Sexually Transmitted Infections, Including HIV

Key Points for Providers and Clients

- **People with sexually transmitted infections (STIs) including HIV, can use most family planning methods safely and effectively.**
- **Male and female condoms can prevent STIs** when used consistently and correctly.
- **STIs can be reduced in other ways, too**—limiting number of partners, abstaining from sex, and having a mutually faithful relationship with an uninfected partner.
- **Some STIs have no signs or symptoms in women.** If a woman thinks her partner may have an STI, she should seek care.
- **Some STIs can be treated.** The sooner treated, the less likely to cause long-term problems, such as infertility or chronic pain.
- **In most cases, vaginal discharge comes from infections that are not sexually transmitted.**

Family planning providers can help their clients in various ways to prevent STIs, including infection with the Human Immunodeficiency Virus (HIV). Program managers and providers can choose approaches that fit their clients' needs, their training and resources, and the availability of services for referral.

What Are Sexually Transmitted Infections?

STIs are caused by bacteria and viruses spread through sexual contact. Infections can be found in body fluids such as semen, on the skin of the genitals and areas around them, and some also in the mouth, throat, and rectum. Some STIs cause no symptoms. Others may cause discomfort or pain. If not treated, some can cause pelvic inflammatory disease, infertility, chronic pelvic

pain, and cervical cancer. Over time, HIV suppresses the immune system. Some STIs can also greatly increase the chance of becoming infected with HIV.

STIs spread in a community because an infected person has sex with an uninfected person. The more sexual partners a person has, the greater his or her risk of either becoming infected with STIs or transmitting STIs.

Who Is at Risk?

Many women seeking family planning services—women in stable, mutually faithful, long-term relationships—face little risk of getting an STI. Some clients may be at high risk for STIs, however, or have an STI now. Clients who might benefit most from discussion of STI risk include those who do not have steady partners, unmarried clients, and anyone, married or unmarried, who asks or expresses concern about STIs or HIV, or that her partner may have other partners.

The risk of acquiring an STI, including HIV, depends on a person's behavior, the behavior of that person's sexual partner or partners, and how common those diseases are in the community. By knowing what STIs and what sexual behavior are common locally, a health care provider can better help a client assess her or his own risk.

Understanding their own risk for HIV and other STIs helps people decide how to protect themselves and others. Women are often the best judges of their own STI risk, especially when they are told what behaviors and situations can increase risk.

Sexual behavior that can increase exposure to STIs includes:

- Sex with a partner who has STI symptoms
- A sex partner who has recently been diagnosed with or treated for an STI
- Sex with more than one partner—the more partners, the more risk
- Sex with a partner who has sex with others and does not always use condoms
- Where many people in the community are infected with STIs, sex without a condom may be risky with almost any new partner

In certain situations people tend to change sexual partners often, to have many partners, or to have a partner who has other partners—all behaviors that increase the risk of STI transmission. This includes people who:

- Have sex for money, food, gifts, shelter, or favors
- Move to another area for work or travel often for work, such as truck driving
- Have no established long-term sexual relationship, as is common among sexually active adolescents and young adults
- Are the sexual partners of these people

What Causes STIs?

Several types of organisms cause STIs. Those caused by organisms such as bacteria generally can be cured. STIs caused by viruses generally cannot be cured, although they can be treated to relieve symptoms.

STI	Type	Sexual transmission	Nonsexual transmission	Curable?
Chancroid	Bacterial	Vaginal, anal, and oral sex	None	Yes
Chlamydia	Bacterial	Vaginal and anal sex Rarely, from genitals to mouth	From mother to child during pregnancy	Yes
Gonorrhea	Bacterial	Vaginal and anal sex, or contact between mouth and genitals	From mother to child during delivery	Yes
Hepatitis B	Viral	Vaginal and anal sex, or from penis to mouth	In blood, from mother to child during delivery or in breast milk	No
Herpes	Viral	Genital or oral contact with an ulcer, including vaginal and anal sex; also genital contact in area without ulcer	From mother to child during pregnancy or delivery	No
HIV	Viral	Vaginal and anal sex Very rarely, oral sex	In blood, from mother to child during pregnancy or delivery or in breast milk	No
Human papilloma-virus	Viral	Skin-to-skin and genital contact or contact between mouth and genitals	From mother to child during delivery	No
Syphilis	Bacterial	Genital or oral contact with an ulcer, including vaginal and anal sex	From mother to child during pregnancy or delivery	Yes
Tricho-moniasis	Parasite	Vaginal, anal, and oral sex	From mother to child during delivery	Yes

More About HIV and AIDS

- HIV is the virus that causes acquired immune deficiency syndrome (AIDS). HIV slowly damages the body's immune system, reducing its ability to fight other diseases.
- People can live with HIV for many years without any signs or symptoms of infection. Eventually, they develop AIDS—the condition when the body's immune system breaks down and is unable to fight certain infections, known as opportunistic infections.
- There is no cure for HIV infection or AIDS, but antiretroviral (ARV) therapy can slow how the disease progresses, improve the health of those with AIDS, and prolong life. ARVs also can reduce mother-to-child transmission at the time of delivery and during breastfeeding. Opportunistic infections can be treated.
- Family planning providers can help with prevention and treatment efforts for HIV/AIDS, particularly in countries where many people are infected with HIV, by:
  - Counseling about ways to reduce risk of infection (see Choosing a Dual Protection Strategy, p. 280).
  - Refer clients for HIV counseling and testing and for HIV care and treatment if the clinic does not offer such services.

Symptoms of Sexually Transmitted Infections

Early identification of STIs is not always possible. For example, chlamydia and gonorrhea often have no noticeable signs or symptoms in women. Early identification, however, is important both to avoid passing on the infection and to avoid more serious long-term health consequences. To help detect STIs early, a provider can:

- Ask whether the client or the client's partner has genital sores or unusual discharge.
- Look for signs of STIs when doing a pelvic or genital examination for another reason.
- Know how to advise a client who may have an STI.
- If the client has signs or symptoms, promptly diagnose and treat, or else refer for appropriate care.
- Advise clients to notice genital sores, warts, or unusual discharge in themselves or in their sexual partners.

Common signs and symptoms that may suggest an STI include:

Symptoms	Possible cause
Discharge from the penis—pus, clear or yellow-green drip	Commonly: Chlamydia, gonorrhea Sometimes: Trichomoniasis
Abnormal vaginal bleeding or bleeding after sex	Chlamydia, gonorrhea, pelvic inflammatory disease
Burning or pain during urination	Chlamydia, gonorrhea, herpes
Lower abdominal pain or pain during sex	Chlamydia, gonorrhea, pelvic inflammatory disease
Swollen and/or painful testicles	Chlamydia, gonorrhea
Itching or tingling in the genital area	Commonly: Trichomoniasis Sometimes: Herpes
Blisters or sores on the genitals, anus, surrounding areas, or mouth	Herpes, syphilis, chancroid
Warts on the genitals, anus, or surrounding areas	Human papillomavirus
Unusual vaginal discharge—changes from normal vaginal discharge in color, consistency, amount, and/or odor	Most commonly: Bacterial vaginosis, candidiasis (not STIs; see Common Vaginal Infections Often Confused With Sexually Transmitted Infections, below) Commonly: Trichomoniasis Sometimes: Chlamydia, gonorrhea

Common Vaginal Infections Often Confused With Sexually Transmitted Infections

The most common vaginal infections are not sexually transmitted. Instead, they usually are due to an overgrowth of organisms normally present in the vagina. Common infections of the reproductive tract that are not sexually transmitted include bacterial vaginosis and candidiasis (also called yeast infection or thrush).

- In most areas these infections are much more common than STIs. Researchers estimate that between 5% and 25% of women have bacterial vaginosis and between 5% and 15% have candidiasis at any given time.
- Vaginal discharge due to these infections may be similar to discharge caused by some STIs such as trichomoniasis. It is important to reassure clients with such symptoms that they may not have an STI—particularly if they have no other symptoms and are at low risk for STIs.

- Bacterial vaginosis and trichomoniasis can be cured with antibiotics such as metronidazole; candidiasis can be cured with anti-fungal medications such as fluconazole. Without treatment, bacterial vaginosis can lead to pregnancy complications and candidiasis can be transmitted to a newborn during delivery.

Washing the external genital area with unscented soap and clean water, and not using douches, detergents, disinfectants, or vaginal cleaning or drying agents are good hygiene practices. They may also help some women avoid vaginal infections.

Preventing Sexually Transmitted Infections

The basic strategies for preventing STIs involve avoiding or reducing the chances of exposure. Family planning providers can talk to clients about how they can protect themselves both from STIs, including HIV, and pregnancy (dual protection).

Choosing a Dual Protection Strategy

Every family planning client needs to think about preventing STIs, including HIV—even people who assume they face no risk. A provider can discuss what situations place a person at increased risk of STIs, including HIV (see Who Is At Risk?, p. 276), and clients can think about whether these risky situations come up in their own lives. If so, they can consider 5 dual protection strategies.

One person might use different strategies in different situations; one couple might use different strategies at different times. The best strategy is the one that a person is able to practice effectively in the situation that she or he is facing. (Dual protection does not necessarily mean just using condoms along with another family planning method.)

Strategy 1: Use a male or female condom correctly with every act of sex.

- One method helps protect against pregnancy and STIs, including HIV.

Strategy 2: Use condoms consistently and correctly plus another family planning method.

- Adds extra protection from pregnancy in case a condom is not used or is used incorrectly.
- May be a good choice for women who want to be sure to avoid pregnancy but cannot always count on their partners to use condoms.

Strategy 3: If both partners know they are not infected, use any family planning method to prevent pregnancy and stay in a mutually faithful relationship.

- Many family planning clients will fall into this group and thus are protected from STIs, including HIV.
- Depends on communication and trust between partners.

Other strategies, which do not involve using contraceptives, include:

Strategy 4: Engage only in safer sexual intimacy that avoids intercourse and otherwise prevents semen and vaginal fluids from coming in contact with each other's genitals.

- Depends on communication, trust, and self-control.
- If this is a person's first-choice strategy, it is best to have condoms on hand in case the couple does have sex.

Strategy 5: Delay or avoid sexual activity (either avoiding sex any time that it might be risky or abstaining for a longer time).

- If this is a person's first-choice strategy, it is best to have condoms on hand in case the couple does have sex.
- This strategy is always available in case a condom is not at hand.

Many clients will need help and guidance to make their dual protection strategy succeed. For example, they may need help preparing to talk with their partners about STI protection, learning how to use condoms and other methods, and handling practical matters such as where to get supplies and where to keep them. If you can help with such matters, offer to help. If not, refer the client to someone who can provide more counseling or skills-building, such as role-playing to practice negotiating condom use.

Contraceptives for Clients with STIs, HIV, and AIDS

People with STIs, HIV, AIDS, or on antiretroviral (ARV) therapy can start and continue to use most contraceptive methods safely. In general, contraceptives and ARV medications do not interfere with each other. There are a few limitations, however. See the table below. (Also, every chapter on a contraceptive method provides more information and considerations for clients with HIV and AIDS, including those taking ARV medications.)

Special Family Planning Considerations for Clients with STIs, HIV, AIDS, or on Antiretroviral Therapy

Method	Has STIs	Has HIV or AIDS	On Anti-retroviral (ARV) Therapy
Intrauterine device (copper-bearing or hormonal IUDs)	Do not insert an IUD in a woman who is at very high individual risk for gonorrhea and chlamydia, or who currently has gonorrhea, chlamydia, purulent cervicitis, or PID. (A current IUD user who becomes infected with gonorrhea or chlamydia or develops PID can safely continue using an IUD during and after treatment.)	A woman with HIV can have an IUD inserted. A woman with AIDS should not have an IUD inserted unless she is clinically well on ARV therapy. (A woman who develops AIDS while using an IUD can safely continue using the IUD.)	Do not insert an IUD if client is not clinically well.
Female sterilization	If client has gonorrhea, chlamydia, purulent cervicitis, or PID, delay sterilization until the condition is treated and cured.	Women who are infected with HIV, have AIDS, or are on antiretroviral therapy can safely undergo female sterilization. Special arrangements are needed to perform female sterilization on a woman with AIDS. Delay the procedure if she is currently ill with AIDS-related illness.	

Method	Has STIs	Has HIV or AIDS	On Anti-retroviral (ARV) Therapy
Vasectomy	If client has scrotal skin infection, active STI, swollen, tender tip of penis, sperm ducts, or testicles, delay sterilization until the condition is treated and cured.	Men who are infected with HIV, have AIDS, or are on antiretroviral therapy can safely undergo vasectomy. Special arrangements are needed to perform vasectomy on a man with AIDS. Delay the procedure if he is currently ill with AIDS-related illness.	
Spermicides (including when used with diaphragm or cervical cap)	Can safely use spermicides.	Should not use spermicides if at high risk of HIV, infected with HIV, or has AIDS.	Should not use spermicides.
Combined oral contraceptives, combined injectables, combined patch, combined ring	Can safely use combined hormonal methods.	Can safely use combined hormonal methods.	A woman can use combined hormonal methods while taking ARVs unless her treatment includes ritonavir.
Progestin-only pills	Can safely use progestin-only pills.	Can safely use progestin-only pills.	A woman can use progestin-only pills while taking ARVs unless her treatment includes ritonavir.
Progestin-only injectables and implants	No special considerations. Can safely use progestin-only injectables or implants.		

Cervical Cancer

What Is Cervical Cancer?

Cervical cancer results from uncontrolled, untreated growth of abnormal cells in the cervix. A sexually transmitted infection, the human papillomavirus (HPV), causes such cells to develop and grow.

HPV is found on skin in the genital area, in semen, and also in the tissues of the vagina, cervix, and mouth. It is primarily transmitted through skin-to-skin contact. Vaginal, anal, and oral sex also can spread HPV. Over 50 types of HPV can infect the cervix; 6 of them account for nearly all cervical cancers. Other types of HPV cause genital warts.

An estimated 50% to 80% of sexually active women are infected with HPV at least once in their lives. In most cases, the HPV infection clears on its own. In some women, however, HPV persists and causes precancerous growths, which can develop into cancer. Overall, less than 5% of all women with persistent HPV infection get cervical cancer.

Cancer of the cervix usually takes 10 to 20 years to develop, and so there is a long period of opportunity to detect and treat changes and precancerous growths before they become cancer. This is the goal of cervical cancer screening.

Who Is at Greatest Risk?

Some factors make women more likely to be infected by HPV. Others help HPV infection progress to cervical cancer more quickly. A woman with any of these characteristics would benefit especially from screening:

- Started having sex before age 18
- Has many sexual partners now or over the years
- Has a sexual partner who has or has had many other sexual partners
- Had many births (the more births, the greater the risk)
- Has a weak immune system (includes women with HIV/AIDS)
- Smokes cigarettes
- Burns wood indoors (as for cooking)
- Has had other sexually transmitted infections
- Has used combined oral contraceptives for more than 5 years

Screening and Treatment

Screening for cervical cancer is simple, quick, and generally not painful. A Papanicolaou (Pap) smear involves scraping a few cells from the cervix and examining them under a microscope. A woman will need to go to a facility for results and for treatment if an abnormality is found.

Before precancers become cancer, they can be frozen away with a probe filled with dry ice (cryotherapy) or cut away using a hot wire loop (loop electrosurgical excision procedure [LEEP]). Freezing is less effective for larger growths, but LEEP requires electricity and more extensive training. No hospital stay is needed for either type of treatment.

Treatment for cervical cancer includes surgery or radiation therapy, sometimes together with chemotherapy.

Promising New Approaches to Screening and Prevention

An alternative to the Papanicolaou smear is being tested. The cervix is coated with either vinegar or Lugol's iodine, which makes any abnormal cells visible to the provider. This makes possible immediate treatment if needed.

In 2006 the European Union and the United States Food and Drug Administration approved the first vaccine against cervical cancer, precancer, and genital warts. The vaccine protects against infection by 4 types of HPV that account for about 70% of all cervical cancers and an estimated 90% of all genital warts. It is approved for use among females age 9 to 26 years.

Questions and Answers About Sexually Transmitted Infections, Including HIV

1. **Does having another STI place a person at greater risk of infection if they are exposed to HIV?**

   Yes. In particular, infections that cause sores on the genitals such as chancroid and syphilis increase a person's risk of becoming infected if exposed to HIV. Other STIs, too, can increase the risk of HIV infection.

2. **Does using a condom only some of the time offer any protection from STIs, including HIV?**

   For best protection, a condom should be used with every act of sex. In some cases, however, occasional use can be protective. For example, if a person has a regular, faithful partner and has one act of sex outside of the relationship, using a condom for that one act can be very protective. For people who are exposed to STIs, including HIV, frequently, however, using a condom only some of the time will offer limited protection.

3. **Who is more at risk of becoming infected with an STI—men or women?**

   If exposed to STIs, women are more likely to become infected than men due to biological factors. Women have a greater area of exposure (the cervix and the vagina) than men, and small tears may occur in the vaginal tissue during sex, making an easy pathway for infection.

4. **Can HIV be transmitted through hugging? Shaking hands? Mosquito bites?**

   HIV cannot be transmitted through casual contact. This includes closed mouth kissing, hugging, shaking hands, and sharing food, clothing, or toilet seats. The virus cannot survive long outside of the human body. Mosquitoes cannot transmit HIV, either.

5. **Is there any truth to rumors that condoms are coated with HIV?**

   No, these rumors are false. Some condoms are covered with a wet or a powder-like material such as spermicide or cornstarch, but these are materials used for lubrication, to make sex smoother.

6. Will having sex with a virgin cure someone with an STI, including HIV?

No. Instead, this practice only risks infecting the person who has not yet had sex.

7. Will washing the penis or vagina after sex lower the risk of becoming infected with an STI?

Genital hygiene is important and a good practice. There is no evidence, however, that washing the genitals prevents STI infection. In fact, vaginal douching increases a woman's risk of acquiring STIs, including HIV, and pelvic inflammatory disease. If exposure to HIV is certain, treatment with antiretroviral medications (post-exposure prophylaxis), where available, can help reduce HIV transmission. If exposure to other STIs is certain, a provider can treat presumptively for those STIs—that is, treat the client as if he or she were infected.

8. Does pregnancy place women at increased risk of becoming infected with HIV?

Current evidence is conflicting as to whether pregnancy increases a woman's chances of infection if exposed to HIV. If she does become infected with HIV during pregnancy, however, the chances that HIV will be transmitted to her baby during pregnancy, delivery, and childbirth may be at their highest because she will have a high level of virus in her blood. Thus, it is important for pregnant women to protect themselves from HIV and other STIs through condom use, mutual faithfulness, or abstinence. If a pregnant woman thinks that she may have HIV, she should seek HIV testing. Resources may be available to help her prevent transmitting HIV to her baby during pregnancy, delivery, and childbirth.

9. Is pregnancy especially risky for women with HIV/AIDS and their infants?

Pregnancy will not make the woman's condition worse. HIV/AIDS may increase some health risks of pregnancy, however, and may also affect the health of the infant. Women with HIV are at greater risk of developing anemia and infection after vaginal delivery or caesarean section. The level of risk depends on such factors as a woman's health during pregnancy, her nutrition, and the medical care she receives. Also, the risk of these health problems increases as HIV infection progresses into AIDS. Further, women with HIV/AIDS are at greater risk of having preterm births, stillbirths, and low birthweight babies.

10. Does using hormonal contraception increase the risk of becoming infected with HIV?

The best evidence is reassuring. Recent studies among family planning clients in Uganda and Zimbabwe and women in a study in South Africa found that users of DMPA, NET-EN, or combined oral contraceptives were no more likely to become infected with HIV than women using nonhormonal methods. Use of hormonal methods is not restricted for women at high risk for HIV or other STIs.

11. How well do condoms help protect against HIV infection?

On average, condoms are 80% to 95% effective in protecting people from HIV infection when used correctly with every act of sex. This means that condom use prevents 80% to 95% of HIV transmissions that would have occurred without condoms. (It does *not* mean that 5% to 20% of condom users will become infected with HIV.) For example, among 10,000 uninfected women whose partners have HIV, if each couple has vaginal sex just once and has no additional risk factors for infection, on average:

- If all 10,000 did not use condoms, about 10 women would likely become infected with HIV.
- If all 10,000 used condoms correctly, 1 or 2 women would likely become infected with HIV.

The chances that a person who is exposed to HIV will become infected can vary greatly. These chances depend on the partner's stage of HIV infection (early and late stages are more infectious), whether the person exposed has other STIs (increases susceptibility), male circumcision status (uncircumcised men are more likely to become infected with HIV), and pregnancy (women who are pregnant may be at higher risk of infection), among other factors. On average, women face twice the risk of infection, if exposed, that men do.