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Moderate Effects of Same-Sex Legislation on Dependent Employer-Based Insurance Coverage among Sexual Minorities

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Abstract

A difference-in-difference approach was used to compare the effects of same-sex domestic partnership, civil union, and marriage policies on same- and different-sex partners who could have benefitted from their partners' employer-based insurance (EBI) coverage. Same-sex partners had 78% lower odds (ME=-21%) of having EBI compared to different-sex partners, adjusting for socioeconomic and health-related factors. Same-sex partners living in states that recognized same-sex marriage or domestic partnership had 89% greater odds of having EBI compared to those in states that did not recognize same-sex unions (ME=5%). The impact of same-sex legislation on increasing take-up of dependent EBI coverage among lesbians, gay men, and bisexual individuals (LGBs) was modest, and domestic partnership legislation was equally as effective as same-sex marriage in increasing same-sex partner EBI coverage. Extending dependent EBI coverage to same-sex partners can mitigate gaps in coverage for a segment of the LGB population but will not eliminate them.

Keywords

sexual minorities; disparities; same-sex policies; employer based insurance; health coverage; LGBT

NEW CONTRIBUTION

The United States is on a swift path to legalizing same-sex marriage in every state. However, the effects of these policies on dependent employer-based insurance coverage for same-sex partners are largely unknown. This study estimates the magnitude of change in partner employer-based insurance (EBI) coverage following the implementation of state-level same-sex relationship recognition laws. It also tests for potential advantages associated with same-sex marriage and compares the effects of same-sex domestic partnerships, marriages, and civil unions on dependent EBI coverage among sexual minorities. Finally, the study highlights EBI coverage disparities across racial/ethnic groups.

INTRODUCTION

Health disparities between heterosexuals and lesbians, gay men, and bisexual individuals (LGBs) have been widely documented. Lesbians have greater risk for breast cancer and cardiovascular disease relative to heterosexual women (Case et al., 2004), and gay men have increased risk for sexually transmitted infections compared to heterosexual men (Mojola & Everett, 2012). Lesbians and gay men also use alcohol and drugs at higher rates than their heterosexual counterparts (Cochran, Ackerman, Mays, & Ross, 2004; Corliss et al., 2010). In addition to having higher risks for certain health conditions, LGBs or sexual minorities are less likely to have access to the care they need to treat those conditions. Studies have shown that, after adjusting for need-related factors and household characteristics, men and women in same-sex relationships are less likely to have health insurance compared to respondents in different-sex relationships (T. Buchmueller & Carpenter, 2010; Heck, Sell, & Gorin, 2006; Ponce, Cochran, Pizer, & Mays, 2010).

Employer-based insurance (EBI) has and continues to be a primary source of health coverage for many individuals and their families. Over half of the U.S. population had employer-based coverage in 2012 (DeNavas-Walt, Proctor, & Smith, 2013). Dependent EBI, however, was not available to same-sex partners until recently (Herek, 2006), and expanding this source for health insurance to all same-sex partners offers one approach for attenuating the health coverage disparity between people in same- and different-sex relationships.

Few studies have investigated whether extending dependent EBI to same-sex couples reduces disparities for these populations (Ash & Badgett, 2006; T. C. Buchmueller & Carpenter, 2012; Gonzales & Blewett, 2013). Ash and Badgett estimated that universal partner employer-based insurance could substantially reduce the uninsured rate of unmarried same- or different-sex partners (2006). Buchmueller and Carpenter found that a California law requiring private employers to offer same-sex domestic partners the same fringe benefits offered to married couples did not have an impact on health insurance coverage between gay and heterosexual men but increased coverage differentially for lesbians relative to heterosexual women (2012). Finally, Gonzales and Blewett (2013, 2014) documented smaller gaps in private coverage for children of same-sex partners as well as narrower EBI disparities between same- and different-sex partners in states that recognized same-sex domestic partnerships, civil unions, or marriage. These studies examined the impacts of a single policy such as same-sex domestic partnership or a combination of policies that recognized same-sex relationships. The effect of same-sex domestic partnership on dependent EBI, relative to same-sex marriage, however, has not been examined.

In light of states' differing and evolving approaches to extending EBI to same-sex partners, this study investigated whether same-sex domestic partnership, civil union, and marriage had differential influences on dependent employer-based insurance coverage for LGBs. Specifically, the study aimed to better understand whether passage and implementation of one policy was more impactful in increasing dependent EBI coverage than adopting other policies. This question is relevant given the recent and rapid trend to legalize same-sex marriage across the United States. I hypothesized that implementation of policies that recognized same-sex unions increased the availability of dependent EBI for same-sex

couples, reduced the costs associated with enrolling a same-sex partner, and as a result increased dependent EBI coverage among same-sex couples. Furthermore, proponents of same-sex marriage policy have argued that domestic partnerships and civil unions create two kinds of marriages which Justice Ruth Bader Ginsburg likened to “full marriage” and “skim milk marriage” (Abrams, 2013). Given the cultural importance of marriage, I also hypothesized that legalizing same-sex marriage is associated with larger increases in dependent EBI coverage among same-sex couples, compared to adopting same-sex domestic partnership or civil union legislation.

CONCEPTUAL FRAMEWORK

The decision to enroll a partner into an employee-sponsored health plan is a balance between expected benefits and costs. Employees must consider their partners’ and families’ needs for health coverage and weigh the costs enrollment. These costs include transactional costs, health premiums, expected out-of-pocket costs, and for LGB individuals, the added burden of disclosing their sexual minority status to their employers and coworkers. Depending on the workplace environment and existing anti-discrimination laws, such disclosure can lead to a hostile environment for an LGB employee, wage loss, and/or loss of employment (Badgett, 1995; Hull, 2008; Ragins, Singh, & Cornwell, 2007).

Social policies recognizing same-sex unions increase LGB’s access to resources such as health insurance, pension plans, and death benefits. They also strengthen workplace protections and reduce environmental stressors for LGB employees (Hatzenbuehler, Keyes, & Hasin, 2009). Same-sex domestic partnership, civil union, and marriage legislation can also alleviate minority stress by validating same-sex unions and signaling that LGBs are equal under state law. As a result, these policies help lower the costs of enrolling a partner in employee-sponsored health coverage.

Other covariates that determine whether a person will enroll his or her partner in employer-based coverage include characteristics that dispose a person to purchase health coverage, the household’s ability to purchase health insurance, and health needs that might influence the household to seek health coverage. Together, these covariates serve as a proxy for the unobserved benefits of health coverage.

SOURCES OF DATA

In order to test whether state recognition of same-sex domestic partnerships, civil unions, and marriage have differential impacts on dependent EBI coverage among LGBs, I used IPUMS-USA to extract and pool five years of Public Use Microdata Sample (PUMS) data from the 2008-2012 American Community Survey (ACS) (Ruggles et al, 2010). The American Community Survey is an ongoing household survey conducted by the US Census Bureau (US Census Bureau, 2013). Unlike the Decennial Census, the ACS samples a proportion of the U.S. population and releases PUMS (1%) data for each calendar year. Survey topics include but are not limited to respondent demographics, socioeconomic status, employment, and household formation. In 2008, the Census Bureau added a question about health coverage status and type to the American Community Survey.

Information on state legislation on same-sex unions was obtained primarily from the National Conference of State Legislatures (NCSL) website (National Conference of State Legislatures, 2013). The NCSL supports the success of state legislators and staff through non-partisan research and trainings. Where needed, I reviewed state statutes to confirm that health benefits were extended to same-sex partners. As of December 2013, three states offered domestic partnership to same-sex couples, six states recognized same-sex civil unions for part of or the entirety of the study period, and seven states recognized same-sex marriage (National Conference of State Legislatures, 2013). See Table 1 for more information on states that enacted policy changes between 2008 and 2013. This patchwork of state policies created the variability needed to examine the unique impacts of each legislation type on LGBs' take-up of dependent employer-based health coverage. By comparing same-sex couples living in states where only domestic partnership was recognized to same-sex couples in states that recognized same-sex civil union or marriage, I was able to observe whether these policies had differential effects on dependent EBI coverage.

METHODS

Study Sample

The analytic dataset included cohabiting married and unmarried couples from 2008 to 2012. The American Community Survey defines an "unmarried partner" as "a person age 15 years old and over, who is not related to the householder, who shares living quarters, and who has a close personal relationship with the householder" (U.S. Census Bureau, 2012). In contrast, "roommates" share residences with householders primarily to "share expenses" and were not included in the study (U.S. Census Bureau, 2012). Among married and unmarried couples, 83% were couples in which both partners were employed at the time of the survey. Same-sex couples (88%) were significantly more likely to have dual incomes relative to different-sex couples (83%) ($\chi^2=306$, $p<.001$). The American Community Survey insurance coverage question does not ask whether a person received health coverage through his or his partner's employer. Therefore, the sample was limited to couples in which reference persons were 18 years or older, had lived in their current state for over a year, and had employer-based insurance at the time of the survey. Their partners, referred to as "partners" throughout the study, were not employed. Non-working partners potentially benefit most from their partners' employer-based insurance plans. Eight percent of different-sex partners had public health insurance coverage compared to 9% of same-sex partners. In order to mitigate additional complexities associated with competing insurance options, partners who were 65 years of age or older and therefore eligible for Medicare were excluded, as well as partners who had public health insurance. The final analytic dataset had 270,406 unweighted couples. These couples represented 17% of all surveyed couples in which reference persons had EBI and their partners were nonelderly, and 8% of all cohabiting married and unmarried couples (where partners were also nonelderly) from 2008 to 2012.

Study Design

Partners in the analytic dataset had employer-based insurance, purchased private insurance, or were uninsured at the time of the survey. Because these partners were not working at the

time, those with EBI likely received dependent EBI coverage through the reference persons' place of work. I used a difference-in-difference (DID) approach and predicted the likelihood that a partner had employer-based coverage. Different-sex couples, who had the option to marry in their states, served as the control group. This design compared partner EBI coverage between different- and same-sex couples before and after adoption of same-sex domestic partnership, civil union, or marriage in their states. Interactions between couple and policy type were included to estimate joint policy effects on same-sex couples. State fixed effects controlled for state differences in firms offering EBI, social attitudes towards LGBs, and other state policies or programs that can influence take-up of dependent EBI. Year fixed effects accounted for overall trends in employment and health coverage.

Measures

The outcome was a binary variable that indicated whether the partner had employer-based health coverage at the time of the survey. Primary regressors of interest included: 1) whether a couple was a same-sex or different-sex couple, 2) presence of state policies that recognized same-sex unions at the time of the survey, and 3) the joint effects of state policies recognizing same-sex unions on same-sex partners. The American Community Survey does not ask respondents to report their sexual orientation. Studies using this survey have defined same-sex couples as cohabiting "unmarried partners" or "spouses" of the same gender (G. Gates, 2010). The same definition was applied in this study. Presence of a state policy was coded as present if the law was in effect for at least 6 months in any given year. Control variables estimated a household's health coverage utility and took into account characteristics that disposed a partner to seek health care (i.e., race/ethnicity), factors that enabled households to purchase care (i.e. educational level and household income), partner's need for health care (i.e., age, functional limitations, and sex), and their aversion to risk (measured by presence of children).

Statistical Analyses

Descriptive statistics compared EBI coverage prevalence among different- and same-sex couples by policy type, and summarized characteristics of same- and different-sex couples in the sample. The logistic regression equation used to estimate the probability that a partner had employer-based insurance was the following:

$$\begin{aligned} \text{Pr}(\text{dependent EBI} = 1) &= 1 / (1 + \exp[\beta_0 + \beta_1 \text{same-sex couple}] \\ &+ \beta_2 (\text{presence of same-sex domestic partnership policy}) \\ &+ \beta_3 (\text{presence of same-sex civil union policy}) \\ &+ \beta_4 (\text{presence of same-sex marriage policy}) \\ &+ \beta_5 (\text{same-sex couple} * \text{domestic partnership policy}) \\ &+ \beta_6 (\text{same-sex couple} * \text{civil union policy}) \\ &+ \beta_7 (\text{same-sex couple} * \text{marriage policy}) + \beta_{8-11} (\text{vector of race categories}) \\ &+ \beta_{12-15} (\text{vector of educational levels}) + \beta_{16} (\text{household income}) \\ &+ \beta_{17} (\text{partner's age}) + \beta_{18-22} (\text{vector of partner's functional limitations}) \\ &+ \beta_{23} (\text{female partner}) + \beta_{23} (\text{presence of children}) \\ &+ \beta_{25-28} (\text{year fixed effects}) + \beta_{29-77} (\text{state fixed effects}) \end{aligned}$$

Because presence of dependent children is associated with take-up of EBI (Abraham, Vogt, & Gaynor, 2006) and different-sex couples were significantly more likely to have children, regression analyses were also stratified by presence of children.

RESULTS

Among households where only the reference person was employed, same-sex partners (65%) were significantly less likely to have employer-based coverage compared to different-sex partners (89%) ($\chi^2=1,100$, $p<.001$). Same-sex partners were also significantly more likely to have directly purchased insurance (22%) and were more likely to be uninsured (16%) than different-sex partners (8% and 7%, respectively). Under all state policy types, same-sex partners had lower rates of EBI coverage than different-sex partners, but EBI coverage rates varied by the type of same-sex relationship policy present at the time of the survey, particularly for same-sex couples. See Table 2. EBI coverage for same-sex partners was greater higher in states that recognized same-sex unions compared to states that did not recognize same-sex relationships. Same-sex partner EBI coverage was also highest in states that recognized same-sex marriage. Partner EBI coverage rates did not shift over time prior to the adoption of same-sex recognition policies for both different- and same-sex couples (not shown).

Decisions to purchase health insurance depend on a number of factors including the health needs of partners, cultural values and attitudes, and couples' abilities to purchase health insurance. Table 3 summarizes characteristics of different- and same-sex households and partners in the analytic dataset. Different-sex partners were more often women compared to same-sex partners, and different-sex couples were nearly three times more likely to have children than same-sex couples. Although there were no substantial differences in partners' mean age, race/ethnicity, and health status by couple type, a greater proportion of same-sex couples reported annual incomes in the top tiers. Approximately one-third (32%) of same-sex couples had household incomes above \$136,500 compared to 23% of different-sex couples. Furthermore, partners in same-sex relationships were nearly two times more likely to have advanced degrees than different-sex partners. Despite having higher education and income levels, which are correlated with employment in firms that offer employer-based insurance, same-sex partners were significantly less likely to have EBI coverage relative to different-sex partners.

Logistic regression results are presented in Table 4. Model 1 compares the effect of each state-level policy (i.e., domestic partnership, civil union, marriage) on partner EBI coverage relative to not having a same-sex union recognition policy. Model 2 tests the hypothesis that marriage had a greater impact on LGB EBI coverage relative to other policies and combines the presence of same-sex domestic partnership or civil union policies into one category. Relative to different-sex couples, same-sex partners had 78% lower odds (OR=.22; 95% CI: .20 to .25) of having EBI coverage, after accounting for other factors in the model. The marginal effect of having EBI coverage between a same-sex versus different-sex partner was -21 percentage points (95% CI: -19% to -23%). Same-sex partners living in states that recognized same-sex domestic partnerships had 95% greater odds (OR=1.95; 95% CI: 1.50 to 2.53) of having EBI coverage compared to those living in states that did not recognize

same-sex relationships, after accounting for other factors. The effect of living in states that recognized same-sex civil unions on same-sex partners (OR=1.04; 95% CI: .60 to 1.82) was not statistically significant.

In both models, same-sex partners living in states that recognized same-sex marriage had 93% greater odds (OR=1.93; 95% CI: 1.33 to 2.78) of having EBI coverage compared to similar same-sex partners in states that did not recognize same-sex unions. This translated to a 5 percentage point increase in EBI coverage among non-working same-sex partners (95% CI: 3% to 7%). Post-estimation tests for Model 1 indicated that the impact of domestic partnership marriage policies was significantly different from civil union policies ($p=.037$) for same-sex partners. The effects of same-sex domestic partnership and same-sex marriage laws were not significantly different ($p=.957$). The combined effect of same-sex domestic partnership and civil union policies in Model 2 was not significantly different from the estimated effect of same-sex marriage for on same-sex partners ($p=.704$).

As expected, advanced age, higher education, and greater household income increased the odds of partner EBI coverage. African-American and Latino partners had half of the odds of having EBI compared to similar non-Hispanic White partners. Female partners as well as partners with children had greater odds for coverage. Finally, health coverage for partners surveyed later in the study were likely more impacted as the recession deepened period; these partners had lower odds of coverage compared to those surveyed in 2008, after accounting for other factors in the model.

Partners with children were 1.70 (95% CI: 1.65 to 1.74) times more likely to have EBI compared to partners who did not have children in the household, and opposite-sex couples were significantly more likely to have children. Stratifying the logistic regression by presence of children did not change the effects of same-sex recognition policies on same-sex partner EBI coverage. Among couples with children, the odds of EBI coverage was 2.43 (95% CI: 1.24 to 4.73) times greater for same-sex partners in states that recognized same-sex domestic partnerships or civil unions compared to similar same-sex partners in states that did not recognize same-sex relationships. This odds ratio was 1.81 (95% CI: 1.38 to 2.36) among same-sex couples without children in the household. Same-sex couples with children living in states that recognized same-sex marriage had 4.58 (95% CI: 1.47 to 14.26) times greater odds of having partner EBI coverage than similar same-sex partners in states that did not recognize same-sex relationships. The corresponding odds ratio for same-sex couples without children was 1.78 (95% CI: 1.20 to 2.65). Effect measure modification analyses were not statistically significant ($\alpha=.05$), but results suggest that state legislation recognizing same-sex relationships may have greater impacts on increasing dependent EBI coverage for same-sex couples with dependent children than those without children.

DISCUSSION

Couples in this study had one partner (reference person) who was employed and had employer-based insurance. Their partners were not working at the time of the survey and had one of three insurance statuses: EBI coverage, purchased own coverage, or uninsured. Study findings indicate that same-sex partners with similar dispositions to seeking care, enabling

factors, and health care needs had substantially lower odds for having employer-based insurance than different-sex partners. The marginal difference was –21 percentage points. These results support findings from earlier studies that observed LGBs were less likely to have employer-based coverage compared to their heterosexual counterparts (Ash & Badgett, 2006; Gonzales & Blewett, 2014; Ponce et al., 2010).

Researchers and advocates have argued that extending dependent EBI coverage to same-sex couples offers one approach for attenuating health coverage disparities for this population. On average, the rate of EBI coverage among non-working same-sex partners was 5 percentage points greater for those residing in states that recognized same-sex domestic partnership or marriage compared to those in states that did not recognize same-sex unions, after accounting for other factors. These results support recent findings by Gonzalez and Blewett (2014) who documented lower adjusted EBI disparities between different-and same-sex couples in states that recognized same-sex relationships. In this study, presence of a same-sex civil union policy was not significantly associated with higher EBI coverage for same-sex partners, which could have been due to a small sample size of couples living in states that recognize same-sex civil unions.

Results did not detect differential effects between same-sex domestic partnership or civil union and marriage policies. These results do not suggest, however, that these policies have the same impacts on other outcomes such as LGBs' minority stress levels, which include distal stressors such as events of discrimination as well as internalized homophobia and heterosexism (Meyer, 2003). I had hypothesized that same-sex marriage would not only increase dependent EBI coverage among same-sex couples, but also encourage more rapid take-up of dependent EBI coverage relative to domestic partnership or civil unions. One consideration that could explain the observed results is the fact that most same-sex marriage policies were enacted very recently; therefore, the full effects of these policies might not have been observed. At the time of this study, many of these policies were also contested throughout several states, which could have influenced some same-sex couples to wait before entering a legal union.

Study findings do suggest that policies extending dependent employer-based coverage moderately reduced the gap in EBI coverage between same- and different sex couples within a few years following implementation. The partner EBI coverage gap, however, was 19 percentage points in 2012. As a result, same-sex partners more often purchased their own coverage or were uninsured.

It is also important to note the substantially lower proportions of EBI coverage among racial minority LGBs. African-American and Latino same-sex partners in this study had 45-50% lower odds of having EBI compared to non-Hispanic White partners. If same-sex marriage was legalized in all states, 65% (95% CI: 58%-72%) of Black same-sex partners and 63% (95% CI: 56%-70%) of Latino same-sex partners are estimated to have EBI compared to 76% (95% CI: 70%-81%) of similar non-Hispanic White same-sex partners. In other words, extending dependent employer-based insurance to all partners regardless of sex does little to reduce this racial/ethnic disparity. Other strategies or interventions must be employed to bolster health coverage for racial/ethnic minority populations.

Limitations

Although this design could have benefitted from the use of longitudinal data, no such national dataset exists. This study utilized a data source from which same-sex couple status can be imputed and where data is released annually (G. Gates, 2010). This was essential because many state decisions to recognize same-sex unions were very recent. Furthermore, the national scope of the American Community Survey allowed for a comparison of policy effects on LGB employer-based insurance.

Gender misreporting in the American Community Survey, however, can lead to misclassification of same- and different-sex couples and bias results (DiBennardo & Gates, 2014). The Census Bureau recodes same-sex partners identified as “husband/wife” in the ACS to “unmarried partner” status. Households in this recoded category include 1) same-sex couples who identified as spouses and 2) different-sex couples who identified as spouses and miscoded the partners’ sex. According to analyses conducted by Gates and Steinberger, misclassification of same-sex couples in ACS 2005-2007 public use files was substantial; approximately 30% of identified same-sex couples were misclassified different-sex couples (2011).

In relation to this study, misclassification of married different-sex couples as same-sex couples would negatively bias the effects of state same-sex policies toward the null. Gates and Steinberger’s analyses indicate that different-sex married couples who mailed in their surveys were older and had higher levels of education than different-sex couples who completed computer-assisted telephone or personal interviews (CATIs/CAPIs) (2011). (Sex miscoding is less likely among CATI/CAPI respondents due to follow-up sex verification questions). Misclassification of these couples would artificially inflate the rate of EBI among same-sex couples. The net effect of misclassification bias is unclear but should be considered when weighing the magnitude of same-sex policy effects. Limiting the sample to respondents who participated in CATIs/CAPIs produced similar, positive policy effects, but results were non-significant, which may be due to insufficient power.

Respondents whose marital statuses were recoded are flagged in public ACS files. Gates and Steinberger recommended excluding couples where one or both partners have an “allocated” data quality flag for marital status to reduce misclassification of different-sex couples (2011). A sensitivity analysis (not shown) excluding these couples (n=2,093) generated similar results. Same-sex partners had .15 (95% CI: .14 to .18) the odds of having dependent employer-based coverage compared to different-sex partners, after accounting for other factors. Same-sex partners living in states that recognized same-sex domestic partnership or civil unions had 1.53 (95% CI: 1.14 to 2.05) times greater odds of having dependent EBI than same-sex partners in states that did not recognize same-sex unions, and same-sex partners living in states that recognized same-sex marriage had 2 (95% CI: 1.25 to 3.21) times greater odds of having dependent EBI than same-sex partners in states that did not recognize same-sex unions. These estimates are not significantly different (p=.307). It appears that misclassification of different-sex couples did not influence the overall findings.

This study did not observe whether study participants received an offer for dependent employer-based insurance. Coverage is contingent on employers’ offer for health insurance,

followed by employees' decisions whether to accept or decline those offers. Data on whether couples in the study received offers for EBI was not available in the American Community Survey, which has two important implications. First, prevalences of EBI offers by couple type cannot be determined, which vary by firm size, industry practices, and other unobservable factors. If LGB people are more likely employed in workplaces that offer EBI relative to heterosexual individuals, comparisons in dependent EBI between these groups may be confounded. Estimated effects of same-sex relationship recognition policies on same-sex partners should not have been strongly affected, as rapid shifts in LGB employment were unlikely.

Second, once employees receive offers for employer-based insurance, take-up depends on a number of factors, including but not limited to marital status, presence of dependents, household income, expected medical expenditures, attitudes on risk and health insurance, and types of health plans offered (Abraham et al., 2006; Monheit & Vistnes, 2008; Polsky, Stein, Nicholson, & Bundorf, 2005). Given that same-sex couples reported higher household incomes and same-sex partners had higher education levels, take-up of EBI and dependent EBI may be higher among LGBs relative to heterosexuals. On the other hand, other factors such as reluctance to disclose LGB status can depress dependent EBI take-up, despite state recognition of same-sex couples, legal protections, and employer offers for coverage. By not observing this disinclination or levels minority stress experienced by reference persons and partners, estimated state policy effects may not reflect the true experiences for different LGB groups. More research should be conducted to examine the predictors of EBI take-up among sexual minorities.

Given the limitations of identifying dependent EBI coverage in the American Community Survey, the study sample was excluded to couples in which the reference person had employer-based insurance and the partner was not working. This facilitated a more direct observation of dependent EBI take-up following same-sex legislation adoption, but potentially compromised comparability between same- and different-sex couples. Drivers of not working may be unique for different- and same-sex partners. As noted earlier, different-sex couples were significantly more likely to have children in the household, which reduces the odds that couples have dual income (Raley, Mattingly, & Bianchi, 2006). For same-sex couples, single-earner status is less often due to presence of children, and likely a result of health limitations and/or lack of employment opportunities. These considerations should be weighed carefully when interpreting results.

Employer-based insurance can also lower the cost of not working, which would introduce endogeneity into the model. However, regressing partner employment status (not shown) on same-sex legislation, same- or different-sex partner status, the joint effect of same-sex legislation on same-sex partners, and year and state fixed effects did not indicate any changes in employment following implementation of these laws.

Similarly, policy endogeneity can also bias the observed effects of state level same-sex legislation on partner EBI coverage. In this case, unobserved conditions and forces such as anti-discrimination and worker protection state laws that determine both state adoption of same-sex relationship recognition laws and partner likelihood of having EBI, if unaccounted

for in the model, can lead to an overestimate of policy effects on the outcome. Although beyond the scope of this paper, Besley and Case have offered use of instrumental variables as a promising method for addressing endogeneity (2000).

Finally, as members of a stigmatized group, LGBs are less likely to disclose their relationship with a same-sex partner on a national survey. Same-sex couples in the study sample are therefore not representative of all single-income LGB couples in the United States. This selection bias limits the generalizability of the findings. It is also important to note that extending dependent EBI coverage to same-sex couples only impacts partnered LGBs employed in firms that offer health insurance. These policies do not address gaps in health coverage for LGBs who do not have access to gainful employment much less employer-based insurance, LGBs who are not in state-sanctioned partnerships, and those who are unable to work. Recognition of same-sex unions alone will not eliminate disparities in health coverage for these populations. Furthermore, it's unclear how implementation of the Affordable Care Act has changed optimal health coverage options for LGBs.

CONCLUSION

The public health implications of these findings are noteworthy. While same-sex legislation offer legal protections, potentially foster social acceptance of LGBs, and help reduce minority stress, their impact on increasing LGB take-up of dependent EBI coverage is modest. The marginal effect of living in a state that recognized same-sex unions increased the proportion of EBI coverage for non-working, same-sex partners by three to seven percentage points. On average, these partners were 21 percentage points less likely to have EBI coverage than different-sex partners. Therefore, same-sex legislation can mitigate gaps in EBI coverage for a segment of the LGB population but not eliminate them. Other strategies must be employed to ensure coverage parity for all LGBs.

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Table 1**Policies Recognizing Same Sex Unions by State (2008-2013)**

State	Policies Recognizing Same-Sex Unions as of 2013
California	Domestic partnership was available to same-sex couples until May 2008. Same-sex couples were able to marry June-November of 2008. A stay on marriages was imposed from November 2008 through June 2013. (Domestic partnerships were still available to same-sex couples during this period). Marriage resumed on June 28, 2013.
Connecticut	CT allowed civil unions from 2005 to the end of September 2010, and became the second state to legalize same-sex marriage in 2008. Couples were able to marry starting October 2008.
Illinois	IL recognized same-sex civil unions as of June 1, 2011. The legislature adopted legislation to recognize same-sex marriage in November 2013.
Iowa	IA started recognizing same-sex marriages starting June 2009.
Massachusetts	MA was the first state to allow same-sex marriage and began issuing licenses in May 2004.
New Jersey	NJ passed same-sex civil union legislation in early 2007. The NJ State Supreme Court decided that the state must recognize same-sex marriage in October 2013.
New Hampshire	NH recognized same-sex civil unions from 2008 until the end of 2009 and legalized marriage starting January 2010.
Oregon	OR passed legislation in 2008 that extended all marriage rights to same-sex couples in domestic partnerships.
Rhode Island	RI passed legislation allowing civil unions starting July 1, 2011.
Washington	WA passed House Bill 2839 in early 2009 to recognize same-sex domestic partnerships.
Washington, DC	Same-sex couples could apply for marriage licenses in Washington, DC starting March 2010.
Vermont	VT recognized same-sex civil unions until September 1, 2009. Marriage was legal thereafter.

Source: National Conference of State Legislatures, 2013

Table 2

Percent of Same- and Different-Sex Partners * who had EBI Coverage by Presence of State Social Policies, United States, 2008-2012 (n=270,406)

	Different-sex couples	Same-sex couples
No Policy	88.5%	60.0%
Domestic Partnerships	87.0%	72.1%
Civil Unions	92.2%	71.1%
Marriage	90.8%	77.5%
N (unweighted)	268,386	2,020

Source: IPUMS-USA, American Community Survey 2008-2012

* Partners were identified as the reference person's "unmarried partner" or "spouse" and were not working at the time of the survey.

Table 3

Characteristics of Cohabiting* Different-sex Couples and Same-Sex Couples, United States, 2008-2012
(n=270,406)

	Different-sex couples	Same-sex couples
Partner's Age (mean)	47.4	47.1
Partner's sex		
Male partner	24.3%	52.2%
Female partner	75.8%	47.8%
Partner's Race/Ethnicity		
Non-Hispanic White	76.9%	79.8%
African-American	4.1%	4.2%
Asian	7.0%	3.4%
Latino	10.6%	10.4%
Other Race or Multiracial	1.4%	2.2%
Household income (quartiles)		
Less than \$66,100	35.5%	25.1%
\$66,100-\$95,000	22.7%	19.9%
\$95,000-\$136,500	19.4%	23.0%
\$136,500+	23.4%	32.0%
Partner's education		
Less than HS	9.8%	6.3%
HS degree	28.5%	17.5%
Some college	28.8%	28.3%
Bachelor's degree	22.2%	26.2%
Advanced degree	10.7%	21.6%
Presence of children in household	61.2%	23.1%
Partner's health status		
Cognitive difficulty	2.1%	2.5%
Ambulatory difficulty	4.4%	3.6%
Independent living difficulty	2.8%	2.8%
Self-care difficulty	1.4%	1.2%
Vision or hearing difficulty	2.4%	2.7%

Source: IPUMS-USA, American Community Survey 2008-2012

* Partners were identified as the reference person's "unmarried partner" or "spouse".

Table 4

Logistic Regression Results (Odds Ratios) for EBI Coverage among Non-working Partners, United States, 2008-2012 (n=270,406)

	Model 1: 4 State Policy Categories		Model 2: Domestic Partnerships and Civil Unions Combined	
	OR	95% CI	OR	95% CI
Couple Type (ref=different-sex couple)				
Same-sex couple	.22	.20-.25	.22	.19-.25
Policy (ref=no policy)				
Domestic partnership	.89	.78-1.01	--	--
Civil union	.99	.86-1.13	--	--
Domestic partnership or civil union	--	--	.93	.84-1.03
Marriage	.89	.80-.99	.91	.83-1.00
Couple Type * Policy				
Same-sex couple * Domestic partnership	1.95	1.50-2.53	--	--
Same-sex couple * Civil union	1.04	.60-1.82	--	--
Same-sex couple * Domestic partnership or civil union	--	--	1.78	1.40-2.28
Same-sex couple * Marriage	1.93	1.33-2.78	1.93	1.34-2.79
Survey Year (ref=2008)				
2009	.95	.91-.99	.95	.91-.99
2010	.92	.88-.96	.92	.88-.96
2011	.88	.84-.91	.87	.84-.91
2012	.87	.84-.91	.87	.83-.91
Partner's Age	1.04	1.04-1.04	1.04	1.04-1.04
Partner's sex (ref=male)				
Female partner	2.45	2.39-2.52	2.45	2.39-2.52
Partner's Race/Ethnicity (ref=NH White)				
African-American	.55	.52-.58	.55	.52-.58
Asian	.94	.89-.99	.94	.89-.99
Latino	.50	.48-.52	.50	.48-.52
Other Race or Multiracial	.83	.75-.92	.83	.75-.92
Household income (in 2012 dollars)	1.00	1.00-1.00	1.00	1.00-1.00
Partner's education (ref=less than HS)				
HS degree	1.66	1.60-1.73	1.66	1.60-1.73
Some college	2.02	1.94-2.10	2.02	1.94-2.10
Bachelor's degree	2.38	2.27-2.50	2.38	2.28-2.50
Advanced degree	2.23	2.11-2.37	2.23	2.11-2.37
Presence of children in household (ref=no)				
Yes	1.70	1.65-1.74	1.70	1.65-1.74

	Model 1: 4 State Policy Categories		Model 2: Domestic Partnerships and Civil Unions Combined	
	OR	95% CI	OR	95% CI
Health Status				
Cognitive difficulty	.95	.87-1.04	.95	.87-1.04
Ambulatory difficulty	1.06	.98-1.14	1.05	.98-1.14
Independent living difficulty	1.15	1.04-1.27	1.15	1.04-1.27
Self-care difficulty	.99		.99	.87-1.12
Vision or hearing difficulty	.82		.82	.76-.88
State fixed effects	Not reported	Not reported	Not reported	Not reported
Constant	.32	.28-.36	.32	.28-.36
N	270,406		270,406	
Log Likelihood	-85,287		-85,289	
Post tests: Differential impacts of social policies				
samesex*dp=samesex*civil union	p=.037		--	
samesex*dp=samesex*marriage	p=.957		--	
samesex*civil union=samesex*marriage	p=.061		--	
samesex*dp and civil union =samesex*marriage	--		p=.704	

Source: IPUMS-USA, American Community Survey 2008-2012