Behavioral Health Treatment Patterns Among Employer-Insured Adults in Same- and Different-Gender Marriages and Domestic Partnerships

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Objective: This study examined specialty behavioral health treatment patterns among employer-insured adults in same- and different-gender domestic partnerships and marriages.

Methods: The study used behavioral health service claims (2008–2013) from Optum to estimate gender-stratified penetration rates of behavioral health service use by couple type and partnership status among partnered adults ages 18–64 (N=12,727,292 person-years) and levels of use among those with any use (conditional analyses). Least-squares, logistic, and zero-truncated negative binomial regression analyses adjusted for age, employer and plan characteristics, and provider supply and for sociodemographic factors in sensitivity analyses. Generalized estimating equations were used to address within-group correlation of adults clustered in employer groups.

Results: Both women and men in same-gender marriages or domestic partnerships had higher rates of behavioral health service use, particularly diagnostic evaluation, individual psychotherapy, and medication management, and those in treatment had, on average, more psychotherapy visits than those in different-gender marriages. Behavioral health treatment patterns were similar between women in same-gender domestic partnerships and same-gender marriages, but they diverged between men in same-gender domestic partnerships and same-gender marriages. Moderation analysis results indicated that adults with same-gender partners living in states with fewer legal protections for lesbian, gay, bisexual, and transgender persons were less likely than adults with same-gender partners in LGBT-friendly states to receive behavioral health treatment. Sensitivity analyses did not affect findings.

Conclusions: Behavioral health treatment patterns varied by couple type, partnership status, and gender. Results highlight the importance of increasing service acceptability and delivering inclusive, culturally relevant behavioral health treatment for lesbian, gay, and bisexual persons.

Psychiatric Services 2018; 69:572–579; doi: 10.1176/appi.ps.201700331

Lesbians, gay men, and bisexual (LGB) individuals have greater risks of suicide ideation, substance use disorders, and mental illness, compared with heterosexual adults (1–5). Meta-analyses found that LGB persons have higher lifetime and 12-month prevalence rates of depression and anxiety disorders, compared with heterosexuals (2). LGB individuals also have 2.7 times greater risk of past-year drug dependence and greater likelihood of lifetime substance use disorder, compared with heterosexual men and women (1,6). Higher risks of mental and substance use disorders among LGB persons are linked to the stress they experience as members of a stigmatized sexual minority group (7). LGB individuals are at greater risk of experiencing discrimination, violence, and other stressors that affect their mental health and well-being (7–10). They also experience internalized homonegativity and heterosexism, which can contribute to higher levels of psychological distress and greater behavioral health service needs (11–13). Given these elevated risks, public health advocates must monitor and strengthen behavioral health treatment for this population.

Several studies have found that LGB individuals are more likely than heterosexual adults to receive substance use treatment and mental health treatment (1,6,14–16). Nearly half of those who identified as LGB and who did not have a diagnosed disorder, particularly women, reported that they recently received mental health treatment (17). This higher rate of service use may be due to greater perceived need for treatment among LGB women, regardless of whether they meet criteria for a mental or substance use disorder (18).

In-depth information on behavioral health utilization patterns, such as duration and type of services received, among LGB adults remains largely unknown. Previous studies that examined this subject relied on self-reported service use in population surveys, which are subject to numerous potential reporting biases (19–22). In addition, earlier studies did not focus on the potential impacts of partnership status of couples

on behavioral health treatment. Our study used administrative data from Optum, a fully owned subsidiary of UnitedHealth Group, to examine behavioral health treatment patterns in a national sample of adults in legal partnerships, comparing those in same- versus different-gender partnerships and those in marriages versus domestic partnerships.

TABLE 1. Annual behavioral health service use and spending among employer-insured women who shared coverage with a spouse or domestic partner, by type of legal union[a]

Variable	Different gender		Same gender	
	Marriage (N=6,216,332)	Domestic partnership (N=93,806)	Domestic partnership (N=34,638)	Marriage (N=12,426)
Service use				
Outpatient assessment and diagnostic evaluation (mean visits)	.05	.07**	.10**	.09**
Outpatient medication management (mean visits)	.16	.20**	.30**	.34**
Outpatient individual psychotherapy (mean visits)	.49	.57**	1.39**	1.65**
Outpatient group psychotherapy (mean visits)	.01	.01	.03**	.04*
Outpatient family psychotherapy (mean visits)	.04	.04	.09*	.18**
Structured outpatient (mean days)	.02	.03**	.05**	.07**
Day treatment (mean days)	.01	.02**	.02**	.03**
Residential (mean days)	.01	.01	.01	.02*
Inpatient (mean days)	.02	.03**	.05**	.03
Total expenditures (mean 2013 dollars)				
Patient out of pocket	27.79	33.92**	69.82**	79.53**
Plan	82.83	109.93**	200.47**	240.13**
Total	110.61	143.85**	270.29**	319.66**

[a] Source: Optum behavioral health claims, 2008–2013. Results are mean predictions estimated from ordinary least-squares models that adjusted for subscriber status, age category, number of dependents by age, employer group size, employer industry, managed plan status, carve-in plan status, providers per 1,000 members by state and year, year enrolled, and state of residence. Reference group: different-gender marriage

*p<.05, **p<.01

METHODS

Sources of Data

Data were provided by the behavioral health division of Optum, a health services company whose behavioral division is one of the largest managed behavioral health organizations (MBHOs), covering 60.9 million members nationwide. Data used in this study precede the 2015 U.S. Supreme Court decision that requires all states to license and recognize marriage between two people of the same gender. Data were drawn from four linked Optum databases from 2008 to 2013: member eligibility files; specialty behavioral health claims, routinely collected for all Optum behavioral health beneficiaries; the "Book of Business" file; and provider supply data. The study identifier included a "family ID" component that allowed linkages between subscribers and their dependents.

Study Cohort

The sampling strategy was derived from a federal parity evaluation (23). Unique employers (N=1,070) were sampled, and 2008–2013 data for all plans and enrollees associated with selected employers were subsequently extracted. Members who shared coverage during a calendar year were linked, and households in which subscribers had one dependent "spouse" or "domestic partner" were selected and defined as a couple during that year. Couples in which dependent partners were classified by the employer group and Optum as "spouses" were defined as legally married, and couples in which dependent partners were classified as "domestic partners" were defined as domestic partnerships. Eligible members included the subscriber, spouse, or domestic partner of selected couples ages 18–64 who were enrolled for a full calendar year between 2008 and 2013. We excluded members who lived outside the United States any time during the calendar year; were enrolled in both carve-out and carve-in plans during the same year; were ever enrolled in retiree plans, supplemental plans, or plans not offering a behavioral health benefit during the year; or had different reported genders within the same year (typically attributable to coding errors). Subscribers and their partners were excluded if one person did not meet eligibility criteria. The final sample included 12,727,292 person-years and 6,363,646 couple-years in 13,685 unique plans and 543 unique employers.

Measures

Our study examined specialty behavioral health services. For each person, study outcomes were aggregated across claims incurred within each calendar year and included expenditures, broken down by plan, patient out of pocket, and total (plan plus patient); receipt and number of outpatient visits for assessment or diagnostic evaluation, individual psychotherapy, family psychotherapy, group psychotherapy, and medication management; and receipt and number of days of structured or intensive outpatient care, day treatment, residential care, and acute inpatient care (23). Expenditure measures were adjusted for geography and inflation and adjusted to 2013 dollars.

Key covariates included indicators for whether a member was in a different-gender domestic partnership (DGDP), same-gender domestic partnership (SGDP), same-gender marriage (SGM), or different-gender marriage (DGM); those in DGMs served as the omitted reference category. To examine potential differences between married couples and couples

TABLE 2. Annual behavioral health service use and spending among employer-insured men who shared coverage with a spouse or domestic partner, by type of legal union[a]

Variable	Different gender		Same gender	
	Marriage (N=6,216,332)	Domestic partnership (N=93,806)	Domestic partnership (N=46,186)	Marriage (N=13,766)
Service use				
Outpatient assessment and diagnostic evaluation (mean visits)	.03	.04**	.07**	.06**
Outpatient medication management (mean visits)	.09	.10	.31**	.26**
Outpatient individual psychotherapy (mean visits)	.27	.31	1.03**	.85**
Outpatient group psychotherapy (mean visits)	.01	.01	.04*	.01
Outpatient family psychotherapy (mean visits)	.03	.04	.05**	.04
Structured outpatient (mean days)	.02	.03**	.05**	.03
Day treatment (mean days)	.01	.01	.02**	.02
Residential (mean days)	.01	.01**	.01	.01
Inpatient (mean days)	.01	.02	.02**	.03*
Total expenditures (mean 2013 dollars)				
Patient out of pocket	17.67	20.16	59.10**	52.47**
Plan	56.20	67.11**	163.58**	131.52**
Total	73.87	87.27**	222.68**	183.99**

[a] Source: Optum behavioral health claims, 2008–2013. Mean predictions were estimated from ordinary least-squares models that adjusted for subscriber status, age category, number of dependents by age, employer group size, employer industry, managed plan status, carve-in plan status, providers per 1,000 members by state and year, year enrolled, and state of residence. Reference group: different-gender marriage

*p<.05, **p<.01

in domestic partnerships, particularly among different-gender couples, we defined couples by the status of their partnerships.

Other covariates included an indicator of whether the member was the plan subscriber, the member's age group, number of other (nonpartner or spouse) dependents by age group, subscriber's employer characteristics, health plan characteristics, provider supply by degree, calendar year, and state of residence. For conditional analyses, meaning analyses involving members who used services, the member's psychiatric or substance use diagnoses were also included. Diagnoses were not included in models estimated with the full sample because of the potential for reverse causality—that is, enrollees obtain diagnoses because they use behavioral health care services.

Statistical Analyses

Descriptive analyses were calculated for all variables by couple type, partnership status, and gender. Ordinary least-squares (OLS) regressions were conducted to predict unconditional mean behavioral health care expenditures and mean visits or treatment days for each service type. Estimates generated from these unconditional regressions represent expected expenditures and service use for the entire sample.

We then examined whether overall differences in service use and expenditures were due to penetration rates, levels of service use among treated patients, or both. We estimated logistic regressions for the probability of having any behavioral health service expenditures and the probability of any use of each service type. We performed zero-truncated negative binomial regression analyses to estimate conditional mean behavioral health care expenditures among members with any expenditures, as well as conditional mean number of visits or treatment days of each service type among the subsamples of members who received any services of that type during the calendar year. Average predicted probabilities and conditional adjusted predictions were calculated by couple type. All regression analyses controlled for the covariates described above and were stratified by gender. We used generalized estimating equations with independent covariance structure and robust variance estimation to adjust for clustering at the employer level. This study was approved by the University of California, Los Angeles, Institutional Review Board.

Moderation and Sensitivity Analyses

To explore the potential effects of LGB and transgender (LGBT) legal protection on behavioral health treatment patterns, we applied state LGBT climate scores in a moderation analysis (24). These scores represent the total number of LGBT-inclusive laws (for example, hospital visitation rights and protections against discrimination) for each state. Scores ranged from –1 to 12, with higher scores indicating a more positive LGBT social climate. We multiplied each member's state LGBT climate score by his or her couple type indicator and included the interaction terms in the unconditional OLS regressions.

We linked indicators for race-ethnicity, education, and financial resources (a combination of household income and net wealth categories) to 39% (N=4,978,169) of person-years in the full sample and repeated all regressions with and without the additional sociodemographic indicators with the subsample of enrollees.

RESULTS

Most (71%) subscribers were male. [Tables presenting data on the characteristics of female and male subscribers are

included in an online supplement to this article.] Female and male subscribers in DGDPs were substantially younger than subscribers in other couple arrangements. On average, subscribers in DGMs had more dependent children. Female and male subscribers in SGMs were more likely to have more flexible health plans, such as preferred provider organizations, compared with those in other couple arrangements, and were more likely to have carve-out plans. Subscribers in SGMs were also more likely to be employed in the smallest businesses (<5,000 employees), compared with all other subscriber groups, including those in SGDPs.

Approximately 8% of 6.35 million women and 5% of 6.37 million men received a specialty behavioral health service during any given calendar year between 2008 and 2013 [see tables in online supplement]. Among women who received a behavioral health service, a larger proportion of women in SGMs had a diagnosis of generalized anxiety, compared with women in DGMs. Comorbid disorders (more than one behavioral health diagnosis) were also most prevalent among women in SGMs.

TABLE 3. Adjusted predictions of behavioral health service use and spending among employer-insured women who shared coverage with a spouse or domestic partner, by type of legal union[a]

Variable	Different gender		Same gender	
	Marriage (N=6,216,332)	Domestic partnership (N=93,806)	Domestic partnership (N=34,638)	Marriage (N=12,426)
Spending and service use (%)				
Any patient expenditures	7.42	9.19**	14.27**	14.43**
Any plan expenditures	7.37	9.36**	14.19**	14.13**
Any expenditures (patient plus plan)	8.12	10.14**	15.36**	15.51**
Outpatient assessment and diagnostic evaluation	3.39	4.54**	6.44**	5.58**
Outpatient medication management	3.41	4.21**	6.16**	6.13**
Outpatient individual psychotherapy	4.60	5.66**	9.61**	9.84**
Outpatient group psychotherapy	.10	.14**	.25**	.27*
Outpatient family psychotherapy	.71	.77	1.39**	1.78**
Structured outpatient	.14	.21**	.40**	.43**
Day treatment	.09	.14**	.22**	.23**
Residential	.04	.08**	.08*	.15**
Inpatient	.26	.37**	.58**	.52**
Service use among those with any service use[b]				
Outpatient assessment and diagnostic evaluation (mean visits)[c]	1.51	1.50	1.56	1.53
Outpatient medication management (mean visits)	3.82	4.03	3.81	3.78
Outpatient individual psychotherapy (mean visits)	8.75	8.01**	11.42**	11.46**
Outpatient group psychotherapy (mean visits)	8.79	8.22	10.68	9.03
Outpatient family psychotherapy (mean visits)	1.27	1.17	1.83*	2.07**
Structured outpatient (mean days)	11.50	10.17*	11.30	13.73
Day treatment (mean days)	8.74	9.86	9.00	10.76
Residential (mean days)	14.32	9.92**	13.24	14.06
Inpatient (mean days)	7.66	7.03	8.50	7.53
Total expenditures among those with any expenditures (mean 2013 dollars)[b]				
Patient out of pocket	382.05	356.13	464.81**	531.44**
Plan	1,578.29	1,513.83	1,906.48**	2,080.04**
Total	1,711.32	1,637.04	2,094.62**	2,290.31**

[a] Source: Optum behavioral health claims, 2008–2013. Adjusted predictions were estimated from models that adjusted for subscriber status, age category, number of dependents by age, employer group size, employer industry, managed plan status, carve-in plan status, providers per 1,000 members by state and year, year enrolled, and state of residence. Reference group: different-gender marriage

[b] Zero-truncated negative binomial (ZTNB) models also adjusted for diagnosed conditions.

[c] Negative binomial regression was used in place of the ZTNB regression because of nonconvergence.

*p<.05, **p<.01

Among men in SGMs and SGDPs who received a specialty behavioral health service, a larger proportion had a diagnosis of depressive disorder and generalized anxiety disorder, compared with men in different-gender legal unions [see table in online supplement]. A larger proportion of men in SGDPs had a diagnosis of bipolar disorder, compared with men in other couple arrangements, and men in different-gender legal unions had higher rates of adjustment disorders than men in SGDPs or SGMs.

OLS results indicated that women in same-gender legal unions had significantly greater predicted behavioral health service expenditures and behavioral health visits or treatment days than women in DGMs (Table 1). Adjusted mean predictions for outpatient individual psychotherapy visits among women in SGMs and SGDPs were 1.7 and 1.4, respectively, compared with .5 visits for women in DGMs. Compared with women in DGMs, women in DGDPs had a greater mean number of visits or treatment days for some services and greater annual expenditures.

Men in same-gender legal unions had significantly greater predicted expenditures than men in DGMs or DGDPs (Table 2). Average annual total expenditures were between $184 and $223 for men in SGDPs or SGMs, compared with $74 for men in DGMs. Men in same-gender legal unions were also predicted to receive approximately one outpatient individual psychotherapy visit per year, compared with .3 visits

TABLE 4. Adjusted predictions of behavioral health service use and spending among employer-insured men who shared coverage with a spouse or domestic partner, by type of legal union[a]

Variable	Different gender		Same gender	
	Marriage (N=6,216,332)	Domestic partnership (N=93,806)	Domestic partnership (N=46,186)	Marriage (N=13,766)
Spending and service use (%)				
Any patient expenditures	4.75	5.51**	10.67**	9.11**
Any plan expenditures	4.76	5.70**	10.65**	8.96**
Any expenditures (patient plus plan)	5.28	6.24**	11.71**	9.98**
Outpatient assessment and diagnostic evaluation	2.21	2.72**	4.52**	3.84**
Outpatient medication management	2.04	2.21*	4.87**	4.03**
Outpatient individual psychotherapy	2.76	3.21**	6.87**	5.79**
Outpatient group psychotherapy	.09	.11	.19**	.12
Outpatient family psychotherapy	.58	.66	.84**	.63
Structured outpatient	.17	.25**	.33**	.31**
Day treatment	.08	.10*	.13**	.11
Residential	.05	.08**	.06	.06
Inpatient	.18	.22	.32**	.33**
Level of service use among those with any service use[b]				
Outpatient assessment and diagnostic evaluation (visits)[c]	1.53	1.50	1.49	1.42*
Outpatient medication management (visits)	3.45	3.66	4.33**	4.00
Outpatient individual psychotherapy (visits)	7.68	7.64	10.82**	9.45**
Outpatient group psychotherapy (visits)	10.53	8.89	13.47	13.37
Outpatient family psychotherapy (visits)	2.41	2.52	2.60	2.79
Structured outpatient (days)	11.19	11.02	11.36	8.32
Day treatment (days)	9.84	9.71	11.74	13.10
Residential (days)	13.95	16.43	15.54	8.45*
Inpatient (days)	6.89	7.17	6.27	7.02
Total expenditures among those with any expenditures (2013 dollars)[b]				
Patient out of pocket	381.24	366.28	530.10**	532.81**
Plan	1,750.62	1,734.98	2,486.85**	2,107.53*
Total	1,845.82	1,812.13	2,591.73**	2,334.79**

[a] Source: Optum behavioral health claims, 2008–2013. Adjusted predictions were estimated from models that adjusted for subscriber status, age category, number of dependents by age, employer group size, employer industry, managed plan status, carve-in plan status, providers per 1,000 members by state and year, year enrolled, and state of residence. Reference group: different-gender marriage

[b] Zero-truncated negative binomial (ZTNB) models also adjusted for diagnosed conditions.

[c] Negative binomial regression was used in place of the ZTNB regression because of nonconvergence.

*p<.05, **p<.01

for men in different-gender legal unions, and had greater adjusted predictions for number of outpatient medication management visits.

Controlling for other factors, the analyses showed that women in same-gender legal unions were significantly more likely than women in different-gender legal unions to use specialty behavioral health services (as defined by total expenditures) (Table 3). An average of 15% of women in the sample would have used a behavioral health service during a calendar year if they were in SGDPs or SGMs, compared with only 8% if all women were in DGMs and 10% if all women were in DGDPs. Women in same-gender legal unions were also significantly more likely than women in DGMs to receive all behavioral service types, particularly individual psychotherapy, medication management, and contrasts between all groups (data not shown) indicated that women in DGDPs were significantly more likely than women in DGMs to receive most service types.

Among women with any expenditures during the calendar year (conditional analyses), average predictions for plan, patient, and total expenditures were significantly greater for women in same-gender legal unions than for women in different-gender legal unions (Table 3). Women in same-gender legal unions with any individual psychotherapy visits on average had two to three more visits per year than women in different-gender legal unions. In conditional analyses, family psychotherapy use was also significantly greater among women in same-gender legal unions, compared with women in different-gender legal unions. In addition, women in DGDPs had significantly fewer individual psychotherapy visits and residential care days than women in DGMs.

Average predicted probabilities for behavioral health services use was 12% for men in SGDPs, 10% for men in SGMs, 6% for men in DGDPs, and 5% for men in DGMs (Table 4). Compared with men in DGMs, men in SGDPs or SGMs had significantly greater predicted use of outpatient individual psychotherapy, medication management, diagnostic evaluation, structured outpatient care, and inpatient care. Contrasts between all groups (data not shown) indicated that men in SGDPs were significantly more likely than men in SGMs to receive outpatient family and group psychotherapy and day treatment care, and men in DGDPs had significantly greater predicted use of most services compared with men in DGMs.

In conditional analyses, predicted patient, plan, and total expenditures were greater among men in same-gender legal unions, compared with men in different-gender legal unions (Table 4). Among men with any individual psychotherapy visits,

TABLE 5. Summary of logistic and conditional ZTNB regression model results among employer-insured women and men, by type of legal union[a]

	Women			Men		
Variable	DGDP (N=93,806)	SGDP (N=34,638)	SGM (N=12,426)	DGDP (N=93,806)	SGDP (N=46,186)	SGM (N=13,766)
Spending and service use (%)						
Any patient expenditures	+	+	+	+	+	+
Any plan expenditures	+	+	+	+	+	+
Any expenditures (patient plus plan)	+	+	+	+	+	+
Outpatient assessment and diagnostic evaluation	+	+	+	+	+	+
Outpatient medication management	+	+	+	+	+	+
Outpatient individual psychotherapy	+	+	+	+	+	+
Outpatient group psychotherapy	+	+	+		+	
Outpatient family psychotherapy		+	+		+	
Structured outpatient	+	+	+	+	+	+
Day treatment	+	+	+		+	
Residential	+	+	+	+		
Inpatient	+	+	+		+	+
Service use among those with any service use[b]						
Outpatient assessment and diagnostic evaluation (visits)[c]						+
Outpatient medication management (visits)					+	
Outpatient individual psychotherapy (visits)	−	+	+		+	+
Outpatient group psychotherapy (visits)						
Outpatient family psychotherapy (visits)		+	+			
Structured outpatient (days)	−					
Day treatment (days)						
Residential (days)	−					−
Inpatient (days)						
Total expenditures among those with any expenditures (2013 dollars)[b]						
Patient out of pocket		+	+		+	+
Plan		+	+		+	+
Total		+	+		+	+

[a] Source: Optum behavioral health claims, 2008–2013. DGDP, different-gender domestic partnership; SGDP, same-gender domestic partnership; SGM, same-gender marriage; and DGM, different-gender marriage. Adjusted predictions were estimated from models that adjusted for subscriber status, age category, number of dependents by age, employer group size, employer industry, managed plan status, carve-in plan status, providers per 1,000 members by state and year, year enrolled, and state of residence. +, significantly larger compared with reference group (DGM) at $p<.05$; −, significantly smaller compared with reference group (DGM) at $p<.05$

[b] Zero-truncated negative binomial (ZTNB) models also adjusted for diagnosed conditions.

[c] Negative binomial regression was used in place of ZTNB regression due to nonconvergence.

men in SGDPs had the greatest number of predicted visits per year (adjusted prediction=10.8), followed by men in SGMs (adjusted prediction=9.5). Mean individual psychotherapy use among men in DGDPs and DGMs who used psychotherapy was eight visits per year. Contrasts between all groups (data not shown) indicated that men in SGDPs had significantly more medication management visits than men in DGMs or DGDPs, and men in SGMs had the lowest predicted number of residential care days than all other men in the sample.

Men and women in SGDPs or SGMs who were living in states with more positive LGBT climate scores had greater total expenditures and more individual psychotherapy and medication management visits than men and women in SGDPs or SGMs who were living in states with less positive scores (data not shown). State LGBT climate scores were not associated with use of behavioral health services for individuals in DGDPs.

We repeated all regressions with and without additional race-ethnicity, education, and financial resources information with the subsample of enrollees who had linked sociodemographic data (estimates not shown). Overall, the magnitudes and significance of estimates did not substantially change, suggesting that our results are robust against omitted sociodemographic variables.

DISCUSSION

A qualitative summary of results is presented in Table 5. Our findings demonstrate that LGB adults, defined in this

study as adults in same-gender legal unions who share insurance coverage, were more likely to receive specialty behavioral health services than heterosexual individuals, defined as adults in different-gender legal unions who share coverage. Specifically, women and men in SGDPs or SGMs had higher rates of behavioral health comorbidities and had higher rates of use of outpatient individual psychotherapy, medication management, and diagnostic evaluation, compared with women and men in DGMs or DGDPs. Among those who received individual psychotherapy, women and men in same-gender legal unions had more visits than those in DGMs or DGDPs. Women and men in same-gender legal unions also had greater out-of-pocket, plan, and total behavioral health expenditures than those in DGMs or DGDPs. For many services, differences in predicted probabilities and conditional service use between women in same- versus different-gender legal unions were larger than the differences observed between men in same- versus different-gender unions.

Differentiating adults in domestic partnerships from those in marriages allowed us to observe higher penetration rates of service use among adults in DGDPs, compared with those in DGMs. It is unclear whether selection into marriage as opposed to domestic partnership explains this observation or whether legal unions have differing effects on the likelihood of behavioral health service use, or both.

Although rates of service use were similar for women in SGDPs and women in SGMs, we observed that men in SGDPs were more likely than men in SGMs to receive diagnostic evaluation, individual psychotherapy, and medication management; men in SGDPs also had more individual psychotherapy visits than men in SGMs. Factors that contribute to these service differences should be further explored.

A key strength of this study was the use of claims data, which provided detailed information about services received in a large, commercially insured population. Self-reported mental health data may be influenced by recall bias, social desirability bias, and respondents' stress levels, which bias estimates of service use (19–22). Our study data may thus be more reliable than data used in previous studies, and our study had the added advantage of huge sample sizes; for example, even the smallest subgroup studied (women in SGMs) had a sample of more than 12,000 enrollees. Furthermore, using claims data for members enrolled in commercial health plans reduced heterogeneity across health coverage status and insurance generosity; in particular, all adults in our study had specialty behavioral health benefits.

For two reasons, our findings may not generalize to all adults. First, we focused on persons with employer-based insurance. Approximately 58% of the nonelderly population, however, had employer-based coverage in 2011 (25), and given Optum's large and diverse patient population and geographic coverage—Optum was one of the largest MBHOs in the nation during the study period—we believe the data used for this study are likely representative of the U.S. MBHO population. Second, we studied persons who had dependent partners and excluded individuals who were single or whose spouses and domestic partners were not covered by the subscriber's insurance policy. This limitation on external validity may be greater for LGB individuals if they are less likely to be in dependent partnerships.

Our findings cannot determine unmet behavioral health needs. Conditional regressions controlled for patient diagnoses and showed that among members who had any outpatient individual psychotherapy, women and men in same-gender legal unions had more visits per year than women and men in DGMs who had similar diagnoses. Results of moderation analyses indicated that partnered LGB adults who were living in less LGBT-friendly states received fewer behavioral health services, and thus they may be more likely to have unmet needs, compared with LGB adults in friendlier states. Findings may vary across residents living in rural and urban areas, but data on urbanicity were unfortunately not available.

CONCLUSIONS

By focusing our study on legally committed couples, we found that adults in same-gender legal unions who had likely disclosed their sexual orientation to their employers and had the financial resources to purchase employer-based health insurance had significantly higher rates of behavioral health services use than similar adults in DGMs. We also found that persons with same-gender partners living in states with fewer legal protections and rights for the LGBT population were less likely to receive specialty behavioral health treatment than those living in more LGBT-friendly states. Because of perceived and real negative attitudes toward LGBT individuals, LGB persons living in less tolerant states may feel uncomfortable seeking and receiving treatment for mental or substance use disorders that may be related to their experiences as members of sexual minority groups. They might also question behavioral health service providers' competencies and experience serving LGB communities and have less access to LGB providers in their area. Studies suggest that services available to LGB individuals with mental illnesses are inadequate (26), and treatment for this population should be tailored to reflect and incorporate the culture and language of lesbian, gay, and bisexual clients (27–30). Providers and advocates should also conduct outreach to LGB persons living in less LGBT-friendly states, who may have unmet behavioral health service needs.

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This research was supported in part by grant TL1TR000121 from the National Center for Advancing Translational Sciences to the UCLA

Clinical and Translational Science Institute and by grant 1R01DA032619-01 from the National Institute on Drug Abuse.

Dr. Azocar reports receipt of stock options as part of her compensation as an Optum employee. The other authors report no financial relationships with commercial interests.

Received July 27, 2017; revision received October 25, 2017; accepted December 1, 2017; published online February 1, 2018.

REFERENCES

1. McCabe SE, West BT, Hughes TL, et al: Sexual orientation and substance abuse treatment utilization in the United States: results from a national survey. Journal of Substance Abuse Treatment 44: 4–12, 2013
2. King M, Semlyen J, Tai SS, et al: A systematic review of mental disorder, suicide, and deliberate self-harm in lesbian, gay and bisexual people. BMC Psychiatry 8:70, 2008
3. Gilman SE, Cochran SD, Mays VM, et al: Risk of psychiatric disorders among individuals reporting same-sex sexual partners in the National Comorbidity Survey. American Journal of Public Health 91:933–939, 2001
4. Bostwick WB, Boyd CJ, Hughes TL, et al: Dimensions of sexual orientation and the prevalence of mood and anxiety disorders in the United States. American Journal of Public Health 100:468–475, 2010
5. Pakula B, Shoveller J, Ratner PA, et al: Prevalence and co-occurrence of heavy drinking and anxiety and mood disorders among gay, lesbian, bisexual, and heterosexual Canadians. American Journal of Public Health 106:1042–1048, 2016
6. Allen JL, Mowbray O: Sexual orientation, treatment utilization, and barriers for alcohol related problems: findings from a nationally representative sample. Drug and Alcohol Dependence 161:323–330, 2016
7. Meyer IH: Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. Psychological Bulletin 129:674–697, 2003
8. Mereish EH, Poteat VP: A relational model of sexual minority mental and physical health: the negative effects of shame on relationships, loneliness, and health. Journal of Counseling Psychology 62:425–437, 2015
9. Hatzenbuehler ML, McLaughlin KA, Keyes KM, et al: The impact of institutional discrimination on psychiatric disorders in lesbian, gay, and bisexual populations: a prospective study. American Journal of Public Health 100:452–459, 2010
10. Eldahan AI, Pachankis JE, Jonathon Rendina H, et al: Daily minority stress and affect among gay and bisexual men: a 30-day diary study. Journal of Affective Disorders 190:828–835, 2016
11. Hoy-Ellis CP: Concealing concealment: the mediating role of internalized heterosexism in psychological distress among lesbian, gay, and bisexual older adults. Journal of Homosexuality 63: 487–506, 2016
12. Wong CF, Schrager SM, Holloway IW, et al: Minority stress experiences and psychological well-being: the impact of support from and connection to social networks within the Los Angeles House and Ball communities. Prevention Science 15:44–55, 2014
13. Newcomb ME, Mustanski B: Internalized homophobia and internalizing mental health problems: a meta-analytic review. Clinical Psychology Review 30:1019–1029, 2010
14. Drabble L, Midanik LT, Trocki K: Reports of alcohol consumption and alcohol-related problems among homosexual, bisexual and heterosexual respondents: results from the 2000 National Alcohol Survey. Journal of Studies on Alcohol 66:111–120, 2005
15. Cochran SD, Mays VM: Relation between psychiatric syndromes and behaviorally defined sexual orientation in a sample of the US population. American Journal of Epidemiology 151:516–523, 2000
16. Cochran SD, Mays VM, Sullivan JG: Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay, and bisexual adults in the United States. Journal of Consulting and Clinical Psychology 71:53–61, 2003
17. Grella CE, Greenwell L, Mays VM, et al: Influence of gender, sexual orientation, and need on treatment utilization for substance use and mental disorders: findings from the California Quality of Life Survey. BMC Psychiatry 9:52, 2009
18. Grella CE, Cochran SD, Greenwell L, et al: Effects of sexual orientation and gender on perceived need for treatment by persons with and without mental disorders. Psychiatric Services 62:404–410, 2011
19. Rhodes AE, Fung K: Self-reported use of mental health services versus administrative records: care to recall? International Journal of Methods in Psychiatric Research 13:165–175, 2004
20. Drapeau A, Boyer R, Diallo FB: Discrepancies between survey and administrative data on the use of mental health services in the general population: findings from a study conducted in Québec. BMC Public Health 11:837, 2011
21. Evans SW: Mental health services in schools: utilization, effectiveness, and consent. Clinical Psychology Review 19:165–178, 1999
22. Cleary PD, Jette AM: The validity of self-reported physician utilization measures. Medical Care 22:796–803, 1984
23. Ettner SL, Harwood MJ, Thalmayer A, et al: The Mental Health Parity and Addiction Equity Act evaluation study: impact on specialty behavioral health utilization and expenditures among "carve-out" enrollees. Journal of Health Economics 50:131–143, 2016
24. Everly BA, Schwarz JL: Predictors of the adoption of LGBT-friendly HR policies. Human Resource Management 54:367–384, 2015
25. Fronstin P: Sources of health insurance and characteristics of the uninsured: analysis of the March 2012 Current Population Survey. EBRI Issue Brief 376:1–34, 2012
26. Kidd SA, Howison M, Pilling M, et al: Severe mental illness in LGBT populations: a scoping review. Psychiatric Services 67: 779–783, 2016
27. Cochran SD: Emerging issues in research on lesbians' and gay men's mental health: does sexual orientation really matter? American Psychologist 56:931–947, 2001
28. Ida DJ: Cultural competency and recovery within diverse populations. Psychiatric Rehabilitation Journal 31:49–53, 2007
29. Hope DA, Chappell CL: Extending training in multicultural competencies to include individuals identifying as lesbian, gay, and bisexual: key choice points for clinical psychology training programs. Clinical Psychology: Science and Practice 22:105–118, 2015
30. Rutherford K, McIntyre J, Daley A, et al: Development of expertise in mental health service provision for lesbian, gay, bisexual and transgender communities. Medical Education 46:903–913, 2012