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## Healthcare usage and satisfaction among young adult gay men in New York city

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### ABSTRACT

Satisfaction greatly impacts decisions about where and how to access healthcare. This cross-sectional study uses data gathered from young adult gay men in New York City. Findings indicate that participants who experienced discrimination in a healthcare setting were less likely to prefer coordinated healthcare. Participants who disclosed their sexual orientation and were comfortable discussing sexual activity with their provider were more likely to agree that their healthcare needs were adequately addressed. The healthcare system does not fully address the healthcare needs of gay men. Preferences for coordination of care, nondisclosure of sexual orientation, and low levels of satisfaction with services further discourage healthcare usage among this population.

### KEYWORDS

Gay men; healthcare access; healthcare setting; homophobia; provider characteristics

## Introduction

Dissatisfaction with healthcare greatly influences healthcare usage. Dissatisfaction with healthcare stems from many sources, but the most common are because of instances of discrimination based on a patient's racial/ethnic background (Armstrong et al., 2013; Eaton et al., 2015), economic status (Blackwell, Martinez, Gentleman, Sanmartin, & Berthelot, 2009; Newacheck, Hung, Park, Brindis, & Irwin, 2003), or sexual orientation (Hoffman, Freeman, & Swann, 2009; Quinn et al., 2015; Rachlin, Green, & Lombardi, 2008; Snow et al., 2013). Studies show that when a patient has had a previous experience of discrimination in a healthcare setting, they may not choose a primary care provider as their usual source of

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healthcare (Blosnich, Hanmer, Yu, Matthews, & Kavalieratos, 2016; Griffin-Tomas et al., 2019), intentionally fragment healthcare services (Armstrong et al., 2013; Graham et al., 2011; Hoffman et al., 2009; Petroll & Mitchell, 2015; Rachlin et al., 2008) and be dissatisfied with healthcare services (Adams, Kenney, & Galactionova, 2013; Griffin, Krause, Kapadia, & Halkitis, 2018; Koester et al., 2013; Martos, Wilson, Gordon, Lightfoot, & Meyer, 2018; Mayer et al., 2008). Intentional fragmentation of healthcare services refers to the explicit decision to seek sexual healthcare services from a separate provider or clinical setting than the individual's usual source of healthcare (Koester et al., 2013).

Studies examining the type of facility used as a usual source of healthcare found that young adult gay men (YAGM) report using public facilities (Macapagal, Bhatia, & Greene, 2016) or emergency rooms (Koester et al., 2013) as a usual sources of healthcare more frequently than their heterosexual counterparts (Blosnich et al., 2016). The facility type that serves as an individual's usual source of healthcare may indicate the level of healthcare coordination they receive, especially if an individual makes extensive use of walk-in healthcare facilities like emergency rooms and urgent care clinics. Private doctors and community health clinics are able to provide preventive care, indicated screenings, and treatment for a variety of chronic, infectious, and preventive health needs. In contrast, specialty clinics (e.g. STI testing facilities) only provide one type of healthcare service. Use of specialty clinics may be related to convenience of services, but for some, the choice to separate one type of care from their primary care may be intentional, especially for sexual health needs (Brindis, 2002; Chabot, Lewis, de Bocanegra, & Darney, 2011).

YAGM often intentionally separate sexual healthcare services from primary care services due to discomfort discussing sexual issues with their primary care provider (PCP) (Koester et al., 2013) and prior experiences of discrimination based on sexual orientation or behavior (Armstrong et al., 2013; Graham et al., 2011; Hoffman et al., 2009; Petroll & Mitchell, 2015; Rachlin et al., 2008). For YAGM, sexual orientation may facilitate access to sexual healthcare but not primary care (Graham et al., 2011; Koester et al., 2013). Although YAGM choose to fragment sexual healthcare from primary care, studies indicate that there is a preference to coordinate healthcare if they are satisfied with the sexual healthcare provided by their PCP (Koester et al., 2013). Fragmentation of healthcare services creates missed opportunities for early diagnosis of chronic health issues such as cancer (Berry et al., 2014; Cochran, Mays, & Sullivan, 2003; Graham et al., 2011), as well as for mental health issues (Graham et al., 2011; Mustanski, Andrews, Herrick, Stall, & Schnarrs, 2014; Storholm, Satre, Kapadia, & Halkitis, 2015).

Higher levels of dissatisfaction with healthcare services may be a result of fragmenting of healthcare services (Koester et al., 2013; Mayer et al., 2008).

Extant literature has identified two themes in the provision of healthcare services once gay patients disclose their sexual orientation: providers focus nearly exclusively on HIV prevention (Adams, Kenney, et al., 2013; Griffin et al., 2018; Rowan, DeSousa, Randall, White, & Holley, 2014) or providers are not trained on the healthcare needs of gay men and patients must then educate their providers (Griffin et al., 2018; Martos et al., 2018). Lack of knowledge of gay men's health issues translates to inappropriate screening and prevention services. Examples of this include the low levels of HPV vaccination among gay men (Oliver et al., 2017) and site-specific STI testing among gay men (Berry et al., 2015; Danby et al., 2016; Drinkard, Huxta, Halbritter, Nguyen, & Malebranche, 2017).

Understanding healthcare usage and satisfaction among YAGM is critical to improving the quality of healthcare services provided to this population. While the extant literature includes studies of healthcare usage and satisfaction among YAGM, the current study contributes to the burgeoning literature by examining these issues in a large urban area in the United States. Furthermore, previous studies examine healthcare usage but do not consider the interplay between the three distinct factors that contribute to the pattern of access: facility type used as usual source of healthcare, preference for coordinated healthcare, and satisfaction with care provided. By examining these three factors in conjunction with healthcare usage, a patient's decision-making process when accessing healthcare will be better understood. These findings can be used in practice to inform provider training and clinic flow procedures.

## **Materials and methods**

### ***Study design***

The methodology of this study has been described in greater detail in previous paper (Griffin-Tomas, Cahill, Kapadia, & Halkitis, 2019). Briefly, the Healthcare Access Study is a cross-sectional survey of 800 YAGM in New York City (NYC) between the ages of 18–29. Trained research staff recruited participants at LGBT-friendly venues, including community events, college campuses, health and social service organizations, public spaces, health outreach events, and nightclubs using a modified time-space sampling methodology. The participant recruitment process for this cross-sectional study began in November 2015 and ended in June 2016.

This study was funded by The New York State Department of Health AIDS Institute (Contract Number T030337). The XXX Committee on Activities Involving Human Subjects (UCAIHS) approved the study protocol (IRB Number 10-6802).

### **Sample**

Participants were eligible to participate if they were (1) between the ages of 18 and 29, (2) identified as male, (3) identified as gay, (4) lived in the NYC metro area, and (5) resided in the United States during the past five years. The sample was restricted to gay men between the ages of 18 and 29 as the period of young adulthood is period in an individual's life that is marked by developmental changes (Arnett, 2000) including greater independence from parents and guardians (Coker et al., 2010). Furthermore, sexual healthcare services are the primary reason for healthcare access during the earlier period of young adulthood (Durso & Meyer, 2013; Harris, Gordon-Larsen, Chantala, & Udry, 2006; Hoffman et al., 2009; Snow et al., 2013); however, healthcare needs shift during the later years of young adulthood to include emerging chronic disease prevention needs (Chabot et al., 2011; Marcell, Jagers, Mayden, & Mobley, 2010).

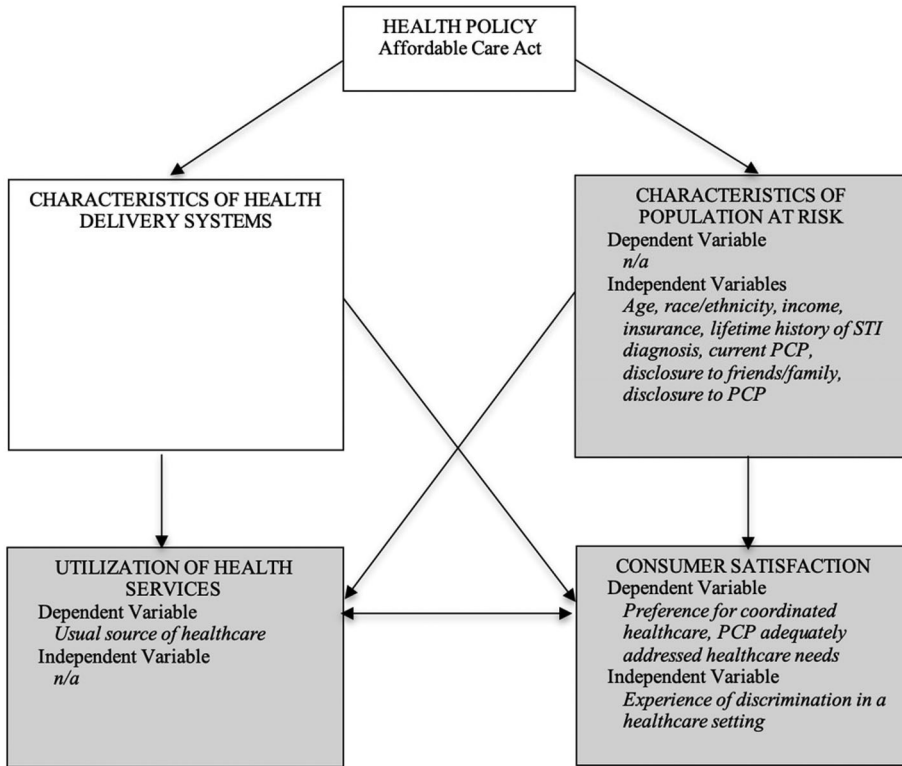
### **Procedures**

Research staff approached men in these venues, regardless of perceived eligibility for participation in this study. All staff followed a similar recruitment script that identified them as researchers from New York University, provided information about the study, and informed potential participants they would receive \$5 for taking the five-minute survey. All interested men were screened using iPads.

All surveys were conducted through QuickTap (QuickTap, Toronto, Canada) software on iPads. Participants consented and self-administered the survey. Studies have shown that computer-assisted self-interviews (CASI) survey administration increases the likelihood that individuals will report accurate information about sensitive topics (i.e., sexual activity and orientation) (Tourangeau & Smith, 1996; Turner et al., 1998). The CASI system allows for greater respondent privacy and reduces social influences from peers, interviewers, and reduces embarrassment (Gribble, Miller, Rogers, & Turner, 1999). Four iPads were employed to collect the data.

### **Measures**

All data in this study are self-reported. The theoretical basis of this study is rooted in the Andersen Model of Healthcare Access. [Figure 1](#) maps the variables in this study onto the Andersen Model of Healthcare Access. Following this model, all sociodemographic characteristics were classified as predisposing factors (age, race/ethnicity, and experience of discrimination in a healthcare setting), enabling factors (income and insurance status), and need factors (lifetime history of STI/HIV diagnosis, disclosure of their



**Figure 1.** Factors related to healthcare access explored in this study as they relate to the Anderson model of healthcare access.

sexual orientation to their PCP, and their comfort when discussing sexual activity with their PCP).

**Predisposing factors**

Participants were asked to report their age. For this study, age was dichotomized into two groups: ages 18–24 and 25–29, as the period of emerging adulthood (ages 18–24) is marked by greater experimentation while establishing independence from their parents or guardians (Arnett, 2000). Participants reported their racial and ethnic background in seven distinct categories by selecting all that applied. Participants that identified as American Indian or Native American and bi-racial, multiracial, or mixed-race individuals were collapsed into a category named “other.” The remaining five categories are: Hispanic or Latino, Black Non-Hispanic, White Non-Hispanic, and Asian/Pacific Islander. Participants were asked about prior experiences of discrimination in a healthcare setting based on their racial/ethnic background, sexual orientation, or economic status (yes/no) in three discrete questions. Based on these responses, a new dichotomous variable was created that captured any experience of discrimination in a

healthcare setting. The experiences of discrimination in a healthcare setting were collapsed, as less than 20% of the sample had experienced discrimination based on their race/ethnicity (18%,  $n = 144$ ), sexual orientation (18.4%,  $n = 147$ ), or socio-economic status (15.6%,  $n = 125$ ).

### ***Enabling factors***

Participants were asked to report their annual income. For this study, the two income groups in the analysis were those making less than \$14,999 and those making over \$15,000 based on the New York State, 2016 Federal Poverty Level (\$11,880) and Medicaid income level (\$16,394) (State, 2016). Health insurance data were collected in three discrete categories: public health insurance, private health insurance, and no health insurance. These data were collapsed into a dichotomous variable: those with health insurance coverage and those without health insurance coverage.

### ***Need factors***

Participants were asked about their lifetime history of ten sexually transmitted infections (STI), including: chancroid, chlamydia, cytomegalovirus, herpes, hepatitis B, hepatitis C, human immunodeficiency virus (HIV), human papilloma virus, gonorrhea, nongonococcal urethritis, and syphilis. Responses were collapsed into a dichotomous variable that differentiated between diagnosis with any STI including HIV and no history of STI or HIV diagnosis. Participants were asked if they had a PCP, and this information was collected dichotomously (yes/no). Disclosure of sexual orientation to their PCP was also collected dichotomously (yes/no). Finally, participants were asked how comfortable they were discussing their sexual activity with their PCP. Responses were collected on a five-point Likert scale and dichotomized as very comfortable/comfortable and neither comfortable or uncomfortable/uncomfortable/very uncomfortable.

### ***Healthcare usage and satisfaction outcomes***

Participants were asked what type of healthcare facility they used as their usual source of care. Response choices included: private doctor, community health center, hospital, emergency room, urgent care facility/walk-in clinic, STI clinic, or other source. These responses were collapsed into two groups: private doctor/community health center and walk-in facilities (including hospitals, emergency rooms, urgent care facilities, STI clinics, and other sources of care). Private doctors and community health centers were combined as healthcare services provided in these two healthcare facility types most closely resemble patient-centered medical homes. Healthcare services in these settings are either provided by one healthcare provider or allow

for personal referrals to collocated services (Ader et al., 2015). In contrast, hospital, emergency room, urgent care facilities and STI clinics were combined as services offered at these facilities are not provided by the same provider across visits and these types of healthcare facilities are not designed to provide long-term care for patients. Participants were asked to indicate their level of agreement that they would prefer to access all their healthcare, including HIV/STI care, at one place. Responses were collected on a five-point Likert scale and dichotomized as strongly agree/agree and neutral/disagree/strongly disagree. Last, satisfaction with the care received from their current PCP was collected on a five-point Likert scale and dichotomized as very satisfied/satisfied and neither/dissatisfied/very dissatisfied.

### ***Analytic plan***

Univariate analysis was conducted to describe participant sociodemographic characteristics (age, race/ethnicity, experience of discrimination in a healthcare setting, income, insurance status, lifetime history of STI/HIV diagnosis, disclosure of sexual orientation to their PCP, and their comfort when discussing sexual activity with their PCP) and healthcare usage and satisfaction outcomes (usual source of healthcare, preference for coordinated healthcare, and satisfaction with healthcare providers). All variables were dichotomized prior to the bivariate analysis. Bivariate analysis included chi-square tests for categorical variables to assess associations at  $p > 0.05$ . Pearson chi-square tests were used to test associations between dependent and independent variables. Multivariable analysis used multivariable logistic regression to test the association between the sociodemographic characteristics and each of the three pattern of healthcare access outcomes: usual source of healthcare, preference for coordinated healthcare, and satisfaction with healthcare providers, controlling for key covariates. Covariates were included if they were significant on the  $p < .05$  level. All analyses were conducted with SPSS version 23 (IBM Corporation, Armonk, New York).

## **Results**

### ***Sample characteristics***

The analytic sample consisted of  $n = 800$  gay men. [Table 1](#) describes the sociodemographic characteristics of the sample.

### ***Predisposing factors***

The participants in this study were evenly distributed between the two age groups. Fifty percent ( $n = 400$ ) were between the ages of 18 and 24 and



**Table 1.** Sociodemographic characteristics of participants enrolled in a study of healthcare access, 2015–2016, NYC ( $n = 800$ ).

	%	<i>n</i>
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*	3.5	28
Missing	4.0	32
Experience discrimination in a healthcare setting		
Yes	28.8	230
No	71.2	570
Income		
\$0–\$14,999	31.1	249
\$15,000–\$100,000 and Over	58.4	467
Missing	10.5	84
Insurance status		
Insured	86.7	694
Uninsured	10.3	82
Missing	3.0	24
Lifetime history of STI/HIV diagnosis		
Yes	39.5	316
No	60.5	484
Current PCP		
Yes	77.3	618
No	22.6	181
Missing	0.1	1
Disclosure to PCP		
Yes	69.9	559
No	7.3	58
Missing	22.9	183
Comfort discussing sexual activity with PCP		
Very comfortable/Comfortable	63.9	511
Neither/Uncomfortable/Very uncomfortable	12.0	96
Missing	24.1	193

\*Comprised of individuals identifying as American Indian or Native American and bi-racial, multiracial, or mixed-race individuals.

49.9% ( $n = 399$ ) were between the ages of 25 and 29 ( $M = 24.22$ ,  $SD = 4.26$ ). The majority of the participants identified as Black Non-Hispanic (35.8%,  $n = 286$ ) or Hispanic/Latino (31.9%,  $n = 225$ ). Experiences of discrimination were fairly common as 28.8% ( $n = 230$ ) of the participants had experienced discrimination based on their racial/ethnic background, sexual orientation, or economic status when accessing healthcare.

### **Enabling factors**

Nearly one-third (31.1%,  $n = 249$ ) of the sample had an income below \$14,999. This sample had a high level of health insurance coverage with 86.7% ( $n = 694$ ) reporting having either public or private health insurance.

**Table 2.** Facility type used as usual source of healthcare, preference for coordinated healthcare, and agreement with PCP addressing healthcare needs of participants enrolled in a study of healthcare access 2015–2016, NYC ( $n = 800$ ).

	%	<i>n</i>
Facility type used as usual source of healthcare		
Private doctor's office/Community health center	60.9	487
Hospital outpatient/Emergency room/Urgent care facility/STI clinic/Other	25.0	200
No Source of Usual Care	7.6	61
Missing	6.5	52
Preference for coordinated healthcare		
Strongly agree/Agree	81.8	654
Neither agree or disagree/Disagree/Strongly disagree	17.9	143
Missing	0.4	3
PCP adequately addressed healthcare needs		
Strongly agree/Agree	58.3	466
Neither agree or Disagree/Disagree/Strongly disagree	17.9	143
Missing	23.9	191

### *Need factors*

Lifetime history of STI or HIV diagnosis was common among this sample as 39.5% ( $n = 316$ ) reported receiving a diagnosis by a medical provider. The majority of the participants (90.5%,  $n = 559$ ) disclosed their sexual orientation to their PCP. Similarly, 82.7% ( $n = 511$ ) of the men in this study reported being very comfortable or comfortable discussing their sexual activity with their PCP.

### *Healthcare usage and satisfaction outcomes*

Table 2 describes the healthcare usage and satisfaction outcomes of the sample. Private doctors' offices were used as the usual source of care for 44.6% ( $n = 357$ ) of the sample and community healthcare centers were used as the usual source of healthcare for 16.3% ( $n = 130$ ) of the sample. Nearly, the same number of participants reported using a walk-in facility as their usual source of healthcare as the number of participants that did not have a usual source of healthcare (7.4%,  $n = 59$  and 7.6%,  $n = 61$ , respectively). Slightly more than half the sample said they strongly agreed that they would like to access all their health services in one place (56.4%,  $n = 451$ ), 25.4% ( $n = 203$ ) said they agreed, and 10.3% ( $n = 82$ ) neither agreed nor disagreed about their preference for coordinated healthcare. Levels of satisfaction with their current PCP followed a similar pattern as 54% ( $n = 334$ ) of the sample were very satisfied with their healthcare, 35.4% ( $n = 219$ ) were satisfied, and 6.1% ( $n = 38$ ) were neither satisfied nor dissatisfied.

### *Bivariate analysis*

The results of tests of association are presented in Table 3. Facility type used as usual source of healthcare was associated with income

**Table 3.** Sociodemographic characteristics by facility type used as usual source of healthcare, preference for coordinated healthcare, and agreement with PCP addressing healthcare needs of participants enrolled in a study of healthcare access, 2015–2016, NYC (n = 800).

	Facility type used as usual source of healthcare			Preference for coordinated healthcare			PCP adequately addressed healthcare needs		
	Private/Clinic % (n)	Walk in % (n)	p-value	Agree % (n)	Disagree % (n)	p-Value	Agree % (n)	Disagree % (n)	p-Value
Age			0.061			0.005**			0.091
18–24	45.4 (221)	53.3 (106)		47.8 (312)	60.8 (87)		47.9 (223)	55.9 (80)	
25–29	54.6 (226)	46.7 (93)		52.2 (341)	39.2 (56)		52.1 (243)	44.1 (63)	
Race/Ethnicity			0.649			0.171			0.047*
Hispanic/Latino	32.3 (156)	30.7 (61)		30.8 (201)	37.1 (52)		32.9 (152)	29.4 (42)	
Black Non-Hispanic	32.9 (159)	38.7 (77)		35.4 (231)	39.3 (55)		38.7 (179)	30.1 (43)	
White Non-Hispanic	23.2 (122)	19.6 (39)		21.5 (140)	16.4 (23)		18.4 (85)	24.5 (35)	
Asian/Pacific Islander	4.8 (23)	4.0 (8)		4.6 (30)	3.6 (5)		3.5 (16)	7.7 (11)	
Other	6.8 (33)	7.0 (14)		7.7 (50)	3.6 (5)		6.5 (30)	8.4 (12)	
Experience discrimination in a healthcare setting			0.059			0.004			0.117
Yes	25.9 (126)	33.0 (66)		26.3 (172)	38.5 (55)		29.8 (139)	23.1 (33)	
No	74.1 (361)	67.0 (134)		73.7 (482)	61.5 (88)		70.2 (327)	76.9 (110)	
Income			0.015*			0.007			0.069
\$0–\$14,999	29.8 (133)	39.9 (71)		32.5 (193)	45.4 (54)		33.3 (140)	42.1 (53)	
\$15,000 and over	70.2 (314)	60.1 (107)		67.5 (401)	54.6 (65)		66.7 (281)	57.9 (73)	
Insurance status			<0.001**			0.150			0.286
Insured	94.6 (454)	85.6 (163)		88.5 (554)	92.7 (127)		96.9 (434)	98.6 (137)	
Uninsured	5.4 (26)	14.4 (28)		11.5 (72)	7.3 (10)		3.1 (14)	1.4 (2)	
Lifetime history of STI/HIV diagnosis			0.391			0.108			0.056
Yes	40.5 (197)	44.0 (88)		40.8 (267)	33.6 (48)		40.3 (188)	31.5 (45)	
No	59.5 (290)	56.0 (112)		59.2 (387)	66.4 (95)		59.7 (278)	68.5 (98)	
Current PCP			<0.001**			0.343			o
Yes	90.1 (438)	58.5 (117)		76.6 (501)	80.3 (114)		100 (466)	100 (143)	
No	9.9 (48)	41.5 (83)		23.4 (153)	19.7 (28)		o	o	
Disclosure to PCP			0.688			0.571			<0.001**
Yes	91.8 (401)	90.6 (106)		90.4 (452)	92.1 (105)		95.7 (445)	75.5 (108)	
No	8.2 (36)	9.4 (11)		9.6 (48)	7.9 (9)		4.3 (20)	24.5 (35)	
Comfort discussing sexual activity with PCP			0.394			0.343			<0.001**
Very Comfortable/Comfortable	84.3 (366)	81.0 (94)		83.8 (413)	87.4 (97)		92.9 (429)	55.0 (77)	
Neither/Uncomfortable/Very uncomfortable	15.7 (68)	19.0 (22)		16.2 (80)	12.6 (14)		7.1 (33)	45.0 (63)	

o statistics not computed based on skip logic

( $\chi^2(1)=5.95, p=0.015$ ). Walk-in facilities were less likely to be used by participants with incomes below \$14,999 (39.9%,  $n=71$ ), as compared to those with incomes greater than \$15,000 (60.1%,  $n=107$ ). The facility type used as usual source of healthcare was strongly associated with having insurance ( $\chi^2(1)=15.07, p<0.001$ ). Those who were uninsured were more likely to use a walk-in facility (14.4%,  $n=28$ ) as compared to those who used a private doctor or clinic as their usual source of healthcare (5.4%,  $n=26$ ). Similarly, participants who reported using a walk-in facility as their usual source of healthcare were more likely to report not having a current PCP (41.5%,  $n=83$ ) as compared to those who did have a current PCP (58.8%,  $n=117$ ) ( $\chi^2(1)=91.72, p<0.001$ ).

Participants who preferred to fragment their healthcare were more likely to be between the ages of 18 and 24 (60.8%,  $n=87$ ) as compared to those between the ages of 25 and 29 (39.2%,  $n=56$ ) ( $\chi^2(1)=8.00, p=0.005$ ). Participants who preferred coordinated healthcare were also more likely not to have experienced discrimination in a healthcare setting (73.7%,  $n=482$ ) as compared to those who had experienced discrimination in a healthcare setting (26.3%,  $n=172$ ) ( $\chi^2(1)=8.52, p=0.004$ ). Participants who had incomes less than \$14,999 preferred uncoordinated healthcare (45.4%,  $n=54$ ) ( $\chi^2(1)=7.27, p=0.007$ ).

Hispanic/Latino and Black Non-Hispanic (29.4%,  $n=42$  and 30.1%,  $n=43$ , respectively) participants were more likely to disagree their PCP adequately addressed their healthcare needs, as compared to Asian or other racial groups (( $\chi^2(4)=9.64, p=0.047$ ) (7.7%,  $n=11$  and 8.4%,  $n=12$ , respectively). Participants who disclosed their sexual orientation agreed that their PCP adequately addressed their healthcare needs (95.7%,  $n=445$ ) as compared to 75.5% ( $n=108$ ) of participants who disclosed their sexual orientation but disagreed that their PCP adequately addressed their healthcare needs ( $\chi^2(1)=54.10, p<0.001$ ). Similarly, 92.9% ( $n=429$ ) of participants who were comfortable discussing their sexual activity with their PCP agreed that their PCP adequately addressed their healthcare needs as compared to 55% ( $n=77$ ) of participants who were comfortable discussing their sexual activity with their PCP but disagreed that their PCP adequately addressed their healthcare needs ( $\chi^2(1)=114.88, p<0.001$ ).

### **Multivariable analysis**

As shown in Table 4, the final multivariable logistic regression model for facility type used as usual source of healthcare achieved significance ( $\chi^2(2)=19.28, p<.001$ ) with Naglekerke  $R^2=4.4\%$ . The odds of reporting a walk-in facility (hospital, emergency room, urgent care center, or STI clinic) as their usual source of healthcare were lower for participants who had an income higher than \$15,000 (AOR = 0.64, 95% CI 0.44–0.94,

**Table 4.** Multivariable logistic regression models examining associations between sociodemographic and health related factors and facility type for usual source of healthcare, preference for coordinated healthcare, and agreement with PCP addressing healthcare needs of participants enrolled in a study of healthcare access, 2015–2016, NYC ( $n = 800$ ).

	Unadjusted model			Adjusted model		
	OR	95% CI	p-Value	OR	95% CI	p-Value
<b>Facility type used as usual source of healthcare</b>						
Age	0.73	0.52–1.02	0.061	–	–	–
Race/Ethnicity	1.24	0.82–1.86	0.305	–	–	–
Experience discrimination in a healthcare setting	1.41	0.99–2.02	0.059	–	–	–
Income	0.64	0.44–0.92	0.015	0.64	0.44–0.94	0.022
Insurance status	0.34	0.20–0.56	<0.001	0.32	0.18–0.58	<0.001
Lifetime history of STI/HIV diagnosis	1.16	0.83–1.61	0.391	–	–	–
Current PCP	0.15	0.10–0.23	<0.001	0.12	0.07–0.20	<0.001
Disclosure to PCP	0.87	0.43–1.76	0.688	–	–	–
Comfort discussing sexual activity with PCP	0.79	0.47–1.35	0.395	–	–	–
<b>Preference for coordinated healthcare</b>						
Age	1.70	1.17–2.46	0.005	1.55	1.01–2.40	0.049
Race/Ethnicity	0.72	0.44–1.17	0.182	–	–	–
Experience discrimination in a healthcare setting	0.57	0.39–0.83	0.004	0.63	0.42–0.96	0.033
Income	1.73	1.16–2.57	0.007	1.40	0.91–2.17	0.130
Insurance status	0.61	0.30–1.21	0.154	–	–	–
Lifetime history of STI/HIV diagnosis	1.37	0.93–2.00	0.109	–	–	–
Current PCP	0.80	0.51–1.26	0.334	–	–	–
Disclosure to PCP	0.81	0.38–1.70	0.572	–	–	–
Comfort discussing sexual activity with PCP	0.75	0.41–1.37	0.334	–	–	–
<b>PCP adequately addressed healthcare needs</b>						
Age	1.38	0.95–2.02	0.091	–	–	–
Race/Ethnicity	1.44	0.92–2.25	0.112	–	–	–
Experience discrimination in a healthcare setting	1.42	0.92–2.19	0.118	–	–	–
Income	1.46	0.97–2.19	0.070	–	–	–
Insurance status	0.45	0.10–2.02	0.298	–	–	–
Lifetime history of STI/HIV Diagnosis	1.47	1.00–2.19	0.057	–	–	–
Current PCP	0	0	0	–	–	–
Disclosure to PCP	7.21	4.00–12.99	<0.001	2.57	1.25–5.21	0.010
Comfort discussing sexual activity with PCP	10.64	6.54–17.29	<0.001	8.04	4.76–13.58	<0.001

$p = 0.022$ ). Participants who reported having insurance were also less likely to report using a walk-in facility as their usual source of healthcare (AOR = 0.32, 95% CI 0.18–0.58,  $p < 0.001$ ). Finally, participants who reported having a PCP were less likely to report using a walk-in facility as their usual source of healthcare (AOR = 0.12, 95% CI 0.07–0.20,  $p < 0.001$ ).

The final multivariable logistic regression model for preference for coordinated healthcare achieved significance ( $\chi^2(3) = 15.19$ ,  $p = 0.002$ ) with Naglekerke  $R^2 = 3.6\%$ . Participants who experienced discrimination in a healthcare setting were less likely to prefer coordinated healthcare (AOR = 0.63, 95% CI 0.42–0.963  $p = 0.033$ ). Participants between the ages of 25 and 29 were more likely to prefer coordinated healthcare (AOR = 1.55, 95% CI 1.01–2.40,  $p = 0.049$ ).

Last, the final multivariable logistic regression model for agreement that their PCP adequately addressed their healthcare needs achieved significance ( $\chi^2(2) = 104.24$ ,  $p < .001$ ) with Naglekerke  $R^2 = 24\%$ . Participants who disclosed their sexual orientation to their PCP were more likely to agree that their PCP adequately addressed their healthcare needs (AOR = 2.57, 95% CI 1.25–5.21,  $p < 0.01$ ). Similarly, participants who were comfortable discussing their sexual activity with their PCP were also more likely to agree that their PCP adequately addressed their healthcare needs (AOR = 8.04, 95% CI 4.76–13.58,  $p < 0.001$ ).

## Discussion

Disparities in healthcare use and satisfaction exist among YAGM and their heterosexual counterparts. Data from the California Health Interview Survey collected in 2005–2007 found that 70% of young adults between the ages of 18 and 26 had a usual source of healthcare (Lau, Adams, Irwin, & Ozer, 2013). Of those that had a usual source of healthcare, 43.3% used a private healthcare facility and 26.7% used a public healthcare facility (i.e. community-based organization, government clinic, or community hospital clinic) (Lau et al., 2013). The use of public healthcare facilities was more common among LGBT young adults compared to their heterosexual counterparts. Data collected in 2012–2013 from LGBT young adults (ages 18–27) in Chicago, Illinois found that 27.2% used private facilities, 46.1% used public facilities, and 25.7 used the ER/no facility as their usual source of healthcare (Macapagal et al., 2016). Findings from the current study follow the same trend with 60.9% of the sample reporting a private doctor's office or community health center and 25% reporting an emergency or other walk-in model of healthcare as their usual sources of care.

Findings from the healthcare access study of YAGM provide a better understanding of the healthcare usage and satisfaction among this

population across three distinct factors: facility type, coordination of healthcare, and satisfaction with care provided. While young adult populations tend to have a usual source of healthcare, this source of care may not be a private doctor; rather, it may be a community-based healthcare facility (Geisler, Chyu, Kusunoki, Upchurch, & Hook, 2006; Hoover, Tao, Berman, & Kent, 2010; Kipke et al., 2007; Lau et al., 2013). Among YAGM, prior experiences of discrimination in a healthcare setting based on their racial or ethnic background (Armstrong et al., 2013; Eaton et al., 2015) and/or sexual orientation (Hoffman et al., 2009; Quinn et al., 2015; Rachlin et al., 2008) may further discourage the use of private practice providers. Additionally, studies indicate that YAGM may be conditioned to prioritize sexual healthcare needs over primary care needs (Eaton et al., 2015) which encourages access for STI/HIV testing and other sexual health services over primary care services (Graham et al., 2011; Koester et al., 2013).

Translating the findings of the study back to the constructs in the Andersen Model of Healthcare Access, the data demonstrate that predisposing factors affect YAGM's healthcare usage and satisfaction. Participants who have prior experiences of discrimination in a healthcare setting were less likely to prefer coordinated healthcare. These findings echo a study conducted by Koester et al. (Koester et al., 2013) on healthcare preferences among gay and bisexual men which found that the decision to consolidate or fragment care was largely dependent on prior experiences with healthcare providers. Conditioning to withhold information about their sexual lives during the period of young adulthood establishes a precedent that will reinforce the separation of healthcare into middle and older adulthood.

The data also show a relationship between enabling factors and patterns of accessing care. Participants with incomes above \$15,000 prefer to use a walk-in based model of care, either at an emergency room or urgent care facility. Wilkin et al. (Wilkin, Cohen, & Tannebaum, 2012) conducted a series of in-depth interviews with low income participants to better understand the decision making process when choosing to access care at a facility with a walk-in based model of care. Factors such as wait times, paper work for reduced cost healthcare, cost, and the need for a referral for specialist care were all factors that increased the use of facilities with walk-in models of care (Wilkin et al., 2012). A study by Newman and Berman (2008) also found that the use of walk-in models of care increased the frequency of health visits as compared to appointment-based models of care. The results of these two studies provide an important context to the current study's findings that highlight the importance not only of healthcare costs but also convenience of healthcare. As was expected, participants who have a PCP were less likely to use a walk-in based model of healthcare. This indicates that once care is established and the patient is satisfied with this care, they

will not doctor shop or use more convenient modes of care (Koester et al., 2013), especially if they have received a prior STI/HIV diagnosis from a culturally-competent provider (Newman & Berman, 2008).

Last, need factors help explain YAGM's healthcare usage and satisfaction. Participants who disclosed their sexual orientation to their provider were more likely to agree that their provider adequately addressed their healthcare needs. Sexual orientation and disclosure to others is complex and must be negotiated by the individual. Disclosure of sexual orientation to a healthcare provider is critically important to the provider's understanding of their healthcare needs (Durso & Meyer, 2013). These findings confirm research that disclosure of sexual orientation improves satisfaction with services received (Whitehead, Shaver, & Stephenson, 2016). Higher levels of satisfaction with healthcare services are associated with more frequent use of healthcare services among gay men (Park, Parlapiano, & Sanger-Katz, 2017) as patients feel they are able to discuss their health concerns free from judgment. Most importantly, creating safe spaces that encourage disclosure of sexual orientation builds trust between patients and providers and allows for the provision of relevant screening and preventive services that YAGM need.

A unique feature of the healthcare access study is the timing of the data collection. All data were collected after the full implementation of the 2010 Patient Protection and Affordable Care Act (ACA). Although healthcare legislation in the United States is in flux, several recent healthcare policies include options to deny care citing religious freedoms, which has the effect of denying coverage to YAGM on the basis of sexual orientation (Rosenbaum, 2016). This is bolstered by a recent Justice Department memo stating that Title VII does not protect employees from discrimination based on sexual orientation (Feuer, 2017). These coordinated policy efforts have the combined effect of stigmatizing an entire sub-population and encouraging fragmented healthcare access. If a healthcare provider may use religious or moral objection to a patient based on their sexual orientation or behavior, this may encourage YAGM to use walk-in facilities as their usual source of healthcare thereby leading to intentional fragmentation of healthcare (Koester et al., 2013). In addition, the ACA included nondiscrimination protections related to insurance coverage for LGBT adults that halved the uninsured rates among LGBT adults (Karpman, Skopec, & Long, 2015); thus, current attempts to remove nondiscrimination protections for insurance coverage included in the ACA would likely increase the number of uninsured LGBT adults in the United States. By examining healthcare usage and satisfaction during a time of expanded healthcare access for all, this study has established estimates by which to compare the effect of more restricted healthcare policy.



## Limitations

There are several limitations to this study. The street-intercept data collection methodology of this study may lead participants to provide information they perceive as more socially desirable. All data in this study are self-reported and is subject to recall bias. Efforts were made to avoid recruiting participants that were under the influence of substances. Second, research staff are not able to verify experiences of discrimination in a healthcare setting reported by participants, and negativity bias may affect the prevalence of these experiences. Negativity bias may skew the data in this sample away from the null. Third, questions on non-sexual health diagnosis and concerns were not included in this survey since the street-intercept data collection methodology requires a shorter survey for administrative purposes. Fourth, this study is conducted in NYC and may not be generalizable to other geographic locations; NYC has many gay-friendly services and neighborhoods. YAGM living in the NYC metro area may feel more comfortable being open about their sexual orientation and behaviors than YAGM in less urban areas. In addition, NYC has a diverse healthcare infrastructure that provides services to patients of all income levels, including those who are not able to pay. The availability of free or low-cost services means YAGM in NYC may be more likely to access services since the barrier of cost is removed. Despite these limitations, this study contributes to the available literature on healthcare usage and satisfaction among YAGM.

## Conclusion

This paper contributes to the available literature on the healthcare usage and satisfaction among YAGM by analyzing the types of facilities used as their usual source of healthcare and satisfaction with healthcare services. Previous studies that explore the type of facility used for healthcare services examine this topic by racial/ethnic background, gender, or socioeconomic status, but do not include the intersection of sexual orientation with other sociodemographic factors. This study also includes the use of urgent care facilities as a usual source of healthcare. Urgent care facilities are a relatively new facility type that combine the convenience of emergency care with primary care services. Studies have shown that urgent care facilities are increasing in popularity (Wang, Ryan, McGlynn, & Mehrotra, 2010; Yee, Lechner, & Boukus, 2013), but little is known about their use (Wang et al., 2010). In addition, this study applies the Andersen Model of Healthcare Access to the population of YAGM. Previous studies using the Andersen Model do not specifically examine healthcare usage and satisfaction in this population. Results from this study can be used to inform clinic

practices and medical training. As the use of nontraditional healthcare facilities increases, it is important that providers in these settings are aware of the healthcare needs of gay men. Providers in these settings should be trained on proper screening protocols for gay men including sensitivity around soliciting information on sexual orientation and behaviors.

### Ethical approval

The XXX Committee on Activities Involving Human Subjects (UCAIHS) approved the study protocol (IRB Number 10-6802).

### Disclosure statement

No potential conflict of interest was reported by the author(s).

### Data availability

The data used in this study are not publicly available.

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