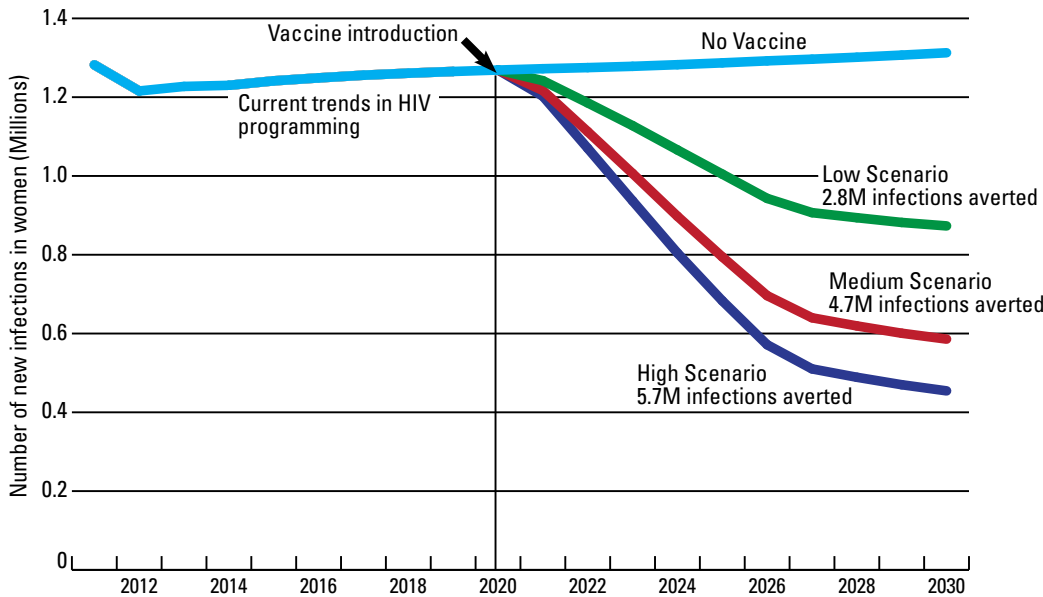


MAY 2012

Spotlight on Women: Modeling the Impact of a Future AIDS Vaccine

The devastating impact of HIV and AIDS on women and girls is well documented. Women account for half of new HIV infections in adults globally and 60% of new infections in Sub-Saharan Africa, where HIV is the leading cause of death among women of reproductive age (15-44), when they are most economically productive and most needed by their children and communities.¹ Entrenched gender norms and inequalities often affect the ability of women to control or negotiate terms of sexual relations and condom use with their partners. Given the complex web of physiological, cultural and socioeconomic factors that heighten women’s vulnerability to infection, the global response to HIV and AIDS must include increased access to proven HIV-prevention methods, active support for the empowerment of women *and* research into new HIV-prevention strategies. A preventive AIDS vaccine, as part of a comprehensive response that includes other new prevention strategies such as microbicides and ARV-based prophylaxis, would serve as a powerful tool to reduce rates of new HIV infections in women around the world.

Vaccine Scenario and Number of HIV Infections in Women by Year in Low- and Middle-income Countries



	Vaccine efficacy	Percentage of population given vaccine	New infections averted in women, 2020-2030	Percentage of new infections averted	Annual HIV infections in women, 2030	Cumulative HIV infections in women, 2020-2030
No Vaccine	n/a	n/a	–	0%	1.3 million	14.2 million
Low	50%	30%	2.8 million	20%	900,000	11.4 million
Medium	70%	40%	4.7 million	33%	600,000	9.4 million
High	90%	40%	5.7 million	40%	500,000	8.5 million

Additional information on this analysis can be found at www.iavi.org.

- A partially effective AIDS vaccine, as part of a comprehensive program of treatment and prevention, could significantly reduce the number of new HIV infections in women.
- Even at low levels of population coverage and vaccine efficacy, an AIDS vaccine could prevent almost 3 million infections in women over a 10-year period, while the highest impact scenario shows that an AIDS vaccine could prevent more than 5 million infections in women over the same time period.

The International AIDS Vaccine Initiative (IAVI) worked with the Futures Institute to mathematically model the future trajectory of the AIDS pandemic and the impact that various preventive interventions could have on the pandemic. These analyses suggest that even a partially effective AIDS vaccine, as part of a comprehensive program of treatment and prevention, could significantly reduce the number of new HIV infections among women. For example, a vaccine with 50% efficacy given to 30% of the adult population in low- and middle-income countries (LMICs) from 2020 to 2030 would prevent 2.8 million new HIV infections in women. A vaccine with 70% efficacy given to 40% of the general population would prevent 4.7 million infections during the same 10-year time frame. And

a vaccine with 90% efficacy given to 40% of the general population would prevent 5.7 million infections in women in LMICs during that period.

According to this analysis, if the scale-up in prevention, treatment, and care continues at current rates, 53-54% of all new infections from 2020-2030 will occur in women. Even if vaccine efficacy levels are relatively low, an AIDS vaccine could substantially alter the course of the global AIDS pandemic by providing a much-needed additional mode of protection for women.

Endnotes

- 1 World Health Organization (WHO). "Gender, women and health: Gender inequalities and HIV." http://www.who.int/gender/hiv_aids/en/ (accessed November 7, 2011).

The Impact Modeling Project

IAVI's Impact Modeling Project was launched in partnership with the Futures Institute in 2006 to model the trajectory of the AIDS pandemic and the potential impact of an AIDS vaccine globally and in key countries. A global analysis was initially published in 2006 and subsequently updated in 2009 and 2012. Country-level analyses were conducted in Kenya, Uganda and Brazil, and policy briefs describing those results were published in 2009. These modeling studies reiterate the relevance of AIDS vaccines to the global campaign against the AIDS pandemic and the need for sustained political and financial support for AIDS vaccine research and development. Published impact modeling policy briefs and one-page summaries of the results can be found at www.iavi.org.

About IAVI

The International AIDS Vaccine Initiative (IAVI) is a global not-for-profit organization whose mission is to ensure the development of safe, effective, accessible, preventive HIV vaccines for use throughout the world. Founded in 1996, IAVI works with partners in 25 countries to research, design and develop AIDS vaccine candidates. In addition, IAVI conducts policy analyses and serves as an advocate for the AIDS vaccine field.

About Futures Institute

The Futures Institute is dedicated to enhancing social and economic development in the fields of HIV and AIDS, family planning and reproductive health, child survival and health systems strengthening by providing tools and technical assistance in policy, planning, modeling, resource allocation and evaluation. Recent Futures Institute projects have involved modeling the health and cost implications of the UNAIDS Investment Framework and working closely with international agencies and national programs in strategic planning and resources allocation around new prevention and treatment options. For more information, visit <http://www.futuresinstitute.org>.



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