


# Access to Health Services Among Young Adult Gay Men in New York City

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## Abstract

This research is a cross-sectional study of young adult gay men (YAGM), ages 18 to 29, that aims to understand their health-care access including: having a primary care provider (PCP), frequency of health-care visits, and instances of foregone health care. Surveys were conducted with a modified time-space sample of 800 YAGM in New York City (NYC). Surveys were conducted between November 2015 and June 2016. This study examined associations between sociodemographic characteristics and health-care access using multivariable logistic regression models. In multivariable logistic regression models, there were higher odds of having a PCP among participants enrolled in school (Adjusted Odds Ratio [AOR] = 1.85, 95% CI [1.18, 2.91],  $p < .01$ ) and covered by insurance (AOR = 21.29, 95% CI [11.77, 38.53],  $p < .001$ ). Modeling indicated higher odds of more than one health visit in the past 12 months for non-White participants (AOR = 2.27, 95% CI [1.43, 3.63],  $p < .001$ ), those covered by insurance (AOR = 3.10, 95% CI [1.06, 9.04],  $p < .05$ ), and those who disclosed their sexual orientation to their PCP (AOR = 2.99, 95% CI [1.58, 5.69],  $p < .001$ ). Participants with insurance were less likely to report instances of foregone care (AOR = 0.21, 95% CI [0.21, 0.13],  $p < .001$ ). Understanding the facilitators and barriers to health-care access among YAGM populations is of critical importance, as many YAGM between the ages of 18 and 29 are establishing their access to health care without parental guidance. Health-care access, including the decision to forego care, can represent a missed opportunity for primary prevention and early diagnosis of health issues, as well as more effective, less invasive, and less costly treatments.

## Keywords

health-care access, barriers, facilitators, foregone care, gay men

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Access to health care among young adults between the ages of 18 and 29 in the United States is limited (Janke et al., 2015) due to developmental changes (Arnett, 2000), changes in health-care needs (Chabot, Lewis, de Bocanegra, & Darney, 2011; Marcell, Jagers, Mayden, & Mobley, 2010), and increasing independence from parents and guardians (Coker et al., 2010). In addition to these universal factors, health-care access of young adults varies by sexual orientation (Graham, 2011), gender (Everett & Mollborn, 2014), race and ethnicity (Burgard & Hawkins, 2014; McKirnan, Du Bois, Alvy, & Jones, 2013; Rew, Resnick, & Beuhring, 1999), socioeconomic status (McKirnan et al., 2013), childhood history of health-care access (Austin, Herrick, & Proescholdbell, 2016), income (Andersen et al., 2002; Blackwell, Martinez, Gentleman, Sanmartin, & Berthelot, 2009; Hayes, Riley, Radley, & McCarthy, 2015), insurance coverage (Akosa Antwi, Moriya, & Simon, 2015; Gonzales & Ortiz, 2015),

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enrollment in school (Burgard & Hawkins, 2014), and employment status (Tandon, Marshall, Templeman, & Sonenstein, 2008). For young adult gay men (YAGM), factors that limit access to health care are compounded by possible fear of breeches in confidentiality of health-care services (Coleman et al., 2017; Frerich et al., 2012; Petroll & Mitchell, 2015) as well as lack of provider knowledge about the health-care needs of YAGM (Rowan, DeSousa, Randall, White, & Holley, 2014).

Access to a health-care provider is commonly measured by assessing whether an individual has had a health-care visit in the past 12 months (McKirnan et al., 2013; Mulye et al., 2009). A study based on data from YAGM collected in 2001 in Chicago, Illinois, reported that only 27% of homosexual young adults reported either no annual visits or a minimum of one instance of health-care access (McKirnan et al., 2013). Using annual visits as an indicator of health-care access is limited, as this measure does not differentiate between the type of provider seen or whether the individual has one provider he considers his primary source of health care. Having one provider that acts as a primary care provider (PCP), regardless of type of medicine practiced, may be a more useful indicator to health-care access, as this definition implies both continuity and coordination of primary care and is associated with better future health outcomes (Hargreaves, Elliott, Viner, Richmond, & Schuster, 2015)—especially among sexual minority populations (Alvy et al., 2011; Austin et al., 2016; McKirnan et al., 2013).

The frequency of use of services is another component of health-care access. A recent study using 2003–2011 data from the Medical Expenditure Panel Survey (MEPS) reported that 32.7% of same-sex partnered adult men reported one to two visits and 59.2% reported three or more office visits in the past 12 months (Blosnich, Hanmer, Yu, Matthews, & Kavalieratos, 2016). YAGM may be more likely to seek testing services for sexually transmitted infection (STI) or human immunodeficiency virus (HIV) over comprehensive or primary health-care services due to the preponderance of public health campaigns designed for this population that focus on sexual health services (Everett & Mollborn, 2014; Rowan et al., 2014); however, this does not mean YAGM receive the sexual health screening services they need (Siconolfi et al., 2013).

Foregone care—the choice not to access health-care services despite need—is important in understanding access to health care. A study using data from the MEPS (2003–2011) indicates that 27% of men in a same-sex relationship reported no physician visits in the previous year (Blosnich et al., 2016). Young adults may choose to forego health-care services for similar reasons as adult gay men, including infrequent health-care access, including concerns over cost (Buzi & Smith, 2014; Mulye et al.,

2009; Rowan et al., 2014), lack of time (Agenor, Krieger, Austin, Haneuse, & Gottlieb, 2014; Coker et al., 2010), and believing that the health issue will resolve itself (Buzi & Smith, 2014; Kalmuss & Austrian, 2010; Same, Bell, Rosenthal, & Marcell, 2014). For YAGM, the decision to delay or forego health care may also be influenced by previous experiences of discrimination due to their sexual orientation (Macapagal, Bhatia, & Greene, 2016), lack of provider knowledge about LGBT health-care needs (Bradford, Reisner, Honnold, & Xavier, 2013; Rowan et al., 2014), or the belief that they should prioritize HIV and STI testing services over routine health care (Everett & Mollborn, 2014).

In this article, the authors aim to understand three distinct measures of health-care access: if they have a current PCP, the frequency of health-care visits, and instances of foregone health care. The measures and covariates are situated within the Andersen Model of Healthcare Access (Andersen et al., 2002). Such data provide a broader understanding of gay men's access to care that goes beyond HIV/STI screenings, prevention, and treatment. By examining the relationship between comprehensive health-care access in YAGM, this research study will fill an important gap in the literature.

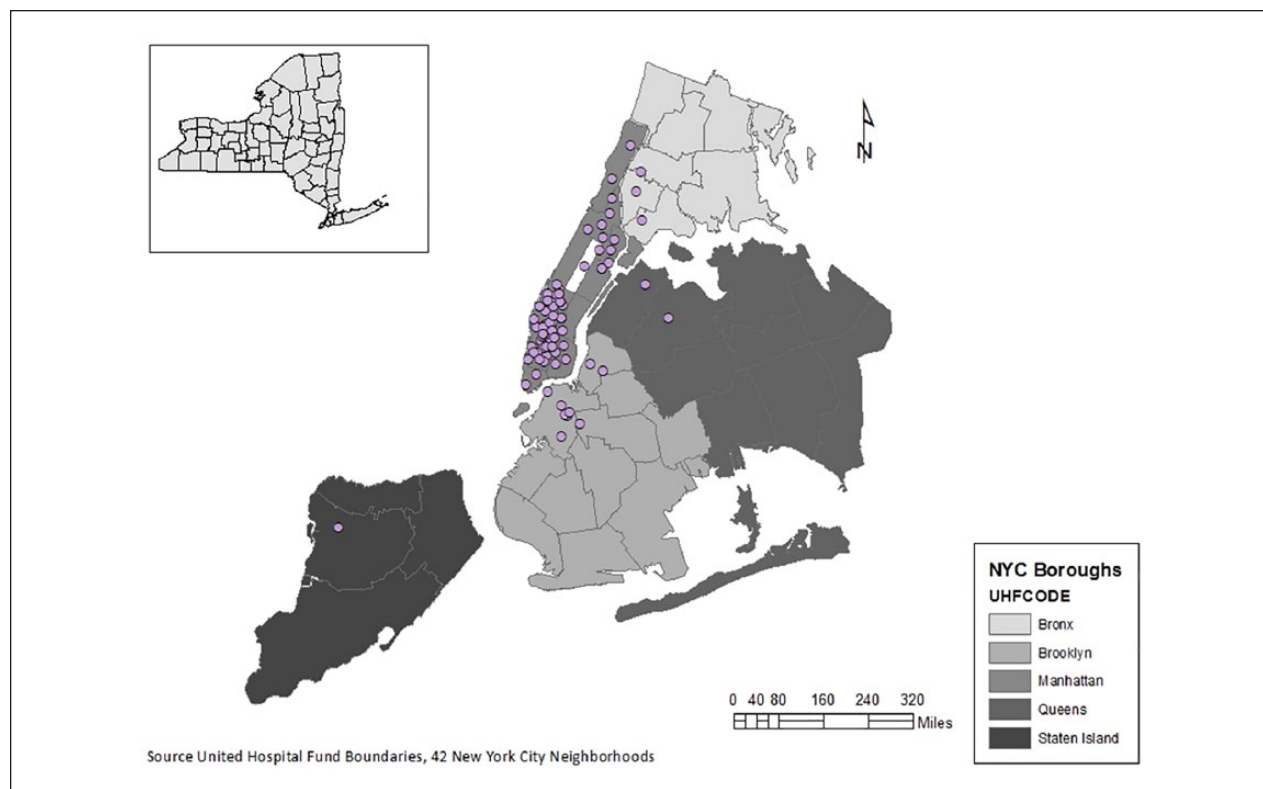
## Methods

### Study Design

The recruitment process began in November 2015 and ended in June 2016 over 131 recruitment events lasting 355 hr. First, a list of 32 LGBT-friendly venues was generated and included LGBT community-based health and social service organizations, a mobile HIV testing van, bars and clubs, LGBT community events, college campuses, and public spaces. For each venue, days and times of operation were collected. From this information, a data set of 564 time-space units was generated. Venues provided a median of 8 time-space units (range 2–106). Using STATA 12.1 (STATA Corp, College Station, TX), the research staff sampled, without replacement, 4 time-space units within strata of 8 weeks, resulting in a sample of 32 time-space units. After the research staff completed recruitment at the initial 32 time-space units, research staff identified the days and times when the largest number of participants were recruited. Figure 1 shows the geographic distribution of the recruitment events in this study.

### Sample

**Procedures.** Individuals were eligible to participate if they were (a) between the ages of 18 and 29, (b) identified as male, (c) identified as gay, (d) lived in the NYC metro area, and (e) reside in the United States during the



**Figure 1.** Location of 131 Healthcare Access Study Recruitment Sites, 2015–2016, New York City.

past 5 years. Research staff approached men in these venues, regardless of perceived age or sexual orientation. During the recruitment conversation, research staff identified themselves as (New York University) research staff, provided information about the study, and told participants they would receive \$5 for completing the 5-min survey. If interested, the individuals were screened using an iPad at the venue where the study event was taking place. In total, 1294 individuals were screened and 800 were eligible to participate in the study. If eligible, all participants provided tacit consent prior to enrollment in the study. Consent was collected via a yes or no option as part of the survey instrument. The response to all consent questions was collected via iPads. Surveys were conducted on iPads using QuickTap (QuickTap, Toronto, Canada) survey software.

**Measures.** Developed in 1974, the Andersen Model of Healthcare Access sought to explain the interplay between health policy, the health-care system, and the populations at risk and their effects on health-care access (Aday & Andersen, 1974). Using this theoretical framework, sociodemographic characteristics were grouped as predisposing factors (age, race/ethnicity, history of regular health-care provider, and disclosure of sexual orientation to their PCP), enabling factors (income, school enrollment,

employment status, insurance status, and disclosure of sexual orientation to friends and family), and need factors (lifetime history of STI/HIV diagnosis and general physical health).

**Predisposing factors.** Participants were asked to report their age using whole integers between 18 and 29. For the purpose of this analysis, self-reported age was dichotomized into two groups: ages 18–24 and 25–29. This dichotomization was used to examine the differences that exist among emerging adult and young adult gay men, as the younger of these two groups may be experimenting with lifestyle choices and establishing their independence from their parents (Arnett, 2000). Race and ethnicity data were collected in seven distinct categories, which were then collapsed into five categories: Hispanic or Latino (including Black Hispanic), Black Non-Hispanic, White Non-Hispanic, Asian/Pacific Islander, and Other (comprised of individuals identifying as American Indian or Native American and biracial, multiracial, or mixed-race individuals). Participants were also asked if they had seen a pediatrician/family doctor on a regular basis growing up (yes/no).

**Enabling factors.** Income was collected using five thousand dollar increments beginning at \$0–\$4,999 up

to \$100,000 and over. Next, income information was dichotomized into two groups: those making less than \$14,999 per year and those making over \$15,000. This dichotomization was based on the 2016 Federal Poverty Level (\$11,880) and Medicaid income level (\$16,394) for New York State (New York State, 2016). Participants were asked if they were currently enrolled in school (yes/no). Participants were also asked about their current employment status and could select employed full-time, employed part-time, and not employed. This was dichotomized into employed or not employed. Participants were asked to indicate if they had public health insurance, private health insurance, or no health insurance. This information was dichotomized into those with insurance coverage and those without. Finally, participants were asked about how many of their friends and family members knew they were gay. Responses were collected on a 5-point Likert scale and dichotomized as *all/most* or *some/few/none*.

**Need factors.** Participants were asked about diagnoses of 10 different STIs (chancroid, chlamydia, cytomegalovirus, herpes, hepatitis B, hepatitis C, human papilloma virus, gonorrhea, nongonococcal urethritis, and syphilis) and HIV made by a medical provider. These responses were collapsed into a new dichotomous variable called lifetime history of STI/HIV diagnosis. Lifetime history of STI/HIV diagnosis is a useful measure to examine health-care need, as sexual health-care services are the primary reason for accessing health care during young adulthood (Durso & Meyer, 2013; Harris, Gordon-Larsen, Chantala, & Udry, 2006; Hoffman, Freeman, & Swann, 2009; Snow et al., 2013). In addition to lifetime STI/HIV diagnosis, participants were also asked to rate their general health status. Responses were collected on a 5-point Likert scale and dichotomized as *excellent/very good* or *good/fair/poor*. Finally, participants were asked if their PCP knew they had sex with men (yes/no).

**Health-care access outcomes.** Current access to health services was assessed for all participants by asking if they have a PCP (yes/no). Participants were asked how often they saw their PCP in the last 12 months and could select from the following responses: less than once, once, two to three times, or four or more times. Responses were dichotomized into two groups: less than once a year and more than once a year. Instances of foregone health care were assessed by asking if there was a time in the past 12 months when they needed health care but did not access services (yes/no).

**Analytic plan.** Descriptive statistics were computed for participant sociodemographic characteristics (age, race/ethnicity, history of regular health-care provider, income,

school enrollment, employment status, insurance status, disclosure of sexual orientation to friends and family, lifetime history of STI/HIV diagnosis and general physical health, and disclosure of sexual orientation to their PCP) and health-care access outcomes (if they have a current PCP, frequency of health-care visits, and instances of foregone care). Prior to bivariate analysis, all variables were dichotomized as previously described. Bivariate analysis included chi-square tests for categorical variables to assess associations at  $p > .05$ . Pearson chi-square tests were used to test associations between dependent and independent variables. Multivariable analysis used multivariable logistic regression to test the relationship between the sociodemographic characteristics and each of the three health-care access outcomes: if they have a current PCP, frequency of health-care visits, and foregone care. All analyses were conducted with SPSS version 23 (IBM Corporation, Armonk, New York).

## Results

### Sample Characteristics

**Predisposing factors.** The analytic sample consisted of 800 gay men who met the eligibility requirements. Table 1 describes the sociodemographic characteristics of the sample. The sample was comprised of equal parts of 18–24 year olds (50%,  $n = 400$ ) and 25–29 year olds (49.9%,  $n = 399$ ;  $M = 24.22$ ,  $SD = 4.26$ ). The racial and ethnic background of participants in this sample was largely non-White with the majority of participants self-identifying as Black Non-Hispanic (35.8%,  $n = 286$ ) or Hispanic/Latino (31.9%,  $n = 225$ ). Further, 86.4% ( $n = 691$ ) of the sample reported having regular access to a pediatrician during childhood.

**Enabling factors.** Slightly more than a quarter of the sample lived on less than \$14,999 (31.1%,  $n = 249$ ) although 10.5% ( $n = 84$ ) of participants refused to answer the question. Only one-third (33.3%,  $n = 266$ ) of the sample were currently enrolled in school. Nearly four-fifths (78.6%,  $n = 694$ ) of the sample were currently employed. The majority of participants had health insurance coverage (86.7%,  $n = 694$ ). Nearly three-fourths had disclosed their sexual orientation to all or most of their friends and family (74.0%,  $n = 592$ ).

**Need factors.** Among the sample, 39.5% ( $n = 316$ ) of the participants reported being diagnosed with at least one STI or HIV during their lifetime. Of the sample, 73.9% ( $n = 591$ ) reported a general status of excellent or very good. The majority of the participants (90.5%,  $n = 559$ ) disclosed their sexual orientation to their PCP.



**Table 1.** Sociodemographic Characteristics of Participants Enrolled in a Study of Health-Care Access;  $n = 800$ , 2015–2016, New York City.

	%	N
Age ( $M = 24.22$ , $SD = 4.26$ , range 18–29)		
18–24	50.0	400
25–29	49.9	399
Missing	0.1	1
Race/ethnicity		
Hispanic/Latino	31.9	255
Black Non-Hispanic	35.8	286
White Non-Hispanic	20.5	164
Asian/Pacific Islander Non-Hispanic	4.4	35
Other Non-Hispanic <sup>a</sup>	3.5	28
Missing	4.0	32
Regular access to pediatrician		
Yes	86.4	691
No	13.6	109
Income		
\$0–\$14,999	31.1	249
\$15,000–\$100,000 and over	58.4	467
Missing	10.5	84
School enrollment		
No	66.6	533
Yes	33.3	266
Missing	0.1	1
Employment status		
Employed	78.6	629
Not employed	20.4	163
Missing	1.0	8
Insurance status		
Insured	86.7	694
Uninsured	10.3	82
Missing	3.0	24
Disclosure to friends/family		
All/most	74.0	592
Some/few/none	25.1	201
Missing	4.3	7
Lifetime history of STI/HIV diagnosis		
Yes	39.5	316
No	60.5	484
General health status		
Excellent/very good	73.9	591
Good/fair/poor	26.1	209
Disclosure to PCP		
Yes	69.9	559
No	7.3	58
Missing	22.9	183

Note. PCP = primary care provider; STI = sexually transmitted infection; HIV = human immunodeficiency virus. <sup>a</sup>Comprised of individuals identifying as American Indian or Native American and biracial, multiracial, or mixed race individuals.

**Health-care access outcomes.** Table 2 describes the health-care access outcomes characteristics of the sample;

77.3% ( $n = 618$ ) of participants had a current PCP. Of the 618 participants who had a PCP, 94.8% ( $n = 568$ ) reported seeing their provider at least once a year. This means that 71% ( $n = 568$ ) of the total analytic sample had at least one visit in the previous 12 months. One-fifth (20.3%,  $n = 162$ ) of the men in this sample reported an instance of foregone care despite needing services at some point in the past 12 months.

### Bivariate Analysis

Table 3 presents the results of the tests of association between the dependent and independent variables. Having a current PCP was associated with having had regular access to a pediatrician as a child ( $\chi^2(1) = 6.44$ ,  $p = .011$ ). Those with a current PCP were more likely to report having had regular access to a pediatrician (88%,  $n = 544$ ) in childhood as compared to those who did not have a current PCP (80.7%,  $n = 146$ ). There was a strong association between having a current PCP and school enrollment ( $\chi^2(1) = 14.63$ ,  $p < .001$ ). Compared to those who did not have a PCP, participants who had a PCP were more likely to be in school (36.8%,  $n = 227$ ) compared to those who were not in school (21.5%,  $n = 39$ ). Having a current PCP was also associated with having insurance ( $\chi^2(1) = 180.40$ ,  $p < .001$ ); participants who had a current PCP were more likely to have insurance (97.3%,  $n = 579$ ) than those that did not have a PCP (61.2%,  $n = 104$ ). Lastly, there was a strong association between having a current PCP and general health status ( $\chi^2(1) = 5.92$ ,  $p = .015$ ). Participants who had a current PCP were more likely to report having excellent/very good health (75.9%,  $n = 469$ ) as compared to those who did not have a PCP (66.9%,  $n = 121$ ).

Having more than one visit to a PCP within a year was associated with certain racial and ethnic groups ( $\chi^2(4) = 15.05$ ,  $p = .005$ ). Hispanic/Latino and Black Non-Hispanic (34.0%,  $n = 160$  and 37.9%,  $n = 178$ , respectively) participants were more likely to report more than one visit to their PCP than White Non-Hispanic, Asian, or other racial groups (16.8%,  $n = 79$ , 4.3%,  $n = 20$  and 6.3%,  $n = 20$ , respectively). More frequent visits to a PCP were also associated with insurance status ( $\chi^2(1) = 5.16$ ,  $p = .023$ ). Those who had insurance (98%,  $n = 451$ ) were more likely to report more than one visit to a PCP in a year compared to those who had less than one visit to a PCP in a year (94.3%,  $n = 115$ ). There was a strong association between lifetime STI/HIV diagnosis and more frequent visits to a PCP ( $\chi^2(1) = 16.01$ ,  $p < .001$ ). Among participants, 43.1% ( $n = 204$ ) of those with an STI/HIV diagnosis had more than one health-care visit in the past year, compared to those who had less than one health-care visit in the past year (23.6%,  $n = 30$ ). Disclosure of sexual orientation to a PCP was also strongly associated

**Table 2.** Current PCP, Frequency of Health-Care Visits, and Instances of Foregone Care of Participants Enrolled in a Study of Health-Care Access;  $n = 800$ , 2015–2016, New York City.

	%	$n = 800$
Current PCP		
Yes	77.3	618
No	22.6	181
Missing	0.1	1
Frequency of health-care visits <sup>a</sup>		
Less than once a year	15.9	127
More than once a year	59.1	473
Missing	25	200
Instances of foregone health care		
Yes	20.3	162
No	79.8	638

Note. PCP = primary care provider. <sup>a</sup>Only participants that reported having a current PCP were asked about frequency of health-care visits ( $n = 618$ ).

with more frequent health-care visits ( $\chi^2(1) = 16.06$ ,  $p < .001$ ). Participants who disclosed their sexual orientation to their PCP had more than one health-care visit per year (93.9%,  $n = 104$ ), as compared to only 6.1% ( $n = 29$ ) of those who did not disclose their sexual orientation to their PCP.

Foregone care was associated with school enrollment ( $\chi^2(1) = 5.08$ ,  $p = .024$ ). Among participants who had an instance of foregone care in the past year, 40.7% ( $n = 66$ ) were enrolled in school, and 59.3% ( $n = 96$ ) were not in school. There was a strong association between insurance status and foregone care; 75.5% ( $n = 117$ ) of those with insurance coverage had an instance of foregone care, compared to 92.8% ( $n = 567$ ) of those without health insurance ( $\chi^2(1) = 38.78$ ,  $p < .001$ ). Finally, those with a lifetime STI/HIV diagnosis were less likely to have an instance of foregone care (47.5%,  $n = 77$ ) than those who had never received an STI/HIV diagnosis (52.5%,  $n = 85$ ) ( $\chi^2(1) = 5.48$ ,  $p = .019$ ).

### Multivariable Analysis

The final multivariable logistic regression models for having a PCP, frequency of health-care visits, and instance of foregone care are presented in Table 4. The model for having a PCP achieved significance ( $\chi^2(4) = 156.02$ ,  $p < .001$ ) with Nagelkerke  $R^2 = 28.2\%$ . In the final multivariable logistic regression model for having a PCP, the odds of reporting having a PCP were higher among those who were enrolled in school (Adjusted Odds Ratio [AOR] = 1.85, 95% CI [1.18, 2.91],  $p < .01$ ) and among those who had health insurance (AOR = 21.29, 95% CI [11.77, 38.53],  $p < .001$ ).

The model for frequency of health-care visits achieved significance ( $\chi^2(4) = 43.17$ ,  $p < .001$ ) with Nagelkerke  $R^2 = 11.2\%$ . Non-White participants were more likely to have more than one health visit in the past 12 months (AOR = 2.27, 95% CI [1.43, 3.63],  $p < .001$ ). Participants with health insurance were also more likely to have more than one health visit in the past 12 months (AOR = 3.10, 95% CI [1.06, 9.04],  $p < .05$ ). Those with a lifetime history of STI/HIV diagnosis were more likely to have more than one health visit in the past 12 months (AOR = 2.15, 95% CI [1.34, 3.44],  $p < .01$ ). Additionally, participants who disclosed their sexual orientation to their PCP were more likely to have more than one health visit in the past 12 months (AOR = 2.99, 95% CI [1.58, 5.69],  $p < .001$ ).

The final multivariable logistic regression model for instances of foregone care achieved significance ( $\chi^2(3) = 47.28$ ,  $p < .001$ ) with Nagelkerke  $R^2 = 9.4\%$ . Participants who were enrolled in school were more likely to have reported an instance of foregone care at least once in the past 12 months (AOR = 1.81, 95% CI [1.23, 2.66],  $p < .05$ ). Participants with health insurance were less likely to report an instance of foregone care at least once in the past 12 months (AOR = 0.21, 95% CI [0.21, 0.13],  $p < .001$ ). Finally, those with a lifetime history of STI/HIV diagnosis were more likely to report having an instance of foregone care at least once in the past 12 months (AOR = 1.73, 95% CI [1.19, 2.53],  $p < .01$ ).

### Discussion

Previous studies of health-care access among YAGM have largely focused on their access to sexual health services (Dahlhamer, Galinsky, Joestl, & Ward, 2016; Koester et al., 2013; Rowan et al., 2014). Findings from the health-care access study provide a more comprehensive understanding of health-care access among YAGM across three distinct measures: having a PCP, frequency of health-care visits, and instances of foregone health care.

Situating study findings within the Andersen Model of Healthcare Access, the only predisposing factor that impacts health-care access is race. Non-White participants were also more likely to have more than one health visit in the past 12 months. A study by Mulye et al. (Mulye et al., 2009) reported that Black Non-Hispanic and Hispanic participants had a lower percentage of visits to private providers in the past year than their White Non-Hispanic counterparts; however, the analysis of emergency room visits in this study aligns with the results of this study. Differences in measurement between the Mulye et al. study (2009) and the health-care access study may account for the discordant findings. In the current study, frequency of health-care visits was assessed across all facility types.

**Table 3.** Sociodemographic Characteristics by Current PCP, Frequency of Health-Care Visits, and Instances of Foregone Care of Participants Enrolled in a Study of Health-Care Access;  $n = 800$ , 2015–2016, New York City.

	Current PCP			Frequency of health-care visits			Instances of foregone health care		
	Yes % (n)	No % (n)	<i>p</i> value	>1 time % (n)	<1 time % (n)	<i>p</i> value	Yes % (n)	No % (n)	<i>p</i> value
Age			.865			.911			.470
18–24	50.2 (310)	49.4 (89)		49.0 (232)	49.6 (63)		47.5 (77)	50.7 (323)	
25–29	49.8 (308)	50.6 (91)		51.0 (241)	50.4 (64)		52.5 (85)	49.3 (314)	
Race/ethnicity			.666			.005			.174
Hispanic/Latino	32.2 (198)	31.1 (56)		34.0 (160)	27.0 (34)		38.5 (62)	30.4 (193)	
Black Non-Hispanic	37.1 (227)	32.8 (59)		37.9 (178)	29.4 (37)		35.4 (57)	36.1 (229)	
White Non-Hispanic	19.5 (120)	24.4 (44)		16.8 (79)	31.7 (40)		16.1 (26)	21.8 (138)	
Asian/Pacific Islander	4.4 (27)	4.4 (8)		4.3 (20)	5.6 (7)		2.5 (4)	4.9 (31)	
Other	6.8 (42)	7.2 (13)		6.3 (8)	7.0 (33)		7.5 (12)	6.8 (43)	
Regular access to pediatrician			.011			.662			.128
Yes	88.0 (544)	80.7 (146)		88.8 (420)	87.4 (111)		82.7 (134)	87.3 (557)	
No	12.0 (74)	19.3 (35)		11.2 (53)	12.6 (16)		17.3 (28)	12.7 (81)	
Income			.470			.930			.673
\$0–\$14,999	35.4 (196)	32.3 (52)		34.4 (146)	33.9 (39)		36.2 (54)	34.4 (195)	
\$15,000 and over	64.6 (358)	67.7 (109)		65.6 (279)	66.1 (76)		63.8 (95)	65.6 (372)	
School enrollment			<.001			.590			.024
Yes	36.8 (227)	21.5 (39)		36.4 (172)	33.9 (43)		40.7 (66)	31.4 (200)	
No	63.2 (390)	78.5 (142)		63.6 (300)	66.1 (84)		59.3 (96)	68.6 (437)	
Employment status			.634			.494			.839
Employed	79.2 (486)	80.8 (143)		79.0 (372)	81.7 (103)		80.0 (128)	79.3 (501)	
Not employed	20.8 (128)	19.2 (34)		21.0 (99)	18.3 (23)		20.0 (32)	20.7 (131)	
Insurance status			<.001			.023			<.001
Insured	97.3 (579)	61.2 (104)		98.0 (451)	94.3 (115)		75.5 (117)	92.8 (567)	
Uninsured	2.7 (16)	38.8 (66)		2.0 (9)	5.7 (7)		24.5 (38)	7.2 (44)	
Disclosure to friends/family			.973			.241			.656
All/most	74.6 (458)	74.7 (133)		76.0 (357)	70.9 (90)		73.3 (118)	75.0 (474)	
Some/few/none	25.4 (156)	25.3 (45)		24.0 (113)	29.1 (37)		26.7 (43)	25.0 (158)	
Lifetime history of STI/HIV diagnosis			.251			<.001			.019
Yes	38.3 (237)	43.1 (78)		43.1 (204)	23.6 (30)		47.5 (77)	37.5 (239)	
No	61.7 (381)	56.9 (103)		56.9 (269)	76.4 (97)		52.5 (85)	62.5 (339)	
General health status			.015			.648			.053
Excellent/very good	75.9 (469)	66.9 (121)		76.7 (363)	74.8 (95)		67.9 (110)	75.4 (481)	
Good/fair/poor	24.1 (149)	33.1 (60)		23.3 (110)	35.2 (32)		32.1 (52)	24.6 (157)	
Disclosure to PCP			<sup>a</sup>			<.001			.366
Yes	100 (559)	100 (58)		93.9 (443)	82.7 (105)		92.9 (104)	90.1 (455)	
No	<sup>a</sup>	<sup>a</sup>		6.1 (29)	17.3 (22)		7.1 (8)	9.9 (50)	

Note. PCP = primary care provider; STI = sexually transmitted infection; HIV = human immunodeficiency virus. <sup>a</sup>Statistics not computed based on skip logic.

The data indicate that enabling factors are the predominant influence on health-care access. Unsurprisingly, insurance status was related to all three measures of health-care access. Participants with health insurance were more likely to have a PCP, have more frequent health-care visits, and less likely to have an instance of

foregone care. Numerous studies have demonstrated the positive relationship between health insurance and access to care (Karpman, Skopec, & Long, 2015; McKirnan et al., 2013; Sommers, Buchmueller, Decker, Carey, & Kronick, 2013), more frequent visits (Blosnich et al., 2016; Macapagal et al., 2016; Mulye et al., 2009), and

**Table 4.** Multivariable Logistic Regression Models Examining Associations Between Sociodemographic and Health-Related Factors and Current PCP, Frequency of Health-Care Visits, and Instances of Foregone Care of Participants Enrolled in a Study of Health-Care Access;  $n = 800$ , 2015–2016, New York City.

	Unadjusted model			Adjusted model		
	OR	95% CI	<i>p</i> value	OR	95% CI	<i>p</i> value
<b>Current PCP</b>						
Age	0.97	[0.70, 1.35]	.865	–	–	–
Race/ethnicity	1.33	[0.90, 1.98]	.154	–	–	–
Regular access to pediatrician	1.76	[1.13, 2.74]	.012	1.25	[0.72, 2.18]	.431
Income	0.87	[0.60, 1.27]	.470	–	–	–
School enrollment	2.12	[1.43, 3.13]	<.001	1.85	[1.18, 2.91]	.008
Employment status	0.90	[0.59, 1.38]	.634	–	–	–
Insurance status	22.97	[12.80, 41.21]	<.001	21.29	[11.77, 38.53]	.001
Disclosure to friends/family	0.99	[0.68, 1.46]	.973	–	–	–
Lifetime history of STI/HIV diagnosis	0.82	[0.59, 1.15]	.251	–	–	–
General health status	1.56	[1.09, 2.24]	.015	1.22	[0.79, 1.88]	.373
Disclosure to PCP	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	–	–	–
<b>Frequency of health-care visits</b>						
Age	1.02	[0.69, 1.51]	.911	–	–	–
Race/ethnicity	2.30	[1.47, 3.60]	<.001	2.27	[1.43, 3.63]	.001
Regular access to pediatrician	1.14	[0.63, 2.08]	.662	–	–	–
Income	0.98	[0.64, 1.52]	.930	–	–	–
School enrollment	1.12	[0.74, 1.69]	.590	–	–	–
Employment status	0.84	[0.51, 1.39]	.495	–	–	–
Insurance status	3.05	[1.11, 8.36]	.030	3.10	[1.06, 9.04]	.038
Disclosure to friends/family	1.30	[0.84, 2.01]	.0241	–	–	–
Lifetime history of STI/HIV diagnosis	2.45	[1.57, 3.84]	<.001	2.15	[1.34, 3.44]	.002
General health status	1.11	[0.71, 1.75]	.648	–	–	–
Disclosure to PCP	3.20	[1.77, 5.80]	<.001	2.99	[1.58, 5.69]	.001
<b>Instances of foregone care</b>						
Age	1.14	[0.80, 1.60]	0.471	–	–	–
Race/ethnicity	1.45	[0.91, 2.29]	0.117	–	–	–
Regular access to pediatrician	0.70	[0.44, 1.11]	0.130	–	–	–
Income	0.92	[0.63, 1.34]	0.673	–	–	–
School enrollment	1.50	[1.05, 2.14]	0.025	1.81	[1.23, 2.66]	.003
Employment status	1.05	[0.68, 1.61]	0.839	–	–	–
Insurance status	0.24	[0.15, 0.39]	<.001	0.21	[0.21, 0.13]	<.001
Disclosure to friends/family	0.92	[0.62, 1.36]	0.657	–	–	–
Lifetime history of STI/HIV diagnosis	1.51	[1.07, 2.14]	0.020	1.73	[1.19, 2.52]	.004
General health status	0.69	[0.47, 1.01]	0.053	–	–	–
Disclosure to PCP	1.43	[0.66, 3.10]	0.368	–	–	–

Note. PCP = primary care provider; STI = sexually transmitted infection; HIV = human immunodeficiency virus. <sup>a</sup>Statistics not computed based on skip logic.

fewer instances of foregone care (Burgard & Hawkins, 2014; Ford, Bearman, & Moody, 1999; Macapagal et al., 2016).

Lastly, need factors also influence health-care access. Participants with a lifetime history of STI/HIV diagnosis had more frequent health-care visits. Conversely, those with a lifetime history of STI/HIV diagnosis were also more likely to have an instance of foregone care. A study by Elliott and Larsen (Elliott & Larson, 2004) confirmed

the link between adolescents who indicated a need for STI-related care but did not access the care they needed and indicates that even if the risk is known, adolescents regardless of sexual orientation may still choose not to access care. Participants with a better general health status were also more likely to have a PCP. A study by Gorman et al. (Gorman, Denney, Dowdy, & Medeiros, 2015) identified that gay men who report a higher general health status and are more likely to have a PCP when compared to



heterosexual men and other sexual minority groups. Whitehead, Shaver, and Stephenson (2016) examined the effect of disclosure of sexual orientation to PCP on the frequency of health-care visits. The result of their study indicates that higher levels of disclosure were related to more frequently access to health-care services among gay men (Whitehead et al., 2016). Disclosure of sexual orientation establishes a personal relationship between patient and provider and allows for the provision of relevant screening and preventive services that YAGM need.

A particular strength of the health-care access study is that all data were collected after the full implementation of the 2010 Patient Protection and Affordable Care Act (ACA). The future of the ACA and health-care legislation in the United States is uncertain. Proposed legislation to repeal the Affordable Care Act by the House of Representatives (Kaplan & Pear, 2017), multiple failed attempts in the Senate (Park, Parlapiano, & Sanger-Katz, 2017), and additional calls from the President to pass health-care legislation despite the failure in the Senate (Haberman, 2017) add to this uncertainty. The Justice Department has also concurrently indicated that the Title VII does not protect employees from discrimination based on sexual orientation (Feuer, 2017). Changes in health-care policy, coupled with a rise in anti-LGBT legislation (Thompson, 2015; Wang, Geffen, & Cahill, 2016), will likely disproportionately affect the health-care access of YAGM. Each of these proposed policy changes may further restrict health-care access of YAGM by allowing insurance companies to deny coverage on the basis of sexual orientation. This would likely reverse the gains made in the uninsured rates of LGBT adults as a result of the nondiscrimination protections included in the ACA (Karpman et al., 2015). By examining health-care access across these three distinct measures, this study creates an important baseline by which to measure the effect of future health-care policy.

## Limitations

This study is not without limitations. First, this study relies on self-reported data and are subject to social desirability, recall, and information bias. Since surveys were conducted on the street, at social venues, or at street festivals, it is possible that participants reported perceived favorable answers to avoid accidental disclosure of health information to passersby. In addition, men in these venues are more likely to openly identify as gay men. Second, the study was not able to assess the type of provider participants think of as their PCP. Third, the study was not able to differentiate why participants chose to forego care. Fourth, due to the street-intercept data collection methodology, the study team could not administer a longer survey that would have included additional

questions on nonsexual health states and outcomes. Last, this study is conducted in NYC where there are myriad options for free or low-cost health care. The availability of health-care services—regardless of ability to pay—may weaken the generalizability of this study to other geographic locations that do not have a similar health-care infrastructure. Despite these limitations, this study contributes to the available literature about health-care access and foregone care among YAGM populations.

## Implications and Contribution

This article contributes to the extant literature on health-care access among young adults by examining the comprehensive health-care access among YAGM. Previous studies of health-care access among this population have largely focused either on barriers to health-care access such as health insurance coverage or on sexual health-care needs exclusively. Results from this study can be used to inform medical training as well as health education programs.

## Declaration of Conflicting Interests

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