High Community Viral Load a Possible Driver of African HIV Epidemic

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The average HIV viral load of those not taking antiretrovirals (ARVs) in sub-Saharan Africa is almost four times the “community viral load” in North America, possibly explaining a significant reason for the disproportionate toll HIV as taken on sub-Saharan Africa, aidsmap reports. Factoring out South Africa, sub-Saharan Africa’s community viral load was 5.5 times higher than North America’s. Researchers from Cornell University in New York assembled 44 cohort studies from seven regions around the world and analyzed 71,668 viral load measurements, publishing their findings in the journal AIDS.

West Africa’s viral loads were, on average, twice as high, and east Africa’s five times and southern Africa’s 5.5 times as high as in North America. Asia’s community viral load was about 40 percent higher than North America’s. Due to the fact that South Africa has a better health care system than its neighbors, the researchers analyzed that country’s data separately and found that its viral loads were 50 percent higher than in North America.

The investigators calculated that the epidemic in Kisumu, Kenya, was 13.9 percent greater in 2010 than it would have been if the area shared North America’s community viral load level. Those most disproportionately affected by the increased viral load were actually those at lower risk of infection, because those at higher risk were most likely to become infected irrespective of others’ viral loads. The researchers calculated that the prevalence of HIV in lower-risk heterosexuals was 22.5 percent higher due to the increased community viral load in Kisumu.

The researchers speculate that untreated coinfections have contributed significantly to community viral load—including herpes, which raises HIV viral load by 50 percent, active tuberculosis (150 percent) and acute malaria (370 percent).

To read the aidsmap story, click here.

To read the study abstract, click here.

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