protect foods from insects, rodents and other animals

Animals frequently carry pathogenic microorganisms that cause foodborne disease. Storing foods in closed containers is the best protection.

10. Use safe, clean water

Safe water is just as important for food preparation as for drinking. If you have any doubts about the water supply, boil water before adding it to food or making ice for drinks. Be especially careful with any water used to prepare an infant's meal.

ANNEX VI: Universal Precautions

Effective Universal Precautions will depend largely on how well we learn to treat all blood as if it is infected --- not just the blood of an adult or child infected with HIV.

Universal precautions mean treating all blood as if it were infected with bloodborne germs, such as HIV or Hepatitis B or Hepatitis C Virus. Basic precautions should be extended to avoid or prevent any contact with blood, to find a barrier when blood contact is unavoidable and to kill blood germs correctly. The following are recommendations for HCWs, women and all individuals to reduce the risk of contracting HIV and other infections.

Prevent Contact

- avoid touching another person's blood
- do not share personal items that may have blood on them - toothbrushes, razors, earrings, needles (piercings)

Create Barriers

- wear latex gloves to change a diaper (with visible blood) or care for a cut or bloody nose, to handle clothing, clean surfaces soiled with blood and to assist during a medical procedure or during labor when blood exposure is possible
- use a rolled cloth, paper towels or a piece of clothing to apply pressure to a child's cut or bloody nose when latex gloves are not available
- bag disposable items soiled in blood in plastic or a large cloth and tie securely or wrap in enough newspaper to prevent leakage before placing the soiled items in containers
- cover all cuts or sores
- leave scabs alone (they keep blood in)

- moisturize hands so they do not become chapped or cracked and thus open to blood borne germs

Kill Germs

- soak up blood spills with paper towels, wash with soap and water, rinse with a 1:10 (bleach: water) solution and air dry

- rinse blood spilled on clothing or furniture immediately with cold water or hydrogen peroxide and wash as usual

Teach children to avoid contact with blood by:

- telling children not to touch someone else's blood (blood may contain germs)

- demonstrating for children how to care for a cut or a bloody nose

- discouraging blood-sharing rituals




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