**KENYA MEDICAL TRAINING COLLEGE**

**DEPARTMENT OR ORTHOPAEDIC**

**SUBJECT: HIV/AIDS/STI**

This unit aims at providing the learner with relevant knowledge ,skills and attitudes to prevent the spread os STI/HIV/AIDS at individual and community level

**Outcomes**

At the end of this unit the learner should be able to:-

* Demonstrate understanding of STI/HIV/AIDS and the impact of the disease in the community
* To share health messagesa with the communityon preventive measures and mgt ofSTI/HIV/AIDS
* Provid counseling services to the infected and the affecte

**CONTENT**

**Understanding STI/HIV/AIDS**

Infection,Transmission and Treatment,

 **STIs :- HIV/AIDS**

Urethral discharge, Virginal discharge, pelvic inflammatory disease (PID) Genital Ulcer Disease (GUD), Syphilis in pregnancy, Ophthalmic Neonatorum

**Public Health Problems**

**Epidimeology, consequences**

**Health Education**

Transmission and safe sex.use of condoms.access, care and disposal, home based care of persons with STYI/HIV/AIDS, referral services .

**Using coinselling skils**

Participatory dialogue, behavioural change, counseling skills

**Community mobilization**

Concept, process

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**What Is HIV?**

HIV stands for Human Immunodeficiency Virus. HIV is the virus that causes AIDS.

Your [immune system](http://www.thewellproject.org/hiv-information/understanding-immune-system) is your body's defense system. While many viruses can be controlled by the immune system, HIV targets and infects the same immune system cells that are supposed to protect us from germs and illnesses. These cells are a type of white blood cell called CD4 cells (sometimes called T-cells).

Without medication to control the virus, in most cases, HIV takes over [CD4 cells](http://www.thewellproject.org/hiv-information/understanding-cd4-cells-and-cd4-cell-tests) and turns them into factories that produce thousands of copies of the virus. As the virus makes copies, it damages or kills the CD4 cells, weakening the immune system. This is how HIV causes AIDS.

There are many different strains of HIV that are grouped into two main types:

* HIV-1: most common type worldwide
* HIV-2: found mostly in West Africa, Asia, and Europe

It is possible for one person living with HIV to carry several different strains of HIV in their body at one time.

***Click above to view or download this fact sheet as a*** [***PDF slide presentation***](http://www.thewellproject.org/sites/default/files/What%20is%20HIV%20FINAL.PDF)

**What Is AIDS?**

AIDS stands for Acquired Immune Deficiency Syndrome. AIDS is the most advanced stage of HIV infection.

HIV causes AIDS by attacking CD4 cells, which the immune system uses to protect the body from disease. When the immune system loses too many CD4 cells, you are less able to fight off infection and can develop serious, often deadly, infections. These are called [opportunistic infections](http://www.thewellproject.org/hiv-information/what-are-opportunistic-infections) (OIs).

When someone dies of AIDS, it is usually OIs or other long-term effects of HIV that cause death. AIDS refers to the weakened state of the body’s immune system that can no longer stop opportunistic infections.

**What Is the Difference Between HIV and AIDS?**

You do not have AIDS as soon as you are infected with HIV. You can live with HIV (be HIV+) for many years with no signs of disease, or only mild-to-moderate symptoms. People living with HIV and taking HIV drugs as prescribed have a very low risk of progressing to AIDS. But without treatment, HIV will eventually wear down the immune system in most people to the point that they have low numbers of CD4 cells and develop opportunistic infections. Without treatment, this usually happens in five to ten years.

The definition of AIDS was established before there was effective treatment for HIV. It indicated that a person was at higher risk for illness or death. In countries where HIV treatment is readily available, AIDS is no longer as relevant as it once was. This is because having access to effective treatment means people can stay healthier even with low CD4 counts. Also, someone could have received the AIDS diagnosis years ago even though they no longer have a low CD4 count.

The US Centers for Disease Control and Prevention (CDC) identifies someone as having AIDS if she or he is living with HIV and has one or both of these conditions:

* At least one AIDS-defining condition (see our list of [AIDS Defining Conditions](http://www.thewellproject.org/hiv-information/aids-defining-conditions))
* A [CD4 cell count](http://www.thewellproject.org/hiv-information/understanding-cd4-cells-and-cd4-cell-tests) of 200 cells or less (a normal CD4 count is about 500 to 1,500)

People with AIDS can rebuild their immune system with the help of HIV drugs and live a long healthy life. Even if your CD4 cell count goes back above 200 or an OI is successfully treated, you will still have a diagnosis of AIDS. This does not necessarily mean you are sick or will get sick in the future. It is just the way the public health system counts the number of people who have had advanced HIV disease.

**How Do I Know If I Have HIV?**

Most people cannot tell that they have been exposed or infected. Initial, or acute symptoms of HIV infection may show up within two to four weeks of exposure to HIV, and can include:

* Fever
* Swollen glands
* Sore throat
* Night sweats
* Muscle aches
* Headache
* Extreme tiredness
* Rash

Some people do not notice the symptoms because they are mild, or people think they have a cold or the flu. After the 'flu-like' symptoms that often accompany initial infection, people living with HIV can go years without showing any symptoms. The only way to know for sure if you are infected is to take an [HIV test](http://www.thewellproject.org/hiv-information/hiv-testing).

If you have some of the initial or acute symptoms of HIV, it is important that you be tested for HIV antigen (not just HIV antibody). Antigens are pieces of the HIV virus or viral particles. If an HIV antigen is your blood, there are tests that can identify HIV infection as quickly as two weeks after exposure to HIV.

Antibodies are proteins that your body makes to mark HIV for destruction by your immune system. The body takes one to three months and occasionally up to six months to develop antibodies to HIV. This three to six month period between getting HIV and the production of antibodies is called the "window period." Therefore, the results of tests that detect antibodies are only reliable one to three months after your exposure to HIV.

**Do I Need to Get Tested for HIV?**

The CDC estimates that about one in five people living with HIV in the US do not know they have HIV. Many of these people look and feel healthy and do not think they are at risk. But the truth is that anyone of any age, gender, race, ethnicity, sexual orientation, social group, or economic class can become infected. Humans may [discriminate](http://www.thewellproject.org/hiv-information/stigma-and-discrimination-against-women-living-hiv) on the basis of these factors, but the virus does not. For more on how HIV is spread, see our fact sheet on [HIV transmission](http://www.thewellproject.org/hiv-information/hiv-transmission).

To see if you need to get tested for HIV, answer the following questions:

* Have you ever had penile-vaginal, penile-anal, or [oral sex](http://www.thewellproject.org/hiv-information/oral-sex-what%E2%80%99s-real-risk) without a condom or other latex barrier (e.g., dental dam)? Note: oral sex is a low risk activity. Vaginal and anal sex are much higher risk.
* Are you uncertain of your partner’s status or is your partner living with HIV?
* Are you [pregnant](http://www.thewellproject.org/hiv-information/pregnancy-and-hiv) or considering [becoming pregnant](http://www.thewellproject.org/hiv-information/getting-pregnant-and-hiv)?
* Have you ever had a [sexually transmitted infection or disease (STI or STD)](http://www.thewellproject.org/hiv-information/sexually-transmitted-infections-or-diseases-stis-or-stds)?
* Do you have [hepatitis C (HCV)](http://www.thewellproject.org/hiv-information/hepatitis-c-hcv)?
* Have you ever shared needles, syringes, or other equipment to inject drugs (including steroids or hormones)?

If you answered yes to any of these questions, you should definitely get an HIV test. In the US, it is now recommended that everyone age 13-64 be screened for HIV at least once.

**Why Should I Get Tested?**

If you are worried because you think you may have been exposed to HIV, get tested. Then, if you learn you are negative (not infected), you can stop worrying. If you test HIV+ there are effective medications to help you stay well. But you cannot get the health care and treatment you need if you do not know your HIV status (whether you are living with HIV or HIV-negative). Being unaware of your status also means you could pass HIV to others without knowing it.

For women who plan to become pregnant, testing is especially important. If a woman is infected with HIV, medical care and certain drugs given during pregnancy can lower the chance of passing HIV to her baby. For more information, see our fact sheet on [Pregnancy and HIV](http://www.thewellproject.org/hiv-information/pregnancy-and-hiv).

In the US, you can go to the National HIV and STD Testing Resources [website](http://hivtest.cdc.gov/Default.aspx) or the AIDS.gov [website](http://aids.gov/hiv-aids-basics/prevention/hiv-testing/hiv-test-locations/) to find a testing location near you. You can also call the CDC’s information line at 800-232-4636 or call your state’s HIV/AIDS hotline (numbers listed [here](http://hab.hrsa.gov/gethelp/statehotlines.html)). To find services across the world, visit [AIDSmap’s e-atlas](http://www.aidsmap.com/e-atlas). For more on getting tested for HIV - types of tests, how they work, and where to get them - see our fact sheet on [HIV Testing](http://www.thewellproject.org/hiv-information/hiv-testing).

**How Is HIV Spread?**

HIV is spread primarily through contact with the following body fluids:

* Blood (including menstrual blood)
* Semen (“cum”) and other male sexual fluids ("pre-cum")
* Vaginal fluids
* Breast milk

The most common ways HIV is spread from person-to-person is through [unprotected sex](http://www.thewellproject.org/hiv-information/safer-sex) (no condoms or other barriers), [sharing needles](http://www.thewellproject.org/hiv-information/cleaning-equipment-injecting-drugs) used for injecting drugs, and [mother-to-child](http://www.thewellproject.org/hiv-information/pregnancy-and-hiv) (during pregnancy, birth, or breast-feeding).

HIV is **not** spread through contact with these body fluids:

* Sweat
* Tears
* Saliva (spit)
* Feces (poop)
* Urine (pee)

In other words, you CANNOT get HIV by touching or hugging someone who is living with HIV, kissing someone living with HIV, or by using a toilet also used by someone living with HIV.

**Is There a Vaccine or Cure for HIV?**

There is neither a vaccine nor a cure for HIV. The best way to prevent HIV is to use consistent prevention methods, including [safer sex](http://www.thewellproject.org/hiv-information/safer-sex) (choosing low- or no-risk activities, using condoms, taking [PrEP](http://www.thewellproject.org/hiv-information/prep-women)) and using sterile needles (for drugs, hormones or tattoos). For more information, see our fact sheet on [HIV Vaccines](http://www.thewellproject.org/hiv-information/hiv-vaccines).

**Additional Information**

As you learn more about HIV, you may find these articles helpful:

* [HIV Testing](http://www.thewellproject.org/hiv-information/hiv-testing)
* [Did You Just Test HIV+?](http://www.thewellproject.org/hiv-information/did-you-just-test-hiv)
* [Considerations Before Starting HIV Treatment](http://www.thewellproject.org/hiv-information/considerations-starting-hiv-treatment)
* [HIV Transmission](http://www.thewellproject.org/hiv-information/hiv-transmission)
* [Safer Sex](http://www.thewellproject.org/hiv-information/safer-sex)
* [Pregnancy and HIV](http://www.thewellproject.org/hiv-information/pregnancy-and-hiv)
* [Women and HIV](http://www.thewellproject.org/hiv-information/women-and-hiv)

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## How HIV Spreads

Many people still do not understand how HIV is passed, or transmitted, from one person to another. Knowing the basics helps you avoid getting the virus if you are HIV-negative, and avoid giving it to someone else if you are living with HIV (HIV+).

The spread of HIV can be prevented! There are ways to avoid, or at least reduce, contact with body fluids that spread HIV. This article explains how.

HIV is spread through contact with the following body fluids:

* Blood (including menstrual blood and any blood in saliva, urine, and feces)
* Semen ("cum") and other male sexual fluids ("pre-cum")
* Vaginal fluids
* Breast milk

HIV is also spread through contact with these body fluids; however, usually only health care workers come into contact with these fluids:

* Fluid around the brain and spinal cord (cerebrospinal fluid)
* Fluid around the joints (synovial fluid)
* Fluid around a developing fetus (amniotic fluid)

HIV is **not** spread through contact with these body fluids:

* Sweat
* Tears
* Saliva (spit)
* Feces (poop)
* Urine (pee)

In other words, you CANNOT get HIV by touching or hugging someone who is living with HIV, kissing someone living with HIV, or by using a toilet also used by someone living with HIV.

## Methods of Transmission

Today, the most common ways HIV is passed from one person to another are:

* Re-using and sharing needles or other equipment for injecting drugs (including steroids or hormones)
* Unprotected/unsafe sex (no [condoms](http://www.thewellproject.org/hiv-information/talking-your-partner-about-condoms) or other barriers)
* Mother-to-child (during [pregnancy](http://www.thewellproject.org/hiv-information/pregnancy-and-hiv), birth, or breast-feeding)

### Re-using and Sharing Needles for Injecting Drugs

* **Injecting Drugs (including steroids or hormones):** Many HIV infections occur when people share the equipment used to inject heroin, methamphetamines, steroids, hormones, or other drugs. Re-using syringes, needles, water, spoons, "cookers," or "cottons" can spread HIV. Be sure to use syringes and needles only from reliable sources, such as needle exchange programs or pharmacies. Many cities offer free needle and syringe exchange programs. For more information, see our fact sheet on [Cleaning Works](http://www.thewellproject.org/hiv-information/cleaning-equipment-injecting-drugs).
* **Tattoos or Body Piercings:** Tattoos or body piercings should always be done by a licensed professional whose equipment, including ink, is sterile. The US Centers for Disease Control and Prevention (CDC) recommends that instruments be used only once and then thrown away. Reusable instruments must be sterilized between uses. Using alcohol to clean instruments is not enough. Proper sterilization involves having instruments steam sterilized, or autoclaved.

### Unprotected/Unsafe Sex

Every sexual act (oral, anal, or vaginal) that involves sexual fluids has at least some risk. Barriers, such as condoms (male and female), dental dams (thin squares of latex), and latex gloves help reduce risk substantially.

Unsafe sex (sex without condoms or barriers) puts you and/or your partner at risk for HIV or other [sexually transmitted diseases](http://www.thewellproject.org/hiv-information/sexually-transmitted-infections-or-diseases-stis-or-stds) (STDs).

[Safer sex](http://www.thewellproject.org/hiv-information/safer-sex) (sex using [condoms](http://www.thewellproject.org/hiv-information/talking-your-partner-about-condoms) or other barriers consistently and correctly) is the most effective way to protect you and your partner.

Which common sexual activities are most likely to cause HIV transmission when safer sex is not used? Listed from most to least risky:

1. **Receptive anal sex ("bottoming"):** Taking a penis through one's anus and into one's rectum remains the most risky activity. This is due to the likelihood of small tears in the rectum that allow semen ("cum") to have direct contact with the bloodstream.
2. **Receptive vaginal intercourse:** This refers to taking a penis into one's vagina. HIV is transmitted from men to women much more easily than from women to men.
3. **Insertive anal sex ("topping"):** Putting one's penis into someone else's anus and rectum can expose you to HIV.
4. **Insertive vaginal intercourse:** Putting one's penis into a vagina, especially when the woman is menstruating, can expose you to HIV.
5. **Giving oral sex:** Using one's mouth to lick, suck, or bite another person's genitals (penis, vagina, or anus) can expose you to HIV. Swallowing semen ("cum"), licking menstrual blood, and having bleeding gums, mouth ulcers, or gum disease will increase your risk of getting HIV.
6. **Receiving oral sex:** Having your genitals licked, sucked, or bitten is less risky than giving oral sex. However, you can get HIV from your partner, especially if your partner has bleeding gums, mouth ulcers, or gum disease.
7. **Sharing sex toys without sterilizing them or using a new condom:** This can allow HIV to be transmitted from the first partner to the next one who uses the toy.
8. **Mutual masturbation (hand jobs), fingering, and fisting (using a hand to penetrate the anus or vagina):** These are relatively low risk, as long as your hand has no open cuts or sores.

Sexual assault or rape can result in infection if the attacker is living with HIV. The risk increases when rape involves anal penetration, force, and/or multiple attackers. Some forced sexual acts involving wounds can place a victim at very high risk.

Survivors of sexual assault or rape who do not already have HIV should be routinely offered PEP (post-exposure prophylaxis; also called non-occupational PEP, or nPEP) in emergency rooms. This 28-day treatment with HIV drugs greatly reduces the chances of becoming infected with HIV. PEP must be started within the first 72 hours of exposure to be effective. The earlier treatment is started, the more effective it will be. If PEP is not offered in the emergency room or clinic after a rape or sexual assault, do not be afraid to ask for it.

### Perinatal Transmission

Women living with HIV can pass the virus to their babies while [pregnant](http://www.thewellproject.org/hiv-information/pregnancy-and-hiv), during birth, or by breastfeeding. This is called perinatal or vertical transmission, and is also known as mother-to-child transmission. The good news is that medical care and HIV drugs given during pregnancy can almost eliminate the risk of a baby getting HIV from its mother.

In resource-rich countries like the US, it is recommended that mothers living with HIV not breastfeed their babies. In other countries, where formula is unavailable or clean water sources are unreliable, it is recommended that mothers breastfeed their babies exclusively (no mixed feeding, such as some breast milk and some gripe or sugar water). It is also important not to feed your baby food that has been chewed by someone who is living with HIV (pre-masticated). This can spread HIV to your child. For more information, see our fact sheet on [Pregnancy and HIV](http://www.thewellproject.org/hiv-information/pregnancy-and-hiv).

### Other Types of Transmission

In the past, HIV was spread by transfusion with blood products, such as whole blood or the "factor" used by hemophiliacs. Many people were infected this way. The blood supply is now much more strictly tested and controlled in most countries. The odds of being infected from receiving blood or blood factor in countries like the US, the UK, and Canada are extremely low. However, there are still several countries that do not screen all blood donations for HIV.

It is also possible to get HIV from skin grafts or transplanted organs taken from people living with HIV. Again, the risk is considered very low, as these 'body products' are required to be strictly tested in the same way as blood products. Semen donations collected by sperm banks for artificial insemination are also considered 'body products' and strictly tested in high-resource countries. Private semen samples that are not processed by sperm banks or similar organizations are not subject to the same testing. It is important for anyone receiving a private donor's sperm for artificial insemination to have the donor tested for HIV.

Some people, mostly health care workers, are infected through needle sticks with infected blood, or through other medical accidents. This is a very small percentage of overall infections. According to the CDC, only three in every 1,000 exposures to HIV-infected blood at work, if left untreated, will result in HIV infection. When exposed to fluid or body products that may be infected while on the job, health care workers should be offered occupational post-exposure prophylaxis (oPEP) immediately.

If you are getting breast milk from a milk bank, it is important to ask if the bank tests the milk for HIV. Also, if your baby is getting breast milk from a wet nurse, it is important to make sure that she tests negative for HIV before giving her milk to your baby.

## Rare Types of Transmission

There are a few isolated cases of people becoming infected from using a razor that had just been used by a person living with HIV, or from using a toothbrush immediately after the toothbrush was used by someone living with HIV, or in other unexpected ways. One case of transmission occurred when two people, both of whom had bleeding gums and/or open sores in their mouths, engaged in deep or "French" kissing. In this situation, they were exposed not only to each other's saliva (which does not carry HIV), but also to each other's blood (which can spread HIV). To be safe, always avoid direct contact with blood and sexual fluids.

## Avoiding Transmission

HIV cannot be transmitted except when certain body fluids are exchanged. You can greatly reduce the risk of transmission by:

* Knowing your HIV status so you can take steps to avoid spreading HIV if you are living with HIV; for more information, see our fact sheet on [HIV Testing](http://www.thewellproject.org/hiv-information/hiv-testing)
* Practicing [safer sex](http://www.thewellproject.org/hiv-information/safer-sex)
* Having unprotected sex only if you and your partner are both HIV-negative and in a monogamous relationship
* Abstaining from sex
* Not injecting drugs
* Using new or [clean needles](http://www.thewellproject.org/hiv-information/cleaning-equipment-injecting-drugs) and other equipment for any injections
* Staying on your HIV drug regimen if you are living with HIV. This will keep your [viral load](http://www.thewellproject.org/hiv-information/women-and-viral-load) as low as possible. Keeping your viral load low will reduce the risk of your passing HIV to others (sexual partners, mother-to-child). This is often referred to as taking [HIV treatment as prevention](http://www.thewellproject.org/hiv-information/hiv-treatment-prevention-tasp).

You do not need to be afraid of getting or passing HIV by casual contact. Remember, HIV is **not** transmitted by:

* Hugs
* Dancing
* Sharing food or drinks
* Using a toilet, shower, bath, or bed
* Kissing (between people with no significant dental problems)
* Sharing exercise equipment
* Bug bites
* **Treatment & Care**
* Without treatment, nearly everyone with HIV will get AIDS. These links will give you all the information you need to get the best treatment and care.
* **Treatment**
* [HIV Treatment](http://www.webmd.com/hiv-aids/guide/understanding-aids-hiv-treatment)
* When people discover they have HIV, they may not begin taking medications immediately. The decision to start treatment for HIV is individual and considers a person's past medical history, the length of time they've been infected with HIV, current CD4 T cell count, and current health.
* [HIV Vaccines](http://www.webmd.com/hiv-aids/guide/hiv-vaccines-where-are-we-now)
* Two main types of HIV vaccines are currently being tested -- preventive and therapeutic.
* [Alternative Medicine for HIV and AIDS](http://www.webmd.com/hiv-aids/guide/aids-hiv-alternative-medicine)
* Antiretroviral therapies have brought renewed hope for many people living with HIV. However, they do not offer a cure, and they can cause many side effects.
* [HIV Treatment: Coping With Side Effects](http://www.webmd.com/hiv-aids/guide/hiv-drug-side-effects)
* Here are some common side effects of HIV treatment and tips for coping with them.
* [Finding an HIV/AIDS Doctor](http://www.webmd.com/hiv-aids/guide/aids-doctors-finding-your-doctor)
* The HIV/AIDS doctor you choose should be knowledgeable about HIV and have experience treating patients with HIV and AIDS. You'll also want to find a person with whom you feel at ease and can talk comfortably.
* [Expanding HIV and AIDS Drug Options](http://www.webmd.com/hiv-aids/guide/aids-hiv-medication)
* Today, HIV-positive people have many options for AIDS and HIV medication.
* [HIV Treatment in Children](http://www.webmd.com/hiv-aids/guide/hiv-treatment-in-children-topic-overview)
* If HIV is diagnosed before it becomes AIDS, medicines can slow or stop the damage to the immune system. Early treatment can help your child live a long and active life.
* **Care**
* [AIDS Care](http://www.webmd.com/hiv-aids/guide/aids-care)
* Are you caring for someone with AIDS? You must read this CDC guide.

# HIV / AIDS: Symptoms, Diagnosis, Prevention and Treatment

### Symptoms

* Most people who have become recently infected with HIV will not have any symptoms. They may, however, have a flu-like illness within a month or two after exposure to the virus, with fever, headache, tiredness, and enlarged lymph nodes (glands of the immune system easily felt in the neck and groin). These symptoms usually disappear within a week to a month and are often mistaken for those of other viral infections. During this period, people are very infectious, and HIV is present in large quantities in blood, semen, and vaginal fluids.
* More severe HIV symptoms—such as profound and unexplained fatigue, rapid weight loss, frequent fevers, or profuse night sweats—may not appear for 10 years or more after HIV first enters the body in adults, or within two years in children born with HIV infection.

### Diagnosis

* Your health-care provider can diagnose HIV by testing blood for the presence of antibodies (disease-fighting proteins) to HIV. It may take HIV antibodies as long as six months after infection to be produced in quantities large enough to show up in standard blood tests. For that reason, make sure to talk to your health-care provider about follow-up testing.

### Prevention

* Because there is no cure or vaccine to prevent HIV, the only way people can prevent infection from the virus is to avoid high-risk behaviors putting them at risk of infection, such as having unprotected sex or sharing needles.
* NIAID urges everyone ages 13 to 64 to get tested for HIV as part of their routine health care. Catching HIV in its early stages can make a lifesaving difference.

### Treatment

* NIAID and other researchers have developed drugs to fight both HIV infection and its associated infections and cancers. In combination with early detection through HIV testing, available HIV therapies can greatly extend years and quality of life, and have resulted in a dramatic decrease in AIDS deaths in the U.S.

### NIH Research to Results

The NIH is working to find new and effective ways to prevent HIV. Research is focused on:

* Behavioral strategies designed to increase condom usage, delay sexual activity among young people, and reduce sexually transmitted infections, which can make people more susceptible to HIV infection.
* Using HIV medicines that can treat HIV as a way to prevent infection among high-risk groups.
* Microbicides—gels, creams, or foams—that women could use to protect themselves against HIV.
* Developing a safe, effective vaccine against HIV infection.
* Drug abuse intervention and treatment programs to prevent HIV transmission among injection drug users.

## Treatments and drugs

There's no cure for HIV/AIDS, but a variety of drugs can be used in combination to control the virus. Each class of anti-HIV drugs blocks the virus in different ways. It's best to combine at least three drugs from two classes to avoid creating strains of HIV that are immune to single drugs.

The classes of anti-HIV drugs include:

* **Non-nucleoside reverse transcriptase inhibitors (NNRTIs).** NNRTIs disable a protein needed by HIV to make copies of itself. Examples include efavirenz (Sustiva), etravirine (Intelence) and nevirapine (Viramune).
* **Nucleoside or nucleotide reverse transcriptase inhibitors (NRTIs).** NRTIs are faulty versions of building blocks that HIV needs to make copies of itself. Examples include Abacavir (Ziagen), and the combination drugs emtricitabine-tenofovir (Truvada), and lamivudine-zidovudine (Combivir).
* **Protease inhibitors (PIs).** PIs disable protease, another protein that HIV needs to make copies of itself. Examples include atazanavir (Reyataz), darunavir (Prezista), fosamprenavir (Lexiva) and indinavir (Crixivan).
* **Entry or fusion inhibitors.** These drugs block HIV's entry into CD4 cells. Examples include enfuvirtide (Fuzeon) and maraviroc (Selzentry).
* **Integrase inhibitors.** These drugs work by disabling integrase, a protein that HIV uses to insert its genetic material into CD4 cells. Examples include raltegravir (Isentress), elvitegravir (Vitekta) and dolutegravir (Tivicay).

### When to start treatment

Everyone with HIV infection, regardless of CD4 count, should be offered antiviral medication.

HIV therapy is particularly important for the following situations:

* You have severe symptoms.
* You have an opportunistic infection.
* Your CD4 count is under 350.
* You're pregnant.
* You have HIV-related kidney disease.
* You're being treated for hepatitis B or C.

### Treatment can be difficult

HIV treatment regimens may involve taking multiple pills at specific times every day for the rest of your life. Side effects can include:

* Nausea, vomiting or diarrhea
* Heart disease
* Weakened bones or bone loss
* Breakdown of muscle tissue (rhabdomyolysis)
* Abnormal cholesterol levels
* Higher blood sugar levels

### Other diseases and treatment

Some health issues that are a natural part of aging may be more difficult to manage if you have HIV. Some medications that are common for age-related cardiovascular, metabolic and bone conditions, for example, may not interact well with anti-HIV medications. Talk to your doctor about other conditions for which you're taking medication.

### Treatment response

Your doctor will monitor your viral load and CD4 counts to determine your response to treatment. Viral load should be tested at the start of treatment and then every three to four months during therapy. CD4 counts should be checked every three to six months.

HIV treatment should reduce your viral load to the point that it's undetectable. That doesn't mean your HIV is gone. It just means that the test isn't sensitive enough to detect it. You can still transmit HIV to others when your viral load is undetectable.

# What is an STI or Sexual Transmitted Infection?



You can get an STI by sexual intercourse but also through oral sex, anal sex or contact with bodily fluids such as sperm, saliva, blood, and vaginal discharge. Very few STI’s can be transmitted through skin contact. Here is more information about how to prevent getting one and what to do if you have one.

STI’s are infections that are transmitted through sexual contact. The most important ones are Chlamydia, Gonorrhea, Genital and anal warts, Trichomoniasis, Hepatitis B, Genital Herpes, Syphilis, HIV/AIDS and Pubic lice. An yeast infection (Candida) is not transmitted by sexual contact.

##### How do you prevent getting an STI?

The best way to protect yourself from getting an STI is using condoms. After intercourse, make sure the sperm remains in the condom. Sometime it fails; a condom breaks, a boy or man does not want to use a condom. A STI can also be the result of rape.

##### What are the symptoms of an STI?

STIâ€™s do not always give symptoms. Therefore some people do not know they have an STI and that they can infect others.
Symptoms that can be caused by a STI are:
- more vaginal discharge then usual
- pain with urinating or only urinating small amounts
- irritability and itching of the vagina
- pain while having sex
- abnormal blood loss between menstruations or after sex
- pain in belly and fever
- ulcers, warts, blisters on the vulva or vagina, anus, mouth
- pain in the throat (after oral sex)

##### What should you do if you think you have an STI?

Do not hesitate to have an exam. If you have a STI, you need treatment. A STI does not go away by itself . Other STIs such as HIV/AIDS should also be excluded. Ask your doctor to test your blood or make a culture.

CHLAMYDIA is caused by a bacterium and infects the mucous membranes in the anus, mouth, and genital areas. Symptoms include abnormal genital discharge or pain during urination, which appear within 1 to 3 weeks after exposure; however, half of infected women and 25 percent of infected men may have no symptoms whatsoever. Pelvic inflammatory disease is a serious complication of Chlamydia infection and a major cause of infertility of women. Chlamydia is treated and cured with antibiotics.

GONORRHEA is caused by bacteria and most commonly spread during genital or oral contact (pharyngeal gonorrhea). If symptoms of gonorrhea develop, they usually appear within 2 to 10 days after sexual contact with an infected partner, although a small percentage of patients may be infected for several months without showing symptoms. The initial symptoms in women include a painful or burning sensation when urinating or an abnormal purulent vaginal discharge. Man often have a purulent discharge from their penis. Gonorrhea is treated with antibiotics.

TRICHOMONIASIS is caused by a parasite; It usually affects the urethra in men, and the vagina in women. It often occurs without any symptoms. When symptoms occur, it is within 4 to 20 days of exposure. The symptoms in women include a yellow-green or gray vaginal discharge, discomfort during intercourse, vaginal odor, painful urination, irritation and itching of the female genital area. Often men do not have any symptoms. Both partners should be treated with metronidazole to eliminate the parasite.

HEPATITIS B is a viral infection. It is very contagious and easily transmitted. The virus is present in blood , sperm, vaginal discharge and urine. You can get infected through unsafe sex, contact with blood through use of toothbrush, shaving knives, etc and needles (drug users) Two out of 3 people that are infected do not notice anything. One third gets an inflammation of the liver two to sex month after being infected and complaints of mild fever, headache, muscle aches, fatigue, loss of appetite, nausea, vomiting, or diarrhea. The urine is often dark and the stools light. If it becomes chronic, it can lead to liver failure and death. Many people infected with viral hepatitis have no symptoms. Later symptoms may include dark urine and pale feces, abdominal pain and yellowing of the skin and whites of the eyes., there are no specific treatments for the acute symptoms of viral hepatitis. To prevent viral hepatitis is to avoid contact with the blood, saliva, semen, or vaginal secretions of infected individuals. People at high risk of infection should consider vaccination.

PUBIC LICE is annoying but harmless. Both partners should be treated with an anti-lice product and wash all their clothes.

GENITAL HERPES is caused by a virus. There are two types. Type 1 gives blisters on the lips, mouth and less frequencies of the genitals. Type 2 causes complaints of the genitals. Symptoms of a first episode of genital herpes usually appear within 2 to 10 days of exposure to the virus and last an average of 2 to 3 weeks. Sores appear at the site of infection, sometimes on the cervix in women or in the urinary passage in men. Other symptoms of genital herpes can include fever, headache, muscle aches, painful or difficult urination, vaginal discharge, and swollen glands in the groin area. The disease can reoccur . There is no cure for herpes but acyclovir can be used to speed healing.

SYPHILIS is caused a bacteria. The disease proceeds in stages. The first symptom of primary syphilis is a sore on the penis, the vulva, the vagina, the cervix, tongue, lips, or other parts of the body which can appear within 10 days to 3 months after exposure. The next stage of syphilis is marked by a skin rash that appears anywhere from 3 to 6 weeks after the sore appears, sometimes accompanied by symptoms like mild fever, fatigue, headache, sore throat, as well as patchy hair loss, and swollen lymph glands throughout the body. Later, when syphilis is no longer contagious, untreated syphilis can cause serious heart abnormalities, mental disorders, blindness, other neurological problems, and death. Syphilis is usually treated with penicillin or other antibiotics. In all stages of syphilis, treatment will cure the disease, but in late syphilis, damage already done to bodily organs cannot be reversed.

GENITAL AND ANAL WARTS are caused by a viruses and spread during sexual contact but sometimes also by sharing towels. They can cause warts on the penis, vagina, cervix, anus and scrotum. They can appear after a few weeks but sometimes also more then a year after infection. The warts are treated by an application of a chemical, freezing or burning.

HIV/AIDS can be transmitted through the exchange of body fluids (e.g. blood, semen, saliva, vaginal secretions and breast-milk) and through all forms of unsafe sexual intercourse (oral, vaginal, and anal) when one or both partners are infected with HIV. Within a few weeks of having been infected, many people have flu-like symptoms. However, in some cases, symptoms do not show for many years. As the infection progresses, some symptoms can include 1) swollen lymph glands 2) recurrent fever including â€œnight sweats,â€? 3) rapid weight loss for no apparent reason, 4) constant tiredness, 5) diarrhea and decreased appetite, 6) white spots or unusual blemishes in the mouth. The infected person can be diagnosed as an AIDS-patient. To protect against HIV one must use condoms at all times during sex. After a six-week to six-month period from the time of oneâ€™s last unsafe sex encounter, one can do an HIV test. Currently, there is no known cure for HIV/AIDS although there is medical treatment which delays getting AIDS.

* 

[Trich1](http://www.womenonwaves.org/en/page/736/trich1)

# The global HIV pandemic

##### to

* [Evidence-informed HIV prevention](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#item1441707)
* [Biomedical approaches](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#item1441722)
* [Individual approaches](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#item1441729)
* [Group and community approaches](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#item1441730)
* [Socio-political and structural interventions](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#item1441731)

The human immunodeficiency virus (HIV), first discovered in 1984, attacks the body’s immune system. If left undiagnosed and/or untreated, HIV can gradually weaken the immune system, making it more difficult for the infected person to fight off disease.

Acquired Immune Deficiency Syndrome (AIDS), first recognised in 1981, is the name for a collection of symptoms and illnesses that can occur if an HIV-positive person’s immune system becomes very weak as a result of HIV-related underlying immune deficiency. Since AIDS is not a disease, and because HIV infection does not inevitably lead to any one of these symptoms or illnesses, the term 'HIV-related illness' is now considered more accurate.

HIV is usually acquired in one of three ways:

* through unprotected anal or vaginal sex.
* from a mother to her baby.
* through blood-to-blood contact, including sharing non-sterile drug-use equipment.

HIV infection most commonly occurs as a result of blood, semen, vaginal fluid, anal secretions or breast milk from a person with HIV entering another person’s body.

HIV exposure occurs when there is an opportunity for HIV to enter a person’s body, for example, through unprotected anal or vaginal sex. However, HIV is not easy to acquire. Whilst it is *possible* to be sexually exposed to HIV just once and become infected, it is *very much more likely* that this will be not the case. Some people are sexually exposed to HIV many hundreds of times and never become infected. Consequently, although most cases of HIV infection worldwide are attributable to sexual exposure, an act of sexual intercourse with an HIV-positive person is more likely than not to leave an HIV-negative person uninfected. Read more in the chapter: [**Risk**](http://www.aidsmap.com/resources/law/Risk/page/1441687/).

Global HIV incidence – the number of new HIV infections per year – is now estimated to have peaked in 1996 with 3.5 million new infections per year.[1](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1356054) In 2008, the estimated number of new HIV infections was approximately 30% lower than at the epidemic’s peak 12 years earlier.[1](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1356054) The number of new infections appears to have stabilised in most regions of the world, although it is still increasing in Eastern Europe and Central Asia and in other parts of Asia.[1](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1356054)

Worldwide, half of the estimated 33.4 million people living with HIV in 2008 were female[1](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1356054) and HIV is the leading cause of disease and death for women of childbearing age.[2](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1498290) Sub-Saharan Africa remains the global region most affected by HIV and AIDS – more than two-thirds of all people with HIV live in sub-Saharan Africa. In high-income countries with a low overall prevalence of HIV, sub-populations most affected by HIV include: gay men and other men who have sex with men; migrants; people who inject drugs; and sex workers.[1](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1356054)

Researchers first succeeded in developing effective anti-HIV drugs in the mid-late 1990s. Combinations of these drugs, which are known collectively as antiretroviral therapy (ART), reduce levels of HIV in the blood and other bodily fluids, allowing the immune system to recover, and reducing the possibility of infectiousness. Most people who take ART on an ongoing basis are able to maintain good health for many years. ART is the standard of care for HIV treatment in wealthy countries, and is gradually becoming the standard of care in resource-limited countries. Read more in the chapter: [**Harm**](http://www.aidsmap.com/resources/law/Harm/page/1441685/)

### Evidence-informed HIV prevention

The global number of people living with HIV is constantly increasing not only because people are continuing to acquire HIV, but also because effective treatment has resulted in significantly extended lifespans for people who have had timely access to HIV testing and counselling, and can access treatment and care.[3](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1441708),[4](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/%22%20%5Cl%20%22ref1441710),[5](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1441712),[6](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1441713),[7](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1441715)

However, for every two people starting treatment another five are newly infected.[1](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1356054) Continued high rates of transmission of HIV largely result from a failure to use currently available, evidence-informed, effective prevention strategies and tools, and poor coverage of HIV-prevention programmes.[8](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1441716) Globally, less than one person in five at risk of acquiring HIV has access to basic HIV-prevention services.[9](http://www.aidsmap.com/The-global-HIV-pandemic/page/1410521/#ref1441718)

Three decades of experience have led to many evidence-informed HIV-prevention activities. These fall into the following broad categories.

### Biomedical approaches

These include: male and female condoms; sterile drug-use equipment; male circumcision; and the use of ART to prevent infection in people exposed to HIV, known as post-exposure prophylaxis (PEP). Biomedical approaches currently being investigated include microbicides and novel uses of ART. Microbicides work like ‘invisible condoms’ creating a barrier to sexual transmission but, unlike condoms, are controlled by the receptive partner. ART may also be effective when taken by people at high risk of acquiring HIV. This is known as pre-exposure prophylaxis (PrEP).

ART's preventive effects are also being studied in populations that include people who are diagnosed with HIV and are taking treatment primarily for its health benefits. This is known as 'treatment as prevention'. Read more in the chapter: [**Risk**](http://www.aidsmap.com/resources/law/Risk/page/1441687/)

### Individual approaches

These include voluntary counselling and testing for HIV antibodies (the 'HIV test'), and counselling to support people living with, and at risk of, HIV to help them reduce HIV-related risk behaviours. (See [Supporting people living with HIV to protect themselves and others](http://www.aidsmap.com/Supporting-people-living-with-HIV-to-protect-themselves-and-others/page/1441737/).)

### Group and community approaches

These include sex education and HIV-related information in schools, as well as 'safer sex' and HIV-testing campaigns, and HIV-related information targeted at specific communities where HIV prevalence is higher than in the general population.

### Socio-political and structural interventions

These include legal and policy interventions that may permit some of the other types of prevention work, such as condom distribution, provision of sterile drug-use equipment, or sex education in schools. Examples of structural interventions include reforming laws and policies, and strengthening their enforcement, in order to better address the drivers of vulnerability to HIV acquisition, such as gender inequality, violence, discrimination, economic inequality, and lack of social capital. (See also [The role of the law in the global response to HIV](http://www.aidsmap.com/The-role-of-the-law-in-the-global-response-to-HIV/page/1441838/)*.*)

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# HIV and AIDS in Kenya

## [Kenya-2015.png](https://www.avert.org/files/kenya-2015png)



Kenya has the joint fourth-largest HIV epidemic in the world (alongside Mozambique and Uganda), in terms of the number of people living with HIV, which was 1.6 million people in 2013. Roughly 58,000 people died from AIDS-related illnesses in the same year although this dropped by 32% between 2009 and 2013.[1](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote1_y4jhe1y) There are now 1.1 million children orphaned by AIDS.[2](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote2_lflmma5)

The first case of HIV in Kenya was detected in 1984, and by the mid-1990s it was one of the major causes of mortality in the country putting huge demands on the healthcare system as well as the economy. HIV prevalence peaked at 10.5% in 1996, and had fallen to 6% by 2013 mainly due to the rapid scaling up of antiretroviral treatment (ART).[3](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote3_oyu4sox)

## Key affected populations in Kenya

Kenya’s HIV epidemic is often referred to as generalised – affecting all sections of sectors including [children](https://www.avert.org/node/390), [young people](https://www.avert.org/node/389), adults, [women](https://www.avert.org/node/387) and men.

However, in recent years, a number of studies have identified concentrated epidemics among certain groups who are particularly vulnerable to HIV transmission.



### Men who have sex with men (MSM) and HIV in Kenya

HIV prevalence among [men who have sex with men (MSM)](https://www.avert.org/node/382) in Kenya is almost three times that among the general population. Latest statistics reveal that in 2010, HIV prevalence among MSM was an estimated 18.2%.[4](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote4_xo8y93e)

Condom use among MSM is fairly low but has been rising. In 2013, an estimated 69% of MSM reported using a condom the last time they had anal sex, up from 55% in 2011.[5](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote5_zafn5ou)

Sexual relations between people of the same sex are illegal in Kenya and can carry a prison sentence of up to 21 years.[6](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote6_0eikkux)

***"Homosexuality is "largely considered to be taboo and repugnant to [the] cultural values and morality" of Kenya."*** [7](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote7_yurdjc8)

This stance leads to high levels of [stigma and discrimination](https://www.avert.org/node/391) towards MSM as well as other members of the lesbian, gay, bisexual and transgender community (LGBT), deterring many people from seeking the HIV services they need. Many have been harassed by state officials and held in 'remand houses' without being informed of the charges against them.[8](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote8_3rup7re)

### People who inject drugs (PWID) and HIV in Kenya

In 2011, an estimated 18.3% of [people who inject drugs (PWID)](https://www.avert.org/node/386) in Kenya were living with HIV.[9](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote9_6jjtko8) The majority of PWID are concentrated in specific geographical areas such as Nairobi and Mombasa.[10](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote10_f5se93o)

One study found that 3.8% of new HIV infections occur among PWID. In the capital Nairobi, this rises to 5.8%.[11](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote11_jmc99tb) Condom use and safe injecting practices are very low among this group (29.8% and 51.6% respectively) and are the cause of high rates of HIV transmission.[12](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote12_hx9aesq)

### Sex workers and HIV in Kenya

Female [sex workers](https://www.avert.org/node/384) (FSW) have the highest reported HIV prevalence of any group in Kenya. In 2011, an estimated 29.3% of FSW were living with HIV.[13](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote13_baw7k6p) By comparison, data from the Sex Workers Outreach Program (SWOP 2011) showed an HIV prevalence of 30% among FSW and 40% among male sex workers.[14](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote14_wkn2e76)

The 2009 Modes of Transmission Study (MOT) reported that 14% of new HIV infections occurred among FSW and their clients. However, FSW are reportedly better at protecting themselves from HIV transmission compared to groups such as MSM and PWID. 86% of FSW have reported using a condom with their most recent client.[15](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote15_dzknbnl)

### Women and HIV in Kenya

Although HIV prevalence among the general population has fallen in Kenya, women continue to be disproportionately affected by the epidemic. In 2012, 6.9% of women were living with HIV compared with 4.2% of men.[16](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote16_09mhulh) Young women (aged 15-24) are almost three times as likely to be living with HIV than men of the same age (3% and 1.1% respectively). However, HIV prevalence among young women has almost halved since 2003, showing that progress is being made.[17](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote17_z5z16kw)

Like in many parts of sub-Saharan Africa, women and girls in Kenya face discrimination in terms of access to education, employment and healthcare. As a result, men often dominate sexual relationships with women not always able to practice safer sex even when they know the risks.

Young women in Kenya are over three times more likely to be exposed to sexual violence than young men.[18](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote18_ggc4rqt) They are often forced into early marriage and unable to negotiate safe sex.[19](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote19_xnp1c2e) Young women also have a lower level of HIV knowledge than young men in Kenya. The 2014 Demographic Health Survey found that only 54% of young women could correctly identify ways of preventing sexual transmission of HIV and reject misconceptions about HIV transmission compared to 64% of young men.[20](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote20_depcc4j)

## HIV testing and counselling (HTC) in Kenya

In recent years, HIV testing and counselling (HTC) has been a major feature of the HIV response in Kenya. The country has adopted a number of strategies including provider initiated testing and counselling (PCT), outreach testing and counselling, home-based testing and counselling (HBT) as well as the integration of HTC in antenatal care, sexually transmitted infections (STI) and sexual and reproductive health services.[21](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote21_yerm9gd)

As a result, there has been dramatic progress in terms of the number of people getting tested for HIV. In 2000, there were just three voluntary counselling and testing (VCT) sites in Kenya; by 2010 there were over 4,000. In 2008, 860,000 people were being tested annually for HIV, by 2013; this had increased to 6.4 million.[22](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote22_5r1az44)

Though annual testing rates have nearly doubled since 2008/2009, there remains a significant disparity between men and women. In 2014, 53% of women had tested for HIV in the past 12 months and received their results, alongside 45% of men.[23](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote23_gjn4x5t) To address this, there has been a concerted effort to increase testing rates among Kenyan men with community-based testing programmes proving successful in particular.[24](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote24_zwy31d6)

Like HTC coverage among the general population, testing rates among pregnant women have risen substantially. From 2009 to 2013, the percentage of pregnant women tested for HIV increased from 68% to 92%.[25](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote25_47frbx5)

## HIV prevention programmes in Kenya

Kenya is widely regarded as one of sub-Saharan Africa’s HIV prevention success stories. Annual new HIV infections are less than a third of what they were at the peak of the country's epidemic in 1993.[26](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote26_0595mz5) In 2013, there were an estimated 100,000 new HIV infections in Kenya.[27](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote27_bryi2cb)

The National AIDS Control Council (NACC) is the body responsible for coordinating the response to the HIV epidemic in Kenya. The Kenya AIDS Strategic Framework 2014/15-2018/19 sets out four objectives over its five year duration:

* reduce new HIV infections by 75%
* reduce AIDS-related mortality by 25%
* reduce HIV-related stigma and discrimination by 50%
* increase domestic financing of the HIV response to 50%.[28](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote28_n8udsj7)

### Condom distribution and use

The Kenyan government has only actively promoted the use of condoms since 2001, but distribution has substantially increased year on year.[29](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote29_jn2ck7u) [30](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote30_ltolnnf)

However, many people still find condoms difficult to acquire. For example, one report from rural northern Kenya showed how men could only afford to use condoms once, and due to a shortage in supply, would often wash condoms and hang them out to dry for reuse, or use plastic bags and cloth rags instead:

***"Many rural areas in the country are inaccessible due to the poor road network and this makes distribution of condoms difficult and challenging…because government condoms are mostly made available at health facilities and there are not many in rural areas, this creates another challenge in distribution." - Peter Cherutich, NASCOP***[*31*](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote31_2ca3tza)

Even where condoms are widely available, this does not guarantee their use. The 2014 Kenya Demographic and Health Survey revealed that only 40% of women and 43% of men who had two or more partners in the last 12 months, reported using a condom the last time they had sex.[32](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote32_l2c1zy4)

### Preventing mother-to-child transmission (PMTCT)

Kenya is committed to eliminating the mother-to-child transmission (MTCT) of HIV by 2015. Key strategies to achieve this include efforts to increase knowledge of [PMTCT](https://www.avert.org/node/375), greater male involvement, universal attendance of pregnant women at antenatal clinics, universal uptake of HIV testing among pregnant women, as well as the provision of antiretroviral drugs for those who test positive.[33](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote33_h81qlqt)

From 2008 to 2013, 58,000 women annually were offered PMTCT services, out of an estimated 79,000 (76% coverage). Between 2010 and 2013, PMTCT coverage actually fell from 86% to 70%. However, this was due mainly to an increase in demand for PMTCT services.[34](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote34_wne98tj)

In 2009, the Kenyan government emphasised the importance of male involvement in PMTCT, and in 2010 started a campaign to encourage partner testing, exclusive breastfeeding and the delivery of ART to children.[35](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote35_l9pcap6) [36](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote36_ue6779w) From 2010 to 2013, the percentage of women and their infants given ARVs during breastfeeding to prevent HIV transmission increased from 65% to 71%. By comparison, male involvement in PMTCT remains very low in Kenya (4.5%).[37](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote37_wwp4sfk)

### Voluntary medical male circumcision (VMMC)

In 2008, Kenya implemented the [voluntary medical male circumcision (VMMC)](https://www.avert.org/node/372) for HIV prevention programme. The programme aimed to circumcise 860,000 males aged 15-49 by 2013 to achieve universal coverage (80%).

The number of VMMCs performed annually has increased dramatically, although by the end of 2013 only 670,000 VMMCs were performed, about 77% of the original target, with roughly 50% of Kenyan men aged 15-19 circumcised. Regions with the highest HIV prevalence among uncircumcised adult males - Nairobi (20.2%), Nyanza (17.3%), Rift Valley (7%) and Western (6.8%) were selected as priority regions for the implementation of VMMC.[38](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote38_5x5qa0o) 80% of all operations were conducted in the Nyanza region.[39](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote39_9tzkren)

In 2012, a new initiative was introduced to boost the number of men being circumcised annually. It involved handing out vouchers to men who had the procedure, which could be exchanged for money upon attending a follow-up appointment. They were also encouraged to bring a friend who was interested in becoming circumcised.[40](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote40_rtidze0)

### Harm reduction

In 2011, as part of efforts by the National AIDS Control Council (NACC) to provide free HIV prevention and treatment for PWID, previously disallowed [harm reduction](https://www.avert.org/node/373) methods including [needle and syringe programmes (NSPs)](https://www.avert.org/node/374), and services such as psychosocial support were made available. Opioid substitution therapy (OST) remains unavailable in Kenya, but work to establish its use is in progress.[41](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote41_wcwhycb)

In June 2012, the Kenyan government announced plans to distribute free needles and syringes to over 50,000 PWID. By the end of the programme, the government aims to have distributed over 8 million needles and syringes nationwide. However, only 10 NSPs are currently operational, and only 15% of people who inject drugs are thought to be accessing the service.[42](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote42_hhlc5gs)

One report found high HIV prevalence levels among people who inject drugs (PWID) in a number of prisons, with many having no access to NSP or OST services.[43](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote43_6g951xe)

### HIV education and awareness

HIV education and awareness is an important component of HIV prevention in Kenya. The Education Sector Policy on HIV and AIDS 2013 aims to develop programmes to enhance HIV prevention, care and support for school pupils as well as education personnel (e.g. teachers). It emphasises that strategies must be gender sensitive because women and girls are disproportionately affected by the epidemic.[44](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote44_h2r1l15)

HIV and AIDS education has been part of the school curriculum in Kenya since 2003. However, the 2014 Demographic and Health Survey found that only 54% of young women and 64% of young men aged 15-24 had comprehensive knowledge about HIV prevention.[45](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote45_b55y8p7)

The provision of HIV and AIDS education does not necessarily equate to lower HIV prevalence. For example, the Kenya AIDS Indicator Survey 2012 reported almost no difference in HIV prevalence between those who had completed primary education (6%) and those who had completed secondary education (5.8%). In fact, the lowest HIV prevalence was among people without any schooling (3.6%). Moreover, HIV prevalence was higher among women than men across all education levels.[46](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote46_ur841j6)

In contrast, one study among participants from both secondary schools and universities found that while both had very high levels of knowledge, knowledge was significantly higher among university students. This shows that education delivered in the correct way can be an effective means to empower people to protect themselves from HIV.[47](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote47_upoqwmk)

## Antiretroviral treatment (ART) in Kenya

In 2003, only 6,000 people living with HIV were accessing ART, but by 2013 this had increased to 596,000 adults and 60,000 children. This equates to 42% of adults who are in need of treatment receiving it, and 31% of children.[48](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote48_maou37k)

Kenya previously announced universal access to treatment in 2013, when 80% of those in need were on treatment. However, the amendments to the WHO treatment guidelines in the same year means that access is now much lower due to more people being eligible for treatment.[49](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote49_dxffr04)

In Kenya, up to 38% of people with tuberculosis (TB) are co-infected with HIV. It is reported that 83% of people with a co-infection are being treated for both illnesses which is high and shows commitment to tackling both public health issues.[50](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote50_ooza8x4)

## HIV stigma and discrimination in Kenya

Though awareness of HIV and AIDS is comparatively high in Kenya, many people living with HIV face high levels of stigma and discrimination. This deters many people living with HIV, particularly vulnerable groups, from seeking vital HIV services.[51](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote51_y7yjmc1)

For example, many reports from Kenya have shown how pregnant women often do not test for HIV because they fear stigmatisation from their family or healthcare workers.[52](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote52_9palpo7)

Accepting attitudes among the general population towards people living with HIV increased in Kenya between 2003 and 2009, rising from 27% to 33% among men, and from 39.4% to 47% among women. However, levels of stigma and discrimination remain too high to foster an environment for a more effective national HIV response.[53](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote53_hlhl9mr)

## Funding the HIV response in Kenya

A lot of money has been spent in Kenya in recent years to combat HIV, particularly through the scaling up of ART. Between 2009 and 2013, external [funding](https://www.avert.org/node/353) from donors accounted for over 70% of HIV expenditure. The Kenyan government has contributed 17% of funding with private and household spending making up the remaining 13%. Since 2010, government spending has remained stable (at 17%).[54](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote54_pll62a6)

As in many countries, the scaling up of antiretroviral treatment means that spending on HIV treatment and care accounted for the majority of HIV expenditure (52%) between 2009 and 2013. Prevention, which includes the provision of HIV testing services, accounted for 21%.[55](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote55_zyymtmx)

The cost of the HIV response in Kenya is expected to increase by 114% between 2010 and 2020 representing a funding gap of $1.75 billion. In order to plug this gap, Kenya has established a High Level Steering Committee for Sustainable Financing, which has proposed the establishment of an HIV and Non-Communicable Diseases Trust Fund to pool additional and private resources.[56](https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya#footnote56_7pm66mg)

## The future of HIV and AIDS in Kenya

In recent years, Kenya has made huge strides in tackling its HIV epidemic and has been pioneering in the provision of HIV prevention, particularly the implementation of VMMC.

However, current efforts are not reaching all of those who need these services. As a result, concentrated epidemics are emerging among vulnerable groups. Prevention initiatives need to target these groups as part of wider efforts to stem the HIV epidemic in Kenya.

Moreover, there are still an unacceptable number of people who do not know their HIV status. The scale up of HIV testing is vital in order for people to learn their HIV status and be referred onto the appropriate treatment, care and support.

However, in order to get more people in Kenya to test for HIV, as well as an increase in the provision of HIV services, a number of social, cultural and legal barriers need to be overcome which prevent many people, particular those belonging to key affected groups from accessing them.

The Kenyan government needs to work to develop sustainable methods of funding to sustain and scale up existing prevention efforts and to reduce the country's reliance on external funding from international donors.

# HIV/AIDS in Kenya

From Wikipedia, the free encyclopedia

[Kenya](https://en.wikipedia.org/wiki/Kenya) has severe, generalized [HIV](https://en.wikipedia.org/wiki/HIV) epidemic, but in recent years, the country has experienced a notable decline in HIV prevalence, attributed in part to significant behavioral change and increased access to [ART](https://en.wikipedia.org/wiki/Antiretroviral_drug) (antiretroviral drugs). Adult HIV prevalence is estimated to have fallen from 10 percent in the late 1990s to about 6.1 percent in 2005. Women face considerably higher risk of HIV infection than men, and also experience a shorter life expectancy due to HIV/[AIDS](https://en.wikipedia.org/wiki/AIDS). The 7th edition of AIDS in Kenya reports an HIV prevalence rate of eight percent in adult women and four percent in adult men. Populations in Kenya especially at risk include [injecting drug users](https://en.wikipedia.org/wiki/Drug_user) and [people in prostitution](https://en.wikipedia.org/wiki/Sex_worker), whose prevalence rates are estimated at 53 percent and 27 percent, respectively.[[1]](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#cite_note-us-1) [Men who have sex with men](https://en.wikipedia.org/wiki/Men_who_have_sex_with_men) (MSM) are also at risk at a prevalence of 18.2%. Other groups also include discordant couples (where one partner is infected and the other is not), prison communities, uniformed forces, and truck drivers.[[2]](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#cite_note-2)

Kenya is in a transitional period, with a government seeking to restructure many elements of the state. This context offers clear opportunities, but also many constraints for controlling HIV/AIDS. Human capacity development is a major concern and all partners are working to improve capabilities and [human resource management systems](https://en.wikipedia.org/wiki/Human_resource_management_system) to enable people to respond effectively to HIV/AIDS. The key to success will be developing effective mechanisms to engage these trained staff. In addition, efforts to employ auxiliary staff, such as adherence counselors and outreach workers, are a high priority. Treatment literacy is very low.

## Contents

* [1 Overview of the HIV epidemic](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#Overview_of_the_HIV_epidemic)
* [2 Current status](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#Current_status)
* [3 See also](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#See_also)
* [4 References](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#References)
* [5 External links](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#External_links)

## Overview of the HIV epidemic

Here is a brief overview of the HIV epidemic in the country as reported by the Ministry of Education in June 2014.[[3]](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#cite_note-gbvhivonline.com-3)[[4]](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#cite_note-4)[[5]](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#cite_note-5)

* 101,560 Kenyans were infected with HIV In 2013.
* 12,940 children, 50,530 women, and 38,090 men were infected with HIV in 2013.
* 65% of new HIV infections occur in 9 out of 47 counties.

|  |  |
| --- | --- |
| **County** | **New HIV infections** |
| Homa Bay | 15,003 |
| Kisumu | 12,645 |
| Siaya | 12,059 |
| Migori | 8,292 |
| Kisii | 5,975 |
| Nakuru | 4,326 |
| Turkana | 3,141 |
| Nyamira | 2,507 |
| Bomet | 1,965 |

* 21% of new adult HIV infections occur among young women aged 15–24 every year.
* 1.6 million Kenyans were living with HIV in 2013.
* 191,840 children were living with HIV In 2013.
* 63% of men and 80% of women know their HIV status.

## Current status

The Kenyan Ministry of Health published a report on June 2014 called *Kenya HIV Prevention Revolution Road Map.* The road map aims to dramatically strengthen HIV prevention, with the ultimate goal of reducing new HIV infections to zero by 2030. The following observations and conclusions were outlined:[[3]](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya%22%20%5Cl%20%22cite_note-gbvhivonline.com-3)[[6]](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#cite_note-6)[[7]](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#cite_note-7)[[8]](https://en.wikipedia.org/wiki/HIV/AIDS_in_Kenya#cite_note-8)

* Sexual transmission accounts for 93.7% of all new HIV infections (MOT, 2008).
* The HIV epidemic in Kenya exhibits extreme geographical and gender disparities. National estimates and modelling indicate that 65% of new adult infections occur in nine of the 47 Counties. There is higher prevalence among women at 7.6% compared to men at 5.6% . There is a treatment gap of over 99,500 women and 64,900 men, in need of [ART](https://en.wikipedia.org/wiki/Antiretroviral_drug) but not currently receiving treatment. ART coverage is 77% in eligible women compared to 80% in men.
* Key populations contribute a disproportionately high number of new HIV infections annually despite their small population size. According to the MOT 2008, although these populations represent less than 2% of the general population, they contribute a third of all new HIV infections. Key populations in Kenya include sex workers, men who have sex with men (MSM) and people who inject drugs. Additionally, there are geographical disparities in the distribution of key populations across the Counties.

## See also

* [AIDS pandemic](https://en.wikipedia.org/wiki/AIDS_pandemic)
* [HIV/AIDS in Africa](https://en.wikipedia.org/wiki/HIV/AIDS_in_Africa)

## References

 ["2008 Country Profile: Kenya"](http://www.pepfar.gov/pepfar/press/81596.htm). [U.S. Department of State](https://en.wikipedia.org/wiki/U.S._Department_of_State) (2008).  *This article incorporates text from this source, which is in the* [*public domain*](https://en.wikipedia.org/wiki/Public_domain)*.*

  <http://www.nation.co.ke/news/Kenya-ranked-fourth--in-HIV-infections-/-/1056/2425884/-/12lp3vxz/-/index.html>

  [*"HIV-prevention-roadmap-report-draft"*](http://www.gbvhivonline.com/wp-content/uploads/2014/04/HIV-prevention-roadmap-report-draft.pdf) (PDF).

  [*"Kenya\_HIV\_Prevention\_Revolution\_Road\_Map."*](http://www.nacc.or.ke/attachments/article/418/Kenya_HIV_Prevention_Revolution_Road_Map.pdf) (PDF).

  [*"Kenya\_HIV\_Prevention\_Revolution\_Road\_Map alternate link"*](https://drive.google.com/file/d/0B6hn4-tQ6XTIOGZLS25Lbm5LTEU/edit?usp=sharing).

  [*"Kenya\_HIV\_Prevention\_Revolution\_Road\_Map"*](http://www.nacc.or.ke/attachments/article/418/Kenya_HIV_Prevention_Revolution_Road_Map.pdf) (PDF).

  [*"Kenya HIV Prevention Revolution Road Map alternate link"*](https://drive.google.com/file/d/0B6hn4-tQ6XTIOGZLS25Lbm5LTEU/edit?usp=sharing).

 *["HIV AIDS Timeline in Kenya"](http://www.tazamakenya.com/HIVAIDS)*.

# Economic impact of HIV/AIDS

From Wikipedia, the free encyclopedia



Changes in life expectancy in some hard-hit African countries between 1960 and 2012.

  [Botswana](https://en.wikipedia.org/wiki/Botswana)

  [Zimbabwe](https://en.wikipedia.org/wiki/Zimbabwe)

  [Kenya](https://en.wikipedia.org/wiki/Kenya)

  [South Africa](https://en.wikipedia.org/wiki/South_Africa)

  [Uganda](https://en.wikipedia.org/wiki/Uganda)

[HIV](https://en.wikipedia.org/wiki/HIV) and [AIDS](https://en.wikipedia.org/wiki/AIDS) affects [economic growth](https://en.wikipedia.org/wiki/Economic_growth) by reducing the availability of [human capital](https://en.wikipedia.org/wiki/Human_capital).[[1]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-Bell-et-al-2003-1) Without proper [prevention](https://en.wikipedia.org/wiki/Prevention_of_HIV/AIDS), [nutrition](https://en.wikipedia.org/wiki/Nutrition), health care and medicine that is available in developing countries, large numbers of people are falling victim to AIDS.

People living with HIV/AIDS will not only be unable to work, but will also require significant medical care. The forecast is that this will probably cause a collapse of economies and societies in countries with a significant AIDS population. In some heavily infected areas, the epidemic has left behind many [orphans](https://en.wikipedia.org/wiki/Orphan) cared for by elderly [grandparents](https://en.wikipedia.org/wiki/Grandparent).[[2]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-Greener-2)

The increased mortality in this region will result in a [smaller skilled population](https://en.wikipedia.org/wiki/Population_decline) and [labor force](https://en.wikipedia.org/wiki/Labor_force).[[2]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-Greener-2) This smaller [labor force](https://en.wikipedia.org/wiki/Labor_force) will be predominantly young people, with reduced knowledge and [work experience](https://en.wikipedia.org/wiki/Work_experience) leading to reduced productivity. An increase in workers’ time off to look after sick family members or for [sick leave](https://en.wikipedia.org/wiki/Sick_leave) will also lower productivity. Increased mortality will also weaken the mechanisms that generate human capital and [investment](https://en.wikipedia.org/wiki/Investment) in people, through loss of [income](https://en.wikipedia.org/wiki/Income) and the death of parents.[[2]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-Greener-2) As the epidemic progresses, the age profile of those infected will increase, though the peak is expected to stay within the working age population. HIV disproportionately infects and impacts on women, so those sectors employing large numbers of women e.g. education, may be disproportionately economically impacted by HIV[[3]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS%22%20%5Cl%20%22cite_note-3)

## Contents

* [1 Effect on taxable population](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#Effect_on_taxable_population)
* [2 Relationship to GDP](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#Relationship_to_GDP)
* [3 Response in sub-Saharan Africa](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#Response_in_sub-Saharan_Africa)
* [4 Copenhagen Consensus](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#Copenhagen_Consensus)
* [5 See also](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#See_also)
* [6 References](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#References)
* [7 External links](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#External_links)

## Effect on taxable population

By killing off mainly young adults, AIDS seriously weakens the [taxable](https://en.wikipedia.org/wiki/Tax) population, reducing the resources available for [public expenditures](https://en.wikipedia.org/wiki/Public_expenditure) such as education and health services not related to AIDS resulting in increasing pressure for the state's finances and slower growth of the economy. This results in a slower growth of the tax base, an effect that will be reinforced if there are growing expenditures on treating the sick, training (to replace sick workers), sick pay and caring for AIDS orphans. This is especially true if the sharp increase in adult mortality shifts the responsibility and blame from the family to the government in caring for these orphans.[[2]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-Greener-2)

On the level of the household, AIDS results in both the loss of income and increased spending on healthcare by the household. The income effects of this led to spending reduction as well as a substitution effect away from education and towards healthcare and funeral spending. A study in [Côte d'Ivoire](https://en.wikipedia.org/wiki/C%C3%B4te_d%27Ivoire) showed that households with an HIV/AIDS patient spent twice as much on medical expenses as other households.[[4]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-WBank-4)

With economic stimulus from the government, however, HIV/AIDS can be fought through the economy. With some money, HIV/AIDS patients will have to worry less about getting enough food and shelter and more about fighting their disease. However, if economic conditions aren't good, a person with HIV/AIDS may decide to become a sex trade worker to earn more money. As a result, more people become infected with HIV/AIDS.

## Relationship to GDP

UNAIDS, WHO and the [United Nations Development Programme](https://en.wikipedia.org/wiki/United_Nations_Development_Programme) have documented a correlation between the decreasing life expectancies and the lowering of [gross national product](https://en.wikipedia.org/wiki/Gross_national_product) in many African countries with prevalence rates of 10% or more. Indeed, since 1992 predictions that AIDS would slow [economic growth](https://en.wikipedia.org/wiki/Economic_growth) in these countries have been published. The degree of impact depended on assumptions about the extent to which illness would be funded by savings and who would be infected.[[4]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-WBank-4)

Conclusions reached from models of the growth trajectories of 30 sub-Saharan economies over the period 1990–2025 were that the economic growth rates of these countries would be between 0.56 and 1.47% lower. The impact on [gross domestic product](https://en.wikipedia.org/wiki/Gross_domestic_product) (GDP) per capita was less conclusive. However, in 2000, the rate of growth of Africa's per capita GDP was in fact reduced by 0.7% per year from 1990–1997 with a further 0.3% per year lower in countries also affected by [malaria](https://en.wikipedia.org/wiki/Malaria).[[5]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-Bonnel-5) The forecast now is that the growth of GDP for these countries will undergo a further reduction of between 0.5 and 2.6% per annum.[[2]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-Greener-2) However, these estimates may be an underestimate, as they do not look at the effects on output [per capita](https://en.wikipedia.org/wiki/Per_capita).[[1]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-Bell-et-al-2003-1)

## Response in sub-Saharan Africa

Many governments in sub-Saharan Africa denied that there was a problem for years, and are only now starting to work towards solutions. Underfunding is a problem in all areas of HIV prevention when compared to even conservative estimates of the problems.

Recent research by the [Overseas Development Institute](https://en.wikipedia.org/wiki/Overseas_Development_Institute) (ODI) has suggested that the private sector has begun to recognize the impact of HIV/AIDS on the bottom line, both directly and indirectly. It is estimated that a company can generate an average return of US$3 for every US$1 invested in employee health due to a reduced absenteeism, better productivity and reduction in employee turnover.[[6]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-6) Indirectly there are also important implications on the [supply chain](https://en.wikipedia.org/wiki/Supply_chain). Many multi-national corporations (MNCs) have therefore gotten involved in HIV/AIDS initiatives of three main types: a community-based partnerships, supply chain support, and sector-based initiatives.[[7]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-odi-7)

The launching of the world's first official HIV/AIDS Toolkit in [Zimbabwe](https://en.wikipedia.org/wiki/Zimbabwe) on October 3, 2006 is a product of collaborative work between the [International Federation of Red Cross and Red Crescent Societies](https://en.wikipedia.org/wiki/International_Red_Cross_and_Red_Crescent_Movement), [World Health Organization](https://en.wikipedia.org/wiki/World_Health_Organization) and the [Southern Africa](https://en.wikipedia.org/wiki/South_Africa) HIV/AIDS Information Dissemination Service. It is for the strengthening of people living with HIV/AIDS and nurses by minimal external support. The package, which is in form of eight modules focusing on basic facts about HIV and AIDS, was pre-tested in Zimbabwe in March 2006 to determine its adaptability. It disposes, among other things, categorized guidelines on clinical management, education and counseling of AIDS victims at community level.[[8]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-xinhua-8)

## Copenhagen Consensus

The [Copenhagen Consensus](https://en.wikipedia.org/wiki/Copenhagen_Consensus) is a project that seeks to establish priorities for advancing global welfare using methodologies based on the theory of [welfare economics](https://en.wikipedia.org/wiki/Welfare_economics). The participants are all economists, with the focus of the project being a rational prioritization based on economic analysis. The project is based on the contention that, in spite of the billions of dollars spent on global challenges by the United Nations, the governments of wealthy nations, foundations, charities, and non-governmental organizations, the money spent on problems such as malnutrition and climate change is not sufficient to meet many internationally agreed targets. The highest priority was assigned to implementing new measures to prevent the spread of HIV and AIDS. The economists estimated that an investment of $27 billion could avert nearly 30 million new infections by 2010.[[9]](https://en.wikipedia.org/wiki/Economic_impact_of_HIV/AIDS#cite_note-Kaiserfunds-9)

# III. Socio-Economic Impacts of HIV/AIDS

From [UNAIDS](http://www.thebody.com/unaids/unaidspage.html)

February 16, 2001

AIDS, while continuing to be an important health issue, has evolved into a complex social and economic emergency. HIV primarily affects young adults, cutting a broad path through society's most productive layer and destroying a generation of parents, whose death leaves behind orphans, desocialized youth and child-headed households. AIDS has a significant impact on the more educated and skilled segments of society because HIV primarily infects productive young adults rather than children or the elderly. The stigma attached to HIV and AIDS adds to the impediments encountered in mounting a response to AIDS, in addition to the discrimination already faced by infected individuals. HIV also increases social and economic vulnerability among women.

In the hardest-hit regions, AIDS is now reversing decades of development. It changes family composition and the way communities operate, affecting food security and destabilizing traditional support systems. By eroding the knowledge base of society and weakening production sectors, it destroys social capital. By inhibiting public and private sector development and cutting across all sectors of society, it weakens national institutions. By eventually impairing economic growth, the epidemic has an impact on investment, trade and national security, leading to still more widespread and extreme poverty. In short, AIDS has become a major challenge for human security.

### A. Demographic Impacts

AIDS deaths are premature deaths. In countries where HIV spreads mainly through unsafe sex between men and women, the majority of infected people acquire HIV in their twenties or thirties and will die of AIDS on average a decade later. In a number of countries, AIDS has resulted in increased mortality among children under five, and is now wiping out half a century of development gains, including increases in life expectancy at birth, particularly in southern Africa, where life expectancy increased from 44 years in the early 1950s to 59 in the early 1990s. Between 2005 and 2010, it is expected to fall to 45 years and even lower in some countries.

The lifetime risk of dying of AIDS is far higher than the general prevalence rate would suggest. For example, where prevalence is 15 per cent and rates continue to apply through their lifetime, over half of today's 15-year olds will die. In Botswana, which has a prevalence rate of 36 per cent, over three quarters would die of AIDS. In some countries, these trends are reshaping the traditional population pyramid into a new population chimney," with a narrowing base of young people and children. The most dramatic change in the pyramid occurs when young adults, infected early, begin to die of AIDS. Only those adults who escape HIV infection can expect to survive to middle and old age. Also, recent studies among various African populations indicate that rates of HIV infection in young women aged 15 to 19 may be five to six times higher than in young men.

Advertisement

### B. Social Impacts

The premature death of large numbers of young adults has an inevitable impact on those societies most affected by AIDS.

#### Households and Families

Households and families bear the brunt of the misery caused by AIDS. Those who fall ill become unable to work, forcing family members to care for them rather than producing food or income. According to studies of rural families in Thailand and urban families in Côte d'Ivoire, farm output and income fell between 52 and 67 per cent in families affected by AIDS. Families are also subject to discrimination if they have members who are HIV-positive, often facing reduced access to publicly available social and economic benefits.

#### Gender

The gender dynamics of the epidemic are far-reaching due to women's weaker ability to negotiate safe sex and their generally lower social and economic status. More women than men are caretakers of people with AIDS, which may saddle them with the triple burden of caring for children, the elderly and people living with AIDS -- as well as financial responsibility for their family's survival. Girl children or older women may find themselves at the head of households, and many girls from families facing poverty risk exploitation, especially sexual exploitation, when trying to bring in additional income. Mother-to-child transmission is also a concern.

#### Education

Where AIDS is widespread, education -- an essential building block of development -- is being impaired. The epidemic is eroding the supply of teachers and diluting the quality of education. AIDS also reduces the amount of money available for school fees, and forces an increasing number of children -- more girls than boys -- to drop out of school in order to help at home. As teachers become ill and unable to work, some schools are closing. In parts of Southern Africa, one fifth of teachers and secondary school students are estimated to be HIV-positive.

#### Health Services

Since the beginning of the epidemic, 21.8 million people have fallen sick and died of AIDS, placing ever-increasing demands on health services in the worst-affected countries. Often, this increased demand stretches already over-burdened public health systems. In 1997, public health spending on AIDS alone exceeded 2 per cent of gross domestic product (GDP) in seven of 16 African countries sampled, a staggering amount for countries whose health expenditure for all diseases accounts for 3 to 5 per cent of GDP. Adding to these increased demands is the crushing burden of AIDS on health workers themselves. A study in Zambia showed that in one hospital, deaths among health-care workers increased by a factor of 13 over a decade, largely because of HIV. Overburdened public health systems may also further marginalize minority, disabled and elderly women with HIV/AIDS. HIV-positive people also lack access to medicines and to health care, often facing discrimination from hospital staff or health-care systems.

#### Orphans

AIDS has a dramatic impact on children, particularly through the emergence of an entire generation of orphans to families affected by HIV. To date, the epidemic has left behind 13.2 million orphans, children who before the age of 15 have lost either their mother or both parents to AIDS. Studies have shown that children orphaned by AIDS are at greater risk of malnutrition, illness, abuse and sexual exploitation than children orphaned by other causes. The stigma and discrimination they face can also deprive them of basic social services and education. Today, in many African countries 20 to 25 per cent of all households are fostering orphans. The long-term consequences of such shifts in socialization are incalculable.

#### Human Development Index

The Human Development Index (HDI), a generally accepted measure of development based on economic and social indicators, is also affected by AIDS. In Namibia, for example, the HDI is predicted to fall 10 per cent by 2006 and in South Africa by 15 per cent before 2010 because of AIDS.

### C. Economic Impacts

#### Economic Growth

Growing evidence suggests that AIDS is having a devastating effect on economic growth and incomes. According to the World Bank, had average national HIV prevalence in sub-Saharan Africa not reached 8.6 per cent in 1999, per capita income on that continent would have grown 1.1 per cent, nearly three times the actual growth rate of 0.4 per cent achieved during 1990-1997. In the case of a typical sub-Saharan African country with a prevalence rate of 20 per cent, overall GDP growth would be 2.6 per cent lower each year. At the end of 20 years, the economy would be two thirds smaller than it would otherwise have been.

#### Workers

AIDS reduces the number of healthy workers, especially experienced workers in their most productive years. This raises dependency, diminishes human capital, and may cut productivity growth by as much as 50 per cent in the hardest hit countries.

#### Public Sector

In the public sector, AIDS reduces government revenues and puts severe strain on budgets as spending on health and social welfare mount. Scarce capacity is depleted, and the return on other public investments falls.

#### Governance

Governance suffers as a result of the epidemic: HIV/AIDS has a disastrous impact on the capacity of Governments, especially on the delivery of basic social services. Human resources are lost, public revenues reduced and budgets diverted towards coping with the epidemic's impact. Similarly, the organizational survival of civil society institutions is under threat, with a corresponding impact on democracy.

#### Private Sector

In the private sector, firms face higher costs in training, insurance, benefits, absenteeism, medical costs, sick leave, funerals and pensions. At the same time, the average experience of their labor force falls, reducing accumulated knowledge within firms. The most seriously affected businesses are those that are labor-intensive, such as transport. Companies in Africa have already felt the impact of AIDS on their bottom line. One sugar estate in Kenya quantified the cost of HIV infection as 8,000 days of labor lost to illness in two years, a 50 per cent drop in processed sugar recovered from raw cane in four years, and a tenfold increase in health costs. The company estimated that more than three quarters of all illness was related to HIV infection.

#### Agriculture

AIDS also threatens the basic livelihood of people living in developing countries, especially the poor. In many countries, agriculture provides a living for as much as 80 per cent of the population. As adults in rural areas fall ill, productivity drops off dramatically. Patterns of cropping shift from cash crops to subsistence farming, reducing household income and forcing the family to sell such assets as equipment or cattle to get by. Children may be withdrawn from school to help with work or tend to the sick, impairing their own development. In some areas, women dominate agricultural labor -- up to 80 per cent -- and this requires a gender-sensitive response to HIV/AIDS.

### D. Impact on Security

The reverse in economic growth and development gains being experienced in some countries affected by AIDS is magnified by the fragility and complexity of geopolitical systems. The epidemic is present in a number of countries already facing conflict, food scarcity and poverty, and poses real threats to social and political stability where it is most concentrated -- in Africa. The Security Council redefined security as an issue going well beyond the presence or absence of armed conflict, one which affects health and social services, family composition and social structure, economies and food security.

There is now broad acknowledgement that AIDS has become a global development crisis, potentially affecting national security in some countries. Armed conflict and associated population movements provide fertile ground for the spread of AIDS, while the epidemic itself can be seen as a risk factor in the breakdown of social cohesion and in social and political instability, in addition to a threat to security forces.

# Bringing health education to rural Kenya

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The Global Initiative for Village Empowerment (GIVE) was created in 2006 by a group of UBC students with the goal of bringing HIV/AIDS education to the community of Kanyawegi, Kenya. The community borders Lake Victoria and is located near Kisumu, the second-largest city in Kenya, in the Nyanza province. There is an estimated 15% HIV prevalence in Nyanza province, which is much higher than the reported rate of 7.4% for Kenya as a whole.[[1](http://www.bcmj.org/mds-be/bringing-health-education-rural-kenya%22%20%5Cl%20%22a1)] We suspect this is due to a variety of factors including the transient fishing population, cultural practices around sex, barriers to practising safe sex, lack of education, and significant stigma around HIV/AIDS.

GIVE is run by volunteers from Canada and Kenya—as well as by paid Kenyan employees—is governed by an elected executive, and fundraises for all project costs.

In addition to the original HIV/AIDS education project, GIVE has expanded to include health, food security and nutrition, and economic development teams. The HIV/AIDS education project is the focus of this article.

The education project is a collaboration between GIVE volunteers and the zonal officer, head teachers, and teachers of the Ojola school zone. The Ojola school zone consists of 18 primary schools. The education project has involved developing and integrating an HIV/AIDS curriculum into the Ojola school zone, zonal paper-exam funding, a zonal education day, and facilitating an extracurricular girls’ club in many schools. From May to August between 2006 and 2012, volunteers traveled from Canada to facilitate this project; however, we recognized early on that this is not a sustainable model. Our goal has been for the project to run independently without help from GIVE’s stakeholders in Canada. In 2013 GIVE did not send any Canadian volunteers to support the project, signaling our much-anticipated transition out of project management. By continuing to hand over responsibility and ownership to the community in stages, we hope to be hands-off (and wallets-off) in 2016.

This article is our first step in making our project an open-source guide to establishing, conducting, and transitioning a community-initiated, sustainable global health education project. The article provides an overview of our goals and how we executed them, outlines challenges we faced and how we adapted the project to meet local needs, and describes where we are going next.

**Project goals**
We intended to create a sustainable model of supporting education in low-income countries that can be adapted to any educational topic and hopefully any setting with the proper research and implementation strategy. To achieve this ultimate result, this project started with three main goals:
•    To increase knowledge of HIV/AIDS in the community by educating and engaging young people.
•    To decrease risky sexual behavior in the community’s at-risk youth.
•    To increase the number of students proceeding to secondary education.

**How we approached our goals**
To increase knowledge of HIV/AIDS in the community we organized workshops in primary and secondary schools, held parent meetings, established an annual HIV/AIDS awareness soccer tournament and, most successfully, introduced HIV/AIDS as an examinable subject in the curriculum. Creating this new subject area involved conducting extensive research, writing new teachers’ guides (a collaborative effort between Canadian volunteers and teachers in the school district), training and recertifying trained teachers on HIV/AIDS material, creating and invigilating annual exams, and awarding achievement through an annual education day.

To decrease risky sexual behavior, our educational tools focus on the scientific basis of how HIV transmission occurs as well as lifesaving skills such as condom use, condom negotiation, volunteer counseling and testing, self-esteem building, and empowering women. Anecdotally, heterosexual sexual intercourse is the most common mode of transmission in this region.

The third goal—increasing the number of students proceeding to secondary education—is multifaceted. This goal demonstrates our commitment to the overall academic success and continued education of students and has operated as an incentive to teachers, head teachers, the zonal officer, and other stakeholders to allow this project to continue. To increase the number of students going to secondary school we funded annual paper exams for standards 6 to 8 (the equivalent to our grades 6 to 8) for all subjects (i.e., math, religion/social studies, English, Kiswahili, science, and HIV/AIDS).

Primary education is free in Kenya but mandatory components such as uniforms, school supplies, and exams are not. This poses a significant barrier to students’ success as there is tremendous poverty in the area. Many students cannot afford to write the exams and, therefore, reach the end of standard 8 and their national exams (which determine whether they will be admitted to secondary school) without having practised writing a paper test.

By supporting the setting, vetting, typesetting, proofreading, printing, marking, and analysis of these exams financially and logistically, we have given thousands of students the opportunity to practise writing at a subsidized rate of 10 Kenyan shillings (approximately 15 cents). The minimal cost to the student was retained to preserve some ownership within the community without being so high as to prevent any child from participating.

**What we achieved**
Over the past 7 years we have achieved each of our goals, at least in part. The project’s major weakness is a lack of measurable outcomes from which to analyze our success. Unlike in research, aid and development projects tend to be initiated without measurable outcomes in place. Additionally, many aid and development projects are initiated with the intention of doing good while neglecting to be aware that it is possible to do harm no matter how positive the intentions. For example, an organization running a project must ensure that resources reach the intended recipients rather than being diverted to unintended recipients for profit.

We have had a few encouraging developments over the years. First, the number of girls in primary schools who become pregnant has dropped. In 2007 there were seven pregnancies at Oyiengo Primary, one of the schools in the Ojola zone. In 2010 we saw pregnant girls in many of the schools we visited while teaching workshops. By 2012 the zonal officer reported that there were no pregnancies at that time. There are, of course, many explanations for this change besides the additional sexual education in the curriculum, but recognition from a key stakeholder that our programs were helping in this positive indicator is encouraging. Additionally, scores on the HIV/AIDS exam are consistently the highest of any tested subject. Again, confounding factors could be that we rigorously vet these exams to ensure questions are clear, teachers are retrained every year on the material, and we focus the exam questions on important facts for prevention. We have also qualitatively observed a massive positive shift in the community’s approach and openness toward contraceptives such as condoms. When we first arrived, teaching how to use condoms correctly and permitting youth access to condoms was opposed by many community stakeholders—a significant challenge. In recent years all schools began teaching how to use condoms, condoms are available at every annual HIV/AIDS awareness soccer tournament, and there have been community-initiated discussions seeking to improve access to condoms for primary school students.

**What we did not achieve and why**
We tried to initiate a procedure to track school attendance in an effort to measure dropout rates and pregnancies, but without adequate incentives—or perhaps due to incomplete communication—the record booklets circulated to all schools were not completed in a way that allowed us to track this information. We also did not have the resources to track how many students progressed to secondary school. We had planned to compare the national exam graduating marks of the first three classes going through the program, each successive class having an extra year of exam practice. However, the district’s zonal officer changed partway through the tracking process and we were not able to obtain these marks from the replacement office to compare successive years.

**Problems that emerged and our solutions**
In 2010 the education team members were asked for sanitary napkins by girls at every school at which they taught workshops. When they spoke to the teachers and head teachers about this, they discovered that many girls were staying home from school because they did not have any sanitary products to use while they were menstruating. The same summer we tested a self-esteem building workshop and noticed that students had a difficult time performing tasks that we took for granted, such as listing their positive attributes. Combining these two issues, and engaging many teachers, head teachers, and community members in discussion, led us to create girls’ clubs comparable to the Girl Guides of Canada. The clubs were led by volunteer female teachers from the community with the purpose of empowering young girls and to serve as a way to distribute sanitary napkins to participating girls in a controlled and sustainable manner. Unfortunately we did not have the resources to fund the sanitary napkin distribution at the time, but we moved forward with the educational component of this idea with great success.

We based our training materials on an existing life skills course, which many teachers had been trained to teach during university, to ensure that the content was culturally appropriate and in keeping with Kenyan policymakers’ goals for the children. As a small incentive for participation, we gave each school a package of arts and crafts materials, made from donated goods, for use in their sessions. The majority of the 18 schools in the zone now have trained female teachers who lead this program on their own time, demonstrating yet again how committed this community is to improving the quality of life and education for their children and that significant positive changes can be made without a lot of material input from GIVE. We provided the idea and some initial support, and what resulted was an important step toward addressing critical issues faced by the community’s girls.

**Where we are now**
We completed our first summer without volunteers from Canada managing the education project on the ground in Kenya. Volunteers from another GIVE team conducted the refresher training for our teachers; otherwise, the community and our Kenyan GIVE employees were responsible for the program’s day-to-day operations. Thus far, this first transitional stage toward making the education project truly sustainable has been a success.

We hope to be completely hands-off in 2016. Next year we will decrease funding for undertakings such as exam printing (the bulk of our annual budget—approximately $2500) and transition some of the funding responsibility to the community’s stakeholders. We are also assembling a group of teachers trained on the HIV curriculum to take responsibility for ongoing teacher training and motivation and for the girls’ clubs.

As we complete this transition we plan to compile the resources we have created into an open-source package that can be used by other organizations to implement education projects in a global context.

**Recommendations**
The benefits of a project like GIVE are that it uses existing infrastructure, engages influential members of the local community, and requires little monetary support for the amount of development that occurs. We encourage anyone planning global health projects to build strong partnerships with their stakeholders, incorporate local priorities and initiatives as fundamental aspects of any program, and encourage a sense of community ownership from the planning stages to maximize opportunities for success and easily transition to a sustainable model. Additionally, conducting research to objectively identify the project’s strengths and limitations, and ultimately demonstrate that the project is making a difference, is of paramount importance.