91% of HIV Passes From Those Unaware They're Infected or Not in Care

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Of the approximately 45,000 new cases of HIV in 2009, an estimated 91.5 percent were transmitted from people who did not know they were infected or who were not in medical care for the virus. Publishing their findings in JAMA Internal Medicine, researchers analyzed national databases to estimate the rates of infection deriving from HIV-positive Americans at each stage of the "treatment cascade" in 2009.

There were more than 1.1 million Americans living with HIV at that time. Dividing this group into the five stages of the treatment cascade, also known as the "care continuum," the researchers estimated that 207,600 (18.1 percent) were undiagnosed; 519,414 (45.2 percent) knew they were HIV-positive but were not in medical care; 47,453 (4.1 percent) were in medical care but had not been prescribed antiretrovirals (ARVs); 82,809 (7.2 percent) had been prescribed ARVs but still had a detectable viral load; and 290,924 (25.3 percent) were virally suppressed.

Of the new HIV cases, an estimated 30.2 percent transmitted from people unaware of their infection, and an estimated 61.3 percent came from those diagnosed with the virus but not in medical care.

The research suggested that as individuals make their way through the steps of the treatment cascade, their average risk of transmitting HIV drops off steadily. Compared with undiagnosed people with HIV (who transmitted the virus 6.6 times for each cumulative 100 years of life), people diagnosed but not in care were 19 percent less likely to pass on the virus (with a rate of 5.3 transmissions per 100 person-years), while those who were virally suppressed were 94 percent less likely to transmit (0.4 transmission per 100 person-years).

A total of 86.5 percent of new infections came from men.

The researchers called for improvements to the state of the care continuum to lower the rate of new HIV infections in the United States, which stands at an estimated 50,000 cases per year.

"By quantifying where HIV transmissions occur at each stage of care, we can identify when and for whom prevention and treatment efforts will have the most impact," Jonathan Mermin, MD, MPH,

director of CDC's National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, said in a press release. "We could prevent the vast majority of new infections tomorrow by improving the health of people living with HIV today."

"Positive or negative, an HIV test opens the door to prevention. For someone who is positive, it can be the gateway to care and the signal to take steps to protect partners from infection. For someone who tests negative, it can be a direct link to important prevention services to help them stay HIV-free," Eugene McCray, MD, director of CDC's Division of HIV/AIDS Prevention, said in the same press release. "At CDC, we're working hard to make testing as simple and accessible as possible."

To read the press release, click here.

To read the study, click here.

To watch an informational video about the report, click here.

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