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RESEARCH ARTICLE

Adverse Selection into and within the Individual Health Insurance Market in California in 2014

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Objective. The Affordable Care Act (ACA) introduced reforms to mitigate adverse selection into and within the individual insurance market. We examined the traits and predicted medical spending of enrollees in California post-ACA.

Data Sources. Survey of 2,103 enrollees in individual market plans, on- and off-exchange, in 2014.

Study Design. We compared actual versus potential participants using data from the 2014 California Health Interview Survey on respondents who were individually insured or uninsured. We predicted annual medical spending for each group using age, sex, self-rated health, body mass index, smoking status, and income.

Principal Findings. Average predicted spending was similar for actual (\$3,377, 95 percent CI [\$3,280-\$3,474]) and potential participants (\$3,257 [\$3,060-\$3,454]); however, some vulnerable subgroups were underrepresented. On- versus off-exchange enrollees differed in sociodemographic and health traits with modest differences in spending (\$3,448 [\$3,330-\$3,565] vs. \$3,175 [\$3,012-\$3,338]).

Conclusions. We did not find evidence of selection into the overall insurance pool in 2014; however, differences by exchange status reflect the importance of including off-exchange enrollees in analyses and the pool for risk adjustment. California's post-ACA individual market has been a relative success, highlighting the importance of state policies and outreach efforts to encourage participation in the market.

Key Words. Health reform, insurance, selection

The Patient Protection and Affordable Care Act (ACA) reformed the individual health insurance market rules in an effort to expand insurance coverage. Some of the reforms focused on stabilizing the market to address the potential for adverse selection or the possibility that healthier individuals (with better

risks) would not enroll. The ACA's principal mechanisms to mitigate adverse selection into the market are its financial assistance (subsidies) for low- and moderate-income individuals and families, and the individual mandate and associated penalty for noncompliance. The mandate penalties, however, will be eliminated starting in 2019. To address selection within the market and discourage insurers from engaging in selection, the ACA also included risk adjustment, risk corridors, and reinsurance. Risk corridors and reinsurance ended in 2017 (and were only partially funded in earlier years), but risk adjustment continues.

The ACA allowed consumers a choice between purchasing plans on the ACA's public exchanges or outside them, for example, directly from insurance carriers. Most plans sold off-exchange must meet many of the same coverage requirements as those sold on-exchange, including the requirement to cover essential health benefits and to offer plans in one of four metal tiers that correspond with actuarial value. In addition, plans sold both on- and off-exchange must be priced at the same premium. Insurers, however, are not required to offer at least one Silver and one Gold plan off-exchange as they are if they sell plans on-exchange. Within the off-exchange market, carriers may concentrate plan offerings in lower premium plans, such as Bronze plans or those with narrower provider networks. Some states have additional policies to align on- versus off-exchange plan offerings even more closely; in

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California, for example, all plans sold on-exchange are required to be sold (mirrored) off-exchange.

The risk-adjustment mechanism in the ACA mandates zero-sum premium transfers across carriers based on their enrollees' risk level. The risk-adjusted premium transfers discourage carriers from offering particularly low-premium, low-coverage plans, because if there is favorable selection, some of the premiums are transferred to insurers that enrolled less favorable risks. These risk-adjustment payments are calculated using a single risk pool that includes both on- and off-exchange enrollees in qualified health plans.

Because of the single risk pool feature, the functioning of the individual market depends on the characteristics of all individuals who participate, both on- and off-exchange. Data on off-exchange enrollees, however, are limited. Moreover, especially given California's mirroring requirement, insurers' participation in the exchange and their plan offerings will be influenced by the traits and medical spending of both on- and off-exchange enrollees.

Despite the various antiselection provisions of the ACA, recent exits by some large insurers from the public exchanges in several markets outside California, as well as sizeable premium increases in many markets, have led to questions about the extent of adverse selection in the post-ACA individual market. To examine this issue, we conducted a survey among adult individual market enrollees in California in 2014 who enrolled both on- and off-exchange. We gathered data on their sociodemographic and health-related traits, as well as predicted their medical spending. We compared the various traits and predicted spending of the individual market enrollees (both on- and off-exchange), with the overall pool of those who were potentially eligible for individual market insurance using data from the 2014 California Health Interview Survey (CHIS). Our goal was to compare the actual risk pool in 2014 with the hypothetical pool in which all eligible persons had participated. We also compared both the traits and predicted spending between on- and off-exchange enrollees to assess potential within-market selection.

METHODS

Data Sources and Study Population

The data for this study are from (1) individual market enrollment data from several insurance carriers in California in 2014; these carriers comprised over 90 percent of individual market enrollees in California (California Department of Managed Health Care 2015); (2) a telephone and web-based survey

we conducted with adults who purchased individual market plans from these carriers (which we refer to as the RISC survey); (3) the 2014 CHIS, which provides detailed information on health status and health insurance coverage for a random sample of the California population; and (4) the 2012–2013 Medical Expenditure Panel Survey (MEPS).

We focused on California because of its large population, 12 percent of the United States, and its relatively high rate of uninsured prior to the ACA, which was 16 percent in 2013 (Kaiser Family Foundation 2013; The American Academy of Actuaries 2014). Nonetheless, the experience with the individual market in California is far from typical. Compared with other states, California has been a success story, with large decreases in its uninsured rate, lower than average premium increases, and stable insurer participation (Lee 2016).

California's favorable performance reflects a number of policies it implemented to improve the sustainability and affordability of coverage that were not widely adopted by other states. The public exchange, Covered California, was and is an active purchaser, meaning it negotiates rates with carriers and chooses which plans participate in the public exchange. It required standard benefit designs for participating plans. Unlike many states, it did not allow renewals of non-ACA compliant (grandmothered) plans in 2014, and, as mentioned above, it required that any plans offered on-exchange have an identical (mirrored) product that was also offered off-exchange. The reverse, however, is not required; insurers can offer plans off-exchange that are not offered on-exchange.

Actual On- and Off-exchange Individual Market Participants in 2014

We obtained information on traits of on- and off-exchange individual market enrollees in 2014 from carrier enrollment data and a survey of a random sample of enrollees. The carrier data included information for each enrollee on whether they purchased on- versus off-exchange plans, the plan metal tier purchased, whether the plan was an individual or family plan, receipt of low-income subsidies, and enrollee age. We selected a random sample of adults from these data to survey; they were aged 18 years and older, living in California, had valid phone numbers, purchased individual market insurance during the 2014 open enrollment period (1 October 2013–31 March 2014), specified a language preference of English, Spanish, or did not specify a preference, and were not enrolled in non-ACA compliant plans that were purchased prior to 23 March 2010 (grandfathered plans).

The survey asked about current health status, health conditions, smoking status, height, weight, prior insurance status, and demographic traits. It was conducted between November 2014 and August 2015. A total of 2,103 respondents completed the survey with a response rate of 39 percent. Compared with nonrespondent enrollees, respondents were significantly ($p < .05$) more likely to be in an older age category (e.g., 30 percent vs. 27 percent aged 55–65), female (56 percent vs. 52 percent), and to have enrolled on-exchange (69 percent vs. 65 percent); there were no significant differences by subsidy receipt or plan metal tier. Poststratification weights were used to balance the sample to resemble the overall population of individual market enrollees of study insurance carriers on gender, age, metal tier, exchange status, type of plan, type of subscriber, and subsidy level. Additional details on the survey protocol and methods are described in detail elsewhere (Fung et al. 2017).

Potential Participants and the Uninsured in 2014

To obtain information on the traits of a comparison group of adults in California who could have purchased individual market insurance, we used data from the 2014 CHIS. The CHIS collects information about health status, health-related issues, and current insurance coverage using a dual-frame, multistage sample design stratified by geographic region for individuals living in California. For our analysis, we defined a subgroup of adult CHIS respondents who were likely eligible to participate in the post-ACA individual insurance market because they did not have other sources of insurance and met other eligibility rules; this group includes those who actually enrolled in individual market plans plus those who remained uninsured.

Operationally, the sample we refer to as potential participants includes adults 18 to 65 years old who were currently uninsured or insured with non-group private insurance and were U.S. citizens (U.S. born or naturalized). We were unable to differentiate between legal, noncitizen residents, and undocumented immigrants because the CHIS does not include this level of detail in their public files.

These sample inclusion criteria assume that persons who were covered by other sources of insurance at the time of interview in 2014, including group/employer-based health insurance, Medicare, or Medicaid, would have been unlikely to participate in the individual market in 2014. It is important to note that we cannot precisely estimate the proportion of potential participants who went on to participate in the individual market, either on- or off-exchange. Based on the CHIS sample, we estimate about half of our target

population of potential participants (who did not become insured commercially or by Medicaid) remained uninsured while the other half participated in the individual market.

Sociodemographic and Health Traits

We compared a number of sociodemographic traits between actual and potential participants, including age, gender, race/ethnicity, household income, educational attainment, and whether the respondent was uninsured at any time in 2013. In addition, we compared self-reported health status, smoking status (current smoker vs. not), and having a body mass index (BMI) in the obese range (≥ 30 kg/m²). For each characteristic, we provide the unadjusted mean and the 95 percent confidence interval after applying the relevant survey weights.

Predicted Medical Spending

We compared predicted medical spending for actual versus potential participants to assess whether actual enrollees were predicted to be more expensive than the overall pool of potential enrollees, on average, and thus whether there is evidence that costlier-than-average individuals were more likely to enroll. To predict annual medical spending, we used data from the 2012–13 MEPS. The MEPS includes a nationally representative panel sample of households for whom data are collected for 2 years. We limited the MEPS sample to a subgroup of respondents who were uninsured or had individual market policies in 2013. We used an ordinary least-squares model to predict total medical spending in 2013 using individual characteristics in 2012, including 10 age-sex categories (18–25, 26–34, 35–44, 45–54, and 55–64 years old for males and females), self-reported health status (very good, good, or fair/poor vs. excellent), smoking status (current smoker vs. not), having a body mass index ≥ 30 versus < 30 kg/m², and household income as a percent of the FPL (251–400 percent FPL, >400 percent FPL vs. ≤ 250 percent FPL, Supporting information). We used a one-part linear model, similar to the HHS-HCC and CMS-HCC models used for risk adjustment in the individual market and Medicare Advantage (Van De Ven and Ellis 2000; Buntin and Zaslavsky 2004; Van Kleef, Van Vliet, and Van de Ven 2013; Kautter et al. 2014).

We limited our model to these variables because they have been shown to be strongly predictive of future spending in other studies, are less likely to

reflect differences in health care spending that could be associated with gaining insurance (such as utilization), and are variables for which we had comparable information on actual and potential enrollees from our study survey and the CHIS, respectively (DeSalvo et al. 2009; Assistant Secretary for Planning and Evaluation 2016b). We then used the estimated coefficients from the fitted model to predict total medical spending of both the potential participants and the actual enrollees given their respective distributions of age-sex, self-reported health status, smoking status, body mass index, and household income. In sensitivity analyses, we examined alternative model specifications for predicted spending, including those that included indicators for chronic conditions (i.e., stroke, heart failure, asthma or other lung diseases, diabetes, and cancer). Differences in predicted spending between on-versus off-exchange enrollees were similar using this model.

RESULTS

Traits of Actual Versus Potential Participants

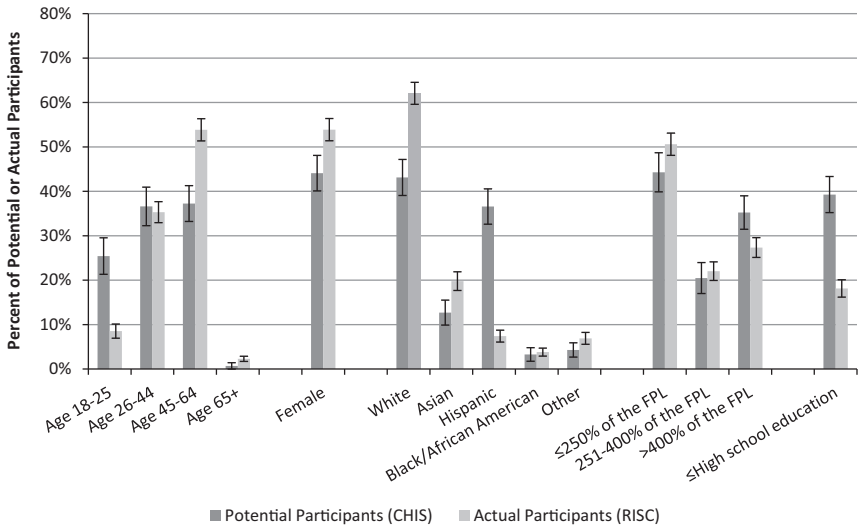
There were substantial differences in the sociodemographic and health-related traits of actual versus potential participants; the latter group includes both participants and nonparticipants. Compared with potential participants, actual participants were much less likely to be 18–25 years old (9 percent vs. 25 percent potential participants, Figure 1), to be of Hispanic ethnicity (7 percent vs. 37 percent), to have a relatively high household income (27 percent vs. 35 percent >400 percent FPL), or to have less than a college education (18 percent vs. 39 percent), $p < .05$ for all comparisons.

Nonetheless, those enrolled in individual market plans appeared healthier, on average, compared with potential participants, even when not controlling for age. Of actual participants, 25 percent versus 17 percent of potential participants reported being in excellent health, and only 10 percent versus 17 percent reported being in fair or poor health (Figure 2). Those who participated in the market were also significantly less likely to report being smokers (8 percent vs. 17 percent). There were no tobacco-related surcharges in the California market.

On- Versus Off-exchange Enrollees

Enrollees who purchased their plans off- versus on-exchange were significantly more likely to be white (70 percent vs. 59 percent, Figure 3) and to have

Figure 1: Sociodemographic Traits of Participants in California’s Individual Insurance Market Versus Potential Participants in 2014



Notes. Potential participants include adult CHIS respondents who were currently uninsured or reported being covered by private (nongroup) insurance in 2014. Actual participants include respondents in our study survey of on- and off-exchange qualified health plan (QHP) enrollees in 2014. Weighted for sampling proportions.

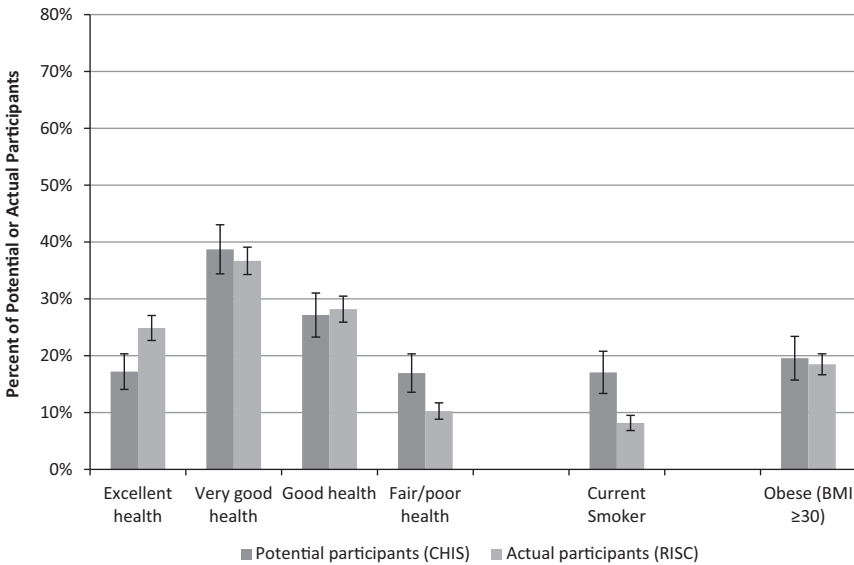
higher household income (e.g., 52 percent vs. 19 percent >400 percent FPL). These income differences are consistent with the provision of low-income subsidies, which are only available if enrollees purchase plans on-exchange. Off-versus on-exchange enrollees were less likely to have less than a college education (8 percent vs. 22 percent) and less likely to have been previously uninsured (11 percent vs. 46 percent).

With respect to health traits, those who purchased off- versus on-exchange were more likely to report better health (e.g., 33 percent vs. 22 percent in excellent health, Figure 4) and less likely to have body mass indices in the obese range (13 percent vs. 20 percent).

Differences in Predicted Medical Spending

The predicted annual medical spending of actual participants (\$3,377) was 4 percent higher than that of potential participants in 2014 (\$3,257, Table 1), but we could not reject the null hypothesis of no true difference. Thus, we did not

Figure 2: Health-Related Traits of Participants in California’s Individual Insurance Market Versus Potential Participants in 2014



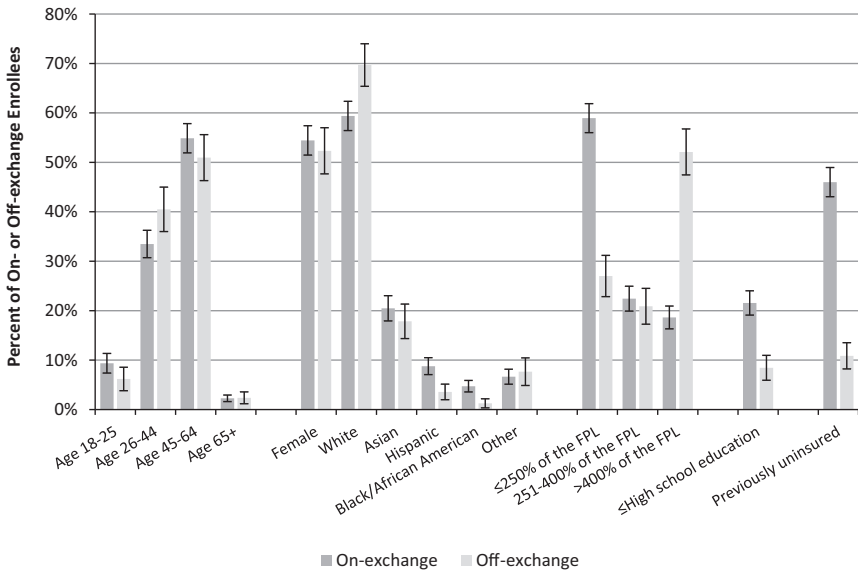
Notes. Potential participants include adult CHIS respondents who were currently uninsured or reported being covered by private (nongroup) insurance in 2014. Actual participants include respondents in our study survey of on- and off-exchange QHP enrollees in 2014. Weighted for sampling proportions.

detect selection effects, either favorable or unfavorable, into the pool. Those who enrolled on-exchange, however, had 9 percent higher predicted medical spending, on average, compared with off-exchange enrollees (\$3,448 vs. \$3,175, $p < .05$).

DISCUSSION

The ACA sought to expand health insurance coverage in the United States in part through reforming the private individual insurance market. We examined the traits and the predicted spending of individual market enrollees in California compared with potential participants. Our analysis of a survey of a random sample of on- and off-exchange individual market participants in California suggests three main findings. First, although traits differed, we did not find evidence of substantial adverse selection into the California individual market in

Figure 3: Sociodemographic Traits of On- Versus Off-Exchange Enrollees in California’s Individual Insurance Market in 2014



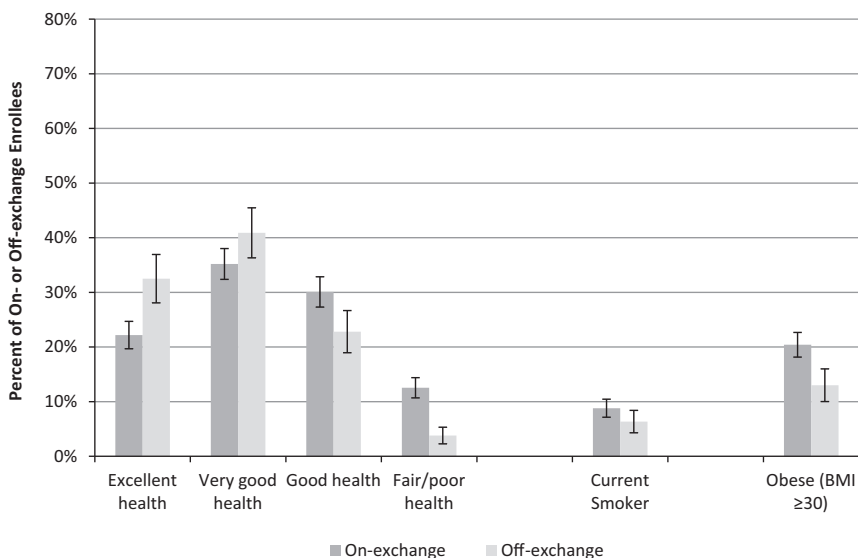
Notes. Previously uninsured refers to actual participants who reported any uninsured period in 2013. Weighted for sampling proportions.

2014 as a whole, based on predicted medical spending. Second, we found differences in the traits of those who purchased on- versus off-exchange, with more favorable risk profiles among off-exchange enrollees. Taken together, these findings highlight the importance of including the off-exchange plan enrollees in the overall risk pool. Finally, in this first year of roll-out, we found notable underrepresentation of individuals of Hispanic race/ethnicity, those with less than a college education, and the previously uninsured.

Participation in the Market

We found that actual participants were less likely to be 18–25 years old, which is consistent with the ACA’s policy that allows those aged 26 and younger to stay on their parents’ insurance policies. Correspondingly, we found greater participation among individuals 45–64 years old, consistent with previous reports of the age distribution of on-exchange enrollees (Assistant Secretary for Planning and Evaluation 2014). The distribution of self-reported health

Figure 4: Health-Related Traits of On- Versus Off-Exchange Enrollees in California’s Individual Insurance Market in 2014



Notes. Weighted for sampling proportions.

Table 1: Predicted Annual Medical Spending of Actual Versus Potential Participants and On- and Off-Exchange Enrollees in California’s Individual Insurance Market in 2014

	Mean	95% CI	
Potential participants (CHIS)	\$3,257	\$3,060	\$3,454
Actual participants (RISC)	\$3,377	\$3,280	\$3,474
On-exchange enrollees	\$3,448	\$3,330	\$3,565
Off-exchange enrollees	\$3,175	\$3,012	\$3,338

Notes. Spending predictions based on age*sex categories, smoking status, health status, obesity, and income (FPL). Weighted for sampling proportions.

status, however, was relatively favorable for actual versus potential participants with fewer participants reporting fair or poor health status. On average, differences in projected total medical spending in 2014 between the two groups were modest and not statistically significant. Moreover, in 2014, the penalties for noncompliance with the mandate were relatively low—that is, 1

percent of income with a maximum fine of \$95 per adult and \$285 per household, so that any unobserved selection may well have been even less in subsequent years when penalties increased but could increase starting in 2019 after the mandate penalties are eliminated.

There appeared to be underparticipation in the market by some historically disadvantaged groups, including racial/ethnic minorities. The findings of underparticipation and lack of adverse selection could be associated. Medical spending is correlated with poor health status, obesity, and risk behaviors such as smoking (DeSalvo et al. 2009; Stam, van Vliet, and van de Ven 2010). The disproportionate burden of disease borne by racial/ethnic minorities and lower-income groups is well-known (Haan, Kaplan, and Camacho 1987; Marmot et al. 1991). To the extent that access or outreach barriers are associated with lower participation among these vulnerable subgroups, one might expect that this would be associated with the finding of a relatively “healthy” overall participating population.

There were well-publicized implementation challenges during the initial enrollment period in 2014. Some materials were not available in languages other than English for several months, and there were reports that outreach was initially limited within minority, non-English speaking groups, which could have limited first-year enrollment, particularly of Latinos (McWilliams et al. 2011; Blavin et al. 2014). Other states appear to have had similar challenges reaching uninsured Latinos (Collins et al. 2016). The underrepresentation of those with lower educational attainment is consistent with the complexity of the enrollment process (Golberstein, Gonzales, and Sommers 2015). Other surveys suggest that knowledge of the exchanges and the open enrollment period was limited, especially among the uninsured (Singh and Palosky 2014).

In addition, the extent of adverse selection as well as uneven participation by disadvantaged subgroups could be worse in other states. California undertook a considerable effort to market insurance to potential enrollees, but not all states made similar efforts. Other market characteristics and policies that are somewhat unique to California could have also influenced these results. California had a sizeable pre-ACA individual insurance market relative to other states. These previously insured individuals might have been relatively healthy compared to the uninsured as there was favorable selection into the pre-ACA individual insurance market given market rules that allowed for medical underwriting and excluding individuals with pre-existing conditions.

California also was one of 11 states (plus the District of Columbia) that did not allow carriers to renew noncompliant pre-ACA plans in 2014 (Dash

et al. 2013; Gabel 2014; Lucia, Keith, and Corlette 2014). It appears that those with individual market insurance policies prior to the ACA were more likely to purchase policies through the post-ACA individual market. Their participation could have favorably impacted the risk pool (Centers for Medicare & Medicaid Services 2016). Most states, particularly those using the federally facilitated exchange, allowed for an extension of renewals of non-ACA compliant plans, and experiences in these states likely differed (Assistant Secretary for Planning and Evaluation 2017). The transitional policy that allowed states to temporarily allow renewals of non-ACA compliant plans was recently extended again for another year to allow for renewals through 2018 (Jost 2017).

Differences in state-level decisions about Medicaid expansion and redeterminations as well as coverage decisions by local employers also influenced the likelihood that individuals who had public or group insurance in 2013 entered the individual insurance market in 2014. All of these factors probably contributed to a broader risk pool of actual enrollees in California than in other states.

In subsequent years, substantial resources have been devoted for outreach, particularly to Latino communities and there appear to have been gains in Latino enrollment both in California and nationally (Carey 2015; Assistant Secretary for Planning and Evaluation 2016a; Covered California 2017). To the extent that ongoing outreach efforts are curtailed overall or for specific populations, there are likely to be declines in participation and changes in the risk pool. To the extent that higher-risk individuals preferentially increase participation, premiums will increase.

On- Versus Off-exchange Market Selection

Adverse selection within markets could also affect sustainability. We found that differences in the distribution of household income for on- versus off-exchange enrollees are consistent with the provision of low-income subsidies, which are only available if enrollees purchase on-exchange plans. In addition, off-exchange enrollees were significantly more likely to have previously had insurance coverage in 2013 compared with on-exchange enrollees. Higher income and previous insurance could be correlated with better health risks (given the prior exclusion of individuals with pre-existing conditions) and lower predicted spending. We found about 9 percent higher spending, on average, among on- versus off-exchange enrollees.

The ACA uses a single risk pool for risk adjustment that includes on- and off-exchange enrollees. Thus, if the risk-adjustment payments are accurate, differences in the medical spending of on- versus off-exchange enrollees should balance out. However, if the risk scores do not adequately account for the spending of high-risk enrollees, this could contribute to recent decisions by some large insurance carriers to cease offering plans on the ACA exchanges (Hsu et al. 2009).

Insurer participation in Covered California has been more stable compared with many states, with 10 of the 11 insurance carriers who sold plans on-exchange in 2014 continuing to do so in 2017. This could suggest that adverse selection into on-exchange plans in California could be less severe than in other states. In California, rates for unsubsidized beneficiaries rose by an average of 13.2 percent in 2017 versus 4 percent in 2016 and 4.2 percent in 2015 for unsubsidized enrollees (Petersen and Levey 2016). These increases are smaller compared with an average rate increase of 23 percent across HealthCare.gov states in 2017 (and 8 percent in 2016 and 4 percent in 2015) (Petersen and Levey 2016; Assistant Secretary for Planning and Evaluation 2017). This likely reflects greater adverse selection into the market in states with fewer protections; however, there is limited information on the risk characteristics of enrollees in other states compared with the potential pool of enrollees.

These increases have been attributed to some ongoing challenges, including higher spending among those who enroll during special enrollment periods as well as the expiration of the transitional reinsurance program (Lee 2016). Contributing to the relatively larger rate increases in 2017, reinsurance, the main market protection for insurers who disproportionately enroll high-cost enrollees, expired in 2016. Nationally, this reinsurance plan provided an implicit subsidy for the individual insurance market, which was largely passed onto consumers in premiums, as it was funded by a per enrollee contribution by individual market insurers, as well as small and large group insurers. Reinsurance payments totaled \$7.9 billion nationally in 2014 (Department of Health & Human Services 2015). A number of carriers have filed larger premium increases for 2017 than in prior years, partly in anticipation of the loss of reinsurance payments. Although reinsurance could be worked into the risk-adjustment scheme, if it came with no additional dollars, it would not affect the average loss across carriers but would redistribute those losses. Several states and some federal proposals are considering the introduction of a reinsurance program for 2019 and future years.

Risk corridors were also a transitional component of the premium stabilization program to offset large insurer losses, although the risk corridor payments have only been partially paid (Centers for Medicare & Medicaid Services 2016). In addition, the administration announced in October 2017 that they would stop funding payments to insurers for the cost-sharing reductions that insurers are required to offer to low-income consumers (below 250 percent FPL) who purchase on-exchange Silver plans. States are currently handling the loss of cost-sharing reduction payments differently, such as having insurers load rate increases across all plans and metal tiers, loading on Silver-tier plans only, or loading on Silver on-exchange plans only (Kamal et al. 2017; Rustagi, Cohen, and Al Bingham 2017). To the extent that these policy changes increase premiums rates relative to penalties associated with the individual mandate, and are more spread across plans offered in the individual market, adverse selection will likely increase.

Limitations

There are limitations to this study. First, we use data from a single state, which is not nationally representative. California had a relatively successful, well-developed plan for ACA implementation and participation was higher than other states, particularly those states using the federally facilitated exchange (Assistant Secretary for Planning and Evaluation 2014; Freaan, Gruber, and Sommers 2016). Our data on individual market enrollment come from the major carriers in the California market. Although these insurers represented over 90 percent of enrollees in California's individual market in 2014, it is possible that our findings do not generalize to the few enrollees in plans offered by small insurance carriers or to future years. For example, most of the enrollment among nonstudy carriers was concentrated in counties with larger proportions of enrollees of non-White race and Hispanic ethnicity, and thus it is possible that these groups are underrepresented in our study (Covered California 2017).

In addition, our measures of a number of individual traits, including income and health status, are self-reported and thus subject to reporting error. Our survey of individual market enrollees, however, used methods comparable to the CHIS and MEPS, and any potential error is therefore unlikely to bias between-sample comparisons or spending estimates. Other studies have also found that self-reported health status is a strong predictor of future spending and is comparable to approaches for capturing spending risk using claims data, which have their own limitations. Indeed, claims data cannot be used to

estimate risk among uninsured persons as they do not file claims (Blavin et al. 2014; Assistant Secretary for Planning and Evaluation 2016b; Hsu 2016). Nevertheless, our method to predict differences in spending cannot account for selection into the insurance pool on variables we did not observe; it thus may understate any selection against the insurance pool. In addition, the MEPS sample could underestimate spending for the upper tail of the spending distribution, which could affect our spending estimates particularly for those with higher spending (Zuvekas and Olin 2009).

The response rate in our survey was 39 percent, although it is considerably higher than that of other surveys of similar populations (Blavin, Karpman, and Zuckerman 2016). It also compares favorably with the CHIS surveys, which have response rates of 12.9 percent and 16.0 percent for the landline and cell phone modalities, respectively. This difference raises concerns that nonresponse bias could be confounded with true differences. We define the pool of potential participants based on the 2014 CHIS. When interpreting comparisons between the CHIS sample of potential participants and the RISC sample of actual participants, it is important to understand that the population of actual participants (from which the RISC sample was drawn) comprises a subset of the population of potential participants (from which the CHIS sample was drawn). Insurance status in the CHIS was based on self-report, which could be subject to error if respondents were unaware of or confused about their current insurance status. In addition, the CHIS does not include information to differentiate those in ACA compliant versus noncompliant plans among those reporting private, nongroup insurance. In sensitivity analyses, we examined differences between actual participants and those uninsured in 2014 (i.e., participants vs. nonparticipants) by restricting the CHIS sample to those who reported being currently uninsured, and inferences were similar (Supporting information), as well as using data only from the CHIS sample (i.e., insured vs. potential participants as reported in the CHIS, Supporting information).

CONCLUSIONS

Our findings suggest a mixed story in that we found underrepresentation of some vulnerable subgroups in the first year of the major ACA individual market reforms in California. However, we did not find evidence that substantially costlier individuals enrolled in the individual market as a whole compared to the potential market, assuming full participation. There was, however,

evidence of favorable selection into off-exchange plans. Experiences in other states with less intensive outreach or less well-developed marketplaces may well have differed. These findings highlight the importance of state policies and outreach efforts to encourage broad participation in the market and provide a guide for future policy makers interested in stabilizing the individual health insurance markets.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the supporting information tab for this article:

Appendix SA1: Author Matrix.

Figure S1: Sociodemographic and Health-Related Characteristics of Actual Participants in California's Individual Insurance Market (RISC) versus Currently Uninsured in 2014 (CHIS).

Figure S2: Characteristics of Potential versus Actual Participants Using 2014 CHIS Data.

Table S1: Predicted Spending Model Using the Medical Expenditure Panel Survey.

Table S2: Predicted Annual Medical Spending of Actual Versus Potential Participants in California's Individual Insurance Market.