

Disparities in Health Insurance Coverage, Access, and Outcomes for Individuals in Same-Sex Versus Different-Sex Relationships, 2000–2007

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Sexual minorities have received increasing research attention in social science and public health, in part as the result of increasing recognition of health disparities associated with sexual orientation.¹ The earliest research on sexual minorities generally used convenience samples of gay men and lesbians because large-scale representative surveys rarely ask questions about sexual orientation.^{2,3} Although a handful of large surveys now do ask direct questions about sexual orientation, most are concentrated to a single city or state (such as the Los Angeles County Health Survey⁴ or the California Health Interview Survey⁵) or provide very small samples of sexual minorities at a point in time (such as the National Health and Social Life Survey or the National Survey of Family Growth).

An alternative approach to identifying sexual minorities in large, nationally representative social science data sources has therefore been to use information on intra-household relationships. This information can be used to create samples of gay men and lesbians in same-sex cohabiting relationships whose outcomes can be compared with heterosexual men and women—both married and unmarried—in cohabiting relationships. This approach has the benefit that samples of individuals in same-sex relationships can be created from large household datasets that routinely collect information on socioeconomic outcomes of interest to social science and public health researchers.

Recent work has applied this couples-based strategy in the 1997 to 2003 National Health Interview Survey to document differences in health insurance coverage and access to care for 614 individuals in same-sex relationships compared with 93 418 individuals in different-sex relationships.⁶ That study found that women in same-sex relationships were significantly less likely to have health insurance coverage, were significantly less likely to have visited a health

Objectives. We used data from the Behavioral Risk Factor Surveillance System to compare health insurance coverage, access to care, and women's cancer screenings for individuals in same-sex versus different-sex relationships.

Methods. We estimated logistic regression models by using data on 5265 individuals in same-sex relationships and 802 659 individuals in different-sex relationships.

Results. Compared with women in different-sex relationships, women in same-sex relationships were significantly less likely to have health insurance coverage, were less likely to have had a checkup within the past year, were more likely to report unmet medical needs, and were less likely to have had a recent mammogram or Pap test. Compared with men in different-sex relationships, men in same-sex relationships were significantly less likely to have health insurance coverage and were more likely to report unmet medical needs, although they were more likely to have had a checkup in the past year.

Conclusions. In the largest and most recent nationally representative sample, we found important differences in health insurance coverage and access to care between individuals in same-sex relationships and those in different-sex relationships for both men and women. (*Am J Public Health.* 2010;100:489–495. doi:10.2105/AJPH.2009.160804)

professional in the past 12 months, and were significantly more likely to have unmet medical needs than were women in different-sex relationships. In contrast, that study found no statistically significant differences in insurance coverage or unmet medical needs for men in same-sex relationships compared with men in different-sex relationships. Another recent study used a similar approach to look at individuals from the 1996 through 2003 pooled March Current Population Surveys and found that individuals in same-sex relationships were significantly less likely to have health insurance coverage than were married individuals in different-sex relationships.⁷

In the present analysis, we studied differences between individuals in same-sex relationships and those in different-sex relationships with respect to health insurance coverage, access to care, and health outcomes by using large samples of data from the 2000 through 2007 Behavioral Risk Factor Surveillance System (BRFSS). We used information on the

gender composition of the household combined with information on the respondent's marital status to mimic previous approaches for identifying samples of men and women in same-sex relationships. The key advantage of using the BRFSS was that we could identify over 5000 men and women in same-sex relationships, which is several times larger than the numbers used in previous studies. We hypothesized that these additional observations would provide important precision with which we could identify differences in relevant outcomes for individuals in same-sex relationships compared with individuals in different-sex relationships.

METHODS

The BRFSS is a large, annual, telephone-based survey coordinated by the Centers for Disease Control and Prevention along with state health departments. The survey asks respondents about individual demographic

characteristics, health behaviors, health plan coverage, and access to health services. The results are designed to be representative at the state level when weighted. We used data from the 2000 through 2007 waves of the survey.

Sample Selection and Definition of Same-Sex Relationships

The BRFSS does not ask respondents direct questions about sexual orientation. This is not unusual. Only a handful of national surveys have ever included direct questions about sexual orientation or other indirect questions that could be used to infer sexual orientation (e.g., same-sex sexual behavior), and most of those were limited to a single city or state and produced small samples of sexual minorities. Our approach to identify sexual minorities in the BRFSS instead relied on information about the gender composition of the household and the respondent's answer to a question about marital status. Specifically, all adults were asked how many men and women above the age of 18 years resided in the household during the screener portion of the interview. Subsequent questions asked about their marital status, and 1 of the options was "a member of an unmarried couple" (in addition to married, divorced, separated, etc). We defined a man as being in a same-sex relationship if he reported that there were exactly 2 adult men living in the household and there were exactly zero adult women living in the household and he reported that he was a member of an unmarried couple. We defined women in same-sex relationships similarly.

Because our approach for identifying sexual minorities necessitated examining couples, we similarly restricted our attention to individuals in different-sex relationships as the relevant comparison group. Specifically, we identified adult men and women in 2-adult households who reported that there was exactly 1 adult male and 1 adult female living in the household and who reported that their marital status was either "married" or "a member of an unmarried couple."

We restricted our attention to adults aged 25 to 64 years, a period during which most people's educational decisions have been completed but before universal health insurance coverage through Medicare becomes available. These criteria yielded samples of 338 085 men and 469 839 women, of whom

2384 men and 2881 women were in same-sex relationships. Although individuals in same-sex relationships are commonly understood to be gay and lesbian individuals, we followed previous naming conventions to identify men and women in same-sex relationships versus men and women in different-sex relationships to avoid confusion and to clarify that—like all previous work using this strategy—we did not directly observe the sexual orientation of the respondent.

Measures and Statistical Models

The BRFSS contains numerous questions related to population health, although its broad topic coverage and large samples are traded off against fairly limited depth of information in any 1 topic. For example, we were able to identify whether respondents had any health insurance coverage, but we did not have information on what the plan covered, whether the plan was public or private, or who held the policy. The BRFSS also asks basic questions about access to care. Specifically, individuals were asked whether they visited a doctor for a regular checkup (defined as "a general physical exam, not an exam for a specific injury, illness, or condition") in the past 12 months and whether there was a time in the past 12 months when they wanted to see a doctor but could not because of cost, an outcome we defined as "unmet medical needs." We also examined 2 women's cancer screenings that have been studied in previous research: whether the woman had a Pap test in the prior 3 years and whether the woman had an age-appropriate mammogram within the frequency intervals recommended by the American Cancer Society.

We estimated straightforward logistic regression models that included controls for individuals in same-sex relationships (with the omitted group consisting of individuals in different-sex relationships). We estimated models for men and women separately. Consistent with prior research,⁶ we began by estimating models with the form:

$$(1) \text{ Outcome} = \beta_1 X + \beta_2 \text{SSR} + \epsilon,$$

where SSR is individuals in same-sex relationships. In this specification, the omitted relationship category pooled married individuals in different-sex relationships (MDSR) with unmarried individuals in different-sex

relationships (UDSR). With the sample sizes provided by the BRFSS, we were able to also estimate models that treated married and unmarried individuals in different-sex relationships as separate demographic categories:

$$(2) \text{ Outcome} = \gamma_1 X + \gamma_2 \text{SSR} + \gamma_3 \text{UDSR} + v,$$

where MDSR was the omitted category. Note that although we used information on couples to define the relationship categories, the unit of analysis was the individual. In both specifications, X is a vector of individual-level variables known to be related to health insurance coverage and health access outcomes that included age group dummies (25–34, 35–44, and 45–54 years; 55–64 years was the reference group), education dummies (less than high school, some college, college degree, and education missing; high school degree was the reference group), race/ethnicity dummies (non-Hispanic Black, non-Hispanic other race, and Hispanic; non-Hispanic White was the reference group), region dummies (Midwest, South, and West; North was the reference group), employment group dummies (employed and unemployed; not in the labor force was the reference group), smoking status dummies (daily smoker and someday smoker; non-smoker was the reference group), household income dummies (\$10 000–\$15 000, \$15 000–\$20 000, \$20 000–\$25 000, \$25 000–\$35 000, \$35 000–\$50 000, \$50 000–\$75 000, and income missing; greater than \$75 000 was the reference group), self-rated health dummies (excellent or very good and fair or poor; good was the reference group), and a dummy variable indicating the presence of any children aged less than 18 years in the household.

RESULTS

Descriptive statistics by couple type are presented in Table 1. Men and women in same-sex relationships were younger than married individuals in different-sex relationships but were older than unmarried individuals in different-sex relationships. About three quarters of the men and women in same-sex relationships and the married men and women in different-sex relationships were non-Hispanic White, whereas about 10% of each group reported a Hispanic ethnicity. Men and women

TABLE 1—Sample Descriptive Statistics, by Relationship Type: Behavioral Risk Factor Surveillance System, 2000–2007

	Men			Women		
	Same-Sex Relationship, Weighted Mean	Different-Sex Unmarried, Weighted Mean	Different-Sex Married, Weighted Mean	Same-Sex Relationship, Weighted Mean	Different-Sex Unmarried, Weighted Mean	Different-Sex Married, Weighted Mean
Age, y	40.36	36.49	43.26	40.43	36.68	42.65
Race						
Non-Hispanic White	0.777	0.557	0.766	0.774	0.630	0.788
Non-Hispanic Black	0.050	0.107	0.063	0.075	0.060	0.055
Non-Hispanic other	0.072	0.061	0.072	0.055	0.059	0.058
Hispanic	0.102	0.275	0.098	0.096	0.250	0.099
Education						
< High school	0.032	0.185	0.074	0.043	0.162	0.064
High school degree or GED	0.148	0.291	0.258	0.099	0.243	0.261
Some college	0.192	0.253	0.242	0.219	0.270	0.275
College degree	0.627	0.269	0.424	0.639	0.323	0.399
Any children aged < 18 y in household	0.068	0.488	0.529	0.263	0.454	0.517
Employed	0.693	0.712	0.724	0.694	0.606	0.559
Self-rated health						
Excellent or very good	0.682	0.523	0.619	0.654	0.541	0.641
Fair or poor	0.090	0.148	0.101	0.090	0.160	0.103
Smoker	0.316	0.376	0.196	0.240	0.312	0.161
Has any health coverage	0.883	0.669	0.901	0.880	0.703	0.899
Did not see doctor in past 12 mo because of cost	0.138	0.208	0.082	0.166	0.263	0.114
Had a regular checkup in past 12 mo	0.356	0.243	0.327	0.350	0.351	0.394
Had a Pap test in past 3 y	–	–	–	0.192	0.225	0.249
Had a mammogram ^a	–	–	–	0.149	0.091	0.196
Total	2384	10 970	324 731	2881	15 395	451 563

Note. GED = general equivalency diploma. Weighted means are for adults aged 25 to 64 years.

^aHad a mammogram at intervals recommended by the American Cancer Society.

in same-sex relationships reported much higher levels of education than did men and women in different-sex relationships, particularly with respect to having at least a college degree. The probability of having a college degree was 50% higher among individuals in same-sex relationships. Men and women in same-sex relationships were far less likely than individuals in different-sex relationships to report the presence of a child under age 18 years in the household, though about one quarter of women in same-sex relationships were living with a child in the household. Employment rates were somewhat lower among men in same-sex relationships than among men in different-sex relationships, whereas the opposite was true among women. Women in same-sex relationships were much more likely to be employed than were women in different-sex

relationships. These patterns closely accord with previous research.⁸

In addition to the demographic characteristics, also shown in Table 1 are the raw, unadjusted differences in some relevant health behaviors and outcomes. Specifically, the BRFSS data indicated that men and women in same-sex relationships were much more likely to smoke than were individuals in different-sex relationships, although they had lower smoking rates than did unmarried individuals in different-sex relationships. Unadjusted rates of health insurance coverage and unmet medical needs for men and women in same-sex relationships also were between the rates of the 2 different-sex relationship groups: married individuals had the highest rates of insurance coverage and lowest rates of unmet medical needs, followed by men and women in same-sex

relationships, followed by unmarried men and women in different-sex relationships. There was a less clear pattern regarding the probability of having had a regular checkup in the past year by relationship type. Finally, for the women's cancer screening outcomes, we found that women in same-sex relationships were less likely to report having had a Pap test in the previous 3 years than were other women, whereas their mammography rates were between the rates of the 2 groups of women in different-sex relationships.

Of course, the large demographic differences across groups documented in Table 1 made the unadjusted differences in health insurance coverage and access to care difficult to interpret. The adjusted odds ratios (AORs) from the multivariate logistic regressions in which the dependent variable was an indicator for

TABLE 2—Multiple Logistic Regression of Health Insurance Coverage: Behavioral Risk Factor Surveillance System, 2000–2007

	Men		Women	
	Model 1, AOR (95% CI)	Model 2, AOR (95% CI)	Model 1, AOR (95% CI)	Model 2, AOR (95% CI)
In a same-sex relationship	0.80* (0.64, 1.02)	0.73*** (0.58, 0.92)	0.71*** (0.55, 0.90)	0.65*** (0.51, 0.83)
In an unmarried, different-sex relationship		0.45*** (0.40, 0.49)		0.48*** (0.44, 0.52)
Age group, y				
25–34	0.36*** (0.33, 0.39)	0.40*** (0.37, 0.43)	0.42*** (0.39, 0.45)	0.45*** (0.42, 0.49)
35–44	0.45*** (0.42, 0.49)	0.48*** (0.44, 0.52)	0.48*** (0.45, 0.51)	0.50*** (0.47, 0.54)
45–54	0.59*** (0.54, 0.63)	0.60*** (0.59, 0.65)	0.60*** (0.57, 0.64)	0.62*** (0.58, 0.66)
55–64 (Ref)	1.00	1.00	1.00	1.00
Race/ethnicity				
Non-Hispanic White (Ref)	1.00	1.00	1.00	1.00
Hispanic	0.46*** (0.43, 0.49)	0.48*** (0.44, 0.51)	0.46*** (0.43, 0.48)	0.47*** (0.44, 0.50)
Non-Hispanic Black	0.87*** (0.80, 0.95)	0.90** (0.83, 0.98)	0.96 (0.89, 1.03)	0.96 (0.89, 1.04)
Non-Hispanic other	0.76*** (0.70, 0.83)	0.76*** (0.70, 0.83)	0.80*** (0.74, 0.87)	0.80*** (0.73, 0.87)
Education				
< High school	0.63*** (0.59, 0.68)	0.64*** (0.59, 0.69)	0.65*** (0.61, 0.69)	0.65*** (0.62, 0.70)
High school degree or GED (Ref)	1.00	1.00	1.00	1.00
Some college	1.19*** (1.13, 1.26)	1.20*** (1.13, 1.27)	1.19*** (1.14, 1.24)	1.20*** (1.14, 1.26)
College degree	1.85*** (1.73, 1.98)	1.85*** (1.73, 1.98)	1.88*** (1.78, 1.99)	1.90*** (1.80, 2.01)
Education missing	1.46 (0.92, 2.34)	1.43 (0.89, 2.31)	0.94 (0.60, 1.47)	0.93 (0.60, 1.44)
Smoking status				
Daily smoker	0.63*** (0.60, 0.67)	0.66*** (0.63, 0.69)	0.63*** (0.60, 0.66)	0.65*** (0.62, 0.68)
Someday smoker	0.81*** (0.74, 0.89)	0.84*** (0.77, 0.92)	0.69*** (0.63, 0.75)	0.71*** (0.65, 0.78)
Nonsmoker (Ref)	1.00	1.00	1.00	1.00
Household income, \$				
10 000–14 999	0.07*** (0.06, 0.08)	0.08*** (0.07, 0.09)	0.06*** (0.05, 0.06)	0.06*** (0.05, 0.07)
15 000–19 999	0.07*** (0.07, 0.08)	0.08*** (0.07, 0.09)	0.06*** (0.06, 0.07)	0.07*** (0.06, 0.07)
20 000–24 999	0.09*** (0.09, 0.10)	0.10*** (0.09, 0.11)	0.08*** (0.07, 0.09)	0.08*** (0.08, 0.09)
25 000–34 999	0.15*** (0.14, 0.16)	0.15*** (0.14, 0.17)	0.12*** (0.11, 0.13)	0.12*** (0.11, 0.13)
35 000–49 999	0.28*** (0.26, 0.31)	0.28*** (0.26, 0.31)	0.25*** (0.23, 0.27)	0.25*** (0.23, 0.27)
50 000–74 999	0.53*** (0.49, 0.58)	0.53*** (0.49, 0.58)	0.53*** (0.49, 0.58)	0.53*** (0.49, 0.58)
≥ 75 000 (Ref)	1.00	1.00	1.00	1.00
Income missing	0.23*** (0.21, 0.25)	0.23*** (0.21, 0.26)	0.18*** (0.16, 0.19)	0.18*** (0.17, 0.20)
Employment				
Employed	2.20*** (2.08, 2.32)	2.21*** (2.09, 2.33)	1.89*** (1.82, 1.97)	1.92*** (1.85, 2.00)
Unemployed	0.59*** (0.54, 0.66)	0.60*** (0.54, 0.66)	0.69*** (0.64, 0.74)	0.70*** (0.65, 0.75)
Not in labor force (Ref)	1.00	1.00	1.00	1.00
Any children aged <18 y in household	1.04 (0.99, 1.10)	1.00 (0.95, 1.06)	1.07*** (0.102, 1.13)	1.04 (0.98, 1.09)
Self-rated health				
Excellent or very good	1.11*** (1.06, 1.17)	1.11*** (1.06, 1.17)	1.18*** (1.13, 1.23)	1.18*** (1.13, 1.22)
Good (Ref)	1.00	1.00	1.00	1.00
Fair or poor	1.17*** (1.09, 1.26)	1.17*** (1.09, 1.26)	1.12*** (1.05, 1.18)	1.12*** (1.06, 1.19)

Note. AOR = adjusted odds ratio; CI = confidence interval; GED = general equivalency diploma. Multivariate logistic regressions in which the dependent variable was an indicator for having any type of health insurance coverage. All models also included indicators for each survey wave from 2001 through 2007 (2000 was the reference group), as well as indicators for each of the 4 US geographic regions (Midwest, South, West; North was the reference group).

* $P < .10$; ** $P < .05$; *** $P < .01$.

TABLE 3—Multiple Logistic Regression Analysis of Unmet Medical Needs, Regular Checkups, and Women's Cancer Screenings: Behavioral Risk Factor Surveillance System, 2000–2007

	Men		Women	
	Model 1, AOR (95% CI)	Model 2, AOR (95% CI)	Model 1, AOR (95% CI)	Model 2, AOR (95% CI)
Unmet medical needs				
In a same-sex relationship	1.98*** (1.48, 2.64)	2.02*** (1.51, 2.70)	1.57*** (1.27, 1.93)	1.61*** (1.30, 1.98)
In an unmarried, different-sex relationship		1.23*** (1.08, 1.40)		1.29*** (1.17, 1.42)
Checkup within past 12 mo				
In a same-sex relationship	1.36*** (1.12, 1.65)	1.33*** (1.10, 1.62)	0.72*** (0.60, 0.86)	0.72*** (0.60, 0.86)
In an unmarried, different-sex relationship		0.77*** (0.70, 0.86)		0.98 (0.91, 1.07)
Had a mammogram ^a				
In a same-sex relationship	NA	NA	0.75*** (0.61, 0.92)	0.75*** (0.61, 0.92)
In an unmarried, different-sex relationship		NA		0.79*** (0.71, 0.89)
Had a Pap test in past 3 y				
In a same-sex relationship	NA	NA	0.74*** (0.57, 0.97)	0.74** (0.57, 0.96)
In an unmarried, different-sex relationship		NA		0.89 (0.76, 1.03)

Note. AOR = adjusted odds ratio; CI = confidence interval; NA = not applicable; Pap = Papanicolaou. All models also include a control for whether the individual has health insurance, age group, race/ethnicity, education, smoking status, household income, employment, self-rated health, and a dummy variable for any children aged less than 18 years living in the household.

^aHad a mammogram at intervals recommended by the American Cancer Society.

* $P < .10$; ** $P < .05$; *** $P < .01$.

having any type of health insurance coverage are reported in Table 2. The 2 models correspond to the equations presented in the Methods section. The omitted relationship categories were all individuals in different-sex relationships (model 1) and married individuals in different-sex relationships (model 2). We present the results for men and women separately.

The model 1 results in Table 2 indicate that, conditional on observable characteristics, men in same-sex relationships had a lower likelihood of insurance coverage than did men in different-sex relationships (AOR=0.80; 95% confidence interval [CI]=0.64, 1.02). Women in same-sex relationships were significantly less likely to have insurance coverage compared with all women in different-sex relationships (model 1; AOR=0.71; 95% CI=0.55, 0.90). However, when we split the individuals in different-sex relationships into the unmarried and married categories in model 2, we found that the lower likelihood of health insurance coverage for men and women in same-sex relationships was driven by the large difference in insurance coverage between those groups and the married individuals in different-sex relationships category. Men and women in same-sex relationships were actually more

likely to be insured than were unmarried individuals in different-sex relationships.

The AORs for all the covariates in the 2 models are also reported in Table 2. The probability of being insured increased with age, education, and household income and was higher for Whites than for racial and ethnic minorities. Note that we did not directly observe the number of employed individuals in the household. Previous research has shown that labor force participation rates are higher among women in same-sex relationships than among women in different-sex relationships, for example, meaning that the relationship between household income and our outcomes may have substantively differed by relationship type. We experimented with controlling for interactions of our key variables of interest with the household income variables, but all of our main results were qualitatively unchanged.

In Table 3, we report the main results for the various measures of access (unmet medical needs and regular checkups in the past year) and utilization (women's cancer screenings) for each of the 2 models shown in Table 2. We again estimated models for men and women separately. Because health insurance was an important determinant of utilization, the indicator for whether a person had insurance was

included as an independent variable. However, the estimated coefficients on our variables of interest were qualitatively similar (i.e., in sign and statistical significance) when we excluded this variable. The control variables were the same as in the insurance regressions; for the sake of brevity, we do not report their AORs (available upon request).

The results in Table 3 for men indicate that regardless of comparison group (i.e., model 1 or model 2), men in same-sex relationships were significantly more likely to report unmet medical needs (model 1; AOR=1.98; 95% CI=1.48, 2.64) but were also significantly more likely to have had a recent check-up (model 1; AOR=1.36; 95% CI=1.12, 1.65). We revisit this apparent tension in the Discussion.

We found more consistency across the 2 access results for women: those in same-sex relationships reported significantly worse access than did women in different-sex relationships. Specifically, they were significantly more likely to report unmet medical needs (model 1; AOR=1.57; 95% CI=1.27, 1.93) and were significantly less likely to report having had a recent checkup (model 1; AOR=0.72; 95% CI=0.60, 0.86). Consistent with these access gaps, we also found that women in same-sex relationships were significantly less likely to

have had recommended mammograms (model 1; AOR=0.75; 95% CI=0.61, 0.92) or to have had a Pap test in the previous 3 years (model 1; AOR=0.74; 95% CI=0.59, 0.97).

It is important to note that because the models in Table 3 controlled for insurance coverage, the access and utilization gaps are not fully explained by the significant differences in coverage documented in Table 2. That is, factors other than insurance coverage also contributed to the significant differences in outcomes for individuals in different types of relationships. For example, women in same-sex relationships were plausibly less likely to have regular interactions with obstetricians and gynecologists, Planned Parenthood, and other related providers because their demand for birth control is lower than that of other women. To the extent that these institutions also provide outreach or direct provision of screening and other women's health services, this could contribute to the lower rates of mammography and Pap tests among women in same-sex relationships even in the absence of an insurance coverage channel.

DISCUSSION

We have revisited differentials in health insurance coverage, access to care, and health outcomes for individuals in same-sex relationships compared with individuals in different-sex relationships. Our results generally corroborate previous findings for women in same-sex relationships, and our larger samples allowed us to show that the differences for men in same-sex compared with different-sex relationships are also statistically significant. We also illustrate that the difference between married and unmarried individuals in different-sex relationships is substantively important when choosing a comparison group for individuals in same-sex relationships. We found that high rates of insurance coverage for married individuals largely account for the insurance gap between individuals in same-sex relationships and those in different-sex relationships. In fact, individuals in same-sex relationships were more likely to have insurance coverage than were unmarried individuals in different-sex relationships.

One puzzle in our results (and those of previous work) is that men in same-sex

relationships were more likely to be uninsured and to report unmet medical needs even though they were more likely to have had a regular checkup in the past year. A possible explanation is that men in same-sex relationships have medical needs that differ from those of men in different-sex relationships. HIV/AIDS is just 1 example of a condition that has historically been much more prevalent among men in same-sex relationships than among other men, and research has also documented similar gaps in substance use and depression.⁹ If actual or perceived medical needs vary by group, this could produce the finding that men in same-sex relationships have higher rates of unmet medical needs despite having higher rates of regular checkups. We lack detailed data on medical conditions that would be useful in testing this hypothesis, although it is an interesting avenue for future research. Alternatively, if men in same-sex relationships obtain care from different types of places than do men in different-sex relationships (e.g., AIDS service organizations, gay/lesbian-focused public health clinics, etc), their perceptions about what constitutes a routine checkup or a "general physical exam" may systematically differ.

What do our results imply about the role of public policy as it relates to domestic partner health insurance benefits and access to care? For married workers, access to employer-sponsored health benefits is an important source of insurance coverage.¹⁰ This is a source of coverage that historically has not been an option for individuals in same-sex relationships, although that is changing. Many large employers now allow workers to extend dependent benefits to same-sex domestic partners, and recently some states such as California have enacted mandates to that effect. The ability to extend such coverage to unmarried different-sex domestic partners varies substantially across employers and states, though many policies explicitly limit these benefits to same-sex partners. This may be 1 reason for the finding that unmarried individuals in different-sex relationships had the lowest rates of health insurance coverage of all the groups we studied. Our results suggest that domestic partner benefits policies may increase insurance coverage, although because our data do not provide information on the source of insurance or the characteristics of the respondent's partner, it is not possible to draw stronger conclusions.

Limitations

Our analysis had several limitations, mainly related to data limitations. As indicated previously, we did not observe information on the type or source of insurance coverage over this time period, nor did we observe characteristics of the respondent's partner, because the BRFSS is an individual-level survey as opposed to a household survey. Additionally, our approach for identifying sexual minorities was not perfect. In particular, (1) we could not identify sexual minority individuals who were not members of unmarried couples; (2) we could not identify any bisexuals; (3) we incorrectly coded members of gay and lesbian couples who—perhaps correctly—reported their marital status as anything other than "a member of an unmarried couple"; and (4) we incorrectly dropped some individuals in relationships who had nontraditional living arrangements (including couples living with another roommate or couples who did not reside together).⁵ Of course, sexual minority individuals may participate in other kinds of partnering relationships, and as such we have limited our attention to same-sex partnerships that are, by construction, more similar to heterosexual partnerships. For purposes of comparison, note that whereas about 68% of heterosexual men and women are in partnerships, recent research on adults in California suggests that between about 37% to 46% of gay men and about 51% to 62% of lesbians are in partnerships.¹¹ Also, although we could not test for differences among single individuals, we note that individuals in same-sex relationships are at the forefront of social policy and health policy debates regarding gay marriage and access to a same-sex partner's health insurance benefits; as such, this focus is relevant to policy. Also, because we did not observe detailed information about the respondent's employer, we could not relate the employment-based domestic partner benefit availability to group-specific differences in insurance coverage. Finally, our study used cross-sectional data and methods and therefore was subject to the standard limits regarding inability to make causal inferences from the observed relationships.

Despite these limitations, the BRFSS still provides valuable information relative to other data sources. First, previous research has shown that the approach has strong face validity. For example, previous research has

shown that individuals in same-sex relationships in the BRFSS data exhibited family planning and condom use behaviors that were systematically different from those of other individuals and that were consistent with being in a gay or lesbian relationship.⁵ Second, the proportion of all relationships in the BRFSS that we identified as same-sex relationships was 0.65%, which is nearly identical to the proportion obtained from both the National Health Interview Survey and the Decennial Census.⁶ Third, the patterns of demographic characteristics of individuals in our same-sex relationships corresponded quite closely to those found in previous research using the 1990 or 2000 decennial censuses, which also identified gay and lesbian couples by using intrahousehold relationships.¹² Finally, and most importantly, the BRFSS provided us with large samples of individuals in same-sex relationships so that we could make meaningful statistical comparisons with both married and unmarried individuals in different-sex relationships for both men and women.

Conclusions

Our study used the largest and most recent nationally representative sample to examine differences in health insurance coverage and access to care for individuals in same-sex relationships. We found that both men and women in same-sex relationships had significantly lower rates of health insurance coverage and higher rates of unmet medical needs than did individuals in different-sex relationships. The gap in utilization existed even when we accounted for differential rates of health insurance coverage. This suggests that although increasing insurance coverage—perhaps through expansion of domestic partner benefits laws—is an important policy goal, other strategies are also needed to reduce the disparities associated with being in a same-sex relationship. ■

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Contributors

T. Buchmueller and C.S. Carpenter originated the study, interpreted the findings, and wrote and edited the original article and subsequent revisions. C.S. Carpenter conducted the analysis.

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Human Participant Protection

No protocol approval was needed for this study because the data were obtained from secondary sources.

References

1. Gay and Lesbian Medical Association (GLMA). Healthy People 2010 Companion Document for Lesbian, Gay, Bisexual, and Transgender (LGBT) Health. 2001. Available at: http://www.glma.org/_data/n_0001/resources/live/HealthyCompanionDoc3.pdf. Accessed October 14, 2008.
2. Marrazzo JM, Koutsky LA, Kiviat NB, Kuypers JM, Stine K, Papanicolaou test screening and prevalence of genital human papillomavirus among women who have sex with women. *Am J Public Health*. 2001;91(6):947–952.
3. Diamant AL, Schuster MA, Lever J. Receipt of preventive health care services by lesbians. *Am J Prev Med*. 2000;19(3):141–148.
4. Diamant AL, Wold C, Spritzer K, Gelberg L. Health behaviors, health status and access to and use of health care: a population-based study of lesbian, bisexual and heterosexual women. *Arch Fam Med*. 2000;9(10):1043–1051.
5. Carpenter C. New evidence on gay and lesbian household incomes. *Contemp Econ Policy*. 2004;22(1):78–94.
6. Heck JE, Sell RL, Sheinfeld Gorin SS. Health care access among individuals involved in same-sex relationships. *Am J Public Health*. 2006;96(6):1111–1118.
7. Ash M, Badgett L. Separate and unequal: the effect of unequal access to employment-based health insurance on gay, lesbian, and bisexual people. *Contemp Econ Policy*. 2006;24:582–599.
8. Black DA, Sanders SG, Taylor LJ. The economics of gay and lesbian families. *J Econ Perspect*. 2007;21(2):53–70.
9. 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. *J Consult Clin Psychol*. 2003;71(1):53–61.
10. Abraham JM, Royalty AB. Does having two earners in the household matter for understanding how well employer-based health insurance works? *Med Care Res Rev*. 2005;62(2):167–186.
11. Carpenter C, Gates GJ. Gay and lesbian partnership: evidence from California. *Demography*. 2008;45(3):573–590.
12. Black D, Gates G, Sanders S, Taylor L. Demographics of the gay and lesbian population in the United States: evidence from available systematic data sources. *Demography*. 2000;37(2):139–154.