Directly Observing HIV Treatment Can Help Those Whose Meds Have Failed

For some people with HIV treatment failure, personal difficulties with adherence may be at the root of the problem.

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People with HIV who have taken multiple antiretroviral (ARV) regimens and who nevertheless have a persistently elevated viral load, which is known as treatment failure, may need help adhering to their drug regimen, aidsmap reports. Consequently, having clinicians directly observe them taking their medications for a period may help fully suppress the virus.

Publishing their findings in Clinical Infectious Diseases, researchers led by Nicole Winchester, MD, of the National Institutes of Health (NIH), enrolled 20 people with HIV who had taken at least two different ARV regimens, had been on their current regimen for at least six months and had treatment failure, defined as a pair of consecutive viral loads greater than 1,000.

The median age of the cohort was 46 years old. Sixty percent were male, 85% were Black and 25% were born with HIV. Ninety percent had a CD4 count below 200—the threshold for a diagnosis of AIDS—and the median count was just 54. The median viral load at the study's outset was about 40,000. The average number of previous ARVs that participants had taken was 12. The participants had an average of 21 major viral mutations associated with resistance to treatment.

The participants were admitted to a clinic for eight days, during which they were asked to take their medications as they normally did. If the study members did not request their ARVs within two hours of the schedule they said they typically follow, they were engaged in directly observed therapy (DOT), in which nursing staff administered their medications and watched them take them.

The study defined a response to DOT as a 68% (0.5 log10) decline in viral load after eight days. This occurred in nine (45%) of the participants and confirmed to the researchers that a lack of adherence to ARVs had been the cause of treatment failure in these individuals. Those who had a response to DOT experienced an average decline in viral load of 97% (1.52 log10), while those who had no response experienced just a 21% (0.1 log10) decline.

Those who had a response to DOT, compared with those who did not have a response, had taken fewer previous ARVs (9 versus 14), had fewer major drug-resistance mutations (6 versus 24) and

had virus that proved more susceptible to ARV treatment. The responders also had lower levels of education and required more frequent support from social workers with employment, housing, food insecurity and mental health conditions.

Six of the participants who responded to DOT received at least six months of follow-up in outpatient care. Five of them had a fully suppressed viral load at least once, but only one had a consistently undetectable viral load. However, all of them experienced a significant rise in their CD4s.

To read the study abstract, click here.
