Remarks by Dr. Mathilde Krim

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I am Mathilde Krim, the Founding Chairman of amfAR, The Foundation for AIDS Research. This is a not-for-profit foundation based in New York and Washington D.C. that has global interests and activities.

I am very honored by your invitation to open this important meeting held on the thirtieth anniversary of the first report, in June 1981, of five cases of the disease that came later to be known as AIDS. None of us, in 1981, could have predicted the tragedy to follow.

The number of people with AIDS rapidly grew. Some scientists soon realized that AIDS was caused by a sexually or blood transmissible virus, would be named HIV, that was capable of destroying the human body's immune defense system, thus making it susceptible to many other infections. So far, HIV infection has always had lethal consequences.

In the 30 years since the 1981 report, 25 million people have died, worldwide, of AIDS-related illnesses and more than 33 million people now live with HIV/AIDS. Here, in the United States, more than 56,000 people become HIV infected <u>each year</u> and a total of one million of this country's people now live with HIV/AIDS.

In 1981, nothing was known about how the disease was transmitted nor of course if and how it could be prevented or treated. It was not known whether AIDS was confined to one or more "at risk groups" or if everyone in the general population was or could be at risk.

Prevention and research programs were slow to start because of the public's misinterpretation of certain early findings about diverse "at risk groups" that had been identified and because possible prevention strategies were debated for too long.

Nevertheless, prevention based on changes in interpersonal behavior or medical care practice, an increased respect for human rights and advances in the understanding of certain fundamental biological mechanisms have collectively resulted, over the last 30 years, in one of the most remarkable success stories in the history of biomedical research.

Prevention research has, by now, delivered a raft of useful interventions:

- First, studies showed that condoms were highly effective barriers to HIV infection.
- Serological and other tests capable of protecting the safety of blood collected for transfusions were devised and became widely used.

- Male circumcision was shown to significantly reduce the risk for males of contracting HIV through heterosexual sex.
- Very importantly an arsenal of more than thirty (antiretroviral or ARV drugs) has become available for treating HIV infected people, enabling them to live longer and relatively healthy lives.
- It was shown that some of these drugs could also significantly contribute to the prevention of HIV infection.
- For example, mother-to-child transmission of the virus could be virtually eliminated with ARV treatment in certain countries and ongoing efforts are now underway to attempt to replicate that success everywhere.
- It was also shown that a vaginal microbicide gel that women can use before heterosexual sex, can sharply decrease their risk of contracting HIV.
- Another remarkable study has recently shown that at high-risk but still
 HIV-negative men who have sex with men, but diligently took a
 particular antiretroviral drug, reduced their risk of contracting the virus
 by more that 90%.
- And, also recently, a clinical study finally confirmed that a healthy HIVpositive person on antiviral drugs is much less likely to pass on the virus

to his or her partner than an untreated person.

• In addition, very effective prevention of HIV infection resulted from the adoption of the very low-cost and highly effective public health practice of "needle exchange." It is thus now possible to shield many users of psychoactive drugs (and hence also their sexual partners and their children) from HIV infection transmitted through the sharing of HIV-contaminated needles.

All the above constitutes remarkable new knowledge that is broadly applicable. This is good news because the rate at which people are becoming newly HIV infected is outpacing our current ability to provide antiretroviral treatment. We are therefore still losing ground to HIV and we are still losing the battle against HIV and AIDS.

None of the preventive or treatment interventions I mentioned earlier can by itself end the epidemic. But if used in various combinations and on a scale that is such as to reach all vulnerable populations, they can lead to a very substantial and worldwide reduction in the incidence of HIV infection and AIDS. And, of course, smart investments in HIV prevention would pay off handsomely not only in lives saved but also in treatment costs averted.

Ending the global AIDS epidemic will ultimately require the equivalent of an effective vaccine for prevention and curative treatment(s), that is treatments that are capable of completely eradicating HIV from all the body's infected

cells.

Developing an effective vaccine has proven difficult, not least because HIV has multiple strains and a rapid mutation rate. Recent developments, however, are offering glimmers of hope. In 2009, and for the first time, a clinical trial identified a modest preventive effect from an experimental vaccine. And, two potent antibodies were discovered that can stop more than 90 percent of known global HIV strains from infecting human cells. Follow up studies are currently being pursued.

Finally – and perhaps most excitingly – research is generating increasing optimism that a cure for HIV/AIDS is now within the realm of possibility. The so-called "Berlin Patient," a true AIDS survivor, is living proof that achieving a real cure is technically feasible. Though the procedure this patient underwent is not likely to be replicable on a meaningful scale, he is the first to have been cured of HIV through a stem-cell transplant. This and other promising scientific advances have led research organizations, including amfAR, the National Institutes of Health and the International AIDS Society, to establish collaborative research teams now racing towards curative treatment.

And now, thirty years into the AIDS epidemic, we are faced with a choice that we never had before. Should we be content with limiting our efforts and resources, for more decades, dealing with pieces of an enormous and still growing tragedy while still spending very large resources to protect or treat

only a fraction of all those in need? Or can we summon the collective will to effectively deploy existing prevention and treatment interventions and make somewhat larger and strategic investments in further research <u>and</u> the use of its findings, all of which could end the AIDS epidemic in our lifetime?

I fervently hope that all those in this audience will decide to become the voice of reason, of decency and of compassion that will explain to the world why the epidemic of HIV/AIDS must be confronted and vanquished everywhere <u>and</u> as soon as possible.

Let us never forget that the lives we will help save may be our own, but that they certainly will be those of our children and grandchildren.