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Article

Utilization of LGBT-Specific clinics and providers across three cohorts of lesbian, gay, and bisexual people in the United States

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ABSTRACT

Lesbian, gay, and bisexual (LGB) people navigate issues of stigma, discrimination, structural barriers, and a history of medical mistrust when seeking healthcare services. Lesbian, gay, bisexual, and transgender (LGBT)-specific clinics and providers offer alternative spaces where these issues may be avoided, but limited research is available on how LGB people utilize these resources. The current study analyzes data from a nationally-representative survey of 1534 LGB people across three age cohorts. Gender, sexual identity, income, proximity to LGBT community health centers, perceived health status, and the total number of lifetime diagnoses are each associated with past utilization of LGBT-specific clinics and providers; interest in future utilization is associated with sexual identity, race/ethnicity, several psychosocial factors, income, a usual source of care, and mental distress. We conclude that LGBT-specific clinics and providers represent an important piece of the healthcare landscape for LGB people but access remains an important barrier to utilization.

Introduction

Lesbian, gay, and bisexual (LGB) people face a variety of barriers to the utilization of healthcare services. These include navigating stigma and discrimination in the healthcare environment (Austin, 2013; Hovey, 2009; Platzer & James, 2000), structural factors influencing access to services (Martos, Wilson, & Meyer, 2017; Oldenburg et al., 2015), and a decades-long history of medical mistrust (Forstein, 2013; Underhill et al., 2015). Due to this prevalent stigma and prejudice, LGB people often feel discomfort in medical settings and seek alternative sources for care (Martos et al., 2017). LGBT community-based organizations have played a pivotal role in responding to public health needs of LGBT people by providing health and social services that LGBT people could not adequately receive elsewhere (D'Emilio 2012; Mail & Lear, 2006). Additionally, as sexual and gender minorities become more visible in American society, self-identified LGBT providers have themselves become sources of trusted, competent care for LGB people (Martos, Wilson, Gordon, Lightfoot, & Meyer, 2018). Whether the care provided by LGBT-specific clinics and providers results in better health outcomes has not been explored, but researchers have begun to explore how these clinics and providers influence healthcare utilization for LGB people.

One of the few studies to consider LGBT-specific healthcare resources identified stigma, the perceived expertise of a provider, identity factors (both of the patient and provider, including gender, sexual identity, and race/ethnicity), the type of services being sought, and the accessibility of services as factors influencing preferences for LGBT-specific clinics and providers (Martos et al., 2018). Though these findings demonstrate that LGBT-specific clinics and providers play an important role in the healthcare landscape for LGB people, they are limited in what they can tell us. For example, these findings did not describe differences in utilization between LGBT-specific and general (i.e., not LGBT-specific) clinics and providers, nor did the study capture the perspectives of LGB people outside metropolitan areas. The research presented here builds on a small but growing literature on healthcare utilization among sexual minority individuals and uses a popular model of healthcare utilization to examine factors that predict utilization of LGBT specific healthcare in a nationally representative sample of LGB individuals.

In this paper we describe healthcare utilization of LGB people only (see rationale below), but the community, and healthcare services therein, are typically inclusive of transgender people and referred to, generically, as LGBT. For this reason we use both terms.

Behavioral model of health services use

There are several prominent models for assessing health services utilization (Aday & Andersen, 2005). The most comprehensive and widely used is the Behavioral Model of Health Services Use (BMHSU; Andersen, 1995). Whereas other models adopt a more narrowly focused

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scope on economic, psychological, or illness-based factors driving utilization, BMHSU incorporates a variety of social, structural, and individual determinants that allow for the dynamic relationship between individuals and the healthcare system to be assessed across multiple levels. Specifically, BMHSU emphasizes predisposing, enabling, and need-based factors.

A systematic review of studies incorporating BMHSU offers guidance on identifying predisposing, enabling, and need-based factors in healthcare research (Babitsch, Daniela Gohl, & von Lengerke, 2012). Predisposing factors include contextual variables (e.g., demographic, social structure, belief systems) about the individual that influence health services utilization. Those commonly incorporated into assessments of healthcare utilization include age, sex, education, and race/-ethnicity, but findings are not necessarily consistent across studies. This is likely because researchers have used BMHSU to study different aspects of utilization. For example, where one study might assess the use of specialist consultations (Nabalamba & Millar, 2007), another may focus on mental health services as the primary outcome (Hochhausen, Le, and Perry, 2011), and yet another on whether treatment for a condition was received (Andersen et al., 2002). A predisposing factor like age may be positively associated with one utilization outcome (e.g., specialist consultations) and negatively associated with another (mental health services). Generally speaking, however, women are more likely to visit a physician than men (Broyles, McAuley, & Baird-Holmes, 1999; Dhingra, Zack, Strine, Pearson, & Balluz, 2010; Parslow, Anthony, Christensen, & Jacomb, 2002), and racial/ethnic minorities have lower levels of utilization across numerous metrics (Andersen et al., 2002; Blackwell, Martinez, Gentleman, Sanmartin, & Jean-Marie, 2009; Dhingra et al., 2010).

Enabling factors include financing and organizational variables that set the conditions for service utilization (Babitsch et al., 2012). Enabling factors commonly explored in health service utilization include income, health insurance, and having a usual source of care as enabling factors. Having health insurance (Andersen et al., 2002; Stockdale, Tang, Zhang, Belin, & Wells, 2007) and a usual source of care (Blackwell et al., 2009; Broyles et al., 1999; Hammond, Matthews, & Corbie-Smith, 2010) are each associated with increased service use across a variety of studies, but findings on income are more varied. For example, those with lower income may be less likely to visit with a doctor (Blackwell et al., 2009) but more likely to utilize psychiatric services (Dhingra et al., 2010).

Need-based factors include both perceived health status and health outcomes (Babitsch et al., 2012). In general, poorer physical and mental health (Nabalamba & Millar, 2007; Parslow et al., 2002) and lower self-rated health status are associated with increased utilization of healthcare services (Broyles et al., 1999; Dhingra et al., 2010).

LGB specific concerns

Additional factors are important to consider when applying the model to populations with unique health and social contexts (Hammond et al., 2010; Martos et al., 2018). One key predisposing factor for LGB people is their specific sexual identity. For example, research suggests that bisexual people have unique healthcare needs and experiences but are often not properly differentiated from lesbians and gay men in health research (Institute of Medicine, 2011). It is possible that there may be a distinction in healthcare utilization between bisexuals and their lesbian and gay counterparts.

Several psychosocial factors pertaining to sexual minority status might also be of interest as predisposing factors. For example, LGB peoples' connection to the LGBT community (Frost & Meyer, 2011) and the degree to which they hold their LGB identity as central (Mohr and Kendra, 2011) may impact their decisions about utilizing LGBT-specific care. Thus, a person who feels deeply connected to the LGBT community may be more likely to seek out LGBT-specific clinics and providers than one who does not feel such a sense of connection. Another pertinent construct is the internalization of negative feelings about LGB people's

sexual identities (Herek, Gillis, and Coogan 2009). A person who perceives her or his LGB identity as negative and less desirable than a heterosexual identity may be less willing to seek care from LGBT-specific clinics and providers. Yet another predisposing factor is healthcare stereotype threat (Abdou & Fingerhut, 2014; Fingerhut & Abdou, 2017), which posits that the threat of being judged by and confronting negative LGB stereotypes in healthcare settings decreases utilization in general (i. e., primarily straight) health care settings.

LGB people also have a unique healthcare landscape via the presence of LGBT community health centers (CHCs; Martos at al. 2017). Access to community-based health services sites offers an alternative source of care for LGB people who might have experienced stigma and discrimination in non-LGB settings (Austin, 2013; Hovey, 2009; Platzer & James, 2000). Although numerous, these centers are sparsely distributed across the United States, and tend to concentrate near large urban centers. As such, proximity to these healthcare venues is an additional enabling factor that may influence utilization of LGBT-specific clinics and providers. The predisposing, enabling, and need-based factors explored in the present study are presented in Table 1, inclusive of both traditional BMHSU variables and those specific to the unique health and social contexts of LGB people as described above.

In this study we seek to understand the factors influencing LGB people's past utilization of LGBT-specific clinics and providers, as well as interest in future utilization. We apply the BMHSU to a nationally representative sample of three cohorts of LGB people. Though to-date BMHSU has not been used to assess the utilization of LGBT-specific clinics and providers, prior research has explored general healthcare utilization among LGB people. Findings showed that homophobia has been a pervasive problem in medical professions (Jowett & Peel, 2009). LGB people unable to locate providers that are competent in their unique health needs showed a decrease in healthcare utilization (Qureshi et al., 2017). LGBT-specific clinics and providers offer LGB people an opportunity to utilize health services that are free of stigma and prejudice and competent in treating their health needs.

We consider both past utilization and interest in future utilization to account for the fact that patterns of past utilization may not necessarily reflect the type of care that LGB people would most want to receive. A discrepancy between past utilization and interest in future utilization could be indicative of the need for LGB CHCs going forward. For example, if past utilization of LGBT-specific clinics and providers is high, but interest in future utilization is low, it may be that LGB people see little added benefit to LGBT-specific clinics and providers and continued utilization is not a priority for them. On the other hand, low past

Table 1
Predisposing, enabling, and need-based factors of LGB-specific healthcare utilization.

Predisposing	Enabling	Need-Based
Demographic	Access	Health Status
Age Cohort	Income	Perceived Health Status
Sex	Health Insurance	Lifetime Number of Diagnoses
LGB Identity[a]	Usual Source of Care	Mental Distress
Race/Ethnicity	Miles to Nearest LGB CHC[a]	
Social Structure		
Education		
Household Size		
Psychosocial		
Internalized Homophobia[a]		
LGB Community Connectedness[a]		
LGB Identity Centrality[a]		
Healthcare Stereotype Threat[a]		

[a] Added to common BMHSU factors in order to account for unique health and social context of LGB people.

utilization and a high interest in future utilization might highlight difficulties in access in the past, suggesting that utilization would be greater if those barriers were overcome.

Data for this investigation are drawn from a larger study known as the Generations Study ("Generations"). Generations is a multi-method study that aims to understand how changes to the social environment over time have impacted the lives and experiences of LGB people. To assess this, investigators defined three distinct periods of LGB life corresponding to changes in the United States regarding LGB law, policy, and culture. They began by composing a list of major events that characterized the social environment of LGB people since 1969. Three of these major events were selected as the basis for age cohorts. They were the Stonewall Inn riots of 1969, the formation of ACT UP in 1987, and the Massachusetts Supreme Court ruling that it was unconstitutional to deny marriage to same-sex couples in 2003.

LGB people who were between the ages of 7–13 at the time of each of these three events were included within each age cohort. This is due to the age of 10 being considered a significant age for sexual development (Herdt & McClintock, 2000). The three cohorts of LGB individuals – aged 18–25 (the "cultural inclusion" generation, or "Equality" cohort), 34–41 (the "institutional advancement" generation, or "Visibility" cohort), and 52–59 years (the "identity formation" generation, or "Pride" cohort) – each have a corresponding phrase and name associated with the defining characteristics of the cohort and the discourses that were likely to be prevalent at the time cohort members were young teens. The youngest cohort, defined as born between 1990 and 1997, is referred to as the *Equality cohort* because discourse during their early years (defined as around age 10) was characterized by greater demand for LGBT equality, for example through marriage equality. The middle cohort, defined as born between 1974 and 1981, is referred to as the *Visibility cohort* as their early life experiences, during a period after the beginning of the AIDS epidemic, were characterized by growing prominence for LGBT institutions (often providing AIDS-related services) as they were strengthened and LGBT people grew in visibility within the national conversation (often portrayed negatively as responsible for AIDS). The oldest cohort, born between 1956 and 1963, is referred to as the *Pride cohort* as discourse of this cohort's early life was characterized by the emergence of a gay identity, gay pride, and coming out.

The investigators for Generations hypothesized that the unique social environments that characterized each age cohort shaped the ways in which they develop their identities, experience stress related to their LGB identities, and utilize LGBT-specific health and social services. Thus, while the primary goal of the analyses presented in this paper is to examine factors that predict utilization of LGBT specific healthcare services, the unique nature of the data allowed an initial exploration of patterns among the variables for the various cohorts.

Data and methods

Sample

Generations participants were recruited by Gallup, Inc., an American survey research consulting company. To recruit study participants, a 2-phase procedure was used. First, Gallup screened a probability sample of the U.S. population using a daily random-digit dial telephone survey of landlines and cell-phones. Participants were eligible for Generations if they identified as lesbian, gay, bisexual, queer, or same-gender loving; if they identified as Black, Latino, or White (other racial/ethnic groups excluded because sufficient number of respondents in lower prevalence U.S. race/ethnic groups could not be recruited during the recruitment period to satisfy required statistical power); if they had completed at least the 6th grade; if they spoke English well enough to be interviewed in English; and if they fell into one of the three age cohorts. In the second phase, respondents who met the eligibility criteria were invited to participate in Generations and those who consented completed a self-administered survey either online or on a mailed survey

questionnaire. Further discussion of Generations is available in Frost et al. (2019). Transgender participants, regardless of sexual orientation, were eligible and participated in a sister study, titled TransPop that inquired more fully about issues affecting transgender people, and are not included in this paper.

Between April 2016 and April 2017, a total of 366,644 individuals representing the U.S. population of people with telephones (landline or cell phones) were screened by phone. Of them, 3.5% identified as LGBT; 27.5% were eligible and were invited to participate in the Generations Study. Of them, 80% agreed to participate and were emailed a linked web address to access the online survey (76%) or mailed a survey questionnaire with a stamped return addressed envelope (24%). Respondents were allowed up to 6 weeks to complete the survey, and were sent up to 4 reminders, as needed. An enhancement sample of Black and Latino LGBs was recruited between April 2017 and April 2018, resulting in a final total sample of 1534 LGBs. Surveys took approximately 45 min to complete, and participants were provided a $25 Amazon gift card or $25 cash as incentive. All study procedures were approved by the University of California, Los Angeles IRB prior to study initiation.

Measures

Outcome variables

Past LGBT healthcare utilization. Participants were asked about past usage of LGBT-specific healthcare. "In the past 5 years, how often have you been to an LGBT-specific clinic or provider for your health care?" Response options include "Often," "Sometimes," and "Never," which was dichotomized into "Often/Sometimes" and "Never" due to the small number of responses in the "Often" (n = 85) and "Sometimes" (n = 125) categories.

Interest in future LGBT healthcare utilization. Participants were also asked to describe how important it would be for them to use LGBT-specific clinics or providers if they were able to do so. "In the next year, if it were possible for you to do so, how important would it be for you to go for healthcare at an LGBT-specific clinic or provider?" Response options include "Very Important," "Somewhat Important," and "Not Important." Though there was greater variability in response options for future utilization than past utilization, a relatively small number of participants selected the "very important" response option (n = 252). When broken down by cohort only 64 and 71 participants selected the "very important" response in the Visibility and Pride cohorts, respectively. In order to ensure sufficient variability for the planned cohort-specific analyses (see "Statistical Analyses" below), and to maintain consistency with the "past LGBT healthcare utilization" variable, this variable was also dichotomized into "Very/Somewhat Important" and "Not Important."

Predisposing factors

Age cohort. Prior research has included age and not age cohort as a common variable explored in BMHSU. However, given the cohort structure of the data and the potential for generational differences in the utilization of LGBT-specific health services, the authors include age cohort as a predisposing variable within the BMHSU model in place of age. Participants were categorized into the three age cohorts based on their response to the question, "What is your age?" during Gallup screening. During the Generations survey participants were asked, "In what year were you born?" This year was subtracted from the current year at the time of the survey to calculate participants' ages. Eligible were respondents within two or fewer years from the target cohort ages of 18–25, 34–41, and 52–59. Thus, actual age cohort ranges are: *Equality* (18–27 years old, born 1990–1999), *Visibility,* (32–43 years old, born 1974–1985), and *Pride* (52–61 years old, born 1956–1966).

Sex. Participants were asked, "What sex were you assigned at birth, on your original birth certificate?" Response options include Male and Female.

Sexual Identity. Participants were asked their sexual identities.

Responses include lesbian, gay, and bisexual, as well as other, less frequently reported identity labels like queer and same-gender loving. For the purposes of this study participants were dichotomized into groups of bisexual-identified participants versus all others, which are categorized as "Gay/Lesbian."

Race/Ethnicity. Participants were asked to identify their race/ethnicity during Gallup phone interviews. Eligible participants were those who identified as Black, Latino, and White. The following algorithm was used to classify any respondents who indicated multiple racial/ethnic identities: People who indicated Hispanic/Latino were categorized as Latino regardless of any other entries; anyone who indicated Black/African American was categorized as Black regardless of other bi or multi race/ethnicities except Latino; anyone who indicated White regardless of other bi or multi race/ethnicities (other than Latino and Black) was categorized as White. All others (e.g., single-race Asian) were not eligible for the Generations Study.

Education. Participants were asked to report their level of education from six categories ranging from "Less than high school diploma" to "Post graduate work or degree." For the purposes of this investigation the education variable was dichotomized into groups of "Less than College Degree" and "College Degree or More."

Household Size. Household size was determined in relation to the household income variable (described among the enabling factors, below) by asking, "Including yourself, how many people (including children) live on that household income?"

Internalized Homophobia. A revised, five-item scale assessing the extent to which one has internalized negative feelings about their LGB identity (Herek, Roy Gillis, & Cogan, 2009). Examples include: "I have tried to stop being attracted to people who are the same sex as me," and "I wish I weren't LGB." Response options range from "Strongly disagree" (1) to "Strongly agree" (5). Average scores were calculated for each participant, with higher scores indicating greater degrees of internalized homophobia. Cronbach's alpha for the current study = 0.76.

LGBT Community Connectedness. Seven of the eight items originally developed by Frost and Meyer (2011) were used to assess the extent of one's connectedness to the LGBT community. One item was excluded due to the study team not being able to personalize the item to gender and sexual orientation. Examples include: "You feel you're a part of the LGBT community," and "You are proud of the LGBT community." Response options range from "Strongly Agree" (1) to "Strongly Disagree" (4). Average scores were calculated for each participant. The scale was reverse-coded so that higher scores indicated greater LGBT community connectedness. Cronbach's alpha for the current study = 0.86.

LGB Identity Centrality. A five-item scale assessed how central one's LGB identity is to their overall sense of identity (Mohr and Kendra 2011). Examples include: "Being an LGB person is a very important aspect of my life," and "My sexual orientation is a central part of my identity." Response options range from "Strongly disagree" (1) to "Strongly agree" (6). Average scores were calculated for each participant, with higher scores indicating greater LGB identity centrality. Cronbach's alpha for the current study = 0.82.

LGBT Healthcare Stereotype Threat. A modified, four-item scale was used to assess the degree to which negative stereotypes about one's groups influence healthcare seeking behaviors (Abdou & Fingerhut, 2014). Examples include: "When seeking healthcare, I worry about being negatively judged because of my sexual orientation or gender identity," and "When seeking healthcare I worry that I might confirm negative stereotypes about LGBT people." Response options range from "Strongly disagree" (1) to "Strongly agree" (4). Average scores were calculated for each participant, with higher scores indicating greater healthcare stereotype threat. Cronbach's alpha for the current study = 0.90.

Enabling factors

Household Income. Participants were asked, "What is your total ANNUAL household income, before taxes? Please include income from wages and salaries, remittances from family members living elsewhere, farming, and all other sources." Twelve categories for household income range from "Under $720" to "$240,000 and over." Average values were calculated for each household income range ($720 and $240,000 representing the lowest and highest values, respectively). These household income estimates were then adjusted for household size and scaled to represent three-person households consistent with the approach utilized by the Pew Research Center (2015). Following definitions provided by the Pew Research Center researchers (Fry & Kochhar, 2016), lower-income was defined as households of three earning less than two-thirds the 2016 median household income, middle-income as those earning between two-thirds and double the median household income, and upper-income as those earning greater than double the median household income. The 2016 median household income for a household of three was $57, 617 (United States Census Bureau, 2017).

Health Insurance. Participants were asked, "Are you currently covered by any of the following types of health insurance or health coverage plans?" Twelve response options were provided for having insurance (including "through my current or former employer or union," and "through my parent"), and one response option specified "I currently do not have health insurance." The final analytic variable was dichotomized into having any form of insurance versus having no insurance.

Usual Source of Care. Participants were asked, "Is there a place that you usually go to when you are sick or need advice about your health?" The two response options included, "There is NO place" and "Yes, there are one or more places."

Distance to Nearest LGBT Community Health Center (LGBT CHC). Using formative data collected in an early phase of Generations (Martos et al., 2017), the authors created a variable representing the number of miles to the nearest LGBT CHC. LGBT CHCs are community-based organizations that regularly (at least once monthly) provide health services to LGBT people. Those providing the health services may or may not be LGB-identified themselves so long as the organization explicitly identifies LGBT people as the community of focus within their mission statement. The Generations survey data were merged with the formative data and uploaded to the geographic information system software ArcGIS for Desktop. A center-point was generated for each participant zip code's geographic area, from which a straight line was generated to the nearest LGBT CHC. A variable representing the length of that line in miles was added to the original survey dataset. This variable was then dichotomized to represent those who were within or over sixty miles (approximating greater than an hour long commute) from the nearest LGBT CHC.

Need-based factors

Perceived Health Status. Participants were asked, "Would you say that in general your health is …" Response options include "Poor," "Fair," "Good," "Very good," and "Excellent." This variable was dichotomized to represent categories of "Perceived Poor Health" (Poor/Fair) and "Perceived Good Health" (Good/Very Good/Excellent Health).

Lifetime Number of Diagnoses. Participants were asked a modified version of the National Health Interview Survey (NHIS) items on past diagnoses from a doctor or health professional (NHIS 2014). Specifically, participants were asked: "Have you EVER been told by a doctor or health professional that you had any of the following? *Please mark all that apply.*" Response options include 23 distinct physical health conditions (including "hypertension (high blood pressure)" and "diabetes"). The final analytic variable summed the total number of selections made by participants.

Mental Distress. A six-item scale assessed non-specific mental distress occurring in the past 30 days (Kessler et al., 2002). Examples include: "During the past 30 days, about how often did you feel nervous," and "During the past 30 days, about how often did you feel hopeless?" Response options range from "All of the time" (1) to "None of the time"

(5). A sum score was calculated for each participant, with higher scores indicating greater degrees of mental distress. Cronbach's alpha for the current study = 0.89.

Statistical analyses

Statistical analyses were conducted using Stata/IC 15. First, univariate analyses were run on all predisposing, enabling, and need-based factors, as well as each outcome variable, in order to provide descriptive statistics. From there, we tested the model central to the study. Past studies assessing how predisposing, enabling, and need-based factors influence health behaviors have approached model building for multiple logistic regression, and the subsequent analyses, in a variety of ways (Andersen et al., 2002; Broyles et al., 1999; Dhingra et al., 2010; Hammond et al., 2010; Hochhausen, Le, and Perry 2011). In this investigation, multiple logistic regressions were run for each of the two outcome variables controlling for all predisposing, enabling, and need-based variables. Reference groups for categorical variables include: Pride cohort (age cohort); Women (sex); Gay/lesbian (sexual identity); White (race/ethnicity); less than a college degree (education); lower-income (household income); not having health insurance (health insurance); not having a usual source of care (usual source of care); living within 60 miles of an LGBT CHC (distance to nearest LGBT CHC); and perceived poor health (perceived health status).

Subsequent to these primary analyses, a set of secondary analyses were conducted in which separate models were generated for each of the three age cohorts in order to explore generational patterns in LGBT-specific healthcare utilization. As an initial exploration, this more simplified approach was chosen instead of testing statistical interactions, as adding interaction terms for each of the multitude of variables in the model is beyond the scope of this investigation and would be nearly impossible to interpret. Given this, three models were generated for each of the two outcome variables, resulting in a total of six additional models. Because these models were stratified based on cohort, and thus included members of only a single cohort, the age cohort variable was excluded. Other than this exclusion, the models were consistent with the full ones.

For imputing missing values of scales we did a single imputation by chained equations (fully conditional specification), using predictive mean matching (Little, 1988) to draw the imputed values. With predictive mean matching, regression is used to predict the missing value, and then a single value is randomly selected from the k observed values nearest to the predicted missing value from a donor pool of complete observations. We used donor pools of size k = 5 according to Heitjan and Little (1991). When doing imputation by chained equations, each of the imputed variables serve as predictors in the imputation regression models for all other imputed variables. Individual scale items are imputed rather than scale scores themselves, so no maximum percentage of missing item responses was required for a single imputation. Age, race/ethnicity, and sex at birth were included in the imputation models to improve matching. A full description of the imputation methods, including a list of the number of missing values for each scale item, is available in Krueger, Lin, Kittle, and Meyer (2018).

Survey weights were utilized to allow for generalization to the US population of LGB men and women within each of the age cohorts.

Results

Descriptive statistics for all predisposing, enabling, and need-based factors, as well as for both outcome variables, are available in Table 2. The weighted demographic distribution of participants is as follows: The Pride, Visibility, and Equality cohorts account for approximately 17%, 21%, and 62% of the participants, respectively; 60% of participants are women; 40% of participants are bisexual; White, Black, and Latino participants comprise 62%, 17%, and 21% of participants, respectively; 74% of participants have less than a college degree; and the average

Table 2

Predisposing, enabling, and need-based factors of LGBT-specific healthcare utilization in three cohorts of LGB people, 2016-17 U.S. probability sample (N = 1534).*

Predisposing Factors	N (Weighted %)	Mean (Lin. S.E.)
Age Cohort[a]		
50–61 Years (Pride Cohort)	476 (17.39)	–
32–43 Years (Visibility Cohort)	372 (20.86)	–
18–27 Years (Equality Cohort)	670 (61.74)	–
Sex[b]		
Cisgender Women	810 (60.20)	–
Cisgender Men	702 (39.80)	–
LGB Identity[c]		
Lesbian/Gay/Other	1026 (59.59)	–
Bisexual	497 (40.41)	–
Race/Ethnicity		
White	990 (62.24)	–
Black	243 (16.50)	–
Latino	301 (21.26)	–
Education		
Less than College Degree	808 (74.34)	–
College Degree or Higher	726 (25.66)	–
Household Size[d]	–	2.40 (0.05)
Internalized Homophobia	–	2.96 (0.02)
LGBT Community Connectedness	–	1.63 (0.02)
LGB Identity Centrality	–	3.95 (0.03)
Healthcare Stereotype Threat	–	2.57 (0.03)
Enabling Factors		
Household Income		
Lower-Income	473 (39.07)	–
Middle-Income	566 (35.72)	–
Upper-Income	495 (25.21)	–
Health Insurance[e]		
No	122 (10.65)	–
Yes	1389 (89.35)	–
Usual Source of Care[f]		
No	230 (18.77)	–
Yes	1280 (81.23)	–
Miles to Nearest LGBT CHC		
≤ 60 Miles	1127 (72.33)	–
> 60 Miles	407 (27.67)	–
Need-Based Factors		
Self-Perceived Health Status[g]		
Perceived Poor health	265 (19.96)	–
Perceived Good Health	1249 (80.04)	–
Lifetime Number of Diagnoses	–	1.63 (0.05)
Mental Distress		7.65 (0.18)
LGBT-Specific Utilization		
Past 5 years[h]		
Never	1294 (86.88)	–
Often/Sometimes	210 (13.12)	–
Next Year if Possible[i]		
Not Important	774 (48.21)	–
Very/Somewhat Important	739 (51.79)	–

*Unweighted Ns with corresponding weighted percent, unweighted means with corresponding linearlized standard error (from weighted analyses).
[a] 16 missing values.
[b] 22 missing values.
[c] 11 missing values.
[d] 32 missing values.
[e] 23 missing values.
[f] 24 missing values.
[g] 20 missing values.
[h] 30 missing values.
[i] 21 missing values.

household size is approximately 2.4. Nearly a quarter (23%) of LGBs are married, and 17% of all LGBs have children. The adjusted household income distribution is 39% lower-income, 36% middle-income, and 25% upper-income. The large majority of participants have health insurance (89%) and a usual source of care (81%). Approximately three quarters (72%) of the weighted sample live within 60 miles of an LGBT

CHC. A minority (13%) of LGBs have utilized LGBT-specific clinics and providers in the past five years and a majority (52%) expressed an interest in utilizing them in the future.

Past utilization and future interest among LGB people

Table 3 presents the full models for past utilization and future interest among LGB people. Two predisposing, two enabling, and two need-based factors influence the odds of past utilization. Among predisposing factors, men have over twice the odds of past utilization as women, and bisexuals have about one-third the odds as their lesbian and gay counterparts. Among enabling factors, both middle-and upper-income LGBs have roughly half the odds of past utilization as lower-income people. Living over 60 miles from an LGBT CHC also reduces the odds of past utilization by about two-thirds. LGB people who perceive themselves to be in good health are at over two times the odds of past utilization, and an increased number of lifetime diagnoses is associated with greater past utilization as well.

More predisposing factors play a role in influencing LGB peoples' odds of expressing an interest in future utilization of LGBT healthcare services. Bisexuals have about half the odds of interest in utilization compared with lesbians and gay men; Black LGBs are at nearly three times the odds of as White LGBs, but no differences were found between Latino and White LGBs. Greater LGBT community connectedness, LGB identity centrality, and healthcare stereotype threat are each associated with increased odds of expressing an interest in future utilization of LGBT healthcare services. Among all enabling and need-based factors, income and a usual source of care are associated with the odds of

Table 3
Multiple logistic regression models estimating the odds of predisposing, enabling, and need-based factors on past utilization of (N = 1424) and future interest in (N = 1434) LGB-specific clinics and providers.

Variable	Past Utilization OR (95% CI)	Future Interest OR (95% CI)
Predisposing		
Pride Cohort (ref)	1	1
Visibility Cohort	1.62 (0.97, 2.69)	1.06 (0.72, 1.60)
Equality Cohort	1.11 (0.60, 2.06)	0.72 (0.45, 1.15)
Women (ref)	1	1
Male	2.22 (1.47, 3.34)***	1.12 (0.81, 1.53)
Gay/Lesbian (ref)	1	1
Bisexual	0.29 (0.16, 0.51)***	0.57 (0.40, 0.82)**
White (ref)	1	1
Black	1.65 (0.96, 2.86)	2.81 (1.76, 4.49)***
Latino	1.31 (0.79, 2.17)	1.39 (0.93, 2.07)
Less than a College Degree (ref)	1	1
College Degree or Higher	0.95 (0.64, 1.43)	0.79 (0.58, 1.07)
Household Size	0.96 (0.78, 1.17)	0.92 (0.82, 1.03)
Internalized Homophobia	1.01 (0.76, 1.35)	1.05 (0.85, 1.30)
LGB Community Connectedness	1.28 (0.79, 2.07)	2.35 (1.71, 3.22)***
LGB Identity Centrality	1.04 (0.84, 1.29)	1.25 (1.08, 1.46)**
Healthcare Stereotype Threat	1.05 (0.89, 1.25)	1.86 (1.59, 2.18)***
Enabling		
Lower-Income (ref)	1	1
Middle-Income	0.47 (0.29, 0.76)**	0.79 (0.55, 1.15)
Upper-Income	0.46 (0.25, 0.84)*	0.60 (0.38, 0.96)*
No Health Insurance (ref)	1	1
Health Insurance	0.80 (0.40, 1.62)	0.73 (0.40, 1.33)
No Usual Source of Care	1	1
Usual Source of Care	1.15 (0.62, 2.16)	0.58 (0.37, 0.91)*
Less than 60 Miles to Nearest LGB CHC (ref)	1	1
Greater than 60 Miles to Nearest LGB CHC	0.37 (0.21, 0.65)***	0.95 (0.67, 1.33)
Need-Based		
Perceived Poor Health (ref)	1	1
Perceived Good Health	2.26 (1.06, 4.81)*	0.92 (0.58, 1.46)
Lifetime Number of Diagnoses	1.20 (1.07, 1.36)**	0.95 (0.86, 1.05)
Mental Distress	1.03 (0.98, 1.07)	1.04 (1.01, 1.08)*

*p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001.

expressing an interest. Upper-income LGBs have lower odds of expressing an interest than their lower-income counterparts, with no differences identified between middle- and lower-income LGBs. Having a usual source of care reduces the odds of expressing an interest in future LGBT healthcare services by about half. Among need-based factors, LGBs with greater mental distress are more likely to express an interest in LGBT-specific clinics and providers.

We next explore patterns in past utilization and interest within each cohort. Cohort-stratified analyses are presented in full in Table 4. Factors associated with past utilization were nearly all unique to each age cohort, whereas patterns of interest in future utilization were more consistent.

Cohort analyses

To begin, logistic regression analyses were done to look at differences across the cohorts in the two outcome variables. Logistic regressions showed that the odds of having utilized LGBT-specific clinics and providers in the five years period prior to survey (or, "past utilization) was 35% lower in the younger, Equality cohort as compared to the older, Pride cohort (OR = 0.65, 95% CI = 0.43–0.97). The middle, Visibility cohort had 1.7 times the odds of past utilization as the Equality cohort (OR = 1.67, 95% CI = 1.09–2.58), but no differences were observed between the Visibility and Pride cohorts. The odds of expressing an interest in utilizing LGBT-specific clinics and providers in the future (or, "interest") was approximately 1.4 times higher for the Equality cohort compared with the Pride cohort (OR = 1.39, 95% CI = 1.06–1.84), but no difference was observed between the Visibility cohort and either of the others.

Equality cohort. Bisexuals in the younger, Equality are at approximately one-third the odds of past utilization as their gay and lesbian counterparts, with no other predisposing factors demonstrating an association. Among enabling factors, middle-income LGBs have about one-third the odds as compared to those in the lower-income group, but no differences were identified between upper- and lower-income LGBs.

Consistent with the full model, nearly all factors associated with an interest in LGBT-specific clinics and providers are statistically significant predictors within the Equality cohort. Bisexuals are half as likely to express an interest in future utilization as gay men and lesbians. Black LGBs have over three and a half times the odds of expressing an interest in LGBT-specific services as compared to their White LGB counterparts, whereas Latino LGBs have approximately twice the odds. Increases in LGBT community connectedness, LGB identity centrality, and healthcare stereotype threat are each associated with a greater future interest in LGBT-specific clinics and providers. Having a usual source of care is the only enabling factor associated with interest, which decreases the odds by nearly 50%. No need-based factors were associated with either utilization in the past five years or an interest in future utilization.

Visibility cohort. The middle, Visibility cohort is the only one for which past utilization is influenced by a psychosocial factor. Increased LGBT community connectedness is associated with greater odds of past utilization. Like the Equality cohort, bisexuals have about one-third the odds of past utilization as their gay and lesbian counterparts. Those with a usual source of care have 8 times the odds of past utilization than those who do not; however, living over 60-miles from an LGBT CHC decreases the odds of past utilization by 92%. Perceived good health is associated with nearly nine times the odds past utilization as compared to those with perceived poor health.

Increases in LGBT community connectedness and healthcare stereotype threat both contribute to increases in the odds of expressing an interest in future utilization among the Visibility cohort. No enabling factors are associated with the odds of expressing an interest in the Visibility cohort. Increased mental distress is associated with increased odds of expressing an interest.

Table 4

Cohort-stratified multiple logistic regression models estimating the odds of predisposing, enabling, and need-based factors on past utilization of and future interest in LGB-specific clinics and providers.

Variable	Equality Cohort		Visibility Cohort		Pride Cohort	
	Past 5 Years OR (95% CI) N = 629	Next Year OR (95 %CI) N = 633	Past 5 Years OR (95 %CI) N = 348	Next Year OR (95 %CI) N = 352	Past 5 Years OR (95 %CI) N = 423	Next Year OR (95 %CI) N = 450
Predisposing						
Gender						
Women (ref)	1	1	1	1	1	1
Men	1.63 (0.89, 2.98)	0.89 (0.56, 1.44)	2.26 (0.97, 5.27)	1.90 (0.98, 3.68)	8.56 (3.54, 20.73) ***	1.76 (1.06, 2.93)*
Sexual Identity						
Gay/Lesbian (ref)	1	1	1	1	1	1
Bisexual	0.31 (0.15, 0.63) ***	0.50 (0.31, 0.80) **	0.34 (0.12, 0.98)*	0.82 (0.43, 1.54)	0.49 (0.13, 1.89)	0.84 (0.40, 1.77)
Race/Ethnicity						
White (ref)	1	1	1	1	1	1
Black	1.75 (0.77, 3.98)	3.68 (1.90, 7.14) ***	1.69 (0.65, 4.41)	2.02 (0.87, 4.73)	1.48 (0.60, 3.62)	1.53 (0.67, 3.46)
Latino	1.35 (0.64, 2.83)	1.99 (1.16, 3.42)*	1.98 (0.72, 5.46)	0.70 (0.34, 1.45)	0.55 (0.16, 1.90)	0.56 (0.23, 1.38)
Education						
Less than a College Degree (ref)	1	1	1	1	1	1
College Degree or Higher	0.96 (0.50, 1.87)	0.79 (0.48, 1.29)	0.95 (0.40, 2.25)	0.75 (0.40, 1.41)	1.01 (0.46, 2.20)	1.00 (0.59, 1.68)
Household Size	1.04 (0.80, 1.35)	0.88 (0.76, 1.03)	0.80 (0.48, 1.35)	1.00 (0.79, 1.27)	0.63 (0.41, 0.98)*	1.03 (0.79, 1.33)
Internalized Homophobia	1.10 (0.69, 1.75)	0.93 (0.68, 1.26)	1.27 (0.82, 1.96)	1.45 (0.97, 2.18)	0.63 (0.33, 1.21)	0.95 (0.66, 1.37)
LGB Community Connectedness	1.00 (0.46, 2.15)	2.49 (1.56, 3.97) ***	2.28 (1.03, 5.06)*	3.16 (1.69, 5.90) ***	1.04 (0.51, 2.14)	2.12 (1.25, 3.58) **
LGB Identity Centrality	1.11 (0.79, 1.55)	1.29 (1.02, 1.63)*	1.10 (0.72, 1.68)	1.12 (0.84, 1.50)	1.04 (0.76, 1.41)	1.20 (0.95, 1.51)
Healthcare Stereotype Threat	0.98 (0.74, 1.29)	1.91 (1.49, 2.43) ***	1.10 (0.80, 1.52)	1.97 (1.49, 2.61) ***	1.20 (0.86, 1.70)	1.84 (1.44, 2.35) ***
Enabling						
Household Income						
Lower-Income (ref)	1	1	1	1	1	1
Middle-Income	0.31 (0.15, 0.64) **	0.72 (0.45, 1.18)	1.16 (0.35, 3.87)	0.91 (0.42, 2.00)	0.83 (0.30, 2.33)	0.73 (0.36, 1.48)
Upper-Income	0.40 (0.13, 1.20)	0.79 (0.39, 1.60)	0.75 (0.19, 2.98)	0.46 (0.19, 1.10)	0.47 (0.16, 1.41)	0.49 (0.23, 1.03)
No Health Insurance (ref)	1	1	1	1	1	1
Health Insurance	0.63 (0.28, 1.43)	0.76 (0.33, 1.78)	1.23 (0.27, 5.64)	0.55 (0.21, 1.43)	1.94 (0.38, 9.96)	2.25 (0.78, 6.49)
Source of Care						
No Usual Source of Care (ref)	1	1	1	1	1	1
Usual Source of Care	0.87 (0.43, 1.77)	0.54 (0.30, 0.97)*	8.02 (1.55, 41.58) *	0.76 (0.31, 1.84)	(omitted)	0.86 (0.25, 2.92)
Miles to Nearest LGB CHC						
Less than 60 Miles to Nearest LGB CHC (ref)	1	1	1	1	1	1
Greater than 60 Miles to Nearest LGB CHC	0.55 (0.27, 1.15)	0.94 (0.59, 1.52)	0.08 (0.02, 0.29) ***	0.83 (0.43, 1.62)	0.23 (0.07, 0.71)*	1.00 (0.55, 1.80)
Need-Based						
Perceived Health Status						
Perceived Poor Health (ref)	1	1	1	1	1	1
Perceived Good Health	1.55 (0.55, 4.34)	0.78 (0.39, 1.55)	8.83 (1.72, 45.25) **	1.17 (0.49, 2.77)	2.41 (0.76, 7.64)	1.19 (0.56, 2.56)
Lifetime Number of Diagnoses	0.95 (0.65, 1.40)	0.88 (0.71, 1.10)	1.23 (0.96, 1.57)	0.92 (0.77, 1.09)	1.37 (1.15, 1.64)***	1.04 (0.91, 1.19)
Mental Distress	1.03 (0.97, 1.09)	1.05 (1.00, 1.10)	1.09 (0.99, 1.19)	1.07 (1.01, 1.14)*	1.00 (0.92, 1.09)	1.01 (0.95, 1.07)

*p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001.

Pride cohort. Men in the older, Pride cohort have eight and a half times the odds of past utilization as women, whereas increases in household size decreases the odds by nearly 40%. Similar to the Visibility cohort, living over 60 miles from an LGBT CHC significantly decreases the odds of utilization in the past five years, by nearly 80% in the Pride cohort. Also similar to the Visibility cohort, increased number of lifetime diagnosis is associated with a greater odds of past utilization.

Men in the Pride cohort also have 1.76 times the odds of expressing an interest in LGBT-specific clinics and providers. LGBT community connectedness and healthcare stereotype threat increase the odds of expressing an interest in utilization. No enabling or need-based factors were associated with the odds of expressing an interest in utilizing LGBT-specific clinics and providers in the future.

Discussion

In applying BMHSU to a study of LGBs in the United States, the present study has found that the factors influencing past utilization of LGBT-specific clinics and providers are distinct from those influencing interest in future utilization. Across all LGBs in the full model, odds of past utilization are influenced by a mix of predisposing, enabling, and need-based factors. Yet interest in the next year is predominantly influenced by predisposing factors in the full model, including demographic, social structure, and psychosocial variables. These patterns suggest potential pathways within the BMHSU framework, such that enabling and need-based factors might serve to mediate or moderate the relationships between predisposing factors (e.g., race/ethnicity, LGB identity centrality) and utilization.

We found that bisexuals have significantly lower odds of both past utilization and interest in future utilization. This is consistent with

research that showed that bisexual people are less likely than their lesbian and gay counterparts to engage with LGBT communities (Dodge et al., 2012). Bisexuals are also less likely to disclose their sexual identity to their physician than lesbians and gay men (Durso & Meyer, 2013).

The role of race/ethnicity in utilization of LGBT healthcare services is more complex. Race/ethnicity is not associated with past utilization, but Black LGBs express a greater interest in future utilization than their White counterparts. In the cohort-stratified analyses, both Black and Latino LGBs in the Equality cohort have greater odds of expressing an interest in future LGBT healthcare services. Black LGBs in the Visibility and Pride cohorts also are more likely to be interested in LGBT-specific health care, but Latino LGBs in these cohorts are less likely to do so. Though interest among Black LGBs is high relative to White LGBs, low past utilization suggests that they may continue to experience barriers in accessing care. For example, prior research has described how racial/ethnic minority LGBs face stigma and discrimination in LGBT settings as well as non-LGBT ones (Malebranche, Peterson, Fullilove, & Stackhouse, 2004). Studies should also continue to assess future cohorts of Latino LGBs to determine if the shift in future interest is associated with an age or cohort affect.

Psychosocial factors such as LGBT community connectedness, LGB identity centrality, and healthcare stereotype threat increase the odds of expressing an interest in LGBT-specific clinics and providers, but do not appear to drive utilization. One possible explanation is that one's level of connectedness to the LGBT community, or the significance of LGB status to their sense of identity, might not be sufficient motivators to lead someone with an interest in LGBT-specific clinics and providers to seek out such care. This may especially be true in the face of any barriers introduced by enabling and need-based factors. The same could be said for healthcare stereotype threat, but the theoretical underpinnings of the concept argue that experiences of stereotype threat lead people to delay or avoid healthcare (Fingerhut & Abdou, 2017). Even if an interest exists among those experiencing stereotype threat, the resulting delay or avoidance of healthcare may occur regardless of whether the services are provided by an LGBT-specific clinic or provider.

Other forms of access may be significant in the utilization of LGBT-specific clinics and providers. In a recent assessment of LGBT community centers throughout the United States, CenterLink and the Movement Advancement Project (2016) reported that a majority of clients served at LGBT community centers are lower-income. Findings from the current study that lower-income LGBs have greater odds of both past utilization as well as an interest in future utilization are therefore not necessarily surprising given that LGBT community centers often strive to make services available at little or no cost to clients. Lower-income LGBs may also be less able to afford health insurance programs that provide them with access to a wide network of physicians so that a good fit – LGBT or otherwise – can be found. LGBs with fewer financial resources may have more limited healthcare options and a greater need for those that are supportive and affirming.

The overall discrepancy among LGBs between past utilization (13%) of and future interest (52%) in LGBT-specific clinics and providers suggests a large disconnect between the kind of healthcare that many LGBs would like to have and what they may have access to. Three out of four LGBs live within 60 miles of an LGBT CHC. Even within a 60-mile radius, unreliable transportation and long commute times can be a serious barrier to utilization. A commute may be especially challenging for the one in four LGBs living more than 60 miles away from LGBT CHCs.

Perceived good health and increases in the lifetime diagnoses of physical health conditions are associated with increases in the odds of past utilization of LGBT-specific clinics and providers. This plausibly related to the greater need among people with physical health problems to use health care facilities of any kind, including LGBT-specific care. It is possible that this association is driven by particular kinds of health issues (for example, sexual health needs of gay and bisexual men in the context of HIV/AIDS) that LGB people may be more

comfortable accessing from an LGBT-specific clinic or provider. Yet the fact that those perceiving their health to be more positive have over twice the odds of utilizing LGBT-specific clinics and providers suggests that LGB people seek out LGBT-specific clinics and providers for both general and complex healthcare management.

Further research is needed to understand the relationships between lifetime diagnoses, perceived health status, and utilization of LGBT-specific clinics and providers. For example, future studies may assess how specific health issues that disproportionately burden LGB people may contribute to their utilization of LGBT-specific clinics and providers, as well as how health status may differentially influence the utilization of LGBT-specific clinics as compared to LGBT-specific providers.

Future research also benefits from more fine tuned examinations of specific constructs and potential cohort differences in the importance of these constructs. Again, the large number of variables included in the current model and the need to make comparisons across three age cohorts prohibited the use of statistical interactions to statistically compare across the cohorts. However, the separate models suggest some possible differences to examine. For example, though the full model indicated that women have lower odds of past utilization, the cohort-stratified analyses suggested a distinction between men and women only within the Pride cohort. There, men have dramatically greater odds of past utilization. These findings are different from findings not specific to LGBs, which showed that, in general, women are more likely to visit with a physician than men (Broyles et al., 1999; Dhingra et al., 2010; Parslow et al., 2002). The markedly greater odds of past utilization of LGBT-specific clinics and providers, specifically among men in the Pride cohort, may be due to HIV/AIDS, with many gay and bisexual men turning to community-based support when little other culturally-sensitive and competent care was available (Epstein, 2003). Additionally, cohort analyses showed that the younger, Equality cohort members are *more* likely to express an interest in future utilization of LGBT-specific clinics and providers than the older, Pride cohort. This potentially challenges Savin-Williams' (2009) proposal that young LGBs, in a "post-gay" culture, would disassociate themselves from the LGBT community.

Though this study shows that BMHSU is a useful tool for assessing healthcare utilization among LGB people, its scope was limited to the individual context. Recent iterations of BMHSU highlight the importance of social networks in healthcare utilization, particularly how family, friends, and affiliations with community organizations can facilitate or impede utilization (Andersen, Davidson, & Baumeister, 2014, pp. 33–69). Age cohort and LGBT community connectedness are both conceptually related to social networks without directly measuring them. The relationships between these variables and utilization may be driven by the attitudes and beliefs prominent within these networks rather than as predisposing factors to the individual alone.

New opportunities for advancing BMHSU have emerged through this research. Demographic characteristics are represented within the model as factors that predispose individuals to particular patterns of utilization, and research applying BMHSU has documented this relationship empirically. Prior research applying BMHSU has not explored how identity operates distinctly from demographic categories. In the present study, sexual identity as a demographic category and LGB identity centrality as a variable representing the significance of that category in one's self-conception are each associated with LGBT-specific healthcare utilization. Findings are consistent with a recent study of veteran women's utilization of Veterans Affairs (VA) health services, which found that the centrality of women's veteran identity was positively associated with the use of VA health services (Di Leone, Brooke, Wang, Kressin, & Vogt, 2016). Identity centrality may be an important factor to consider in future research when the demographic category is associated with the services being sought or offered.

There are several limitations to our study. One limitation is that we are unable to determine the extent of use of LGBT-specific clinics and

providers. Thus, we are unable to distinguish between respondents who had only one encounter with an LGBT-specific clinic or provider in the past five years from those who had frequent encounters with them. It is also not possible to differentiate among LGBT-specific clinics and providers, which may have different and unique set of factors influencing their utilization. Understanding the role of LGBT-specific clinics and providers continues to be an under-researched area of healthcare utilization. It will be important for research to expand upon the foundational knowledge provided here and better elucidate the frequency of use, the specific types of services being sought from LGBT-specific sources, and the pathways through which predisposing, enabling, and need-based factors move to influence healthcare utilization among LGB people. Lastly, given the nearly 150 statistical tests performed in the logistic models, there is significant potential for family-wise error (false discovery). The authors differentiate between 0.05, 0.01, and 0.001 Alpha levels, but relationships significant at the 0.05 level should be interpreted as suggesting potential relationships rather than confirming significance.

Another limitation is the inability to distinguish between cohort and age effects. Although participants represent three distinct age cohorts, the survey data used in the present study is cross-sectional. For example, as described regarding Latino LGBs in the Equality cohort expressing a greater interest in future utilization, it is unclear if findings reflect a unique cohort experience of greater inclusivity or an age effect reflecting more limited lifetime opportunities for negative encounters. Longitudinal cohort data would be needed to distinguish between these two possible explanations.

Our study is strong for its use of a national sample representing the U. S. population of LGBs and for the coverage of areas of LGB life that are not addressed in other national datasets that include LGB respondents among the general population studied. Our study results show that LGBT-specific clinics and providers continue to be an important piece of the healthcare landscape for LGB people, including young LGB people. LGBT-specific health care resources provide alternative sources of healthcare for those who feel more connected to their LGB identities and communities, who believe that general population settings are in some way not meeting their needs, or, in the case of community-based settings, those who may be in need of more affordable services. We believe that the results are a good indication and call for action for LGBT public health professionals to increase access so that those interested in utilizing these services would indeed be able to do so.

Ethics approval statement

On March 25, 2015, the University of California, Los Angeles (UCLA) Institutional Review Board (IRB) approved the study from which the data used in this manuscript was drawn (IRB#14-00500-AM-00004). UCLA's Federalwide Assurance (FWA) with Demartment of Health and Human Services is FWA00004642.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ssmph.2019.100505.

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