HIV Treatment as Prevention

Key points:

- Treating people with HIV/AIDS not only improves their health, it may also prevent transmission of the virus to others.
- Gilead is focused on expanding access to HIV testing and linkage to care so affected individuals know their status and can access appropriate medical services and treatment.

Scientific evidence demonstrates that treating people living with HIV with antiretroviral therapy not only improves an infected individual's health but can also reduce transmission of the virus to uninfected individuals.

The concept of treatment as prevention was demonstrated in 2011 in a large, randomized clinical trial known as HPTN 052, conducted by the U.S. National Institutes of Health. The study, which followed heterosexual couples in which one partner was HIV-infected and the other was not, found that antiretroviral therapy can reduce transmission of HIV by up to 96 percent.[1]

Other research has demonstrated the prevention impact of HIV treatment in real-world settings. For example, a South African study found that people living in areas with higher use of antiretroviral therapy were 38 percent less likely to acquire the virus than people in areas with lower use of treatment.[2] Similarly, in San Francisco, new HIV diagnoses declined by one-third between 2006 and 2008, during a time when the number of people in the community receiving HIV treatment increased.[3]

Implementing Treatment as Prevention

HIV treatment guidelines have historically recommended delaying antiretroviral therapy until advanced HIV disease. But in the past few years, health authorities have begun revising these guidelines to recommend HIV treatment as early as possible because of the therapeutic and preventive benefits of therapy, as well as the improved tolerability and convenience of newer HIV medicines. In 2013, the World Health Organization (WHO) updated its guidelines on antiretroviral therapy to recommend treatment initiation for individuals when their CD4 count, a measure of immune system strength, falls to 500 cells/mm^3 or below (previously WHO recommended treatment initiation at CD4 350 cells/mm^3).[4]

In May 2014, the U.S. Department of Health and Human Services updated its HIV treatment guidelines to recommend antiretroviral therapy for all adults and adolescents diagnosed with HIV, regardless of CD4 count.[5] In July 2014, this recommendation was endorsed by the U.S. Panel of the International Antiviral (formerly AIDS) Society in its updated treatment recommendations for adult HIV infection.[6]

Implementing treatment as prevention requires reaching a high proportion of infected individuals in a community with treatment. While this necessitates a significant up-front financial investment, modeling studies predict that the strategy would be cost-effective longer term. For example, economic analyses presented at the XIX International AIDS Conference in July 2012 found that early access to antiretroviral therapy in South Africa and India would meet the WHO standard for "very cost-effective," meaning that each year of life saved would be less than per capita gross domestic product.[7]

Gilead's Role

Since 2003, Gilead has operated programs to expand the global availability of its HIV medicines. Today, 7 million HIV patients in low- and middle-income countries use Gilead medicines, and licensing partnerships with generic manufacturers in India and South Africa have lowered drug prices by 80 percent since 2006. Price reductions enable international treatment efforts to reach more patients each year, even in difficult economic times.

Treatment as prevention could also have a major impact in the United States, where rates of new HIV infections have remained unchanged for a decade. Through partnerships with health providers in 12 U.S. cities severely affected by HIV, Gilead is helping more people with HIV receive testing and learn their status. This is a critical first step for them to be referred to treatment that can improve health and prevent transmission to others.

Further Reading: In June 2012, Gilead and the Wilton Park group co-convened a high-level policy meeting focused on the "new era in HIV/AIDS treatment as prevention."

References

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[5] U.S. Department of Health and Human Services Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. May 2014. Available online here.

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