On 3 August 2008, the United States (US) Centers for Disease Control and Prevention (CDC) in Atlanta released for the first time estimates for HIV incidence based on a STARHS (serological testing algorithm for recent HIV seroconversion) [1]. In their communication, CDC report that the true HIV incidence for 2006 is around 40% higher than the previous estimate of 40,000 HIV infections. They also point out that this new figure of 56,300 does not indicate any increase in the annual number of new HIV infections, which is believed to be relatively stable since the late 1990s. Analysis by transmission category confirms that male-to-male sexual contacts accounted for 53% of the estimated new HIV infections in 2006, high-risk heterosexual contact for 31%, injection drug use (IDU) for 12% and male-to-male sexual contact and IDU for 4%. Further analyses by race/ethnicity revealed an uneven distribution with the highest percentage of new HIV infections occurring in African Americans (45%) followed white Americans (35%) and Hispanics (17%).

The results were obtained after using a STARHS assay, the BED HIV-1 capture enzyme immunoassay (BED-CEIA), to test 6,864 samples from new HIV diagnoses from 22 US federal states in 2006. Whereas standard HIV tests provide no insight into the time when infection was actually contracted, the BED-CEIA is able to identify HIV infections that occurred within around the previous five months. The test thus allows to distinguish between recent and long-standing infections and permits a more precise estimate of the true incidence. A total of 2,133 (31%) tests of the 6,864 were classified as recent infections and the estimated incidence rate for 2006 was 22.8 per 100,000 population. The detailed methods for the calculation of this incidence and an extended back-calculation model to estimate HIV incidence for the period 1977 to 2006 are reported in an article by Irene Hall et al. in JAMA [2].

The CDC state that the implementation of the STARHS-based surveillance system in the US will allow for reliable monitoring of incidence trends in the future, helping to pinpoint the populations at greatest risk and pave the way for more timely interventional measures.

Since it is estimated that one-quarter of HIV-infected individuals are unaware of their infection status and that they account for more than half of all new infections, CDC recommends testing everyone in the US aged 13 to 64 years for HIV. On a more positive note, the stability in the new HIV infections since 2000 is an indicator that prevention can, and does, work, especially if one takes into consideration that the number of people living with HIV increases over time – due to better survival of infected individuals - and subsequently the overall risk of HIV transmission increases.

References

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