International AIDS Experts: Meeting Today's HIV Challenge

July 25, 2012 By Laura Whitehorn

With new resources now available in the fight against HIV, cooperation, strategic planning and a focus on cure research, global funding and human rights can overcome the pandemic's persistence. That theme emerged from the Tuesday, July 24 plenary session at the XIX International AIDS Conference (AIDS2012) in Washington, DC. Javier Martinez-Picado, PhD, of the AIDS Research Institute (irsiCaixa) in Barcelona; Nelly Mugo, MD, of the Kenyatta National Referral Hospital in Kenya; Bernhard Schwartländer, MD, director for evidence, innovation and policy at UNAIDS; and Howard Koh, MD, United States Assistant Secretary for Health, each outlined strategic use of resources in research and development, health care implementation, funding and political cooperation.

Viral Eradication: The Cure Agenda

"Universal access to HIV medications remains a basic human right that we must support," Martinez-Picado said, "but we must find a cure." After 25 years of consistently improved HIV treatments, he added, a cure remains beyond our grasp.

"It is beyond question that antiretroviral therapy has been one of modern medicine's major successes," Martinez-Picado said. "But the drugs don't cure HIV," because a low level of virus persists even in the presence of effective antiretrovirals (ARV).

To develop strategies to meet this challenge, Martinez-Picado suggests we need to understand better the mechanisms that contribute to persistence, such as latency (HIV's ability to "hide" in a resting state, not replicating and therefore impervious to traditional ARVs, in reservoirs such as genital and gut tissue).

He described the two main cure strategies: eradication (a sterilizing cure) and remission (a functional cure to suppress HIV without ARVs). He outlined five ways to achieve these: Treatment optimization and intensification to eliminate HIV replication, reversal of HIV latency to make the virus vulnerable to drugs, therapeutic vaccines to improve the body's ability to control the virus, gene therapy, and immune-based therapies.

That there are a host of clinical trials in each of these areas is hopeful, Martinez-Picado said, and some of them employ already-approved, non-HIV drugs for tasks like luring resting HIV from cells.

But Martinez-Picado pointed out that when trials use different measurements of CD4 counts or other markers, drawing general conclusions is difficult.

“We need an integrated strategy,” he said, applauding the pre-AIDS2012 launch of the global scientific strategy, “Toward a Cure.” That initiative will coordinate and focus the world’s science human and financial resources on curing HIV.

“We need community engagement and we must consider the ethical issues of risk and toxicity for people who are thriving on treatment and volunteer as subjects for studies of new cure therapies.”

Cure research is complex and difficult, but it is urgent and success is possible, Martinez-Picado reminded the audience. And as we search for a cure, “continuous investment to secure universal access to prevention, treatment, care and support must remain a top priority.”

Realizing the HIV Prevention Revolution

Considering another promising area of HIV research, Nelly Mugo, MD, of Kenya, said, “We have powerful interventions to prevent new infections, so we can envision an end to the epidemic. In 2011 there was jubilation—treatment as prevention and pre-exposure prophylaxis (PrEP) work. In 2012 we have to ask, how can we deliver?”

To make prevention interventions useful and effective, Mugo urged several focuses. She suggested analyzing the source of new HIV cases in each country to determine where interventions can make the most difference in trends in new HIV cases. “Think population groups,” she said. “Target vulnerable groups, address vulnerabilities and use interventions specific to them.”

“Make marginalized populations a priority,” she told the audience, “and don’t forget that there can be no HIV revolution without the youth—42 percent of all new HIV infections are in people from 15 to 24.” She also emphasized that stigma promotes the spread of HIV, singling out criminal laws (such as making sodomy illegal) that render at-risk populations more vulnerable.

Mugo wants the world to learn some critical lessons centering on adapting programs to local conditions and the needs of particular groups:

- Both ARVs and PrEP work—if they are taken. Educating people that they are at risk promotes adherence, and Mugo recommended using social media. When women in FEM-PREP trial thought they were not at risk for HIV, Mugo said, they did not use the gel that was the trial intervention.
- Use a combination of medical and behavioral tools appropriate for each group. “The interventions appropriate to heterosexual couples might not work for MSM,” she said.

- Link testing to services, because stand-alone testing fails to ensure that people get connected to health care.
- Involve communities in HIV prevention work. “This is not a choice, it is an obligation.” Mugo concluded, “[because] we shall be judged on how well we utilized the knowledge we have accrued to save men and women from getting infected with HIV.”

Invest in Human Rights

In years of fighting HIV, Bernhard Schwartländer, MD, of UNAIDS, said, “We’ve seen despair change to a decade of hope after Durban [the XVII International AIDS Conference in 2000]. Science has achieved a bold vision of getting to zero, and we must invest in what we know works.” He urged activists to make sure that happens.

International funding for HIV/AIDS has flatlined, and “business as usual will lead to stagnation. The choice is to pay now—or pay forever.” Schwartlander proposed a new funding strategy investing in programs that create the social and legal context to reverse conditions conducive to HIV infection.

He illustrated this by contrasting Brazil and the Russian Federation. The two have very similar population size, gross domestic product (GDP) and funding for HIV/AIDS. But Russia has failed to control its epidemic by denying services and treatment to people who use drugs. “This violates human rights and wastes domestic resources,” Schwartlander said.

A new funding strategy, he said, must reflect reality: By 2020 the vast majority of HIV-positive people will be living in middle-income countries—South American, Eastern European and some Asian countries, for example—not poor countries. Whereas 70 percent of the world’s HIV-positive people lived in poor countries in 2000, now 37 percent do, with a projected drop to 13 percent by 2020. The economic growth enables countries to replace flatlined international funding with domestic funding.

“Domestic exceeds international funding for the first time,” he said. “But only a few African Union countries are living up to their pledge to give 15 percent of the national budget to health. We must demand that governments live up to that promise. We can’t have people’s lives depend on a donor writing another check.”

Schwartländer outlined some investment strategies to fund HIV, including domestic and international taxes. “Establish reliable sources of predictable government revenue, [such as] taxes on tobacco and fuel, air travel taxes and financial transaction taxes (FTT).” He also argued to make some of these taxes, such as an FTT, global.

“We should explore the new possibilities of cooperation, activism and financing that this world holds,” he urged. We need to fight in partnership, he added, with shared responsibility of all

countries regardless of income.

“Don’t accept the idea that we can’t find the money,” Schwartländer admonished the audience. “The world is getting richer. We have to make it fairer.”

Building on Success: The National HIV/AIDS Strategy

“National strategies outline a framework for responding to HIV/AIDS in ways that reflect each country’s unique epidemiology, disease burden, and trends,” U.S. Secretary of Health Howard Koh, MD, told the audience.

“While the U.S. incidence remained relatively stable in recent years, with approximately 50,000 new infections annually, this figure is unacceptably high,” he said. The National HIV/AIDS Strategy announced by President Obama two years ago provides an effective plan to address the persistence of the U.S. epidemic.

The three goals of the National Strategy, as described by Koh, are reducing new infections (“after all,” he said, “this is a preventable disease”); increasing access to care and improving the health of HIV-positive people; and addressing HIV-related health disparities. The goals were created through community dialogue in this country and with international partners in the President’s Emergency Plan for AIDS Relief (PEPFAR). And “each of the goals is guided by strong science and solid evidence of what works best,” Koh said.

Government agencies such as the National Institutes of Health (NIH) and Centers for Disease Control (CDC) have been charged with creating programs and allocating funds to meet these goals. For example, Koh said, the CDC is promoting its recommendation that every adolescent and adult get tested for HIV at least once, and that those at increased risk get tested at least once a year. The NIH is investing in research to develop preventive microbicides and vaccines. And the Affordable Care Act will make HIV screening available to women without charge.

A national strategy can also inspire cities and communities to develop their own initiatives, such as a project in the District of Columbia offering free HIV testing to people waiting on line at the Department of Motor Vehicles.

The National Strategy has made gains over two years, Koh said, but much work remains if we want to achieve a world free of AIDS. “We can succeed by making our international public health community even stronger. The United States has been part of efforts to build that community, along with so many domestic and global partners. In particular, PEPFAR has demonstrated the power of us working together to plan, coordinate and collaborate to save lives.”
