

Troubling Mutations

When the virus fights back

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In 2017, the World Health Organization (WHO) issued a report showing that in six of 11 countries surveyed in Africa, Asia and Latin America, more than 10 percent of people starting treatment for HIV suffered from drug-resistant HIV.

Drug resistance refers to the ability of a pathogen to continue multiplying in the presence of medications that ordinarily would defeat this disease-causing agent. Despite many breakthroughs in HIV antiretroviral (ARV) medications, drug resistance persists as an obstacle to effective management of the virus. This is because the virus replicates rapidly and imperfectly, generating many mutations, some of which are able to block the ARVs that target HIV.

Most individuals who develop resistance to ARVs do so because they are unable to adhere to treatment—whether because of an inability to access medications regularly or because of side effects—which increases the likelihood of drug-resistant mutations.

This negatively affects not only individuals but people everywhere because those with resistance will see their health decline. What's more, they may transmit drug-resistant strains of HIV to others.

Therefore, WHO recommends that countries keep a close watch on their treatment programs and shift to alternative first-line ARV regimens when more than 10 percent of folks on ARV therapy develop a resistant strain of the virus.

The agency believes that early HIV treatment and undergoing drug-resistance testing can help abate this problem, which is also key to achieving the global target of ending AIDS as an epidemic by 2030.
