Low Prevalence of Sexually Transmitted Infections among Adolescents and Young Adults Living with HIV in Kenya

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BACKGROUND

- Approximately fifty percent of sexually transmitted infections (STIs) are concentrated in people within the age range of 15 to 24 years. This coincides with estimates of age at sexual debut [1].
- This age cohort is of particular public health concern due to the potential consequences of STI transmission to new sexual partners.
- In a longitudinal cohort study of male and female youth living with HIV, we assessed the prevalence of *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae (*NG*)* infections.

METHODS

- We enrolled participants who had been previously vaccinated with the quadrivalent HPV vaccine and collected genital samples for CT and NG infections.
- Nucleic acid amplification testing (NAAT) of genital swabs was performed to detect NG and CT using Gen-Probe APTIMA test (Hologic, Marlborough, MA).
- Cross-sectional data on demographic, medical and sexual history was collected at enrollment.
- Descriptive statistics were used to determine the baseline demographic characteristics of the cohort.
- A multivariable logistic regression model was used to assess the correlation between timing of first sex, age of partner at first sex, education level, marital status, financial dependency, HIV stage and viral load with STI diagnoses.

$$logit(Y) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_p X_p$$

Where Y is the STI outcome, α is the intercept, β_s are the regression coefficient and X_s are a set of predictors.

RESULTS

- At enrolment 158 participants (84 females and 74 males) with a median age of 21 years (IQR 20-22) provided genital CT and NG samples and 155 at month 12 follow-up visit.

Young men and women living with HIV had lower STI prevalence than other comparable population level age cohorts. At enrolment 9/158 (5.7%) were diagnosed with CT or NG and at month 12: 16/155 (10.3%).

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- Two participants had a positive result at both time points.
- Among those diagnosed with STIs at 12-month visit, 12/16 (75.0%) were females, 13/16 (81.3%) had never married, 9/16 (56.3%) were financially dependent and 14/16 (87.5%) reported sexual activity.
- HIV RNA viral load (VL) ≥ 1000 was noted among 3/16 (26.6%) those diagnosed with an STI, while more than 50% of participants with VL≤ 1000 had STIs, 12/16(75%).

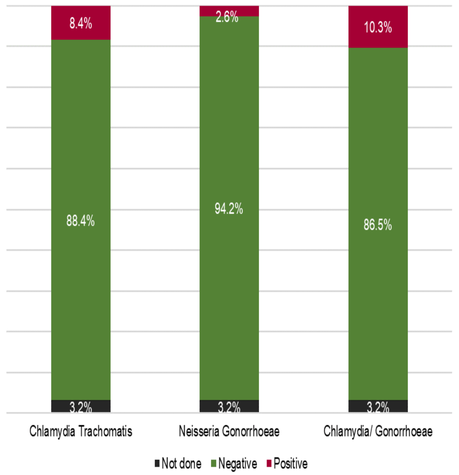


Fig1 :Proportions of Chlamydia Trachomatis and Neisseria Gonorrhoeae at Month 12 Visit

Table 1: Sexual Risk-Taking Behavior Characteristics of Participants at Enrollment (Ever had sex)

		-ve (CT or NG) (N=88)	+ve (CT or NG) (N=8)	All (N=96)
Age of first sexual partner	Mean (SD)	20.3 (3.8)	21.9 (4.2)	20.5 (3.8)
	Median [Min, Max]	20.0 [10.0, 30.0]	22.5 [15.0, 29.0]	20.0 [10.0, 30.0]
Age at sexual debut	Mean (SD)	18.6 (2.3)	17.6 (1.8)	18.4 (2.2)
	Median [Min, Max]	18.0 [10.0, 24.0]	17.5 [14.0, 20.0]	18.0 [10.0, 24.0]
Number of sex intercourse over past 3 months	Mean (SD)	3.81 (6.5)	4.64 (6.1)	3.91 (6.4)
	Median [Min, Max]	1.00 [0, 30.0]	2.00 [0, 24.0]	2.00 [0, 30.0]
Condom use at the last sexual intercourse	Yes	64 (62.7%)	8 (57.1%)	72 (62.1%)
	No	38 (37.3%)	6 (42.9%)	44 (37.9%)

- Older age reduced odds of acquiring STI by 0.6 times per year (aOR 0.56, 95% CI 0.3-0.9).
- Tertiary education lowered odds of acquiring STI by 0.03 times versus primary education (aOR 0.03, 95% CI 0.04-3.30).
- Alcohol/substance use in the past six months increased the odds of acquiring STI by 6.75 times (aOR 6.75, 95% CI 1.29-46.84).
- Sexual activity increased odds of acquiring STI by 12.9 times (aOR 12.9, 95% CI 1.49-216.3).
- An increase of one year in the age of the first sexual partner increased odds of acquiring STI by 1.25 times (aOR 1.25 (1.06-1.50), while abstaining at younger age reduced odds of acquiring STI by 0.65 times (aOR 0.65, 0.46-0.90).

CONCLUSIONS

- Young men and women living with HIV had lower STI prevalence than other comparable population level age cohorts [2].
- Education, delayed sexual debut were protective while older sexual partner and female gender and financial dependency had increased risk, emphasizing the need for structural social protection interventions.

REFERENCES

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