

Increased Risk for *Trichomonas Vaginalis* in an Urban Population of Young Adults

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Background. The epidemiology of *T vaginalis* (TV) in the general population is not well understood, although it is reported to be the most common curable sexually transmitted infection worldwide. Surveillance data do not exist either for US national or local populations. Infection with TV increases the likelihood of HIV acquisition and has been associated with adverse health outcomes in men and women.

Methods. The Monitoring STIs Survey Program (MSSP) used telephone audio computer-assisted self-interview technology and specimen collection kits sent out and returned by mail to monitor *T.vaginalis* and *C.trachomatis* among a probability sample of 15 to 35-year-olds residing in Baltimore, MD from September 2006 through June 2009. Specimens were tested using TMA-based APTIMA assays. Weighted estimates of infection prevalence by respondents' sociodemographic and behavioural characteristics were tabulated using poisson regression.

Results. 2120 of 2936 respondents (72.2%) provided specimens for STI testing. The prevalence of TV was 7.5% (95% CI 6.0% to 9.0%) and was significantly higher among women (11.8%) than men (2.9%; PR_{1/4}4.0, 95% CI 2.2% to 7.4%). Among Black females, the estimated prevalence was 16.1% (95% CI 1.0% to 19.8). Levels of TV infection ranged from 7.3% (95% CI 4.7% to 11.2) among 15-19 year olds to 10.6% (95% CI 7.6% to 14.7) among those aged 20-24 years and 6.6% (95% CI 4.5% to 9.6) among 30-35 year olds (p_{1/4}0.39 for linear trend). Infection with *T.vaginalis* was more common than infection with *C trachomatis* (3.9%, 95% CI 2.7% to 5.0%; p<0.001). Unlike TV, CT did not vary by gender (women 4.5%, men 3.4%, p_{1/4}0.35) and infection prevalence was significantly higher among those <25 years of age (p<0.001 for trend). Concomitant TV infection was detected in 23.5% of respondents with CT (PR_{1/4}3.7, 95% CI 1.9% to 7.7). Both TV and CT were associated with reporting of three or more partners in the past year and a new partner in the past 3 months. TV infection, but not CT, was associated with a previous STI diagnosis (PR_{1/4}1.9, 95% CI 1.3% to 2.8%) see Abstract O1-S05.04 table 1.

Abstract O1-S05.04 Table 1 Estimated prevalence of trichomoniasis and chlamydial infection by respondent characteristics: monitoring STIs in the population, 2006–09

Characteristic	N	<i>T vaginalis</i> Wtd.% (95% CI)	p	<i>C trachomatis</i> Wtd.% (95% CI)	p
Total	2120	7.5 (6.0 to 9.0)		3.9 (2.7 to 5.0)	
Sex					
Women	1322	11.8 (9.6 to 14.3)		3.4 (2.4 to 4.8)	
Men	798	2.9 (1.6 to 5.1)	<0.001	4.5 (2.8 to 7.0)	0.35
Race					
Black	1299	11.2 (9.1 to 13.6)		6.0 (4.4 to 8.1)	
Non-black	821	2.0 (1.2 to 3.5)	<0.001	0.7 (0.2 to 2.0)	<0.001
Age					
15–19	576	7.3 (4.7 to 11.2)		6.6 (4.2 to 10.5)	
20–24	460	10.6 (7.6 to 14.7)		5.9 (3.6 to 9.7)	
25–29	501	5.6 (3.7 to 8.5)		1.7 (0.8 to 3.3)	
30–35	583	6.6 (4.5 to 9.6)	0.39	1.2 (0.5 to 2.8)	<0.001
3+ partners past year					
Yes	445	10.6 (7.6 to 14.6)		8.2 (5.5 to 12.0)	
No	1674	6.6 (5.1 to 8.4)	0.02	2.7 (1.8 to 4.2)	<0.001
New partner in past 3 months					
Yes	435	11.7 (8.2 to 16.4)		9.3 (6.3 to 13.6)	
No	1657	6.3 (5.0 to 8.1)	0.004	2.5 (1.6 to 3.8)	<0.001
Previous STI					
Yes	503	12.8 (9.6 to 17.0)		4.5 (2.7 to 7.2)	
No	1372	6.7 (5.2 to 8.8)	0.001	4.3 (3.0 to 6.1)	0.91

Conclusions. Undetected *T vaginalis* is common among young adults in Baltimore, particularly among women. Nearly one-fourth of respondents with chlamydial infection also tested positive for TV. Unlike chlamydial infection, the prevalence of TV was consistently high across all age groups. Our results provide strong support for routine screening for TV in conjunction with CT in populations at elevated risk of infection.