UK Department for International Development: Joining forces in the development of new prevention technologies

“Challenges in combating the HIV epidemic, combination prevention and the need for new prevention tools”

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Speech by
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Thank you ladies and gentlemen, for the opportunity to join you today during this vital discussion. First, let me congratulate Gareth Thomas and DFID for assembling such a formidable range of actors to address new prevention technologies. I note that we see today both the leading technical experts as well as politicians: every innovator knows that the best brains in the world are not enough – we need the resources, communication and politics to put new ideas into practice.

**Where we are today: implications of the unmet need for prevention**

Twenty-five years into the global AIDS epidemic, 33 million people are living with HIV. Last year saw 2.7 million new HIV infections globally – 5 new infections every minute of the year. The reality is we are still far from where we need to be in coverage of proven HIV prevention tools: less than 40% of young people globally have correct basic knowledge about HIV, only a third of HIV-positive pregnant women receive antiretrovirals to prevent transmission to their infants, and a minority of the most vulnerable groups have access to HIV prevention programmes.

If we are to make major inroads into this global tragedy, we need to better implement what we have, but we also are in desperate need of new tools. The need for new prevention technologies is particularly urgent among women who currently lack access to female-initiated prevention methods.

**What is the status of new HIV prevention technologies?**

While national programmes work to bring available HIV prevention strategies to scale, the search continues for additional tools to strengthen prevention efforts.

Some of my colleagues are discouraged by slow progress in vaccine development, in disappointing results in microbicides or other novel methods, such as diaphragms as an HIV barrier. But in my view, the mood today is clearly realistic – we are not expecting miracles. We can use this mood of realism to create great opportunities.

Certainly, the unprecedented global, cooperative effort in research and trialling of an HIV vaccine must give us great confidence. In the area of the development of an HIV vaccine, while the basic scientific challenges remain formidable, we have made great advances, and a vaccine remains the biggest hope for a major breakthrough in HIV prevention.

If the 21st century is to be the century of biology, let us make HIV vaccine its first great triumph- The World Needs an HIV Vaccine. The discovery and development of an effective microbicide or oral prevention drug would also mark a turning point in the epidemic.
We have great hopes for the development of a microbicide. While results of first generation of microbicide products to date have been disappointing, at least the Carraguard candidate microbicide—while not successful in preventing HIV transmission—was the first microbicide Phase III trial to be completed without safety concerns.

The new class of microbicide candidates, based on antiretrovirals, are helping us to frame microbicides as topical pre-exposure prophylaxis. These may then take their place alongside oral use of antiretrovirals as pre-exposure prophylaxis – with the trials currently underway testing Tenofovir to prevent sexual transmission of HIV.

As well, pre-exposure prophylaxis is used to prevent mother-to-child transmission during labour and delivery, with trials now reporting on the benefits of antiretroviral prophylaxis during breast-feeding.

Male circumcision, the most common surgical procedure in the world, is now recognized as additional HIV prevention strategy on the basis of compelling evidence. A lot of work is now going into figuring out how to introduce adult male circumcision in a number of countries.

Among the new technologies are also the policies we use to trial new products or interventions and, here also, there have been major advances. For example, following a consultation on women and trials convened in Geneva in 2007 by UNAIDS, the Global Coalition on Women and AIDS, the International Centre for Research on Women, and Tibotec Inc., have made recommendations for policy and programming, a research agenda, and an advocacy framework to ensure clinical trials are not gender blind.

Make no mistake: we must do better on HIV prevention.

Last year, around $10 billion was spent on AIDS in developing countries. Some $4 billion of this was spent on HIV prevention. In the estimates of resource needs that UNAIDS is currently conducting, it is clear that to achieve UA access to HIV prevention, that figure will need to at least double.

What will this investment achieve? Modelling earlier in the year suggests that investing in HIV prevention can avert half the new infections between now and 2015 – in other words, full scale HIV prevention can avert an estimated 10 million new HIV cases between now and 2015. And, with universal access to HIV prevention in place, the number of new infections which will take place annually in 2015 will be at only one third of the level they would be if HIV prevention efforts remain as they are today.

**What do we need to advance the development of prevention technologies?**

There are three crucial elements which will determine our success in advancing the development of new prevention technologies. First: convening the right actors. Second:
developing the right financial architecture. And, third: delivering new technologies as part of a strategy of combination prevention.

The essential actors who need to come together around the same table are researchers, industry, communities and politicians. Without all four, new prevention technologies will not be discovered, developed, financed or incorporated into programmes.

The right financial architecture is needed to ensure that new prevention technologies are sustained and sustainable. No one should be thinking small, and the key to sustainable financing is scale. Today, the predominant mode of thinking in HIV prevention is still the pilot project, or the proof of concept. If we don't have a business model for scale-up in prevention, we are doomed to failure. One of the reasons so much attention has been paid to the Gates-financed Avahan prevention programme in India is that it is one of the few global prevention efforts that has really developed a business model for scale.

When we plan for scale, we can also realize economies of scale: when the idea of universal access was being born, we saw the cost of antiretroviral drugs reduced by two orders of magnitude: annual cost per patient dropping from the tens of thousands to the hundreds of dollars. These are the same scales of reduction we should be planning in new prevention technologies if they are to have a real world impact on AIDS.

A great deal of thought is now going into how to create additional financial incentives to ensure robust prevention research efforts. Examples include tax credits for R&D investments, advance market commitments for the purchase and introduction of new prevention technologies, well-financing prizes to promote scientific innovation, and funding streams for R&D innovation (such as the Gates Grand Challenges initiative and the IAVI Innovation Fund).

Technology cannot success in isolation, and the world understands that combination prevention is necessary. To maximize their impact, biomedical interventions to reduce HIV risk must be rolled out alongside behaviour change and changes to social norms. They have the greatest impact when they are acting together.

New technologies in AIDS are a powerful source of hope and if we harness the excitement and promise of new technologies as part of combination prevention we can make great progress. We know that when technologies are rolled out in isolation, they are unsustainable. Nearly every country in Africa can point to piles of disused equipment, crumbling facilities with no staff – the consequences of programmes delivered without thought to their sustainability, to local and community ownership, and in the context of social development.

Let me conclude with three clear calls for action.
One, to convene the right partners in fruitful dialogue – as in today’s meeting but also in a sustained conversation.

Two, to put in place the financial architecture to take new prevention technologies rapidly to scale.

Three, to take a tailored, combination approach that will address both the immediate risks and underlying vulnerabilities and let us really zero in on where we need to be to stop this epidemic.

Thank you.