

Sociodemographic Correlates of Self-reported Discrimination in HIV Health Care Settings Among Persons With Diagnosed HIV in the United States, Medical Monitoring Project, 2018–2019

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Background: HIV-related discrimination in health care settings is associated with negative health outcomes among persons with HIV (PWH). This article describes and compares differences in the prevalence of self-reported experiences with discrimination in health care settings by sociodemographic and clinical care factors among persons with diagnosed HIV in the United States.

Methods: We analyzed interview and medical record data collected during June 2018–May 2019 from 3850 PWH who had received HIV care in the past 12 months. We calculated weighted percentages and associated 95% confidence intervals and assessed the association between any experience of discrimination and selected sociodemographic and clinical characteristics using prevalence ratios with predicted marginal means.

Results: Approximately 25% of PWH who had an HIV care visit in the past 12 months reported experiencing any discrimination. Experiences with discrimination were significantly more prevalent among persons aged 18–29 years (34%); transgender persons (41%); persons of gay (25%), bisexual (31%), or other (40%) sexual orientations; and persons who did not have a regular provider (39%), lived at/below poverty level (28%), were homeless (39%) or incarcerated (37%) in the past 12 months. PWH who experienced discrimination were more likely to have missed at least one HIV care visit, not be taking antiretroviral therapy, and have missed antiretroviral therapy doses. Recent and sustained viral suppression were not significantly associated with experiencing any discrimination.

Conclusions: Interventions that address the sociocultural and structural factors associated with discrimination in all health care

settings are needed to improve health outcomes among PWH and end the HIV epidemic in the United States.

Key Words: HIV-related discrimination, persons with HIV, health care settings, social determinants of health, viral suppression

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INTRODUCTION

The Ending the HIV Epidemic in the United States (EHE; Ending the HIV Epidemic: A Plan for America)–Centers for Disease Control and Prevention, <https://www.cdc.gov/endhiv/index.html>) initiative will use 3 key strategies—diagnose, treat, and prevent—to reduce new HIV infections in the United States by at least 90% by 2030. A key to the success of EHE in reducing HIV incidence is ensuring that all persons with HIV (PWH) receive appropriate treatment and are virally suppressed to reduce transmission to others through sex. Achieving success will also require providers and prevention partners to identify and address factors that negatively affect access to treatment and care among PWH, including experiences with stigma and discrimination by health care providers based on race/ethnicity, socioeconomic status, gender, gender identity, and HIV status.^{1–6}

HIV-related stigma is a social process that occurs in the context of power and entails negative beliefs and attitudes toward persons with or at risk of HIV infection.^{7–9} HIV-related discrimination, an outcome of HIV-related stigma,^{7–9} is unfair and unjust treatment of individuals because of their HIV status and/or their membership in a group perceived to be at greater risk of HIV.^{7–9} HIV-related discrimination can occur in the presence of other forms of discrimination, for example, discrimination based on race, sex, gender or gender identity, and sexual orientation.⁷ In health care settings, discrimination can result in poorer quality or denial of care for PWH.² It is also associated with poorer health outcomes, including depression,^{10–13} reduced linkage to care,^{10–13} negative patient–provider relationships,^{14–17} lower antiretroviral therapy (ART) adherence,^{14–17} and lower viral suppression in PWH.¹² Therefore, efforts are needed to identify experiences with, and inform strategies to address, HIV-related discrimination in HIV health care settings among PWH.

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The purpose of this article is to describe and compare differences in the prevalence of self-reported experiences of discrimination in health care settings by sociodemographic and clinical care factors using Medical Monitoring Project (MMP) data on PWH in the United States. Specifically, we aim to (1) describe the prevalence of, and perception of reasons for, self-reported experiences of health care discrimination and (2) compare differences in self-reported experiences of discrimination in HIV health care settings by sociodemographic and clinical care factors.

METHODS

Detailed methods for MMP data collection are reported elsewhere.^{18,19} MMP uses a 2-stage sampling design. In the first stage, 23 jurisdictions were sampled from all US states, the District of Columbia, and Puerto Rico. In the second stage, simple random samples of persons aged 18 years and older with diagnosed HIV were drawn for each participating state/territory from the National HIV Surveillance System (NHSS), a census of persons with diagnosed HIV in the United States. For this analysis, we used data collected from phone or face-to-face interviews and medical record abstractions during June 2018 through May 2019. Approximately 76% of interviews were conducted by phone and 24% face-to-face; interview mode was not associated with our discrimination measure. Response rates were 100% at the state/territory level and 45% at the person level.

Data were weighted on the basis of known probabilities of selection and were adjusted for nonresponse.²⁰ For the nonresponse adjustment, weighting classes were based on variables related to person-level response: sex at birth, age of most recent contact information, and the person's frequency of receipt of care (as indicated by HIV-related laboratory test results in NHSS). Furthermore, the data were poststratified to NHSS population totals by age, race/ethnicity, and sex. MMP data collection is part of routine public health surveillance and was determined to be nonresearch. Informed consent for the interview and medical record abstraction was obtained from all participants.

We adapted measures developed by Bird et al⁵ to estimate the prevalence of experiences of discrimination in HIV care settings over the past 12 months among persons who received HIV care during the past 12 months and gave complete information for all discrimination questions ($n = 3850$). In MMP, respondents were asked about the following experiences when getting HIV care during the past 12 months: (1) How often were you treated with less courtesy than other people; (2) How often were you treated with less respect than other people; (3) How often have you received poorer service than others; (4) How often has a doctor or nurse acted as if he or she believed you were not smart; (5) How often has a doctor or nurse acted as if he or she was afraid of you; (6) How often has a doctor or nurse acted as if he or she was better than you; and (7) How often have you felt like a doctor or nurse was not listening to what you were saying. Response options were never, rarely, sometimes, most of the time, and always. These questions were the same as those used in the study by Bird et al. However, Bird et al

prefaced each question by asking about experiences due to one's race and then about experiences due to one's socioeconomic status. Therefore, the measures used by Bird et al captured only discrimination attributed to race or socioeconomic status. Because we wanted to capture a more comprehensive assessment of discrimination, we chose to first ask about the frequency of each discriminatory experience. During the interview, persons who reported any discrimination were then asked whether they attributed the discrimination to any of the following: HIV status; gender; sexual orientation; race/ethnicity; income or social class; or injection drug use. Respondents could report multiple reasons for the discrimination they experienced. Because the distribution of the summed scale score (range: 0–28) was highly skewed (skewness = 4.2) and US national prevention goals envision a country free from any discrimination, responses were dichotomized into “never” vs. all other options to estimate any experience of discrimination in HIV care over the past 12 months. We calculated weighted percentages and associated 95% confidence intervals (CIs) for any discrimination and any discrimination attributed to each of the 6 characteristics. We then assessed the association between any experience of discrimination and selected sociodemographic and clinical characteristics using prevalence ratios with predicted marginal means, using $P < 0.05$ as a cutoff for identifying significant differences between groups. All analyses accounted for the complex sample design and weights.

All examined covariates were self-reported and measured over the 12 months before interview, except where otherwise noted. Persons were classified as men who have sex with men, women who have sex with men, and men who have sex only with women based on sexual behavior among the sexually active and reported sexual orientation among the nonsexually active. All persons not classified as men who have sex with men, women who have sex with men, or men who have sex only with women were grouped into the “other” category. Homelessness was defined as living on the street, in a shelter, in a single-room occupancy hotel, or in a car. Household poverty level was determined using Health and Human Services poverty guidelines.²¹ Responses to items from the Patient Health Questionnaire-8 were used to define “major or other depression” over the past 2 weeks according to criteria from the DSM-IV.²² Responses to the Generalized Anxiety Disorder Scale-7 was used to estimate moderate to severe anxiety over the past 2 weeks.²³

Clinical characteristics captured by medical record abstraction at the person's most frequent source of HIV care included HIV care retention and sustained viral suppression (all viral load measurements documented undetectable or <200 copies/mL). Retention in HIV care was defined as having received at least 2 elements of outpatient HIV care at least 90 days apart. Outpatient HIV care was defined as any documentation of the following: encounter with an HIV care provider (could also be self-reported); viral load test result; CD4 test result; HIV resistance test or tropism assay; ART prescription; *Pneumocystis pneumonia* prophylaxis; or *Mycobacterium avium* complex prophylaxis. Persons who reported currently taking ART were asked about their adherence to ART in the 30 days before the interview using questions from

a 3-item scale that ranges from 0 to 100, with a score of 100 indicating perfect adherence.²⁴ Persons who were not taking ART were given a score of 0. We also assessed responses to a one scale question regarding the number of days an ART dose was missed in the past 30 days, which we dichotomized into no missed doses vs. ≥1 missed dose. The other scale questions were, “In the past 30 days, how good a job did you do at taking your HIV medicines in the way you were supposed to?” (response options: very poor, poor, fair, good, very good, and excellent) and “During the past 30 days, how often did you take your HIV medicines in the way you were supposed to?” (response options: never, rarely, sometimes, usually, almost always, and always).

RESULTS

About one in 4 (25%, 95% CI: 22 to 27) people with diagnosed HIV who had a care visit in the past 12 months reported experiencing any discrimination in an HIV care setting. The mean discrimination score was 1.1 (CI: 1.0 to 1.2), and the median discrimination score was 0.0 (CI: 0.0 to 0.2; Table 1). The most endorsed item was “feeling like a doctor or nurse was not listening to what you were saying,” and the least endorsed item was “having a doctor or nurse act as if they were afraid of you.” Among persons who reported any discrimination in the past 12 months, 28% (CI: 24 to 31) attributed it to their HIV status, 8% (CI: 7 to 10) to their gender, 18% (CI: 15 to 22) to their sexual orientation, 18% (CI: 14 to 21) to their race or ethnicity, 18% (CI: 15 to 22) to

their income or social class, and 4% (CI: 3 to 6) to their injection drug use (results not summarized in tables).

Experiences of discrimination in health care settings varied significantly by age, gender, gender identity, and socioeconomic status (Table 2). Specifically, the prevalence of experiencing any discrimination in a HIV care setting during the past 12 months was significantly higher among persons aged 18–29 years (34%) and 40–49 years (27%) compared with those older than 50 years (22%, *P* = 0.002 and *P* = 0.012, respectively). Experiencing discrimination was also significantly more prevalent among transgender persons (41%) compared with cisgender women (22%, *P* < 0.001), Black (23%) and White men (25%) compared with Black women (19%, *P* = 0.045 and *P* = 0.002, respectively), and persons of gay (25%), bisexual (31%), or “other” (40%) sexual orientations compared with straight persons (22%, *P* = 0.019, *P* = 0.001, *P* = 0.001, respectively). Finally, experiencing discrimination was also significantly more prevalent among persons with only public insurance (27%) compared with those with any private insurance (22%, *P* = 0.035), who did not have a regular HIV care provider (39%) compared with those who did (24%, *P* = 0.005), who lived at or below poverty level (28%) compared with those who lived above the poverty line (23%, *P* < 0.001), who were homeless in the past 12 months (39%) compared with those who were not (23%, *P* < 0.001), or who were incarcerated in the past 12 months (37%) compared with those who were not (24%, *P* < 0.001). Discrimination did not significantly differ by whether a person attended a Ryan White HIV/AIDS Program-funded facility (*P* = 0.357).

TABLE 1. Self-reported Discrimination in HIV Care Settings Among Persons With Diagnosed HIV Who Received Care During the Past 12 Months—United States, June 2018 to May 2019 (N = 3850)

	Never		Rarely		About Half of the Time		Most of the Time		Always	
	n*	Row % (95% CI)†	n*	Row % (95% CI)†	n*	Row % (95% CI)†	n*	Row % (95% CI)†	n*	Row % (95% CI)†
During the past 12 months										
How often were you treated with less courtesy than other people?	3420	89.6 (88.2 to 91.1)	282	6.7 (5.5 to 8.0)	85	2.1 (1.6 to 2.7)	32	0.9 (0.6 to 1.2)	29	0.6 (0.4 to 0.8)
How often were you treated with less respect than other people?	3431	89.9 (88.5 to 91.3)	279	6.8 (5.5 to 8.1)	82	2.0 (1.4 to 2.6)	27	0.7 (0.4 to 1.0)	27	0.6 (0.3 to 1.0)
How often have you received poorer service than others?	3426	89.5 (87.9 to 91.2)	281	7.2 (5.9 to 8.4)	83	2.0 (1.5 to 2.6)	28	0.8 (0.5 to 1.2)	24	0.5 (0.3 to 0.7)
How often has a doctor or nurse acted as if he or she believed you were not smart?	3491	90.9 (89.5 to 92.3)	200	4.9 (3.9 to 6.0)	93	2.5 (2.0 to 3.1)	26	0.7 (0.4 to 1.0)	33	0.9 (0.5 to 1.3)
How often has a doctor or nurse acted as if he or she was afraid of you?	3645	95.0 (94.1 to 96.0)	141	3.5 (2.7 to 4.3)	29	0.6 (0.3 to 1.0)	14	0.3 (0.1 to 0.5)	17	0.5‡ (0.2 to 0.8)
How often has a doctor or nurse acted as if he or she was better than you?	3523	91.4 (89.8 to 93.0)	206	5.5 (4.3 to 6.7)	57	1.4 (1.0 to 1.8)	25	0.8 (0.4 to 1.1)	36	1.0 (0.6 to 1.3)
How often have you felt like a doctor or nurse was not listening to what you were saying?	3217	83.6 (81.0 to 86.2)	400	10.1 (8.4 to 11.8)	147	4.0 (3.0 to 5.0)	48	1.4 (1.0 to 1.9)	36	0.8 (0.5 to 1.2)

*Numbers are unweighted.

†Percentages and corresponding CIs are weighted percentages.

‡Coefficient of variation > 0.30, estimate may be unstable.

TABLE 2. Self-reported Discrimination Among Persons With Diagnosed HIV by Sociodemographic Characteristics—United States, June 2018 to May 2019 (N = 3850)

Characteristics	n*	Col % (95% CI)	Any Discrimination		
			Row % (95% CI)†	Prevalence Ratio (95% CI)†	P
Total	3850		24.6 (21.9 to 27.2)		
Age, yrs					
18–29	312	8.2 (6.7 to 9.6)	33.9 (25.7 to 42.1)	1.55 (1.20–2.00)	0.002
30–39	572	16.6 (15.4 to 17.8)	25.4 (20.7 to 30.1)	1.16 (0.94 to 1.44)	0.179
40–49	842	22.1 (20.4 to 23.8)	27.0 (22.9 to 31.1)	1.23 (1.05 to 1.45)	0.012
≥50	2124	53.1 (51.0 to 55.2)	21.9 (19.2 to 24.6)	Reference	
Sex					
Male	2777	74.8 (72.8 to 76.8)	24.9 (22.4 to 27.4)	1.11 (0.97 to 1.28)	0.124
Female	999	23.4 (21.4 to 25.5)	22.4 (18.5 to 26.3)	Reference	
Transgender	73	1.8 (1.3 to 2.2)	41.0 (30.0 to 52.0)	1.83 (1.40 to 2.40)	<0.001
Race/ethnicity					
White (non-Hispanic)	1092	30.1 (23.8 to 36.5)	25.7 (22.2 to 29.2)	1.18 (0.99 to 1.41)	0.059
Black (non-Hispanic)	1631	39.7 (30.4 to 49.0)	21.7 (18.0 to 25.4)	Reference	
Hispanic/Latino	848	22.7 (14.5 to 31.0)	24.2 (21.1 to 27.3)	1.12 (0.91 to 1.38)	0.302
Other/multiracial	279	7.5 (5.4 to 9.5)	36.5 (30.2 to 42.8)	1.68 (1.35 to 2.10)	<0.001
Gender-stratified racial/ethnic group					
White (non-Hispanic) men	939	28.5 (21.9 to 35.0)	25.4 (22.0 to 28.8)	1.35 (1.11 to 1.64)	0.002
Black (non-Hispanic) men	1007	27.9 (21.3 to 34.6)	23.2 (18.9 to 27.5)	1.23 (1.00 to 1.52)	0.045
Hispanic/Latino men	629	19.4 (12.3 to 26.4)	24.5 (20.7 to 28.3)	1.30 (0.99 to 1.71)	0.058
White (non-Hispanic) women	144	4.4 (3.2 to 5.5)	26.4 (17.5 to 35.4)	1.41 (0.96 to 2.07)	0.092
Black (non-Hispanic) women	593	14.9 (11.5 to 18.2)	18.8 (14.7 to 22.9)	Reference	
Hispanic or Latina women	201	5.0 (3.1 to 6.9)	22.0 (16.1 to 27.9)	1.17 (0.86 to 1.59)	0.324
Sexual orientation					
Gay	1531	41.4 (38.1 to 44.7)	25.2 (22.0 to 28.4)	1.15 (1.02 to 1.30)	0.019
Straight	1860	46.5 (43.0 to 49.9)	21.8 (18.7 to 25.0)	Reference	
Bisexual	333	9.1 (8.0 to 10.3)	31.1 (26.1 to 36.1)	1.43 (1.16 to 1.75)	0.001
Other	107	3.0 (2.3 to 3.6)	39.6 (29.5 to 49.8)	1.82 (1.31 to 2.51)	0.001
Sexual behavior/orientation					
MSM	1864	50.4 (47.2 to 53.7)	26.3 (23.4 to 29.2)	1.23 (1.06 to 1.42)	0.006
MSW	859	22.7 (20.6 to 24.9)	21.5 (18.2 to 24.7)	Reference	
WSM	976	23.0 (21.0 to 25.0)	22.0 (18.1 to 26.0)	1.03 (0.88 to 1.20)	0.746
Others	151	3.8 (3.3 to 4.4)	35.4 (28.1 to 42.7)	1.65 (1.26 to 2.16)	0.001
Education					
<High school	667	16.4 (14.5 to 18.4)	24.3 (20.9 to 27.8)	Reference	
High school diploma or equivalent	1034	26.7 (24.9 to 28.5)	21.7 (17.1 to 26.2)	0.89 (0.69 to 1.15)	0.368
>High school	2147	56.9 (53.7 to 60.0)	26.0 (23.4 to 28.7)	1.07 (0.91 to 1.27)	0.424
Household poverty level, past 12 mo					
Above poverty level	1978	57.2 (54.5 to 59.9)	22.5 (19.7 to 25.4)	Reference	
At or below poverty level	1581	42.8 (40.1 to 45.5)	28.2 (24.7 to 31.7)	1.25 (1.11 to 1.41)	<0.001
Homeless, past 12 mo					
Yes	364	8.7 (7.7 to 9.6)	38.6 (32.9 to 44.3)	1.66 (1.44 to 1.92)	<0.001
No	3486	91.3 (90.4 to 92.3)	23.3 (20.6 to 25.9)	Reference	
Incarcerated, past 12 mo					
Yes	168	4.7 (3.5 to 5.8)	37.4 (30.1 to 44.8)	1.56 (1.29 to 1.90)	<0.001
No	3679	95.3 (94.2 to 96.5)	24.0 (21.4 to 26.5)	Reference	
Limited English proficiency (excluding Puerto Rico)					
Yes	722	18.9 (16.6 to 21.1)	23.2 (19.3 to 27.1)	Reference	
No	2961	81.1 (78.9 to 83.4)	25.1 (22.2 to 28.0)	1.08 (0.93 to 1.26)	0.300
Health care coverage, past 12 mo					
Any private insurance	1329	35.5 (32.2 to 38.7)	21.8 (18.6 to 25.1)	Reference	
Public insurance only	2144	54.6 (50.2 to 59.0)	26.6 (23.5 to 29.7)	1.22 (1.01 to 1.46)	0.035
Ryan White coverage only/uninsured	344	9.9 (7.0 to 12.8)	23.4 (16.3 to 30.5)	1.07 (0.80 to 1.44)	0.644

TABLE 2. (Continued) Self-reported Discrimination Among Persons With Diagnosed HIV by Sociodemographic Characteristics—United States, June 2018 to May 2019 (N = 3850)

Characteristics	n*	Col % (95% CI)	Any Discrimination		
			Row % (95% CI)†	Prevalence Ratio (95% CI)‡	P
Time since HIV diagnosis,‡ yrs					
<5	543	15.0 (13.9 to 16.1)	26.3 (21.2 to 31.4)	1.07 (0.89 to 1.30)	0.473
5–9	652	17.1 (15.9 to 18.3)	23.4 (18.2 to 28.5)	0.95 (0.79 to 1.15)	0.604
≥10	2651	67.9 (66.6 to 69.3)	24.5 (22.1 to 27.0)	Reference	
Received care at a Ryan White HIV/AIDS program–funded facility, past 12 mo					
Yes	2565	69.7 (59.5 to 79.8)	24.2 (21.0 to 27.5)	Reference	
No	1093	30.3 (20.2 to 40.5)	26.5 (23.0 to 29.9)	1.09 (0.91 to 1.32)	0.357
Has a regular HIV care provider					
Yes	3693	95.7 (94.4 to 97.1)	24.0 (21.5 to 26.4)	Reference	
No	156	4.3 (2.9 to 5.6)	38.8 (25.6 to 52.0)	1.62 (1.21 to 2.16)	0.005

All variables self-reported except where otherwise noted.

*Numbers are unweighted.

†Percentages and corresponding CIs are weighted percentages.

‡Measured from the National HIV surveillance system.

MSM, men who have sex with men; MSW, men who have sex only with women; WSM, women who have sex with men.

Regarding care outcome variables (Table 3), compared with persons who did not experience discrimination in HIV care settings, persons who experienced discrimination were more likely to have been seen in the ER (39% vs. 51%, $P < 0.001$), been hospitalized (17% vs. 26%, $P < 0.001$), reported symptoms of anxiety or depression (12% vs. 29%, $P < 0.001$ and 14% vs. 29%, $P < 0.001$, respectively), missed at least 1 HIV care visit (21% vs. 33%, $P < 0.001$), not been taking ART (3% vs. 6%, $P < 0.001$), and missed ART doses (37% vs. 51%, $P < 0.001$). Discrimination was also significantly associated with the continuous ART adherence score; the odds ratio for each 10-unit increase in the ART adherence scale score on experiencing any discrimination was 0.87 (95% CI: 0.84 to 0.90, $P < 0.001$, data not summarized in table). Recent and sustained viral suppression were not significantly associated with experiencing any discrimination.

DISCUSSION

We estimate that 1 in 4 adults in the United States receiving HIV care experienced discrimination in a HIV health care setting during the past 12 months. However, the mean and median discrimination scale scores were low, which suggests that most of the participants reported experiencing relatively little discrimination in their HIV care settings. This finding is of note because studies have shown that discrimination due to HIV status, race/ethnicity, sexual orientation, gender, and other social characteristics impedes the abilities of PWH to access health care and maintain suppressed viral loads.^{10,25} Notwithstanding other patient–provider–related factors (eg, trust, health literacy) that facilitate favorable health outcomes for PWH, our findings suggest that HIV care providers and institutions that deliver HIV care in the United States may be providing HIV care in contexts that are conducive to equitable treatment for PWH.

However, despite the importance of this finding, nearly one quarter (25%) of participants reported at least one past-year experience of discrimination in a health care setting. Using nationally representative, probabilistic data, Valverde et al²⁶ found that the prevalence of perceived health care discrimination attributed to one’s HIV status declined from 24% to 15% from 1996 to 2011 through 2013. However, the definition of discrimination used was limited to 3 items (hostility or lack of respect, less attention, or refusal of service) and captured only discrimination attributed to HIV status. Our measure is more comprehensive in that it incorporates other forms of, and reasons for, discrimination. Although more than 1 in 4 attributed the discrimination they experienced to their HIV status, nearly 1 in 5 attributed it to their sexual orientation, race/ethnicity, or income/social class. These findings suggest that discrimination in US health care settings is multifactorial and discriminatory practices related to other characteristics may need to be incorporated into antidiscrimination training for health care facility staff. In 2018, Pitasi et al²⁷ reported that 21% of US adults and adolescents believed that “a lot of prejudice and discrimination” exists against PWH.

The persistence of discrimination against PWH is a cause for concern, not only because freedom from discrimination is a basic human right, but also because it can prevent PWH from acquiring care needed for optimal health. For example, the United States annually appropriates approximately \$26 billion in HIV research and programs.²⁸ Despite this large investment, 24% of persons with diagnosed HIV infection in 42 jurisdictions did not receive care in 2018 (ie, did not have ≥ 1 CD4 or viral load test), and 35% of PWH in these areas were not virally suppressed.²⁹ Because discrimination remains one of the most formidable barriers to HIV care, PWH who experience discrimination in health care settings remain vulnerable to not receiving care and thus poor health, which can also increase their risk of transmitting HIV. Some of our findings, although exploratory,

TABLE 3. Self-reported Discrimination Among Persons With Diagnosed HIV by Clinical Characteristics—United States, June 2018 to May 2019 (N = 3850)

Characteristics	n*	Any Discrimination			P
		Yes Col % (95% CI)†	No Col % (95% CI)†	Prevalence Ratio (95% CI)	
Total (row %)	3850	24.6 (21.9 to 27.2)	75.4 (72.8 to 78.1)		
Current ART use					
Yes	3740	94.5 (92.6 to 96.4)	97.5 (96.6 to 98.3)	0.97 (0.95 to 0.99)	<0.001
No	108	5.5 (3.6 to 7.4)	2.5 (1.7 to 3.4)	2.16 (1.49 to 3.12)	<0.001
100% ART dose adherence, past 30 d					
Yes	2237	49.0 (45.7 to 52.2)	63.2 (61.0 to 65.4)	0.77 (0.72 to 0.83)	<0.001
No	1498	51.0 (47.8 to 54.3)	36.8 (34.6 to 39.0)	1.39 (1.27 to 1.51)	<0.001
Sustained viral suppression‡					
Yes	2641	63.6 (57.2 to 70.1)	66.8 (64.5 to 69.2)	0.95 (0.87 to 1.05)	0.281
No	1209	36.4 (29.9 to 42.8)	33.2 (30.8 to 35.5)	1.10 (0.93 to 1.29)	0.281
Recent viral suppression‡					
Yes	2921	70.6 (64.2 to 77.0)	73.3 (70.5 to 76.1)	0.96 (0.89 to 1.04)	0.325
No	929	29.4 (23.0 to 35.8)	26.7 (23.9 to 29.5)	1.10 (0.91 to 1.33)	0.325
Retention in HIV care, past 12 months‡					
Yes	3164	80.9 (77.0 to 84.8)	83.7 (81.7 to 85.6)	0.97 (0.92 to 1.02)	0.164
No	497	19.1 (15.2 to 23.0)	16.3 (14.4 to 18.3)	1.17 (0.94 to 1.45)	0.164
Missed at least 1 HIV care visit, past 12 mo					
Yes	900	33.3 (29.6 to 37.0)	20.7 (18.9 to 22.5)	1.61 (1.42 to 1.82)	<0.001
No	2944	66.7 (63.0 to 70.4)	79.3 (77.5 to 81.1)	0.84 (0.80 to 0.89)	<0.001
Trust in HIV care or treatment information from a doctor, nurse, or other health care worker					
Not at all	14	1.2§ (0.0 to 2.4)	0.6§ (0.0 to 1.1)	2.14 (0.33 to 13.84)	0.423
Somewhat	275	15.7 (12.8 to 18.5)	7.0 (5.9 to 8.2)	2.22 (1.76 to 2.80)	<0.001
A great deal	2542	83.2 (80.0 to 86.4)	92.4 (91.0 to 93.8)	0.90 (0.86 to 0.94)	<0.001
Emergency room visits, past 12 mo					
Yes	1633	51.1 (46.9 to 55.3)	38.7 (35.9 to 41.4)	1.32 (1.22 to 1.43)	<0.001
No	2210	48.9 (44.7 to 53.1)	61.3 (58.6 to 64.1)	0.80 (0.74 to 0.86)	<0.001
Hospitalizations, past 12 mo					
Yes	781	26.2 (23.4 to 29.0)	17.1 (14.8 to 19.4)	1.53 (1.30 to 1.79)	<0.001
No	3065	73.8 (71.0 to 76.6)	82.9 (80.6 to 85.2)	0.89 (0.85 to 0.93)	<0.001
Depression, past 2 wk					
No depression	3166	71.5 (68.7 to 74.2)	86.2 (84.9 to 87.5)	0.83 (0.80 to 0.86)	<0.001
Major or other depression	658	28.5 (25.8 to 31.3)	13.8 (12.5 to 15.1)	2.06 (1.80 to 2.36)	<0.001
Anxiety, past 2 wk					
No or mild anxiety	3229	70.7 (67.2 to 74.3)	88.4 (86.6 to 90.1)	0.80 (0.76 to 0.84)	<0.001
Moderate or severe anxiety	607	29.3 (25.7 to 32.8)	11.6 (9.9 to 13.4)	2.51 (2.12 to 2.98)	<0.001

All variables self-reported except where otherwise noted.

*Numbers are unweighted.

†Percentages and corresponding CIs are weighted percentages.

‡Measured from medical record abstraction.

§Coefficient of variation = 0.30, estimate may be unstable.

support this assertion. Although experiencing any discrimination in HIV health care settings was not associated with either of our viral suppression measures, experiencing discrimination was associated with missing HIV care visits, not taking ART, and lower ART adherence.

Another notable finding, although not surprising, was that socially marginalized persons were more likely to experience discrimination. Discrimination was more prevalent among those of younger age (vs. those aged 50 years or older), who were of transgender (vs. cisgender male or female), bisexual or “other” sexual orientation (vs. hetero-

sexual orientation), and were of low (vs. high) socioeconomic status (ie, public insurance, poverty level, homelessness, or recent incarceration). Even in the absence of discrimination in HIV health care settings, groups who have been marginalized commonly experience social challenges—including interpersonal and institutionalized discrimination outside of health care settings—which make it difficult for them to access HIV care and achieve viral suppression.³⁰

We interpret our results considering some limitations. First, our data did not permit us to investigate discrimination outside of HIV health care settings. Discrimination in all

health care settings, including HIV care settings, is only one form of discrimination that PWH commonly experience. Therefore, our data limit our ability to understand the broader social contexts in which PWH experience discrimination and its potential impact on PWH. Second, MMP’s design provides us with only a cross-sectional snapshot of perceived discrimination in HIV health care settings. Therefore, we are unable to determine causality. Third, it is possible that levels and forms of discrimination vary by geographic region in the United States. However, because of MMP’s design, we cannot produce regionally representative estimates. Finally, the lack of significant associations between experiencing discrimination in HIV care settings and viral suppression measures are surprising, given the association we found between discrimination and lower ART adherence. Although ART adherence is a primary determinant of viral suppression, it is possible that our use of self-reported adherence may have overestimated actual adherence or that many people were taking regimens that are more forgiving of nonadherence.³¹ It is not possible for us to examine this outcome because of the way that ART regimen data are collected in MMP. Additional research may be needed to clarify the results and explore associations between experiences with discrimination in HIV health care settings and viral suppression. Furthermore, qualitative research that explores the specific determinants of discrimination and their underlying mechanism in HIV health care settings could assist with informing training programs at the health care level.

Toward the national goal of ending the HIV epidemic in the United States, the development of interventions that address discrimination in all health care settings—not just those specific to HIV—remains paramount. Rather than solely addressing individual-level biases among health care providers, these interventions should also address the sociocultural and structural factors that promote discrimination.³² A promising approach would be to use mass media, social marketing interventions that inform HIV care providers of the need to provide culturally competent care to all PWH.³³ Other approaches could provide medical trainings on the value of delivering equitable treatment to all PWH, irrespective of their HIV status, race/ethnicity, gender, or sexual orientation.³⁴ These approaches, alongside others, have the potential to end the HIV epidemic in the United States.

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