

AIDS 2016 Progress and Challenge

A report from  **IDSA**
Global Health

When the 2000 International AIDS Conference convened in Durban, South Africa, the government of the host country denied existence of the virus, and, worldwide, just 700,000 of an estimated 30 million people living with HIV were receiving the antiretroviral treatment they needed to stay alive.



The 2016 International AIDS Conference returned to the South African city and to a country that is home to the largest HIV treatment program in the world, while more than **17 million people** globally are accessing antiretroviral treatment.

Still, with an estimated **37 million people living with HIV** worldwide, the world faces the need to ensure treatment for at least **20 million more**. Prisoners, men who have sex with men, transgender women, people engaged in sex work, and people who inject drugs remain at disproportionately high risk for HIV, with disproportionately low access to services. Women continue to surpass men in new infections, while men, behind in diagnosis and treatment, surpass women in AIDS-related deaths. And still, fewer than one in three of the **2.6 million children living with HIV** are accessing antiretroviral treatment. With all of these challenges now, discussions noted, the future holds the prospect of the largest generation in history approaching the age of greatest risk for HIV.

“We have not only gathered to celebrate our shared achievements,” International AIDS Society President Chris Beyrer told an opening night audience, “we are here because of the urgency of the undone work, because we are still counting annual AIDS deaths in the millions, because less than half of our precious brothers and sisters living with HIV are being treated, and because new infections are

holding steady in most places and expanding in others.”

Global responses to HIV face another challenge in findings from a Kaiser Family Foundation UNAIDS report presented at the conference: Between **2014 and 2015** international donor funding **dropped by 13 percent**. The decline in donated dollars is the first in five years and includes a significant reduction in both real numbers and potential impact from the world’s largest donor, the United States. “It will translate,” Dr. Jennifer Cohn of the Elizabeth Glaser Pediatric AIDS Foundation said at a presentation of the report, “into lives lost that could have been saved.”

If the 2000 International AIDS Conference in Durban set the challenge of recognizing needs for HIV science, services, prevention, treatment and care globally, the 2016 conference set the challenge of meeting those needs. It is a challenge that discussions, sessions and action in Durban during the third week of July sought to answer, with release and analyses of new findings, as well as with examinations of scientific and funding hurdles that continue. This report summarizes some of the highlights.

Goals and guidelines

Studies and trials that began even before the 2000 conference have confirmed that appropriate care and effective prevention of HIV require immediate access to antiretroviral treatment for all people diagnosed with the virus. **UNAIDS 90-90-90*** targets set a timetable for optimal use of that knowledge with testing and treatment goals to be met by **2020**. The release of the updated World Health Organization *Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection* codified that knowledge with more than 40 new recommendations, setting standards for treating all people living with HIV, using antiretroviral treatment to prevent infection among people at significant risk, using new and better antiretroviral treatments, improving service delivery to reach all people, and improving health systems to ensure reliable access to medicines.



*90 percent of all people with HIV to know it, 90 percent of those to be receiving treatment, and 90 percent of those to be virally suppressed

Policy and Practice

Nearly a quarter of low- and middle-income countries have adopted the recommendation to make treatment accessible to all people living with HIV, regardless of CD4 (or immune cell) count, a WHO-sponsored presentation examining uptake of both policy and practice asserted. But, Dr. Meg Doherty, presenting the data, added, for the majority of those countries, putting the “treat all” policy into practice remains a goal. Similarly, while the presentation showed almost universal adoption of the WHO-recommended Option B+ of immediate treatment for life for pregnant HIV-infected women, it also showed implementing that policy to be a continuing work in progress, with reality in some resource poor countries limited to a small number of settings. Adoption of WHO’s guideline to treat all children, like the reality of treatment access for pediatric HIV patients, also lags, with just 58 percent of countries expressing intent to add the recommendation to national policy.



A preconference session examining progress toward 90-90-90 goals highlighted one reason for the delay in African countries. With **24 percent** of the world’s disease burden, the continent is home to **3 percent** of the world’s health workforce and **1 percent** of its financial resources. “Task shifting” is a frequently cited solution for HIV care in physician shortage landscapes, Dr. Carlos del Rio of HIVMA and Emory University’s Global Health Department noted, but, he added, “task shifting to who?” An increasing expectation that community health workers can take up the slack, particularly without compensation, is unrealistic, Dr. del Rio said. Outside the hall, a mock graveyard in memorial to community health workers “unpaid, unprotected, unsung” underscored the point.



At the same time, the conference provided a forum for research showing the potential impacts of optimized care models, with the most striking coming with findings from the ongoing SEARCH trial. The study, following about 320,000 people across 32 communities in Kenya and Uganda, showed an array of mobile services and immediate links to care leading to numbers of people tested and treated effectively for HIV exceeding UNAIDS’ 90-90-90 goals in two years. The study, in which long term activities include screening and testing for chronic as well as infectious illnesses, showed the impact of offering optimal health services in high disease burden, low resource settings. Within the study areas two years after systematic community-based outreach began, **97 percent** of people living with HIV were diagnosed, **94 percent** of them were on treatment, and in **90 percent** of them, treatment was suppressing the virus, protecting their health and the health of their communities. The results also included a “youth gap” of lower rates of

testing, treatment and viral suppression among adolescents, highlighting a persisting challenge of reaching hard to reach populations.

Progress in prevention

Paralleling the SEARCH study’s precedent-setting testing and treatment results, the presentation of findings from the Partners Demonstration Project highlighted the preventive power of antiretroviral treatment when it is optimally accessible. The open-label study had recruited HIV-discordant couples deemed at high risk for transmission of the virus from the infected to the uninfected partner (because of factors that included recent condomless sex). Antiretroviral treatment was immediately available to the partner living with HIV. For the months before that treatment could be expected to suppress the infected partner’s viral loads to undetectable levels, researchers provided immediate access to pre-exposure prophylactic antiretroviral medicine (PrEP) to the partner without the virus, as a “bridge” of protection. With those interventions, **four infections** among more than **1,000** couples, represented “virtual elimination of incidence,” researcher Dr. Jared Baeten said, with a rate that fell below that of the intervention arm of HPTN 052, the trial that proved treatment prevents transmission of HIV.

News on other PrEP efforts was mixed. It included encouraging IPERGAY open-label results showing an estimation of **97 percent** efficacy, compared to earlier control groups. An update on results from the ASPIRE trial of a vaginal ring loaded with the antiretroviral dapivirine reinforced earlier findings on the effectiveness of the device when used, but with the caveat that the young women who were hoped to gain the most protection did not show interest in using the device.

The news on medical circumcision, once the most reliable preventive intervention, still the only one-time measure, also came with a caveat at this conference – both supply and demand for the procedure has declined. More than **11 million medical circumcisions** have been delivered since the preventive value of the surgical measure was proven in 2007, researchers said, and that alone will have prevented more than **330,000** HIV infections from occurring by **2025**, but that is not enough, researchers emphasized, to optimize the benefits of the intervention, and sustain control of the epidemic. They presented modelling data showing that efforts targeting boys and men from 15 to 34 years old will have the greatest impact with the most efficient use of resources. They also noted the importance of early circumcision, and the lasting gains that will come from its continued uptake and access.

And the conference brought interesting news in biomedical prevention for women in findings from CAPRISA, indicating that a vaginal microbiome common in Southern Africa may be both a factor in HIV acquisition, and a barrier to the effectiveness of preventive microbicides.

Left behind

Sixteen years after President Nelson Mandela, once the world’s most famous prisoner awakened the world’s conscience to the necessity of universal HIV treatment coverage, the 2016 conference brought overdue attention to incarcerated people. A “key population” exposed to high risks and low access to HIV services, prison populations encompass other groups including people who inject drugs, sex workers and sexual minorities, who because of punitive laws also face barriers to health and health care outside of prison walls. A presentation on the *Lancet* series on [HIV and related infections in prisoners](#) reviewed the impacts of policies leading to mass incarceration, and, in turn reviewed the impacts of tuberculosis and hepatitis as well as HIV among prisoners. The impacts are global, with presentations highlighting laws and conditions contributing to the spread of infectious diseases in sub-Saharan Africa, Eastern Europe and Central Asia, as well as in the United States. Lowering the numbers of people incarcerated as well as providing access to full health services and preventive interventions in correctional settings will be crucial to controlling HIV and related illnesses, presenters said, noting that prisoners bring the diseases they have acquired behind bars with them when they rejoin their communities. Recognition of this has come slowly, but is gaining, they agreed. In 2009, USAID awarded its first grant to a prison health program, and its recipient, the U.S.-based Health through Walls presented a discussion of progress the organization has made since, in screening, diagnosing and treating prisoners in Haiti, where the government’s plans to adopt “treat all” guidelines is expected to be applied to prisoners.



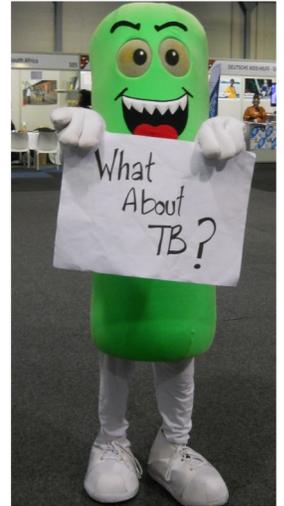
But, as a one-day pre-conference session highlighted, diminishing donor funds are anticipated to have the gravest impact on services for criminalized and stigmatized “key populations” that include gay and bisexual men, who are already threatened and neglected by their own governments. Presentations at the session sponsored by MSMGF (the Global Forum on MSM and HIV) examined data showing that while new HIV infections and AIDS deaths generally are in decline worldwide, rates of both are increasing among gay and bisexual men. At the same time, a presentation by Meg Davis of the NYU Center for Global Justice and Human Rights showed that the impacts of punitive and discriminatory laws and policies targeting gay men and other sexual minorities have never been systematically examined, and that data submitted by countries indicates that criminalized populations remain undercounted, as well as underserved. In addition, a panel discussion laid out potentially encouraging, but still lagging developments in the relatively new requirement for U.S. President’s Emergency Plan for AIDS Relief in-country teams to solicit and use input from local civil society organizations, including ones representing criminalized populations. And, during the conference, a joint announcement by the U.S. Office of the Global AIDS Coordinator and the Elton John Foundation of the first awardees of grants to support local organizations facilitating HIV service delivery to men who have sex with men offered hope those efforts will expand their reach.

Efforts to address obstacles to HIV services for sex workers also are showing some results, but slowly, discussions at the conference indicated. Baseline data from the SAPHH-Ire trial showed an increase from about **30 percent** of surveyed sex workers accessing antiretroviral treatment in **2011** to about **40 percent** of trial participants in **2013**. But, Dr. Frances Cowan who presented the data noted, increased access to testing, treatment and prevention is a critical need among sex workers. And, while the leader of a sex worker-led advocacy group noted that the trial was designed without input of sex workers, a session at the conference examining the current impact of the U.S. “anti-prostitution pledge” found the policy continues to limit participation from local organizations representing populations at great risk.

Tuberculosis — a crisis continues

Two days of sessions on tuberculosis during a preconference event emphasized continuing failures in responses to the No. 1 killer of people living with HIV – from inadequate diagnostic tools, treatments and health systems, to the growing crisis of drug-resistance, to under-supported research. A presentation called for patient-centered programming to reach, inform and support people with tuberculosis with effective standards of care. Another pointed to gaps in research to meet the needs of children, pregnant women, people who use drugs and people living with HIV, and urged accelerated studies that test medicines in combination. Updates on the quest for a tuberculosis vaccine included the need to target adults and adolescents, an approach using cytomegalovirus as a delivery mechanism, and the considerations of human challenge trials.

But, in a conference that highlighted advances that enable optimism toward controlling HIV, solutions to the toll of tuberculosis on people living with the virus were scarce. Notable among them was a presentation of results from a pilot project in Malawi that highlighted the difference even a small investment could make. It showed the impact of a one-day training in TB screening for community health workers who were already facilitating care of HIV patients. Following the training, the presentation showed, the numbers of TB diagnoses among HIV patients in a Malawi hospital increased by **20-fold**, and nine cases were identified among children – the first pediatric diagnoses in more than a year. And a plenary talk delivered by Dr. Anton Pozniak of Chelsea and Westminster Hospital NHS Trust in London called for a new 90-90-90, with price controls limiting the costs of tuberculosis drugs, as well as hepatitis treatments and cures to \$90 for each.



The Future

Updates on the continued findings of acceptability and efficacy of long-acting injectable antiretroviral treatment for HIV showed the potential for scientific advances to address structural obstacles. Findings from the LATTE trial showed that injections of the antiretroviral riplivirine every four weeks led to the same, or higher rates of viral suppression as a daily oral regimen. As importantly, despite a side effect of mild to moderate pain at the injection site, the majority of trial participants preferred the convenience, confidentiality, and normalization of the alternative the shots gave them to a life of daily pills. But, researchers pointed out, the findings also highlighted the role that stigma continues to play in the lives of people with HIV, and while long-acting injected antiretroviral medicine has the potential to be a valuable tool, the need to address stigma and other structural challenges to testing, treatment and life with HIV remains.



The End

AIDS 2016 highlighted advances in science and policy that have encouraged aiming for the “end of AIDS” even as the world continues to wait for breakthroughs toward an effective vaccine to prevent infection, and a cure to stop the impacts of infection. But it also highlighted longstanding and re-emerging obstacles, including stigma, discriminatory neglect and abuse, and declining donor funding that add urgency to continuing work toward those lasting interventions. Both remain years away, even as knowledge surrounding each continues to grow.

The vaccine candidate that became the first to demonstrate protective power against HIV in the Thai RV 144 clinical trial, refashioned to confront the HIV clade that is common in sub-Saharan Africa showed safe, effective results in South Africa, and is now set for a wider clinical trial.

Research in recent years has highlighted that hidden reservoirs of virus constitute the greatest challenge to what researchers call a “functional cure” – an end to illness and transmission caused by the virus in an infected person. But that knowledge has focused the search, they add. Like South African Justice Edwin Cameron, who told a plenary audience, “I claim no credit and seek no praise for surviving; it seemed like a necessary task,” they do not intend to stop until they reach their goal.