We still need to beat HIV

François Dabis and Linda-Gail Bekker

Despite remarkable advances in HIV treatment and prevention, the limited political will and leadership in many countries—particularly in West and Central Africa and Eastern Europe—has fallen short of translating these gains into action. As a result, nearly 2 million infections occurred in 2016, creating a situation that is challenging to counter. Next week in Paris, the International AIDS Society (IAS) convenes researchers, health experts, and policy-makers to discuss the global state of this epidemic. It has been more than three decades since AIDS was clinically observed and associated with HIV infection. Since then, HIV has accounted for 35 million deaths worldwide. Today, about 37 million people are infected. IAS and the French Research Agency on HIV and Viral Hepatitis (ANRS) have now released the Paris Statement (www.ias2017.org/The-Paris-Statement-HIV-Science-Matters) to remind world leaders why HIV science matters, how it should be strengthened, and why it should be funded globally and durably so that new evidence can be translated into policy.

The good news is that scientific breakthroughs have led to new biomedical interventions and practices and, consequently, substantive reductions in morbidity, mortality, and new infections. Full-scale implementation of these new measures could eliminate HIV/AIDS as a health crisis. The bad news is that this effort is fragile because funding is under threat, health care systems of many countries are not equipped to deliver, and political will and leadership are lacking. Even if current efforts reduce new infections by 90% over the next decade, there would still be 200,000 new infections each year, with a worldwide lifelong treatment target of 40 million individuals living with HIV.

Antiretroviral therapy (ART) has been the catalyst for change in how HIV infection is treated and prevented. A single, once-a-day, multidrug tablet, with few side effects, has converted HIV from a death sentence to a chronic, manageable disease for millions. It reduces viral levels so that the risk of transmission plummets. ART also has made mother-to-child transmission a rare event in many places. Pre-exposure prophylaxis and voluntary male circumcision have joined other behavioral measures (condom promotion, universal testing, and lifestyle changes) as cornerstones in prevention. Yet ART is a lifelong and costly regime, and many people in the developed and the developing world cannot access it. Many nations do not have the health care infrastructure or the community engagement to support the robust new ways to prevent transmission or diagnose infection. Although we have come far, the benefits of these new approaches are not universal.

The Paris Statement describes five scientific priority areas for building a new public health agenda that meets the challenge of this ongoing epidemic in the face of shrinking resources. Vaccine research and development should be globally coordinated and supported through public-private partnerships. Simpler and efficient ART drug formulations are needed for long-term use. Biomedical preventive and therapeutic measures must be tailored to at-risk groups and key populations through multidisciplinary, evidence-based approaches to test, prevent or treat, and retain in care, while addressing stigma and discrimination. HIV persistence and viral control mechanisms must be understood through basic research to envision a functional or complete cure. Economic research and innovative financing models should be devised to ensure that new strategies can be universally applied at full scale while also strengthening health systems. The foundation of all five priorities requires funding to pull society through this next collective drive to end the pandemic.

Containment of this epidemic is attainable. We encourage all to join in the global advocacy for HIV/AIDS research and development.
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published online July 20, 2017

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