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.
- **STI risk can be reduced in other ways, too**—limiting number of partners, abstaining from sex, and having a mutually faithful relationship with an uninfected partner.
- **STIs often have no signs or symptoms, particularly in women.** People should seek care if they think that they or their partners might have an STI.
- **Some STIs can be treated.** The sooner treated, the less likely to cause long-term health problems, such as infertility or chronic pain, or to infect a sexual partner or a fetus.
- **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, viruses, and parasites 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 can cause discomfort or pain. If not treated, some can cause pelvic inflammatory disease, infertility, chronic pelvic pain, and cervical cancer. 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 people seeking family planning services are in stable, mutually faithful, long-term relationships and so 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 or his 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 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. People 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
- Sex with a 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
- Sex without a condom with almost any new partner in a community where many people have STIs

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

- Have sex in exchange for money, food, gifts, shelter, or favors
- Move to another area for work, or travel often for work, such as truck drivers
- 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

- HIV is the virus that causes acquired immunodeficiency 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. If not treated, however, eventually 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, but antiretroviral (ARV) therapy can slow the progress of HIV disease, improve health, prolong life, and reduce the risk of transmission to others. ARVs also can reduce mother-to-child transmission at the time of delivery and during breastfeeding. Opportunistic infections can be treated.
- People at high risk of exposure to HIV can take PrEP—pre-exposure prophylaxis—to prevent HIV infection. PrEP consists of some of the same ARV drugs also used to treat infection. Hormonal contraceptives and PrEP can be taken at the same time. The effectiveness of the contraception and of PrEP are not affected. Condom use while taking PrEP will help prevent both HIV and other STIs.
- Family planning providers can help with prevention and treatment efforts for HIV, particularly in countries where many people are living with HIV, by:
  - Counseling about ways to reduce risk of infection (see Choosing a Dual Protection Strategy, p. 336).
  - Counseling a couple that wants to have a child, and one partner has HIV, about how to conceive while trying to prevent HIV transmission to the uninfected partner (see box, next page).
  - Referring clients for HIV counseling and testing and for HIV care and treatment if the clinic does not offer such services.

For information on family planning methods for people living with HIV, see Contraceptives for Clients with STIs, including HIV, p. 338.

Safer Conception for HIV Serodiscordant Couples

When a couple wants to have a child and one partner has HIV while the other does not (a serodiscordant couple), counseling and care can make these points:

- The partner with HIV should take antiretroviral (ARV) therapy consistently and correctly until the HIV is suppressed to the point that it cannot be detected.
- If the partner with HIV is not virally suppressed on ARV therapy, the partner who does not have HIV (HIV-negative) can consider taking pre-exposure prophylaxis (PrEP) with ARVs during the period when they are trying to conceive (see Fertility Awareness Methods, page 291).
- In some settings where available, if the woman has HIV but the man does not, a safe option for conception is artificial insemination with the uninfected partner's semen.

Both partners should be screened and treated for any other STIs before trying for conception.

Early Identification

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

- Ask the client's sexual history and assess the risk of having an STI
- 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
- Promptly diagnose and treat, or else refer for appropriate care, the client who has signs or symptoms
- Advise clients to notice genital sores, warts, or unusual discharge in themselves or in their sexual partners
- For clients without STI signs or symptoms but who are at high risk for STIs, encourage syphilis screening and, when feasible, screening for gonorrhea and chlamydial infection

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 discharge or pain during 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 cervical discharge—changes from normal vaginal discharge in color, consistency, amount, and/or odor	Most commonly: Bacterial vaginosis, candidiasis (see Common Vaginal Infections That May Not Be Sexually Transmitted, next page) Commonly: Trichomoniasis Sometimes: Chlamydia, gonorrhea

Common Vaginal Infections That May Not Be Sexually Transmitted

The most common vaginal infections usually are due to an overgrowth of organisms normally present in the vagina. They may or may not be sexually transmitted. These infections include candidiasis (also called yeast infection or thrush) and bacterial vaginosis. Candidiasis is not usually sexually transmitted. Recent research links bacterial vaginosis with sexual behavior, but even women who have never had sex can, rarely, develop bacterial vaginosis.

- 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 can be cured with antibiotics; 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.

Avoiding Sexually Transmitted Infections

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. 330), 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 are in 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 or otherwise prevents semen and vaginal fluids from coming in contact with each other's genitals.

- This strategy will not prevent syphilis, genital herpes, or infection with human papillomavirus. These spread through skin-to-skin contact.
- 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.

People at high risk of HIV infection can take PrEP—pre-exposure prophylaxis. This daily treatment with oral antiretroviral drugs greatly reduces the chances of infection if exposed to HIV. PrEP can be a part of any dual protection strategy. PrEP can be used along with condoms and any other family planning method. Taking PrEP and a hormonal contraceptive at the same time does not reduce the effectiveness of either one.

Many clients will need help, support, 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, Including HIV

People with STIs and people with HIV, whether or not they are taking antiretroviral (ARV) therapy, can start and continue to use most contraceptive methods safely. 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, including those taking ARV medications.)

Special Family Planning Considerations for Clients with STIs, including HIV

Method	Has STIs	Has HIV
Intrauterine device (copper-bearing IUD or LNG-IUD)	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 clinical disease that is mild or with no symptoms, including a woman on ARV therapy, can have an IUD inserted. Generally, a woman should not have an IUD inserted if she has HIV clinical disease that is severe or advanced (WHO Stages 3 or 4). A woman using an IUD who becomes infected with HIV or whose HIV clinical disease becomes severe or advanced (WHO Stages 3 or 4) can safely continue using the IUD. A woman using an IUD can keep the IUD in place when she starts ARV therapy.
Female sterilization	If client has gonorrhea, chlamydia, purulent cervicitis, or PID, delay sterilization until the condition is treated and cured.	Women with HIV, including women on ARV therapy, can safely undergo female sterilization. The procedure may need to be delayed if she currently has an HIV-related illness.

Method	Has STIs	Has HIV
Vasectomy	If client has scrotal skin infection, active STI, or swollen, tender tip of penis, sperm ducts, or testicles, delay sterilization until the condition is treated and cured.	Men who are living with HIV, including men on ARV therapy, can safely undergo vasectomy. The procedure may need to be delayed if he currently has an HIV-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. Generally, should not use spermicides if she has HIV infection.
Combined oral contraceptives, monthly injectables, combined patch, combined ring	Can safely use combined hormonal methods.	Can safely use combined hormonal methods.
Progestin-only pills, injectables, and implants	Can safely use progestin-only methods.	Can safely use progestin-only methods. There is some concern that using a progestin-only injectable could make a woman more likely to develop HIV infection if exposed to the virus (see Progestin-Only Injectables, Question 2, p. 92). However, a woman who already has HIV can safely use a progestin-only injectable.

Cervical Cancer

What Is Cervical Cancer?

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

HPV is found on skin in the genital area 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; 7 of them account for nearly all cervical cancers, with 2 types accounting for about 70% of cancers. Two other types of HPV cause most cases of 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 women with persistent HPV infection get cervical cancer.

Cancer of the cervix usually takes 10 to 20 years or more 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. Other factors make infection with the most risky types of HPV progress to cervical cancer more quickly. A woman with any of these characteristics would benefit especially from screening:

- Has many sexual partners now or over the years
- Has a sexual partner who has or has had many other sexual partners
- Has a weak immune system (includes women living with HIV)
- Has other sexually transmitted infections, such as herpes simplex, chlamydia, and gonorrhea
- Has had many births (the more births, the greater the risk)
- Was young when she first gave birth
- Smokes tobacco
- Has used combined oral contraceptives for more than 5 years. (This factor is weak. WHO notes that it is not in a woman's interest to discourage or prevent her from using COCs. See Facts About Combined Oral Contraceptives and Cancer, p. 4.)

Screening and Treatment

Screening for cervical cancer is simple, quick, and generally not painful. Women age 30 years and older and women of any age living with HIV should be screened for cervical cancer. The screening should be repeated every 3 to 5 years. Any precancerous cervical changes that are detected can be treated successfully.

Three screening methods are recommended, depending on the capacity and conditions in a region. These methods are HPV testing, cytology (Papanicolaou, or Pap) screening, and/or visual inspection with acetic acid (VIA). The first 2 methods involve scraping a small sample of cells from the cervix. VIA involves looking at the cervix after it is coated with a weak vinegar solution. All three methods generally require a woman to go to a facility for testing (although HPV testing can use self-collected vaginal samples). Then she may have to return for the test results. VIA and some HPV tests can provide results at the first visit, and any preventive treatment needed can be offered at the same visit.

If a test finds precancerous changes, they must be treated to prevent progression to cancer. These changes can be removed by freezing with a probe (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. Both treatments are generally well-tolerated and effective.

Treatment for cervical cancer includes surgery or radiation therapy, sometimes together with chemotherapy. Treatment can be effective if the cancer is detected early. Women with advanced cervical cancer, however, have a high mortality rate.

Vaccine Available for Prevention

In the mid 2000s the European Union and the United States Food and Drug Administration approved 2 vaccines against cervical cancer, precancer, and genital warts. One vaccine, called Gardasil, 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. The other vaccine, Cervarix, protects against the 2 main cancer-causing HPV types. Both vaccines are most effective when administered to girls before they become sexually active. They are available through GAVI—the Global Alliance for Vaccines and Immunization—and they are offered by programs around the world. A new vaccine protecting against 9 HPV types, which will protect against the great majority of cervical cancers, has recently been approved and will likely become available globally in 2018.

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 frequently exposed to STIs, including HIV, however, using a condom only some of the time will offer only 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 than men (the cervix and the vagina), and small tears may occur in the vaginal tissue during sex, making an easy pathway for infection.

4. Can STIs be transmitted through oral sex (mouth on penis or vagina)?

Yes. Herpes, syphilis, hepatitis B, chlamydia, and gonorrhea can be transmitted through oral sex.

5. Can STIs be transmitted through anal sex (penis in anus)?

Yes. STIs, including HIV, are commonly transmitted through anal sex. Unprotected anal sex carries the highest sexual risk of HIV transmission.

6. 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.

7. 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.

8. 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.

9. 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.

10. Why is it especially important to prevent HIV infection during pregnancy?

If a woman becomes infected with HIV during pregnancy, 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. 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. It is not clear whether a woman who is exposed to HIV is more likely to become infected if she is pregnant.

11. Is pregnancy especially risky for women with HIV and their infants?

Pregnancy will not make the woman's condition worse. HIV infection may increase some health risks of pregnancy, however, and may also affect the health of the infant. Women living 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 if HIV infection progresses. Further, women living with HIV are at greater risk of having preterm births, stillbirths, and low birthweight babies.

12. 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), and male circumcision status (uncircumcised men are more likely to become infected with HIV), among other factors. On average, women face twice the risk of infection, if exposed, that men do.