

Alignment of PrEP use with HIV risk in young women and men in Uganda

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BACKGROUND

- Oral daily pre-exposure prophylaxis (PrEP) uptake has been high, but discontinuation is very common and often happens soon after initiation.
- Whether discontinuation among young women and their male partners aligns with potential exposure to HIV is unknown.

METHODS

Study design: Young women and their male partners were enrolled in separate but linked longitudinal studies in Kampala, Uganda from 2018-2021

Data collection:

- Demographic information were collected at enrollment
- Self-reported sexual behaviors in the past 3 months were collected at enrollment and quarterly follow-up visits.
- PrEP was offered to all at each visit
- Diagnostic assays for *Neisseria gonorrhea (GC)* and *Chlamydia trachomatis (CT)* were conducted at enrollment and 6-monthly

Measurement:

- Potential HIV exposure was defined as having any STIs diagnosed on laboratory assays, self-report of any condomless vaginal sex in the past 3 months or multiple sex partners in the past 3 months.
- A composite binary variable was generated to indicate elevated HIV risk if participants reported any of the potential HIV exposures.

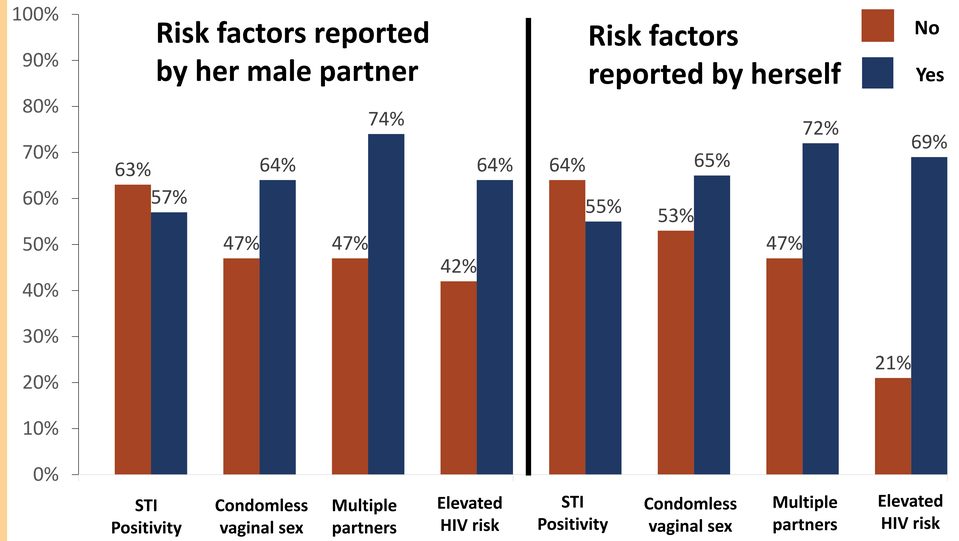
***Analysis*:**

- GEE regression with a Poisson link was used to examine the alignment between potential HIV risk and PrEP use by young women and their male sex partners.
- Multivariable models adjusted for age and other covariates that substantially changed the point estimate.

RESULTS

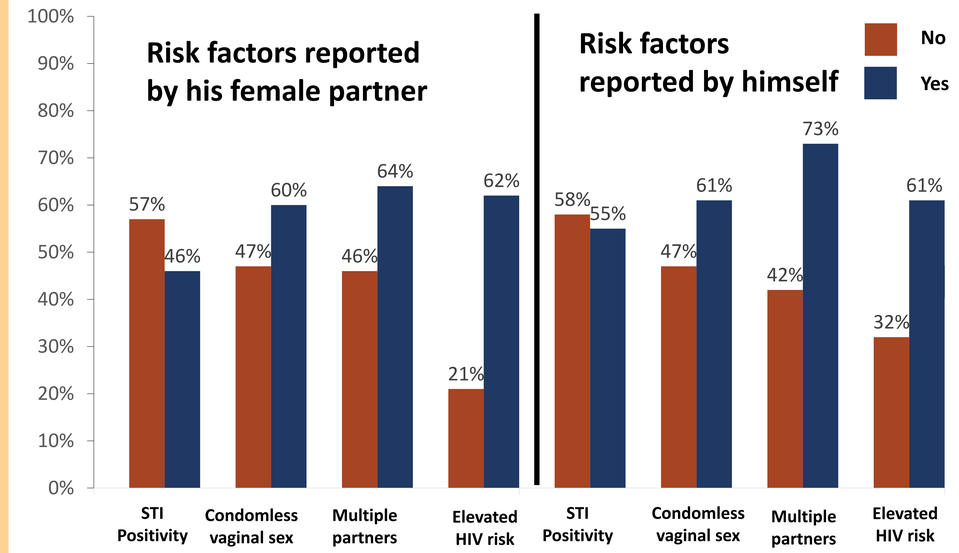
- 125 male partners of 88 young women were included.
- The median age at enrollment was 24 (IQR 21-26) and 20 (18-21) years for male and female, respectively.
- At enrollment, 21 participants (9.9%) had a positive test result for CT or GC (15 men, 6 women).

Frequency of PrEP refills received by the female partner



PrEP use aligns with self-reported sexual behaviors among young women and men

Frequency of PrEP refills received by the male partner



Association between potential HIV exposure and her PrEP use

	His Exposure		Her Exposure	
	aPR (95%CI)	P value	aPR (95%CI)	P value
Has STI positive results	0.89 (0.58-1.38)	0.61	0.84 (0.5-1.41)	0.52
Has condomless vaginal sex	1.36 (0.78-2.37)	0.28	1.23 (0.81-1.86)	0.33
Had multiple partners	1.58 (1.09-2.28)	0.02	1.56 (0.98-2.48)	0.06
Had elevated HIV risk	1.52 (0.68-3.44)	0.31	3.28 (0.08-27.39)	0.53

Association between potential HIV exposure and his PrEP use

	Her HIV exposure		His HIV exposure	
	aPR (95%CI)	P value	aPR (95%CI)	P value
Had STI positive results	0.79 (0.37-1.67)	0.54	0.93 (0.64-1.35)	0.69
Had condomless vaginal sex	1.32 (0.87-2.01)	0.20	1.37 (0.78-2.4)	0.27
Had multiple partenrs	1.34 (0.9-2.01)	0.15	1.72 (0.98-3)	0.06
Had elevated HIV risk	2.99 (0.13-69.91)	0.50	1.92 (0.33-11.26)	0.47

CONCLUSIONS

- Among young adults, PrEP use was more common when they or their partners self-reported multiple sex partners or comdomless vaginal sex
- These results are reassuring in light of the high occurrence of PrEP discontinuation among young people.

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