

Potential Barriers to Success in MTN-043

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Breastfeeding is one of the most effective ways to promote child health and survival

Improved rates of breastfeeding lead to...



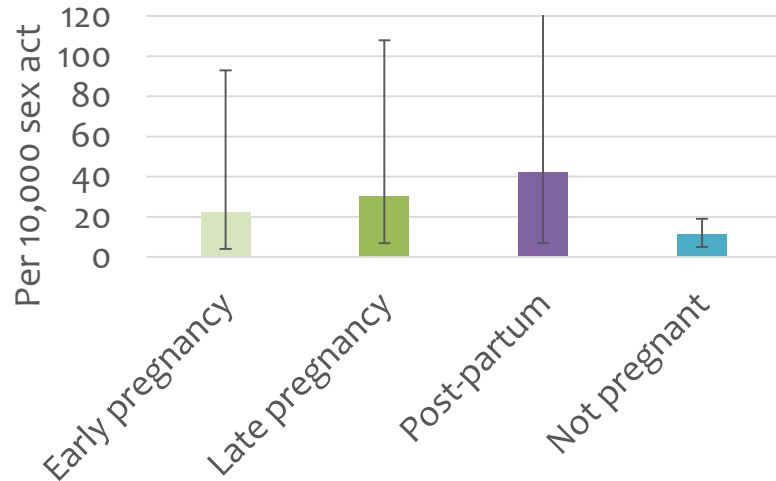
Global recommendations on breastfeeding

- WHO and UNICEF recommend:
 - Early initiation of breastfeeding within 1 hour of birth;
 - Exclusive breastfeeding for the first 6 months of life; and
 - Breastfeeding should continue up to two years of age and beyond, along with appropriate complementary foods



Postpartum women are at increased risk of HIV-1 acquisition

Probability of HIV acquisition per 10,000 sex-acts*



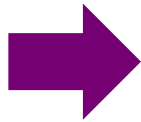
- HIV-1 incidence in pregnant and postpartum women is similar to incidence among non-pregnant women
- However, pregnant and postpartum women may have less frequent sex
- As a result, the probability of acquisition at each sex act may be higher than compared to non-pregnant women

*For a 25-year-old woman not taking PrEP, the HIV acquisition probability per condomless sex act with an HIV-infected male partner with a viral load of 10,000 copies/mL

Urgent need to understand the impact of HIV prevention products in breastfeeding women

- Breastfeeding women do not represent a separate, special population at risk for HIV, but a very significant proportion of the general population of women at any given time
- That said, investigational products need to specifically be evaluated in breastfeeding women

Does the
investigational
product...



Impact milk supply

Pass into breastmilk

Get orally absorbed by
the infant

Have adverse effects
on the infant



B♥Protected



- **B**reastfeeding
- **P**rEP &
- **R**ing
- **O**pen-label
- **T**rial to
- **E**nsure
- **C**ollection of
- **T**imely and
- **E**ssential
- **D**ata

Overview

200 Healthy, HIV-uninfected breastfeeding mother-infant pairs

Design	Phase 3B, randomized (3:1 ring to PrEP), open-label
Duration	Each mother-infant pair followed up to ~3.5 months
Regimen	DPV 25 mg VR replaced each month for 12 weeks or Truvada one tablet by mouth daily for 12 weeks
PK	Maternal blood and milk, infant blood concentrations assessed at multiple time points



Study objectives

- Maternal Safety:
 - To describe the maternal safety profile (SAEs/AEs) associated with study product exposure during breastfeeding in both study arms
- Infant Safety:
 - To describe the infant safety profile (SAEs/AEs) associated with study product exposure during breastfeeding in both study arms
- Drug Detection:
 - To summarize the frequency of study drug detection and concentration of study drug(s) in mothers and their breastfeeding infants

Sites

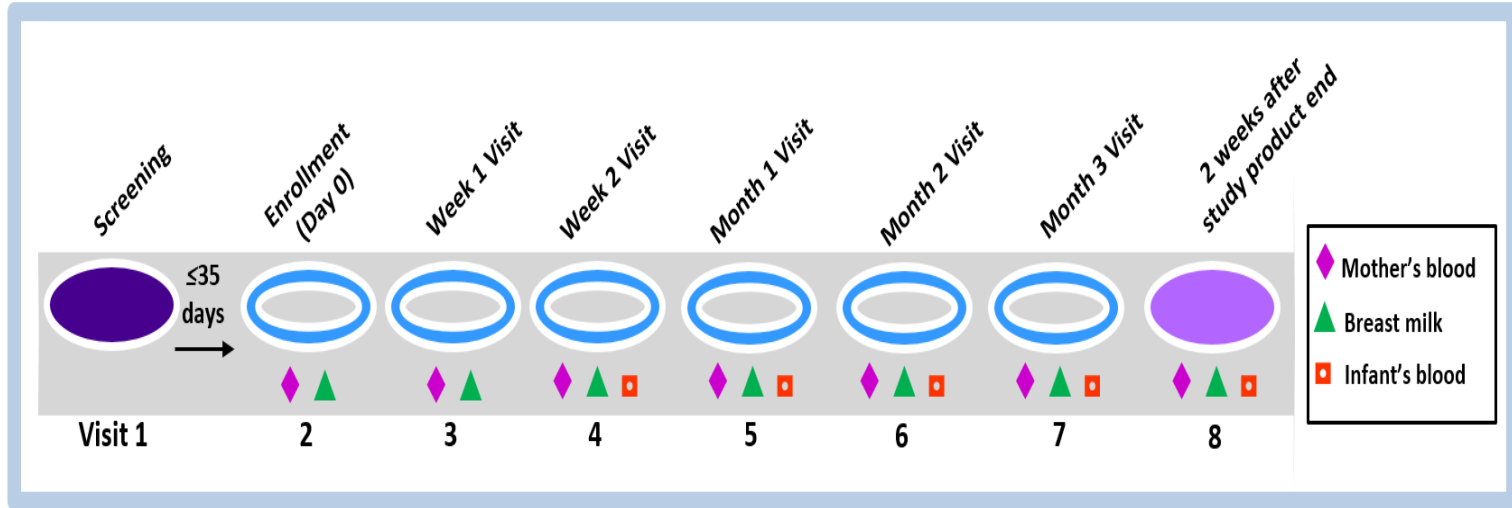


- Blantyre
- MU-JHU
- WRHI
- Zengeza



Study Visit Schedule

Mother-infant pairs enrolled 6-12 weeks after delivery



~14 weeks of follow-up in total

Enrolling breastfeeding women in clinical research

- Unique challenges related to postpartum recovery, women's roles in the family, and other competing priorities for mother and infant



Image from MTN-043 story board

What are the potential barriers to success?

- How we engage and educate communities, potential participants, and key influencers?
- How we recruit participants that may be a ‘good fit’?
- How we talk about benefits and unknowns of the study products?
- How we counsel about choices and adherence?
- What support our participants may need?

Insights from MTN-041 (MAMMA Study)

- Multi-site qualitative acceptability study to explore attitudes of community members about the use of a VR or oral PrEP during pregnancy and lactation*

Social/structural barriers

Product-related barriers

Breastfeeding-related
barriers

**Ariane van der Straten & Petina Musara;
Protocol chair and co-chair*

Support from key influencers

Potential challenges identified in MTN-041

- Lack of support or understanding from key influencers (partners, mothers, mothers in law, grandmothers, healthcare providers)
- Elders may discourage PrEP use during BF because of concerns over toxicity of ARVs that may affect the baby

Plans to overcome/address the challenge

- Development of educational materials to improve knowledge of safety and effectiveness of study products
 - Target participants and key influencers



The effect of study product on breastmilk

Potential challenges identified in MTN-041

- Concerns from women and key influencers about the impact study products on breastmilk:
 - May cause breastmilk to become bitter
 - May impact breastmilk production/quantity
 - May cause baby to get sick (specific concern for PrEP)

Plans to overcome/address the challenge

- Educational materials and counseling by study staff will specifically address these concerns
 - No evidence that products impact taste or quantity of breast milk
 - We do not anticipate any significant safety concerns for mothers or infants



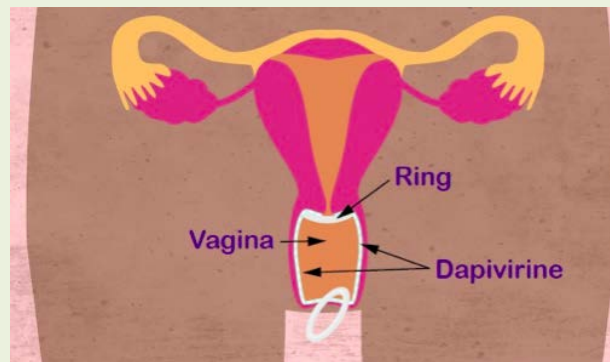
Concerns over study product use

Potential challenges identified in MTN-041

- Oral PrEP
 - Stigma – oral PrEP looks like ART
 - Potential side effects
 - Remembering to take a pill every day, especially as a health person
- Vaginal ring
 - Unfamiliar with using rings
 - Hygiene
 - Potential side effects

Plans to overcome/address the challenge

- Implement the counseling lessons learned from HOPE about choice and adapt those to breastfeeding women
 - Special thanks to Iván Balán and all of the counsellors working to prepare for DELIVER and B-Protected



The role of male partners

Potential challenges identified in MTN-041

- Feelings of distrust with use of HIV prevention products
- Concerns that male partners may notice the ring during sex
 - Concerns about woman's libido and lubrication
- Lack of support from male partners
- How much involvement should male partners have?

Plans to overcome/address the challenge

- Counseling on disclosure to male partners that is tailored to participant circumstances



Key lesson from MTN-041

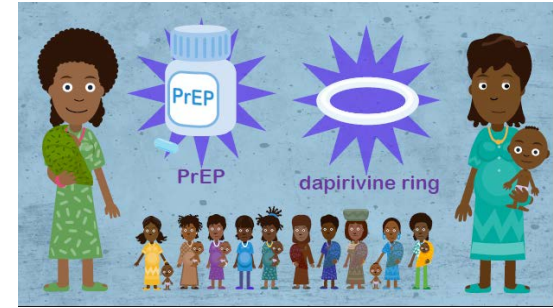


- Breastfeeding is perceived as a high-risk period and participants are willing to use/recommend use of products **if**:
 - They are safe for woman and baby
 - They are endorsed by healthcare providers
 - There is thorough education for breastfeeding women AND partners, community members, and community leaders

Additional approaches to ensure the success of B-Protected



- Product use ambassadors
 - Engage with women from the community that have successfully used oral PrEP and the vaginal ring, especially those that have used PrEP while breastfeeding
- Ongoing community education and outreach
 - Educate male partners, community leaders, mothers and elders, religious leaders, traditional healers and practitioners
- Counseling and support for exclusive breastfeeding, champions
 - Repeated counseling sessions and one-on-one support



Ensuring the success of B-Protected



- Collaboration, communication and teamwork will enable the B-Protected team to:
 - Educate community members, including breastfeeding women and their key influencers
 - Enroll and empower our participants
 - Provide counseling support related to adherence
 - Result: collection of data **essential** to understanding the safety of oral PrEP and the vaginal ring when used during breastfeeding
- ✓ How we engage and educate communities, potential participants, and key influencers?
 - ✓ How we recruit participants that may be a ‘good fit’?
 - ✓ How we talk about benefits and unknowns of the study products?
 - ✓ How we counsel about choices and adherence?
 - ✓ What support our participants may need?



#breastfeeding

No woman should have to choose between breastfeeding and protecting herself from HIV infection

Acknowledgements

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Image credits: Jhpiego, UNICEF