

Introduction:

Human immunodeficiency virus (HIV) is an infection that attacks the body's immune system. Acquired immunodeficiency syndrome (AIDS) is the most advanced stage of the disease. HIV infects and destroys cells of your immune system, making it hard to fight off other diseases. The virus targets the body's white blood cells (called CD4 cells or helper T cells). It destroys CD4 cells and causing your white blood cell count to drop), weakening the immune system. This makes it easier to get sick with diseases like tuberculosis, infections and some cancers.

AIDS is the final and most serious stage of an HIV infection. People with AIDS have very low counts of certain white blood cells and severely damaged immune systems. They may have additional illnesses that indicate that they have progressed to AIDS. Without treatment, HIV infections progress to AIDS in about 10 years.

The difference between HIV and AIDS is that HIV is a virus that weakens your immune system. AIDS is a condition that can happen as a result of an HIV infection when your immune system is severely weakened.

You can't get AIDS if you aren't infected with HIV. Thanks to treatment that slows down the effects of the virus, not everyone with HIV progresses to AIDS. But without treatment, almost all people living with HIV will advance to AIDS.

HIV initially makes you feel sick with flu-like symptoms. Then it can hide in your body for a long time without causing noticeable symptoms. During that time, it slowly destroys your T-cells. When your T-cells get very low or you begin to get certain illnesses that people with healthy immune systems don't get, HIV has progressed to AIDS.

AIDS can cause rapid weight loss, extreme tiredness, mouth or genital ulcers, fevers, night sweats and skin discolorations. Other illnesses and cancers often happen in people living with AIDS and can cause additional symptoms.

Anyone can get HIV if they're exposed to the virus. Having sex without a condom or sharing needles to inject drugs are the most common ways that HIV spreads.

You can get HIV through the blood, semen, vaginal fluids, breast milk and rectal fluids of an infected person. People of all sexes and sexual orientations can get infected with and spread HIV.

The virus can enter your body through your mouth, anus, penis, vagina or broken skin.

It can't get through your skin unless you have a cut or wound. Pregnant people with HIV can also give it to their babies.

Having sex without a condom and sharing needles to take drugs are the most common ways that HIV spreads. Even if you feel fine, you can still give HIV to others.

• HIV remains a major global public health issue, having claimed 40.4 million [32.9–51.3 million] lives so far with ongoing transmission in all countries globally; with some countries reporting increasing trends in new infections when previously on the decline.

There is no cure for HIV infection. However, with access to effective HIV prevention, diagnosis, treatment and care, including for opportunistic infections, HIV infection has become a manageable chronic health condition, enabling people living with HIV to lead long and healthy lives.

By 2025, 95% of all people living with HIV (PLHIV) should have a diagnosis, 95% of those should be taking lifesaving antiretroviral treatment (ART) and 95% of PLHIV on treatment should achieve a suppressed viral load for the benefit of the person's health and for reducing onward HIV transmission

Incubation period :

The period from infection to the primary seroconversion illness is usually 1 to 4 weeks. The period from infection to development of anti-HIV antibodies is usually less than 1 month but may be up to 3 months; newer tests have a shorter window period, where a false negative result may be obtained early in infection.

The interval from HIV infection to the diagnosis of AIDS ranges from about 9 months to 20 years or longer, with a median of 12 years.

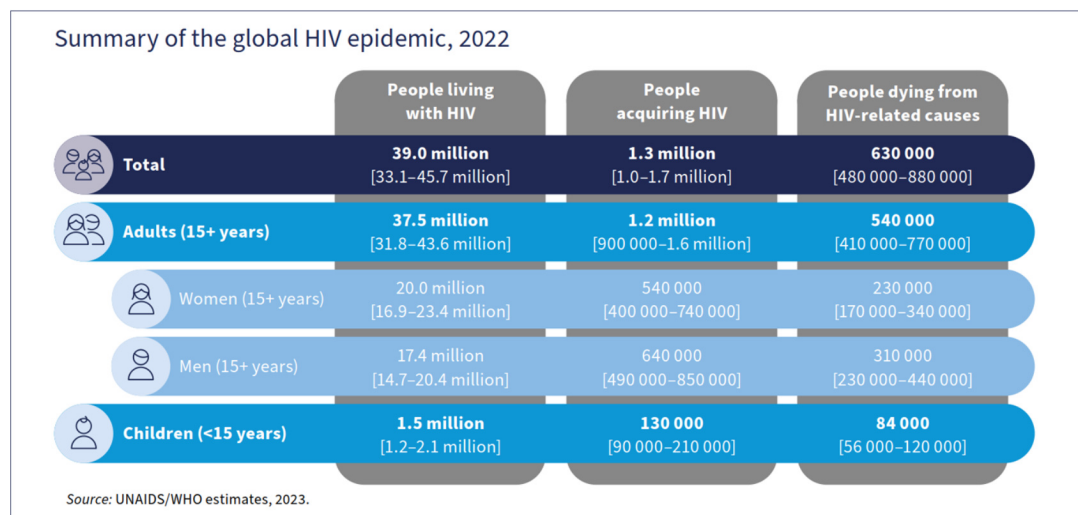
There is a group of people with a more rapid onset of disease who develop AIDS within 3–5 years of infection, and another smaller group who do not seem to progress to AIDS.

Epidemiology:

Since the beginning of the epidemic, 85.6 million [65.0–113.0 million] people have been infected with the HIV virus and about 40.4 million [32.9–51.3 million] people have died of HIV.

Globally, 39.0 million [33.1–45.7 million] people were living with HIV at the end of 2022. An estimated 0.7% [0.6–0.8%] of adults aged 15–49 years worldwide are living with HIV, although the burden of the epidemic continues to vary considerably between countries and regions.

The WHO African Region remains most severely affected, with nearly 1 in every 25 adults (3.2%) living with HIV and accounting for more than two-thirds of the people living with HIV worldwide.



In Iraq HIV prevalence is less than 1% although the number of cases is expected to increase, especially in conflict-affected areas. In 2017, 86 people were enrolled in HIV care.

In 2018, WHO supported the Ministry of Health's procurement of antiretroviral drugs for the treatment of HIV/AIDS patients and conducted an evaluation of the national AIDS programme to identify gaps and recommend ways to scale up the detection of cases and improve service delivery for people living with HIV/AIDS.

A detailed statistical data were taken from the ministry of Iraq :

2016 data:

جدول (4-22) عدد الاصابات والوفيات بالعوز المناعي والمعدل لكل 10000 من السكان حسب دائرة الصحة والجنس

Table (4-22) Number of HIV cases and deaths and rates per 10000 of population according to health directorate and sex

Health directorates	معدل الوفاة Mortality rate	عدد الوفيات Number of deaths			معدل الاصابة Morbidity rate	عدد الاصابات Cases			دائرة الصحة
		المجموع Total	انثى Female	ذكر Male		المجموع Total	انثى Female	ذكر Male	
Baghdad/Al-karkh	0.003	1	0	1	0.032	11	3	8	بغداد / الكرخ
Baghdad/Al-Rusafa	0.011	5	0	5	0.036	17	1	16	بغداد / الرصافة
Basrah	0	0	0	0	0.003	1	0	1	البصرة
Nineveh	0	0	0	0	0	0	0	0	نينوى
Maysan	0	0	0	0	0.009	1	0	1	ميسان
Al-Dewaniya	0	0	0	0	0.023	3	0	3	الديوانية
Diala	0	0	0	0	0.006	1	0	1	ديالى
Al-Anbar	0	0	0	0	0	0	0	0	الانبار
Babylon	0	0	0	0	0.015	3	0	3	بابل
Kerbela	0	0	0	0	0.017	2	0	2	كربلاء
Kirkuk	0.025	4	1	3	0.013	2	0	2	كركوك
Wasit	0.007	1	1	0	0.015	2	1	1	واسط
Thi-Qar	0	0	0	0	0.005	1	0	1	ذي قار
Al-Muthanna	0	0	0	0	0	0	0	0	المتن
Salah Al-Deen	0	0	0	0	0	0	0	0	صلاح الدين
Al-Najaf	0	0	0	0	0	0	0	0	النجف
Total without Kurdistan region	0.003	11	2	9	0.013	44	5	39	المجموع بدون اقليم كردستان
Erbil	0	0	0	0	0.038	7	2	5	اربيل
Duhok	0	0	0	0	0.008	1	0	1	دهوك
Al-Sulaimaniya	0	0	0	0	0	0	0	0	السليمانية
Grand total	0.003	11	2	9	0.014	52	7	45	المجموع الكلي

2020 data:

جدول (5-20) عدد الاصابات والوفيات بالعوز المناعي والمعدل لكل 10000 من السكان حسب دائرة الصحة والجنس

Table (5-20) Number of HIV cases and deaths and rates per 10000 of population according to health directorate and gender

Health directorates	معدل الوفاة Mortality rate	عدد الوفيات Number of deaths			معدل الاصابة Morbidity rate	عدد الاصابات Cases			دائرة الصحة
		المجموع Total	أنثى Female	ذكر Male		المجموع Total	أنثى Female	ذكر Male	
Baghdad/Al-karkh	0	0	0	0	0.12	43	8	35	بغداد / الكرخ
Baghdad/Al-Rusafa	0.006	3	1	2	0.13	62	6	56	بغداد / الرصافة
Basrah	0	0	0	0	0.05	14	1	13	البصرة
Nineveh	0	0	0	0	0.01	4	1	3	نينوى
Maysan	0	0	0	0	0.01	1	0	1	ميسان
Al-Dewaniya	0.007	1	1	0	0.01	2	0	2	الديوانية
Diala	0.017	3	1	2	0.03	5	2	3	ديالى
Al-Anbar	0	0	0	0	0.01	1	1	0	الانبار
Babylon	0.005	1	0	1	0.04	9	3	6	بابل
Kerbela	0	0	0	0	0.05	7	0	7	كربلاء
Kirkuk	0	0	0	0	0.08	13	1	12	كركوك
Wasit	0.007	1	0	1	0.04	6	2	4	واسط
Thi-Qar	0.005	1	0	1	0.08	17	3	14	ذي قار
Al-Muthanna	0	0	0	0	0.01	1	0	1	المتن
Salah Al-Deen	0	0	0	0	0	0	0	0	صلاح الدين
Al-Najaf	0	0	0	0	0.05	8	1	7	النجف
Total without Kurdistan region	0.0029	10	3	7	0.06	193	29	164	المجموع بدون إقليم كردستان
Erbil	0.005	1	1	0	0.04	8	2	6	اربيل
Duhok	0.007	1	0	1	0.03	4	2	2	دهوك
Al-Sulaimaniya	0	0	0	0	0.02	5	2	3	السليمانية
Grand total	0.003	12	4	8	0.05	210	35	175	المجموع الكلي

2022 data:

جدول (4-23) عدد الاصابات والوفيات بالعوز المناعي والمعدل لكل 10000 من السكان حسب دائرة الصحة والجنس
Table (4-23) Number of HIV cases and deaths and rates per 10000 of population according to health directorate and gender

Health directorates	معدل الوفاة Mortality rate	عدد الوفيات Number of deaths			معدل الاصابة Morbidity rate	عدد الاصابات Cases			دائرة الصحة
		المجموع Total	أنثى Female	ذكر Male		المجموع Total	أنثى Female	ذكر Male	
Baghdad/Al-karkh	0.01	4	1	3	0.25	96	12	84	بغداد / الكرخ
Baghdad/Al-Rusafa	0.02	8	3	5	0.29	148	27	121	بغداد / الرصافة
Basrah	0.01	2	1	1	0.11	37	11	26	البصرة
Nineveh	0	0	0	0	0.01	4	2	2	نينوى
Maysan	0.01	1	0	1	0.04	5	1	4	ميسان
Al-Dewaniya	0	0	0	0	0.04	6	0	6	الديوانية
Diala	0.02	3	1	2	0.04	7	2	5	ديالى
Al-Anbar	0	0	0	0	0.02	4	0	4	الانبار
Babylon	0	0	0	0	0.08	19	3	16	بابل
Kerbela	0.01	1	0	1	0.15	20	3	17	كربلاء
Kirkuk	0.02	3	0	3	0.08	15	1	14	كركوك
Wasit	0.01	1	1	0	0.10	16	7	9	واسط
Thi-Qar	0.01	2	0	2	0.12	29	7	22	ذي قار
Al-Muthanna	0	0	0	0	0.03	3	1	2	المتنى
Salah Al-Deen	0.01	1	0	1	0.01	2	0	2	صلاح الدين
Al-Najaf	0.03	5	0	5	0.12	19	6	13	النجف
Total without Kurdistan region	0.01	31	7	24	0.12	430	83	347	المجموع بدون إقليم كردستان
Erbil	0.005	1	1	0	0.04	8	0	8	اربيل
Duhok	0.01	1	1	0	0.01	2	0	2	دهوك
Al-Sulaimaniya	0	0	0	0	0.03	6	0	6	السليمانية
Grand total	0.01	33	9	24	0.11	446	83	363	المجموع الكلي

Clinical features of the disease:

HIV has three stages:

Stage 1: Acute HIV

Some people get flu-like symptoms a month or two after they've been infected with HIV. These symptoms often go away within a week to a month.

Stage 2: Chronic stage/clinical latency

After the acute stage, you can have HIV for many years without feeling sick.

It's important to know that you can still spread HIV to others even if you feel well.

Stage 3: AIDS

AIDS is the most serious stage of HIV infection. In this stage, HIV has severely weakened your immune system and opportunistic infections are much more likely to make you sick.

Opportunistic infections are ones that someone with a healthy immune system could typically fight off. When HIV has advanced to AIDS, these illnesses take advantage of your weakened immune system.

You're more likely to get certain cancers when you have AIDS. These cancers and opportunistic infections together are called AIDS-defining illnesses.

To be diagnosed with AIDS, you must be infected with HIV and have at least one of the following:

- Fewer than 200 CD4 cells per cubic millimeter of blood (200 cells/mm³).
- An AIDS-defining illness.

The symptoms of HIV vary depending on the stage of infection.

The disease spreads more easily in the first few months after a person is infected, but many are unaware of their status until the later stages. In the first few weeks after being infected people may not experience symptoms. Others may have an influenza-like illness including:

- fever , chills
- Fatigue
- Muscle Aches
- Night sweating
- headache
- rash
- sore throat

The infection progressively weakens the immune system. This can cause other signs and symptoms:

- swollen lymph nodes
- weight loss
- fever
- diarrhoea
- cough.

Without treatment, people with HIV infection can also develop severe illnesses:

- tuberculosis (TB)
- cryptococcal meningitis
- severe bacterial infections
- cancers such as lymphomas and Kaposi's sarcoma.
- HIV causes other infections to get worse, such as hepatitis C, hepatitis B.

risk factor for and route of transmission :

HIV can be transmitted via the exchange of a variety of body fluids from people living with HIV, such as blood, breast milk, semen and vaginal secretions. HIV can also be transmitted during pregnancy and delivery to the child. People cannot become infected through ordinary day-to-day contact such as kissing, hugging, shaking hands, or sharing personal objects, food or water.

It is important to note that people with HIV who are taking ART and have an undetectable viral load do not transmit HIV to their sexual partners. Early access to ART and support to remain on treatment is therefore critical not only to improve the health of people with HIV but also to prevent HIV transmission.

Behaviours and conditions that put people at greater risk of contracting HIV include:

- having condomless anal or vaginal sex;
- having another sexually transmitted infection (STI) such as syphilis, herpes, chlamydia, gonorrhoea and bacterial vaginosis;
- engaging in harmful use of alcohol and drugs in the context of sexual behaviour;
- sharing contaminated needles, syringes and other injecting equipment and drug solutions when injecting drugs;
- receiving unsafe injections, blood transfusions and tissue transplantation, and medical procedures that involve unsterile cutting or piercing; and
- experiencing accidental needle stick injuries, including among health workers.

Treatment :

The main objective of treatment of HIV infection is to reduce the mortality and morbidity caused by the virus and associated conditions, increasing survival, improving the quality of life and preventing HIV transmission.

HIV treatment involves the use of combined antiretroviral therapy (ART) to effectively suppress the viral load, preserve (or improve) immune function and reduce the risk of opportunistic infections and cancers commonly associated with HIV. People living with HIV are more likely than others to become sick with tuberculosis (TB).

Worldwide, TB is one of the leading causes of death in HIV/AIDS. HIV suppression with ART also decrease the inflammation caused by the immune activation associated with chronic HIV infection that contribute with an increased occurrence of cardiovascular, renal, neurological and other end-organ diseases that are prevalent in people living with HIV.

Pregnant women with HIV should have access to and take ART as soon as possible. This protects the health of the mother and will help prevent HIV from passing to the fetus before birth, or to the baby through breast milk.

In individuals with advanced HIV disease, the use of certain antimicrobials for prevention and treatment of common opportunistic infections is also an essential part of the care package.

Adherence to ART is important to maximize the clinical benefits on mortality and morbidity, and to reduce the risk of drug resistance.

ART regimens has evolved in the last years and are more potent, better tolerated and available in fixed-dose combinations for adults adolescents and children, which further support adherence and increase the efficacy and durability of the treatment.

To optimize the programmatic impact of HIV treatment and promote efficiency gains, the use of person-centred, differentiated care models has been adopted by countries, reducing the HIV disease burden on health systems and improving patient's quality of care.

Types of ART medications include:

Nucleoside reverse transcriptase inhibitors (NRTIs).

Non-nucleoside reverse transcriptase inhibitors (NNRTIs).

Protease inhibitors (PIs).

Fusion inhibitors.

CCR5 antagonists

Prevention :

HIV is a preventable disease.

Reduce the risk of HIV infection by:

- using a male or female condom during sex
- being tested for HIV and sexually transmitted infections
- having a voluntary medical male circumcision
- using harm reduction services for people who inject and use drugs.

Doctors may suggest medicines and medical devices to help prevent HIV, including:

antiretroviral drugs (ARVs), including oral PrEP and long acting products dapivirine vaginal rings injectable long acting cabotegravir.

ARVs can also be used to prevent mothers from passing HIV to their children.

People taking antiretroviral therapy (ART) and who have no evidence of virus in the blood will not pass HIV to their sexual partners. Access to testing and ART is an important part of preventing HIV.

Rights and confidentiality of HIV patients:

AIDS (Acquired Immunodeficiency Syndrome) and HIV (Human Immunodeficiency Virus) patients have specific rights that aim to protect their well-being, dignity, and access to appropriate care. Here are some key rights of AIDS and HIV patients:

1. **Right to Privacy:** AIDS and HIV patients have the right to privacy regarding their health status. Their medical information should be kept confidential, and disclosure of their HIV/AIDS status should only occur with their informed consent or as mandated by law.
2. **Right to Non-discrimination:** AIDS and HIV patients have the right to be treated fairly and without discrimination in all areas of life, including employment, housing, education, healthcare, and access to public services. Discrimination based on HIV/AIDS status is illegal in many countries.
3. **Right to Healthcare:** AIDS and HIV patients have the right to access appropriate healthcare services, including antiretroviral therapy (ART), counseling, and support. Governments and healthcare systems should ensure the availability and affordability of HIV/AIDS treatment and care.
4. **Right to Informed Consent:** AIDS and HIV patients have the right to make decisions about their own healthcare. This includes the right to be fully informed about the nature of their condition, available treatment options, and potential risks and benefits. They should also have the right to refuse or discontinue treatment, as long as they are competent to do so.
5. **Right to Confidentiality:** AIDS and HIV patients have the right to have their medical information kept confidential. Healthcare providers and institutions should maintain strict confidentiality of patient records and information, except when required by law or with the patient's informed consent.
6. **Right to Support and Counseling:** AIDS and HIV patients have the right to receive emotional support, counseling, and psychosocial services to help them cope with the physical, emotional, and social challenges associated with HIV/AIDS.
7. **Right to Education:** AIDS and HIV patients have the right to access education without discrimination. Schools and educational institutions should provide a safe and inclusive environment that protects the rights and dignity of students with HIV/AIDS.
8. **Right to Participation:** AIDS and HIV patients have the right to participate in decisions that affect their lives, including healthcare policies, research, and community programs.

Their voices should be heard, and they should be involved in shaping policies and practices related to HIV/AIDS.

It is important to note that the specific rights and legal protections for AIDS and HIV patients may vary from country to country. Therefore, it is advisable to refer to the laws and regulations of the relevant jurisdiction for comprehensive information.

References:

Most of the information and statistical data in this research was taken from

- 1- World health organisation / HIV / AIDS data and information
- 2- Iraqi ministry of health / yearly statistical data of HIV /AIDS



**World Health
Organization**



