Sexually Transmitted Infections among Adolescents and Adults in Baltimore, MD

E. Eggleston[1]*, C.F. Turner[2], S.M. Rogers[1], S.Tan[1], A.M. Roman[3], W.C. Miller[4], M.M. Hobbs[4], E. Erbelding[5], L. Ganapathi[1]

[1]Research Triangle Institute, Washington DC/RTP, NC; [2]City University of New York, (Queens College & the Graduate Center); [3]University of Massachusetts-Boston; [4]University of North Carolina at Chapel Hill, School of Medicine; [5]Johns Hopkins University, School of Medicine

1. Background

- Adolescents perceived as more vulnerable to STIs.
- 15–19-year-old females have highest reported chlamydia (Ct) rates.
- However, trichomoniasis (Tv) associated with increasing age, and reported syphilis rates highest among 25–29 year-olds.

2. Monitoring STIs Survey Program (MSSP)

- Monitors prevalence of undiagnosed STIs (Ct, Tv, GC) among probability samples of 15–35 year-olds in Baltimore MD households with landline telephones.
- Data sources: 1) T-ACASI interview; 2) mailed-in urine specimens.

3. Objectives

- Report prevalences of undiagnosed STIs (chlamydia and trichomoniasis) among Baltimore teens aged 15–19 and adults aged 20–35 from 2006–08 MSSP.
- Identify correlates of Ct and Tv and determine if they differ between teens and adults.

4. Methods

- Estimates weighted to account for differing probabilities of selection and post-stratification adjustment.
- Bivariate analysis conducted to measure differences in Ct and Tv prevalence among demographic subgroups.
- Logistic regressions conducted to:
  1. assess age group variation in impact of risk factors on Ct and Tv,
  2. measure effects of behavioral/health risk factors on Ct and Tv, while controlling for age.

5. Results

- 60% of eligible respondents (n=2281) completed TACASI.
- 76% provided urine specimen. Six damaged or non-urine specimens not tested.
- 1637 specimens tested: 461 teens and 1176 adults.

Prevalence and Demographic Correlates of STI

- STI detected in nearly 10% of overall sample: Ct in 3.9%, Tv in 6.5%.
- Ct more prevalent among teens, Tv more prevalent among adults.
- Tv far more common among women, but males and females equally likely to have Ct.
- Racial disparities were dramatic. Only one Ct and two Tv infections found among Whites.

Table 1. Percentage Population with Chlamydia or Trichomoniasis, Baltimore, MD, 2006–08

Group		Chlamydia		Trichomoniasis	
		% infected	*p*	% infected	*p*
All ages (n=1637)		3.9		6.5	
Age Group	Adults, 20–35 (n=1176)	3.2	0.07	7.3	0.048
	Teens, 15–19 (n=461)	5.8		4.2	
Sex	Female (n=1013)	3.7	0.66	10.5	<.0001
	Male (n=624)	4.2		2.1	
Race	White (n=498)	0.1		0.2	
	Black (n=1045)	5.7		9.8	
	Asian (n=35)	0.0		0.0	
	Other (n=59)	8.2		6.4	

p-values from chi-square tests.

Risk Factors — Chlamydia

- Teen-adult variation in impact of having >1 partner approached significance (p=.09). Multiple partnerships associated with higher odds of Ct among both age groups
- Impact of forced sex on Ct infection varied significantly between teens and adults (p=.02). Associated with higher odds among teens only.

5. Results *(continued)*

- Impact of respondent incarceration on Ct varied between teens and adults (p=.09). Associated with increased odds among teens only.
- Impact of other risk factors on Ct did not vary between teens and adults.

Table 2. Correlates of Chlamydia among Teens and Adults in Baltimore, MD, 2006–08

Factor	Teens, 15–19 (n=461) OR	Adults, 20–35 (n=1176) OR	Age-Risk Factor Interaction *p*-value
>1 sex partner, past year	10.2*	3.0*	0.09
Forced sex, ever	4.7*	0.5	0.02
Partner physical abuse, ever	1.2	1.3	0.92
STI, past year	4.6*	2.6	0.50
STI symptoms, past 30 days	2.3	1.4	0.57
Respondent jailed, past year	5.8*	1.2	0.09
Partner jailed, past year	5.7*	3.6*	0.55

OR = Odds Ratio
*significant at .05 level.

Risk Factors — Trichomoniasis

- Teen-adult variation in impact of recent STI symptoms on Tv approached significance (p=.08).
- Among adults, but not teens, recent symptoms associated with higher odds of Tv.
- Impact of other risk factors on Tv did not vary significantly between teens and adults.

Table 3. Correlates of Trichomoniasis among Teens and Adults in Baltimore, MD, 2006–08

Factor	Teens, 15–19 (n=461) OR	Adults, 20–35 (n=1176) OR	Age-Risk Factor Interaction *p*-value
>1 sex partner, past year	3.1*	3.5*	0.83
Forced sex, ever	7.2*	2.8*	0.23
Partner physical abuse, ever	1.2	1.5	0.80
STI, past year	5.7*	3.0*	0.38
STI symptoms, past 30 days	0.7	2.5*	0.08
Respondent jailed, past year	4.4*	3.1*	0.67
Partner jailed, past year	7.0*	4.3*	0.46

OR = Odds Ratio
*significant at .05 level.

6. Conclusions

- High prevalence of Ct (3.9%) and Tv (6.5%) among 15–35 year-olds in Baltimore.
- Ct prevalence much higher among teens, Tv more prevalent among adults.
- Huge racial disparities; nearly all Ct and Tv infections found among Black and "Other" respondents.
- Impact on Ct of three factors varied significantly between teens and adults: >1 partner in past year, ever experiencing forced sex, respondent incarceration.
- Impact of recent STI symptoms on Tv varied between teens and adults.
- Overall, impact of most risk factors on Ct and Tv did not vary significantly between teens and adults.

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Contact Information

***Presenting author**: Elizabeth Eggleston
Email: eeggleston@rti.org
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