

A Multipurpose Prevention Ring for Women's Sexual and Reproductive Health



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HIV and complications due to unintended pregnancy are among the greatest obstacles to women's health and development. New products that simultaneously address both issues could help keep women healthy so they can reach their full potential.

Women's sexual and reproductive health needs do not exist in isolation, and meeting those needs is essential to supporting women's overall health.

- **Women are disproportionately affected by HIV/AIDS due to biology, gender inequities and cultural norms.** In sub-Saharan Africa—where the epidemic's main driver is heterosexual sex—women carry nearly 60% of the HIV burden. Young women in the region are more than twice as likely to acquire HIV as young men.ⁱ

- **In developing countries, a lack of access to contraception is a major contributor to maternal and newborn deaths,** largely due to complications during pregnancy and childbirth.

Worldwide, 43% of all pregnancies are unintended. An estimated 214 million women of reproductive age—one-quarter living in sub-Saharan Africa—have an unmet need for contraceptives that would allow them to space their pregnancies, and lead to better health, educational and economic outcomes for women and their families.ⁱⁱ

- **Women face dual risks.** Women in areas with high rates of HIV often have the greatest unmet need for modern contraception.ⁱⁱⁱ Recent research also suggests that women's risk for HIV is up to three times higher during pregnancy^{iv}, and HIV/AIDS is one of the leading causes of death among pregnant women in developing countries^v.

Promise of Multipurpose Prevention

New multipurpose products are now being developed to offer women a single product that offers discreet protection against the risks associated with HIV and unintended pregnancy in a single product. Some products may also prevent other sexually transmitted infections. Although male and female condoms are highly effective multipurpose prevention products, it is often difficult for women to negotiate condom use with their partners.

Three-month Dual Protection

Leveraging our experience developing the monthly dapivirine ring, which was found to help reduce HIV risk in clinical trials and now under regulatory review, IPM is developing a vaginal ring to help women protect against both HIV and unintended pregnancy.



The three-month ring is designed to slowly release the ARV drug dapivirine and the contraceptive hormone levonorgestrel.

Integrated Solutions Make Sense

- Discreet, woman-initiated protection against HIV and unintended pregnancy—and reduced maternal and newborn deaths associated with both
- Long-acting options with dual or multipurpose protection may help encourage consistent use
- Integrated sexual & reproductive health care may offer:
 - ✓ Expanded method mix for HIV prevention and contraception
 - ✓ Fewer clinic visits and greater efficiency by addressing multiple needs together
 - ✓ Reduced stigma associated with seeking HIV care

Because women's perceived risk of HIV is low compared to their perceived risk for pregnancy, combined technologies may be attractive to many women. Women in multiple studies have shown strong interest in and willingness to use multipurpose^{vi} rings and other products if proven effective^{vi,vii}.

The first safety study of IPM's dapivirine-contraceptive ring began in 2017 in the US, and was led by our partner, the Microbicide Trials Network (MTN). The study found the ring to be well-tolerated, and encouraging drug levels were seen in blood and vaginal fluid. A second safety study in the US, also led by MTN, began in 2018, with results expected in 2020.

ⁱUNAIDS, AIDSinfo database. <http://aidsinfo.unaids.org>, accessed Aug. 3, 2018.

ⁱⁱGuttmacher Institute. "Adding It Up: Investing in Contraception and Maternal and Newborn Health, 2017". 2017.

ⁱⁱⁱCohen SA. Hiding in plain sight: The role of contraception in preventing HIV. *Guttmacher Policy Review* 2008; 11: 2-5.

^{iv}Thomson KA, Hughes JP, Baeten J, John-Stewart G, Celum CL, et al. Female HIV acquisition per sex act is elevated in late pregnancy and postpartum [oral presentation]. 25th Conference on Retroviruses and Opportunistic Infections 2018; Boston, Mass.: 4-7 March 2018.

^vHogan M. et al. "Maternal mortality for 181 countries, 1980–2008: a systematic analysis of progress towards Millennium Development Goal 5," *The Lancet* 375 (2010): 1609-23.

^{vi}Woodsong C and JDS Holt. Acceptability and preferences for vaginal dosage forms intended for prevention of HIV or HIV and pregnancy. *Advanced Drug Delivery Reviews* 2015; 146-154.

^{vii}Woodsong C, P Musara, A Chandipwisa, E Montgomery, P Alleman, M Chirenje et al. Interest in multipurpose prevention of HIV and pregnancy: perspectives of women, men, health professionals and community stakeholders in two vaginal gel studies in southern Africa. *BJOG* 2014; 121 (Suppl 5): 45-52.