

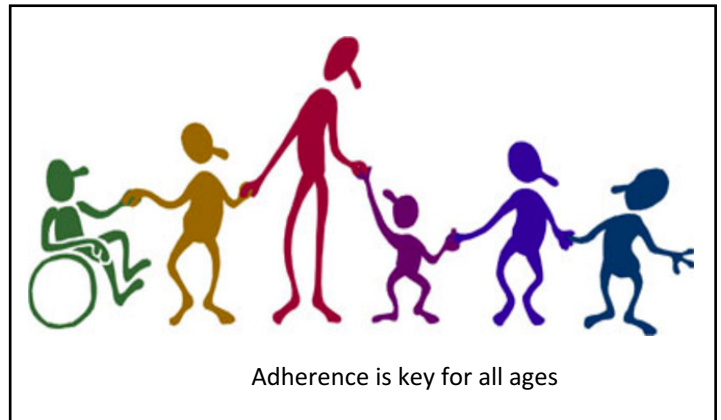


Fighting HIV DRUG RESISTANCE IN UGANDA

An upward trend in HIV drug resistance has been confirmed in Uganda and is causing increasing cases of treatment failure. Rising levels of drug resistance could threaten to reverse decades of hard-won gains in keeping people alive. There is an urgent need to monitor, prevent and respond to HIV drug resistance .

Importance of taking ARV treatment as prescribed

HIV treatment using antiretroviral (ARV) medications is extremely effective for the majority of people living with HIV. When taken daily as prescribed, ARVs control infection by preventing HIV's ability to reproduce inside the body. The ultimate aim is to reduce the viral load (the amount of virus in the blood stream). People who achieve viral load suppression live longer, healthier lives, and are less likely to transmit HIV to other people. Those who do not regularly take their medication risk high viral load and drug resistance which can lead to treatment failure, illness and death.



HIV drug resistance

There are two types of HIV drug resistance *pretreatment* HIV drug resistance (PDR) and *acquired* HIV drug resistance (ADR).

- As it sounds, PDR occurs when someone is originally infected with a virus that is already drug resistant.
- ADR develops when people do not follow a prescribed treatment plan, often because they do not have consistent access to quality HIV combination treatment and care.



Specific causes of drug resistance

- The major cause of HIV drug resistance is poor faithfulness to a medication regimen—in science speak it's also known as “adherence.” When a person with HIV does not take medications as advised by the health worker they are likely going to experience treatment failure and drug resistance. Missing and skipping medications reduces the amount of ARVs in the body, giving HIV a chance to become active and replicate.
- Drug resistance may also be transmitted when a person whose treatment is failing infects another. A high prevalence of drug resistance is likely to lead to circulation of drug resistant strains within a community, which will increase HIV treatment costs if many people need second, or even third-line treatment.
- A mother whose HIV is resistant to ARVs can pass her resistant HIV to her baby.

Monitoring drug resistance

Viral load is one of the best tools available to determine if HIV treatment is working. An undetectable viral load is an excellent sign that treatment is working correctly. The Ministry of Health recommends a viral load test 6 months after initiating antiretroviral treatment and annually thereafter. Viral load monitoring also has a high potential to motivate good medication taking habits. If the virus continues to multiply when a person is taking medications correctly, another test called resistance test or genotype test is required.



Second- and third-line treatment

Individuals with HIV drug resistance will start to fail therapy and may also transmit drug-resistant viruses to others. The level of HIV in their blood will increase unless they change to a different treatment regimen, which could be more expensive – and, still harder to obtain.

Second-line ARVs cost up to four times more than first-line drugs, but so far, most people in Uganda who need the medicines have access to them. The bigger challenge faces those who fail on second-line treatment and hence need third-line treatment. The country has limited capacity to provide third-line ART.

State of drug resistance in Uganda

- Over 10 percent of people on treatment have resistance to the NNRTI drugs nevirapine and efavirenz, mostly due to ADR. However, children under 12 years old mostly have PDR.
- There is a low rate of resistance to the NRTI drug class and no resistance to protease inhibitors.
- Second-line ARVs cost up to four times more than first-line drugs, but so far most of those who need the medicines have access to them.
- The bigger challenge faces those who fail on second-line treatment and hence need third-line treatment. The country has limited capacity to provide third line-ART.
- Joint Clinical Research Centre (JCRC) only acquired genotype testing capacity recently, to be able to test drug resistant HIV for specific genetic mutations that are known to be resistant for specific drugs.
- The Ministry of Health launched a viral load campaign in February to reverse the downward trend in viral load testing.



Action

Uganda must monitor and improve the quality of its treatment programmes and take action as soon as treatment failure is detected. Actions include:

- The launch of non-NNRTI drugs for all first-time treatment starters, including the availability of Dolutegravir, an integrase inhibitor with low potential for drug resistance.
- Adopting WHO's newly launched Guidelines on the public health response to pretreatment HIV drug resistance <http://www.who.int/hiv/pub/guidelines/hivdr-guidelines-2017/en/>

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