The COVID-19 pandemic has the potential to cause disruptions in treatment for people living with HIV/AIDS that could result in hundreds of thousands of extra deaths from AIDS-related illnesses, according to a warning from the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO).

In sub-Saharan Africa—where more than two-thirds of the nearly 40 million people living with HIV worldwide reside—a 6-month disruption of antiretroviral therapy (ART) could lead to more than a half-million extra deaths from tuberculosis and other AIDS-related illnesses in 2020 to 2021, according to modeling experts convened by UNAIDS to assess the potential effects of COVID-related disruptions on HIV/AIDS.

“The COVID-19 pandemic must not be an excuse to divert investment from HIV,” said UNAIDS Executive Director Winnie Byanyima.

The agency estimates that of the 25.7 million people with HIV in sub-Saharan Africa, about 16.4 million (64%) were receiving ART in 2018. With the COVID-19 pandemic, they now are at risk for interruption in HIV treatment for a variety of reasons. These include clinic closures or reduced availability of HIV-related services, clinicians and facilities overwhelmed from responding to COVID-19 cases, measures such as physical distancing put in place to stem the spread of SARS-CoV-2, and disruptions in the antiretroviral supply chain.

UNAIDS and the WHO said that the effect of a 6-month disruption of ART “could effectively set the clock on AIDS-related deaths back to 2008,” when 950 000 deaths occurred in the region.

The international consortium of modeling experts who conducted the analysis used 5 models of HIV epidemics to consider various potential disruptions to HIV prevention and treatment services caused by COVID-19, lasting for 3 months or 6 months, and to estimate the effects of these disruptions on HIV-related deaths and new infections in sub-Saharan Africa over periods of 1 year and 5 years.

The models predict that a 6-month interruption in antiretroviral treatment would be expected to approximately double HIV-related deaths over 1 year, which translates to 471 000 to 673 000 excess adult deaths in sub-Saharan Africa. About half as many excess HIV deaths would occur with a 3-month interruption of ART.

“This relates to the fact that CD4 lymphocyte count recovery that takes years to achieve on ART is rapidly lost after viral replication resumes in the absence of ART,” the researchers noted.

“Interruption of [antiretroviral] supply affecting only a proportion of the population or for a shorter duration would have lesser effects.”

The study also predicted that a 6-month interruption in coverage of HIV services for mothers and their children would result in an approximately 2-fold increase in mother-to-child transmission of HIV—reversing gains from the past decade, in which new HIV infections among children in sub-Saharan Africa declined by 43%, from 250 000 in 2010 to 140 000 in 2018. One model also predicted that sporadic interruptions in the supply of antiretroviral medications, resulting in interruptions in adherence to treatment, would lead to an increase in resistance to antiretroviral drugs and a reduction in the number of people on treatment who achieve successful suppression of the virus over the next 5 years.
Although an interruption of the antiretroviral drug supply would have by far the largest effect of any potential disruptions, other COVID-19–related factors would lead to increased HIV/AIDS incidence and deaths, the study found. These include reductions in quality of clinical care at overtaxed health facilities; interruptions in the supply of drugs other than antiretroviral medications, such as cotrimoxazole, taken to prevent protozoal, bacterial, and fungal infections; suspension of HIV testing; and reluctance to access care because of fear of exposure to SARS-CoV-2 in the health care setting.

The study authors said that as governments, donors, suppliers, and communities consider plans to manage effects of the COVID-19 pandemic, maintaining the supply of antiretroviral medications for people with HIV and providing essential prevention services for key populations are critical for averting additional HIV-related deaths and new cases.

“We must read this as a wake-up call to countries to identify ways to sustain all vital health services,” said WHO Director-General Tedros Adhanom Ghebreyesus. He noted that some countries are already taking steps, such as providing drop-off points where people can collect bulk packs of treatment and other essential items, such as self-testing kits, to help relieve pressure on health services and health care workers.

“We must also ensure that global supplies of tests and treatments continue to flow to the countries that need them,” he added.

ARTICLE INFORMATION

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