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Original Contribution

Sexual Identity Differences in Access to and Satisfaction With Health Care: Findings From Nationally Representative Data

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Identification of barriers to adequate health care for sexual minority populations remains elusive given that they are complex and variable across sexual orientation subgroups (e.g., gay, lesbian, bisexual). To address these complexities, we used data from a US nationally representative sample of health-care consumers to assess sexual identity differences in health-care access and satisfaction. We conducted a secondary data analysis of 12 waves (2012–2018) of the biannual Consumer Survey of Health Care Access ($n = 30{,}548$) to assess sexual identity differences in 6 health-care access and 3 health-care satisfaction indicators. Despite parity in health insurance coverage, sexual minorities—with some variation across sexual minority subgroups and sex—reported more chronic health conditions alongside restricted health-care access and unmet health-care needs. Gay/lesbian women had the lowest prevalence of health-care utilization and higher prevalence rates of delaying needed health care and medical tests relative to heterosexual women. Gay/lesbian women and bisexual men were less likely than their heterosexual counterparts to be able to pay for needed health-care services. Sexual minorities also reported less satisfactory experiences with medical providers. Examining barriers to health care among sexual minorities is critical to eliminating health disparities that disproportionately burden this population.

health-care access; health-care disparities; health disparities; LGB; sexual minorities; sexual minority health

Abbreviations: CI, confidence interval; PR, adjusted prevalence ratio; SM, sexual minority.

There is irrefutable evidence that sexual minority (SM) people suffer disproportionately from mental, behavioral, and physical health conditions (e.g., mental health disorders, substance abuse, cardiovascular disease, cancer) (1–4), which result from unique and compounding stressors (e.g., stigma, discrimination) related to their minoritized sexual identities (5, 6). Restricted access to medical health services represents a critical barrier to health parity for SMs, and is an important contributor to health inequities. Large-scale examinations of barriers to adequate health care for SM people are in their nascence due to limitations in the collection of sexual orientation data in population-level data sets (7, 8).

Using population-based data to build understanding of barriers to medical care among SM people is crucial for the development and implementation of large-scale policy initiatives designed to address SM people's inequitable access to timely and quality health care. Furthermore, SM subgroup differences in these barriers to health services—that is, differences across sexual identity (e.g., gay, lesbian, bisexual, and other SMs) and according to sex (i.e., male, female)—have not been well-examined. These investigations add important perspective to who among SM people might be most impacted by barriers to care.

Research documenting sexual orientation differences in health-care access is growing and often focuses on insurance coverage, health-care utilization, and experiences when engaging in health-care services. For example, SM adults are less likely to report health insurance coverage and more likely to report unmet medical needs than their heterosexual peers (9–12). Compared with heterosexual adults, SM men and women are also less likely to engage in routine medical care (13–16). Studies often find that SMs often forego care due to, in part, affordability (16–18). SM adults, for example, report avoiding necessary care due to the cost (19), even when they have health insurance (20). The barrier to care

for SMs that is perhaps the most often studied is their lack of satisfaction with health-care services (21–23). Several studies highlight the degree to which SM people report negative experiences with doctors, nurses, and other medical staff (22–26). SMs often report that providers' deficits in cultural competence (e.g., assumptions about sexual behavior, provider discomfort) interfere and guide their health-services seeking behavior (17, 27, 28).

Given the recognition of SM health inequities, major US health organizations (e.g., National Institutes of Health, Substance Abuse and Mental Health Services Administration) have developed high-profile initiatives to elucidate the pathways through which sexual orientation–related health disparities emerge and are maintained (29, 30). However, given the slow uptake of sexual-orientation data collection in medical records, and a dearth of population-based data on this topic, there remain limited opportunities to systematically assess to what degree SM adults experience deficits in access of and satisfaction with medical care. At the same time, determining access to quality care is critical to evaluating the equity of current health policies and practices (31). We, therefore, used data from a US national population-based sample of health-care consumers to examine whether the prevalence of several chronic health conditions, factors related to health-care access (e.g., insurance coverage, delaying and forgoing care due to cost), and satisfaction (e.g., overall satisfaction, being mistreated due to sexual orientation) varied by sexual identity and, further, if these associations were modified by sex (male vs. female).

METHODS

Data source and sample

Data are from the Association of American Medical Colleges biannual Consumer Survey of Health Care Access, a survey conducted for the Association of American Medical Colleges by an external firm to capture a US national sample of respondents who reported needing health care in the previous 12 months. This firm offers access to 68 actively managed proprietary panels around the world and recruits members using various methods, including Web banners, website referrals, pay-per-click, natural search optimization, affiliate marketing, e-mail, and online public relations activities.

The Consumer Survey of Health Care Access collects data in 2 waves annually, with each wave enrolling 2,000–3,500 adults. Each sample is acquired using a panel of roughly 8 million adults that approximate the US adult population. The Consumer Survey of Health Care Access uses a stratified random sampling strategy to oversample on the basis of health insurance status and age during all waves, and additionally for rural, Medicaid-recipient, Black, Hispanic, and low-income populations in every other wave. Poststratification weights are calculated on the basis of sex, age, race and ethnicity, employment status, and household income and applied to better reflect the US adult population (32). In an effort to assess the representativeness of the Association of American Medical Colleges data compared with the US population, we tested differences in sociodemographic factors between the Association of American Medical Colleges biannual Consumer Survey of Health Care Access and the 2018 National Health Interview Survey. The results suggest that the data approximate the US population (see Web Table 1, available at https://doi.org/10.1093/aje/kwab012).

Adults were eligible if they indicated that they, or a health-care professional, believed they needed "medical care" in the past 12 months. The definition of "medical care" was not provided to participants and thus left to their own interpretation. Sexual identity measures were not collected until 2012 (wave 5); the sample, therefore, includes all participants from a total of 13 waves of data from 2012–2018 (n = 30,548). Reports of mistreatment due to sexual identity were not collected until 2013 (wave 7); therefore, all analyses using this measure reflect participants from 2013–2018 (11 waves; n = 28,463).

Measures

Sexual identity. Sexual identity was measured using the closed-ended question, "How do you self-identify?" (heterosexual or straight, gay or lesbian, bisexual, other).

Sex. Sex was measured using the question, "Are you male/female?" (male, female).

Chronic health conditions. Participants were asked "A chronic condition is an ongoing condition you have had for six or more months or is expected to last that long. Has a health professional told you that you currently have any of the following chronic conditions?" followed by a table to report on the presence (yes = 1; no = 0) of several chronic health conditions, including arthritis, high cholesterol, depression, diabetes, heart disease, hypertension, and respiratory disease. We also assessed the degree to which subgroups differed in having any of the listed chronic health conditions (yes =1, no = 0).

Health-care access. Access to services was assessed using 6 items. First, insurance coverage was assessed with a single item asking, "At any time during the last 12 months, were you ever without health insurance coverage?" (yes, no). This item was reverse coded to reflect consistent coverage over the past year (yes = 1, no = 0). Next, 2 items assessed delaying or forgoing care: "In the last 12 months, were you ever delayed in getting medical care you or a health care professional believed necessary?" (yes = 1, no = 0); and "Thinking about the times you needed medical care in the last 12 months, how often were you able to get it?" (always, sometimes, never). Due to low endorsement of "never" (<5%), responses to this item were collapsed to reflect always = 1, not always = 0. Three additional items assessed cost-related access to services. "In the last 12 months, was there any time when you did not fill a prescription for medicine because of the out-of-pocket cost?" (yes = 1, no = 0); "In the last 12 months, was there any time when you skipped a medical test, treatment or follow-up recommended by a doctor because of the out-of-pocket cost?" (yes = 1, no = 0); "In the last 12 months, were there times when you had

problems paying or were unable to pay for medical bills?" (yes = 1, no = 0).

Health-care satisfaction. Participants' satisfaction with health-care experiences was assessed using 3 items: "Would you recommend the provider who treated you during your most recent medical care visit to family and friends?" (yes = 1, no = 0); "During your most recent medical care visit, do you think any of the following influenced your healthcare provider to treat you unfairly?" with the option for participants to select sexual orientation (yes = 1, no = 0); and "All things considered, how satisfied are you with the health care you received during your most recent medical care visit?" (very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, very dissatisfied). Similarly, given the small proportions (<5%) of multiple responses to this final item, responses were collapsed to reflect satisfied = 1 (included very and somewhat satisfied), not satisfied = 0 (included all other values).

Covariates. Covariates included age (18–34, 35–44, 45–54, 55–64, ≥65 years), race/ethnicity (Asian/Native Hawaiian/Pacific Islander, Black, Hispanic, other, White), educational level (less than high school, high school, college, graduate degree), annual household income ($24,999 or less, $25,000 to $49,999, $50,000 to $74,999, $75,000 to $99,999, $100,000 or more), employment status (full-time, part-time, retired, student/homemaker, unemployed), marital status (single, married, widowed, divorced, separated), and region (Northeast, Midwest, West, South).

Analytical strategy

Missing data. Nonresponse for all variables was low, with a maximum of 7% missing for any variable and less than 2% missing for most variables. We used intrascale stochastic imputation to impute missing values within the health-care measures. Health-care access and satisfaction measures demonstrated sufficient internal consistency ($\alpha = 0.81$), which supports the validity of this imputation strategy. Missing socioeconomic covariates (highest educational level, income, full-time employment status) were imputed using these socioeconomic covariates, which also demonstrated sufficient internal consistency ($\alpha = 0.72$).

Bivariate analyses. We used χ^2 tests to examine whether all categorical variables, including sexual identity, sex, race/ethnicity, region, marital status, and employment, were associated with each health-care outcome (all binary). For all other ordinal covariates, we used a Cochran-Armitage test for trend to examine associations with each health-care outcome. Cross-tabulations with percentages of each health-care outcome across sexual identity, sex, and all covariates were reported. We also conducted post-hoc analyses examining associations between sexual identity and age, educational level, employment status, and income.

Regression analyses. For each health-care outcome, we constructed Poisson regression models to generate ratios reflecting the difference in the prevalence of each health-care outcome between each SM identity (lesbian, gay, bisexual, other) and the reference group (heterosexual). Poisson regression was used because it generates prevalence ratios when used with binary outcomes and allows for a more robust incorporation of confounders compared with log-binomial modeling (33). For each outcome, models with and without adjustments were generated. Model adjustments included terms for sex, age, race, educational level, household income, employment status, marital status, region, and survey wave. We also tested interactions between sexual identity and sex using interaction terms and, as a result, sex-stratified all models testing sexual identity differences in health-care access and satisfaction.

Quality assurance and statistical software. We tested collinearity by measuring the variance inflation factor (VIF) in all models; there was no evidence of collinearity (VIF < 5 for all). No influential outliers were identified using both leverages and Cook's distances. All analyses were conducted using SAS, version 9.4 (SAS Institute, Inc., Cary, North Carolina) (34).

RESULTS

Sample characteristics and results of the bivariate analyses are presented in Table 1. Gay/lesbian, bisexual, and other sexual-orientation–identifying participants made up 8.7% of the sample (Table 1). Sexual identity was statistically associated with every health-care outcome, with heterosexual participants reporting greater proportions of access to needed care (10%–20% greater), medical tests (5%–14% greater), and prescription drugs (4%–14% greater) compared with SM participants (all $P < 0.05$). "Other" sexual identity participants, and to a lesser extent bisexual participants, had consistently lower rates of access-related indicators relative to gay/lesbian participants across measures, except for health insurance coverage; gay/lesbian participants had the lowest proportions satisfied with their health care (8% lower than heterosexual participants).

Sexual identity and chronic health conditions

Proportions of chronic health conditions across sexual identity and sex are reported in Table 2. Compared with heterosexual women, gay/lesbian women had greater proportions of arthritis, high cholesterol, depression, diabetes, heart disease, respiratory disease, and any chronic health condition; bisexual and other SM women had greater prevalence of depression, heart disease, and any chronic illness. Compared with heterosexual men, gay men had greater likelihood of depression, heart disease, and any chronic health condition; bisexual men were more likely to report all chronic health conditions. Other SM, relative to heterosexual men, had greater probability of arthritis and any health condition.

Sexual identity and health-care access and satisfaction

Models with and without adjustment showed that sexual identity was statistically associated with all outcomes, except

Table 1. Proportions of Health-Care Indicators Across Sexual Identity, Demographics, and Other Covariates (n = 30,548), Association of American Medical Colleges Biannual Consumer Survey of Health Care Access, United States, 2012–2018

Sociodemographic Characteristic	Total % of Sample	% Responding "Yes"								
		Access Questions						Satisfaction Questions		
		Health Insurance (n = 27,402)	Able to Get Needed Care (n = 26,210)	Able to Not Delay Care (n = 21,720)	Able to Get Prescriptions (n = 20,650)	Able to Get Medical Tests (n = 20,528)	Able to Pay for Needed Care (n = 18,879)	Satisfied With Last Visit (n = 27,371)	Would Recommend Their Provider (n = 25,508)	Never Treated Unfairly Due to Sexual Orientation[a] (n = 24,934)
Overall		89.7	85.8	71.1	67.6	67.2	61.8	89.6	83.5	87.6
Sexual identity[b]										
Heterosexual	91.3	90.0[c]	86.8[c]	71.9[c]	68.4[c]	68.0[c]	62.8[c]	90.2[c]	84.2[c]	88.2[c]
Gay/lesbian	3.3	85.4[c]	76.9[c]	67.1[c]	64.6[c]	63.2[c]	56.8[c]	81.7[c]	76.1[c]	80.0[c]
Bisexual	4.2	88.1[c]	76.1[c]	60.2[c]	54.2[c]	54.1[c]	47.0[c]	85.4[c]	77.4[c]	82.9[c]
Other	1.2	85.4[c]	66.8[c]	55.4	59.2[c]	55.7	57.6[c]	81.5[c]	73.1[c]	81.9[c]
Sex[b]										
Female	52.2	89.0	84.9	74.4[c]	69.2[c]	67.9	61.8	88.5	82.4	91.6[c]
Male	47.8	90.5	86.8	67.5[c]	65.8[c]	66.4	61.9	90.8	84.7	83.1[c]
Age, years[d]										
18–34	29.4	85.4[c]	79.9[c]	58.4[c]	56.2[c]	53.9[c]	52.2[c]	86.0[c]	79.6[c]	80.7[c]
35–44	17.1	87.3[c]	81.3[c]	55.7[c]	52.5[c]	52.4[c]	48.6[c]	88.7[c]	84.0[c]	77.8[c]
45–54	17.5	87.2[c]	83.8[c]	72.5[c]	68.0[c]	67.3[c]	59.4[c]	88.3[c]	82.4[c]	91.1[c]
55–64	15.1	90.8[c]	88.8[c]	82.2[c]	78.4[c]	76.7[c]	68.5[c]	90.8[c]	84.4[c]	95.8[c]
≥65	20.8	99.2[c]	97.3[c]	92.4[c]	87.8[c]	91.0[c]	83.6[c]	95.7[c]	89.0[c]	97.0[c]
Race/ethnicity[b]										
Asian/Native Hawaiian/Pacific Islander	4.7	88.2	82.6[c]	71.0[c]	70.5[c]	67.0[c]	72.6[c]	82.8[c]	74.5[c]	86.0
Black	12.0	87.5	83.3[c]	70.5[c]	64.3[c]	65.0[c]	55.7[c]	89.4[c]	83.5[c]	88.0
Hispanic	15.4	87.3	80.2[c]	60.7[c]	58.8[c]	56.8[c]	55.4[c]	87.9[c]	81.2[c]	83.3
Other	3.4	85.6	74.6[c]	64.5[c]	63.3[c]	62.9[c]	56.1[c]	82.1[c]	73.0[c]	86.0
White	64.5	91.0	88.4[c]	74.0[c]	70.3[c]	70.3[c]	64.0[c]	90.9[c]	85.3[c]	88.8
Educational level[d]										
Less than high school	33.5	85.6[c]	82.9[c]	72.2	67.1	67.1	59.7	88.2	81.6[c]	88.2[c]
High school	33.6	90.0[c]	84.7[c]	72.8	67.9	67.8	60.2	88.8	82.9[c]	90.2[c]
College	20.6	93.0[c]	88.2[c]	70.8	68.8	67.2	65.6	91.2	85.1[c]	87.2[c]
Graduate degree	12.3	94.9[c]	92.5[c]	64.0	65.9	65.3	66.1	92.8	88.0[c]	79.8[c]

Table continues

Table 1. Continued

Sociodemographic Characteristic	Total % of Sample	% Responding "Yes"								
		Access Questions						Satisfaction Questions		
		Health Insurance (*n* = 27,402)	Able to Get Needed Care (*n* = 26,210)	Able to Not Delay Care (*n* = 21,720)	Able to Get Prescriptions (*n* = 20,650)	Able to Get Medical Tests (n = 20,528)	Able to Pay for Needed Care (*n* = 18,879)	Satisfied With Last Visit (n = 27,371)	Would Recommend Their Provider (*n* = 25,508)	Never Treated Unfairly Due to Sexual Orientation[a] (*n* = 24,934)
Employment[b]										
Full-time	42.4	90.9[c]	86.6[c]	63.0[c]	59.7[c]	58.4[c]	54.7[c]	90.4[c]	85.3[c]	80.8[c]
Part-time	16.0	85.5[c]	81.0[c]	69.2[c]	66.1[c]	63.8[c]	59.4[c]	88.2[c]	80.9[c]	87.7[c]
Retired	22.1	97.2[c]	94.9[c]	88.5[c]	83.5[c]	86.4[c]	78.0[c]	93.7[c]	86.9[c]	96.8[c]
Student/homemaker	11.0	84.9[c]	80.1[c]	71.3[c]	67.8[c]	66.1[c]	61.7[c]	84.9[c]	79.3[c]	91.7[c]
Unemployed	8.5	78.9[c]	74.1[c]	69.7[c]	67.8[c]	68.3[c]	60.1[c]	83.6[c]	76.1[c]	92.8[c]
Yearly household income, $[d]										
≤24,999 or less	20.9	83.8[c]	78.7[c]	71.9	68.2	69.0	59.5	85.8[c]	78.0[c]	91.9[c]
25,000–49,999	23.1	87.5[c]	83.3[c]	75.1	67.7	66.9	57.4	88.6[c]	83.3[c]	91.2[c]
50,000–74,999	19.5	91.3[c]	87.4[c]	76.4	71.0	69.7	64.4	89.6[c]	83.8[c]	90.6[c]
75,000–99,999	13.5	92.0[c]	88.8[c]	67.1	65.7	65.4	63.2	91.1[c]	84.5[c]	84.8[c]
≥100,000	23.0	94.7[c]	91.5[c]	64.1	64.9	64.6	65.5	93.2	87.9[c]	79.2[c]
Marital status[b]										
Single	26.7	85.7[c]	80.1[c]	66.3[c]	64.4[c]	62.0[c]	58.7[c]	85.6	78.4[c]	86.0[c]
Married	54.1	91.9[c]	88.4[c]	70.2[c]	66.8[c]	66.6[c]	61.8[c]	91.5	86.1[c]	85.7[c]
Widowed	5.3	93.6[c]	88.6[c]	84.7[c]	80.0[c]	81.5[c]	72.2[c]	91.2	86.7[c]	96.3[c]
Divorced	12.1	88.4[c]	85.9[c]	79.2[c]	72.3[c]	74.8[c]	64.7[c]	89.7	82.7[c]	94.6[c]
Separated	1.8	82.9[c]	81.1[c]	73.7[c]	68.0[c]	67.3[c]	59.2[c]	85.3	80.9[c]	96.3[c]
Region[b]										
Midwest	21.0	91.2[c]	87.3	75.0[c]	71.1	70.5	62.8[c]	89.7	83.6	90.8
Northeast	20.7	92.6[c]	89.0	71.0[c]	68.8	68.1	64.9[c]	91.2	85.5	86.5
South	36.3	86.2[c]	83.5	70.5[c]	64.8	64.2	57.8[c]	89.1	84.0	88.9
West	22.0	92.1[c]	85.5	64.6[c]	65.4	64.5	63.5[c]	89.6	83.1	84.5

[a] Total *n* = 28,463 for this measure due to measurement starting 1 wave later than all other measures.
[b] Tested using χ^2 test.
[c] Statistically significant estimate ($P < 0.05$).
[d] Tested using Cochran-Armitage trend test.

Table 2. Adjusted[a] Proportions (%) of Chronic Health Conditions Across Sexual Identity and Sex (n = 22,370), Association of American Medical Colleges Biannual Consumer Survey of Health Care Access, United States, 2012–2018)

Chronic Health Condition	Women				Men			
	Heterosexual (n = 12,223)	Gay/Lesbian (n = 254)	Bisexual (n = 663)	Other Sexual Minority (n = 173)	Heterosexual (n = 8,341)	Gay (n = 358)	Bisexual (n = 260)	Other Sexual Minority (n = 98)
Arthritis	35.6	56.5	43.2	43.2	35.5	30.5	54.6	43.8
High cholesterol	30.1	44.3	33.3	29.6	40.4	40.7	59.2	33.5
Depression	32.0	48.5	41.8	38.2	27.5	29.0	30.3	20.2
Diabetes	16.2	28.8	17.3	13.3	27.0	27.2	37.4	24.5
Heart disease	24.5	40.5	39.0	38.4	21.6	24.2	34.9	19.9
Hypertension	32.8	46.2	33.5	29.4	40.0	41.8	45.2	38.7
Respiratory disease	18.4	42.2	21.2	23.9	19.1	12.7	31.1	11.4
Any chronic condition	73.0	88.3	92.5	84.4	75.4	78.3	91.2	79.9

[a] Proportions adjusted for age, race, educational level, annual household income, employment status, marital status, region, and survey wave. All differences statistically significant ($P < 0.05$) using χ^2 test.

for health insurance coverage, although results varied by sexual identity (Table 3). We focus on the results from adjusting models in text, including differences in adjusted proportions (Web Table 1). Compared with heterosexual participants, gay/lesbian participants had significantly lower proportions of satisfaction with their last health-care visit (adjusted proportion: 7.2% lower; adjusted prevalence ratio (PR) = 0.92, 95% confidence interval (CI): 0.86, 0.99), and in the experience of always being treated fairly due to sexual identity (adjusted proportion: 7.1% lower; adjusted PR = 0.92, 95% CI: 0.86, 0.99). Bisexual and other sexual identity participants were least likely to: always receive needed health care ("other" adjusted proportion: 16.5% lower; adjusted PR = 0.81, 95% CI: 0.71, 0.91); not delay health care ("other" adjusted proportion: 14.4% lower; adjusted PR = 0.80, 95% CI: 0.70, 0.92); be able to afford prescriptions ("bisexual" adjusted proportion: 7.5% lower; adjusted PR = 0.89, 95% CI: 0.82, 0.96); and be able to afford medical tests ("other" adjusted proportion: 9.5% lower' adjusted PR = 0.86, 95% CI: 0.75, 0.98).

Sexual identity differences in health-care insurance coverage, access and utilization, and satisfaction were modified by sex (see Table 3). Sex-stratified results showed that gay/lesbian women had the lowest prevalence of health-care access overall, and they were least able to avoid delaying health care (adjusted proportion: 12.8% lower; adjusted PR = 0.83, 95% CI: 0.72, 0.95). Gay/lesbian women and bisexual men had the lowest prevalence of adequate health-care insurance coverage. Gay/lesbian women were less likely than heterosexual women to be able to afford medical tests (adjusted proportion: 17.0% lower; adjusted PR = 0.75, 95% CI: 0.64, 0.87) and needed health care (adjusted proportion: 16.2% lower; adjusted PR = 0.74, 95% CI: 0.63, 0.87). Bisexual men were less likely than heterosexual men to be able to afford prescriptions (adjusted proportion: 13.0% lower; adjusted PR = 0.80, 95% CI: 0.70, 0.91) and needed health care (adjusted proportion: 15.7% lower; adjusted PR = 0.75, 95% CI: 0.66, 0.87).

DISCUSSION

Using a US population-based sample of potential health-care consumers, we demonstrated that SM populations, by and large, experience disparities in chronic health conditions and deficits in several facets of health-care access and satisfaction relative to heterosexuals; however, there are some variations in this theme when sex was also considered. One encouraging finding was that we did not detect sexual-identity differences in health insurance coverage. Previous studies have shown sexual-orientation–related disparities in health insurance coverage (10, 35), yet researchers tracking health-insurance coverage trends since the enactment of the Affordable Care Act find substantial gains in coverage for underrepresented groups, including SMs (36, 37). Our findings regarding insurance coverage equivalence across sexual identity might, therefore, be an artifact of when most of our data were collected (i.e., after passage of the Affordable Care Act). Despite parity in health insurance coverage, we found that all SM adults, except for gay men, were less likely to utilize health-care services due to cost (e.g., forgoing or delaying care, prescription drug fulfillment, and medical testing). Bisexual men and women were 15% to 20%, and lesbian women 20% to 30%, more likely to delay care and forego prescriptions and medical testing. Despite some differences across subgroups, these cost-related findings are generally consistent with other studies of sexual identity and barriers to care (11, 18).

Given that the health utilization questions in the Association of American Medical Colleges Consumer Survey of Health Care Access were specific to affordability, the disconnect between health insurance coverage and utilization is likely related to out-of-pocket costs. Bisexual adults and gay/lesbian women appear to be more susceptible to economic instability than heterosexual men and women and gay men (38), and this might explain why these SM subgroups were more likely to delay and forgo care as a result of cost. In an effort to explore this hypothesis, we conducted post-hoc analyses to test socioeconomic status differences among groups defined by sexual identity and sex and found that, in our sample, bisexual subgroups and gay/lesbian women were younger, had lower educational attainment, and had lower income than heterosexual men and women and gay men (Table 4). Overall, these findings are consistent with previous research (2, 16, 39) and emphasize how the intersection of sexual identity and socioeconomic status are critical in understanding within-group variation in timely access to health-care services. These sex and sexual-identity differences in barriers to care are critical. Particularly, gay men in our sample have equivalent or lower disease prevalence rates than heterosexual men. Conversely, sexual orientation differences for disease prevalence (e.g., depression, diabetes, heart disease, hypertension) among gay/lesbian women and bisexual women and men were stark. Thus, those who appear most in need of care were those least likely to receive it.

Despite the contributions of the current study, we have limitations to note. First, data are restricted to US adults who indicated that they, or a health-care professional, believed they needed health care in the preceding 12 months, and therefore might not be directly generalizable to the national population. This sampling frame could explain the proportion of adults indicating a SM identity. Many population-based surveys suggest that 2%–5% of adults are SMs (40); 8.7% of adults in the present study identified as such. The disproportionate burden of chronic disease and need for care among SMs might partially explain this difference. Another artifact of this sampling frame is the proportion of lower-income persons, a value that is higher than other commonly used survey data, such as the National Health Interview Survey (Web Table 1). This might also explain the higher proportion of adults indicating SM identity as SMs are overrepresented among those in poverty (38).

Second, many SM people intentionally seek out affirming medical-care providers (27). For this reason, our findings, which were restricted to the previous 12 months, might underreport the challenges faced by SM populations in health-care settings across the life course. Third, our secondary data-analysis findings highlight sexual-identity disparities in health-care access and satisfaction, but the

Table 3. Prevalence Ratios of Each Health-Care Indicator Across Sexual Identity (n = 30,548), Association of American Medical Colleges Biannual Consumer Survey of Health Care Access, United States, 2012–2018

Health-Care Indicator	Unadjusted[a]						Adjusted[a]					
	Gay/Lesbian		Bisexual		Other		Gay/Lesbian		Bisexual		Other	
	aPR	95% CI	aPR	95% CI	aPR	95% CI	aPR	95% CI	aPR	95% CI	aPR	95% CI
						Full Sample						
Access												
Current health insurance	0.95	0.89, 1.02	0.98	0.92, 1.04	0.95	0.85, 1.06	0.97	0.91, 1.04	1.02	0.96, 1.09	0.98	0.88, 1.09
Always received needed health care	0.89[b]	0.82, 0.95	0.88[b]	0.82, 0.94	0.77[b]	0.68, 0.87	0.92[b]	0.85, 0.98	0.93[b]	0.87, 1.00	0.81[b]	0.71, 0.91
Did not delay health care	0.93	0.86, 1.01	0.84[b]	0.78, 0.90	0.77[b]	0.67, 0.88	0.98	0.91, 1.06	0.94	0.87, 1.01	0.80[b]	0.70, 0.92
Able to afford prescriptions	0.94	0.87, 1.02	0.79[b]	0.73, 0.86	0.87[b]	0.76, 0.99	0.98	0.91, 1.06	0.89[b]	0.82, 0.96	0.90	0.78, 1.02
Able to afford medical tests	0.93[b]	0.86, 1.00	0.79[b]	0.74, 0.86	0.82[b]	0.71, 0.94	0.97	0.90, 1.05	0.91[b]	0.84, 0.98	0.86[b]	0.75, 0.98
Able to afford needed health care	0.90[b]	0.83, 0.98	0.75[b]	0.69, 0.81	0.92	0.80, 1.05	0.94	0.86, 1.02	0.84[b]	0.78, 0.92	0.95	0.84, 1.09
Satisfaction												
Satisfied with last health-care visit	0.91[b]	0.85, 0.97	0.95	0.89, 1.01	0.90	0.81, 1.01	0.92[b]	0.86, 0.99	0.98	0.92, 1.05	0.93	0.83, 1.04
Would recommend their provider to others	0.91[b]	0.85, 0.97	0.95	0.89, 1.01	0.90	0.81, 1.01	0.93	0.86, 1.00	0.96	0.90, 1.02	0.90	0.80, 1.01
Never treated unfairly due to sexual orientation[c]	0.91	0.84, 0.97	0.94	0.88, 1.00	0.93	0.83, 1.04	0.92[b]	0.86, 0.99	0.97	0.91, 1.04	0.93	0.83, 1.05
						Women						
Access												
Current health insurance	0.99	0.88, 1.11	0.95	0.88, 1.02	0.92	0.79, 1.07	1.00	0.89, 1.12	1.00	0.92, 1.08	0.94	0.81, 1.10
Always received needed health care	0.90	0.80, 1.02	0.84[b]	0.77, 0.91	0.79[b]	0.67, 0.93	0.93	0.82, 1.05	0.91[b]	0.83, 0.99	0.82[b]	0.70, 0.97
Did not delay health care	0.77[b,d]	0.67, 0.89	0.82[b]	0.75, 0.90	0.79[b]	0.66, 0.94	0.83[b,d]	0.72, 0.95	0.92[a]	0.84, 1.01	0.83[b]	0.69, 0.99
Able to afford prescriptions	0.80[b,d]	0.69, 0.92	0.81[b]	0.73, 0.89	0.86	0.72, 1.02	0.85[b,d]	0.73, 0.98	0.90[b,d]	0.82, 0.99	0.89	0.75, 1.06
Able to afford medical tests	0.69[b],[d]	0.59, 0.81	0.82[b]	0.74, 0.90	0.78[b]	0.65, 0.93	0.75[b,d]	0.64, 0.87	0.93[d]	0.85, 1.03	0.82[b]	0.68, 0.98
Able to afford needed health care	0.69[b],[d]	0.59, 0.82	0.78[b]	0.70, 0.86	0.92	0.77, 1.10	0.74[b,d]	0.63, 0.87	0.88[b,d]	0.79, 0.97	0.98	0.82, 1.17
Satisfaction												
Satisfied with last health-care visit	0.89	0.79, 1.01	0.93	0.86, 1.01	0.92	0.79, 1.06	0.91	0.81, 1.03	0.98	0.91, 1.06	0.94	0.81, 1.09
Would recommend their provider to others	0.88	0.77, 1.00	0.87[b,d]	0.80, 0.95	0.90	0.77, 1.05	0.90[d]	0.79, 1.02	0.92[d]	0.85, 1.01	0.93	0.80, 1.09
Never treated unfairly due to sexual orientation[c]	0.80[b,d]	0.71, 0.91	0.96[d]	0.89, 1.04	0.96	0.83, 1.11	0.83[b,d]	0.73, 0.94	0.99[d]	0.91, 1.07	0.97	0.84, 1.12
						Men						
Access												
Current health insurance	0.93	0.85, 1.01	1.03	0.94, 1.14	0.98	0.83, 1.16	0.96	0.88, 1.05	1.06	0.96, 1.16	1.02	0.86, 1.20
Always received needed health care	0.87	0.80, 0.95	0.95[b]	0.86, 1.05	0.78[b]	0.64, 0.94	0.91	0.84, 1.00	0.97	0.88, 1.08	0.81[b]	0.67, 0.98
Did not delay health care	1.05[d]	0.96, 1.15	0.83[b]	0.74, 0.94	0.76[b]	0.61, 0.95	1.04[d]	0.95, 1.14	0.90	0.79, 1.01	0.79[b]	0.64, 0.98
Able to afford prescriptions	1.04[d]	0.94, 1.14	0.75[b,d]	0.66, 0.86	0.86	0.70, 1.06	1.01[d]	0.92, 1.11	0.80[b,d]	0.70, 0.91	0.87	0.71, 1.07
Able to afford medical tests	1.06[d]	0.97, 1.16	0.75[b,d]	0.66, 0.85	0.86	0.70, 1.05	1.05[d]	0.96, 1.15	0.81[b,d]	0.71, 0.92	0.89	0.72, 1.09
Able to afford needed health care	1.01[d]	0.92, 1.11	0.70[b,d]	0.61, 0.81	0.94	0.77, 1.15	1.01[d]	0.91, 1.11	0.75[b,d]	0.66, 0.87	0.95	0.77, 1.16
Satisfaction												
Satisfied with last health-care visit	0.91[b]	0.83, 0.99	0.98	0.89, 1.08	0.92	0.78, 1.09	0.93	0.85, 1.01	1.00	0.90, 1.10	0.95	0.80, 1.12
Would recommend their provider to others	0.91[b]	0.83, 0.99	1.01[d]	0.91, 1.11	0.85	0.71, 1.02	0.94[d]	0.86, 1.03	1.02[d]	0.93, 1.13	0.88	0.73, 1.06
Never treated unfairly due to sexual orientation[c]	0.99[d]	0.91, 1.08	0.87[b,d]	0.78, 0.97	0.86	0.72, 1.04	0.95[d]	0.87, 1.04	0.89[b,d]	0.80, 1.00	0.87	0.72, 1.05

Abbreviations: aPR, adjusted prevalence ratio; CI, confidence interval.

[a] Referent: heterosexual. Models adjusted for sex, age, race, educational level, annual household income, employment status, marital status, region, and survey wave. Estimates for models with and without adjustment for interaction are available in Web Table 2.

[b] Statistically significant estimate ($P < 0.05$).

[c] Total n = 28,463 for this measure due to measurement starting 1 wave later than all other measures.

[d] Significant interaction between sex and sexual identity.

Table 4. Distribution (%) of Sociodemographic Characteristics Across Sex and Sexual Identity (n = 30,548), Association of American Medical Colleges Biannual Consumer Survey of Health Care Access, United States, 2012–2018

Sociodemographic Characteristic	Women				Men			
	Heterosexual (n = 14,568)	Gay (n = 335)	Bisexual (n = 816)	Other (n = 216)	Heterosexual (n = 13,312)	Gay (n = 679)	Bisexual (n = 458)	Other (n = 164)
Age, years[a]								
18–34	27.8	37.9	73.3	46.7	27.9	26.3	33.0	42.3
35–44	15.1	25.6	13.4	10.0	19.3	17.4	23.9	11.9
45–54	19.0[b]	19.4[b]	9.2[b]	17.3[b]	15.8[b]	26.3[b]	17.4[b]	20.4[b]
55–64	16.9[b]	11.6[b]	2.9[b]	15.6[b]	14.0[b]	18.6[b]	16.6[b]	7.3[b]
≥65	21.2[b]	5.6[b]	1.2[b]	10.4[b]	23.0[b]	11.4[b]	9.0[b]	18.2[b]
Educational level[a]								
Less than high school	37.4[b]	36.8[b]	39.8[b]	33.1[b]	28.9[b]	35.0[b]	27.6[b]	33.6[b]
High school	35.3[b]	41.7[b]	40.2[b]	42.1[b]	31.2[b]	31.2[b]	36.6[b]	16.8[b]
College	18.5[b]	14.5[b]	14.8[b]	18.2[b]	23.4[b]	21.1[b]	20.1[b]	21.3[b]
Graduate degree	8.9[b]	7.1[b]	5.1[b]	6.6[b]	16.4[b]	12.8[b]	15.8[b]	28.4
Employment[c]								
Full-time	33.1[b]	53.0[b]	33.7[b]	32.1[b]	52.5[b]	42.0[b]	56.8[b]	39.0[b]
Part-time	17.9[b]	15.2[b]	24.0[b]	21.1[b]	13.5[b]	15.4[b]	15.1[b]	20.2[b]
Retired	22.1[b]	11.7[b]	2.1[b]	11.9[b]	24.1[b]	20.0[b]	16.7[b]	17.7[b]
Student/homemaker	17.3[b]	9.8[b]	26.2[b]	20.5[b]	3.4[b]	7.5[b]	7.6[b]	6.2[b]
Unemployed	9.6[b]	10.4[b]	14.1[b]	14.4[b]	6.5[b]	15.1[b]	3.9[b]	16.9[b]
Yearly household income, $[a]								
≤24,999	25.7[b]	24.0[b]	33.1[b]	30.4[b]	14.7[b]	24.1[b]	16.5[b]	16.3[b]
25,000–49,999	26.0[b]	25.8[b]	24.8[b]	32.3[b]	19.6[b]	22.6[b]	21.9[b]	23.8[b]
50,000–74,999	19.1[b]	15.5[b]	19.7[b]	11.7[b]	20.1[b]	23.0[b]	15.4[b]	20.1[b]
$75,000–99,999	10.6[b]	8.1[b]	8.0[b]	15.0[b]	17.0[b]	14.0[b]	18.3[b]	11.4[b]
≥100,000 or more	18.5[b]	26.6[b]	14.4	10.7[b]	28.6[b]	16.4[b]	27.8[b]	28.5[b]
Race/ethnicity[c]								
Asian/Native Hawaiian/Pacific Islander	4.2[b]	7.9[b]	4.3[b]	4.2[b]	4.8[b]	7.9[b]	4.9[b]	9.9[b]
Black	9.3[b]	13.6[b]	11.8[b]	19.9[b]	13.8[b]	11.4[b]	12.2[b]	5.3[b]
Hispanic	26.6[b]	17.8[b]	15.2[b]	14.4[b]	11.4[b]	21.2[b]	14.6[b]	23.3[b]
Other	8.0[b]	6.4[b]	3.3[b]	11.8[b]	5.6[b]	3.3[b]	2.9[b]	9.3[b]
White	51.9[b]	54.3[b]	65.4[b]	49.7[b]	64.5[b]	56.2[b]	65.4[b]	52.2[b]

Table continues

Table 4. Continued

Sociodemographic Characteristic	Women				Men			
	Heterosexual (*n* = 14,568)	Gay (*n* = 335)	Bisexual (*n* = 816)	Other (*n* = 216)	Heterosexual (*n* = 13,312)	Gay (*n* = 679)	Bisexual (*n* = 458)	Other (*n* = 164)
Marital status[c]								
Single	51.4[b]	46.6[b]	23.5[b]	40.1[b]	36.6[b]	51.7[b]	26.3[b]	33.1[b]
Married	35.9[b]	43.1[b]	51.0[b]	41.3[b]	42.9[b]	35.5[b]	60.5[b]	52.6[b]
Widowed	1.7[b]	4.3[b]	7.8[b]	4.6[b]	2.7[b]	5.2[b]	2.8[b]	6.7[b]
Divorced	8.3[b]	5.0[b]	15.6[b]	12.3[b]	12.6[b]	7.4[b]	9.0[b]	4.7[b]
Separated	2.7[b]	1.0[b]	2.1[b]	1.8[b]	5.2[b]	0.3[b]	1.5[b]	3.0[b]
Region[c]								
Midwest	19.4[b]	22.2[b]	23.3[b]	22.4[b]	18.5[b]	15.8[b]	20.0[b]	22.9[b]
Northeast	19.6[b]	17.5[b]	16.6[b]	15.8[b]	23.8[b]	15.3[b]	20.3[b]	15.9[b]
South	35.3[b]	31.8[b]	38.9[b]	34.2[b]	31.7[b]	42.9[b]	34.1[b]	35.9[b]
West	25.7[b]	28.5[b]	21.3[b]	27.6[b]	26.1[b]	26.0[b]	25.6[b]	25.4[b]

[a] Tested within each sex category using Kruskal-Wallis test.
[b] Statistically significant estimate ($P < 0.05$).
[c] Tested using χ^2 test.

available data limited our ability to thoroughly understand the factors that influence these inequities. For example, we are not able to say under what conditions gay/lesbian women and bisexual men come to experience unfair treatment from medical professionals. Similarly, the data are limited to self-reported sex, which precludes any investigations on the basis of gender identity (the Consumer Survey of Health Care Access added gender identity measures in the most recent wave).

Finally, 11.8% of heterosexual-identified adults reported experiencing unfair treatment from a medical provider based on their sexual orientation; however, it is difficult to assess whether this is measurement error. For example, did heterosexual participants misunderstand the question about sexuality more broadly, instead of sexual orientation specifically? Might these responses from heterosexual participants reflect some sort of discomfort regarding sexual health care? Or might these responses from heterosexual participants be related to the fact that an appreciable proportion of people who identify as heterosexual also report same-sex attraction and/or engage in same-sex behavior? (40) Unfortunately, we do not have the means to disentangle these effects given the current data.

Despite these limitations, the current study is strengthened by its use of a large national sample to understand different facets of health-care access and satisfaction among SM adults in the United States. Findings confirm prior observations regarding sexual orientation differences in health care (8, 20) and extend this scholarship by highlighting how sexual identity disparities in health care differ among SM subgroups (lesbian/gay vs. bisexual) and by sex.

Despite polices that have advanced health insurance coverage for SMs (i.e., the Affordable Care Act) (36), we note substantial differences in health-care access and satisfaction between heterosexual and SM adults in the United States. It is notable that 1 in 5 SM participants in this sample reported sexual-orientation–related unfair treatment from a medical provider at their most recent visit, with gay/lesbian women and bisexual men most likely to experience unfair treatment. When we consider that these instances are replicated across providers and years, the cumulative effect of these experiences likely influences health-care seeking behaviors. Repeated instances of mistreatment from medical providers could lead SMs to not disclose their sexual identity to their health-care providers or avoid care altogether (21, 22). Increasing the cultural awareness and sensitivity of health-care providers (e.g., physicians, nurses, front-line staff) reflects a crucial step to decreasing sexual-identity–related disparities in health-care access and utilization (41–43).

National agencies and organizations committed to improving population health (e.g., National Institutes of Health; National Academies of Science, Engineering, and Medicine; Centers for Disease Control and Prevention, Healthy People 2030) recognize the importance of health-care access and satisfaction for addressing SM health inequities (29, 44, 45). However, ensuring that quality health-care services are accessible is not limited to proximal experiences with access to providers. There appear to be larger structural forces at play that impede access to health-care services for SM people, such as cost. As with other health-disparity populations, policies that address the affordability of quality health care will benefit SM populations in distinct ways (37, 46). There needs to be a concerted effort to identifying systemic barriers to accessing care—characteristics of health services, providers, and health-care systems that reduce utilization—as we do here. Once identified, these barriers to timely and quality health care are malleable through a multisystemic approach: provider education, enacted and enforced institutional policy, and legislative action (47).

Unfortunately, current policy initiatives will likely increase these health-care access disparities. In May of 2019, the Department of Health and Human Services announced regulations that would allow medical care providers the right to deny services to patients on the basis of their "fundamental and inalienable rights of conscience and religious liberty" (48). This "conscience clause" has the potential to hinder health-care access for many persons, but it has a particularly pointed impact for SMs given traditional religious intolerance of SM people (49, 50). The vulnerability of SM people with respect to this policy is particularly concerning given that there is a general lack of access to alternative sources of care for SM people in many contexts (e.g., people living in rural areas, people with limited health insurance coverage, the uninsured). Given well-documented health inequities for SM adults, it is critical that we gain a deeper understanding of the factors that impede health-care access for this population. Future research is needed to better understand the impact of policies, programs, and practices and what is necessary to decrease health-care disparities for SM people in the United States.

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