What is HIV?

- HIV stands for ‘human immunodeficiency virus’.
- HIV is a virus (of the type called retrovirus) that infects cells of the human immune system (mainly CD4 positive T cells and macrophages—key components of the cellular immune system), and destroys or impairs their function.
- Infection with this virus results in the progressive deterioration of the immune system, leading to ‘immune deficiency’.
- The immune system is considered deficient when it can no longer fulfill its role of fighting off infections and diseases.

What is AIDS?

- AIDS stands for 'acquired immunodeficiency syndrome' and is a surveillance definition based on signs, symptoms, infections, and cancers associated with the deficiency of the immune system that stems from infection with HIV.

What are the stages of HIV?

- Stage 1:***Primary Infection*** ,
- stage 2: ***Clinically Asymptomatic stage***,
- stage 3: ***Symptomatic Infection Stage***
- stage 4: ***The Progression from HIV to AIDS***.

STAGE 1 : Primary HIV infection

- This stage of infection lasts for a few weeks and is often accompanied by a short flu-like illness. In up to about 20% of people the HIV symptoms are serious enough to consult a doctor, but the diagnosis of HIV infection is frequently missed.
- During this stage there is a large amount of HIV in the peripheral blood and the immune system begins to respond to the virus by producing HIV antibodies . This process is known as seroconversion. If an HIV antibody test is done before seroconversion is complete then it may not be positive.

STAGE 2 : Clinically asymptomatic stage

- This stage lasts for an average of ten years and, as its name suggests, is free from major symptoms, although there may be Generalised swollen glands.
- The level of HIV in the peripheral blood drops to very low levels but people remain infectious and HIV antibodies are detectable in the blood, so antibody tests will show a positive result.
- Research has shown that HIV is not dormant during this stage, but is very active in the lymph nodes.
- A test is available to measure the small amount of HIV that escapes the lymph nodes. This test which measures HIV RNA (HIV genetic material) is referred to as the viral load test, and it has an important role in the treatment of HIV infection.

STAGE 3 : Symptomatic HIV infection

- The lymph nodes and tissues become damaged or ‘burnt out’ because of the years of activity;
- HIV mutates and becomes more pathogenic,
- The body fails to keep up with replacing the T helper cells that are lost.

- certain ***opportunistic infections***
- This stage of HIV infection is often characterised by multi-system disease and infections can occur in almost all body systems.
- Unless HIV itself can be slowed down the symptoms of immune suppression will continue to worsen.

STAGE 4 : Progression from HIV to AIDS

- As the immune system becomes more and more damaged
- increasingly severe opportunistic infections and cancers, leading eventually to an AIDS diagnosis.
- A clinical criteria is used by WHO to diagnose the progression to AIDS,
- differs slightly between adults and children under five.
- The criteria for diagnosing AIDS may differ depending on individual country guidelines.