



Correlates of adherence to oral pre-exposure prophylaxis (PrEP) and the dapivirine ring among adolescent girls and young women (AGYW) participating in the MTN-034/REACH trial

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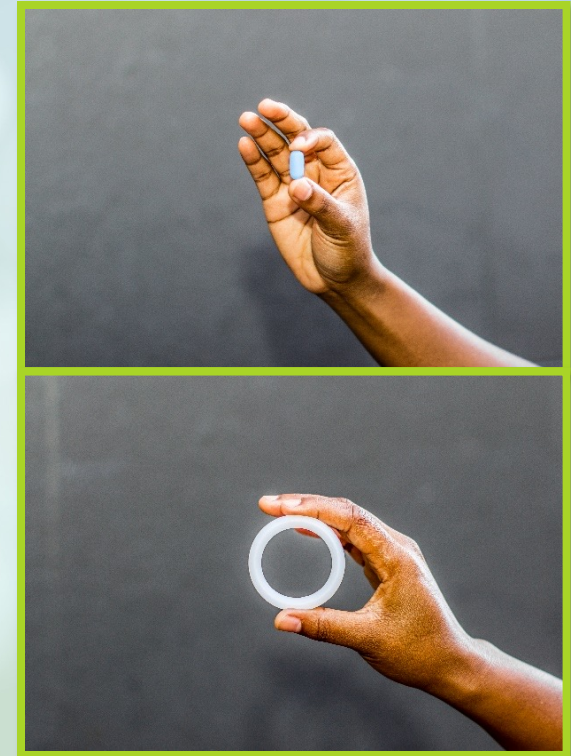
Disclosures

- Current Grantee - Merck Investigators Study Program (MISP)
- No other disclosures



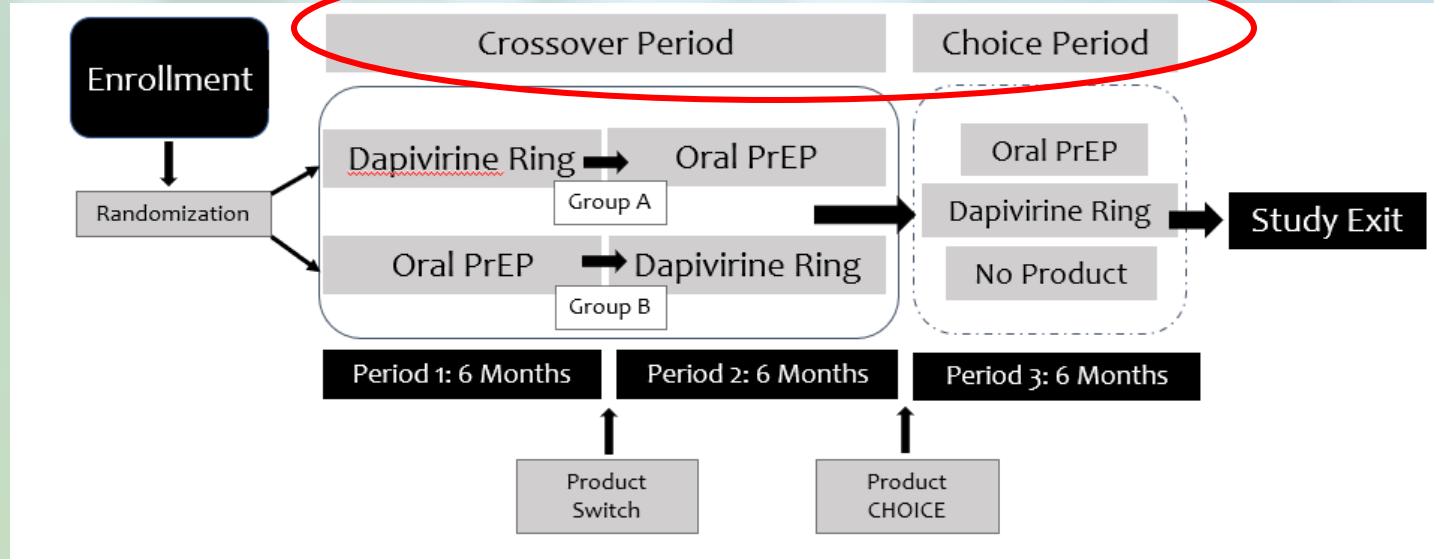
Background

- Adolescent girls and young women (AGYW) in sub-Saharan Africa have high risk of HIV acquisition.
- Oral pre-exposure prophylaxis (PrEP) and the monthly dapivirine vaginal ring (ring) are effective HIV prevention options, however many AGYW face challenges using them consistently.
- We evaluated correlates of adherence to PrEP and the ring among AGYW in the MTN-034/REACH study.



REACH Study Design

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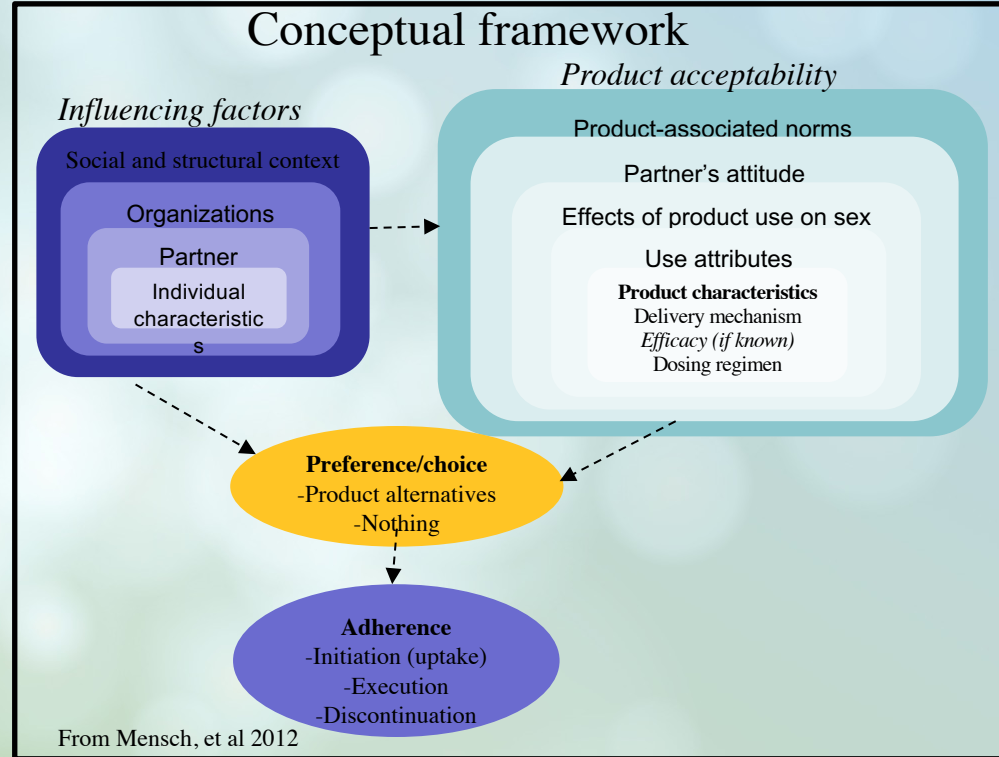
Enrolled 247 AGYW aged 16-21 years in South Africa, Uganda and Zimbabwe



Identifying Adherence Correlates

Potential adherence correlates assessed quarterly via self-report

- Individual level
- Interpersonal level
- Community level
- Study-related
- Product-related

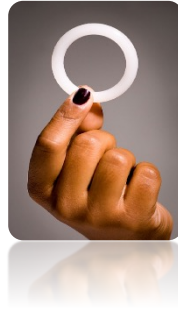




Adherence Measurement

Ring adherence

- Estimated dapivirine release based on residual drug (RD) levels in returned rings



High adherence

- $RD \geq 4.0\text{mg}$

Consistent with continuous 28 days of use/month

Oral PrEP adherence

- Measured tenofovir diphosphate (TFV-DP) levels in dried blood spots (DBS)



High adherence

- $TFV\text{-}DP \geq 700\text{fmol/punch}$

Consistent with ≥ 4 doses/week

We tested associations between correlates and high adherence using generalized estimating equations, controlling for randomization and site, with interaction terms between product and 1) study period and 2) correlate measures



Baseline Characteristics – Demographics

Characteristic	Total (N=247)
Age <18 years	84 (34%)
Not married	214 (87%)
Earns own income	53 (21%)
Proportion with any children	99(40%)
Completed Secondary School	212 (86%)
Food insecure	62 (25%)
Risk perception (Somewhat/very worried about HIV)	100 (41%)

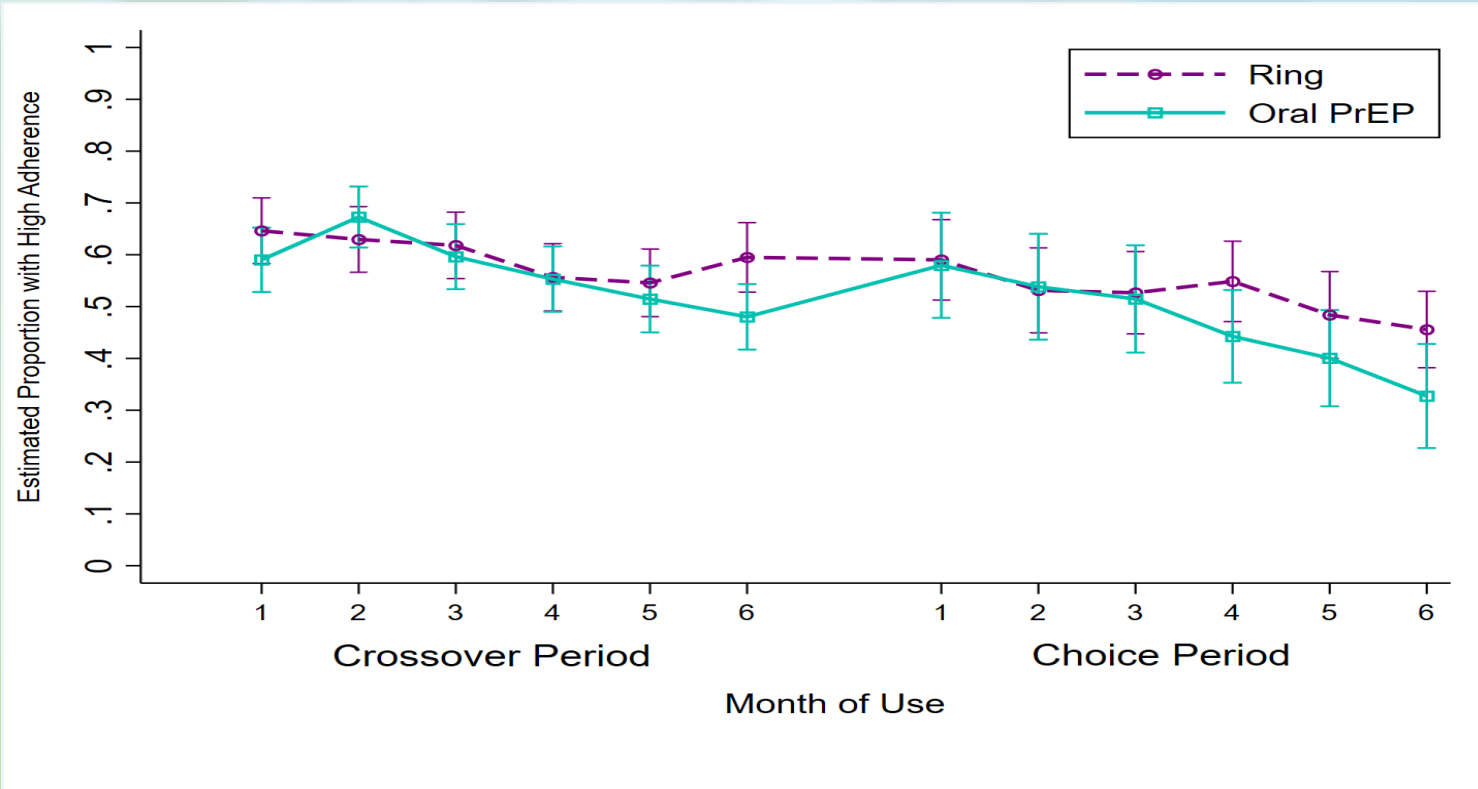


Baseline Characteristics – Mental Health and Sexual Behavior

Characteristic	Total (N=247)
Hazardous drinking (AUDIT-C ≥ 3)	97 (39%)
Depression indicated (CESD-10 ≥ 12)	91 (37%)
Primary partner has/may have other partners	167 (68%)
Vaginal sex at least weekly in the past 3 months	107 (43%)
More than 1 sex partner in past 3 months	90 (36%)
Transactional sex in the past 6 months	66 (27%)



Proportion of Participants with High Adherence





Correlates of Oral PrEP Adherence

Measures	Adjusted Risk Ratio ^a	95% CI	p-value
Exchanged sex in past 6 months	0.87	(0.77, 0.98)	0.02
Primary partner >4 years older	1.18	(1.01, 1.37)	0.04
Rated product highly acceptable	1.21	(1.08, 1.35)	<0.01
Crossover period (vs choice period)	1.23	(1.06, 1.42)	0.01

^a Controlled for randomization arm and study site



Correlates of Ring Adherence

Measures	Adjusted Risk Ratio ^a	95% CI	p-value
Unstably housed (e.g., no access to running water)	1.17	(1.04, 1.31)	0.01
Disclosure to male family member	1.11	(1.01, 1.22)	0.03
Experienced social benefit	1.19	(1.01, 1.39)	0.03
Crossover period (vs choice period)	1.11	(1.01, 1.22)	0.03

^a Controlled for randomization arm and study site



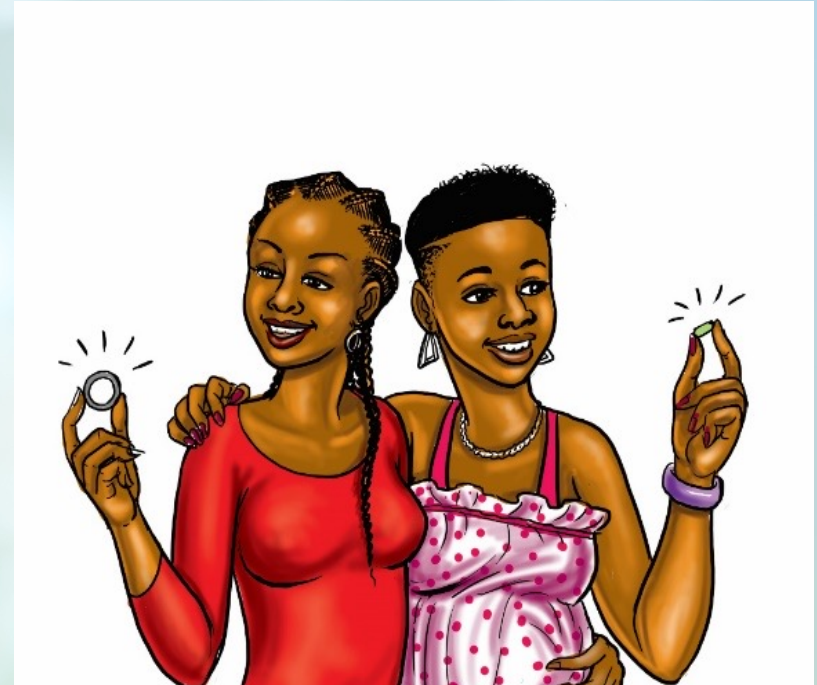
Factors not Significantly Associated with Oral PrEP or Ring Adherence

- Age
- Education
- Currently in school
- Income
- Who she lives with
- Food security
- Hazardous drinking
- Possible depression
- Risk perception
- Frequency of sex
- Number of partners
- Condom use
- Partnership status & duration
- Thinking partner may have other partners
- Financial support from partner
- IPV or non-partner sexual violence
- Disclosure to partner, female family, or friends
- Perceived community awareness of PrEP
- Perceived community stigma around PrEP



Conclusions

- Roughly half of participants were able to use each of the products consistently in any given month.
- **Different factors were associated with adherence for each product**
 - **Supports benefit of offering multiple options to meet different needs**
- All associations were modest in scale (but significant); need additional research to identify strong drivers of oral PrEP or ring adherence



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