UNITAID: CD4 and Viral Load Testing

What is a CD4 test?

CD4 cells are a type of white blood cell that plays a major role in protecting the body from infection. A CD4 test measures the number of CD4 cells in a sample of human blood. In people living with HIV, the higher the CD4 count, the better the patient is able to control HIV and other infections.

What is Viral Load testing?

A viral load test measures the number of HIV virus particles in human blood. It shows how well treatment is suppressing the virus even if a patient is showing no symptoms.

High viral load means HIV is replicating at a high rate in a patient's body. This indicates that treatment is not suppressing the HIV effectively – either the patient is not taking the medicine, or has developed resistance to treatment. The goal of HIV antiretroviral treatment is to decrease the viral load to an undetectable level.

Who should take the test?

Health workers can use CD4 and viral load tests in a complementary manner to build up an overall picture of the health status of a person living with HIV. Once treatment has started, patients should have viral load tests every 6-12 months to check how well their medication is controlling the virus. However, in resource-poor settings, patients do not always have access to viral load testing.

"Lost" results

Today, most diagnostics facilities are centralized and require trained staff and specialised infrastructure. Such facilities can be far from patients' homes, so results can be lost or delayed due to the distances between where samples are collected and where the test is carried out. It can take weeks before results are returned to the clinician.

UNITAID's role

UNITAID has committed $28 million through Médecins Sans Frontières for a CD4 and viral load project in seven African countries. It aims to establish best practices for the use of new point-of-care diagnostic technologies in resource-poor settings.
By demonstrating the feasibility and cost-effectiveness of viral load monitoring and CD4 testing in decentralized areas, the project aims to create incentives for manufacturers to invest in this market.

Some 47,000 point-of-care CD4 tests, and just under 150,000 viral load tests were conducted in the first two years of this project.