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Variation in Patterns of Racial and Ethnic Disparities in Primary and Secondary Syphilis Diagnosis Rates Among Heterosexually Active Women by Region and Age Group in the United States

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Background: Syphilis rates have increased substantially over the past decade. Women are an important population because of negative sequelae and adverse maternal outcomes including congenital syphilis. We assessed whether racial and ethnic disparities in primary and secondary (P&S) syphilis among heterosexually active women differ by region and age group.

Methods: We synthesized 4 national surveys to estimate numbers of heterosexually active women in the United States from 2014 to 2018 by region, race and ethnicity, and age group (18–24, 25–29, 30–44, and ≥45 years). We calculated annual P&S syphilis diagnosis rates, assessing disparities with rate differences and rate ratios comparing White, Hispanic, and Black heterosexually active women.

Results: Nationally, annual rates were 6.42 and 2.20 times as high among Black and Hispanic than among White heterosexually active women (10.99, 3.77, and 1.71 per 100,000, respectively). Younger women experienced a disproportionate burden of P&S syphilis and the highest disparities. Regionally, the Northeast had the highest Black-White and Hispanic-White disparities using a relative disparity measure (relative rate), and the West had the highest disparities using an absolute disparity measure (rate difference).

Conclusions: To meet the racial and ethnic disparity goals of the Sexually Transmitted Infections National Strategic Plan, tailored local interventions that address the social and structural factors associated with disparities are needed for different age groups.

Although men who have sex with men have the highest rates of primary and secondary (P&S) syphilis,¹ women are an important population because of the negative sequelae of syphilitic infection and the risk of adverse maternal outcomes including congenital syphilis. Women with untreated syphilis have higher rates of adverse maternal outcomes, including 21%, 9%, and 6% percentage point higher probabilities of stillbirth or fetal loss, neonatal death, and prematurity or low birth weight.^{2,3} From 2015 to 2019, rates of diagnosed P&S syphilis among women and congenital syphilis have increased by 179% and 291%, with higher rates among non-Hispanic Black women, among younger populations, and in the West.¹ These disparities are highlighted in the 2021–2025 Sexually Transmitted Infections (STI) National Strategic Plan, which includes goals of reducing STI-related disparities.⁴

Variations in P&S syphilis by US region, age group, and race and ethnicity are well documented.¹ Prior work has examined age disparities stratified by race and sex⁵; the distribution of cases across states, race and ethnicity, and age groups⁶; and relationships between incidence and socioeconomic factors.⁷ National estimates of US incidence, prevalence, and direct medical costs of P&S syphilis were recently updated.^{8–10} However, there is limited information on variation in racial and ethnic disparities by both age group and region. Furthermore, P&S syphilis rate calculations typically include all women in denominators, whereas limiting denominators

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Acknowledgments: The authors sincerely thank Nanette Benbow, Mary Ann Chiasson, Melanie Thompson, and Ronald Valdiserri from their research advisory group and Travis O'Donnell (New York State Department of Health) for their helpful feedback on an early draft. Andrés Berruti (Centers for Disease Control and Prevention) provided suggestions on the analysis, and John Angles (University at Albany) conducted a quality assurance check on the code.

Conflict of Interest and Sources of Funding: The authors have no conflicts of interest to disclose. This work was supported by Centers for Disease

Control and Prevention/National Center for HIV, Viral Hepatitis, STD, and TB Prevention Epidemiological and Economic Modeling Agreement (No. 5U38PS004650). The findings and conclusions are solely the responsibility of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

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Received for publication November 21, 2021, and accepted January 21, 2022. Supplemental digital content is available for this article. Direct URL citations appear in the printed text, and links to the digital files are provided in the HTML text of this article on the journal's Web site (<http://www.stdjournal.com>).

DOI: 10.1097/OLQ.0000000000001607

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to heterosexually active women can provide a clearer picture of disparities if sexual activity levels differ by subgroup. A comprehensive and nuanced understanding of disparities in P&S syphilis rates among heterosexually active women by both region and age group, using refined population denominators, can inform local public health prevention strategies.

We used P&S syphilis diagnosis data to report relative and absolute measures of Black-White and Hispanic-White disparities among heterosexually active women in the United States by age group and region. Our analysis provides new information on how racial and ethnic syphilis diagnosis disparities differ by age and whether these patterns are consistent regionally. In addition, we synthesized several household surveys through meta-analysis to develop updated denominators of estimated heterosexually active women by stratum (age group, region, and race and ethnicity) to provide more refined rates. Although all syphilis stages are important, we focused on P&S syphilis because it is the most infectious stage and a comprehensive understanding of women who are most recently infected can most effectively inform prevention planning and programming.

MATERIALS AND METHODS

Population and Data Sources

Our study population was heterosexually active women 18 years or older in the 50 US states and District of Columbia in 2014 to 2018, the most recent years with complete data. We included all P&S syphilis cases among women reported to the Centers for Disease Control and Prevention (CDC), assuming that nearly all infections would be through heterosexual contact. We were unable to distinguish transgender and cisgender women because nationally reported diagnosis data are only recorded as male versus female sex, without gender identity. For the denominator (heterosexually active women), we defined current heterosexual activity as self-reported sex with men exclusively or else with both men and women in the past year.

We used counts of diagnoses within strata of state, age group, race and ethnicity, sex, and year, based on jurisdictional reports to the CDC. Because of the small numbers of diagnoses in some strata, we aggregated counts data from 2014 to 2018 and to the 4 Census regions. We aggregated the data into 16 strata (ages 18–24, 25–29, 30–44, and ≥45 years; and Northeast, Midwest, South, and West regions). We selected those age groupings to reflect (1) important epidemiologic trends, with the highest rates among young adult women in their 20s,¹ and (2) CDC recommendations to screen pregnant women for syphilis, all sexually active women younger than 25 years for chlamydia and gonorrhea, and sexually active women 25 years or older for chlamydia and gonorrhea if they are at increased risk.¹¹ Although the syphilis screening recommendations do not distinguish age groups, we separated ages 18–24 and 25–29 years because screening for chlamydia and gonorrhea may influence syphilis screening. We distinguished women 45 years or older because most live births are among women younger than 45 years,¹² and consequently, there would be a lower rate of screening associated with pregnancy. Our analysis was limited to women with reported race and ethnicity of non-Hispanic White, non-Hispanic Black, and Hispanic (hereafter, White, Black, and Hispanic). The P&S syphilis diagnosis data include categories of multiple races, American Indian or Alaska Native, Asian, and Native Hawaiian or other Pacific Islander. We focused on White, Black, and Hispanic women because 9.1% of P&S diagnoses were in all other categories combined and the small number of diagnoses in these population groups resulted in unreliable disparity measures.

We estimated the denominators of heterosexually active women using 4 national surveys: National Health and Nutrition Examination Survey (pooled 2013–2014 and 2015–2016 waves), National Survey of Family Growth (2015–2017 wave), General Social Survey (GSS; pooled annual surveys in 2014, 2016, and 2018), and American Community Survey (5-year estimates from 2014 to 2018).

Statistical Methods

To estimate heterosexually active women by region and age group, we adapted the methodology from past work to estimate populations of heterosexually active men and women by state (see Appendix, <http://links.lww.com/OLQ/A797>, for an analysis flowchart).¹³ First, for each survey (National Health and Nutrition Examination Survey, National Survey of Family Growth, and GSS), we ran logistic regressions of past-year heterosexual activity among adults aged 18 to 44 years with the following independent variables: sex, age group (ages 18–24, 25–29, and 30–44 years), race and ethnicity (White, Black, Hispanic, and all other races combined), education category (high school and lower, some college, and college graduate and above), and marital status (never married; married; and widowed, separated, or divorced). We estimated a fourth logistic regression for adults 45 years or older in GSS, the only survey containing sexual activity questions for older adults. Second, we used meta-analysis to synthesize the 3 survey-based predicted probabilities of recent heterosexual activity among women aged 18 to 44 years by stratum (age group, race and ethnicity, education category, and marital status). Third, we applied the predicted probabilities of heterosexual activity among women by strata to the estimated number of women in the 50 states and District of Columbia to estimate the number of heterosexually active women by state, age group, and race and ethnicity.

To create P&S syphilis rates, we aggregated the number of heterosexually active women to the 16 strata (4 regions and 4 age groups [18–24, 25–29, 30–44, and ≥45 years]) and overlaid P&S syphilis diagnoses from 2014 to 2018 by stratum. We created average annual rates by multiplying the denominators by 5. We used a 5-year average because the small number of cases reported to the CDC at the detailed stratification by sex, race and ethnicity category, age group, and region yielded unreliable estimates for some strata when using annual data. Although the denominators of heterosexually active women are model-based estimates with confidence intervals, we do not report confidence intervals for the reported diagnosis rates because the standard errors for the denominators were small and the number of reported diagnoses represents all reported diagnoses.

Following best practices for reporting disparities,¹⁴ we calculated both a relative and absolute disparity measure (relative rate ratio [RR] and absolute rate difference [RD]). We present our calculated rates of P&S syphilis among White, Black, and Hispanic heterosexually active women for the 4 age groups nationally and by region. Using White heterosexually active women as our reference group, we report RDs and RRs for Black and Hispanic heterosexually active women.

To contextualize disparities in P&S syphilis rates among heterosexually active women as they relate to congenital syphilis, we compared the racial and ethnic distribution (White, Black, and Hispanic) for (1) heterosexually active women aged 18 to 44 years, (2) live births among women aged 18 to 44 years, (3) P&S syphilis among women aged 18 to 44 years, and (4) congenital syphilis among all live births. We restricted to women younger than 45 years for consistency with our study population and P&S syphilis data presentations and only 0.23% of live births are among women 45 years or older.¹² Congenital syphilis diagnoses were from the

TABLE 1. Average Annual Rates of Primary and Secondary Syphilis Diagnoses Among Heterosexually Active Women, by Region, Age Group, and Race and Ethnicity in the United States, 2014 to 2018

Age Group, y	Non-Hispanic White		Non-Hispanic Black		Hispanic		
	Rate Per 100,000	Rate Per 100,000	Absolute Rate Difference*	Relative Rate Ratio*	Rate Per 100,000	Absolute Rate Difference*	Relative Rate Ratio*
United States							
18–24	3.69	28.48	24.79	7.72	5.67	1.98	1.54
25–29	4.13	21.85	17.72	5.29	6.77	2.64	1.64
30–44	2.59	9.38	6.79	3.62	3.82	1.23	1.47
45+	0.49	2.54	2.05	5.18	1.37	0.88	2.80
All women	1.71	10.99	9.28	6.42	3.77	2.06	2.20
Northeast							
18–24	1.66	14.44	12.78	8.70	3.88	2.22	2.34
25–29	1.37	13.79	12.42	10.07	4.06	2.69	2.96
30–44	0.66	4.95	4.29	7.50	2.66	2.00	4.03
45+	0.22	0.93	0.71	4.23	0.65	0.43	2.95
All women	0.58	5.75	5.16	9.83	2.42	1.83	4.13
Midwest							
18–24	2.40	19.64	17.24	8.18	2.66	0.26	1.11
25–29	2.54	18.99	16.45	7.48	2.47	-0.07	0.97
30–44	1.44	9.50	8.06	6.60	1.68	0.24	1.17
45+	0.27	2.82	2.55	10.44	0.46	0.19	1.70
All women	1.03	9.68	8.66	9.43	1.65	0.63	1.61
South							
18–24	4.34	32.64	28.30	7.52	4.98	0.64	1.15
25–29	4.30	24.22	19.92	5.63	5.59	1.29	1.30
30–44	2.68	9.52	6.84	3.55	2.13	-0.55	0.79
45+	0.44	2.55	2.11	5.80	0.90	0.46	2.05
All women	1.80	12.00	10.20	6.68	2.66	0.87	1.48
West							
18–24	6.49	37.61	31.12	5.80	7.50	1.01	1.16
25–29	8.16	25.15	16.99	3.08	9.39	1.23	1.15
30–44	5.65	16.52	10.87	2.92	6.44	0.79	1.14
45+	1.15	5.13	3.98	4.46	2.28	1.13	1.98
All women	3.55	16.07	12.52	4.52	5.74	2.19	1.62

*Reference group: non-Hispanic White.

2018 surveillance report, which included a table of annual reported cases from 2014 to 2018.¹⁵ We summed the congenital syphilis cases across the 5 years for consistency with our study

time period for P&S syphilis diagnoses. The congenital syphilis diagnoses are for all live births because maternal age was not available. The number of live births was from the Annie E. Casey

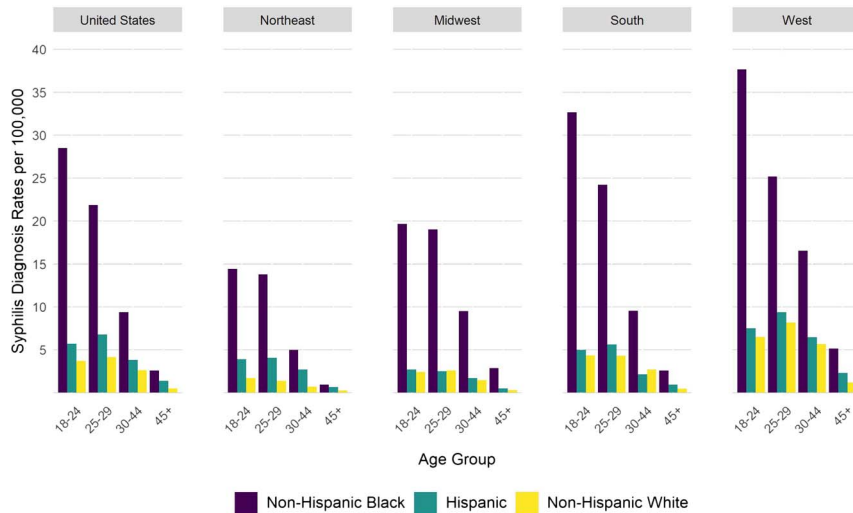


Figure 1. Average annual rates of P&S syphilis diagnoses per 100,000 heterosexually active women by US region, age group, and race and ethnicity, 2014 to 2018. The 5 sets of clustered bar charts display the annual syphilis diagnosis rates by age group (18–24, 25–29, 30–44, and ≥45 years) and by race and ethnicity, for the United States and the 4 regions.

Foundation's aggregation of births by race and year, based on the final birth data from the National Center for Health Statistics; we aggregated counts from 2014 to 2018 for consistency with other measures.¹⁶

RESULTS

Table 1 displays the average annual rates, RDs, and RRs of P&S syphilis diagnoses among White, Black, and Hispanic heterosexually active women from 2014 to 2018 nationally and by stratum (Northeast, Midwest, South, and West regions; and 18–24, 25–29, 30–44, and ≥45 years). The estimated denominators of heterosexually active women by region and age group are shown in Appendix (<http://links.lww.com/OLQ/A797>). To facilitate interpretation of the differences by region and age group, Figure 1 displays the average annual rates by stratum and Figure 2 displays the RD (top panel) and RR (bottom panel).

Nationally, among all women included in our study population (White, Black, and Hispanic women), annual rates of P&S syphilis diagnoses were highest among women younger than 30 years and the lowest rates were among women aged 45 years or older. Among White and Hispanic heterosexually active women, the highest rates were among women aged 25 to 29 years (4.13 and 6.77 per 100,000, respectively). Among Black women, the highest rates were among young women aged 18 to 24 years (28.48 per 100,000). Compared with White women, absolute and relative disparities were higher among Black women (all adults: RD, 9.28; RR, 6.42) than among Hispanic women (all adults: RD, 2.06; RR, 2.20).

Nationally, disparities differed by age. Among Black women, the RD declined by age group from 24.79 (women aged 18–24 years) to 2.05 (women aged ≥45 years). For the relative measure comparing Black to White women, the RR was highest among heterosexually active women aged 18 to 24 years (RR, 7.72) and lowest among heterosexually active women aged 30 to 44 years (RR,

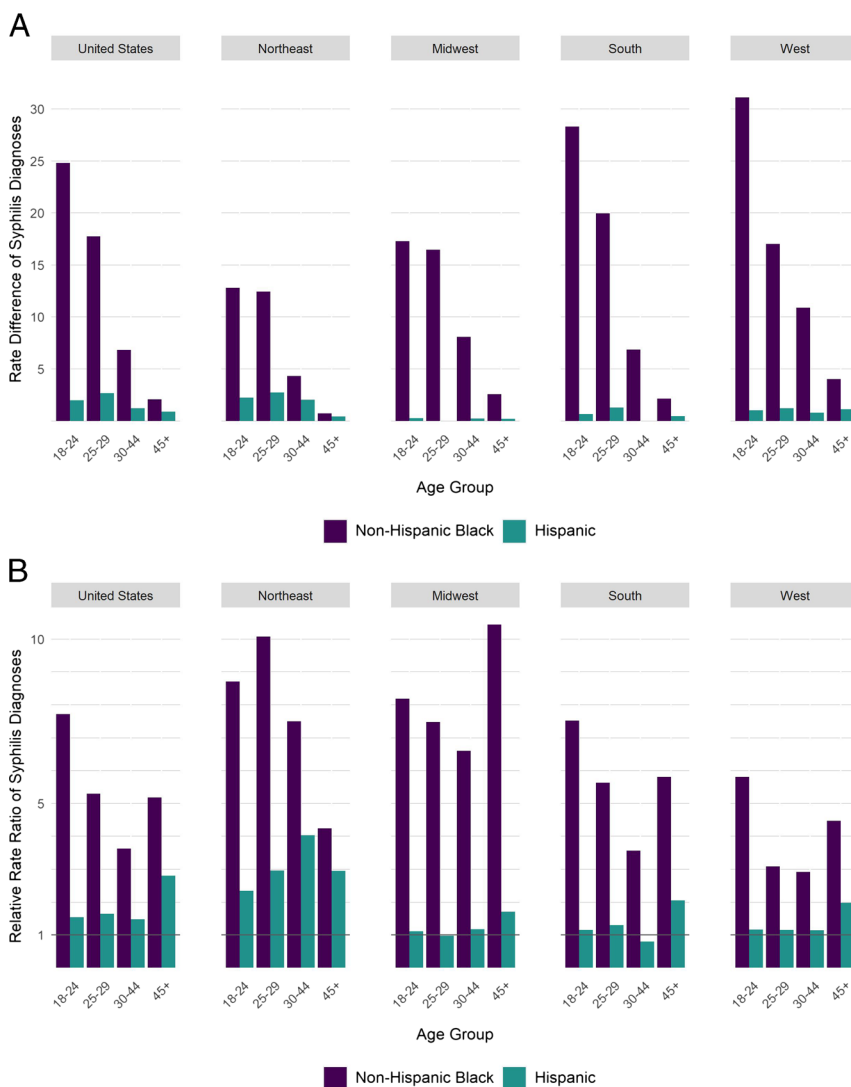


Figure 2. Absolute and relative disparities in the average annual rates of P&S syphilis diagnoses per 100,000 heterosexually active Black and Hispanic women, relative to White women, by US region and age group, 2014 to 2018. The top panel presents rate differences as an absolute disparity measure, and the bottom panel presents rate ratios as a relative disparity measure. In the top panel, a value of zero indicates no disparity, and the bottom panel has a horizontal line for 1.0, which indicates no disparity. The reference group is non-Hispanic White women.

3.62); the slight increase in the RR measure among women 45 years or older (RR, 5.18) is likely an artifact of their diagnosis rates being much lower. There were no clear age patterns in absolute or relative disparity measures comparing Hispanic with White heterosexually active women.

Annual rates of P&S syphilis diagnoses varied regionally. For all 3 race and ethnicity groups, the highest rates were in the West (3.55, 16.07, and 5.74 per 100,000 for White, Black, and Hispanic heterosexually active women, respectively). For White and Black women, the lowest rates were in the Northeast (0.58 and 5.75 per 100,000, respectively). This regional pattern differed for Hispanic women, for whom the rates were lowest in the Midwest (1.65 per 100,000).

For both Black and Hispanic women (all age groups combined), disparities were highest in the West using the absolute disparity measure (RD for Black and Hispanic women compared with White women, 12.52 and 2.19). However, the disparities were highest in the Northeast when using the relative measure (RR for Black and Hispanic women, 9.83 and 4.13). Among Black women, the absolute disparities followed a similar age-related pattern with the highest disparities among younger women. However, the absolute disparities among younger women were particularly pronounced in the South and West (RD among women aged 18 to 24 years in the West and South, 31.12 and 28.30, compared with an RD of 12.78 in the Northeast). Consistent with national results, there were no clear patterns in disparity measures stratified by age group across regions.

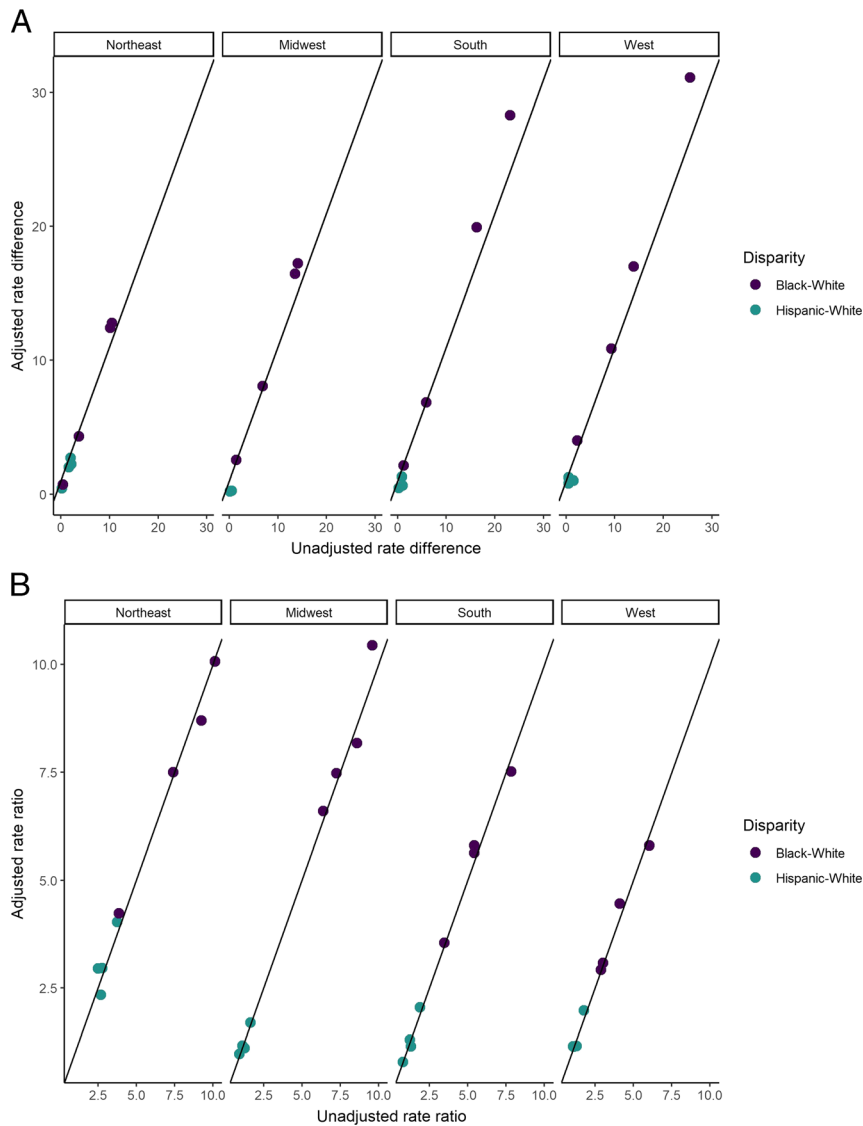


Figure 3. Comparison of unadjusted and adjusted Black-White and Hispanic-White absolute and relative disparity measures by age group and region. The top panel compares the adjusted versus unadjusted absolute disparities (rate differences), and the bottom panel compares the adjusted versus unadjusted relative disparities (rate ratios). The dots represent the observations of disparity measures for each stratum of race and ethnicity (non-Hispanic Black vs. non-Hispanic White and Hispanic vs. non-Hispanic White), age group (18–24, 25–29, 30–44, and 45+ years), and 4-level region. In each plot, the line has a slope of 1. For the rate ratios (bottom panel), the observations are clustered on the line signaling no meaningful difference between denominators; however, there are deviations in the rate difference comparison (top panel), indicating that the Black-White absolute disparities are higher when using the adjusted denominators.

Comparing Hispanic with White women, there were 2 age-region strata with reverse disparities: women aged 25 to 29 years in the Midwest (RD, -0.07 ; RR, 0.97) and women aged 30 to 44 years in the South (RD, -0.55 ; RR, 0.79).

Figure 3 compares the disparity measures using the adjusted rates (y axis) versus unadjusted rates (x axis). These are stratified by region, and dots represent observations for the stratum of race and ethnicity, age group, and region. If the adjusted and unadjusted measures were similar, the observations would be close to the line (slope, 1). The adjusted diagnosis rates are slightly higher than unadjusted rates because the adjusted denominators are smaller (not shown). In the comparison of the absolute disparity measure (RD, top panel), the Hispanic-White RDs are close to the line indicating that differences between Hispanic-White disparities using the adjusted versus unadjusted denominators are not meaningful. However, the adjusted RDs for the Black-White disparities are consistently higher than the unadjusted RDs, and the largest deviations are for RDs with the highest magnitude. In the comparison of the relative disparity measure (RR, bottom panel), both Hispanic-White RRs and Black-White RRs are close to the line, signaling that the adjusted denominators do not yield meaningful differences in observed relative disparities.

Figure 4 presents further context for racial and ethnic disparities in P&S syphilis among women. Although White women comprised 62.1% of heterosexually active women aged 18 to 44 years, 34.7% of P&S syphilis diagnoses were among women aged 18 to 44 years and 23.7% of pregnancies that resulted in congenital syphilis diagnoses were among White persons. In contrast, Black women comprised 15.3% of heterosexually active women aged 18 to 44 years, but 45.7% of P&S syphilis diagnoses and 42.3% of congenital syphilis diagnoses were among Black newborns. Hispanic women comprised 22.6% of heterosexually active women, but 34.1% of congenital syphilis diagnoses were among Hispanic newborns.

DISCUSSION

We used a meta-analysis of several household surveys to estimate denominators of heterosexually active women to calculate P&S syphilis diagnosis rates and Black-White and Hispanic-White disparities among heterosexually active women in the

United States. To our knowledge, this is the first such analysis with a 3-level stratification of race and ethnicity, age group, and region. We found that nationally, syphilis diagnosis rates were 6.42 and 2.20 times higher among Black and Hispanic heterosexually active women compared with White heterosexually active women. The highest diagnosis rates and disparities were among women aged 18 to 24 and 25 to 29 years. The Northeast had the highest Black-White and Hispanic-White disparities using a relative disparity measure (RR), and the West had the highest disparities using an absolute disparity measure (RD). Black-White disparities among younger women were particularly pronounced in the South and West. Findings differed between absolute and relative disparity measures because the West and Northeast had the highest and lowest diagnosis rates, respectively; consequently, the largest absolute difference was in the West because rates were higher. Inconsistencies across disparity measures have been found elsewhere¹⁴ and reflect their different approaches to measuring inequities: absolute disparity measures demonstrate where interventions would be most impactful (i.e., numbers of cases averted from an intervention), and relative disparity measures highlight which populations are most impacted.

Black-White disparities are attributable to multiple social and contextual factors. Persistent racism against Black women in healthcare and medical research have adversely affected maternal and sexual health outcomes.¹⁷ Numerous social and structural factors associated with disparities in HIV risk, also relevant to STI acquisition, include poverty, unstable housing, and incarceration; low socioeconomic status and educational attainment; low access to quality HIV prevention and care; and racial discrimination.¹⁸ Black young adults had higher odds of STI/HIV infection than White young adults for most behavioral risk profiles during adolescence, suggesting that Black young adults have an increased risk of STIs irrespective of individual behaviors because of broader social and contextual factors.¹⁹ Sexual network characteristics may increase STI transmission among Black versus White populations; differences include more frequent sexual contacts with “core” persons in sexual networks with many partners, higher racial segregation of sexual networks among Black populations, younger age at sexual debut, and low ratios of men to women, which affect partner

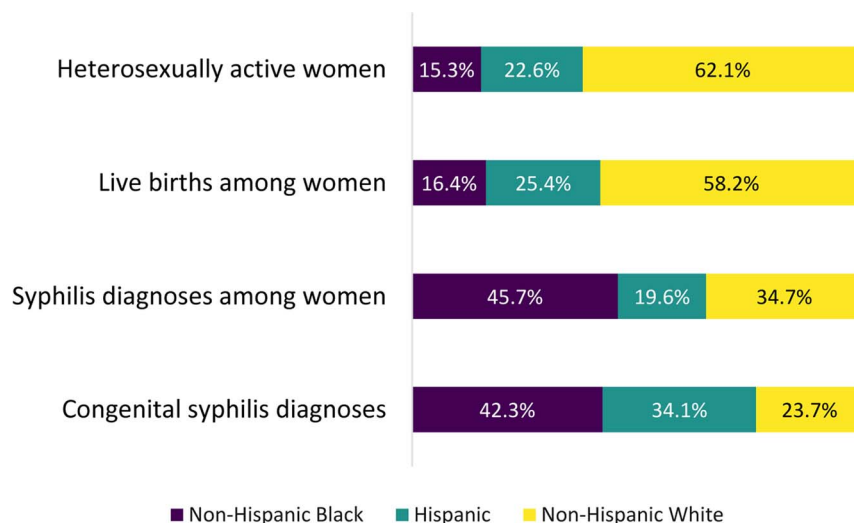


Figure 4. Comparison of the racial and ethnic distribution of heterosexually active women, live births, P&S syphilis, and congenital syphilis in the United States, 2014 to 2018. For consistency with the main analysis, races and ethnicities other than non-Hispanic White, non-Hispanic Black, and Hispanic are excluded. The population for heterosexually active women, P&S syphilis diagnoses, and live births includes women aged 18 to 44 years. The proportion of congenital syphilis cases in the 3 racial/ethnic groups is for all live births and not restricted to births among women aged 18 to 44 years because of data availability. Diagnoses of P&S, congenital syphilis cases, and live births are from 2014 to 2018.

selection, concurrent partnerships, high-risk sexual behaviors, and other factors related to STI transmission.²⁰

Hispanic-White disparities were notable but less pronounced than Black-White disparities, a difference that is also observed for HIV diagnoses.²¹ There are at least 2 potential explanations for larger Black-White than Hispanic-White disparities. First, Hispanic-White disparities vary by county²² and birth region (i.e., born in US mainland, Puerto Rico, or other countries of origin),²³ and our regional aggregation masks these differences. Second, screening rates may differ because of lower access to care among Hispanic populations²⁴ and Black women being more likely to be screened for STIs than Hispanic women.²⁵

There are several potential explanations for differential racial and ethnic disparities across age groups. First, larger disparities among younger populations have also been noted among men who have sex with men with respect to HIV incidence and prevalence, with complex and incompletely explained underlying causes.²⁶ Second, there might be a measurement effect of access to and receipt of screening, with young women likely screened more frequently because of national screening guidelines. A third hypothesis is that assortative sexual mixing may be more pronounced among younger populations, leading to increased racial disparities.

We found a disproportionate share of congenital syphilis cases among infants of Black and Hispanic persons, compared with the racial and ethnic distribution among heterosexually active women. A partial but insufficient explanation is the slightly elevated proportion of live births among Black and Hispanic women. A more comprehensive explanation is barriers to accessing prenatal care, inadequate treatment of syphilis during pregnancy, and late identification of seroconversion during pregnancy. A recent analysis of common missed prevention opportunities for congenital syphilis identified some variation across regions and demographic groups.²⁷ In the West, the most common missed prevention opportunities (no timely prenatal care and inadequate treatment despite receiving a timely diagnosis) were similar among Black, Hispanic, and White mothers. However, in the South, White mothers more commonly reported a lack of timely prenatal care, whereas Black and Hispanic mothers a lack of adequate maternal treatment.²⁷

Our findings have several practice implications. First, meeting the STI National Strategic Plan's fourth goal to improve health equity may require that interventions be tailored to age groups and regional contexts. Local health departments can use these data to inform resource planning and allocation, provide direct outreach to women at higher risk for syphilis, and implement screening initiatives within the most disproportionately affected populations. However, as noted by the National Academies of Sciences, Engineering, and Medicine, federal funding for these activities has remained flat (and declined in inflation-adjusted dollars), state and local STI programs are historically underresourced, and the COVID-19 pandemic has further strained the public health response to STIs.²⁸ These factors may constrain public health agencies' ability to enhance prevention services for women experiencing a higher risk for syphilis, initiate new initiatives addressing the underlying social and structural causes of disparities, and ensure their sustainability. Second, as previously noted by the CDC, more robust and complete surveillance data are needed.⁸ For example, sex of sex partner data are incomplete and gender identity data are unavailable. Third, regional differences under the relative versus absolute disparity measures highlight the importance of using multiple disparity measures.¹⁴ Furthermore, our finding that Black-White RDs were higher when using the adjusted denominators (heterosexually active women) compared with the unadjusted denominators (Census population) suggests that failure to use appropriate denominators may inadvertently bias absolute disparity measures, particularly for high-burden populations.

Our analysis has several limitations. First, aggregating to 4 regions and across 5 years masks possible temporal and local variation; however, estimates were unreliable at a more granular level because of the small number of diagnoses when stratifying by age group and region. Within regions, states likely have variable screening rates and numbers of diagnoses reported because of factors such as access to care and state laws related to screening pregnant women for syphilis.²⁹ Second, we were unable to examine other racial and ethnic groups, including persons of more than 1 race, because of the small numbers within certain strata. Although our 3-way stratification by sex, age group, and region is a strength, the small numbers in each strata made it impossible to explore conceptually important subpopulations such as the "eight Americas" studied by others.³⁰ Third, each survey used to estimate the population denominators has common limitations such as nonresponse bias and potential reporting bias. Because of data availability, the estimated number of heterosexually active women 45 years or older is only based on the GSS. In developing our population denominators, we assumed equivalent probabilities of heterosexual activity within each demographic strata across states. Using reported P&S diagnoses underrepresents true disease burden because syphilis cases may be diagnosed late after the P&S stage, never diagnosed, or not reported.⁹ Finally, we were unable to examine transgender women separately because of the lack of information on transgender versus cisgender identity.

The high racial and ethnic disparities in P&S syphilis across regions confirm the need for culturally responsive interventions to address the social and structural factors that contribute to health inequities. Interventions might include training medical providers to reduce racism in healthcare, housing and employment services for women who experience a high risk of syphilis, and improved access to quality STI prevention services. Addressing syphilis among women can reduce the risk of congenital syphilis, a tragic and preventable outcome of untreated syphilis during pregnancy. Tailored local interventions for different age groups can play an important role in achieving health equity.

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