



High prevalence rates of chlamydia and gonorrhea among adolescent men who have sex with men (AMSM) and transgender women (ATGW) enrolled in a PrEP cohort in Salvador, Northeast Brazil



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Introduction

Neisseria gonorrhoeae (NG) and *Chlamydia trachomatis* (CT) are among the sexually transmitted infections (STIs) with high rates worldwide. These infections disproportionately affect MSM and ATGW. This population's prevalence rates by anatomical site are scarce in Brazil and elsewhere. This study aimed to estimate the prevalence of these STIs among MSM/ATGW, and its associated factors.

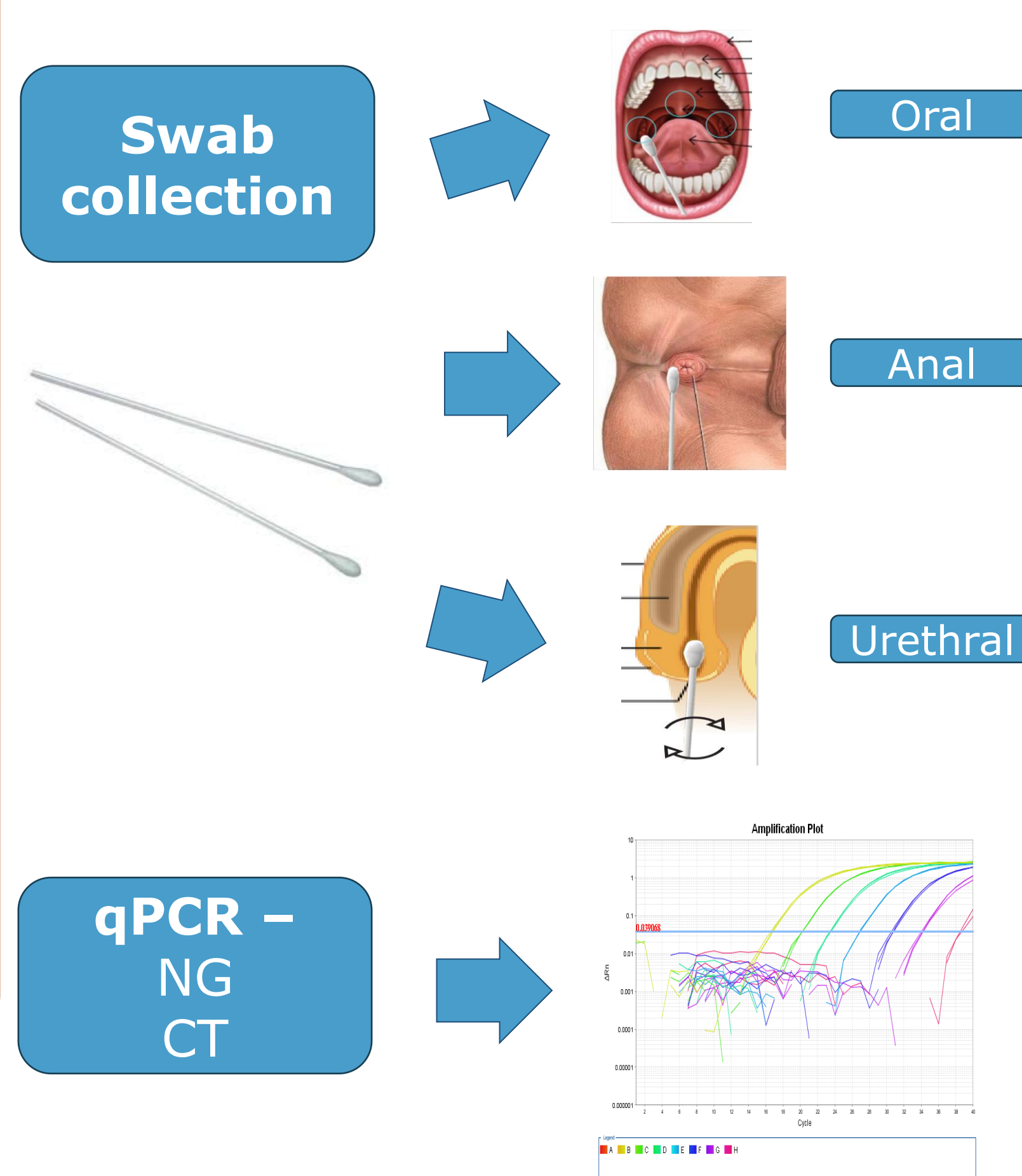
Methods

PrEP1519 is a prospective, multicenter, open-label PrEP demonstration cohort study of MSM and ATGW aged 15-19.

246 adolescents were enrolled between April 2019-February 2021 in the Salvador site, Northeast Brazil.

Participants answered a sociodemographic/sexual behavior questionnaire.

Samples



Data Analysis

We assessed the association between sociodemographic and behavioral data (SBD) and the prevalence of STIs in the baseline by Pearson's chi-squared test or Fisher's exact test. Poisson regression with robust variance was used to estimate the adjusted prevalence ratio (PR) and 95% confidence interval (95%CI).

Results

SBD data are presented in Table 1. The overall prevalence of NG and CT were 17.9% and 5.9%, respectively. Coinfection occurred in 0.5% of the cases. Both STIs had higher prevalence on extra genital sites. The prevalence of NG was highest in the oral (9.4%) site. For CT, the highest prevalence occurred at the anal site (2.4%) (Table 2). The prevalence of NG was higher among the participants with a lower level of schooling (PR=2.08; 95%CI 1.07-4.04), while the CT was higher in those who had condomless oral sex in the previous three months (PR=3.75; 95%CI 1.28-11.00) (Table 3).

Table 2. Prevalence of *N. gonorrhoeae* and *C. trachomatis* by anatomical site.

STI	Oral (n=245)		Anal (n=210)		Urethral (n=213)	
	n (%)	*95%CI	n (%)	*95%CI	n (%)	*95%CI
<i>N. gonorrhoeae</i>	23 (9.4)	6.31-13.76	16 (7.6)	4.71-12.11	4 (1.9)	0.70-4.92
<i>C. trachomatis</i>	3 (1.2)	0.39-3.75	5 (2.4)	0.99-5.62	4 (1.9)	0.70-4.92
Coinfection	-	-	1 (0.5)	0.05-3.74	-	-

Conclusions

We found a high prevalence of NG and CT especially in extragenital sites. These findings highlight the need for testing in multiple anatomical sites among HIV-vulnerable populations. The association between lower education and condomless oral sex with STIs indicates the role social and behavioral factors play in the greater vulnerability of MSM/TGW to these infections. Comprehensive sexual health and counseling tailored to adolescents, especially those engaging in riskier sexual practices, could further improve HIV and STI prevention and care.

Table 1. Sociodemographic, behavioral and clinical data. PrEP1519 study-Salvador site. April 2019 – February 2021 (N=246).

Variables	N	%
Age		
15 - 17 years	36	14.6
18 - 19 years	210	85.4
Race/skin color		
Non-black	35	14.2
Black	211	85.8
Schooling		
High School and higher education	218	83.3
Primary school students and education for young adults	26	10.7
Sexual Orientation		
Homosexual	158	64.2
Bisexual and Heterosexual	88	35.8
Steady sexual partner in the last 3 months		
No	111	45.5
Yes	133	54.5
Casual sexual partner in the last 3 months		
No	84	34.4
Yes	160	65.6
Receptive anal sex in the last 3 months		
No	68	27.9
Yes	147	72.1
Insertive anal sex in the last 3 months		
No	97	39.7
Yes	147	60.3
Condomless anal sex in the last 3 months		
No	96	39.3
Yes	148	60.7
Condomless oral sex in the last 3 months		
No	38	15.6
Yes	206	84.4
Group sex in the last 3 months		
No	204	83.6
Yes	40	16.4
Clinical suspicion of STI		
No	212	90.3
Yes	23	9.7

Table 3. Prevalence ratio of the association between SBD factors and the prevalence of STIs. PrEP1519 study- Salvador site.

Variables	PR*	95%CI% [†]	p-value
<i>Neisseria gonorrhoeae</i>			0.030
Schooling			
High School and higher education	1.00	-	
Primary school students and education for young adults	2.08	1.07-4.04	
Receptive anal sex in the last 3 months			0.077
No	1.00	-	
Yes	2.45	0.91-6.65	
<i>Chlamydia trachomatis</i>			
Schooling			0.073
High School and higher education	1.00	-	
Primary school students and education for young adults	3.00	0.90-9.98	
Condomless oral sex in the last 3 months			0.016
No	1.00	-	
Yes	3.75	1.28-11.00	

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