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Prevalence of *Chlamydia trachomatis* genital infection among sexually experienced females aged 14–24 years by race/ethnicity, United States: 2011–March 2020

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Abstract

Background: Since 2013, national trends in behavioral factors that increase STI risk among adolescent and young adult (A/YA) females have been mixed (e.g., fewer sex partners, lower condom use). We used data from a national sample of A/YA females to examine racial disparities in CT prevalence considering these trends.

Methods: Using 2011–March 2020 National Health and Nutrition Examination Survey data, we estimated the prevalence, unadjusted and adjusted prevalence ratios (APRs) of a positive CT urine test among sexually experienced non-Hispanic Black (Black), Hispanic, non-Hispanic Other race (NHO), and non-Hispanic White (White) A/YA females. Percentages were categorized by race/ethnicity, and each compared to the average of the other race/ethnic groups (e.g., Black vs. Hispanic, NHO and White). Covariates included age group, health insurance coverage, number of sex partners and condom use (both past year).

Results: Overall, the prevalence of CT infection among A/YA females was 5.8% (95% CI: 4.5%–7.3%). CT prevalence was higher among Black females (vs. Hispanic, NHO, and White) (11.7%; 95% CI: 8.7%–15.2%) and lower among White females (vs. Black, Hispanic, and NHO) (3.2%; 95% CI: 1.7%–5.5%). Compared with the average CT prevalence for Hispanic, NHO, and White females, Black females had a higher adjusted CT prevalence (APR: 2.48, 95% CI: 1.63–3.75).

Conclusions: Nationally, CT prevalence was 2.5 times as high among Black A/YA females than the average prevalence for Hispanic, NHO, and White females. Inclusion of behavioral STI risk factors did not attenuate this association. Research incorporating sexual network-level factors associated with CT transmission may provide additional insights.

Short summary

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Urogenital *Chlamydia trachomatis* (CT) positivity was 5.8% among sexually experienced females aged 14–24 years using 2011–March 2020 data from a national sample. Comparisons of racial/ethnic groups indicated disparities in CT infection prevalence.

Keywords

chlamydia; sexual behavior; adolescents; young adults

Introduction

Reducing racial/ethnic disparities in *Chlamydia trachomatis* (CT) infections among adolescent and young adult (A/YA) females is an important sexual health priority. In 2023, the rate of reported CT cases among non-Hispanic Black (Black) females aged 15–19 years was more than five times the rate among non-Hispanic White (White) females in the same age group (6,248.1 vs. 1,114.5 per 100,000 women) (1). A similar disparity existed in females aged 20–24 years (Black: 6,736.8 vs. White: 1,575.5 per 100,000 women; rate ratio: 4.3), and rate ratios in both age groups have remained stable over the past decade (2). CT case reports are sensitive to changes in diagnostic, screening, and reporting practices and are limited in describing the individual or societal level factors contributing to the transmission of these infections across racial/ethnic groups. To gain a more complete understanding of factors associated with racial/ethnic disparities observed in CT case rates among female A/YA, it is important to estimate racially stratified CT infection prevalence and its associated correlates.

CT screening practices vary significantly among A/YA females by race/ethnicity. Despite similar levels of lifetime sexual activity (3), higher levels of CT screening among Black and Hispanic compared with White A/YA females point to racial/ethnic inequities in screening practices performed by healthcare providers (4) that can impact observed CT morbidity. Similarly, previous studies have extensively documented individual and societal-level factors that act as barriers to sexual and reproductive health (SRH) care among A/YA females (5–7). These factors include cost, limited access to and utilization of SRH services, and concerns related to confidentiality, which can be exacerbated by experiences of racism within the healthcare system (8). Such barriers can significantly impede the timely detection and treatment of CT infections, which often manifest without apparent symptoms. Additionally, heterogeneity in individual-level sexual behaviors by race/ethnicity among A/YA can affect CT prevalence (9). National-level trends have been mixed for many years in terms of the behavioral factors that increase STI risk among A/YA females that directly affect the probability of acquiring CT infection. From 2013 to 2023, data from the Youth Risk Behavior Survey (YRBS) show reports of fewer sexual partners among female high school students, particularly among Black A/YA (3). However, trend analyses from the National Survey of Family Growth (NSFG) among female youth aged 15–19 years from 2008 to 2019 did not identify similar changes (10). Both sources indicated a decline in condom use among A/YA across all racial/ethnic groups (3) and specifically among Black females (10) during this period, which may have contributed to racial/ethnic disparities in CT rates, particularly

among those engaging in other sexual risk behaviors (e.g., alcohol or drug use before sexual intercourse) (11).

Previous population-based assessments of CT prevalence using data from the National Health and Nutrition Examination Survey (NHANES) pointed to differences by race/ethnicity but did not focus specifically on A/YA females or consider prevalence differences by behavioral factors that increase STI risk (12, 13). Updated national reports of CT prevalence by race/ethnicity among A/YA females are crucial for informing local screening and prevention efforts. To address this gap, we analyzed data from the 2011–March 2020 cycles of NHANES to estimate CT prevalence and associated behavioral factors that increase STI risk among A/YA females stratified by race/ethnicity.

Materials and Methods

Study Population

NHANES is administered by the National Center for Health Statistics (NCHS) at the Centers for Disease Control and Prevention, and is an ongoing series of cross-sectional, multistage surveys conducted in 2-year cycles of the civilian, non-institutionalized population of the United States (<https://www.cdc.gov/nchs/nhanes/>, accessed on March 11, 2025). Participants undergo a household interview followed by a health examination at a mobile examination center (MEC). The health examination includes the collection of biological specimens, including samples that are subsequently tested for CT. Additionally, during the MEC visit, participants undergo an additional interview to gather information on various topics, such as sociodemographic characteristics, healthcare access and utilization, and sexual behaviors. Sensitive questions on topics such as sexual behavior are administered privately at the MEC.

Data

For our analysis, we utilized data from the 2011–March 2020 cycles of NHANES, specifically focusing on A/YA females. The analytic sample was limited to female respondents aged 14–24 years who reported having ever engaged in vaginal, oral, or anal sexual activity (i.e., sexually experienced) and had both interview and examination data available from the MEC. To access the data for females aged 18–24 years, we utilized the public-use datasets provided by NHANES; however, due to the sensitive nature of the information for females aged 14–17 years, access to their data was restricted and we obtained approval from the NCHS Research Data Center to analyze these data.

Ethics Approval

The survey conducted by NHANES is approved by the NCHS Research Ethics Review Board. Informed consent or assent was obtained from all participants or their guardians for both the interview and physical examination components.

Definition of Key Study Variables and Covariates

The outcome of interest in this study was a positive urine CT nucleic acid amplification test result. The primary predictor was the respondents' race/ethnicity, categorized as non-

Hispanic Black (Black), Hispanic, non-Hispanic Other race, including multi-racial (NHO), and non-Hispanic White (White). In addition to an evaluation by race/ethnicity, we also examined CT prevalence by age group (categorized as 14–19, 20–24 years), health insurance coverage (categorized as covered, not covered), and sexual behaviors in the past 12 months, including the number of reported sex partners (categorized as 0/1, ≥ 2) and whether sex occurred without a condom (categorized as yes=less than half of the time, about half of the time, not always but more than half of the time, always; no=never).

Statistical Analysis

We examined the prevalence of demographic and behavioral characteristics and the prevalence of urogenital CT by each covariate among A/YA females categorized by race/ethnicity. We compared the percentages within each individual racial/ethnic group to the average of the other three race/ethnic categories (e.g., Black vs. Hispanic, NHO and White). Prevalence ratios (PRs) and 95% confidence intervals (CIs) were also calculated. For each of the four comparisons (Black vs Hispanic, NHO and White; Hispanic vs. Black, NHO and White; NHO vs Black, Hispanic and White; White vs. Black, Hispanic and NHO), we evaluated the bivariate association of respondent characteristics with CT prevalence using the Rao-Scott χ^2 test. The Holm-Bonferroni correction was used to adjust for multiple comparisons. A two-tailed α level of 0.05 was used to determine statistical significance.

We then used log-binomial regression with robust standard errors to estimate adjusted prevalence ratios (APRs) with corresponding 95% CIs for associations of these variables with urogenital CT prevalence. For each covariate category, CT prevalences for each racial/ethnic group were compared to the average prevalence of the other three races/ethnic groups to estimate the prevalence ratio (e.g., NH Black vs. Hispanic, NH Other, and NH White). Our final regression models included age, current health insurance status, number of sex partners, and whether the participant had sex without using a condom (both past year). Multivariable models were adjusted for all covariates. We excluded missing data on sociodemographic and behavioral variables for the estimates of CT prevalence presented.

SAS 9.4 (SAS Institute, Cary, NC) and SAS-Callable SUDAAN software (Release 11.0; Research Triangle Institute, Durham, NC) was used to generate prevalence and PR estimates. All analyses followed the 2017 NCHS Data Presentation Standards for Proportions (14) and accounted for the complex NHANES survey design and used the MEC sample weights. The 95% CIs of prevalence estimates were calculated using the Korn and Graubard method. Effective sample size, absolute and relative 95% CI width, and degrees of freedom were evaluated to determine the reliability of prevalence estimates. Relative CI widths greater than 130% are noted in the tables and these estimates should be interpreted with caution.

Results

The analysis included an unweighted sample size of 1,669 sexually experienced A/YA females. White females had the highest percentage reporting health insurance coverage (86.3%, 95% CI: 82.8%–89.7%), followed by NHO (82.3%, 95% CI: 75.0%–85.6%), Black (79.8%, 95% CI: 75.8%–83.8%) and Hispanic females (71.1%, 95% CI: 66.4%–75.8%)

(Table 1). A higher percentage of Black females reported ≥ 2 partners in the past year compared with females in other race/ethnic groups (Black: 37.7%, 95% CI: 33.4%–42.0% vs. White: 32.6%, 95% CI: 29.1%–36.2%; NHO: 26.8%, 95% CI: 18.5%–35.2%; Hispanic: 22.0%, 95% CI: 17.7%–26.4%), though not all differences were statistically significant. The overall percent of A/YA females who reported not using a condom during sex in the past year was 78.9% (95% CI: 75.6%–82.0%) and did not vary significantly across racial/ethnic groups.

Among A/YA females who underwent urine CT testing ($n=1,652$), overall CT prevalence was 5.8% (95% CI: 4.5%–7.3%) (Table 2). CT prevalence was higher among Black females than the average of the other groups (vs. Hispanic, NHO and White) (11.7%, 95% CI: 8.7%–15.2%) and lower among White females (vs. Black, Hispanic and NHO) (3.2%, 95% CI: 1.7%–5.5%). CT prevalence was 10.3% for NHO (95% CI: 3.5%–21.9%) and 6.7% for Hispanic (95% CI: 4.4%–9.7%) females and did not vary significantly when compared with the average prevalence among females in the other three racial/ethnic groups.

Among females with health insurance, CT prevalence was 10.5% for Black females (95% CI: 7.4%–14.3%) and 3.4% for White females (95% CI: 1.6%–6.2%). A similar pattern of CT prevalence was seen among Black and White females without health insurance (Black: 16.2%, 95% CI: 8.1%–27.7%; White: 2.4%, 95% CI: 0.2%–8.9%). Among females with 0/1 partner in the past year, CT prevalence was higher for Black females (vs. Hispanic, NHO and White) and lower for White females (vs. Black, Hispanic and NHO) (Black: 8.9%, 95% CI: 5.1%–14.4%; White: 2.3%, 95% CI: 0.7%–5.4%). Comparatively, CT prevalences among those with ≥ 2 partners in the past year were close to double (Black: 16.1%, 95% CI: 10.9–22.5%;) or more than double (White: 5.2%, 95% CI: 1.9–10.8%) those with only 0/1 partner in the past year.

Controlling for all covariates in multivariable analysis, Black female A/YA had a CT prevalence that was 2.5 times as high as the average CT prevalence of Hispanic, NHO, and White females (95% CI: 1.6–3.8) (Table 3). From the same comparisons, CT prevalence was significantly higher for Black females with health insurance (APR=2.2, 95% CI: 1.3–3.5), for those without health insurance (APR=3.4, 95% CI: 1.5–8.0), and for those with ≥ 2 partners in the past year (APR=3.0, 95% CI: 1.7–5.3). CT prevalence was also significantly higher among Black females (vs. Hispanic, NHO and White) who reported not using a condom during sex in the past year (APR=2.4, 95% CI: 1.5–3.9) and lower among White A/YA females (vs. Black, Hispanic and NHO) who reported not using a condom during sex in the past year (APR=0.3, 95% CI: 0.1–0.6).

Discussion

During 2011–March 2020, Black (vs. Hispanic, NHO and White) and White (vs. Black, Hispanic and NHO) A/YA females had the highest and lowest prevalence of CT compared to the average CT prevalence of the other race/ethnicities. Notably, our analysis shows that Black females had a higher CT prevalence than the average CT prevalence of Hispanic, NHO and White females regardless of whether they currently had health insurance. This difference may be due to inconsistent and disparate use of SRH services among racial/

ethnic minority youth. Previous studies have found that Black A/YA females were more likely to report being offered preventive SRH services, such as STI testing and having discussions with healthcare providers about sexual health, than their White counterparts (15–17). Although it is encouraging that Black A/YA females report receiving SRH services and having conversations about sexual health with healthcare providers, they often report experiencing stigma, discrimination, and discomfort during these interactions (18). There continues to be a lack of adherence to clinical guidelines for including SRH topics in discussions between healthcare providers and A/YA patients during clinical visits (19) that may be contributing to reports of these negative healthcare experiences. Moreover, studies examining racial/ethnic differences in the receipt of SRH care among A/YA females only reflect the reports of those actively seeking SRH services and do not represent the experiences of those who forgo care due to a lack of trust in providers, fear of judgement, and concerns related to confidentiality (20).

We also found that CT prevalence among Black A/YA females was higher compared with the average CT prevalence of Hispanic, NHO and White females regardless of the number of sex partners in the past year, although, in adjusted analyses, this effect only remained statistically significant among those with ≥ 2 partners. CT prevalences among A/YA not using condoms was also higher than average among Black female A/YA (vs. Hispanic, NHO and White) and lower than average among White females (vs. Black, Hispanic and NHO). These findings reinforce longstanding evidence that factors related to sexual networks may play a more significant role in the racial disparities of STI prevalence than individual-level STI risk factors (21–23). Although we included several individual-level behaviors that have potential for increased CT transmission, data on partner-level characteristics that are associated with the acquisition of STIs, such as concurrency (i.e., being in more than one sexual relationship at the same time), were not collected in NHANES. Additional studies that include both individual and partner-level STI behavioral factors that increase STI risk by race/ethnicity, sex, and age may generate additional insights into which factors contribute most to racial/ethnic disparities in CT prevalence among A/YA.

Our analyses are subject to other limitations. First, the prevalence estimates among A/YA females presented here do not include CT infections at non-genital anatomic sites that can be infected through sexual contact, such as the rectum and oropharynx. Thus, the prevalence estimates presented are likely an underestimate of the actual burden of CT infection among A/YA females in the general population. Second, small sample sizes of A/YA females testing positive for CT infection resulted in estimates with wide CIs. Our analytic sample only included A/YA females within the age range recommended for annual screening (<25 years) and numerators were small, particularly when stratified by race/ethnicity. Also of note, the percentage of missing data on condom use in our analytic sample ranged from 10% (White) to 18% (NHO) among A/YA females. Reports of condom use among A/YA are lower among females than males which may be due, in part, to the use of other contraceptive methods to prevent pregnancy (24). Lastly, the data utilized were cross-sectional, which may have obscured trends in CT prevalence as well as trends in behavioral factors related to STI risk during this period.

In our analysis, a higher CT prevalence was most apparent for Black A/YA females compared with the average CT prevalence of Hispanic, NHO and White females. Additional research incorporating sexual network-level measures is needed to explain CT prevalence differences by race/ethnicity, considering previously observed inconsistencies in behavioral factors that increase STI risk among A/YA over the past decade (i.e., fewer sex partners, lower condom use). Expanding access to high-quality, low-cost, and confidential SRH services among racial/ethnic minority youth remains crucial for reducing disparities in the burden of CT nationwide.

References

- Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2023. Atlanta, GA: US Department of Health and Human Services, 2024. Available at: <https://www.cdc.gov/sti-statistics/data-vis/index.html>.
- Centers for Disease Control and Prevention. STI Statistics Archive. Chlamydia – Rates of reported cases by race/Hispanic ethnicity, age group and sex, United States, 2014–2023. Available at: <https://www.cdc.gov/sti-statistics/archive/index.html>.
- Centers for Disease Control and Prevention. Youth Risk Behavior Survey Data Summary & Trends Report: 2013–2023. U.S. Department of Health and Human Services; 2024. Available at: <https://www.cdc.gov/yrbs/dstr/index.html>.
- Wood S, Min J, Tam V, et al. Inequities in *Chlamydia trachomatis* screening between Black and White adolescents in a large pediatric primary care network 2015–2019. *Am J Public Health* 2022; 112: 135–143. [PubMed: 34936422]
- Carroll C, Lloyd-Jones M, Cooke J, et al. Reasons for the use and non-use of school sexual health services: a systematic review of young people's views. *Am J Public Health* 2012; 34(3):403–10.
- Badolato GM, Sadeghi N, Goyal MK. Racial and ethnic disparities in receipt of sexual health care and education among a nationally representative sample of adolescent females. *J Racial Ethn Health Disparities* 2022;9(4):1422–1429. [PubMed: 34160820]
- Galloway CT, Duffy JL, Dixon RP, et al. Exploring African-American and Latino teens' perceptions of contraception and access to reproductive health care services. *J Adolesc Health* 2017; 60(3S): S57–62. [PubMed: 28235437]
- Hilario C, Poon-Louie S, Kennedy M. Racism in health services for adolescents; a scoping review. *Int J Soc Determinants of Health and Health Services* 2023; 53(3): 343–353.
- Goodreau S, Pollock E, Wang LY, et al. Impacts of changing sexual behavior on chlamydia and gonorrhea burden among US high school students, 2007 to 2017. *Sex Trans Dis*. 48(9): 635–642.
- Katz DA, Copen CE, Haderxhanaj LT, et al. Changes in sexual behaviors with opposite sex partners and STI outcomes among women and men ages 15–44 in the United States: National Survey of Family Growth, 2008–2019. *Arch Sex Beh* 2022; 52(2): 809–821.
- Harper CR, Steiner RJ, Lowry R, et al. Variability in condom use trends by sexual risk behaviors: Findings from the 2003–2015 National Youth Risk Behavior Surveys. *Sex Transm Dis* 2018; 45(6): 400–405. [PubMed: 29465682]
- Torrone E, Papp J, Weinstock H. Prevalence of *Chlamydia trachomatis* genital infection among persons aged 14–39 years—United States, 2007–2012. *MMWR Morb Mortal Wkly Rep*. 2014 Sep 26; 63(38):834–8. [PubMed: 25254560]
- Datta SD, Torrione E, Kruszon-Moran D, et al. *Chlamydia trachomatis* trends in the United States among persons 14 to 39 years of age, 1999–2008. *Sex Transm Dis*; 2012; 39(2): 92–96. [PubMed: 22249296]
- Parker JD, Talih M, Malec DJ, et al. National Center for Health Statistics Data Presentation Standards for Proportions. National Center for Health Statistics. *Vital Health Stat* 2(175). 2017.
- Pleasure ZH, Lindberg LD, Mueller J, et al. Patterns in receipt and source of STI testing among young people in the United States, 2013–2019. *J Adolesc Health*. 2022;71(5):642–645. [PubMed: 35691850]

16. Hensel DJ, Herbenick D, Beckmeyer JJ, et al. Adolescents' discussion of sexual and reproductive health care topics with providers: Findings from a nationally representative probability sample of U.S adolescents. *J Adolesc Health*. 2021; 68(3):626–628. [PubMed: 32788074]
17. Townes A, Rosenberg M, Guerra-Reyes L, et al. Inequitable experiences between Black and White women discussing sexual health with healthcare providers: Findings from a national probability sample. *J Sex Med* 2020; 17: 1520–1528. [PubMed: 32622764]
18. Pratt MC, Jeffcoat S, Hill SV, et al. “We feel like everybody’s going to judge us”: Black adolescent girls’ and young women’s perspectives on barriers to and opportunities for improving sexual health care, including PrEP, in the Southern U.S. *JIAPAC* 2022; 21.
19. Brookmeyer KA, Coor AM, Kachur RE, et al. Sexual history taking in clinical settings: A narrative review. *Sex Transm Dis* 2021; 48(6):393–402. [PubMed: 33093285]
20. Chelvakumar G, Ford N, Kapa HM, et al. Healthcare barriers and utilization among adolescent and young adults accessing services for homeless and runaway youth. *J Community Health* 2017; 42: 437–443. [PubMed: 27817043]
21. Morris M, Kurth A, Hamilton DT et al. Concurrent partnerships and HIV prevalence disparities by race: Linking science and public health practice. *Am J Public Health*, 99(6): 1023–1031.
22. Millett GA, Flores SA, et al. Explaining disparities in HIV infection among black and white men who have sex with men: a meta-analysis of HIV risk behaviors. *AIDS* 2007; 21: 2083–2091. [PubMed: 17885299]
23. Hamilton DT, Morris M. The racial disparities in STI and the US: Concurrency, STI prevalence and heterogeneity in partner selection. *Epidemics* 2015; 11: 56–61. [PubMed: 25979282]
24. Szucs LE, Lowry R, Fasula AM, et al. Condom and contraceptive use among sexually active high school students — Youth Risk Behavior Survey, United States, 2019. *MMWR Suppl* 2020;69(Suppl-1):11–18. [PubMed: 32817600]

Table 1. Prevalence of selected demographic and behavioral characteristics by race/Hispanic ethnicity among sexually experienced females aged 14–24 years

	Total	NH Black	Hispanic	NH Other	NH White
	Unweighted N Weighted %, 95% CI				
Total	1669	452 14.5, 11.2–17.8	491 21.1, 17.8–24.5	206 8.5, 6.7–10.3	520 55.8, 51.1–60.7
Age group, in years					
14–19	822 34.8, 31.3–38.3	226 36.4, 31.5–41.2	273 38.1, 32.9–43.2	98 36.5, 27.9–45.0	225 33.0, 27.9–38.1
20–24	847 65.1, 61.7–68.6	226 63.6, 58.8–68.4	218 61.9, 56.8–67.0	108 63.5, 55.0–72.0	295 67.0, 61.9–72.1
Health insurance coverage					
Covered	1321 81.8, 79.3–84.4	369 79.8, 75.8–83.8	341 71.1, 66.4–75.8	168 82.3, 75.0–89.6	443 86.3, 82.8–89.7
Not covered	341 18.1, 15.6–20.7	81 20.1, 16.1–24.3	146 28.9, 24.2–33.6	38 17.7, 10.4–25.0	76 13.6, 10.2–17.2
Number of sex partners in past year					
0/1	1164 69.3, 66.8–71.9	279 62.2, 57.9–66.5	386 77.9, 73.6–82.3	151 73.1, 64.8–81.5	348 67.4, 63.8–70.9
≥2	504 30.6, 28.1–33.1	172 37.7, 33.4–42.0	105 22.0, 17.7–26.4	55 26.8, 18.5–35.2	172 32.6, 29.1–36.2
Sex without condom in past year					
Yes	1111 78.9, 75.6–82.0	301 77.3, 72.4–82.4	322 79.2, 74.4–83.9	124 81.9, 74.4–89.6	364 78.8, 73.8–83.6
No	346 21.1, 17.9–24.2	94 22.6, 17.6–27.6	105 20.8, 16.1–25.5	44 18.0, 10.3–24.7	103 21.2, 16.3–26.2

Acronyms: NH=Non-Hispanic; CI=confidence interval.

Note: For each covariate category, the percentage for each racial/ethnic group was compared to the average of the other races/ethnicities (e.g., NH Black vs. Hispanic, NH Other, and NH White). **Bold** font indicates the p-value from Rao-Scott χ^2 test was <0.05.

Source: National Health and Nutrition Examination Survey, 2011–March 2020

Table 2.

Chlamydia prevalence by race/Hispanic ethnicity and other characteristics among sexually experienced females aged 14–24 years

	Total	NH Black	Hispanic	NH Other	NH White
Unweighted N Weighted Prevalence 95% CI					
Total	1652 5.8 4.5–7.3	445 11.7 8.7–15.2	487 6.7 4.4–9.7	206 10.3 3.5–21.9 [†]	514 3.2 1.7–5.5
Age group, in years					
14–19	812 7.8 4.8–11.9	220 13.7 9.0–19.7	270 5.4 3.0–8.8	98 15.3 1.5–47.6 [†]	224 6.0 2.4–12.0 [†]
20–24	840 4.7 3.3–6.4	225 10.5 6.3–16.2	217 7.5 4.2–12.2	108 7.4 1.9–18.2 [†]	290 1.9 0.6–4.4[†]
Health insurance coverage					
Covered	1305 5.6 4.1–7.5	362 10.5 7.4–14.3	337 6.0 3.4–9.7	168 12.2 4.2–25.8 [†]	438 3.4 1.6–6.2[†]
Not covered	340 6.5 4.1–9.7	81 16.2 8.1–27.7	146 8.1 3.9–14.6 [†]	38 1.4 0.0–11.8 [†]	75 2.4 0.2–8.9[†]
Number of sex partners in past year					
0/1	1150 5.0 3.4–7.0	273 8.9 5.1–14.4	383 5.9 3.5–9.1	151 1.6 0.0–9.4[†]	343 2.3 0.7–5.4[†]
≥2	501 7.5 4.8–11.1	171 16.1 10.9–22.5	104 9.6 4.6–17.0	55 13.4 4.6–28.2[†]	171 5.2 1.9–10.8[†]
Condomless sex in past year					
Yes	1102 6.1 4.5–8.0	298 12.5 8.9–17.4	320 7.6 4.6–11.5	124 12.7 3.7–29.6 [†]	360 2.9 1.4–5.4 [†]
No	342 6.4 2.6–12.9 [†]	92 13.6 6.7–23.6	104 5.0 1.2–13.3 [†]	44 5.8 0.2–26.1 [†]	102 5.1 0.4–14.9 [†]

Acronyms: NH=Non-Hispanic; CI=confidence interval.

Note: For each covariate category, the percentage for each racial/ethnic group was compared to the average of the other races/ethnic groups (e.g., NH Black vs. Hispanic, NH Other, and NH White). **Bold** font indicates the p-value from Rao-Scott χ^2 test was <0.05.

[†] Estimates do not meet the NCHS Data Presentation Standards for Proportions and must be interpreted with caution.

Source: National Health and Nutrition Examination Survey, 2011–March 2020

Table 3: Unadjusted and adjusted PRs for chlamydia prevalence by race/Hispanic ethnicity among sexually experienced females aged 14–24 years

	NH Black		Hispanic		NH Other		NH White	
	PR 95% CI	APR 95% CI	PR 95% CI	APR 95% CI	PR 95% CI	APR 95% CI	PR 95% CI	APR 95% CI
Overall	2.4, 1.6–3.6	2.5, 1.6–3.8	1.2, 0.7–2.0	1.2, 0.7–2.0	1.9, 0.8–4.7	2.0, 0.9–4.8	0.4, 0.2–0.7	0.3, 0.2–0.6
Age group, in years								
14–19	2.0, 1.0–3.9	2.0, 1.0–3.9	0.6, 0.3–1.3	0.5, 0.3–1.2	2.2, 0.5–8.9	2.3, 0.6–9.3	0.6, 0.3–1.4	0.6, 0.3–1.4
20–24	2.8, 1.5–5.4	2.9, 1.6–5.5	1.9, 1.0–3.5	2.0, 1.1–3.7	1.7, 0.5–5.1	1.8, 0.6–5.5	0.2, 0.0–0.6	0.2, 0.1–0.5
Health insurance coverage								
Covered	2.2, 1.3–3.6	2.2, 1.3–3.5	1.1, 0.6–2.0	1.0, 0.6–1.9	2.4, 1.0–6.2	2.5, 1.1–5.9	0.4, 0.2–0.8	0.4, 0.2–0.8
Not covered	3.5, 1.6–7.6	3.4, 1.5–8.0	1.4, 0.6–3.4	2.0, 0.8–4.8	0.2, 0.0–1.6	0.2, 0.0–1.7	0.3, 0.1–1.0	0.1, 0.0–0.6
Number of sex partners in last year								
0/1	2.0, 1.1–3.9	2.0, 1.0–4.0	1.2, 0.7–2.3	1.2, 0.6–2.3	0.2, 0.0–0.9	0.1, 0.0–0.9	0.3, 0.1–0.7	0.3, 0.1–0.7
≥2	2.9, 1.6–5.0	3.0, 1.7–5.3	1.3, 0.6–3.0	1.2, 0.5–2.5	3.2, 1.2–8.3	3.4, 1.4–8.1	0.5, 0.2–1.0	0.5, 0.2–1.1
Condomless sex in last year								
Yes	2.5, 1.5–4.0	2.4, 1.5–3.9	1.3, 0.8–2.3	1.3, 0.7–2.4	2.3, 0.9–6.2	2.4, 0.9–6.2	0.3, 0.1–0.6	0.3, 0.1–0.6
No	2.6, 0.9–8.0	2.8, 1.0–8.3	0.7, 0.2–2.8	0.8, 0.2–3.0	0.9, 0.2–3.8	0.8, 0.2–3.5	0.6, 0.1–2.9	0.6, 0.1–2.6

Acronyms: NH=Non-Hispanic; CI=confidence interval; PR=prevalence ratio; APR=adjusted prevalence ratio.

Note: For each covariate category, CT prevalences for each racial/ethnic group were compared to the average prevalence of the other races/ethnic groups to estimate the prevalence ratio (e.g., NH Black vs. Hispanic, NH Other, and NH White). **Bold** font indicates statistical significance (e.g., the 95% CI does not contain 1). Multivariable models were adjusted for all covariates.

Source: National Health and Nutrition Examination Survey, 2011–March 2020