A World Without AIDS, Still Worlds Away

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WASHINGTON — Is the world on the verge of ending the AIDS epidemic and creating an AIDS-free generation, even though a cure and a vaccine are still distant hopes?

Yes, roared enthusiasts among the nearly 24,000 participants at the 19th International AIDS Conference here last week. Their hopes are based on the extraordinary scientific gains made since the conference was last held in the United States, 22 years ago, when an AIDS diagnosis was a sure death sentence.

Among those gains: antiretroviral drug combinations for women to prevent infection of their newborns; drugs to treat and prevent infection with H.I.V., the virus that causes AIDS, among adults; and evidence that voluntary male circumcision can reduce the risk of female-to-male transmission by 50 to 60 percent.

Today, H.I.V. has become a chronic disease that, if treated appropriately, can be held at bay in a newly infected young adult for decades — if the patient adheres to the rigid daily drug regimen.

Michel Sidibé, the executive director of the United Nations AIDS agency, said that the opportunity to end AIDS will “evaporate” if governments do not show greater political will and increase investments to make gains available to millions more people.

“All that can stop us now is indecision and lack of courage,” he said.

Ending the AIDS epidemic is likely to be far more complicated than ending most other epidemics. The AIDS conferences assemble scientists and health workers from a wide range of disciplines, infected people, activists, protesters, journalists, elected and appointed officials, pharmaceutical representatives and others. The meetings, in part, boost morale and raise the aspirations of thousands of people fighting AIDS, a laudable goal.

But since they began, in 1985, they have become more like conventions than scientific meetings. Rhetoric is plentiful, and separating it from fact is sometimes a challenge. Activists disrupt scientific presentations and news conferences with loud demonstrations, creating a circuslike atmosphere. Lobbying for more AIDS money is a given.

Dr. Richard Horton, the editor of The Lancet, the medical journal that arguably focuses most on global health, said of the conference’s new sloganeering about turning back AIDS, “It’s a marketing strategy.” He added, “It’s one that could backfire.”

One obstacle is a failure to clearly define the epidemic or what it means to have an AIDS-free generation. While many speakers repeatedly admonished that AIDS policy must be based on scientific evidence, they missed this point. The importance of precise definitions for such hopeful words extends far beyond semantics.

Definitions of terms like these may help determine how many billions of dollars the world devotes to the battle
against AIDS and how many millions of lives will be extended. A failure to meet ill-defined goals could lead to public misunderstandings that limit investments and the number of people who have access to the lifesaving antiretroviral drugs in the future.

And, as Sharonann Lynch, an AIDS policy adviser for Doctors Without Borders, said in an interview, “We do have to get concrete in terms of what it means, because otherwise we are not going to be able to hold governments accountable” for how they spend taxpayers’ money to achieve specified goals.

To begin with, defining the word “epidemic” is difficult. The term is flexible and subjective, and can mean different things to different experts. Even more elusive is determining what constitutes the end of an epidemic like this one.

AIDS makes people deathly ill from problems like severe weight loss, swollen lymph nodes and a loss of critical immune cells that increases a person’s vulnerability to myriad other infections. But H.I.V. infection can remain silent for several years before causing symptoms.

Some speakers defined an AIDS-free generation as the absence of people sick from the disease. But even if there is no one with AIDS, there will still be millions of H.I.V.-infected people with us for a very long time. In those terms, H.I.V. will likely be endemic until there is a cure.

Dr. Helen Rees, an AIDS expert at the University of the Witwatersrand in Johannesburg, said that while scientific advances provide “cause for optimism,” the fact is that if many infected people stop taking their drugs, even for brief periods, they could transmit H.I.V. to others — and those strains may well be drug-resistant.

This is not the end of an epidemic in any sense as we have understood it; an AIDS-free generation, if it arrives, will live in a world where H.I.V. very much remains a threat. Dr. Peter Piot, the United Nations AIDS program’s first director, from 1995 through 2008, said in an interview that he was “puzzled” by the apparent lack of attention to such distinctions at the conference.

“Which generation?” asked Dr. Piot, who is now the dean of the London School of Hygiene and Tropical Medicine in England. “Mine? Or the next one? Or my great-grandchildren’s?”

Bill Gates, whose foundation is spending billions on developing AIDS preventions, expressed skepticism that the world could soon end the AIDS epidemic by any conventional definition. “Unfortunately, we do not have the tools, and we need lots of new tools,” with a vaccine the ultimate preventive one, Mr. Gates told the conference.

He and others called for greater accountability from AIDS workers in identifying the measures that work so they can be stepped up and those that do not so they can be stopped. For example, in countries where young people are dying in excessive numbers, he said, health workers must learn “why they did not start treatment, and if they were on treatment, why did it not work?”

The AIDS epidemic is not unfolding uniformly across the globe. Speakers cited an undertaker in Lesotho who said he was going out of business because of poor coffin sales, as so many people with H.I.V. are staying alive.

But undertakers do a brisk business in other countries with a rising AIDS incidence. In some ways, this is not just one epidemic. Scientists often use the term “R0” as a statistical way to monitor an epidemic, with “R” standing for the reproductive number of an infectious disease agent.
When, on average, one infected person transmits an infection to more than one other person, $R_0$ becomes greater than one, leading to sustained spread or epidemic spread of the agent. When $R_0$ is less than one, epidemic spread does not occur, and the agent will become endemic or disappear.

In AIDS, $R_0$ depends on a number of factors, like the prevalence of H.I.V. in a sexual network and the efficiency of H.I.V. transmission per sexual act. The $R_0$ varies in the many different H.I.V. epidemics in the world.

“We talk about generalized epidemics and concentrated epidemics,” said Dr. Kevin M. De Cock, director of global health at the Centers for Disease Control and Prevention in Atlanta.

“As guidance, we say if the prevalence of H.I.V. is greater than 1 percent in a sentinel population like pregnant women, we call it a generalized epidemic,” he added. “That is terribly arbitrary, but useful for certain discussions.”

Because the conferences, held every two years, offer one of the biggest lobbying venues for AIDS workers, pleas for money from governments, foundations and other sources are standard. Indeed, the conference in South Africa in 2000 is credited with stimulating efforts to provide access to antiretroviral drugs for millions of people in poor countries who would have otherwise died.

Many participants were disappointed that President Obama did not appear. But a large number of administration officials, members of Congress and Bill Clinton did attend.

This conference came at a time of global recession, which has reduced the financial contributions used to provide treatment to those who need it. Of the 15 million infected with H.I.V. only five million are receiving the drugs they need, according to U.N.AIDS.

At the same time, participants raised questions about the ethics of providing uninfected Americans with drugs to prevent H.I.V. when poor people elsewhere with AIDS received none.

Many participants likened ending the AIDS epidemic to medicine’s successes against two other viral infections, smallpox and polio. Smallpox is the only naturally occurring human infection to have been eradicated, meaning that cases can no longer arise because the causative virus has been wiped out of nature.

The World Health Organization defines elimination of an infectious disease as bringing the number of cases below a predetermined amount, or reducing the number to zero in a specific region. Polio was eliminated from the Western Hemisphere, though it requires regular controlled public health efforts to maintain that, and it still is spread in Nigeria, Afghanistan and Pakistan.

The conference participants who spoke of eradicating or eliminating AIDS failed to recognize that a vaccine was required to succeed against smallpox and polio.

In saying that the United States is committed to achieving an AIDS-free generation, Secretary of State Hillary Rodham Clinton told the conference that her definition of the phrase means “virtually no child anywhere will be born with the virus” by 2015. People who become infected “will have access to treatment that helps prevent them from developing AIDS and passing the virus on to others.”

Under Mrs. Clinton’s definition, many people will continue to become H.I.V.-infected, but not go on to suffer the
myriad other infections and devastation caused by AIDS. “The disease that H.I.V. causes need not be with us,” she said.

But even if that goal is reached, millions will be living with H.I.V. for a long time to come.