Current Draft: July 2011

The Effect of Requiring Private Employers to Extend Health Benefit Eligibility to Same-Sex Partners of Employees: Evidence from California

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Abstract

Health disparities related to sexual orientation are well documented and may be due to unequal access to a partner's employer-sponsored insurance (ESI). We provide the literature's first evaluation of legislation enacted by California in 2005 that required private employers within the state to treat employees in committed same-sex relationships in the same way as employees in different-sex marriages with respect to ESI. Our analysis uses data on sexual orientation, partnership, and health insurance from the 2001-2007 California Health Interview Surveys (CHIS). Prior to the reform, partnered gay men and lesbians were significantly less likely to have ESI in someone else's name than partnered heterosexuals. Pooling data from 2001 to 2007, we find that the reform had no effects on gay/straight differences in outcomes for men. We find some evidence that the reform increased partnership, reduced full-time employment, and increased health insurance coverage among lesbians relative to heterosexual women. The increases in insurance coverage for lesbians are consistent with a role for expanded dependent ESI, suggesting that such policies may reduce sexual orientation-based insurance disparities among women.

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Disparities in access to health care as well as in health outcomes related to sexual orientation are well documented (see, for example, Institute of Medicine 2011, 1999; Cochran and Mays 2000; and others). While the disproportionate impact of the HIV/AIDS epidemic on the gay male community is well known, public health research has also shown that sexual minorities are at increased risk for cancer, body weight problems, depression and other mental health disorders, substance use, and smoking (see, for example, Daling et al. 1987, Carpenter 2003, Cochran and Mays 2000, Stall and Wiley 1988, Stall et al. 1999, and others). Other work finds that lesbians are significantly less likely than other women to get routine preventive health care such as pap smears and breast cancer screenings and that gay adults are significantly more likely than heterosexuals to report unmet medical needs and difficulty obtaining care (see, for example, Denenberg 1995, Diamant, Schuster and Lever 2000, and others).[1] However, the causes of these disparities are not well understood.

A low rate of insurance coverage among gay adults[2] is commonly cited as a primary reason for their reduced access, and indeed several recent studies document lower rates of insurance coverage for gay men and lesbians relative to heterosexual men and women (Diamant et al 2000, Cochran et al 2001, Harris Interactive/Witeck-Combs 2002, Ash and Badgett 2008, Heck et al. 2009, Buchmueller and Carpenter 2010). One reason that sexual minorities might have lower rates of coverage is that employers have historically treated same-sex partners of employees differently than heterosexual spouses with respect to fringe benefits such as health

[1] Elimination of these disparities has been identified as a major public health goal by Healthy People 2020 – the nation's health promotion and disease prevention initiative.

[2] Throughout this paper we will sometimes use the terms "gay" or "gay couples" to refer to both gay men and lesbians. Because of data limitations, we can say very little about health insurance concerns unique to bisexual or transgender persons, particularly in the context of domestic partner benefits; as such, we focus exclusively on gay men and lesbians.

insurance. Although same-sex domestic partner benefits have increased over time, many employers do not offer them, and in most states employers are not legally required to do so.

Government intervention with respect to health insurance benefits for same-sex partners has taken a variety of forms. Many state governments have extended a variety of fringe benefits—including health insurance—to the same-sex partners of government employees for several decades.[3] More recently, the issue of same-sex partner benefits has been on the policy agenda in numerous states which have addressed this issue by legalizing gay marriage, civil unions, or some other domestic partner registration status within the state (e.g., New Jersey, Vermont, Massachusetts, California, and others). There has been no evidence, however, on whether and to what extent these laws have affected the disparity in health insurance between sexual minorities and heterosexual individuals.

In this paper we address this gap by examining differences in health insurance coverage related to sexual orientation in California using data from the California Health Interview Survey (CHIS) for the years 2001, 2003, 2005 and 2007. These data provide direct measures of sexual orientation and partnership for large, representative samples as well as detailed information on sources of health insurance coverage. From a policy perspective, a key feature of our CHIS sample is that it provides data before and after the implementation of legislation in California that effectively required private employers within the state to extend health benefit eligibility to their employees in committed same-sex relationships in the same way as employees in different-sex marriages.

California's reform consisted of two companion pieces of legislation. The first, California's Domestic Partner Rights and Responsibilities Act—commonly known as AB205—

[3] The practice varies across different branches of the US federal government but was made more complicated by the 1996 federal Defense of Marriage Act. California's government workers have enjoyed same-sex domestic partner

which was passed in 2003 and took effect on January 1, 2005, amended the state family code to give same-sex domestic partners many of the same rights and responsibilities already afforded heterosexual married couples, including adoption rights, hospital visitation privileges, and equal state income tax treatment.[4] AB205 was widely interpreted as requiring private employers to treat domestic partners of employees the same as spouses. The second bill, AB2208 was adopted in 2004 and took effect January 2, 2005 (one day after AB205). AB2208 amended the state insurance code to make it consistent with the provisions of AB205. Both laws were motivated by concerns about equality in treatment of gay and lesbian couples compared to heterosexual couples; this is explicit in the language of both bills. For employers, the reforms mean that any fringe benefits such as health insurance commonly extended to heterosexual spouses of employees must also be extended to same-sex partners of employees. In so doing, this policy had the potential to increase health insurance coverage among partnered gay men and lesbians. Ours is the first study to directly evaluate the effects of these increasingly common policies.[5]

Of course, this description raises several important considerations that may complicate empirical evaluations of California's reform. First, since AB205 changed many other benefits besides just access to health insurance for partnered compared to non-partnered gay men and lesbians, it is plausible that partnership itself changed as a result of the law. A key feature of our analysis is that we test whether partnership rates changed appreciably for gays and lesbians relative to heterosexuals coincident with AB205 implementation. Second, the reform may have changed the sources of health insurance coverage without changing overall rates of health

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health benefit eligibility since 2000.

[4] Federal benefits were unaffected. Note also that the reform preceded California's short-lived period of gay marriage by three and a half years. Our sample (2001-2007) entirely excludes this brief period when gay marriage was legal in the state.

[5] For examples of research that have examined sexual orientation-related public policy effects on other outcomes such as earnings, see Klawitter and Flatt (1998) and Klawitter (2010).

insurance coverage by sexual orientation. For example, a partnered gay person who had previously purchased individual insurance may drop that coverage in favor of enrolling as a dependent on his or her partner's employer-sponsored plan. Or, some people who were working full-time to gain access to employer-sponsored insurance may reduce their hours in response to being able to access a partner's health insurance. In such cases we would not observe a change in the overall likelihood of having health insurance coverage, despite the fact that important behavioral changes occurred. We address these possibilities by examining the effects of the reform on the probability an individual has any insurance coverage and the probability an individual works full-time, in addition to examining effects on the main outcomes of interest: the probability of having health insurance from various sources, especially ESI in someone else's name.

Literature Review and Institutional Details

Research on health insurance gaps by sexual orientation face formidable data challenges because most representative survey datasets do not include direct measures of sexual orientation at the individual level.[6] To overcome this limitation, researchers have analyzed large datasets that allow identification of minority sexual orientation status indirectly through information on household sex composition and intra-household relationships (since two men (women) living together in a married-like relationship are very likely to be gay (lesbian) (Carpenter 2004)). These studies find that individuals in same-sex relationships are significantly less likely to have health insurance than individuals in different-sex relationships (Heck et. al. 2006; Ash and Badgett 2003; Buchmueller and Carpenter 2010).

[6] An exception is Diamant et al. (2000), who use data from the 1997 Los Angeles Community Health Survey (LACHS) and find that sexual minority women are significantly less likely to be insured than heterosexual women.

Several patterns from the literature on sexual orientation and health insurance emerge that are relevant for considering the potential effects of policies such as AB205 and AB2208. First, the evidence base for a disparity in insurance coverage is stronger for lesbians than it is for gay men. For example, studies that examine both men and women consistently find that the gap between lesbians and straight women is larger than the associated gap between gay men and straight men (Heck et. al. 2006, Buchmueller and Carpenter 2010). Second, partnership rates among lesbians are close to the partnership rates among heterosexual women, while gay men are much less likely to be partnered than straight men (Carpenter and Gates 2008). Finally, previous research on gay marriage or domestic partner registries in other settings indicates that lesbians are more likely to take advantage of these registration benefits than are gay men (Gates, Badgett, and Ho 2008, Badgett, Gates and Maisel 2008). These factors all suggest that policies such as those we study here have greater latitude for affecting sexual-orientation-based disparities in health insurance-related outcomes for females than males.

Partly due to data limitations, we know very little about the sources of health insurance coverage for gay men and lesbians, particularly when compared to the large body of research on sources of insurance for heterosexuals. A Harris Interactive (2002) report based on an online survey indicates that while only 3 percent of sexual minority individuals have health insurance through a partner, 14 percent of heterosexual adults report dependent ESI. Ponce et al. (2010) find that gay men and lesbians are 42 and 28 percent as likely as straight men and women, respectively, to have dependent ESI. Dependent coverage is an important source of health insurance for heterosexual married women and to a lesser extent married men (Buchmueller 1996/1997, Farber and Levy 2000). Several studies suggest that access to ESI coverage through a spouse has important effects on behavior. Married workers, especially women, are

significantly more likely to decline coverage from their own employer when their spouse is offered ESI (Buchmueller 1996/1997, Zimmer 2009). Other studies find that access to spousal health insurance coverage is negatively related to labor supply for married women (Olson 1998, Buchmueller and Valletta 1999, Wellington and Cobb-Clark 2000, Abraham and Royalty 2006, Kapinos 2009).

The effect of laws like AB205 and AB2208 depend in part on how common it is for employers to allow gay or lesbian employees to cover their partners as dependents on their health insurance in the absence of legislation. We know very little about the prevalence of such policies, though available evidence indicates that the practice of extending same-sex domestic partner health benefits by private employers is far from universal. The 2011 National Compensation Survey (NCS) indicated that just 29 percent of all workers in private industry had access to health benefits for same-sex partners. Firm characteristics – especially firm size – are strongly correlated with the likelihood of offering same-sex domestic partner health benefits. For example, although a slight majority (57%) of Fortune 500 firms now offer health insurance benefits to same-sex partners of their sexual minority employees (HRC 2009), a 2009 employer survey sponsored by the Kaiser Family Foundation indicated that just 20 percent of firms with fewer than 200 employees offer these benefits to same-sex domestic partners of their employees (KFF 2009).[7]

[7] Because the NCS study, the HRC study, and the KFF study do not report availability of domestic partner benefits at the state level over time, we are unable to directly assess whether the reform changed employer benefits differentially in California relative to other states. Data from a confidential employer survey and reported in Ponce et al. (2010), however, do indicate that the percentage of California firms offering health benefits to same-sex couples increased substantially over this time period, from 22% in 2003 to 35% in 2004, 64% in 2006, and 70% in 2007 (see Appendix B to Ponce et al. 2010). Consistent with this, the NCS data indicate that among private industry workers, offers of health benefits to partners of same-sex employees is by far most common in states in the Pacific division (including California) – at 52 percent – compared to workers in the rest of the US (with the Mountain, New England, and Middle Atlantic states being next closest at 39, 38, and 31 percent, respectively, and all other divisions at 22 percent or less). Note that even though some firms were offering domestic partner benefits prior to the reform, gays and lesbians may have viewed those benefits as uncertain or legally revocable prior to the reform (which they

In summary, there is a fair amount of evidence that gays and lesbians are less likely to have health insurance than heterosexuals, and some evidence suggests that a source of this disparity is reduced access to a partner's ESI. Same-sex domestic partner health insurance benefits were far from universal in the period prior to California's reform, suggesting a potential role for the law to increase access to a partner's ESI. In addition to changes in insurance, previous research on dependent ESI among heterosexuals suggests that labor supply effects are also possible. Finally, several considerations, including the much higher prevalence of partnership among lesbians, suggest that any effects are likely to be larger for lesbians than for gay men.

Data and Empirical Approach

Our data for this study are the 2001, 2003, 2005, and 2007 waves of the CHIS. These surveys are administered by telephone to over 40,000 households using RDD methods in each year. The CHIS data are unique in that they provide information on self-reported sexual orientation for all adults. For privacy reasons, the question on sexual orientation is not available in the public use CHIS data file, though we have obtained access to these data through a confidential data agreement with the UCLA Data Access Center at the Center for Health Policy Research.

Individuals in the 2001 CHIS were asked "Are you gay, (lesbian) or bisexual?" Since 2003, the CHIS has asked adults: "Do you think of yourself as straight-heterosexual, gay (lesbian), or bisexual?" If the individual did not immediately volunteer an answer, the interviewer was directed to read the following statement: "Straight or heterosexual people are attracted to, or have sex with, people of the opposite sex; gays/lesbians are attracted to, or have

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sex with, people of the same sex; and bisexuals are attracted to, or have sex with, people of both sexes." We drop a very small share of individuals who report they do not know their sexual orientation or who refused a response to the sexual orientation question. Throughout this analysis, we also drop individuals who report being bisexual. Although these groups are independently interesting, bisexual is not a well-defined concept when studying policies related to same-sex partner benefits since we do not observe the sex of any respondent's partner. This is because CHIS does not include a complete household sex roster.

The CHIS includes standard sociodemographic variables, including age, race/ethnicity, education, rural/urban residency, and employment. We identify the partnership status of each CHIS respondent using responses to a question about marital status. Specifically, individuals are asked: "Are you now married, living with a partner in a marriage-like relationship, widowed, divorced, separated, or never married?" We define an individual as "partnered" if she reports being either married or living with a partner in a marriage-like relationship.[8] Unfortunately, because the CHIS is an individual level (not a household level) survey, we do not observe detailed information on the employment or insurance coverage of partners or other household members for all adults in the sample.[9]

We restrict attention to 25-64 year olds to focus on a period after most people have

[8] Note that the 2001-2007 CHIS does not ask whether the respondent is a "registered domestic partnership", which is the strict eligibility definition under laws like AB205 and AB2208. In practice, employers often consider partnerships that are not officially registered with the local or state government as long as other key criteria are met (e.g., cohabitation, shared financial arrangements, etc.). Using a marital status question to identify partnership status is less than perfect; for a discussion, see Carpenter and Gates (2008). We note that a small number of gay men (34) and lesbians (25) reports being "married", despite the fact that gay marriage was not legal in California until June 2008. Absent a household sex roster, we are unable to determine whether these are "closeted" heterosexuals, sexual minorities who were legally married in another jurisdiction (e.g., Canada), or sexual minorities who consider themselves to be effectively married. See Carpenter and Gates (2008) for a discussion of these issues. We do not exclude them from the current analysis, but we note they constitute a very small share of the gay and lesbian samples (2 and 2.5 percent, respectively).

[9] In some years the CHIS has asked questions about health insurance coverage of spouses. We are unable to use this information because: 1) the questions changed over time; 2) the questions were not always asked of people living with partners; and 3) the questions specifically refer to spouses as opposed to partners.

completed their education. Table 1 presents the means of these variables by gender and sexual orientation. The patterns in these variables are similar to those that have been reported previously using earlier waves of these data (Carpenter 2005, Carpenter and Gates 2008) and are also similar to patterns from other large, representative datasets (Black et. al. 2000, Black et. al. 2007).

The CHIS data also provide detail on both the type (e.g., public, ESI, private non-group) and source (e.g., own name, as a dependent) of health insurance coverage for each respondent. We consider several outcomes related to insurance coverage and its sources. Individuals in the CHIS are asked a series of detailed questions regarding whether they are covered by a variety of specific sources, such as Medicare, Medicaid (MediCal in California), employer plans, or other individually purchased plans. We use the CHIS recoded responses to create several indicator variables, including: insurance from any source, Medicaid, own-name ESI, dependent ESI, and individually purchased insurance. We do not separately examine the very small share of individuals who report having CHIP (the public insurance program targeted to children), Medicare, or "other public" insurance, though we do not exclude them from the analysis.

We begin by examining descriptive evidence on differences in insurance coverage (overall and by source), paying particular attention to the period prior to California's reform (i.e. the 2001 and 2003 CHIS waves). This is an independently interesting and valuable exercise, since in many ways our large samples of population-based data with detailed information on source of insurance coverage improve on previous research that has used much smaller and geographically isolated samples, convenience samples, or couples-based samples and that has focused mainly on overall differences in insurance coverage.

We then use the full pooled 2001-2007 CHIS sample to test whether California's reform differentially affected outcomes for gay men and lesbians relative to heterosexual individuals by examining how outcomes changed for this group relative to heterosexuals after the enactment of the reforms in 2005. This difference-in-differences (DD) model takes the form:

(1) $Y_i = \alpha + \beta_1 X_i + \beta_2(GAY/LESBIAN)_i + \beta_3(POST\ REFORM)_i + \beta_4(GAY/LESBIAN * POST\ REFORM)_i + \varepsilon$

where *GAY/LESBIAN* is an indicator variable equal to one for individuals reporting a gay or lesbian sexual orientation and *X* is a vector of demographic variables that includes: age and its square, four education dummies (less than high school, some college, bachelors degree, and masters/PhD degree, with high school degree as the excluded category), four race/ethnicity dummies (black, Hispanic, Asian/Pacific Islander, and other multiple race, with white as the excluded category), a dummy for being partnered, and five dummies for urban location (second city, suburban, small town, rural, and urban status not ascertained, with urban location as the excluded category). *POST REFORM* is an indicator variable equal to one for observations after the implementation date of the AB205 and AB2208 laws (January 1 and 2, 2005). The error term ε in equation (1) is assumed to iid, and we estimate models separately for males and females. The coefficient of interest is β_4 and represents the relative effect of the reform on outcomes for gays and lesbians compared to heterosexuals. The key identifying assumption in this simple DD model is that there were no other shocks to relative outcomes over this period for gays and lesbians relative to heterosexuals.

The distribution of interview dates in the CHIS is far from uniform in a way that is fortuitous for our research design. AB205 and AB2208 were passed in 2003 and 2004, respectively, and took effect in January 2005. Since insurance policies are generally revised in the fall to take effect the following calendar year, we expect that individuals would have seen the

new benefits beginning in calendar year 2005. The 2005 CHIS interviews did not begin until July 2005 and actually continued into March and April of 2006. This means that there should have been ample time for individuals to have responded to the new benefits in the 2005 data. In other words, the 2005 CHIS wave is legitimately "after" the reform. All 2007 CHIS interviews were completed from June 2007 to March 2008, just before the California Supreme Court unexpectedly legalized same-sex marriage.

Finally, we note that an alternative strategy for evaluating California's reform would be to use partnership status as an additional treatment status in a triple differences framework, since AB205 and AB2208 changed access to ESI for partnered gays and lesbians only. A limitation of this approach is that if partnership itself was affected by the reform, a triple difference model is inappropriate because of composition changes in the treatment and control groups coincident with the policy of interest. Indeed, we show below that there is some evidence that partnership increased among lesbians relative to heterosexual women coincident with AB205, which is plausible given that the policy increased many benefits to same-sex partnership. Given these changes in partnership, we do not estimate triple difference models.

Results

Sexual Orientation and Insurance Coverage Prior to the Reform

To provide a sense of the potential impact of California's reform, we begin the analysis by documenting differences in health insurance coverage prior to the law. Table 2 presents means for the various insurance outcomes for men (top panel) and women (bottom panel); the first four columns present descriptive statistics for the 2001 and 2003 CHIS data prior to the reform. For completeness, we also present in the last four columns the associated descriptive

statistics for the 2005 and 2007 CHIS data. We present means separately for non-partnered gays and lesbians (columns 1 and 5) non-partnered heterosexuals (columns 2 and 6), partnered gays and lesbians (columns 3 and 7), and partnered heterosexuals (columns 4 and 8) (recall that the ESI provision of the reform pertains only to partnered gays and lesbians). The patterns in Table 2 show that although there are not large differences in the percentage of gay and straight men and women who have any health insurance (see bottom of Table 1), there are interesting differences by type of coverage and partnership status. For men in the top panel of Table 2, we find that prior to the reform gay men are slightly more likely to have Medicaid and individually purchased insurance, regardless of partnership status. The higher rate of individually purchased insurance among gay men compared to straight men (regardless of partnership status) is interesting in light of common perception and past research suggesting discriminatory practices related to a minority sexual orientation in the individual insurance market (Zellers, McLaughlin and Frick 1992). Non-partnered gay men are also more likely to have own-name ESI compared with non-partnered straight men. In contrast, in the partnered subsample straight men are more likely to have ESI, either in their own name or as a dependent, and this more than offsets their lower rate of Medicaid and individually purchased insurance compared to partnered gay men.

The means for women by sexual orientation and partnership status in the pre-reform period are reported in the first four columns of the bottom panel of Table 2. In the years just prior to reform, lesbians were less likely to have any health insurance than heterosexual women. As with men, the pattern with respect to sources of coverage varies with partnership status. Among non-partnered women, differences in ESI coverage (either own-name or in someone else's name) are very small. For this subsample, the difference in overall coverage rates is driven by a much higher rate of Medicaid coverage for heterosexual women: fully 17.5% percent

of non-partnered heterosexual women have Medicaid, compared to only 6.9% of non-partnered lesbians. In contrast, there are large differences in ESI coverage by sexual orientation in the partnered subsample. Partnered lesbians are 27.4 percentage points more likely than partnered heterosexual women to have own-name ESI. This difference in own-name ESI coverage, however, is more than offset by the fact that partnered heterosexual women are much more likely to have ESI coverage as a dependent than partnered lesbians (39.5% vs. 11%).

Overall, the results in Table 2 suggest a greater potential effect of California's reform for lesbians than for gay men. Among men, differences in any health insurance coverage were modest, and it appears that gay men are able to compensate for low levels of ESI coverage with higher rates of individually purchased insurance and Medicaid. Moreover, partnership prevalence among gay men was low (about 40%), meaning that the potential role for AB205 to affect relative outcomes for men is limited. Among women, we find much larger differences in insurance coverage associated with sexual orientation, and for partnered women the gap is largely due to a much lower likelihood for lesbians to have dependent ESI. This large difference in the source of ESI is potentially a target of the reform if partnered women were constrained due to lack of legal rights to access a same-sex partner's ESI. Moreover, the high rates of partnership among lesbians (nearing 60 percent) also increase the latitude for the reform to have meaningful effects on outcomes.

Estimating the Effect of California's Reform

We now turn to a direct evaluation of AB205 and AB2208. As described in the previous section, we estimate difference-in-differences models (i.e., equation 1) that compare changes in outcomes for gay men and lesbians (the treatment groups) before and after the reform to the associated changes in outcomes for heterosexual men and women (the control groups). Before

turning to health insurance-related outcomes, however, we first examine in Table 3 a range of other outcomes that may speak to the appropriateness of our research design and to other behavioral changes that may have been due to the policy. The format of Table 3 is as follows: the top panel presents results for males, and the bottom panel presents results for females. Each column within each panel is from a separate regression that includes the standard demographic controls, and we report the relevant coefficients on the *GAY/LESBIAN*, *POST REFORM*, and the interaction of these two indicators. The coefficient of primary interest in the DD models is the one on the interaction term.

We begin Table 3 in column 1 with an examination of partnership probabilities. Recall that AB205 changed several aspects of the benefits and costs of partnership for gays and lesbians, not just potential access to a partner's ESI. These other changes included: tax liability, parenting rights, and hospital visitation rights, among others. It is plausible, then, that partnership itself changed in response to AB205. Since one research design to test for differences in health outcomes surrounding AB205 and AB2208 would be to use partnership as a treatment/control group margin (i.e., to compare partnered gay men with non-partnered gay men versus partnered straight men with non-partnered straight men before versus after the law change), it is necessary to examine changes in partnership itself. If we found that the reforms changed partnership substantially, this would raise concerns about composition biases in triple differences estimates of the effects of the laws that used partnership as a treatment margin.

Indeed, we find some evidence that California's reforms increased partnership among lesbians. The bottom panel of column 1 indicates that in 2001-2003, lesbians were about 15 percentage points less likely to be in a partnership. The coefficient on the POST REFORM dummy indicates that for heterosexual women partnership remained stable between this early

period and 2005-2007. The coefficient on the interaction term, however, suggests that lesbians were 7.6 percentage points more likely to be in a partnership following the reform compared to the associated change for heterosexual women. This estimate is statistically significant at the ten percent level; relative to the pre-existing partnership figure for lesbians it represents an increase of about 14 percent. The interaction term coefficient for gay men is also positive but smaller in magnitude (suggesting a 1.6 percentage point increase) and is statistically insignificant. However, because the relevant partnership figure for gay men was only around 40 percent, this point estimate does represent a nontrivial increase in partnership. These results suggest that it could be problematic to use partnership as a treatment margin in a triple differences framework to evaluate the effects of California's reform on outcomes, particularly for women.

In the next two columns of Table 3 we perform the related exercise for the probability an individual is employed at all (column 2) and the probability an individual is employed full-time (column 3). While we find small and statistically insignificant estimates for the coefficients of interest for men, we do find in the bottom panel of column 3 for women that lesbians were 7.1 percentage points less likely to be working full-time following the reform compared to the associated change for heterosexual women. This reduction in full-time employment is significant at the ten percent level and could represent the alleviation of suboptimal labor force decisions associated with the new ability to access a partner's ESI.

In Table 4 we turn to a direct examination of the effects of California's reform on the sources of insurance coverage using a difference-in-differences framework that compares changes in outcomes for gays and lesbians surrounding the law to the associated changes in outcomes for straight men and women. The format of Table 4 follows that of Table 3, except the outcomes differ in each column. In column 1 we show results for the probability an individual

has any insurance; in column 2 for individually purchased insurance; in column 3 for Medicaid; in column 4 for own-name ESI; and in column 5 for dependent ESI. Again, the coefficients of interest are those on interaction terms of the *GAY/LESBIAN* indicator with the *POST REFORM* indicator. All models include the same demographic controls.

The results in Table 4 suggest that the reform had essentially no meaningful effect on health insurance outcomes overall or by source for gay men relative to straight men. All of the interaction terms are small and statistically insignificant. For females in the bottom panel of Table 4, in contrast, we find evidence that the laws helped to close the gap in health insurance coverage. We estimate that lesbians were 7.6 percentage points more likely to have insurance following the reform compared to the associated change for heterosexual women. This estimate is statistically significant at the five percent level. The coefficient on the *LESBIAN* times *POST REFORM* variable for ESI in someone else's name is positive and sizable in magnitude though not statistically significant. The evidence broadly suggests that the reform increased health insurance coverage for lesbians relative to straight women and is consistent with the possibility that one of the mechanisms was an increase in access to a partner's ESI.

The results for women presented in Tables 3 and 4 suggest that the reform allowed some lesbians who were working full-time in order to qualify for health benefits to reduce their hours while taking up coverage through their partner's employer. In other models (not reported here but available on request), we further explored these results for women in two key ways. First, we examined outcomes that jointly examined health insurance coverage and employment. If California's reform induced some women to reduce work effort due to increased access to a partner's ESI, we should expect to see a relative reduction in the probability a lesbian works full-time and has ESI in her own name and relative increases in the probability a lesbian works part-

time (or not at all) and has ESI in someone else's name.[10] Second, we examined whether there were important differences in the effects for women with children compared to women without children, since the preference for shorter hours should be strongest among women with children (and thus any effects of the law should be concentrated in this group).[11] Prior research on married women suggests that access to dependent insurance coverage does not represent as much of a constraint for women without children, presumably because they do not have the same preference for part-time hours (Buchmueller and Valletta 1999).

Indeed, we found that the probability a woman reported working full time and having ESI in her own name fell significantly for lesbians after the reform relative to heterosexual women, and this effect was only found for women with children.[12] Moreover, we estimated that the probability a woman reported working part-time and having ESI in someone else's name increased for lesbians after AB205 relative to heterosexual women, and although the relevant interaction coefficient was not statistically distinguishable from zero we found that it was sizably positive for women with children (.059) and essentially zero for women without children (.001). This pattern is again consistent with the hypothesis that California's reform alleviated labor market constraints for partnered lesbian women with children, allowing some women to reduce their hours while receiving ESI coverage through a working partner.[13]

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[10] Note that in this scenario we would not expect to see overall increases in the probability of having any health insurance (which we do observe in Table 4), but instead would observe a shifting of sources. The increase in the probability of having any insurance could only therefore work through the channel of increased access to a partner's ESI if the partner was previously uninsured. Again, however, we do not observe the insurance status of the partner.

[11] In results not reported but available upon request, we found no evidence that the probability of having any children changed differentially for lesbians relative to heterosexual women after the law went into effect. The relevant coefficient estimate on the interaction term in a model where the dependent variable was an indicator variable for the presence of any children was .012 with a standard error of .033.

[12] The relevant coefficient on the interaction term for women with children was -.208 with a standard error of .099, while the relevant coefficient on the interaction term for women without children was .016 with a standard error of .048.

[13] Consistent with the lack of an effect on the likelihood of any employment in Table 3, we did not find significant interaction effects for the outcome of no employment and dependent ESI. This was true both for women with children and for women without children.

Finally, we subjected our main findings on relative health insurance increases for lesbians to a variety of robustness checks. For example, although we are concerned about using partnership as a treatment margin due to possible composition biases suggested in Table 3 for women, we did estimate models that restricted attention to people in partnerships. These models produced very similar results to those in the bottom panel of Table 4: we continued to find a large, positive, and statistically significant increase in the likelihood of any insurance for lesbians compared to heterosexual women following the reform, and there is still evidence consistent with a possible role for dependent ESI. Also, while we chose not to include measures of employment, presence of children, or partnership directly in the health insurance models (due to concerns about endogeneity), we recognize that a large body of research suggests that all of these are important correlates of health insurance. In robustness analyses we found qualitatively identical results to those in the bottom panel of Table 4 when we separately included either: a dummy variable for being employed at all, a dummy variable for the presence of any children in the household, or a dummy variable for living with a partner. That is, we continued to find large and statistically significant increases in health insurance for lesbians compared to heterosexual women following the reform and plausible roles for dependent ESI. None of these additional robustness analyses indicated that the reform had any effects on insurance for gay men relative to heterosexual men, consistent with the findings in the top panel of Table 4. All of these results are available upon request.

Conclusion

Sexual orientation-based disparities in health outcomes are well-documented, and eliminating these disparities is an explicit goal of national health policy. A difficulty in reducing

such disparities, however, is that the causes of sexual orientation-based differences in health are not well understood. Disparities in health insurance coverage by sexual orientation have been documented using a variety of samples and methods and may contribute to differences in health outcomes. One plausible cause of these health insurance disparities is that sexual minorities face barriers to accessing a same-sex partner's health insurance benefits due to the historic employer practice of covering heterosexual spouses but not same-sex partners. This possibility has received some attention in the literature (Ash and Badgett 2006) and is consistent with previous descriptive research using couples-based samples (Heck et. al. 2006, Buchmueller and Carpenter 2010) but has not been directly evaluated using quasi-experimental methods.

Recently, several states have adopted laws giving gay and lesbian couples increased rights, including (in some states) the right to access a partner's employer-sponsored insurance. Our study provides the first evaluation of such a reform: California's AB205 and AB2208. Specifically, we use difference-in-differences methods to compare outcomes for gay men and lesbians before and after California's reform with the associated differences for heterosexual men and women, respectively. Our results for men provide no evidence that the reforms had economically or statistically significant effects on gay/straight differences in insurance coverage overall or by source. We similarly find no evidence that the laws affected partnership or work effort by gay men. These null findings are not particularly surprising given previous research showing low rates of partnership among gay men and low rates of official domestic partner registrations conditional on partnership among gay men (Carpenter and Gates 2008, Badgett, Gates, and Maisel 2008).

Among women, we do find some evidence that California's reform affected outcomes differentially for lesbians compared to heterosexual women. First, we estimate that partnership

rates increased and full-time employment decreased for lesbians compared to heterosexual women coincident with the law. These effects are large in magnitude, which suggests that it is inappropriate to compare outcomes for partnered and non-partnered lesbians before and after the reform due to composition problems associated with partnership. The differences in the effects of California's reform on partnership for gay men versus lesbians are consistent with the limited evidence from administrative sources that indicates that two-thirds or more of sexual minorities who take advantage of domestic partner registries are lesbians. Turning to health insurance outcomes, we find in the difference-in-differences framework that lesbians were significantly more likely to have any health insurance coverage after the law compared to straight women, with suggestive increases in dependent coverage. Overall, our results are consistent with previous research on health insurance and married women's labor supply and suggest a potential role for policies such as these to reduce sexual orientation-based disparities in health insurance coverage among women.

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Table 1. Descriptive Characteristics, CHIS 2001-2007

	(1) Gay males	(2) Straight males	(3) Lesbians	(4) Straight females
Age	41.2 (.034)	42.9 (.075)	42.9 (.422)	43.5 (.064)
White	.525 (.019)	.451 (.003)	.523 (.024)	.454 (.003)
Black	.051 (.008)	.050 (.001)	.046 (.010)	.060 (.001)
Latino	.082 (.011)	.121 (.002)	.072 (.012)	.106 (.002)
Asian/Pacific Islander	.057 (.009)	.085 (.002)	.022 (.007)	.089 (.002)
Less than HS degree	.030 (.007)	.083 (.002)	.031 (.007)	.071 (.002)
HS degree	.151 (.016)	.230 (.003)	.137 (.015)	.222 (.002)
Some college	.264 (.017)	.260 (.003)	.263 (.021)	.298 (.003)
College degree or more	.555 (.019)	.426 (.003)	.570 (.023)	.408 (.003)
Partnered (married or living with a partner)	.405 (.018)	.726 (.003)	.584 (.024)	.695 (.003)
Any health insurance	.850 (.016)	.867 (.003)	.887 (016)	.900 (.002)
Works full time	.691 (.017)	.778 (.003)	.690 (.021)	.522 (.003)
N	1783	47733	1140	67460

Notes: Author calculations, 2001-2007 CHIS, adults age 25-64, weighted means (standard errors in parentheses).

Table 2. Health insurance outcomes by sexual orientation and partnership status before and after California's reform, CHIS 2001-2007

	(1) Non-Partnered Gay/Lesbian	(2) Non-Partnered Straight	(3) Partnered Gay/Lesbian	(4) Partnered Straight	(5) Non-Partnered Gay/Lesbian	(6) Non-Partnered Straight	(7) Partnered Gay/Lesbian	(8) Partnered Straight
	Before Reform (2001 and 2003 CHIS)				After Reform (2005 and 2007 CHIS)			
Men								
Has any insurance	.857 (.021)	.759 (.007)	.864 (.026)	.906 (.003)	.814 (.040)	.743 (.010)	.881 (.031)	.915 (.004)
Has individually purchased insurance	.108 (.016)	.065 (.003)	.081 (.018)	.059 (.002)	.110 (.027)	.071 (.005)	.099 (.022)	.057 (.003)
Has Medicaid	.108 (.017)	.102 (.005)	.051 (.016)	.047 (.002)	.114 (.020)	.110 (.007)	.041 (.014)	.042 (.003)
Has ESI in own name	.619 (.026)	.543 (.008)	.611 (.036)	.646 (.005)	.552 (.041)	.491 (.011)	.610 (.042)	.649 (.006)
Has ESI in someone else's name	.012 (.007)	.018 (.002)	.093 (.021)	.150 (.004)	.012 (.006)	.021 (.004)	.064 (.016)	.151 (.004)
Works full time	.672 (.026)	.670 (.008)	.721 (.034)	.817 (.004)	.661 (.037)	.646 (.011)	.732 (.035)	.830 (.004)
Works part time	.109 (.018)	.085 (.005)	.082 (.021)	.048 (.002)	.071 (.013)	.099 (.007)	.115 (.028)	.052 (.003)
N	644	8372	292	16428	562	7069	285	15512
Women								
Has any insurance	.799 (.034)	.855 (.005)	.890 (.027)	.922 (.003)	.855 (.050)	.839 (.007)	.955 (.017)	.926 (.003)
Has individually purchased insurance	.073 (.023)	.078 (.003)	.079 (.018)	.079 (.002)	.075 (.022)	.070 (.004)	.052 (.014)	.071 (.002)
Has Medicaid	.069 (.019)	.175 (.005)	.040 (.015)	.057 (.002)	.097 (.024)	.178 (.006)	.083 (.025)	.051 (.003)
Has ESI in own name	.599 (.041)	.571 (.006)	.655 (.036)	.381 (.004)	.610 (.061)	.546 (.008)	.676 (.036)	.401 (.005)
Has ESI in someone else's name	.016 (.007)	.027 (.002)	.110 (.023)	.395 (.004)	.034 (.020)	.031 (.003)	.104 (.021)	.384 (.005)
Works full time	.710 (.036)	.604 (.006)	.728 (.033)	.470 (.004)	.637 (.059)	.606 (.008)	.687 (.036)	.500 (.005)
Works part time	.068 (.016)	.112 (.004)	.079 (.019)	.146 (.003)	.130 (.048)	.107 (.005)	.126 (.025)	.147 (.003)
N	292	13493	280	21012	251	12242	317	20713

Notes: Author calculations, 2001-2003 CHIS, adults age 25-64, weighted means (standard errors in parentheses).

Table 3. Changes in partnership and employment surrounding California's reform, 2001-2007 CHIS

Outcome is ➔	(1) Partnered	(2) Employed at all	(3) Employed full-time
Males			
GAY	-.302***	-.067***	-.116***
	(.022)	(.018)	(.021)
POST REFORM	.007	-.000	.008
	(.006)	(.005)	(.006)
GAY*POST REFORM	.016	-.035	.004
	(.035)	(.030)	(.032)
R-squared	.07	.08	.09
N	49631	49631	49631
Females			
LESBIAN	-.153***	.100**	.169***
	(.027)	(.020)	(.024)
POST REFORM	.003	-.003	.025***
	(.005)	(.005)	(.006)
LESBIAN*POST REFORM	.076*	-.032	-.071*
	(.045)	(.034)	(.039)
R-squared	.05	.05	.04
N	68797	68797	68797

Notes: *, **, *** indicate statistical significance at the 10, 5, and 1 percent levels, respectively. Robust standard errors below in parentheses. Each column within each panel is a separate regression. Models also include controls for: age and its square, race, education, and urban location.

Table 4. California's reform and changes in health insurance and its sources, 2001-2007 CHIS

	(1) Any insurance	(2) Individually purchased insurance	(3) Medicaid	(4) ESI in own name	(5) ESI in someone else's name
Males					
GAY	-.018	.032***	.043***	-.029	-.068***
	(.016)	(.012)	(.012)	(.021)	(.010)
POST REFORM	-.006	-.006†	.004	-.013	-.001
	(.005)	(.003)	(.003)	(.007)	(.004)
GAY*POST REFORM	-.012	.011	-.009	-.018	-.012
	(.029)	(.022)	(.018)	(.035)	(.013)
R-Squared	.06	.01	.05	.04	.01
N	49631	49631	49631	49631	49631
Females					
LESBIAN	-.072***	-.008	-.006	.150***	-.223***
	(.021)	(.014)	(.013)	(.028)	(.014)
POST REFORM	-.010**	-.016***	.011***	.001	-.015***
	(.004)	(.003)	(.003)	(.006)	(.005)
LESBIAN*POST REFORM	.076**	-.003	.024	.016	.030
	(.031)	(.018)	(.021)	(.042)	(.021)
R-squared	.03	.01	.10	.05	.03
N	68797	68797	68797	68797	68797

Notes: *, **, *** indicate statistical significance at the 10, 5, and 1 percent levels, respectively. Robust standard errors below in parentheses. Each column within each panel is a separate regression. Models also include controls for: age and its square, race, education, and urban location.