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## Unitaid: CD4 and Viral Load Testing

### What is a CD4 test?

CD4 cells are a type of white blood cell that play 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. Over time HIV destroys CD4 cells living a person more vulnerable to opportunistic infections.

### What is Viral Load testing?

A viral load test measures the number of HIV virus particles in human blood. It is offered to patients on antiretroviral therapy to monitor treatment success and shows how well treatment is at suppressing the virus. A 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 virus 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 viral load and/or CD4 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 after 6 months and if undetectable yearly 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.

### Unitaid's role

In 2016, Unitaid's Board committed US \$14,705,000 through Solthis, the lead grantee, for Phase 2 of the OPP-ERA project, which is to run until 2019. Phase 1 aimed to promote access to Open Polyvalent Platforms (OPPs) – an innovative open laboratory system that can be used to perform HIV viral load testing as well as diagnose other diseases – in resource-limited settings. Some key achievements of Phase 1 include: 7 functional OPP-ERA platforms since August 2014 in the Burundi, Cameroon, Cote d'Ivoire and Guinea countries, a total of 60,739 viral load tests performed from August 2014 to July 2016, conducted using OPPs.

Phase 2 will scale up OPPs use and increase the number of labs in the four project countries. It aims to produce results that will inform, facilitate and mobilise scale up. Its overall goal is to scale up access to viral load testing (VLT) and the polyvalent use of OPPs to diagnose TB, and HBV and HIV in infants in low- and middle-income countries (LMICs).

### Some of our partners in the fight against HIV

Solthis, Médecins Sans Frontières, Diagnostics for the Real World (DNDi), Clinton Health Access Initiative (CHAI), and UNICEF.

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