The Associations of Gender, Sexual Identity and Competing Needs with Healthcare Utilization among People with HIV/AIDS

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Studies report gender differences in medical service utilization among persons with HIV, although most compare women to heterogeneous groups of men. Competing needs for medical care of women may contribute to those differences. We examined prospectively the role that competing social, economic and health needs, such as caring for others, play in gender differences in hospital, ambulatory and emergency room (ER) visits. We considered sexual identity to study women, gay/bisexual men and heterosexual men in the most recent wave (n=1,385) of the HCSUS, a nationally representative sample of persons with HIV/AIDS in care in the United States. We considered gay/bisexual men and heterosexual men separately because their different resources and social networks may lead to disparate service utilization. Multivariate regression showed that women were more likely than gay/bisexual men to be hospitalized, while women and gay/bisexual men were more likely than heterosexual men to use the ER without subsequent hospitalization. Controlling for competing needs eliminated neither difference but predicted hospitalization and ER use. Findings suggest that addressing competing needs could reduce unnecessary hospitalization and ER use for both genders. Furthermore, examinations of gender differences in service use should include sexual identity.

Keywords: HIV/AIDS ■ gender ■ sexual identity ■ health service utilization

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Studies show that gender differences exist for a variety of needed HIV services[1-4] and correlates of service use such as insurance status[5,6] and health status.[2,4] For example, women with HIV are less likely to gain early access to[7,8] or use highly active antiretroviral therapy (HAART)[9,10] or pneumocystis carinii pneumonia (PCP) prophylaxis.[11,12] Among intravenous drug users, women also are less likely than men to receive protease inhibitors.[13]

Little is known about why these gender differences in medical service utilization exist among persons with HIV/AIDS. One possible explanation could be that women's time or financial resources required to obtain needed medical care are used instead to address their basic subsistence needs such as food, clothing and housing. Based on previous research, we define competing needs as such: a basic subsistence need that may interfere with a person's seeking medical care.[14] Among individuals with HIV, women report competition between these

needs and medical care more often than do men.[15,16] Women with HIV/AIDS also tend to have more caregiving responsibilities than men.[17,18] Despite the potential importance of competing needs in explaining gender differences in medical service utilization among persons with HIV/AIDS, few studies have examined the issue.[15]

Additionally, few researchers have distinguished between men with varied sexual identities when studying medical service utilization among persons with HIV.[7,19-28] For example, few studies consider that heterosexual men may be more similar to women than to gay/bisexual men in ways that may affect health service use by exploring these two heterogeneous groups of men separately.[8-13] Among people infected with HIV, gay/bisexual men are more likely than heterosexual men to have a tightly networked community, as well as to be privately insured, which may lead to differential service utilization.[29] Insured persons with HIV have a higher utilization of outpatient visits, antiretroviral therapy and PCP prophylaxis than uninsured persons.[3,6,26,30,31] Another study reported differences in knowledge regarding HIV and that this difference can be attributed to social networks of the gay community. This same study also found differences in HIV-related beliefs regarding responsibility of transmission.[32]

Reports also show that gay/bisexual men differ in their modes of HIV transmission compared to heterosexual men and women, with heterosexual men and women reporting more injection drug use.[33] Thus, heterosexual men and women may be more similar in background and resources compared to gay/bisexual men. For instance, intravenous drug users may be less likely to receive HAART due to provider concern about intravenous drug user's adherence. Additionally, the stigma related to intravenous drug use has also been associated with reduced medical care.[34]

The goal of this paper was to investigate gender/sexual identity differences in healthcare utilization and, if those differences existed, the role that competing needs for medical care had in explaining those differences. Comparing women to gay/bisexual men and to heterosexual men enabled us to examine the diversity within the heterogeneous group of men and to examine the extent to which utilization differences are related to gender or sexual identity as opposed to another factor. We examined gender/sexual identity differences in the use of three

Table 1. Patient characteristics by gender/sexual identity group (n=1,385)

Characteristics	Overall (%)	Gay/Bisexual Men (%)	Female (%)	Heterosexual Men (%)
All Respondents	100	43.4	36.1	20.5
Having Any Competing Needs***	36.0	33.2	44.2	34.3
Age***				
20–34	20.2	19.2	32.4	9.6
35–44	47.7	51.4	45.0	41.0
≥45	32.1	29.4	22.6	49.4
Race***				
White/other	55.0	74.8	28.3	32.3
Black	32.2	15.0	55.3	52.1
Hispanic	12.8	10.2	16.4	15.6
Education***				
Less than high school	23.5	10.1	43.3	37.2
High school	27.8	25.1	30.2	32.1
Some college	27.1	30.4	22.5	23.4
College graduate	21.6	34.4	4.0	7.3
Income 1995***				
<$5,000	17.9	11.7	28.6	22.5
$5,001–10,000	26.1	20.4	33.7	32.5
$10,001–25,000	25.2	24.2	26.9	26.2
>$25,000	30.8	43.7	10.8	18.8
Insurance***				
Private	35.2	49.2	14.0	21.7
Medicare	17.4	16.3	10.8	27.1
Medicaid	29.1	16.6	54.0	35.0
None	18.3	17.9	21.2	16.2
Lowest Reported CD4 Count				
<50	24.4	25.0	21.2	26.2
50–199	33.0	33.6	30.1	34.3
200–499	37.6	37.0	43.3	33.1
≥500	5.0	4.4	5.4	6.4

Values in the table represent weighted percentages that reflect the total number of persons in care for HIV; * p≤0.05; ** p≤0.01; *** p≤0.001

medical services: hospitalization, emergency room (ER) use without hospitalization and ambulatory visits. We utilized data from the Risk and Prevention survey (R&P), the third and most recent wave of data from the HIV Costs and Services Utilization Study (HCSUS) sample. HCSUS is a longitudinal study of a national probability sample of adults receiving care for HIV.

METHODS

Sample

The R&P sample was derived as follows. Full details of the HCSUS multistage sampling design are presented elsewhere.[20,35] In brief, the reference population was persons ≥18 years old with known HIV infection who made ≥1 visit, in the context of regular or ongoing care, to a nonmilitary, nonprison medical provider (other than an emergency department) in the contiguous United States, during the period January 5 to February 29, 1996. The HCSUS used a three-stage sampling design, in which geographical areas, medical providers and patients were sampled. In the first stage, we randomly sampled 28 metropolitan statistical areas (MSAs) and 24 clusters of rural counties to be representative of the contiguous 48 states and the District of Columbia. In the second sampling stage, we sampled 58 urban and 28 rural "known providers" from lists of providers known by local informants to provide HIV care. In the third stage, we sampled 4,042 patients from deidentified lists of all eligible patients who visited participating providers during January and February 1996. Sampling rates in this third stage were set to produce an overall probability of selection that was as uniform as possible.

HCSUS baseline interviews were conducted between January 1996 and April 1997 with 2,864 respondents. First follow-up interviews were conducted from December 1996 to July 1997 among 2,466 (86%) persons, and second follow-up interviews were completed between August 1997 and January 1998 among 2,267 persons (91% of those completing the previous survey).

R&P sampled a subset of persons who completed this second follow-up interview. The analyses presented here used the R&P sample (n=1,421). Analytic weights were used to correct for differential selection probabilities, nonresponse, multiplicity (opportunities to enter into the HCSUS sample through >1 provider) and attrition for reasons other than known mortality. After applying these weights, the 1,421 participants in R&P represented 199,613 HIV-positive adults receiving care in the 48 contiguous United States. We randomly imput-

Table 2. Bivariate associations between competing needs and healthcare utilization in previous six months (n=1,385)

Characteristics	Unweighted (n)	Any Hospitalizations (%)	Any ER[a] Visits w/o Hospitalization (%)	<2 Ambulatory Visits (%)
Having Any Competing Needs	***	***		
Yes	545	29.2	30.4	6.7
No	840	17.8	19.7	7.2
Components of Having Any Competing Needs Measure				
Postponed Care Because Could Not Get Off Work				
Yes	101	22.3	22.5	9.7
No	1,284	21.9	23.6	6.8
Postponed Care Because Too Sick	***	***		
Yes	211	35.8	38.4	6.1
No	1,174	19.9	21.4	7.2
Postponed Care Because Did Not Have Transportation			***	***
Yes	216	37.9	33.2	6.3
No	1,169	19.6	22.2	7.2
Postponed Care Because of Caring for Someone Else*				
Yes	133	33.4	32.0	6.7
No	1,252	20.9	22.8	7.1
Postponed Care Because Needed Money for Food/Clothing/Housing				
Yes	155	27.3	31.9	4.5
No	1,230	21.3	22.6	7.4
Went Without Food or Clothing Because Needed Money for Medical Care**				
Yes	86	32.3	29.4	4.4
No	1,299	21.2	23.2	7.2

Values in the table represent weighted percentages that reflect the proportions of the U.S. population in care for HIV in each category; a: ER: emergency room; * p≤0.05; ** p≤0.01; *** p≤0.001

ed missing values (using "hot deck" imputation) to fill in the <5% of essential missing values to preserve the representativeness of the results.[36] All computer-assisted interviews were conducted in person.

Variables

Three outcome variables were of interest: in the prior six months, having: 1) <2 ambulatory visits, 2) ≥1 ER visit that did not lead to a hospitalization, and 3) ≥1 hospitalization. We were interested in knowing who received <2 ambulatory visits because one visit every three months (or two visits in a six-month period) is a reasonable interval for monitoring disease events and response to treatment in most patients with HIV.[20] ER visits without hospitalization are often considered an indication of use of the ER for nonurgent care, which may be a result of underutilization of or poor quality of care from outpatient facilities.[20] Hospitalization may also indicate problems with outpatient care.[20] These outcomes were measured at R&P.

We examined two main independent variables: 1) gender, measured at baseline, and sexual identity, measured at R&P, were combined to create one measure of gender/sexual identity; and 2) having competing needs for medical care measured at baseline. We categorized gender/sexual identity in three groups: 1) women, 2) men who have sex with men (gay/bisexual men), and 3) men who do not have sex with men (heterosexual men). We split men into two categories: gay/bisexual men and heterosexual men because the former are more likely to be privately insured and may experience fewer barriers to HIV-related service utilization partially because their more tightly networked community[37] may provide information on service availability. This gender/sexual identity variable was constructed using an item from the baseline HCSUS survey asking participants whether they were male or female as well as confirmation of gender through interviewer observation at HCSUS baseline, and an item in the R&P survey asking respondents to describe their current sexual orientation as: 1) straight or heterosexual, 2) gay or lesbian, 3) bisexual, or 4) other. A small number of individuals (n=30) chose "other." Five of these cases could be logically imputed with data from the HCSUS baseline, in which they had indicated the gender with whom they most often engaged in sex. Twenty-five cases remained missing. Due to the low prevalence of HIV among women who both self-report as lesbian and do not have sex with men, we did not examine differences among women according to sexual identity. In this study sample, the number of women who identified as lesbian and not having sex with men was very small (n=17), reflecting the low prevalence in the population. As such, we were unable to examine this group separately.

Participants were asked in the baseline HCSUS survey if they had each of six competing needs for medical care that included health, social and economic needs. Specifically, they were asked if they put off going to the doctor for HIV because: 1) they could not get off work, 2) they were too sick, 3) they did not have a way to get there, or 4) they were taking care of someone else who was important to them. They also were asked: 5) if they had ever gone without care because they needed the money for food, clothing, housing, etc.; and 6) if they had ever gone without food, clothing, housing, etc. because they needed the money for healthcare. In addition to dichotomous variables reflecting each need, participants reporting any of the six needs were defined as having "any competing needs" in a composite variable.[14]

Bivariate analysis between each competing needs variable and gender/sexual identity showed that very few people had >1 competing need; therefore, we used the composite measure of competing needs in the multivariate models described below.

Covariates included age, race, education and income, which were measured at baseline. Insurance and lowest reported CD4 count (as a measure of illness severity), were measured at the second follow-up because they may have changed since baseline. No other markers of disease severity were included.[38-40]

Analysis

Bivariate analyses first were conducted to examine the relationship between the three utilization variables and competing needs. They also were conducted to compare the three gender/sexual identity groups on each utilization variable and demographic. Subsequently, multivariate logistic regression analyses predicting utilization were conducted in several stages to show whether observed differences were explained by specific variables or groups of variables. Model 1 contained only the gender/sexual identity variable to determine if differences existed. Subsequently, model 2 added demographics (without competing needs) to determine if factors other than competing needs reduced or removed any gender/sexual identity differences. These covariates also were important because some are potential confounders.[39-41] Model 3 added the composite competing needs variable to isolate its effect on any gender/sexual identity differences as a potential mediator.[42] These initial models used gay/bisexual men as the reference group. We also analyzed model 3 using heterosexual men as the reference group to explore whether women and heterosexual men's patterns of hospitalization indeed differed. In these analyses, which are not shown in the tables, we compared women to two very different groups of men, therefore accounting for diversity within the male group as well as exploring the extent to which utilization differences are located within gender versus some other factor.

In preliminary analyses, a correlation matrix was computed to assess multicollinearity between the com-

posite competing needs variable and the other covariates; none was detected.

RESULTS

Table 1 shows the patients' sociodemographic characteristics stratified by gender/sexual identity and weighted to represent the total number of persons in care for HIV in the United States in 1996 and surviving until 1998, whose sexual identity was known. The sample was 43.4% gay/bisexual men, 20.5% heterosexual men and 36.1% women. Women were more likely than heterosexual men or gay/bisexual men to report having any competing needs for medical care. These groups also differed in their racial/ethnic composition, education level, income and insurance status. In descriptive analysis, women were more likely than others to be hospitalized (women 28.2%, gay/bisexual men 17.8%, heterosexual men 26.0%; $p<0.001$) and to use the ER without subsequent hospitalization (women 31.0%, gay/bisexual men 23.0%, heterosexual men 17.3%; $p<0.01$). However, there were no differences across gender/sexual identity groups in their likelihood of having <2 ambulatory visits during a six-month period (latter data not shown).

Bivariate relationships between medical service utilization and having competing medical needs are displayed in Table 2. Respondents having any competing needs were more likely to be hospitalized and to utilize the ER without subsequent hospitalization. Four types of competing needs were associated with hospitalization, and two were related to use of the ER without subsequent hospitalization. None of the needs were related to making <2 ambulatory visits.

Results of the staged models predicting hospitalization in the prior six months are shown in Table 3. Model 1 provides the odds ratios (ORs) associated with the significant bivariate relationship between gender/sexual identity and hospitalization. Both women and hetero-

Table 3. Associations of gender/sexual identity with being hospitalized in a six-month period (n=1,385)

Characteristics	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)
Gender/Sexual Identity	**	**	*
Gay/bisexual men+	1.00	1.00	1.00
Female	**1.82 (1.27–2.62)****	**1.51 (1.06–2.14)***	**1.51 (1.07–2.13)***
Heterosexual men++	**1.62 (1.19–2.21)****	**1.18 (0.73–1.90)**	**1.19 (0.73–1.94)**
Having Any Competing Needs			1.82 (1.31–2.53)***
Age			*
20–34		1.00	1.00
35–44		0.96 (0.57–1.62)	1.00 (0.60–1.66)
≥45		1.31 (0.83–2.08)	1.45 (0.92–2.28)
Race			
White/other		1.00	1.00
Black		1.22 (0.78–1.90)	1.22 (0.79–1.86)
Hispanic		1.11 (0.77–1.59)	1.02 (0.76–1.52)
Education			
Less than high school		1.00	1.00
High school		1.32 (0.93–1.87)	1.30 (0.91–1.86)
Some college		1.36 (0.85–2.16)	1.32 (0.82–2.15)
College graduate		0.86 (0.47–1.60)	0.86 (0.47–1.58)
Insurance		*	*
Private		1.00	1.00
Medicare		2.41 (1.21–4.78)**	2.41 (1.23–4.71)*
Medicaid		2.00 (1.32–3.01)***	1.92 (1.29–2.88)**
None		1.83 (0.96–3.56)	1.76 (0.94–3.29)
Income			
<$5,000		1.00	1.00
$5,001–10,000		1.02 (0.62–1.67)	1.05 (0.64–1.73)
$10,001–25,000		0.69 (0.38–1.25)	0.74 (0.41–1.31)
>$25,000		1.14 (0.55–2.35)	1.25 (0.61–2.57)
CD4 Count		*	*
<50		1.00	1.00
50–199		0.69 (0.46–1.02)	0.66 (0.43–1.01)
200–500		0.46 (0.26–0.82)**	0.45(0.25–0.81)**
>500		0.34 (0.17–0.68)**	0.37 (0.19–0.75)**

Values are adjusted ORs and 95% CIs in logistic regression models including the variables shown for each model. Changes in the OR on gender/sexual identity were observed across the three models; *p≤0.05; ** p≤0.01; *** p≤0.001

sexual men were more likely to be hospitalized compared to gay/bisexual men. In model 2, which controls sociodemographic variables, the ORs for both women and heterosexual men were reduced. Heterosexual men no longer had significantly higher odds of hospitalization than gay/bisexual men, but women continued to have higher odds. Additionally, those with public as opposed to private insurance and those with lower CD4 counts were more likely to be hospitalized. Model 3 demonstrates that the addition of competing needs did not alter the ORs for gender/sexual identity, indicating it did not further account for the differences in hospitalization between women and gay/bisexual men. However, having any competing needs strongly predicted hospitalization. When we analyzed model 3 using heterosexual men as the reference group, women were no more likely than heterosexual men to be hospitalized (OR=1.27, 95% CI: 0.93–1.72, p=0.13).

Results of the multivariate analysis of ER utilization without subsequent hospitalization during a six-month period are reported in Table 4. Model 1 shows the ORs associated with the bivariate gender/identity differences shown in Table 1. Compared to gay/bisexual men, the odds of using the ER without being hospitalized was higher for women, while the odds for heterosexual men were lower. Model 2 shows that controlling for the combined effect of the sociodemographic variables reduced the odds for women such that they no longer differed from gay/bisexual men. The odds of using the ER became even lower for heterosexual men compared to gay/bisexual men.

Model 3 shows that having any competing needs was strongly and positively associated with ER use. However, having competing needs did not affect the odds of ER use for women or heterosexual men above and beyond the influence of sociodemographic variables. When we analyzed model 3 using heterosexual men as the reference group, women (OR=1.87, 95% CI: 1.31–2.68, p=0.001) and gay/bisexual men (OR=1.77, 95% CI: 1.16–2.69, p=0.009) were more likely than heterosexual men to use the ER without subsequent hospitalization.

We did not analyze multivariate models predicting the receipt of <2 ambulatory visits because there were no bivariate associations between ambulatory visits and gender/sexual identity groups or competing needs.

DISCUSSION

Among persons in treatment for HIV, we found that gender/sexual identity differences existed for individuals' likelihood of being hospitalized and using the ER (without subsequently being hospitalized) during a six-month period but not for the receipt of ambulatory visits. Specifically, women were more likely than gay/bisexual men to be hospitalized and were more likely than heterosexual men to use the ER without subsequent hospitalization. There also were important differences in utilization related to sexual identity among men. Heterosexual men were less likely than gay/bisexual men to utilize the ER without subsequent hospitalization.

Having any health, social or economic needs that competed with the need for medical care at baseline did not account for these gender/sexual identify differences in utilization at follow-up, when considered in the context of other demographic, economic and health characteristics. However, persons with any competing needs were more likely to be hospitalized and to use ERs (without subsequently being hospitalized). Thus, their care is being provided in more costly venues and possibly only after their symptoms have become difficult to address. Additionally, this association was independent of gender, sexual identity, insurance, income and other studied characteristics. This association also highlights the fact that having competing needs may have a long-term effect on health service utilization for this population. As such, addressing competing needs with better resources, such as those provided by some case management approaches,[43] may be a cost-effective way of managing HIV disease and may manage it more effectively.

Several demographic, socioeconomic and health factors other than competing needs also were important predictors of these utilization outcomes and appeared to account for some gender/sexual identity differences in utilization. In particular, heterosexual men did not differ from gay/bisexual men in their likelihood of being hospitalized once their sociodemographic and health characteristics were taken into account. Also, women's greater likelihood of using the ER without subsequent hospitalization was apparently accounted for by their lower incomes, relative to men. However, even when these and other factors were taken into account, women remained more likely than gay/bisexual men to be hospitalized, and both women and gay/bisexual men remained more likely than heterosexual men to use the ER without subsequent hospitalization. These findings contribute important data to the literature on gender/sexual identity and HIV health services and yet call for additional research to better illuminate reasons for gender/sexual identity differences.

Our finding that women were more likely to be hospitalized compared to gay/bisexual men is consistent with previous findings among groups with HIV/AIDS,[1,44-46] with few exceptions.[17] Additionally, our results showed that women were more likely to use the ER for care that does not require subsequent hospitalization and are consistent with at least one previous study.[3] Finally, our finding that women received similar ambulatory care as men mirrors another in the HIV/AIDS literature[17] yet is contrary to one report[3] in the HIV literature and what is well known among the general population[47,48]—that women are more likely to utilize ambulatory care than men. As a chronic disease, HIV/AIDS might result in a pattern of utilization by

gender that differs from that of the general populations. In the general population, it is thought that men are more likely than women to ignore or self-treat most symptoms and avoid medical care.[48] However, men and women with HIV appear equally likely to seek outpatient care in our study, perhaps because symptoms may reflect more serious disease than they do in the general population.

One explanation for the lack of gender/sexual identity differences in ambulatory visits may be the lack of variability in this measure; nearly everyone in the sample was receiving ambulatory care at least twice every six months. The HCSUS sample was selected specifically amongst a group of HIV-positive individuals in care, with selection based on physician visits, and thus reflective of those who *do* visit providers—not the general population of people with HIV, for which there may be more variability in ambulatory visits.

Neither competing needs nor financial or other resources explained women's greater likelihood of hospitalization relative to gay/bisexual men. Nor did these needs explain heterosexual men's being less likely to use the ER relative to both women and gay/bisexual men. Thus, additional research is needed to better illuminate reasons for gender/sexual identity differences.

This paper elucidates the importance of considering persons' competing needs for medical care in examinations of health service utilization. It also stresses the importance of not grouping together all men when examining gender differences in HIV-related health service utilization but instead recognizing that gay/bisexual men and heterosexual men may differ in many important ways that result in health service utilization differences. For instance, the findings about women and gay/bisexual men were similar, and both groups differed from heterosexual men with regard to ER use without subsequent

Table 4. Associations of gender/sexual identity with utilization of emergency rooms without subsequent hospitalization, in a six-month period (n=1,385)

Characteristics	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)
Gender/Sexual Identity	*	*	*
Gay/bisexual men+	1.00	1.00	1.00
Female	**1.51 (1.05–2.19)***	**1.07 (0.73–1.57)**	**1.06 (0.71–1.58)**
Heterosexual men++	**0.70 (0.52–0.95)***	**0.57 (0.38–0.85)****	**0.57 (0.37–0.86)****
Having Any Competing Needs			1.50 (1.17–1.91)**
Age			
20–34		1.00	1.00
35–44		0.96 (0.57–1.62)	0.98 (0.59–1.64)
≥45		0.74 (0.42–1.29)	0.78 (0.46–1.35)
Race			
White/other		1.00	1.00
Black		1.06 (0.66–1.70)	1.05 (0.65–1.69)
Hispanic		1.10 (0.78–1.56)	1.07 (0.76–1.52)
Education			
Less than high school		1.00	1.00
High school		1.18 (0.75–1.85)	1.16 (0.75–1.79)
Some college		0.84 (0.58–1.22)	0.82 (0.57–1.19)
College graduate		0.82 (0.48–1.41)	0.82 (0.48–1.41)
Insurance			
Private		1.00	1.00
Medicare		0.89 (0.53–1.51	0.88 (0.52–1.51)
Medicaid		1.15 (0.76–1.75)	1.12 (0.74–1.70)
None		1.10 (0.72–1.67)	1.05 (0.69–1.61)
Income			
<$5,000		1.00	1.00
$5,001–10,000		1.01 (0.68–1.50)	1.04 (0.70–1.55)
$10,001–25,000		0.82 (0.53–1.30)	0.87 (0.56–1.35)
>$25,000		0.53 (0.28–0.98)	0.56 (0.30–1.04)
CD4 Count			
<50		1.00	1.00
50–199		1.04 (0.73–1.50)	1.02 (0.71–1.47)
200–500		0.77 (0.52–1.14)	0.77 (0.52–1.14)
>500		0.49 (0.21–1.16)	0.52 (0.22–1.22)

Values are adjusted ORs and 95% CIs in logistic regression models including the variables shown for each model. Changes in the OR on gender/sexual identity were observed across the three models; * p≤0.05; ** p≤0.01; *** p≤0.001

hospitalization. Therefore, ER use cannot be explained merely by gender, given this finding, but instead is located in some other unknown characteristic that differs among these groups for which further research should be devoted. Additionally, our finding that women were more likely than gay/bisexual men to be hospitalized, but not more likely than heterosexual men, indicates gender was not the only issue. and some other factor besides gender is behind the differences.

This paper also has limitations. Our analysis relied exclusively on self-reports of service utilization. Also, as noted in prior HCSUS papers, this study is limited to those who received medical care for HIV and is likely to underrepresent persons with extremely poor access, the least compliant and the healthiest. Our use of a sample for which we had two years of follow-up data means we examined only survivors; if there were a greater death rate among the most disadvantaged respondents, it could result in a conservative bias to the findings, leading to an underestimation of differences between these groups. We also did not include additional measures of socioeconomic status beyond education and income. Similarly, we only included CD4 count as a measure of disease severity, because viral load measures were not available at baseline. The HCSUS data used for this study were collected between 1996 and 1998, so it is possible that competing needs for persons with HIV may have changed. However, this data set represents a nationally representative sample of people with HIV in the United States, and to date no other data of this type has been collected.

CONCLUSION

Gender/sexual identity differences exist in some types of medical service utilization among persons with HIV. If not addressed, they may lead to increased morbidity and mortality among women and heterosexual men relative to gay/bisexual men. Future research should move beyond the examination of traditional barriers to medical care and also examine adults' competing needs for medical care. Policymakers could examine solutions to reduce competing needs such as transportation or childcare.

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