

STI-related Risk Behaviors and STI Disparity Between Residents of Baltimore City, MD and Other U.S. Central Cities

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BACKGROUND

- Baltimore City, Maryland, has experienced rates of STIs that are consistently higher than the national average. National surveillance data indicate that in 2000 the rates of gonorrhea and chlamydia in Baltimore City were 3.3 and 6.7 times higher than the overall U.S. rate. Among U.S. cities with greater than 200,000 people, Baltimore City ranked among the top four for chlamydia and gonorrhea infection rates.
- Probability surveys with equivalent survey measures of the Baltimore City population and other urban locales can inform our understanding of the behavioral risks associated with STIs.

OBJECTIVES

- To compare self-reports of diagnosed gonorrhea and chlamydia among adults residing in Baltimore City to those in other central cities of the U.S. and to assess whether a higher prevalence of sexual and substance use behaviors in Baltimore City may account for infection disparity.

The 1999-2000 National STD and Behavioral Measurement Experiment (NSBME)

- The NSBME was a cross-sectional telephone survey of a probability sample of U.S. adults and of residents of Baltimore City, MD in 1999-2000.
- The target population was English-speaking adults between 15–45 years of age residing in households with landline telephones.
- RDD sample. Telephone interviewers screened for eligible households. One eligible household member was randomly selected for participation without substitution.
- Interviews were administered by trained telephone interviewers and using T-ACASI
- Participants were surveyed on a wide range of STI-related risk behaviors and history of gonorrhea and chlamydia.

METHODS – Statistical

- Survey weights were applied to account for differing probabilities of selection and nonresponse.
- Weighted estimates of participants demographic characteristics, history of gonorrhea and chlamydia, and STI-related risk behaviors.
- Prevalence ratios (PrR) estimated using Poisson regression.
- This analysis compares residents of central cities drawn from the NSBME national sample to the Baltimore City sample.

RESULTS

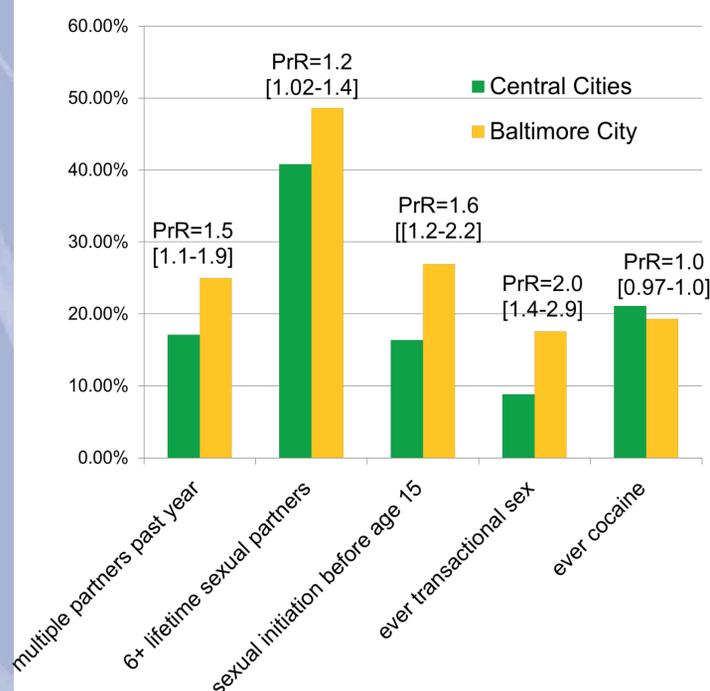
Table 1: Demographic Characteristics of Study Participants Residing in Baltimore City, MD and in Central Cities.

	Baltimore City, MD (N=744)	Central Cities (N=547)	P-value
Female	52%	48%	0.231
Male	48%	52%	
African American*	64%	20%	<0.001
Other	36%	80%	
Ages 18-25	27%	28%	0.492
Ages 26-35	35%	37%	
Ages 36-45	38%	35%	

* Non-Hispanic African American;

- About 70% of eligibles in the national (1,543 of 2,183) and in the Baltimore City (744 of 1,072) samples were interviewed.
- Similar gender and age distribution but different racial/ethnic composition between residents of Baltimore City and overall central cities (table 1).
- Lifetime prevalence of gonorrhea and chlamydia was 18.4% (95% CI 14.9%-22.6%) among Baltimore City residents and 9.9% (95% CI 7.4%-13.1%) among residents of central cities, prevalence ratio 1.9 (95% CI 1.3 - 2.6).

Figure 1: Estimated Prevalence and Prevalence Ratio [95% CI] of STI-related Risk Behaviors Between Residents of Baltimore City, MD and Overall U.S. Central Cities.



- History of STI-related risk behaviors varied between residents of Baltimore City and Central Cities (figure 1):
- Compared to overall U.S. central cities, Baltimore City residents were:
 - Twice as likely to have engaged in transactional sex: [17.6%, 95% CI 14.2-21.7%, versus 8.8%, 95% CI 6.4-11.8%]
 - One-and-a-half times as likely to have multiple sexual partners in the past year [25.0%, 95% CI 21-29%], versus 17.1%, 95% CI 13.4-21.1]
 - More likely to have 6 or more lifetime sexual partners (48.6%, 95% CI 44-53%, versus 40.8%, 95% CI 36.0-46.0).
 - No differences were observed in the lifetime use of any form of cocaine or injection drug use (not shown) between Baltimore City and the average for U.S. central cities.

Table 2: Prevalence Ratios of the Relationship Between Baltimore City versus Central Cities and History of Gonorrhea/Chlamydia Infections, Stratified by Respondents' Race/Ethnicity.

	Bivariate PrR [95% CI]	Adjusted for ever transactional sex PrR [95% CI] *	Adjusted for sexual initiation before age 15 PrR [95% CI] *
Non-African Americans			
Baltimore City	1.11 [0.6-1.9]	1.0 [0.6-1.8]	1.0 [0.5-1.7]
Central Cities	Ref.	Ref.	Ref.
African Americans			
Baltimore City	1.21 [0.7-2.1]	1.0 [0.6-1.7]	1.05 [0.6-1.8]
Central Cities	Ref.	Ref.	Ref.

* Note: Multivariate model adjusts for the single risk behavior only.

- The elevated prevalence of self-reported history of gonorrhea/chlamydia among Baltimore City residents compared to overall central cities is attenuated when stratifying by respondents' race/ethnicity and further weakened after adjustment for sexual risk behavior (table 2).

CONCLUSIONS

- Within race/ethnic strata, residents (18-45 years old) of Baltimore City and overall U.S. central cities have similar prevalence of self-reported history of gonorrhea/chlamydia after adjustment for risk behaviors.
- The high prevalence of sexual risk behaviors in Baltimore City and in U.S. central cities contributes to high rates of STIs.

The NSBME was supported by NIH grants R01-MH56318 and R01-HD31067 to Charles F. Turner. Contact: Maria Villarroel
 Graduate studies for M. Villarroel are supported by the Johns Hopkins Training Program in STIs, T32A1050056. mvillarr@jhsph.edu