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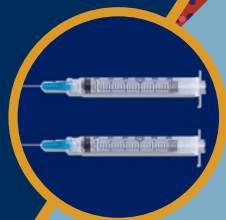
new HIV infections in 2019

1 in 4

new HIV infections in sub-Saharan Africa were in women aged 15 to 24

45%

of sub-Saharan African women have an unmet need for a modern contraceptive method



**Preference for injections** underscored women's desire for a long-acting delivery form that affords discreetness, ease of administration, and a low level of burden in their lives.

Healthcare providers emphasized the need to receive **product-specific training** so they are prepared to offer the most accurate information.

Women and healthcare providers expressed an overwhelming **preference for MPTs**, rather than single indication products (contraceptive or HIV prevention indication).

# Preventing HIV in Sub-Saharan Africa

## Long-Acting Injections for Women's HIV Prevention in Sub-Saharan Africa: What End-Users Think

The HIV epidemic and the unmet need for modern contraceptive methods continue to pose significant health risks for women worldwide, particularly in sub-Saharan Africa.<sup>1,2</sup>

Innovations in **multipurpose prevention technologies (MPTs)** offer women valuable tools to protect themselves. MPTs deliver combined prevention of unintended pregnancy, HIV, and/or other sexually transmitted infections in a single delivery form. An array of MPTs are in development, including rings, gels, inserts, films, implants, patches, and pills.<sup>3</sup>

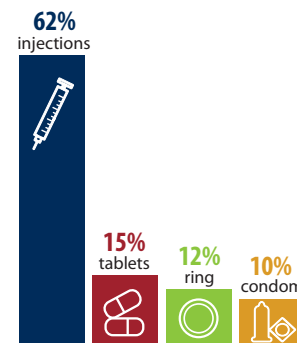
Recently, two pivotal Phase III clinical trials showed that long-acting cabotegravir (CAB LA) injections are highly effective at preventing HIV.<sup>4</sup> This is key for expanding HIV prevention options for women, along with recent advances in vaginal rings<sup>5</sup> and daily oral PrEP.<sup>6</sup> CAB LA also brings us closer to a potential co-administered MPT for contraception and HIV prevention.

With injections as a new biomedical HIV prevention strategy on the horizon, the **TRIO study's end-user findings from women and healthcare providers** provide a timely contribution to late-stage product development. Further, they inform market introduction considerations for rollout of injectable delivery forms for women.

### What Is the TRIO Study?

The Tablets, Ring, Injections as Options study, or TRIO, examined **end-user preferences and choices for female-initiated HIV and pregnancy prevention (2-in-1 MPT) products**. The study was conducted with young women aged 18 to 30, their male partners, and healthcare providers in Kisumu, Kenya and Soshanguve, South Africa from 2015 to 2017. It assessed daily oral tablets and two long-acting methods: a monthly vaginal ring and monthly dual injections.

TRIO drew on complementary research approaches: a crossover clinical study where women used all three placebo products, along with condoms (see figure); a discrete choice experiment where women considered trade-offs among options; and qualitative interviews and focus group discussions. It identified anticipated enablers and barriers to adoption and use of these products, explored preferred product characteristics, and shed light on considerations for rollout.

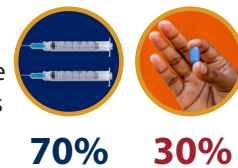


Women's most preferred product after trying each for one month. All the products used for the clinical study were placebo versions with no active ingredients. The study team fully informed all participants that these were mock products and provided them with condoms for use during the study.

## What Do End-Users Think about Injections for Women?

Most women preferred injections. While women emphasized their preference for long-acting methods, injections provide benefits beyond duration.

A majority of women stated they would choose monthly injections over a monthly tablet.



The low burden that injections have on daily life appeals to women.

Women saw injections as providing more privacy and making them feel “worry-free”.

Regular clinic visits for injections were not a concern.

Nearly all women thought it would be easy to visit a clinic every 2 months to receive injections. Clinic location was a key determinant of use.

Most women thought it was acceptable to receive two injections at a time (co-administration of HIV prevention + contraception).

Only a small number of women perceived the discomfort of multiple injections as a barrier.

Women in different life circumstances and societal contexts weigh trade-offs differently, reaffirming the need for a range of products.

Although injections were the most preferred, women in South Africa saw them as more desirable than women in Kenya.

*Once you are injected then you are done, you have nothing else to worry about.*

Kenyan woman participant, Age 20

*With the injection it's something that we are used to. It's common.... It's known, it has been around for a long time. Like even its side effects are known.*

South African woman participant, Age 26

*I don't think the workflow...will be much because already we are seeing, we are injecting at family planning. It is not like a new, new thing that is coming in.*

South African healthcare provider

### What Are Some Considerations for Rollout of HIV Prevention Injections for Women?

**Co-administration of injections** to address dual risks of HIV and pregnancy is promising, as women using an injection for contraception are equally likely to prefer an injection for HIV prevention.

**Some healthcare workers are concerned about increased clinic burden.** Other healthcare workers think that injections could be integrated smoothly into existing practice.

**Alignment with contraceptive injection schedule** may reduce the burden of multiple clinic visits and stigma associated with HIV services, and increase uptake and/or adherence.

**Women may be disinclined to take daily tablets,** which could detract from interest in the CAB LA injections because of the need to use tablets to cover the pharmacokinetic tail.

**Maintaining a regular product supply at clinics** is a concern for women end-users and healthcare providers.

**Healthcare providers must be trained** to counsel end-users on injections, including the potential benefits and commonly perceived downsides or disadvantages.

## To Learn More

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## Additional Resources

[rti.org/womens-global-health-imperative](http://rti.org/womens-global-health-imperative)

### TRIO publications

Minnis et al. [doi.org/10.1097/QAI.0000000000001945](https://doi.org/10.1097/QAI.0000000000001945)  
Shapley-Quinn et al. [dx.doi.org/10.2147%2FJWH.S185712](https://doi.org/10.2147%2FJWH.S185712)  
van der Straten et al. [doi.org/10.1002/jia2.25094](https://doi.org/10.1002/jia2.25094)  
Lutnick et al. [doi.org/10.1177/2325958219841366](https://doi.org/10.1177/2325958219841366)

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- UNAIDS. (2020). UNAIDS Data 2020. [https://www.unaids.org/sites/default/files/media\\_asset/2020\\_aids-data-book\\_en.pdf](https://www.unaids.org/sites/default/files/media_asset/2020_aids-data-book_en.pdf)
- UN DESA. (2020). World Family Planning 2020 Highlights. <https://www.un.org/development/desa/pd/news/world-family-planning-2020-highlights>
- The IMPT. (2020). MPT Product Development Database. <http://mpts101.org/>
- HIV Prevention Trials Network. (2020, November 9). HPTN 084 Study Demonstrates Superiority of CAB LA to Oral FTC/TDF for the Prevention of HIV [Press release]. <https://www.hptn.org/news-and-events/press-releases/hptn-084-study-demonstrates-superiority-of-cab-la-to-oral-ftctdf-for>
- International Partnership for Microbicides. (2020). Dapivirine Ring. <https://www.ipmglobal.org/our-work/our-products/dapivirine-ring>
- FHI 360. (2020). Optimizing Prevention Technology Introduction on Schedule (OPTIONS) Consortium. <https://www.fhi360.org/projects/optimizing-prevention-technology-introduction-schedule-options-consortium>