Women are disproportionately affected by HIV/AIDS — and microbicides could help empower women to protect their own health. Microbicides are being developed as vaginal rings, films and tablets and as rectal gels to help prevent sexual transmission of HIV. These products are based on the same types of antiretroviral (ARV) drugs already being used successfully to treat and prevent HIV.

**Women and Girls Bear the Burden of the HIV/AIDS Epidemic**

- **HIV/AIDS is the world’s leading cause of death in women ages 15-44.** Fifty percent of all adults living with HIV/AIDS are women. The epidemic takes a disproportionate toll in sub-Saharan Africa, where nearly six out of every 10 HIV-positive adults are women.

- **New HIV infections among women and girls continue at an alarming rate.** Each day, nearly 2,500 women and girls become infected with HIV/AIDS. An IPM incidence study conducted in South Africa found that in some areas of the KwaZulu-Natal province HIV prevalence among women ages 18-35 reaches higher than 40 percent.

- **Women are particularly vulnerable to HIV.** Heterosexual sex remains the primary mode of HIV transmission in sub-Saharan Africa, and a combination of biology and gender inequities renders women more susceptible to HIV infection than men.

In sub-Saharan Africa, young women ages 15-24 are *twice as likely* to have HIV as young men of the same age.

- **Marriage is not a refuge from the epidemic.** Many new HIV infections occur in married women and women in long-term relationships. For example, more married and widowed women in Kenya are HIV-positive than those who have never married. In Zambia, 60 percent of people infected with HIV through heterosexual transmission acquired the virus while married or living with their partners.

- **Caregiving for those with HIV/AIDS falls to women and girls, creating a cycle of vulnerability.** Many female caregivers have little extra time to earn money, produce food or attend school while supporting their families. Consequently, these women and girls, along with their families, are more likely to be malnourished, in poor health and impoverished — all factors that further increase susceptibility to HIV infection.

Reducing maternal mortality is difficult in countries hit hard by HIV, one of the leading causes of death in pregnant women and mothers.

- **HIV/AIDS is a leading cause of death among pregnant women and mothers.** From 2000 to 2015, more than 52 percent of maternal deaths in Botswana were due to AIDS-related causes. Women of reproductive age are the most at-risk for HIV infection, and many HIV-positive women in developing countries learn that they are infected only after they are pregnant. Pregnancy exacerbates the symptoms and effects of HIV. New prevention tools designed specifically for women would help reduce maternal mortality.
New Female-Initiated HIV Prevention Options are Urgently Needed

Current prevention strategies are not enough to stop the spread of HIV among women. Many women are unable to negotiate with their partners to use condoms or remain faithful. Abstinence is not a practical option for women who are married, want to have children or are at risk of violence.

Microbicides could help address women’s HIV prevention, and sexual and reproductive health needs. One microbicide has been found to safely help prevent HIV in women: the monthly dapivirine vaginal ring, developed by the International Partnership for Microbicides (IPM), which announced results from two late-stage clinical trials of the product earlier this year. The self-inserted ring slowly releases the ARV dapivirine to help protect against HIV. Given the ring’s promise for many women at high risk, IPM is pursuing regulatory approval for the product in developing countries.

Other products that combine an ARV with a contraceptive are also being developed to prevent both HIV and unintended pregnancy, two of the leading causes of death among women of reproductive age. Among these multipurpose products in development is IPM’s 90-day ring designed to slowly release dapivirine along with the contraceptive hormone levonorgestrel.

Microbicides would complement existing HIV prevention methods. Ending the epidemic will require multiple prevention options that meet women’s needs, which can change throughout their lives. Microbicides such as the dapivirine ring could be a vital part of a comprehensive HIV prevention toolkit that includes daily oral ARV pills known as pre-exposure prophylaxis, or PrEP (where approved for use), and male and female condoms, alongside treatment-as-prevention, male circumcision and behavior change. Other promising tools in development include injectable ARV-based products, rectal microbicide gels and HIV vaccines.

Meeting the promise of microbicides requires continued support. Between 2014 and 2015, global investment in overall microbicide research and development fell 8 percent, from US$193 million to US$178 million. Adequate funding to develop a diverse product pipeline that uses new mechanisms of actions and different formulations is critical to meeting the urgency of the epidemic — and staying one step ahead of the virus. Safe and effective microbicides would empower women to protect themselves from HIV/AIDS and could help alter the course of the epidemic.

---

3 UNAIDS. “AIDS by the numbers.” 2016.
4 IPM. A Cross-Sectional and Prospective, Observational, Cohort Study to Estimate HIV Incidence among Sexually Active Adult Females. 2011.