



# High prevalence and incidence of bacterial STIs in young women at high risk of HIV prior to PrEP scale-up in Kenya

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## Background

Young women account for more than half of new HIV infections in sub-Saharan Africa and are a priority population for HIV pre-exposure prophylaxis (PrEP). Although PrEP protects against HIV acquisition, PrEP does not protect against bacterial sexually transmitted infections (STIs).

High rates of STIs have been reported among PrEP-using men who have sex with men (MSM) in high income countries. Untreated STIs in young women are associated with tubal infertility, ectopic pregnancies and increased risk of HIV.

STI rates among African adolescent girls and young women (AGYW) using PrEP have not been well-described, in part because syndromic management is the standard of care and diagnostic STI testing is rarely performed.

## Methods

POWER is a multi-site PrEP implementation science project among AGYW aged 16-25 in Kenya (beginning August 2017) as well as South Africa; we describe results from the Kenyan POWER cohort. Women were offered PrEP at two family planning clinics in Kisumu (JOORTH and KMET) :

- Follow-up visits are scheduled for month one and then quarterly for up to 36 months.
- STI testing is performed at enrollment at the time when PrEP is offered and every 6 months.
  - Urine samples were tested for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* by nucleic acid amplification (NAAT)
  - Participants with an STI diagnosed are provided treatment based on the diagnostic test results at their next visit.

## Results

- Between October 2017 and May 2019, 847 Kenyan women have enrolled in POWER in Kisumu, Kenya, of whom 742 (87.6%) initiated PrEP
- **High baseline prevalence:** 17% *C. trachomatis* and 7% *N. gonorrhoeae*.
- **High STI incidence at 6 months:** Among the 126 women with 6-month follow-up, the incidence of *C. trachomatis* is 34.7 and incidence of *N. gonorrhoeae* is 10.6 per 100 person-years.

**Table 1. Prevalence and incidence of STIs among young women enrolled in POWER in Kisumu, Kenya**

STI	Site	Participants (N)	Prevalence (%)	Person-years of follow up	Incidence per 100 p-y (95% CI)
<i>Chlamydia trachomatis</i>	JOOTRH	404	15.1	32.3	30.9 (14.8-56.9)
	KMET	392	19.9	33.9	38.3 (20.4-65.5)
	Total	796	<b>17.5</b>	66.3	<b>34.7 (22.0-52.1)</b>
<i>Neisseria gonorrhoeae</i>	JOOTRH	404	5.9	32.3	12.4 (3.4-31.7)
	KMET	392	8.2	33.9	8.8 (1.8-25.9)
	Total	796	<b>7.0</b>	66.3	<b>10.6 (4.3-21.8)</b>

## Conclusions

- In a PrEP scale-up cohort among Kenyan AGYW, prevalence of *C. trachomatis* and *N. gonorrhoeae* were very high.
- These STI rates are comparable to those seen among PrEP-using MSM in the US after years of rising rates, and reflect the limitations of syndromic STI management, and the need for diagnostic STI testing.
- Kenya is early in PrEP roll-out and it is not yet known if STI rates will increase as PrEP use scales up in Kenya.
- PrEP roll-out programs provide a critical opportunity to address both HIV and STI epidemics simultaneously.

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