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The Affordable Care Act and Health Insurance Markets

Simulating the Effects of Regulation

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Preface

The Affordable Care Act changes the rating regulations governing the nongroup and small group markets while simultaneously encouraging enrollment through a combination of subsidies, tax credits, and tax penalties. Policymakers and other stakeholders are interested in understanding how these changes might affect health insurance enrollment, premiums, and other outcomes to inform exchange implementation and planning. In this report, we estimate the effects of the Affordable Care Act on health insurance enrollment and premiums for ten states (Florida, Kansas, Louisiana, Minnesota, New Mexico, North Dakota, Ohio, Pennsylvania, South Carolina, and Texas) and for the nation overall, with a focus on outcomes in the nongroup and small group markets. This analysis was sponsored by the Center for Consumer Information and Insurance Oversight (CCIIO, a division of the Centers for Medicare & Medicaid Services [CMS]) through an interagency agreement with the U.S. Department of Health and Human Services (HHS), Assistant Secretary for Planning and Evaluation (ASPE). However, the views, opinions, and findings presented here are those of the authors and should not be construed as official government positions unless so designated by other documents.

The research was conducted by RAND Health, a division of the RAND Corporation. Questions may be addressed to Christine Eibner (eibner@rand.org; (703) 413-1100, ext. 5913). A profile of RAND Health, abstracts of its publications, and ordering information can be found at <http://www.rand.org/health>.

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Summary

The Patient Protection and Affordable Care Act as modified by the Health Care and Education Reconciliation Act of 2010, collectively known as the Affordable Care Act, makes sweeping changes to the regulation of health insurance markets in the United States.

Specifically, the Affordable Care Act requires insurers in the nongroup and small group markets, including those offering coverage in the new state-level health insurance exchanges, to issue and renew policies to everyone who seeks coverage, regardless of health status. In addition, the Affordable Care Act limits insurers' ability to charge different prices based on individual characteristics. Insurers can vary prices based only on a few factors:

- (1) age
- (2) tobacco use
- (3) geographic location
- (4) family size
- (5) the actuarial value of the plan.

For these factors, only a certain amount of variation is allowed:

- The oldest adult in the risk pool cannot be charged more than three times as much as the youngest adult. This requirement is known as 3-to-1 rate-banding.
- In addition, smokers can be charged no more than 1.5 times more than nonsmokers (1.5-to-1 rate-banding).

These changes raise concerns that the Affordable Care Act could lead to substantial increases in premiums, especially in the nongroup market. For example, commentary in the *Wall Street Journal* published earlier this year suggested that premiums in some markets could double (Matthews and Litow, 2013). Large increases in premiums might occur because of requirements that health insurance be made available to all comers, regardless of health status, and that insurers cannot charge higher premiums based on such characteristics as health status or previous claims experience. Without other changes, these provisions could lead to adverse selection, in which only people with high expected expenditures enroll.

To address these concerns, the Affordable Care Act contains several provisions intended to increase the chances that younger, healthier individuals will get coverage. First, the act requires that all adults obtain a specified minimum level of coverage or pay a tax penalty. Second, the act offers tax credits that individuals with incomes between 100 and 400 percent of the federal poverty level (FPL) can use to buy coverage if they lack access through other sources, such as an employer or Medicaid. Other provisions, such as reinsurance and requirements that insurers limit the amount of premium revenue spent on non-claims costs, could also reduce premiums relative to what would be expected without the law, potentially making insurance more attractive for younger, healthier enrollees.

The changes, coupled with other policies introduced by the Affordable Care Act, are likely to affect enrollment, premiums, and the composition of the population enrolled in nongroup and small group plans. It is important for federal and state policymakers to understand the potential effects of these changes as they make decisions about setting up the health insurance exchanges.

In this report, we use RAND's Comprehensive Assessment of Reform Efforts (COMPARE) microsimulation model to examine these effects. Specifically, our analysis examines the likely effects of the Affordable Care Act on

- the number of uninsured individuals
- the number of enrollees in the nongroup and small group markets
- the cost of premiums
- the characteristics of enrollees.

We also consider the implications of two decisions confronting states: whether to expand their Medicaid programs to cover all adults with incomes below 138 percent of the FPL and whether to merge or combine their small group and nongroup risk pools. If risk pools are merged, enrollees in the small group and nongroup markets would face the same premiums for comparable coverage. If risk pools are split, premiums in the two markets could diverge. For ten representative states (Florida, Kansas, Louisiana, Minnesota, New Mexico, North Dakota, Ohio, Pennsylvania, South Carolina, and Texas), we estimate enrollment and premiums both with and without the Affordable Care Act. Then, for a subset of states, we conduct sensitivity analyses related to these critical state decisions.

The analysis is based on a microsimulation model, which—like all microsimulation approaches—has limitations. Current data on nongroup premiums are limited, and there are many uncertainties about how individuals and insurers will respond to the complex policy changes introduced by the Affordable Care Act. Nevertheless, state and federal policymakers must continue to implement the law, develop policy guidance and regulations, and make decisions about exchange operations, with little historical data available to gauge the potential effects of these decisions. Recognizing that all models have limitations, our analysis aims to provide decisionmakers with insight into the types of changes in enrollment and premiums that may occur as the Affordable Care Act is implemented.

Results: Number of Uninsured Individuals

Our analysis finds that **for all ten states and the United States overall, the Affordable Care Act could lead to a substantial decline in the number of uninsured nonelderly people.** We estimate that the 2016 uninsurance rate in the United States would be 19.6 percent without the Affordable Care Act, compared to 8.2 percent with the law, assuming that all states expand Medicaid. Across states, there is considerable variation in uninsurance levels in our 2016 estimates, ranging from a low of 5 percent in Minnesota to a high of 12 percent in Texas. States with larger immigrant populations, such as Texas and Florida, tend to have the highest uninsurance rates after Affordable Care Act implementation.

For three states—Texas, Louisiana, and Florida—we considered the potential consequences for health insurance enrollment in scenarios in which Medicaid was not expanded. Across the three states, we estimate that an additional 2.3 million individuals would be uninsured without Medicaid expansion and state uninsurance rates would increase by 5 to 6 percentage points, compared to scenarios that include Medicaid expansion.

Results: Nongroup Market Enrollment

We estimate that enrollment in the nongroup market will increase substantially across all ten states as a result of the Affordable Care Act. Without the Affordable Care Act, we estimate that fewer than 5 percent of the nonelderly population would be enrolled in nongroup coverage in 2016. With the Affordable Care Act, nongroup enrollment more than doubles, rising from 4.3 percent of the nonelderly population for the United States overall to 9.5 percent of the nonelderly population. The finding that nongroup enrollment could increase, despite the Affordable Care Act’s rating regulations, suggests that adverse selection (the tendency for a disproportionately large number of sicker individuals to opt into the market for health coverage) caused by these new regulations is mitigated by other provisions. For example, the individual mandate and federal tax credits for exchange enrollees with incomes between 100 and 400 percent of the FPL could keep younger and healthier people enrolled.

Results: Nongroup Premiums

The results for premium prices in the nongroup market are complicated and must be interpreted carefully because the law introduces complex changes and because of limitations of existing data and uncertainties about insurer behavior. The law’s requirement that individuals obtain plans with a minimum actuarial value will cause some enrollees to shift from less-generous into more-generous plans, which could result in higher premiums but also more-comprehensive coverage. In addition, some individuals could experience declines in out-of-pocket premiums even if their total premiums increase, due to eligibility for federal premium tax credits. Because the Affordable Care Act allows insurers to charge higher premiums to older individuals (within a 3-to-1 rate band) and tobacco users (within a 1.5-to-1 rate band), the change in average premiums could be different from the change in premium for an individual with a fixed age and tobacco use status. Finally, data currently available on nongroup premiums and enrollment are limited and vary substantially across sources, which affects the reliability of all predictions, including estimates presented in this report.

In analyses that held age, actuarial value, and tobacco use constant, we estimated that, for five of the ten states we examined (Florida, Kansas, Pennsylvania, South Carolina, and Texas), and for the United States overall, the law causes no change in premiums.¹ In three of the remaining states (Minnesota, North Dakota, and Ohio), we estimated that there could be premium increases of up to 43 percent, although these changes do not account for federal exchange tax credits. For two states (Louisiana and New Mexico), we estimated that premiums standardized for age, actuarial value, and tobacco use could

¹ While premium estimates differed with and without the law, we could not reject the possibility that these differences were due to chance alone.

decline as a result of the Affordable Care Act. Declines in premiums are possible in part because premium tax credits bring some people who are relatively less expensive into the market, reinsurance reduces nongroup premiums in the first few years of implementation, and the Affordable Care Act limits the amount of premium revenue that can be spent on non-claims costs. Even among states estimated to have an increase in total premiums standardized for age, actuarial value, and tobacco use, many enrollees will experience a decline in their out-of-pocket premium expenditures because part of the premium is subsidized via federal tax credits.

For three states (Texas, Louisiana, and Florida), we considered the effect of Medicaid expansion on nongroup premiums. If states fail to expand Medicaid, individuals with incomes in the range of 100 to 138 percent of the FPL will become newly eligible for exchange tax credits. We find that, for these three states, these newly eligible individuals could cause premiums standardized for age, actuarial value, and tobacco use on the nongroup market to rise by 8 to 10 percent, relative to scenarios that include Medicaid expansion. The increase in premiums reflects an influx of slightly lower-income and less-healthy enrollees onto the exchanges.

Results: Small Group Market Enrollment

For the United States overall, and for seven of ten states (Florida, Louisiana, Minnesota, New Mexico, Ohio, South Carolina, and Texas), we estimate that small group enrollment will be larger in scenarios that include the Affordable Care Act, with increases ranging from less than 1 to approximately 5 percentage points. Three states—Kansas, North Dakota, and Pennsylvania—are estimated to experience modest declines in small group coverage, ranging from 1.4 to 2.2 percentage points.

The finding that states could experience an increase in small group enrollment reflects the fact that workers will have increased demand for health insurance as a result of the act, due to penalties associated with not having insurance. In addition, although many lower-income workers will be eligible for exchange tax credits or Medicaid, higher-income workers benefit from the tax advantage associated with employer-sponsored coverage. Firms must make a single health insurance offering decision for all workers, and—for many businesses—the tax benefits to higher-income workers could dominate decisionmaking.

However, a limitation in our analytic framework is that it does not allow us to consider whether firms reduce workers' hours, change premium contribution rates, or alter their sizes in response to the law. This type of strategic response could lead small group enrollment under the Affordable Care Act to be lower than estimated if, for example, firms convert some workers to part-time status to avoid offering coverage.

Results: Small Group Premiums

We find minimal difference in small group premiums in scenarios with and without the Affordable Care Act. For the United States overall, and for nine of ten states (Florida, Kansas, Louisiana, Minnesota, North Dakota, Ohio, Pennsylvania, South Carolina, and Texas), we estimate that small group premiums

standardized for age, actuarial value, and tobacco use will be unchanged by the law.² These scenarios assume that the nongroup and small group risk pools are separated.

For one state that was not included in our group of ten (New York), we analyzed the potential effects of merging the small group and individual market risk pools. In this case, we found that small group premiums standardized for age, actuarial value, and tobacco use could be as much as 16 percent higher if the small group and nongroup markets are merged, relative to the case in which the markets are separated. Both the separated and combined risk pools scenarios assume that the Affordable Care Act is fully in effect. New York may be an unusual case because it has unusually strong regulations in both its nongroup and its small group markets.³ However, we estimate that—for all states considered in our analysis—nongroup enrollees in scenarios with the Affordable Care Act will be slightly older and less healthy than small group enrollees. These estimates imply that, for many states, small group premiums could increase if the nongroup and small group risk pools are combined.

Conclusions

We conclude that the Affordable Care Act will lead to an increase in insurance coverage and higher enrollment in the nongroup market. However, data limitations and uncertainties about insurer behavior make estimates uncertain, particularly when considering outcomes for the nongroup market. We find that the law has little effect on small group premiums, and we find large variation in the effects for nongroup premiums across states.

Our analysis suggests that comparisons of average premiums with and without the Affordable Care Act may overstate the potential for premium increases. Sweeping statements about the effects of the Affordable Care Act on premiums should be interpreted very carefully because the law has complex effects that will differ depending on individuals' age and smoking status, the actuarial value of the plan chosen, individuals' eligibility for federal tax credits, and state implementation decisions. Once we adjust for age, actuarial value, and tobacco use, nongroup premiums are estimated to remain unchanged at the national level and in many states. Further, after accounting for tax credits, average out-of-pocket premium spending in the nongroup market is estimated to decline or remain unchanged in all states considered and in the nation overall.

² That is, statistically, we cannot reject the hypothesis that premiums are equivalent in scenarios with and without the law.

³ New York has full community rating in both its small group and nongroup markets, meaning that all enrollees must be charged the same premium, regardless of age, gender, health status, or other demographic factors.

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I. Introduction

The Patient Protection and Affordable Care Act as modified by the Health Care and Education Reconciliation Act of 2010, collectively known as the Affordable Care Act, was signed into law on March 23, 2010, and represents the biggest change to the U.S. health care system since Medicare was enacted in 1965. The act expands the Medicaid program, requires most individuals to obtain insurance or pay a penalty, provides subsidies to individuals who have low to moderate incomes and no affordable source of coverage, and imposes fines on business with more than 50 employees that do not offer adequate coverage to their workers if those workers seek federally subsidized coverage as an alternative. To ensure that all individuals and small businesses are able to obtain health insurance policies, the Affordable Care Act also introduces new federal regulations in the nongroup (privately purchased) and small group (small employer) health insurance markets that limit insurers' ability to deny coverage or to charge differential prices based on certain enrollee characteristics. Although there are some exceptions for plans that existed prior to the Affordable Care Act's enactment and have not made substantial changes to cost-sharing or other requirements over time, most small group and nongroup plans will be required to adhere to the new regulations.

Separately, to facilitate competitive shopping for qualified insurance plans, the law encourages states to set up and run health insurance exchanges for the small group and nongroup insurance markets. These exchanges—designated the Health Insurance Marketplaces (HIMs)⁴ for individuals and the Small Group Health Insurance Options Program (SHOP) Exchanges for firms—will include online portals to help individuals and small employers shop for, select, and enroll in health insurance plans and will offer subsidies and tax credits to qualified individuals and firms. While states are encouraged to implement health insurance exchanges on their own, they may allow this administrative role to fall to the federal government if they decline to establish a Marketplace, and some states are setting up state and federal partnership exchanges. Whether the exchanges are state-run or federally run, those tasked with setting up exchanges must make many regulatory and implementation decisions. Two significant decisions that states are currently grappling with include whether to combine the small group and nongroup markets for the purposes of risk pooling and whether to expand their Medicaid programs to cover all adults with incomes below 138 percent of the federal poverty level (FPL).

While the Affordable Care Act initially required states to expand Medicaid to all individuals with incomes below 138 percent of the FPL, the Supreme Court ruled in June 2012 that a requirement to expand was unduly coercive, and states may therefore opt out of the expansion of Medicaid if they prefer. The decision to opt out of the Medicaid expansion will have implications for exchange enrollment, since individuals with incomes between 100 and 138 percent of the FPL will become eligible for federal exchange subsidies—formally known as advance premium tax credits (APTCs)—if states opt out of the Medicaid expansion. APTCs are not generally available for individuals with incomes below 100 percent

⁴ Previously, these marketplaces were referred to as the Affordable Insurance Exchanges (AIEs).

of the FPL, although there are exceptions for recent immigrants who would not qualify for Medicaid even if the state expanded.

Because the federal government must establish regulations and provide guidance to states that choose to operate their own exchanges, and because some states may opt to default to the federally facilitated exchanges, policymakers at both the state and federal levels may need estimates of potential exchange-related outcomes to facilitate planning. Key outcomes of interest include the number of people projected to participate in exchanges, the number of enrollees who are subsidy-eligible, exchange premium prices, and aggregate federal spending amounts. In this report, we use RAND's Comprehensive Assessment of Reform Efforts (COMPARE) microsimulation model to analyze these outcomes, focusing on ten representative states—Florida, Kansas, Louisiana, Minnesota, New Mexico, North Dakota, Ohio, Pennsylvania, South Carolina, and Texas. These states were selected by our client, the Centers for Medicare & Medicaid Services' (CMS's) Center for Consumer Information and Insurance Oversight (CCIIO). For sensitivity analyses, we added an eleventh state: New York.

Core questions addressed in this report include the following:

- How many individuals and employees of small businesses are likely to obtain coverage on the newly regulated small group and nongroup markets? Of those participating, how many are eligible for exchange-based subsidies or tax credits?
- What are the risk profiles, income levels, and prior coverage patterns of potential exchange enrollees?
- What are the projected premiums for exchange plans, including both the HIMs and the SHOP exchanges?

We also conduct sensitivity analysis to explore the potential consequences of states opting out of the Medicaid expansion for exchange enrollment and premiums and to address the implications of decisions regarding risk-pool composition on nongroup and SHOP premium prices.

II. The Affordable Care Act and the Nongroup and Small Group Markets

The Affordable Care Act changed the laws governing how health insurers set premiums in the nongroup and small group markets. The basic function of insurance is to pool risk across a group of individuals: Each enrollee contributes money to the pool in the form of a premium, and this money is then redistributed to pay for enrollees' medical care. If the chance of having a high expenditure were unpredictable and did not vary systematically with such characteristics as age and health status, then everyone would be charged the same premium. However, because health spending is somewhat predictable, insurers have an incentive to charge higher premiums (or deny coverage entirely) to individuals who are older, sicker, or otherwise expected to be high spenders. A typical argument in favor of this type of differential pricing is that younger and healthier people will not agree to pay the premiums required to subsidize spending on older and sicker individuals. As a result, if premiums are not differentiated based on age and health status, only people with high anticipated spending will remain in the pool, an outcome known as "adverse selection."

Large variation in premiums can be problematic from a policy perspective if the goal is to ensure that all individuals have access to affordable coverage. As a result, regulatory interventions have sometimes been used to limit insurers' ability to deny coverage or to charge substantially higher premiums to older and sicker individuals. Prior to the Affordable Care Act, the Health Insurance Portability and Accountability Act (HIPAA) prohibited insurers from denying coverage to enrollees in small group plans (for employers with 50 or fewer workers), but such regulations often did not exist in the nongroup market, which was governed primarily by state law. Most states also allowed insurers to charge nongroup enrollees different premiums depending on age, health status, and gender. The handful of states that restricted insurers' ability to charge differential prices in the nongroup market, including New York and New Jersey, tended to experience a reduction in coverage among younger or healthier enrollees, a hallmark of adverse selection (Pauly and Herring, 2007; Lo Sasso and Lurie, 2009).

The Affordable Care Act introduced new federal requirements in both the small group and the nongroup markets that require insurers to issue and renew policies to all comers regardless of health status. In addition, the act imposed strict limitations on insurers' ability to price-discriminate. Specifically, the Affordable Care Act allows issuers to charge different prices based only on a small subset of factors: age, tobacco use, geographic location, family size, and plan actuarial value. Within these factors, there are limits on the amount of price variation that is permissible. Although insurance companies can rate on age (that is, they can vary premiums based on enrollee age), the oldest adult in the risk pool cannot be charged more than three times as much as the youngest adult, a policy known as 3-to-1 rate-banding. Similarly, smokers can be charged no more than 1.5 times as much as nonsmokers (1.5-to-1 rate-banding).

Rating regulations, such as those required under the Affordable Care Act tend to increase premiums for younger and healthier enrollees while lowering premiums for older and sicker enrollees. As a result, the regulations raise the concern that only the sickest individuals will opt to purchase health insurance. However, the Affordable Care Act contains several provisions that are likely to increase the chances that young and healthy people enroll and remain enrolled:

1. The law mandates that all individuals obtain insurance and imposes tax penalties on most individuals who do not have qualifying coverage.
2. The Affordable Care Act offers tax credits to individuals who have incomes between 100 and 400 percent of the FPL and who do not have access to affordable coverage through other sources.
3. The Affordable Care Act sets limits on the medical loss ratio (MLR), limiting the share of premium payments that health insurers can use to finance non-claims-related administrative costs and certain other specified activities, such as quality improvement and effort to detect fraud and abuse. To the extent that the MLR restrictions reduce wasteful administrative spending, they may make premiums less expensive for all enrollees.

Tax credits for individuals are available only if they enroll in coverage through the newly created nongroup health insurance exchanges. The exchanges are new marketplaces for buying and selling insurance in the nongroup and small group markets. In addition to the individual tax credits, the act establishes temporary tax credits for businesses with 25 or fewer workers who have average wages below \$50,000 per year; these tax credits can only be applied to exchange-based coverage. The Affordable Care Act envisioned that the exchanges would be set up and run by states but also allowed for federally facilitated or state and federal partnership exchange options. Although pricing regulations are the same both within and outside of the exchanges, exchange plans will be subject to at least ten additional provisions (Jost, 2010), including requirements that plans include providers that serve low-income, medically needy populations; that plans be accredited on the basis of the Healthcare Effectiveness Data and Information Set (HEDIS) and the Consumer Assessment of Healthcare Providers and Systems (CAHPS); and that plans use a uniform enrollment form.

The Affordable Care Act also contains several provisions that are designed to limit adverse selection across plans—a process in which insurers would steer high-cost enrollees into particular plans to effectively segment the market based on health status. First, the entire small group market—regardless of plan—must be considered a single risk pool by a health insurance issuer in a given state. Similarly, the entire nongroup market must be considered a single risk pool. Second, risk adjustment is required to transfer funds from plans with “higher than average” actuarial risk to those with “lower than average” risk. Together, these provisions are intended to help stabilize premiums and keep more-generous plans affordable, despite the fact that more-expensive individuals may gravitate toward these plans.

The law also includes temporary provisions that are intended to stabilize the nongroup market in the early years of the Affordable Care Act (2014 through 2016). All insurers will be required to make payments to a reinsurance fund, which will then be used to compensate plans in the nongroup market for the costs of enrollees with high realized expenditures. This provision helps to reduce premiums in the nongroup market. The law also establishes risk corridors for small and nongroup plans in the initial

years that limit profits and losses. The risk corridors protect insurers against the possibility that they are off target in setting premiums—an outcome that could be likely, given a lack of historical experience with the newly insured population.⁵ With the exception of reinsurance payments, most of the provisions described above apply to all nongrandfathered small group and nongroup plans.

⁵ A similar approach was used when Medicare Part D was instituted. See, for example, O’Sullivan (2008).

III. COMPARE Background

COMPARE is a microsimulation model that estimates the effects of health policy changes at the national and state levels on health insurance enrollment decisions and premiums. The model uses a synthetic dataset with information on a nationally representative sample of individuals and their employers and estimates how they will react under different policy scenarios. In COMPARE, we used data from the Survey of Income and Program Participation (SIPP), the Medical Expenditure Panel Survey (MEPS), and the Kaiser Family Foundation/Health Research and Educational Trust (Kaiser/HRET) Survey of Employer Benefits to create a synthetic population of individuals, families, and firms that represents the overall U.S. population. These individuals, families, and firms then make simulated health insurance choices by weighing the costs and benefits of available options. We calibrate the model so that it accurately reproduces health insurance enrollment decisions under pre-Affordable Care Act policy. We then introduce the policy changes enacted under the Affordable Care Act. The major policy changes simulated in our model include

- the expansion of Medicaid to all individuals with incomes below 138 percent of the FPL (allowing for states to opt out of the expansion in sensitivity testing)
- the creation of health insurance exchanges in the individual and small group markets
- federal APTCs for individuals with incomes between 100 and 400 percent of the FPL who do not have affordable coverage from another source, such as Medicaid or employer coverage
- cost-sharing subsidies for people with incomes between 100 and 250 percent of the FPL who do not have affordable coverage from another source
- new rating regulations in the small and nongroup insurance markets
- penalties for employers and individuals who do not offer or enroll in coverage.

As described below, we also model many of the laws' more-detailed provisions, such as reinsurance for nongroup plans, and new federal requirements regarding medical loss ratios.

Individual Choices

COMPARE uses a utility-maximization approach to simulate the decisionmaking of individuals and families—or, more specifically, the health insurance eligibility units (HIEUs)—with respect to purchasing health insurance. On the assumption that individuals will change their insurance status based on deductive rational thinking, an HIEU selects the set of insurance policies that maximize the utility of each member. We assume that the utility function is quasilinear and separable in health and other consumption. The health-related component of the utility function is defined as

$$U_{ij} = u(H_{ij}) - E[OOP_{ij}] - p_{ij}^{(H)} - \frac{1}{2}r\text{VAR}[OOP_{ij}]$$

where $u(H_{ij})$ is the utility associated with consuming health care services for individual i under insurance option j ,⁶ OOP_{ij} is the out-of-pocket spending expected, $p^{(H)}$ is the premium, and r is the coefficient of risk aversion. The insurance status j will depend on the options available to each individual but includes employer-sponsored coverage (for those with an employer offer), nongroup coverage, Medicaid (for those meeting eligibility criteria), or uninsurance. In the post–Affordable Care Act environment, insurance options can also include bronze, silver, gold, or platinum plans offered on the exchanges. HIEUs weigh the benefits of an option (e.g., reduced out-of-pocket expenditure, lower risk) against the costs (e.g., higher premiums).

To estimate out-of-pocket spending, we first design synthetic plans, defined by a deductible, coinsurance, and maximum out-of-pocket spending, for each plan type. In the status quo, we have plans for the uninsured, Medicaid, employer-sponsored insurance, and the nongroup market. The uninsured “plan” has no premium but accounts for the out-of-pocket spending that individuals would be likely to face if not insured. Under the Affordable Care Act, we have plans for the uninsured, Medicaid, large group employer-sponsored insurance, each metal tier in the regulated small group and nongroup markets (bronze, silver, gold, and platinum plans), and each level of affordable cost-sharing subsidies available on the nongroup market. We designed synthetic plans for each insurance type to achieve the specified actuarial value of each plan. Status quo plans were additionally chosen to reflect out-of-pocket and total health care spending reported in the MEPS. We then used these synthetic plans to estimate each individual's out-of-pocket spending from estimated total health care spending.

In making health insurance decisions, we assume that individuals and families will choose the option that maximizes their health-related utility. HIEUs consider an array of factors, including eligibility for Medicaid, eligibility for subsidies on the health insurance exchange, the generosity of the plan they are considering, health insurance premiums, tax penalties for not obtaining coverage, and expected health expenditures. Subject to a few constraints (e.g., a child cannot be enrolled in employer-sponsored insurance if a parent is not also enrolled), the HIEU can select different options for each member. We do not account for the possibility that there could be coordination costs associated with having family members enrolled in different plans—for example, costs caused by added paperwork requirements. When the Affordable Care Act takes effect, penalties associated with not having health insurance coverage enter into the utility function. Specifically, these penalties are subtracted from the utility associated with the option of being uninsured.

Firm Choices

Firms in COMPARE maximize the aggregate utility of their workers, enabling them to make the health insurance decision that provides the best value to the most workers. In some cases, the optimal decision could be to not offer insurance or to drop health insurance coverage. Following standard economic

⁶ We assume that the individual experiences an increase in utility from consuming additional health care services, potentially because additional health care consumption improves health. However, the specification is agnostic as to why individuals prefer higher health care consumption and would still be accurate if individuals get utility from consuming health care services that do not improve their ultimate health outcomes.

theory (Baicker and Chandra, 2008), we assume that workers face a trade-off between health insurance and wages, so that wages fall as health insurance costs increase, and vice versa. The wage–health insurance trade-off assumption implies that, if the firm opts to stop offering health insurance, wages will have to increase. In a purely competitive market, wages would adjust one-for-one with changes in employer health insurance expenditure, and several empirical studies have found that workers bear the full incidence of higher benefits costs through reduced wages (Bhattacharya and Bundorf, 2009; Gruber, 1994). However, prior research has also suggested that nominal wages could be sticky in the short run (Sommers, 2005), causing wages to fall by less than the change in employer health expenditure. In the COMPARE model, we assume that for every dollar reduction in health care spending, the firm will pass 80 cents back to workers. However, in prior work, we have shown that the model results are insensitive to wage pass-back assumptions, particularly for wage pass-back rates of 70 percent or higher (Eibner et al., 2010).

In determining whether they would prefer an offer of health insurance to a change in wages, firms consider the value of alternative health insurance options available to their workers, which depends on whether they are eligible for Medicaid or exchange tax credits in the absence of a firm offer, the tax advantage associated with employer-sponsored coverage, the utility of health insurance described above, and the penalty that will be imposed if workers do not enroll in coverage.

In implementing the firm decisionmaking process, we make several simplifying assumptions:

1. We assume that firms offer, at most, one plan. According to the most recent data from Kaiser/HRET (2012), 82 percent of all offering firms offer only one plan, and small firms—the focus of this report—are more likely to offer a single plan than larger firms.
2. We estimate employee premium contribution rates using a regression, which is based on the Kaiser/HRET data.

We do not allow for the possibility that firms might reduce worker hours or change size in response to the Affordable Care Act. A more detailed description of the firm behavior algorithm can be found in two previous reports (Eibner et al., 2010; Eibner et al., 2011).

Premiums

Premiums in the COMPARE model are calculated based on the expenditure of enrollees in the pool, with adjustments for plan actuarial value and administrative costs. In scenarios without the Affordable Care Act we allow premiums to vary based on enrollee health status in both the small group and the nongroup markets, unless prohibited by state law. In the nongroup market, we also account for the possibility that some individuals will be denied coverage because of high expected expenditures. After 2014, we allow premiums in the nongroup and small group markets to vary only by age (with 3-to-1 rate-banding for adults), tobacco use status (with 1.5-to-1 rate-banding), family size, geography, and plan actuarial value. We also require guaranteed issue and guaranteed renewal of plans—that is, insurers may not deny coverage to potential enrollees.

The majority of work described in this report was completed prior to the release of proposed rules from the U.S. Department of Health and Human Services (HHS) on November 26, 2012 (U.S. Department of Health and Human Services, 2012). In the absence of these recommendations, we assumed that children ages 0–17 form a separate risk pool; we assumed a premium age curve for adults ages 18–64 based on average premium schedules in the pre–Affordable Care Act nongroup market, compressed to reflect the 3-to-1 rate-banding. This varies somewhat from the age curves that were ultimately proposed by HHS, which recommend 3-to-1 rate-banding for adults ages 21–64 and that premiums for children and young adults ages 18 to 20 be 63.5 percent the premium for adults age 21. However, based on previous sensitivity analysis we have conducted on changing rating curves, we expect that changing the rating curves to reflect the new recommendations would have a minor impact on results, if any.

In scenarios in which states expand their Medicaid programs, citizens and most legal permanent residents in our model are eligible for federal APTCs if they have incomes between 138 and 400 percent of the FPL and do not have an affordable offer of coverage from an employer.⁷ Exchange enrollees who are eligible for tax credits must contribute a percentage of income toward health insurance coverage, ranging from 2 percent for enrollees with incomes at 138 percent of the FPL to 9.5 percent for enrollees with incomes between 300 and 400 percent of the FPL. Health insurance costs above this amount are subsidized by the federal government, up to the cost of a benchmark silver exchange plan for non–tobacco users. Based on the statute and a subsequent final rule (U.S. Department of the Treasury, 2012), we assume that tobacco users and individuals who opt to choose more-expensive plans must pay for premium costs in excess of the benchmark silver plan price. Tax credit–eligible exchange enrollees with incomes under 250 percent of the FPL are further eligible for cost-sharing subsidies if they enroll in a silver plan.

Although tobacco use is not assessed in the SIPP, we impute tobacco-use status based on data from the MEPS to model the 1.5-to-1 rating difference allowed for tobacco users. To calculate tobacco users' out-of-pocket premiums, we estimate the federal tax credit amounts based on the silver plan premium as if the individual were a non–tobacco user and then deduct this amount from the actual premium to determine the individuals' out-of-pocket premium spending. We further assume that the 1.5 rate band will be binding and that all smokers will be charged the maximum allowed amount.

To account for risk selection, we use an iterative process to set premiums. Individuals in the model make simulated plan choices, premiums are calculated based on enrollee expenditure, and individuals are then allowed to respond to realized premiums. Some individuals will then change their insurance decisions, depending on whether the realized premiums represent a good value, given each individual's utility function. The iterative process continues until the model converges to an equilibrium.

⁷ Plans are considered to be affordable if the employee premium contribution for single coverage is less than 9.5 percent of income. Legal permanent residents who do not meet residency tenure requirements for Medicaid are eligible for tax credits even if incomes are below 138 percent of the FPL. In scenarios that do not include Medicaid expansion, we extend tax credit eligibility to citizens and legal residents who meet Medicaid tenure requirements with incomes between 100 and 400 percent of the FPL. These assumptions are consistent with the Affordable Care Act and subsequent regulation.

Our approach to estimating premiums is designed to mimic a premium-setting process that insurers might use if they had health care claims history data on potential enrollees. However, in the early years of Affordable Care Act implementation, insurers will not have data on enrollees' claims expenditures. As a result, actual premiums may be heavily influenced by insurers' expectations about enrollee spending, which could differ from the model predictions. In addition, premiums offered in the initial years of Affordable Care Act implementation could reflect strategic behaviors on the part of insurers that are not included in the model. For example, insurers might offer low premiums in 2014 in order to capture market share and build brand loyalty. We present model results for 2016 in part because the model does not capture these early-implementation uncertainties, which we anticipate will have the largest effects in 2014 and 2015.

Medical Loss Ratio

The medical loss ratio (MLR) traditionally measures insurer spending on health care claims relative to total premiums collected, with lower MLRs indicating higher levels of spending on administration and profits. The Affordable Care Act requires that MLRs in the small group and nongroup markets be no lower than 0.80 and that MLRs in the fully insured large group market be no lower than 0.85. Table 3.1 shows the MLR assumptions used in the model, with and without the Affordable Care Act.

Table 3.1. Medical Loss Ratio Assumptions

	Without the Affordable Care Act	With the Affordable Care Act
Group market, by firm size		
<25 workers	0.80	0.88
26–100 workers	0.87	0.88
101+ workers	0.92	N/A
Nongroup market	0.70	0.80

NOTES: The table shows the MLR used for the nongroup and group (or employer-based) health insurance markets in scenarios with and without the Affordable Care Act. Assumptions used to model MLR were derived based on expert opinion and assumptions used by other modelers, including the Urban Institute (Blumberg et al., 2003) and the Lewin Group for the Commonwealth Fund (The Commonwealth Fund Commission on a High Performance Health System, 2009, Appendix A-1).

For the nongroup market, we assume that the Affordable Care Act minimum MLR limits (0.80) are binding. For the small group market, we assume that health insurers are able to increase MLR above the

minimum legal requirements (0.80 for firms with fewer than 100 workers and 0.85 for larger firms). We made these assumptions to account for the possibility that increased transparency on the exchanges would lead to improved competition among plans.

Although the Affordable Care Act sets a lower limit on the MLR, it also changes the way that MLR is defined to allow spending on certain activities intended to enhance the quality of care provided (e.g., wellness programs, disease management) to be included in both the numerator and the denominator of the ratio. While pre-Affordable Care Act insurer filings were not detailed enough to fully characterize the effect of this change, Abraham and Karaca-Mandic (2013) argue that refinements to the MLR definition could lead to an offset of approximately 5 percentage points. That is, MLRs measured using the pre-Affordable Care Act definition could be 5 percentage points higher if recalculated with the new definition, or—alternatively—MLRs measured with the Affordable Care Act-compliant definition might be approximately 5 percentage points lower if recalculated using the old definition. In sensitivity analyses reported in Appendix A, we consider the effects of this possible offset on our estimates.

One limitation of the MLR is that insurers could increase the ratio either by reducing expenditures on factors that are included only in the denominator (e.g., administrative costs) or by increasing spending on claims and other services counted in the numerator (Robinson, 1997). In our analysis, we assume that the MLR limits required by the Affordable Care Act will reduce spending on unnecessary components of the denominator, rather than increase spending on costs included in the numerator. This assumption can be justified based on the increased insurer competition expected due to the exchanges and the act's requirement that states institute premium rate review processes to guard against unreasonable premium increases from year to year.

Uncertainty in Premiums

A concern about estimating premiums using a microsimulation model, particularly one in which individual choices must be predicted and expenditures must be imputed, is that premium levels may be highly sensitive to modeling decisions. To address this uncertainty, we compute confidence intervals for our post-Affordable Care Act premium estimates using a Monte Carlo estimation process. Initially, premiums are calculated based on the expenditure of all individuals predicted to enroll in each risk pool (e.g., small group or nongroup). To calculate confidence intervals, we reestimate premiums by randomly drawing samples of 90 percent of the population originally predicted to enroll in each risk pool. We recalculate premiums 1,000 times, each time using a random 90-percent sample of original enrollees. The 90-percent samples are drawn with replacement, meaning that—after each draw—observations are returned to the pool and can theoretically be drawn again. Records are sampled in proportion to their weights, so that records with higher weights have a larger probability of being selected in every draw. Once premiums have been calculated 1,000 times, we estimate the 95 percent confidence intervals by arraying these premium estimates from smallest to largest and selecting the 2.5th and the 97.5th percentiles to represent the confidence limits.

Calibration

The individual and firm decisionmaking processes described above assume that people make choices based only on the economic costs and benefits, without accounting for misinformation, inertia, stigma, hassle, political ideology, and other behavioral factors. In reality, we know that many of these noneconomic factors influence health insurance enrollment. To account for these issues, we adjust the utility maximization procedure by adding calibration constants that ensure that we accurately replicate the status quo. These calibration factors, which vary by age, income, and insurance status, increase or decrease the utility of each health insurance option so that estimated enrollment under pre–Affordable Care Act policy matches actual enrollment. For example, negative adjustments to Medicaid utilities are required to account for the fact that many Medicaid-eligible individuals are not enrolled even though the program is free and has few cost-sharing requirements. These calibration factors are then applied to individuals’ utilities when we model post–Affordable Care Act policy. It is possible that the noneconomic factors represented in the calibration constants will, in fact, change after the Affordable Care Act is fully implemented; for example, the exchanges may lead to increased transparency, which could decrease misinformation and inertia as it becomes easier for individuals to compare different plans. However, no reliable method exists to empirically predict these effects, and we therefore assume that, to a first-order approximation, they remain unchanged after the reform.

State Reweighting

The data sources used to populate COMPARE, including the SIPP, the Kaiser/HRET employer survey, and the MEPS, are representative at the national but not the state level. In order to enable state-level estimation, we reweight the national COMPARE data set to represent state-specific targets that reflect the joint distribution of age, race/ethnicity, and gender; the joint distribution of poverty category and insurance status; firm size; and children’s health insurance enrollment by insurance type. Groupings used to define categories are as follows:

- Age: 0 to 1, 2 to 17, 18 to 34, 35 to 49, 50 to 64 and 65+
- Race: American Indian, Asian, non-Hispanic black, non-Hispanic white, and Hispanic
- Gender: female, male
- Insurance status: employer-sponsored insurance, Medicaid, nongroup, other, uninsured, Medicare
- Poverty category: below 138 percent of the FPL, 138 to 200 percent of the FPL, 200 to 300 percent of the FPL, 300 to 400 percent of the FPL, and above 400 percent of the FPL
- Firm size (based on number of employees): 1 to 4, 5 to 9, 10 to 19, 20 to 99, 100 to 499, and 500+.

To reweight the data, we use a procedure called iterative proportional fitting (Deming and Stephan, 1940; Ruschendorf, 1995). Data for setting the state-specific target variable distributions come from the 2008 Integrated Public Use Microdata Series (IPUMS) published by the U.S. Census Bureau, combined

files from the 2009 to 2011 Current Population Survey Annual Social and Economic Component, and the 2007 Statistics of U.S. Businesses.

In addition to reweighting the data to match specific states, we also adjust the model code to account for state-specific regulations in the nongroup market that may affect health insurance enrollment outcomes (e.g., community rating, restrictions on age rating, or other similar practices), for state Medicaid eligibility rules, and for state-specific programs targeted to low-income individuals who are not Medicaid-eligible. We did not make adjustments for state-specific regulations in the small group market, other than allowing for full community rating in New York (a state we analyze in sensitivity analyses).⁸

The analysis presented in this report includes both state and national results. However, we used slightly different procedures for estimating state and national outcomes. For the national-level results, we model a single, national risk pool for the small group market and then model it again separately for the nongroup market to leverage the full sample size in the SIPP. In contrast, we model two separate, state-specific risk pools for the individual and small group markets in each of the ten states described in this report. An alternative would be to add together estimates from each of the 50 states and the District of Columbia to produce the national-level estimates. However, that analysis is outside of the scope of the current project.

Nongroup Market Adjustments

A central focus of this report is the influence of the Affordable Care Act on outcomes in the nongroup health insurance market. Unfortunately, existing data sources vary widely in reporting the size and demographic composition of nongroup enrollees. For example, the 2010 wave of the SIPP reports 12.9 million nongroup enrollees, compared to 14.7 million reported in the combined 2010–2011 Current Population Survey and 18.9 million in the 2010 American Community Survey. Another challenge is that some individuals appear to report nongroup coverage when they are truly enrolled in another source of coverage, such as Medicaid (Cantor et al., 2007). Over 35 percent of records reporting nongroup enrollment in the SIPP have incomes below 138 percent of the FPL. Given that nongroup coverage is often expensive and costs are not shared with an employer, it seems possible that some SIPP respondents may be misreporting Medicaid coverage as nongroup coverage.

To address this issue, we reclassified 2.2 million individuals currently eligible for Medicaid who self-reported nongroup coverage as Medicaid-enrolled, making exceptions for individuals who were students age 19 and older or young adults between the ages of 19 and 29. We allowed exceptions for young adults and students because they are frequently eligible for low-cost nongroup coverage, and because—even if their own incomes are low—they may be supported to some degree by their parents. In addition, for the national-level model, we adjusted the weights of the nongroup population to reach a

⁸ Full community rating is a regulatory requirement that prevents insurers from varying health insurance premiums based on such demographic characteristics as age, health status, and gender. Only a handful of states, including New York, require full community rating in their nongroup and small group markets.

target of 11.4 million enrollees nationwide.⁹ This target was calculated by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) by summing all product-level enrollment data submitted by individual market health insurance issuers to healthcare.gov in October 2011. (We do not apply the healthcare.gov adjustment to state-specific results).

The adjustments to the size and composition of the nongroup market were determined in collaboration with representatives and senior leaders from the U.S. Department of Health and Human Services Office of the ASPE and the CMS Center for Consumer Information and Insurance Oversight (CCIIO) and were finalized after reviewing tables from the SIPP and consulting an actuarial expert. In addition to addressing the concern that people who self-report nongroup coverage are actually enrolled in Medicaid, these adjustments also help to account for differences between self-reported Medicaid enrollment data and state administrative data. Specifically, state administrative counts of enrollment typically exceed enrollment numbers as reported in nationally representative data sources. However, a drawback of these adjustments is that they require strong assumptions and do not allow for the possibility that some low-income individuals are validly enrolled in nongroup coverage (e.g., because they expect to have higher income in the future, they have assets that make nongroup coverage affordable despite low income). If the adjustments cause us to underestimate the number of low-income individuals who are truly enrolled in nongroup coverage, we may also underestimate the number of people who will exit the nongroup market due to the Affordable Care Act.

In calibrating our nongroup premium estimates, we attempted to match average U.S. and state-level nongroup premiums published by America's Health Insurance Plans (AHIP) in reports released in 2007 and 2011 (AHIP, 2007; AHIP, 2011). Because the 2011 AHIP estimates were not available for all states, we relied more heavily on the 2007 results in calibration. Premiums for both years were adjusted to reflect health care cost inflation, based on factors derived from the National Health Expenditure Accounts. In modeling status quo nongroup premiums, we took into account state-specific regulations, including the presence or absence of community rating, and state rate-banding requirements (if any). As with the size of the nongroup market, there is substantial uncertainty in premium estimates, with wide variation across data sources and over time. The lack of consistency across data sources presents a significant limitation in drawing conclusions about the change in nongroup premiums that can be expected as a result of the Affordable Care Act.

Small Group Market Adjustments

We calibrate small group premiums in scenarios without the Affordable Care Act to match those reported by the Agency for Health Care Research and Quality in their analysis of the 2011 Medical Expenditure Panel Survey, Insurance Component (MEPS-IC), updated to account for inflation. We also matched the distribution of firms with fewer than 100 and 100 or more workers, based on state-specific data from the Statistics of U.S. Businesses. In calibrating small group market premiums, we took into

⁹ The most recent data from healthcare.gov indicate that there are 10.8 million nongroup enrollees nationwide. However, these data were received after the model was updated to reflect 11.4 million enrollees, and we have not made subsequent adjustments to revise downward.

account state community rating requirements but did not attempt to adjust for other state regulations, such as rate-banding.

Exchange Enrollment

In most states, there will be separate plans offered within and outside of the exchanges, both for the small group (SHOP) and nongroup (HIM) markets. However, because premiums for plans within and outside of the exchanges are governed by the same risk-pooling and regulatory requirements, our model is not able to distinguish exchange enrollment from enrollment in the Affordable Care Act–regulated nonexchange markets.¹⁰ To address this issue, we report outcomes for all enrollees in the Affordable Care Act–regulated nongroup and small group markets, rather than attempting to focus solely on the exchanges. This approach provides an upper bound on potential exchange enrollment and sheds light on the composition of enrollees in the exchange risk pool (which is merged with the risk pool outside of the exchanges). Because individual enrollees on the nongroup market will have heavy incentives to take subsidies if they are available, the size of the subsidized nongroup market can be thought of as a lower bound estimate of HIM enrollment. Past experience with employer tax credits, however, suggests that not all subsidy-eligible firms will take the credit (GAO, 2012). As a result, the lower bound for SHOP enrollment could be less than the share of enrollees working for firms that are tax-credit–eligible.

Updates

The version of the model used for this report made several important updates to the code used in previous studies. The major changes that we implemented for the current work include the following:

- We updated the population data used in the model to the 2008 version of the SIPP, which was released to the public in 2011. Prior versions of the model used the 2001 SIPP.
- We imputed immigration status for all observations in the SIPP based on a procedure developed by Jeffrey Passel and co-authors (Van Hook et al., 2006; Passel, 2006). The imputation procedure accounts for such factors as self-reported citizenship status, ethnicity, country of origin, age, and occupation to classify respondents as undocumented immigrants, legal immigrants, or citizens. Undocumented immigrants are ineligible for either Medicaid or federal exchange subsidies; legal immigrants are eligible for exchange subsidies but may be excluded from Medicaid depending on their length of time in the United States (generally, people are Medicaid-eligible after five years of residency, although rules vary by state).
- We made refinements to our approach to determining Medicaid eligibility. The prior version of the model assessed Medicaid eligibility based on family income reported in the SIPP. In the current version, we assess Medicaid income based only on the income of the HIEU. We made

¹⁰ Potentially, user fees charged on the exchanges could systematically increase exchange premiums relative to nonexchange premiums, creating a wedge between exchange and nonexchange premiums. However, CMS rules have required issuers to include user fees when calculating the total index rate for the single risk pool, thereby spreading these fees across the entire market. We do not incorporate the user fees into our model.

this change after determining that HIEU income more closely approximated the income of the tax unit. Although there is currently variation across states in how Medicaid eligibility units are defined, after 2014, the Affordable Care Act requires that Medicaid eligibility be assessed based on tax unit income.

- In the previous version of the model, we had assumed that newly offering firms would offer coverage to all workers, regardless of part-time or full-time status. We now assume that only a fraction of newly offering firms will provide coverage to part-time workers. This fraction is based on the share of firms in the 2011 Kaiser/HRET survey that report offering coverage to their part-time employees.
- We adjusted the model to account for the Affordable Care Act's Section 9010, which institutes a fee that is a fixed dollar amount divided among individuals on private insurance. The fee is \$8 billion in 2014 and grows in subsequent years. Nearly everyone who is insured in private insurance (nonprofit insurers or those with less than \$25 million in net premiums are excluded, and those with less than \$50 million have a reduced rate) will pay a fraction of this amount as part of their premium.
- We also adjusted the model to account for the Affordable Care Act's Section 1341, which institutes transitional reinsurance for the individual market. In 2014, all private insurance plans will pay a reinsurance fee that will total \$12 billion. \$10 billion from this fee will be distributed to nongroup plans that are disproportionately affected by high-cost individuals. This reinsurance is gradually phased out over the following two years.

More information on model assumptions can be found in Appendix B and in our previous reports.

Limitations

Our model, like others, has many limitations. Current data sources on enrollment and premiums in the nongroup market are limited, and—as a result—we cannot be certain whether we are accurately reproducing nongroup premiums and enrollment patterns under the current law. Inaccuracies in current law estimates will affect estimates for 2016, since we base our calibration factors on current law patterns. Further, there is much uncertainty regarding how the exchanges will be perceived and how well they will function operationally, particularly in the early years of the Affordable Care Act. As a result, the model is more useful for identifying patterns that vary systematically across states than for generating precise estimates of nongroup enrollment and premiums on a state-by-state basis.

In addition, we make several assumptions that could affect model results. For example, we assume that individual mandate penalties are perfectly enforced, which may make the mandate appear more effective in our model than it will be in reality. At the same time, unlike the Congressional Budget Office (CBO), we do not assume that individuals have a desire to comply with the law, an assumption that would strengthen the effect of the individual mandate relative to what we have modeled. A more complete list of assumptions can be found in Appendix B, our methodological appendix.

Firms in our model have a relatively limited set of responses to the law, which can include offering coverage, dropping coverage, and—among those offering coverage in the small group market—

choosing the actuarial value of the plan. We do not model strategic responses, such as firms changing size to avoid penalties or decreasing employer contributions to make premiums higher and less affordable so lower-income workers become eligible for exchange subsidies.

We estimate Medicaid enrollment based on self-reported insurance status in nationally representative surveys, including the SIPP (for national-level analysis) and the Current Population Survey (CPS; the source of control totals for the state-reweighted analysis). However, state administrative data often suggest higher Medicaid enrollment than reported in nationally representative data. To some extent, this difference may be due to individuals misreporting Medicaid as another type of coverage, such as nongroup coverage. Although our process of reassigning low-income people who report nongroup coverage to Medicaid may partially address this issue, we did not attempt to fully reconcile the differences between state administrative and self-reported data in our analysis.

Another limitation is that our calibration factors are unable to fully capture all the nuanced behavioral patterns that may cause decisions to deviate from the predictions of utility maximization and how these behavioral patterns may change after reform. For example, although the calibration process captures any stigma or hassle that discourages Medicaid enrollment under current policy, it does not account for possible changes in these stigma and hassle factors that may occur as a result of the law. Similarly, calibration factors for the nongroup market are based on patterns observed under pre-Affordable Care Act policy. However, the act contains a number of provisions that may impact the nongroup market beyond the effects on premiums and out-of-pocket costs that individuals pay. For example, the exchanges are designed to increase transparency and better allow individuals to compare plans. These changes might decrease misinformation and inertia in the nongroup market.

There are several potential changes to the nongroup market that we do not capture. First, although we model transitional reinsurance and risk adjustment, we do not account for temporary risk corridors established under Section 1342 of the Affordable Care Act. We also do not model exchange user fees that insurers may charge after 2014. In addition, we do not account for changes in the competitive landscape that might affect nongroup premiums after 2014, such as possible reductions in insurers' marketing and distribution costs or increased competitive pressure caused by transparent pricing in the exchanges. Many of these factors are difficult to capture because they depend on state and federal implementation decisions and consumer response to those decisions. For example, while the exchanges are intended to promote comparison shopping, achieving this goal will depend on such factors as whether exchange websites are well-designed and whether information provided to consumers can be easily understood.

There are also several policies introduced by the Affordable Care Act that we do not model. Most importantly, we do not model catastrophic plans that will be available to young adults and people who would otherwise be unable to find health insurance. In addition, we do not model the state option to implement a basic health plan as an alternative to the exchanges for individuals within incomes between 138 and 200 percent of the FPL.

Although the model estimates changes in health care coverage caused by reforms, we cannot estimate how long it will take for individuals and firms to understand and fully respond to these changes. For example, behavioral responses may adjust over time as people learn about the exchanges and experience how the Internal Revenue Service enforces the individual mandate penalty, and as firms have a chance to understand and weigh their options. We assume that by 2016 people and firms will have acquired complete information about the policies introduced by the Affordable Care Act and that they will have fully adapted their behavior in response to these policies. However, in reality, it could take more or less time for people to fully understand and respond to the law.

The Medicaid expansion and the exchange tax credits that we model are financed by several provisions, including changes in Medicare payment policies, reductions in disproportionate-share hospital payments, and such new taxes as the increases in the Medicare hospital insurance tax for filers with incomes over \$200,000 (\$250,000 for couples). Because these provisions primarily affect hospitals, other providers, and individuals over the age of 65, while this report focuses on nongroup and small group enrollees under age 65, we do not consider the economic effects of the financing provisions in our analysis.

Finally, as state premium filings have been submitted, it is clear that our estimates are not always consistent with what states have reported. Reasons for differences include that we estimate 2016 premiums while states are reporting 2014 premiums, that our estimates do not take into account strategic gaming that may occur if insurers set prices low in the early years to capture market share, and that we are unable to account for the quality or breadth of plan provider networks in the exchanges. In addition, as described earlier, data on pre-Affordable Care Act nongroup premiums are limited, and any flaws in the existing data will be replicated in our results. Because of these issues, it is likely that the model is better equipped to predict the relative changes in premiums that may occur as a result of the law, rather than the absolute levels of premiums.

The challenges described above are not easy to address, given the vast array of policy changes introduced by the Affordable Care Act and limited experience with adopting similar reforms (particularly at a national level). Nevertheless, policymakers must make decisions about how to implement the law, and—given the lack of actual experience—such models as COMPARE can be useful tools for assessing the potential effects of these decisions.

Comparison to Other Models

Several other organizations, including the CBO (2007) and the Urban Institute (Blumberg et al., 2003) have developed microsimulation models that have been used to assess the impact of the Affordable Care Act. Broadly, these models are similar to the RAND COMPARE microsimulation model, although there are differences in specific methodologies and underlying data sources. Both RAND and the Urban Institute use a utility-based approach to predict behaviors, in which individuals and firms make choices by weighing the costs and benefits of available options. CBO, in contrast, makes predictions based on past experience with smaller-scale reforms. RAND and CBO both use the SIPP as the underlying source of data for the model, while the Urban Institute uses data from the Current Population Survey (CPS).

Table 3.2 compares coverage results across the models. All three produce relatively similar estimates of employer insurance coverage and nongroup coverage. Compared to RAND and the Urban Institute, CBO estimates that many fewer people will enroll in Medicaid after the Affordable Care Act is fully implemented. This is partly because CBO’s most recent numbers assume that certain states will fail to expand Medicaid, while the RAND and Urban Institute numbers cited assume that all states expand. RAND also uses a different hierarchy from CBO in assigning people who report more than one health insurance type to a single, primary insurance policy. As a result, CBO has substantially fewer Medicaid enrollees in its pre–Affordable Care Act starting point than RAND.

Table 3.2. Comparisons Across Models

	RAND 2016	CBO 2016	Urban Institute 2011
Employer	153.5	154.0	154.5
Exchange (Urban Institute), regulated small group (RAND) ^a	28.7	NA	9.9
Nonexchange (Urban Institute), large group/grandfathered (RAND)	124.8	NA	144.6
Nongroup	26.22	24.0	17.8
Exchange, with subsidies	17.0	20.0	8.5
Unsubsidized	9.3	4.0	9.3
Medicaid	62.4	45.0	61.5
Other ^b	12.0	23.0	8.5
Uninsured	22.8	31.0	26.4

SOURCES: Buettgens and Carroll, 2012; CBO, 2013.

^a RAND combines SHOP exchange coverage with other regulated small group coverage, while the Urban Institute distinguishes between exchange and nonexchange plans.

^b CBO combines nonexchange nongroup plans with the “other” category.

Several other factors must be taken into consideration when comparing across models. First, RAND does not distinguish between SHOP plans and other regulated small group plans when reporting enrollment in employer-sponsored coverage. The Urban Institute, in contrast, distinguishes SHOP exchange enrollment from enrollment in other employer plans. CBO combines nongroup coverage outside of the exchange with the “other” insurance category, while RAND and the Urban Institute both distinguish between nongroup and other plans. Finally, the Urban Institute reports outcomes as if the Affordable Care Act were fully implemented in 2011, while RAND and CBO project forward to 2016 when reporting results.

IV. Results

In this chapter, we present the results of our analysis, focusing on the nonelderly population (<65 years old). We compare estimated health insurance outcomes with and without implementation of the Affordable Care Act for 2016, the first year in which penalties for noncompliance with the individual mandate are fully phased in. We use the language “with and without” the Affordable Care Act rather than “before and after” the Affordable Care Act because estimates are standardized to reflect population characteristics and prices levels in a fixed year, 2016. In addition, estimates without the act eliminate all Affordable Care Act–related provisions, including some—like changes to MLR—that have already gone into effect. Results reflect 2016 outcomes even in scenarios in which the Affordable Care Act is not implemented so that we maintain a consistent population base and price levels.

All of the results presented in this chapter assume that the Medicaid expansion is adopted in every state. Using the same assumptions about Medicaid expansion allows us to provide an apples-to-apples comparison of the potential effects of the law for the ten states modeled in this report. However, several states considered in our analysis, including Texas, Pennsylvania, and South Carolina, have announced that they will not participate in the expansion. It is possible that these states will revisit this decision, given the strong financial incentives to expand (the federal government will pay for 100 percent of the costs of the expanded population in the early years, phasing down to 90 percent by 2019). In sensitivity analyses (Chapter V), we consider the implications of failure to expand for three states.

Uninsurance

As modeled, the Affordable Care Act causes the share of the nonelderly population that is without insurance to fall dramatically across the United States as a whole and for each of the ten states considered (Figure 1, in the Figures section). Nationwide, we estimate that the uninsurance rate will decline from 19.6 to 8.2 percent as a result of the Affordable Care Act. Across the ten states considered, the uninsurance rate falls to a low of 5.1 percent in Minnesota and to a high of 12.4 percent in Texas. Because undocumented immigrants are ineligible for Medicaid and federal exchange subsidies and are exempt from penalties associated with failure to obtain insurance, states with larger immigrant populations, including Florida and Texas, have relatively high uninsurance rates after the Affordable Care Act is implemented. However, although states with large immigrant populations have the highest uninsurance rates in 2016 with the Affordable Care Act, they also experience the biggest declines in uninsurance in percentage terms due to the act, assuming that Medicaid is expanded. For example, Florida’s uninsurance rate falls from 24.4 to 8.9 percent, a 64-percent decrease.

Nongroup Outcomes

Figure 2 shows the share of individuals enrolled in the nongroup market, with and without the Affordable Care Act. We estimate that there will be a uniformly large increase in nongroup enrollment across the ten states considered, as well as the nation overall. In many states, the size of the market more than doubles as a result of the Affordable Care Act. However, even with the act, the nongroup market remains a relatively small part of the insurance landscape. Across the United States overall, only about 10 percent of the nonelderly population enrolls in nongroup coverage in 2016, with a range of 8 to 15 percent among the ten states considered in this analysis.

In all states, the majority of nongroup enrollees are eligible for federal subsidies (Figure 3). Nationwide, 65 percent of nongroup enrollees are subsidy-eligible, with the share of subsidy-eligible enrollees ranging from 62 percent to 75 percent across the ten states considered. The large fraction of enrollees who are eligible for subsidies reflects that most people who are not subsidy-eligible will have access either to Medicaid or employer coverage.

In Figure 4, we report what the health insurance enrollment status of individuals with nongroup coverage in 2016 would have been in the absence of the Affordable Care Act. In most states, the majority of nongroup enrollees would have been uninsured without the act. Nationwide, 59 percent of people enrolled in the nongroup market would otherwise be uninsured. Across the ten states, the share of the 2016 nongroup market that would be uninsured in the absence of the Affordable Care Act ranges from 40 percent in Pennsylvania to 74 percent in New Mexico.

Among those who would have had insurance even without the Affordable Care Act, most would have been otherwise covered in the nongroup market. Relatively few nongroup enrollees would have been otherwise insured through an employer, although this varies by state. Pennsylvania and Kansas stand out as having a relatively high proportion of nongroup enrollees transitioning from employer-sponsored insurance as a result of the Affordable Care Act. However, the absolute number of people who transition from employer-sponsored insurance into the nongroup market is low even in these states. For example, in Pennsylvania, just 4 percent of the nonelderly population transitions from employer-sponsored insurance to nongroup coverage as result of the act.¹¹ The fraction of nongroup enrollees that would have been insured through Medicaid without the Affordable Care Act is negligible in all states.

Estimating how the Affordable Care Act will affect nongroup premiums is complicated by several factors. First, available data on nongroup premiums are limited and uncertain, and it is very difficult to judge changes in the nongroup market when it is hard even to gauge the baseline. Second, any estimates of change in the nongroup market must be interpreted very carefully because it is difficult to develop a single summary number that fully describes the change that will be realized by any given enrollee. An individual's total premium may increase, for example, while simultaneously his or her out-of-pocket premium may fall because of federal subsidies. In addition, premium increases may be partially

¹¹ To calculate this number, we multiplied the percentage of nongroup enrollees transitioning from ESI in Figure 4 (35.6 percent in Pennsylvania) by the share of the post-Affordable Care Act nongroup market found in Figure 2 (11.9 percent in Pennsylvania).

explained by increases in benefit generosity caused by the Affordable Care Act, which in turn means that—although premiums are going up—enrollees are better protected against financial risk. Finally, the Affordable Care Act’s rating regulations have different implications for premiums depending on individuals’ age, health status, and tobacco use. These differences make it hard to draw conclusions from looking at changes in overall average premiums.

Despite these challenges, we attempted to use the model to estimate how nongroup premiums might be affected by the Affordable Care Act, recognizing the inherent uncertainty and complexity in interpreting these estimates. Figure 5 shows the average out-of-pocket premium paid by nongroup enrollees with and without the Affordable Care Act. For all states, average out-of-pocket premiums decline in the scenarios that include the Affordable Care Act, reflecting the substantial subsidies available to the majority of nongroup enrollees after the Affordable Care Act takes full effect. For the United States overall, the decline in average premium spending is 26 percent. However, across the ten states considered, declines range from negligible to substantial. Florida and North Dakota both experience negligible declines, while out-of-pocket premiums in New Mexico and Louisiana fall by 42 percent.

There are many factors that contribute to the wide variation across states in enrollee-weighted out-of-pocket premium changes. States vary in the share of enrollees who are eligible for tax credits, as well as the average tax credit per enrollee. Out-of-pocket premium spending is further influenced by the actuarial values of the plans enrollees choose, and these choices may differ across states. Average premiums are heavily influenced by the age and tobacco use distribution of enrollees, which can also vary from state to state. In addition, states differ regarding their current rating regulations in the nongroup market. While most of the states analyzed have no rating restrictions under pre-Affordable Care Act law, New Mexico has 2.5-to-1 rate-banding on age under pre-Affordable Care Act law, and we assume that the policy is relaxed to comply with the Affordable Care Act’s 3-to-1 rate band on age (although states are permitted to continue more-restrictive age and tobacco-related rating regulations policies if they so choose). Finally, inherent uncertainty in the data may contribute to unexplained differences in premium estimates across states.

Figure 6 builds on Figure 5 by adding average federal premium spending, along with the average out-of-pocket premium. These two figures can be summed to determine average total premiums. The average total premium represents the full premium before any tax credits are applied and—as a result—adjusts for state differences in subsidy enrollment and amount. With the exception of New Mexico and (to a much lesser extent) Louisiana, average total premiums increase in all states and for the United States overall. At the national level, we estimate a 22-percent increase in average premiums, with several states experiencing an increase of 30 percent or more. However, average premiums can be very misleading because they do not adjust for changes in benefit generosity (measured by actuarial value) or changes in the age and tobacco use composition of enrollees. As a result, they do not reflect the change in premiums that a given individual could expect as a result of the Affordable Care Act for a plan with a specific actuarial value.

To address these limitations, Figure 7 shows premium estimates that have been standardized for age, actuarial value, and tobacco use for the United States and all ten states considered. We hold the age, tobacco-use status, and choice of plan actuarial value constant using the distribution of enrollees predicted without the Affordable Care Act. Figure 7 also adds confidence intervals to show the uncertainty in our estimates of premiums under the Affordable Care Act. After standardizing the premiums, we estimate that there could be a decline in total premiums for the United States and three states (Louisiana, New Mexico, and Texas). At the national level, we now estimate a 12-percent decline in premiums, although the confidence bands indicate that we cannot reject the hypothesis that there is no difference in scenarios with and without the act. Among the remaining states, premium increases are much smaller than predicted when considering the unadjusted, enrollee-weighted figures. For five of the ten states (Florida, Kansas, Pennsylvania, South Carolina, and Texas), the confidence bands suggest that premium changes could be either positive or negative as a result of the law. In Appendix A, we find that these results are qualitatively similar with a more-conservative estimate about the change in the effective MLR brought about by the Affordable Care Act, although two states (Kansas and Pennsylvania) shift from having no statistically significant change to experiencing an increase in premiums.

A final difference that remains across states in the premiums estimated in Figure 7 is that the starting population of enrollees may differ in terms of their age distribution. Because the Affordable Care Act imposes 3-to-1 rate-banding on age, premium changes for young enrollees will be very different from premium changes for older enrollees. Figure 8 shows actuarial value and tobacco-use standardized premium changes, by age group, for the United States overall. We estimate that there could be declines of up to 35 percent for individuals over age 50, with little to no change for enrollees under age 30. Differences in the age composition of enrollees across states could lead to differences in estimated premiums, both with and without the Affordable Care Act. In Figure 9, we show tobacco-use and actuarial value-adjusted premiums for 40- to 44-year-olds for all states. Across the United States and for most states, we estimate premium declines for this age range, although—in Minnesota and North Dakota—we estimate that premiums could increase on the order of \$700 (13 to 14 percent).

One potentially surprising finding is that, for some states and age groups, standardized nongroup premiums are estimated to decline as a result of the Affordable Care Act. In Figure 8, which shows national-level results, we estimate that these declines could occur even for relatively young age groups (e.g., 30 to 34). One commonly held view is that, because the Affordable Care Act requires guaranteed issue and does not allow rating on health status, premiums will increase due to the law. However, there are several countervailing effects that can lead to premium reductions. First, some younger and healthier enrollees who opt not to obtain coverage under pre-Affordable Care Act law could be induced to enter the market by tax credits and the individual mandate, causing premiums to fall. Second, as modeled, the Affordable Care Act's MLR requirements limiting the amount of premium revenue that insurers can spend on non-claims costs lead to a decline in premiums. Scenarios without the Affordable Care Act eliminate the requirement that MLR in the nongroup market must be no lower than 80

percent, which in turn leads to an increase in premiums relative to the Affordable Care Act estimates.¹² Even if the age and health status of enrollees become less favorable as a result of the law, the MLR requirements may keep premiums affordable for younger and healthier enrollees. Reinsurance transfer payments made from group plans to nongroup plans also reduce nongroup premiums in 2014, 2015, and 2016.

To assess how changes in the risk composition of enrollees are related to premium changes, we analyzed differences in enrollee health status and age in scenarios with and without the Affordable Care Act. For all states, the share of nongroup enrollees in poor health increases substantially in scenarios with the Affordable Care Act relative to baseline estimates generated from the Survey of Income and Program Participation (Figure 10). In most states, the share of nongroup enrollees in fair or poor health doubles, from an average of 4 to 6 percent at baseline to 8 to 10 percent after the Affordable Care Act is fully implemented. However, even after the act is implemented, enrollees in fair and poor health remain a significant minority of the population—accounting for no more than 10 percent of enrollees across the ten states modeled. Most states experience a slight increase in the share of the nongroup population over age 50 as a result of the Affordable Care Act (Figure 11). These results differ from those predicted by CBO, which estimates that the risk composition of the nongroup market will become more favorable (e.g., healthier, younger) as a result of the individual mandate and subsidies offered by the Affordable Care Act (CBO, 2009); however, our results align with a recent report by the Society of Actuaries (SOA), which predicted an increase in per member per month claims costs as a result of the law (SOA, 2013). The shifts in the risk composition predicted by our model imply that the reductions in nongroup premiums found in some states are driven primarily by MLR and reinsurance assumptions, rather than by improvements in the risk composition of enrollees.

Another finding is that there is significant variation across states in terms of the Affordable Care Act's effects on nongroup premiums. For example, in Figure 9, we estimate that two states experience increases in standardized premiums for 40- to 44-year-olds, while other states are estimated to experience declines. In one case (New Mexico), the change in premiums for 40- to 44-year-olds associated with the Affordable Care Act is predicted to be more than 50 percent. States that are estimated to experience decreases in age and actuarial-valued standardized nongroup premiums due to the Affordable Care Act tend to have high uninsurance rates under pre-Affordable Care Act conditions. Figure 12 shows a strong negative correlation between the pre-Affordable Care Act uninsurance rate and the estimated change in the nongroup premium after the Affordable Care Act is fully implemented. This effect is driven by the fact that, in states with high uninsurance rates, there will be proportionately more young, healthy people entering the nongroup market due to the Affordable Care Act, reducing the impact of adverse selection. This effect can be seen in Figure 13, which shows the share of the nongroup market composed of young adults who have transitioned from uninsured status. States that have higher premiums in Figures 6, 7, and 9—including North Dakota and Minnesota—have low proportions of young adults moving from uninsured status into the nongroup market as a result of the law.

¹² Prior to the passage of the Affordable Care Act, only 11 states had minimum MLR requirements in their nongroup markets. Among states with a lower limit, the minimum was at or below 70 percent in 8 of the 11 states (FamiliesUSA, 2008).

For one state, New Mexico, we estimate a very large decline in age and actuarial value standardized premiums due to the enactment of the Affordable Care Act. This effect is partly related to the fact that New Mexico has a high uninsurance rate in the status quo, and many young adults transition into the nongroup market because of the act. In addition, New Mexico has 2.5-to-1 rate-banding on age under pre-Affordable Care Act law, and we assume that the policy is relaxed to comply with the act's 3-to-1 rate band on age (although states are permitted to continue more-restrictive age and tobacco-related rating regulations policies if they so choose). The relaxation of the rate banding in New Mexico, combined with the individual mandate and subsidies in the nongroup market, serves only to induce young and healthy individuals to enroll under our model. Had we maintained the 2.5-to-1 rate band, the change in New Mexico's premium would have been less pronounced.

Figure 14 shows federal tax credit and subsidy spending for the ten states considered. Spending on the APTCs dominates spending on the cost-sharing subsidies, and the total amount spent varies systematically with the size of the states' overall population. At the national level (not shown), we estimate that there will be approximately \$53 billion in spending on APTCs and an additional \$4 billion in spending on cost sharing subsidies.

Small Group Market

Figure 15 shows the share of the nonelderly population enrolled in the small group market, with and without the Affordable Care Act. Nationally, and for seven of ten states, we estimate that there will be a slight increase in enrollment in small group coverage. There has been significant debate about the likely response of firms to the Affordable Care Act (GAO, 2012b). Because individuals are eligible for exchange tax credits only if they meet the income requirements and do not have a qualifying employer offer, and because the Medicaid expansion makes employer coverage less attractive to some workers, the Affordable Care Act creates incentives for firms to drop coverage. At the same time, the individual mandate increases workers' demand for coverage, and employer penalties (levied on firms with more than 50 workers) and tax credits (available to firms with fewer than 25 workers) create new incentives to offer coverage. In net, the COMPARE model finds a small increase in employer offer rates at the national level (Eibner et al., 2012), a result that is consistent with Massachusetts' experience after implementing a reform similar to the Affordable Care Act (Gabel et al., 2008; Commonwealth of Massachusetts, 2013).

Among states experiencing an increase in small group enrollment, these increases range from negligible (e.g., less than 1 percentage point) to 5.2 percentage points. Declines in small group enrollment, which we find in Kansas, Pennsylvania, and North Dakota, range from 1.4 to 2.2 percentage points. The changes in the small group market are correlated with the share of the population that would be uninsured if not for the Affordable Care Act (Figure 16). In particular, states with high uninsurance rates in the absence of reform experience larger increases in small group enrollment. Looking back at Figure 4, it is also the case that states experiencing declines in small group enrollment have the largest share of nongroup enrollees who would have otherwise been insured through employer coverage.

Firms are eligible for temporary premium tax credits if they have no more than 25 workers and if average wages at the firm are less than \$50,000 a year. These credits are provided on a sliding scale, with credits of up to 50 percent of premium costs available to firms with fewer than 10 workers and average wages of less than \$25,000 a year. Figure 17 shows the share of small group enrollees who work at firms that would be eligible for the tax credit. Generally, between 15 and 25 percent of small group enrollees are at firms that are eligible for tax credits.

Figure 18 shows the estimated health insurance status of 2016 small group enrollees had the Affordable Care Act not been enacted. Nationwide and in most states, more than 80 percent of small group enrollees would have been enrolled in employer-sponsored insurance without the Affordable Care Act. In the majority of cases, these individuals work at firms that would have offered health insurance without the law and will continue to offer health insurance after the Affordable Care Act takes full effect. Most of those transitioning into the small group market as a result of the act would have been otherwise uninsured. The share of small group enrollees who would otherwise be uninsured tends to be large in states where uninsurance was high in the absence of the law (e.g., Texas, New Mexico, Florida). Some individuals newly enrolling in small group coverage are prompted to take an existing offer of health insurance coverage because of the individual mandate. In other cases, firms begin newly offering coverage in response to the Affordable Care Act.

As with the nongroup market, premium changes in the small group market can be difficult to fully characterize because they reflect changes in a variety of factors, including the average age of enrollees, the risk composition of the pool, taxes introduced by the Affordable Care Act, and changes in the actuarial value of plans chosen. Not all of these factors will affect the prices faced by a given individual or firm for an insurance product with a set actuarial value. Premiums in the small group market are further complicated by firms' decisions about how to spread costs across enrollees. In COMPARE, we assume that firms allocate premium contributions and wage decrements equally across workers, regardless of age or other characteristics (although workers face higher contributions if they enroll in family coverage instead of single coverage).

Recognizing these limitations, Figure 19 reports small group premiums that have been standardized for age, tobacco use, and actuarial value. The estimates hold constant the age and tobacco use composition of enrollees using the distribution of enrollees that would have been expected without the Affordable Care Act. Relative to premiums without the Affordable Care Act, we find very little change in estimated premium amounts, with some states experiencing a decrease in premiums and others experiencing an increase in premiums. However, the estimated confidence intervals are very wide, and for nine out of ten states and the United States overall, we cannot rule out the hypotheses that small group premiums are unaffected by the Affordable Care Act. The prediction that small group premiums will be largely unaffected by the law is consistent with Gruber and Gorman (2012), who estimated that the Affordable Care Act would have minimum impact on small group premiums in Minnesota.

Figures 20 and 21 shed light on changes in risk composition estimated to occur in the small group market. Consistent with the finding that premiums remain largely unchanged, the age and health status composition of the small group market remain relatively constant in most states. Both with and without

the law, only about 4 to 6 percent of the small group population reports fair or poor health status (Figure 20). Similarly, between 20 and 25 percent of small group enrollees are between the ages of 50 and 64, with or without the Affordable Care Act (Figure 21).

V. Sensitivity Analysis

As part of the broader analysis of the impact of the Affordable Care Act on states, we looked at the sensitivity of the model results to implementation decisions that are available to states. First, we analyzed the implications of states' decision to either split or merge the risk pools for the individual exchange and the SHOP exchange. Second, we investigated the effects of a state's choice of whether or not to expand Medicaid eligibility to nearly everyone below 138 percent of the FPL in response to the Supreme Court's ruling on the Affordable Care Act. For the analysis of split versus combined risk pools, we considered effects for New York, a state not included in the main results presented above. We made this choice because, unlike many states, New York is reportedly considering the option to merge the small group and nongroup markets.¹³ All of the sensitivity analyses are for the year 2016. In addition, in contrast to the analyses presented above, these results compare alternative versions of Affordable Care Act implementation.

Risk Pool Construction

The introduction of insurance exchanges for both the nongroup and small group markets is a central part of the Affordable Care Act. The premiums for each market are based on the spending within its risk pool. Risk adjustment payments and other mechanisms in the act ensure that premiums within a risk pool vary by generosity of the plan and by age but not by the underlying health of the population in a plan. This prevents insurers from benefiting by "cherry-picking" the healthiest people, as can be the case under pre-Affordable Care Act law. States will have the option of splitting or merging the risk pools for the nongroup and small group markets. If a state splits the pools, the premiums in the small group market can be different from those in the nongroup market.

We tested the implications of the decision to split or merge the risk pools on the state of New York (Table 5.1), a state that has reportedly considered the option of merging the nongroup and small group markets. Unlike most other states, New York currently has full community rating in both the nongroup and small group markets, which means that premiums cannot vary by age, sex, or other health characteristics. The Affordable Care Act institutes modified community rating, which allows for premium variation based on age and tobacco use. However, for these tests, we assume that New York keeps its current policy of full community rating. Although fully community rated, when risk pools are split, premiums in the small group market are based only on the claims experience of small group enrollees. When risk pools are combined, the small group and nongroup markets represent a single, fully community-rated risk pool.

¹³ In late 2012, New York asked for stakeholder feedback on whether to combine the markets (see, for example, New York State Health Benefit Exchange, 2012). As of early 2013, stakeholder groups were continuing to advocate positions on this policy decision (Health Care for All New York, 2013).

Table 5.1. Risk Pool Construction for New York

	Baseline: Risk Pools Split (1)	Alternative: Risk Pools Merged (2)	Percentage Difference, Baseline Versus Alternative
Age-standardized adult nongroup exchange silver plan premium	\$7,039	\$6,565	-6.7%
Age-standardized adult SHOP exchange silver plan premium	\$5,780	\$6,718	16.2%
Medicaid enrollment	4,155,708	4,176,981	0.5%
Nongroup enrollment	1,510,468	1,566,632	3.7%
Small group enrollment	2,325,951	2,280,524	-2.0%
All other coverage	7,743,729	7,701,137	-0.6%
Uninsured	1,412,822	1,423,405	0.7%
Premium subsidy costs	\$3,959,350,542	\$3,367,029,594	-15.0%

* Age-standardized premiums are for nonsmokers only.

Table 5.1 shows estimated health insurance enrollment and premiums in New York, in scenarios in which the nongroup and small group risk pools are split (column 1) and combined (column 2). We find that when risk pools are combined, premiums in the individual market are 7-percent lower than they would be if the risk pools were not merged. This finding indicates that the risk composition of the small group market in New York is more favorable than the risk composition of the nongroup market. Conversely, premiums for the small group market are 16-percent higher when the pools are merged, relative to the split-pools case. The increase in small group premiums when pools are merged leads to a 45,000-person decline in the number of individuals covered in the small group market. However, the net change in insurance coverage is much smaller (only a 10,000-person drop) because lower premiums in the nongroup market cause more people to enroll in nongroup plans.

The Urban Institute (Blavin et al., 2012) performed a similar analysis for New York and found a net increase in coverage when risk pools were merged because the decline in small group enrollment was more than offset by increased enrollment in the nongroup market. Blavin et al. estimates that there will be only a slight (1 percent) increase in small group premiums, while we estimate a 16-percent increase in small group premiums if the markets are merged. However, the premium changes reported by the

Urban Institute are not directly comparable to ours because they reflect premiums per covered life, rather than age-standardized silver premiums. Other differences between the two models are likely due, at least in part, to the fact that RAND estimates that the size of the nongroup market relative to the small group market will be larger in 2016. Specifically, we estimate that the nongroup market will be about 65 percent as large as the small group market, while the Urban Institute estimates the nongroup market will be only about half as large as the small group. To the extent that the risk composition of the nongroup market is less favorable relative to the small group market, any adverse effect on small group premiums will be larger in the RAND model, due to the larger relative impact of nongroup enrollees.

There are two surprising results in Table 5.1 that warrant further explanation:

1. Premiums are slightly lower for individuals than for small groups in the merged case because there are reinsurance payments made to the individual market until 2017. In subsequent years, the premiums will be identical because the risk pools are the same and the reinsurance will have been phased out.
2. While it may seem puzzling that small firms would continue to offer health insurance to their workers if it is cheaper to purchase it individually, the favorable tax treatment of employer insurance keeps the costs for firms to buy insurance below the cost for individuals to buy the same plan.

Medicaid Expansion

The Supreme Court ruled that the Medicaid expansion portion of the Affordable Care Act was unconstitutionally coercive to states. This ruling has the effect of allowing states to choose not to expand Medicaid to populations below 138 percent of the FPL. Texas and Louisiana have firmly stated that they will not expand their Medicaid programs, while—as of this writing—Florida is undecided. Tables 5.2, 5.3, and 5.4 show estimated outcomes for these three states, with and without Medicaid expansion.

For each of those three states, we compared the baseline case in which the state expands Medicaid to an alternative in which it maintains only current eligibility standards. The Affordable Care Act allows for subsidies for legal residents with incomes between 100 percent and 400 percent of the FPL if they are not Medicaid-eligible and do not have an affordable employer offer. The decision not to expand Medicaid will mean that the population between 100 percent and 138 percent of the FPL will likely be subsidy-eligible but that the population below 100 percent of the FPL will not. Thus, the population with incomes below 100 percent of the FPL will very likely not have affordable access to health care insurance.

Table 5.2. Medicaid Expansion for Florida

	Baseline: Full Medicaid Expansion	Alternative: Current Medicaid Eligibility	Percentage Difference, Baseline Versus Alternative
Medicaid enrollment	3,242,432	2,111,806	-34.9%
Nongroup/HIM enrollment	1,848,700	2,000,369	8.2%
All other coverage	9,649,155	9,816,348	1.7%
Total insured	14,740,287	13,928,523	-5.5%
Total uninsured	1,436,462	2,248,226	56.5%
Age-standardized individual exchange silver plan premium*	\$4,916	\$5,326	8.3%

* Age-standardized premiums are for nonsmokers only.

Table 5.3. Medicaid Expansion for Louisiana

	Baseline: Full Medicaid Expansion	Alternative: Current Medicaid Eligibility	Percentage Difference, Baseline Versus Alternative
Medicaid enrollment	973,317	706,668	-27.4%
Nongroup/HIM enrollment	381,330	442,738	16.1%
All other coverage	2,344,380	2,343,343	0.0%
Total insured	3,699,027	3,492,749	-5.6%
Total uninsured	270,076	476,354	76.4%
Age-standardized individual exchange silver plan premium*	\$5,282	\$5,802	9.8%

* Age-standardized premiums are for nonsmokers only.

Table 5.4. Medicaid Expansion for Texas

	Baseline: Full Medicaid Expansion	Alternative: Current Medicaid Eligibility	Percentage Difference, Baseline Versus Alternative
Medicaid enrollment	5,508,142	3,773,408	-31.5%
Nongroup/HIM enrollment	2,673,411	2,995,999	12.1%
All other coverage	12,531,020	12,630,965	0.8%
Total insured	20,712,573	19,400,372	-6.3%
Total uninsured	2,926,421	4,238,621	44.8%
Age-standardized individual exchange silver plan premium*	\$4,718	\$5,159	9.3%

* Age-standardized premiums are for nonsmokers only.

Unsurprisingly, Tables 5.2, 5.3, and 5.4 uniformly show a decline in Medicaid enrollment and an increase in the number of people uninsured in scenarios without the Medicaid expansion. We estimate that, across the three states, 3.1 million individuals will be ineligible for Medicaid because of the decision not to expand coverage, relative to the full expansion case. Because some of these individuals will find other coverage, including through the exchanges, the net decrease in the number of individuals insured is 2.3 million. In all three states, the decrease in the number insured without Medicaid expansion is approximately 6 percent, relative to the number that would be insured with expansion. However, because the three states considered have low current-law Medicaid eligibility limits for parents and do not cover childless adults, these percentages likely represent upper-bound estimates of the potential reduction in coverage due to not expanding Medicaid.

The decision not to expand Medicaid causes exchange enrollment to increase, driven by the fact that individuals with incomes between 100 and 138 percent of the FPL generally become eligible for exchange subsidies if Medicaid is unavailable.¹⁴ Per capita federal spending for an individual enrolled in the exchange will likely be higher than per capita federal spending for a comparable individual enrolled in Medicaid, due to Medicaid reimbursement policies. However, we estimate that federal spending will decline if states fail to expand Medicaid, due to the substantial decline in Medicaid enrollees (Price and Eibner, 2013).

¹⁴ To qualify for an exchange subsidy, an individual cannot have an affordable offer of coverage from his or her employer.

Perhaps more surprisingly, we estimate that age-standardized nongroup premiums increase, on the order of 8 to 10 percent, if states fail to expand Medicaid. There are two reasons for this increase in premiums:

1. If Medicaid is not expanded, individuals with incomes between 100 and 138 percent of the FPL become newly eligible for APTCs. Conditional on age, lower-income individuals in our model tend to be less healthy and therefore have higher health spending for a given insurance status than their higher-income counterparts. The positive correlation between income and health reflects the well-documented association between socioeconomic status and health in the United States (Braveman et al., 2010; Elo, 2009). When exchange subsidies become available to lower-income individuals, the average health of the exchange population declines slightly, and premiums increase.
2. Because Medicaid is free while exchange plans require at least a modest premium contribution, the population of individuals who opt to enroll in the exchanges if Medicaid becomes unavailable tends to be slightly less healthy than the full population of individuals eligible for subsidies.

VI. Conclusion

In this analysis, we used the COMPARE microsimulation model to estimate how the Affordable Care Act will influence coverage in the nongroup and small group markets, focusing on ten representative states. We then conducted sensitivity analysis that considered how outcomes might change in response to state decisions to merge nongroup and small group risk pools or to forgo the Affordable Care Act's Medicaid expansion.

We found that all ten states can expect a large decline in uninsurance in response to the law, particularly if they expand Medicaid. In many states, the uninsurance rate will be reduced to levels between 6 and 8 percent with the Affordable Care Act, compared to levels in the range of 15 to 20 percent without the law. States with large immigrant populations—such as Florida and Texas—will have more people remaining uninsured than other states even after the Affordable Care Act is fully in effect. The degree of uninsurance is also influenced by the state decision to expand Medicaid. In sensitivity analyses conducted for Texas, Louisiana, and Florida, we estimated that the share of the population with insurance could fall by as much as 6 percent if Medicaid is not expanded, relative to the full expansion scenario. However, these three states have low Medicaid eligibility limits for parents relative to other states and do not cover childless adults at all. As a result, a relatively large share of the population is affected by the decision to expand.

As the uninsurance rate falls, we estimate that there will be substantial movement into the nongroup market. In many of the ten states analyzed, the size of the nongroup market more than doubles, often increasing from 3 to 4 percent of the nonelderly population under current law to more than 10 percent of the nonelderly population under the Affordable Care Act. The large increase in nongroup enrollment is striking, given that the Affordable Care Act requires that insurers offer plans to all comers (guaranteed issue) and prohibits insurers from charging differential premiums, except within 3-to-1 rate bands for age and 1.5-to-1 rate bands for tobacco use. Prior research on the effects of rating regulation on insurance enrollment has found that tighter regulations lead to a decrease in enrollment, a consequence of adverse selection (Pauly and Herring, 2007). Our prediction that nongroup enrollment will increase even though the Affordable Care Act imposes stricter rating regulations suggests that the act's provisions to stem adverse selection are likely to be effective. These provisions include substantial tax credits and subsidies for nongroup enrollees with incomes between 138 and 400 percent of the FPL and no qualifying employer offer and an individual mandate that requires most individuals to purchase health insurance or face penalties.

Estimating premium changes in the nongroup market is complicated by uncertain data on status quo enrollment and premiums, as well as significant complexities in developing adequate summary measures of premium change. New enrollees will include a mix of young and healthy people who are motivated to enroll due to the individual mandate, as well as older and less-healthy individuals who are

newly able to enroll due to guaranteed issue requirements. People may choose plans with relatively high actuarial values due to newly available tax credits and the act's minimum essential coverage requirements. However, administrative costs may decline because of requirements limiting MLRs and state rate review processes requiring justification for large premium increases. Reinsurance payments transferred from the group market may also serve to reduce premiums. In addition, individuals who are excluded from the current nongroup market because of underwriting may face extremely high out-of-pocket expenditures under current law, and this spending will decline substantially once they are allowed to purchase insurance.

Our estimates indicate that, on average, out-of-pocket premium spending for nongroup enrollees will fall due to new federal tax credits available after the Affordable Care Act takes full effect. Although we estimate that average total premiums will increase because of the act, these increases are largely due to changes in the age composition of enrollees and a shift toward plans with higher actuarial values. When we standardize total premiums to account for age, tobacco use, and actuarial value, we estimate that many states will experience little to no change in nongroup premiums. These analyses are consistent with early state insurance premium filings, which have resulted in lower-than-expected premiums in states including Oregon, California, and Vermont (Baker, 2013; Budnick, 2013; Varney, 2013). These early filers, however, may not be representative of all states, and some initial rates could be artificially low if insurers are hoping to capture a large market share.

In addition to analyzing estimated changes in nongroup premiums caused by the Affordable Care Act, we also conducted sensitivity analyses to estimate the effect of states' decision to expand Medicaid on nongroup premium estimates in 2016. In the three states considered, age-standardized nongroup premiums increased from 8 to 10 percent when Medicaid eligibility was retained at current levels, relative to the case of full expansion. The estimated premium increases are related to the influx of lower-income individuals, who tend to have higher health spending conditional on health insurance status, into the state exchanges if Medicaid is not expanded. These findings suggest that failure to expand Medicaid could affect not only low-income individuals who would otherwise be eligible for the program, but also higher-income, nongroup enrollees who are not eligible for APTCs and who could be faced with higher premiums if Medicaid is not expanded.

We estimate that the effects of the Affordable Care Act for small group enrollment and premiums will be small relative to the effects for the nongroup market. In seven of ten states considered, we estimate that there could be slight to modest increases in small group enrollment, with increases ranging from less than 1 to approximately 5 percentage points. As modeled, these increases are driven by worker preferences: The individual mandate requiring all people to obtain insurance, coupled with the favorable tax treatment of employer-sponsored coverage, increases workers' demand for employer-provided health benefits. As modeled, states experiencing the largest increase in small group coverage tend to have high uninsurance rates under pre-Affordable Care Act policy.

In our main estimates, which assume that the individual and small group markets are split for the purposes of risk pooling, we find little to no change in small group premiums as a result of the law. For nine out of ten states considered, and for the United States overall, we find virtually no difference in

age-, actuarial value-, and tobacco use–standardized small group premiums in scenarios with and without the Affordable Care Act. Of course, individual firms may experience an increase or decrease in premiums, depending on the health status of their enrollees. However, overall, we find no evidence to suggest that small premiums will systematically change as a result of the law.

For one state, New York, we conducted a sensitivity analysis in which we merged the small group and nongroup markets for the purposes of risk pooling. In this scenario, we predicted a 16-percent increase in small group premiums and a 7-percent decline in nongroup premiums. The overall effects for health insurance enrollment were minimal because reductions in small group enrollment were almost fully offset by increases in nongroup coverage. New York has full community rating in both its nongroup and small group markets and may not be representative of other states. However, we generally find that small group enrollees tend to be slightly younger and healthier than nongroup enrollees, suggesting that combining risk pools could lead to higher small group premiums in other states as well.

As with all simulation results, our findings are uncertain, both because of limitations of the model and limitations of the underlying data used to parameterize the model. For example, in analyzing outcomes for the small group market, we were unable to account for the possibility that firms might make fundamental changes to their business models, such as reducing the number of full-time workers, to avoid new regulations. Further, analyses focusing on nongroup premiums are necessarily uncertain, given the limits of existing data on this market. Despite these challenges, state and federal policymakers must continue to implement the law, develop policy guidance and regulations, and make decisions about exchange operations. Recognizing that all models have limitations, we hope that these estimates will provide decisionmakers with insight into the types of changes in enrollment and premiums that may occur as the Affordable Care Act is implemented.

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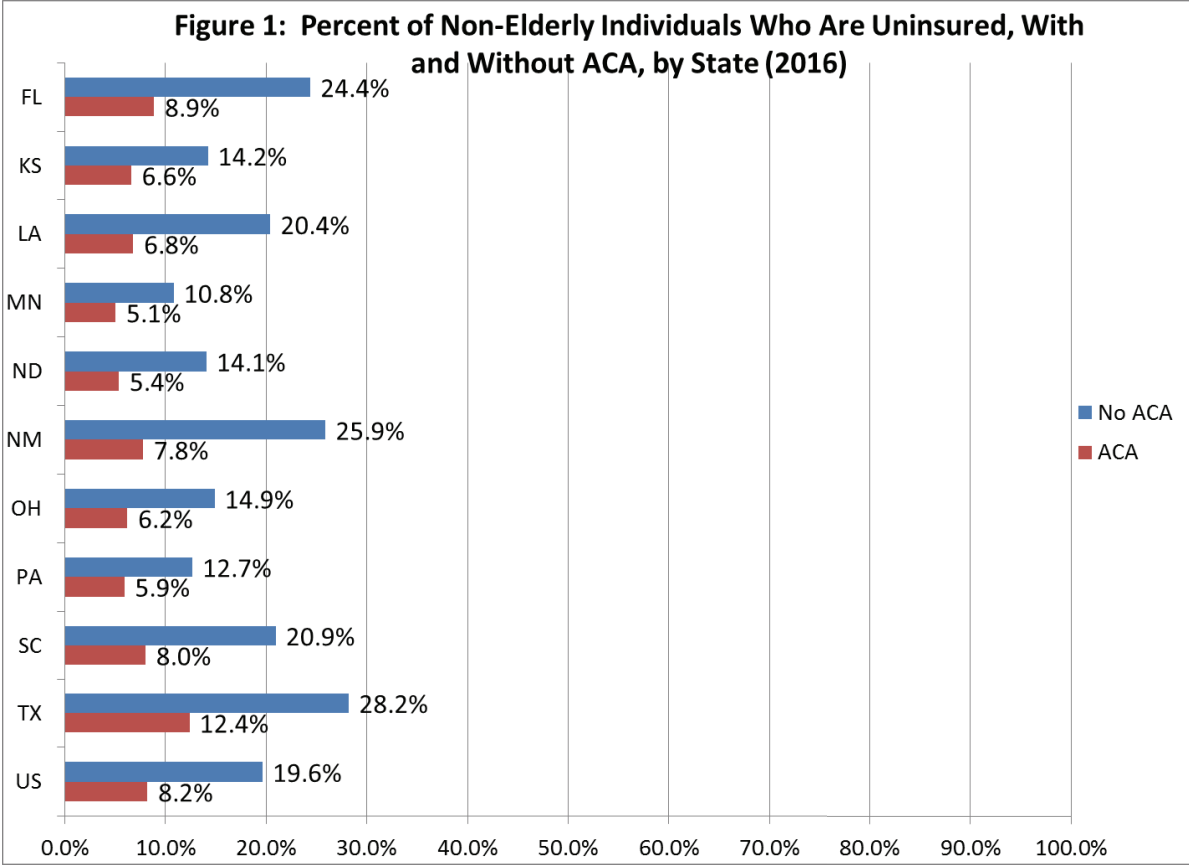
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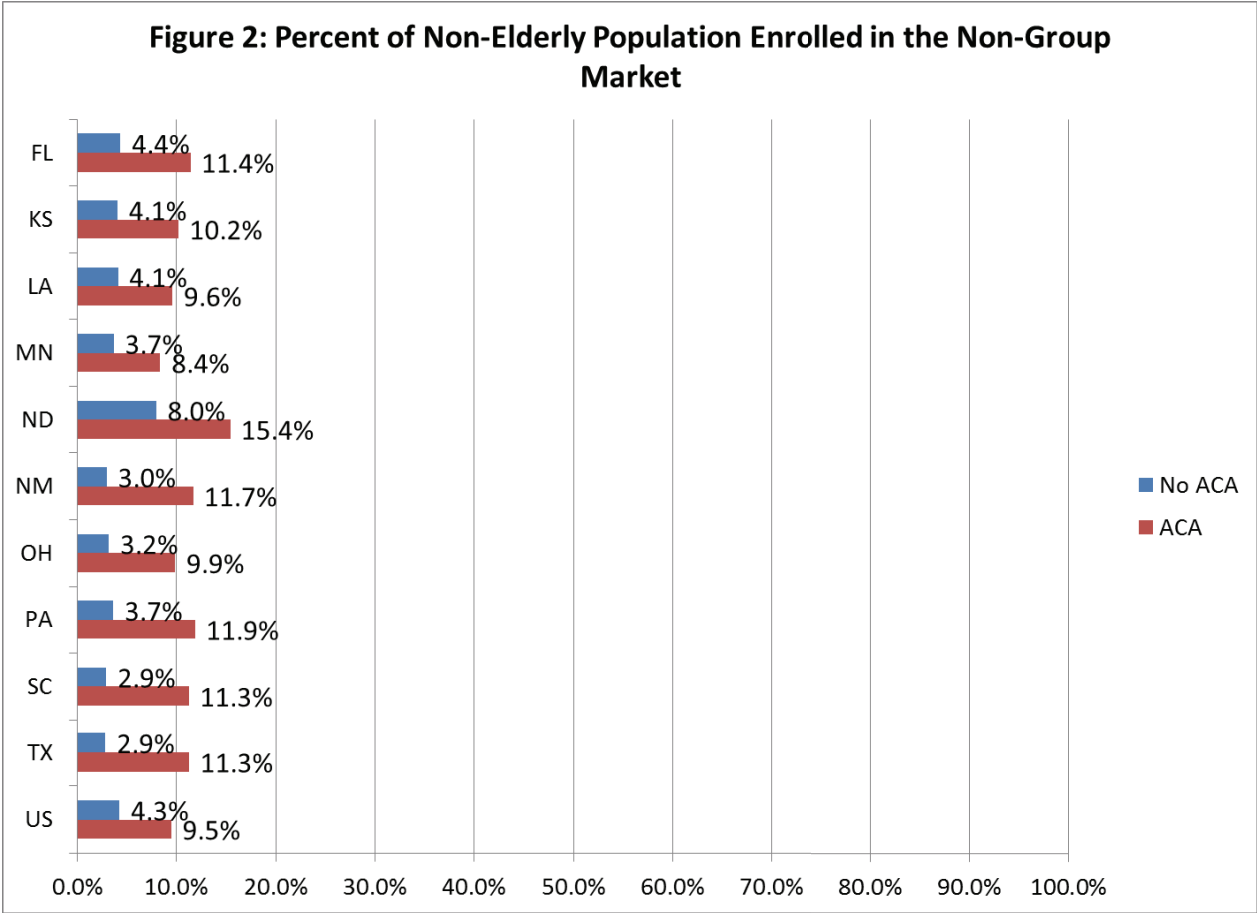
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Figures



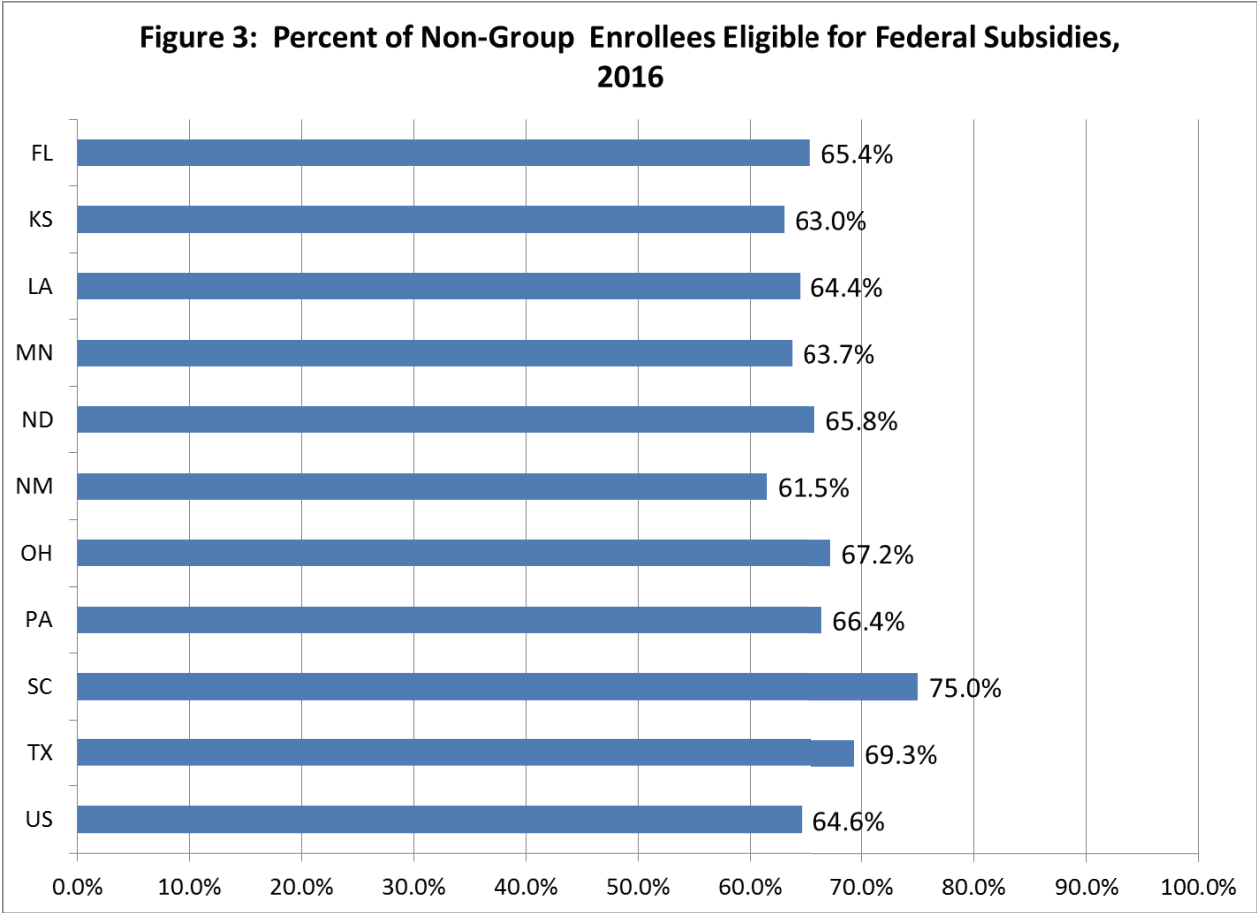
This figure shows the estimated 2016 uninsurance rate in scenarios with and without the Affordable Care Act.

SOURCE: RAND COMPARE model estimates for 2016. Scenarios with the Affordable Care Act assume that all states expand their Medicaid programs.



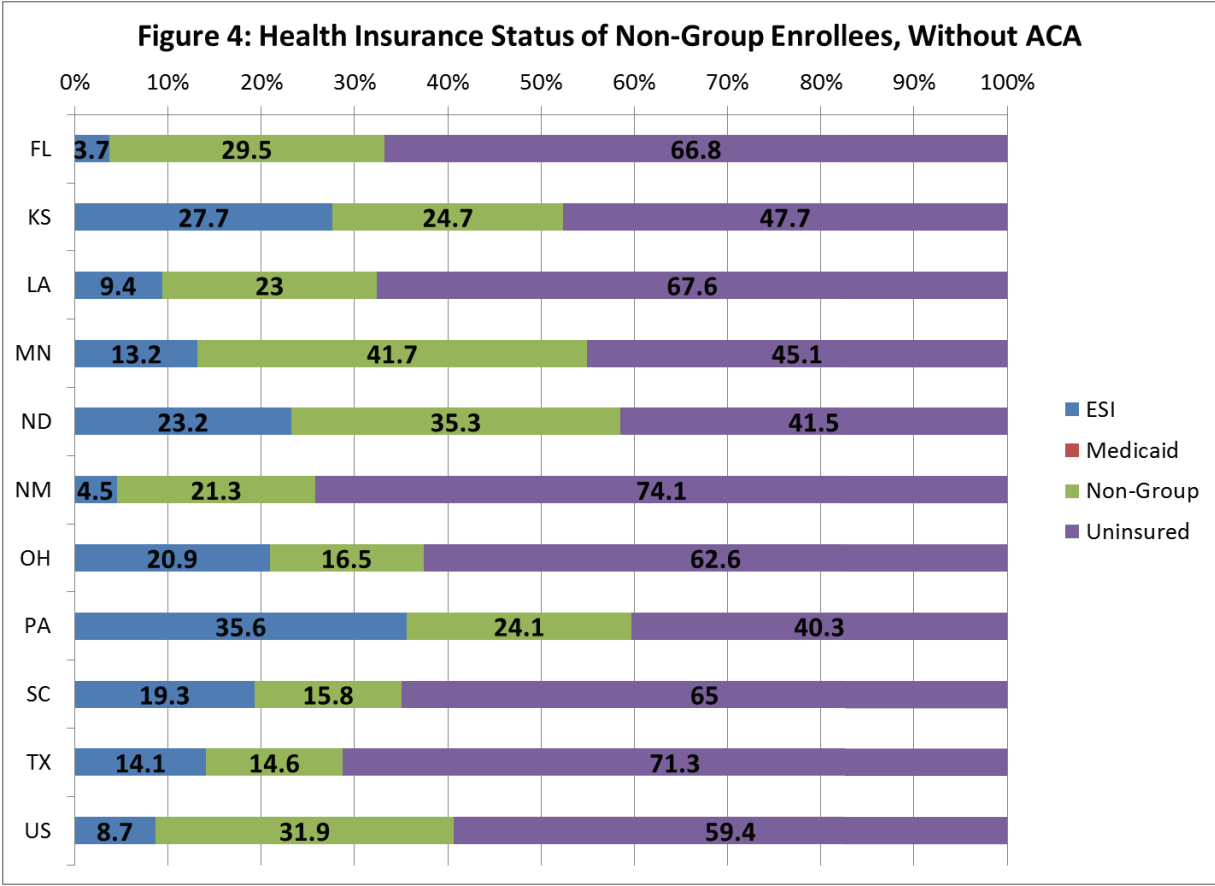
This figure shows the estimated share of the nonelderly population that will enroll in the nongroup health insurance market in 2016, in scenarios with and without the Affordable Care Act.

SOURCE: RAND COMPARE model estimates for 2016. Scenarios with the Affordable Care Act assume that all states expand their Medicaid programs.



This figure shows the estimated share of nongroup enrollees who will be eligible for federal advance premium tax credits.

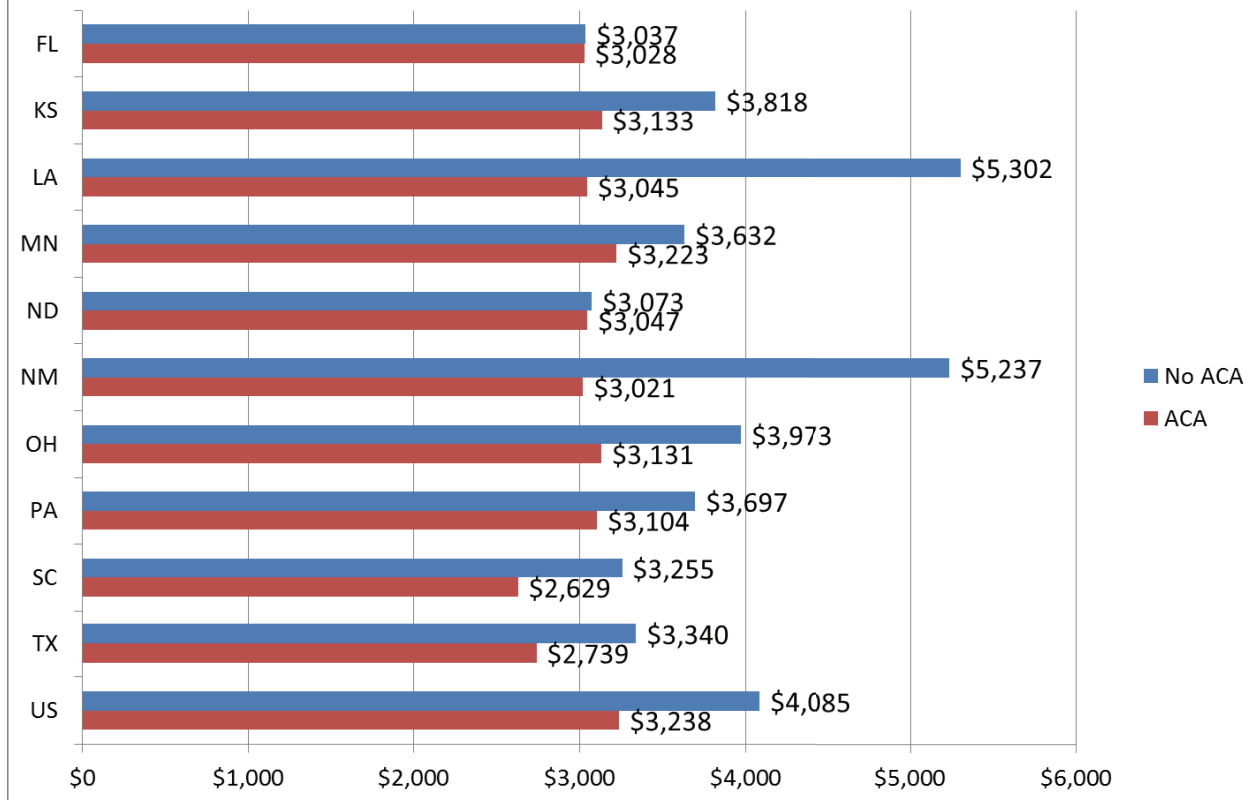
SOURCE: RAND COMPARE model estimates for 2016, assuming that all states expand their Medicaid programs.



This figure shows the estimated health insurance status of 2016 nongroup enrollees in scenarios in which the Affordable Care Act had not been enacted. For example, among those estimated to enroll in Florida’s nongroup market under the law, 3.7 percent would have been on employer-sponsored insurance (ESI), 29.5 percent would have been on nongroup coverage, and 66.8 percent would have been uninsured had the Affordable Care Act not been enacted.

SOURCE: RAND COMPARE model estimates for 2016, assuming that all states expand their Medicaid programs.

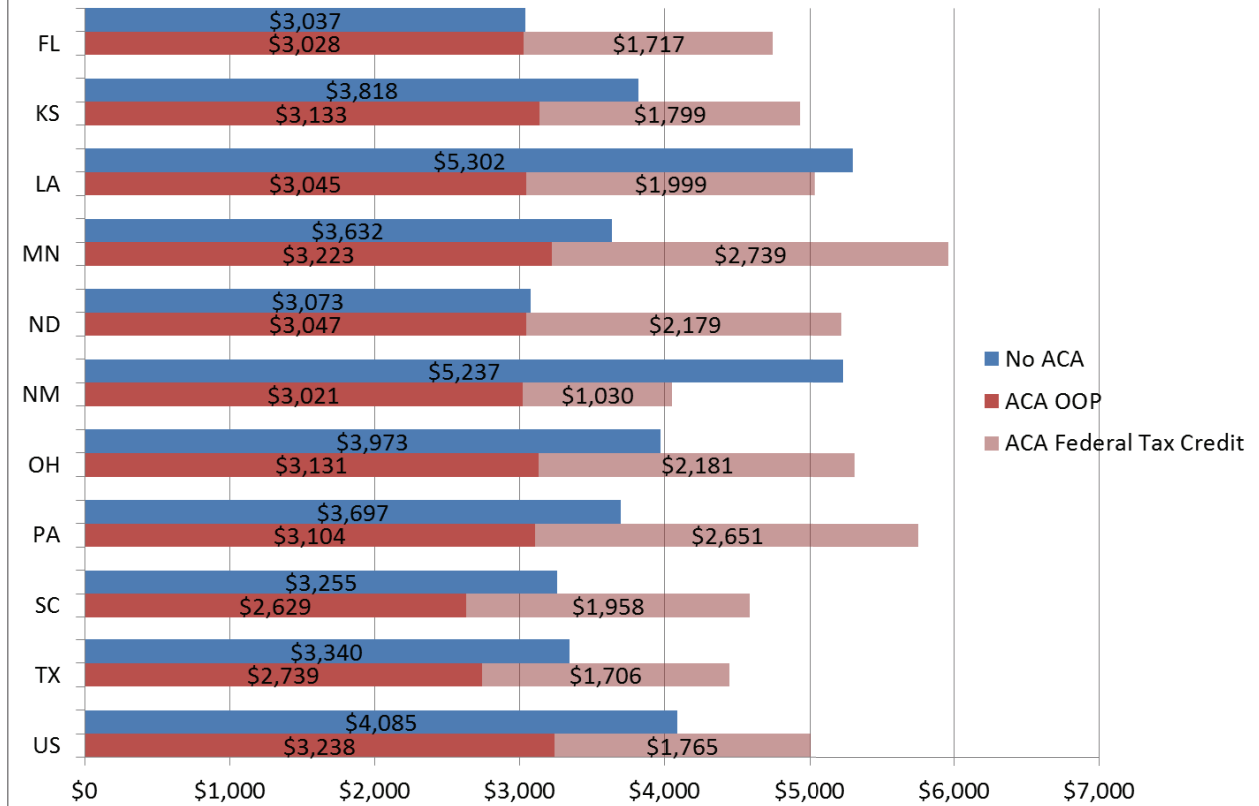
Figure 5: Enrollee-Weighted Out-of-Pocket Premium Spending, Non-Group Market



This figure shows the average out-of-pocket premium spending across all nongroup enrollees in 2016 scenarios with and without the Affordable Care Act. Out-of-pocket premiums reflect individual spending on premiums, net of any government subsidies.

SOURCE: RAND COMPARE model estimates for 2016. Scenarios with the Affordable Care Act assume that all states expand their Medicaid programs.

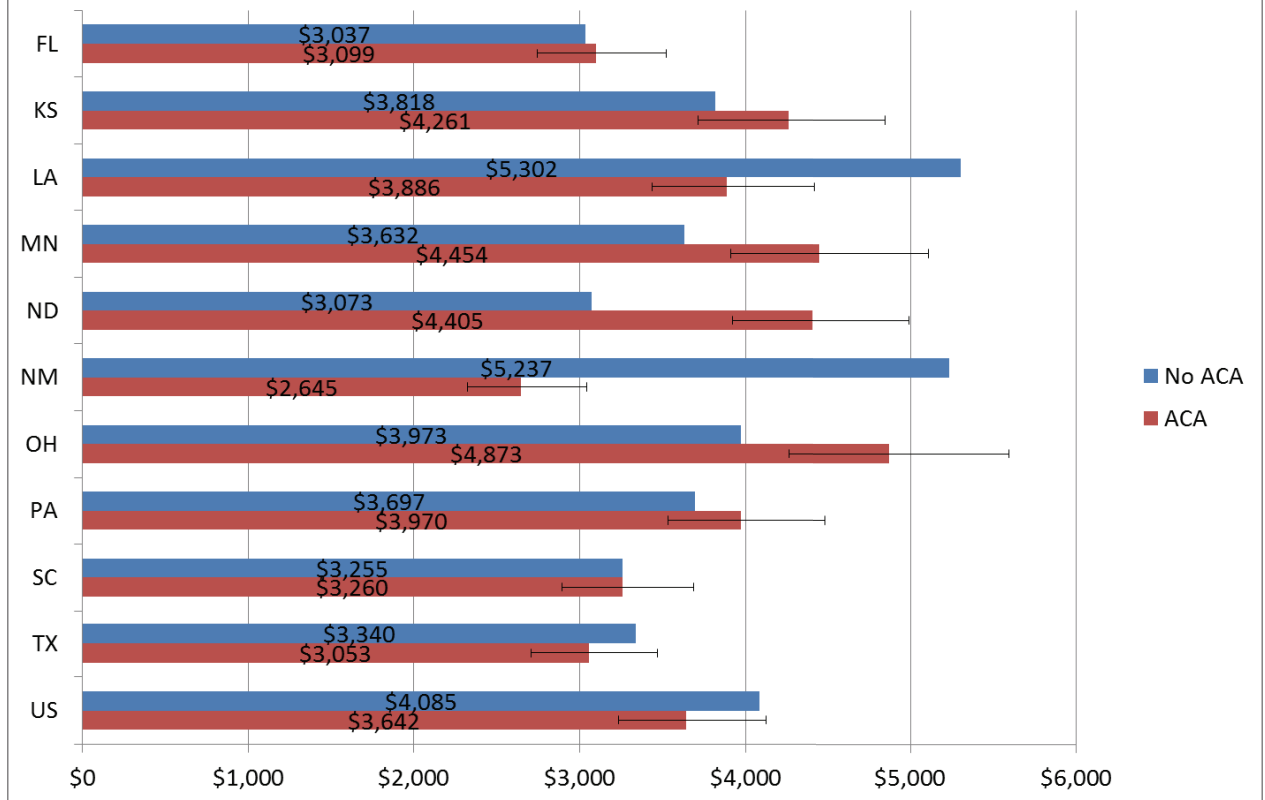
Figure 6: Enrollee-Weighted Premiums, Individual Out-of-Pocket and Federal Contributions, Non-Group Market, 2016



The top bars show the average total premiums estimated in state nongroup markets in 2016 without the Affordable Care Act. The bottom bars show the average out-of-pocket nongroup premium spending (in dark red) and average federal premium subsidy contribution through APTCs (in lighter red) across all nongroup enrollees in scenarios that include the Affordable Care Act. Total nongroup premiums in the Affordable Care Act scenarios can be calculated by adding the out-of-pocket and federal contributions. Out-of-pocket premiums reflect individual spending on premiums, net of any government subsidies.

SOURCE: RAND COMPARE model estimates for 2016. Scenarios with the Affordable Care Act assume that all states expand their Medicaid programs.

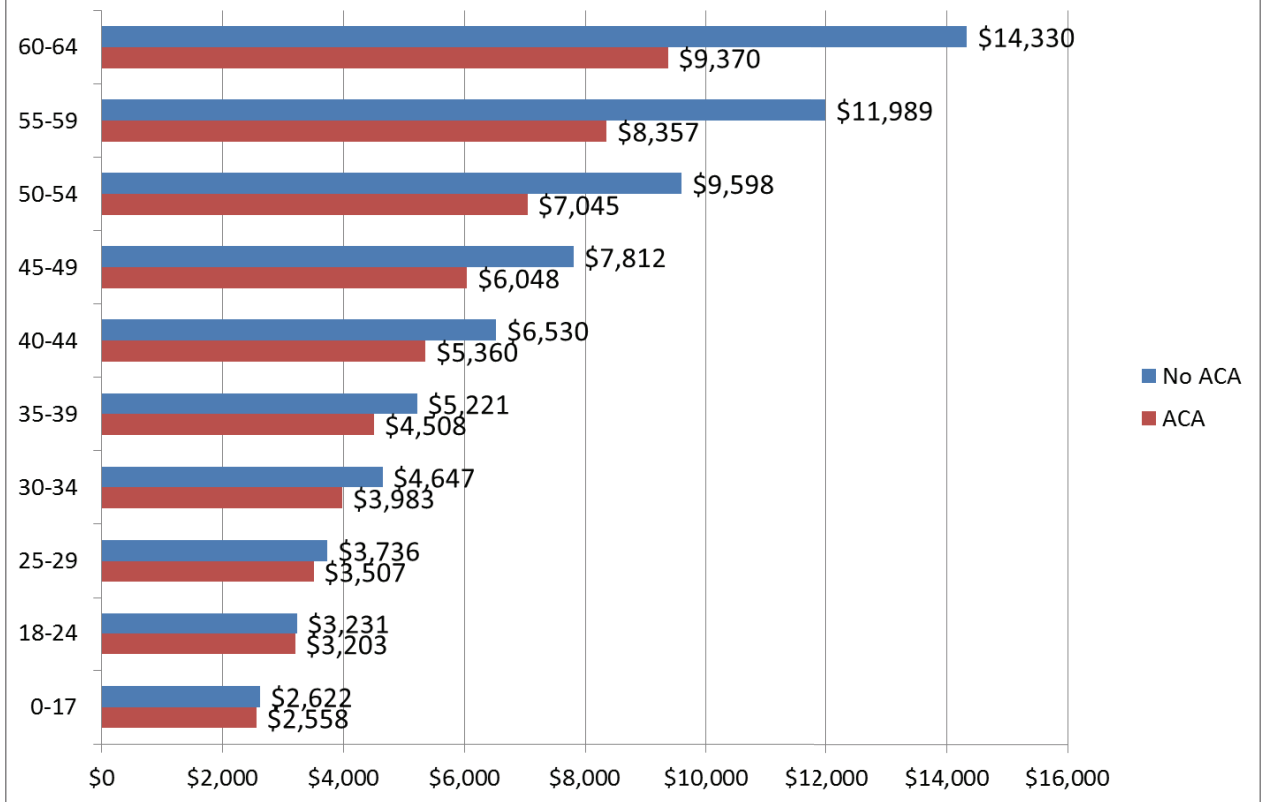
Figure 7: Age, Tobacco Use, and Actuarial Value Standardized Average Premiums, Non-Group Market



This figure shows total nongroup premium estimates, standardized to reflect the age, tobacco use, and actuarial value distribution of the nongroup market without the Affordable Care Act. Confidence bars are based on a Monte Carlo simulation described in the main text.

SOURCE: RAND COMPARE model estimates for 2016. Scenarios with the Affordable Care Act assume that all states expand their Medicaid programs.

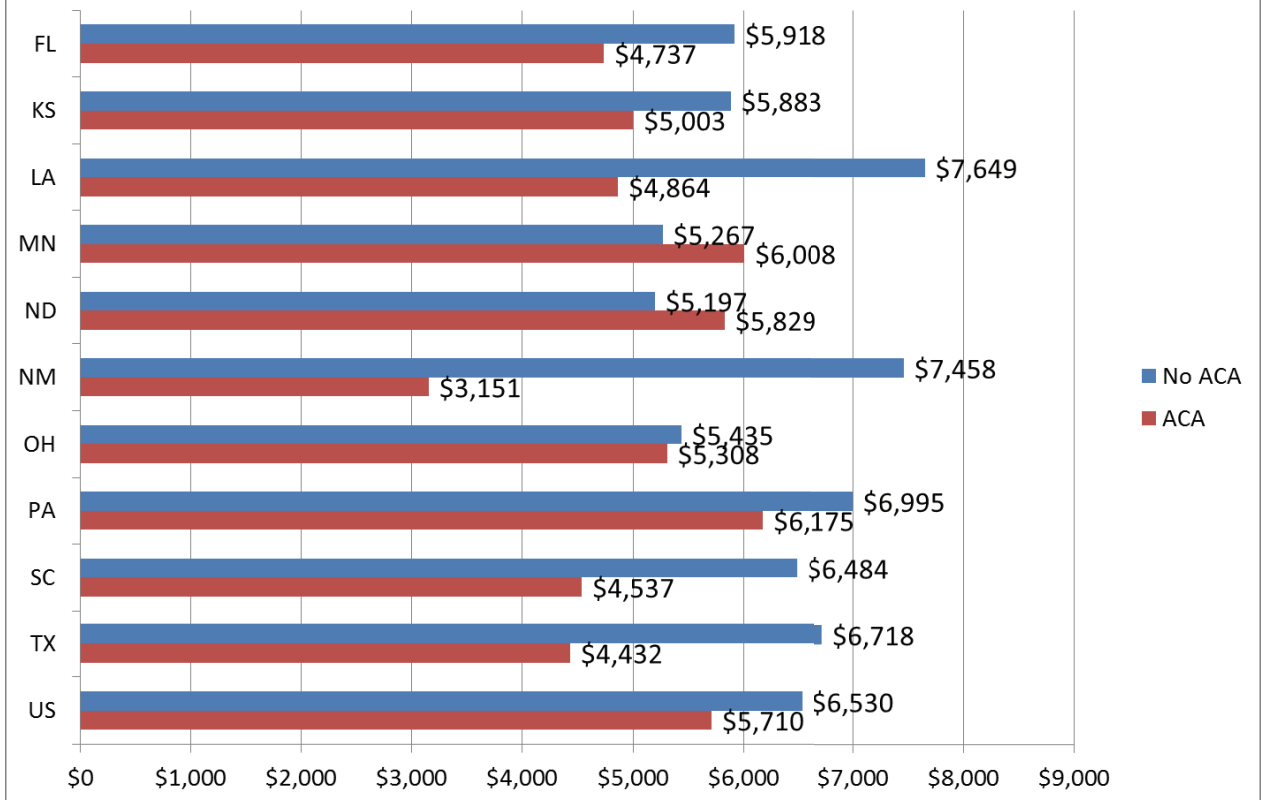
Figure 8: Tobacco-Use, and Actuarial-Value Standardized Premium Schedule, US



This figure shows total nongroup premium estimates from the national version of the COMPARE model by age group. Estimates are standardized to reflect a constant actuarial value and distribution of tobacco use with and without the Affordable Care Act.

SOURCE: RAND COMPARE model estimates. Scenarios with the Affordable Care Act assume that all states expand their Medicaid programs.

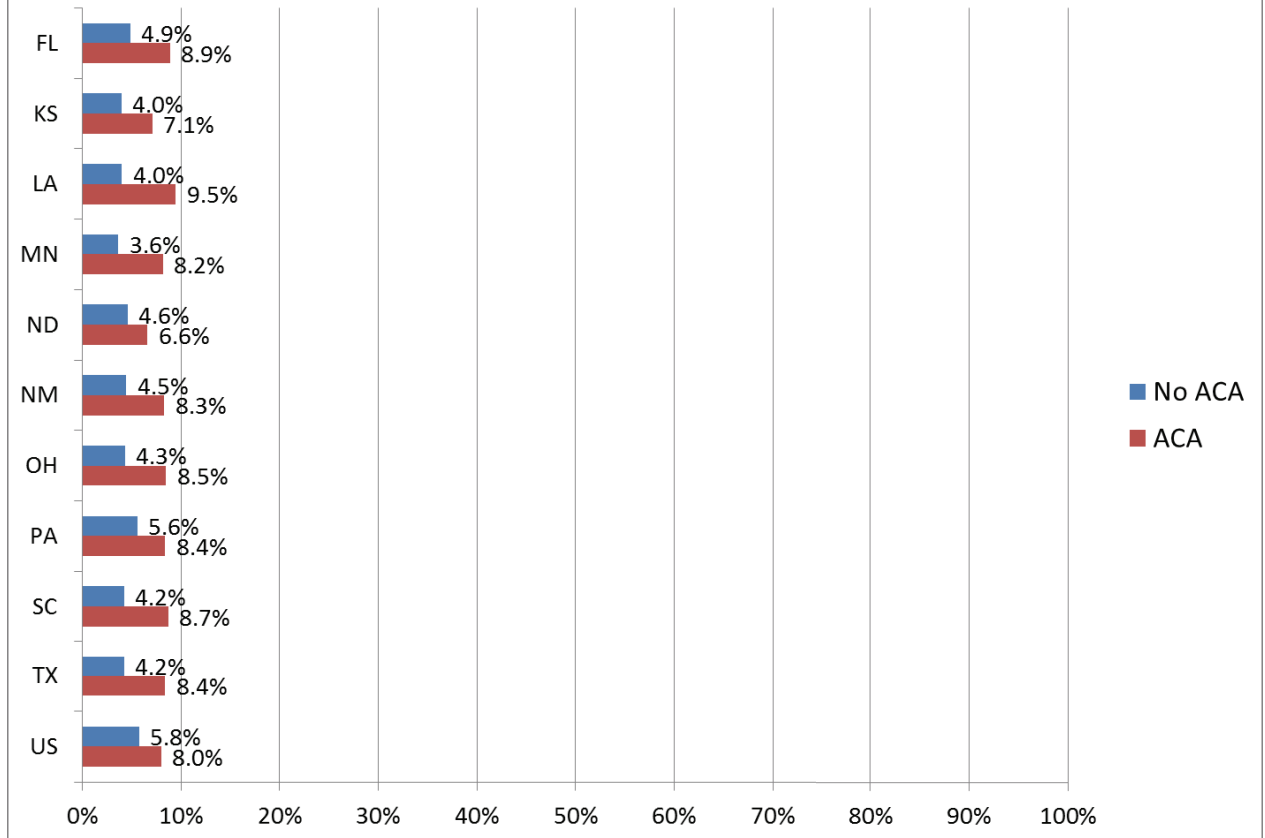
Figure 9: Tobacco-Use, and Actuarial-Value Standardized Premium Schedule, 40-44 Year Olds



This figure shows estimated total nongroup premiums for 40- to 44-year-olds in all states with and without the Affordable Care Act.

SOURCE: RAND COMPARE model estimates for 2016. Scenarios with the Affordable Care Act assume that all states expand Medicaid coverage.

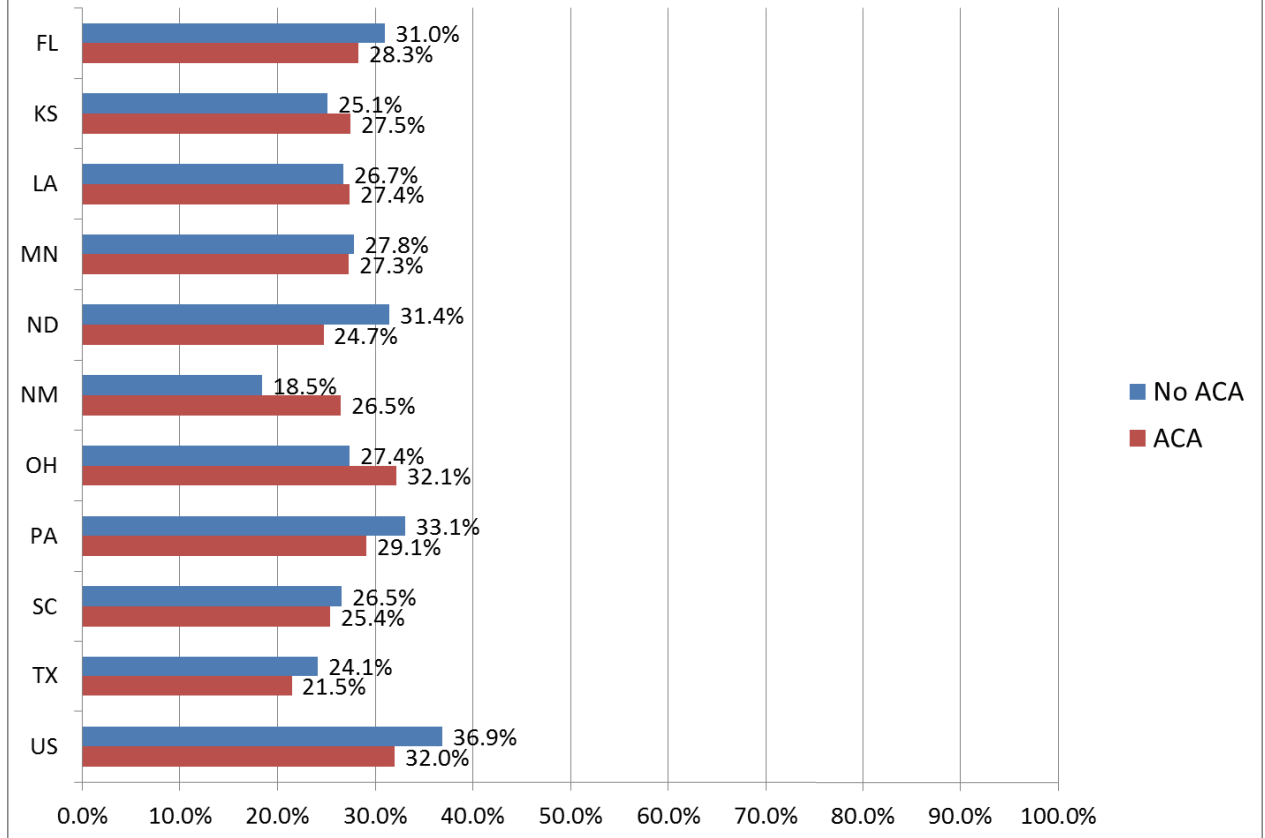
Figure 10: Percent of Non-Group Market in Poor or Fair Health



This figure shows the share of nongroup enrollees under age 65 estimated to self-report fair or poor health.

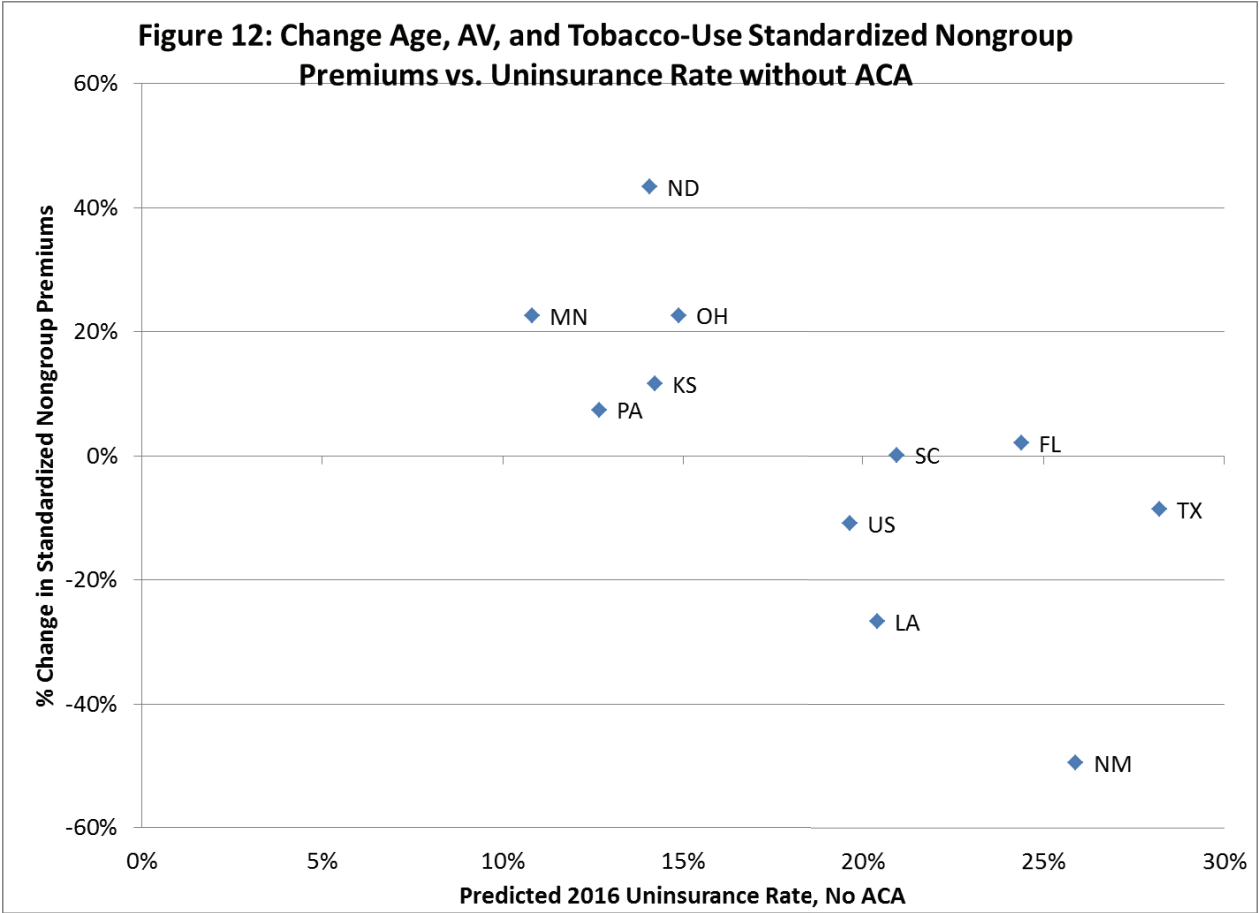
SOURCE: Affordable Care Act values reflect RAND COMPARE model estimates for 2016, assuming that all states expand their Medicaid programs. Values without the Affordable Care Act are based on the April 2010 wave of the 2008 Survey of Income and Program Participation.

Figure 11: Percent of Non-Group Market Age 50 to 64

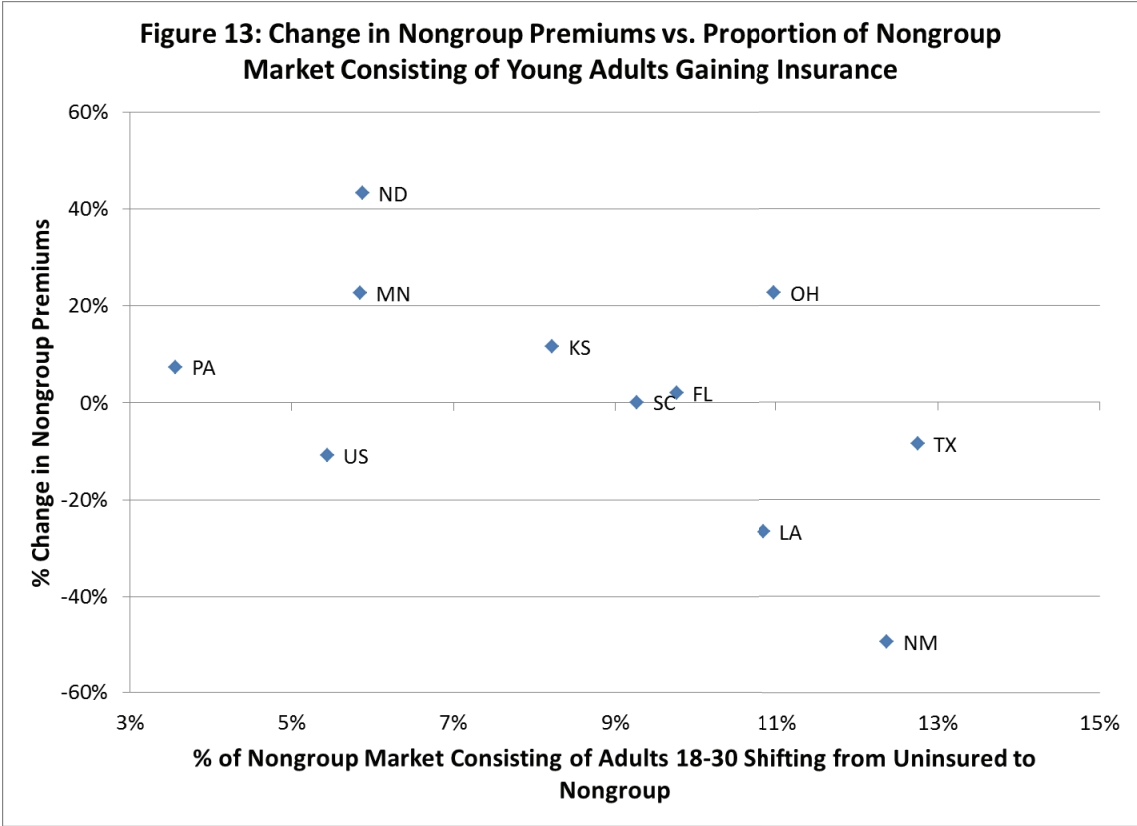


This figure shows the share of nongroup enrollees under age 65 estimated to be age 50 to 64.

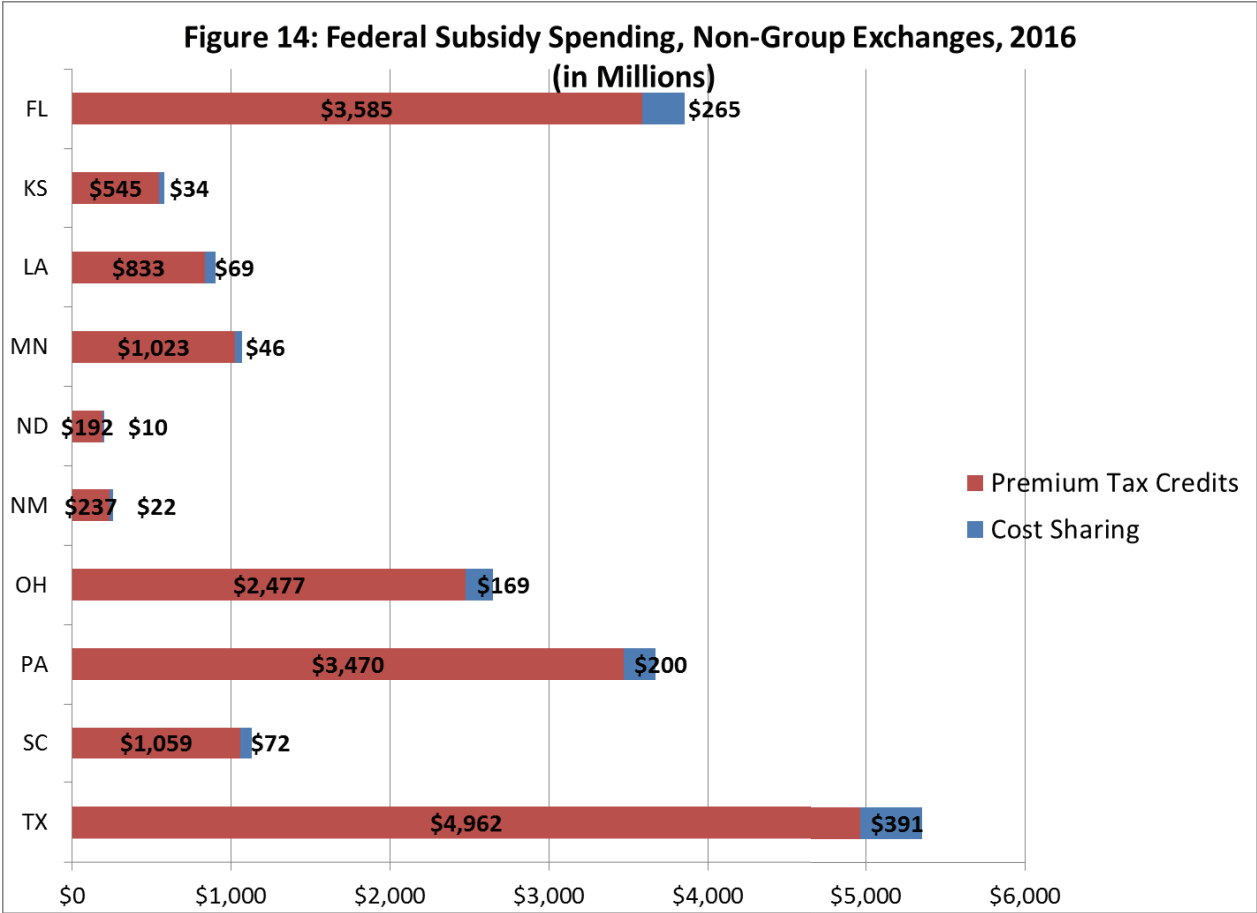
SOURCE: Affordable Care Act values reflect RAND COMPARE model estimates for 2016, assuming that all states expand their Medicaid programs. Values without the Affordable Care Act are based on the April 2010 wave of the 2008 Survey of Income and Program Participation.



SOURCE: RAND COMPARE model estimates for 2016, assuming that all states expand their Medicaid programs. The correlation between the percentage change in standardized nongroup premiums and the predicted 2016 uninsurance rate in the case without the Affordable Care Act is -0.71 . The percentage change in nongroup premiums assumes that all states expand their Medicaid programs.



SOURCE: RAND COMPARE model estimates for 2016, assuming that all states expand their Medicaid programs. The correlation between the percentage change in standardized nongroup premiums and the percentage of the nongroup market consisting of young adults who were previously uninsured is -0.53 . Estimates assume that all states expand their Medicaid programs.



This figure shows estimated federal spending for APTCs and for cost-sharing subsidies.

SOURCE: RAND COMPARE model estimates for 2016, assuming that all states expand their Medicaid programs.

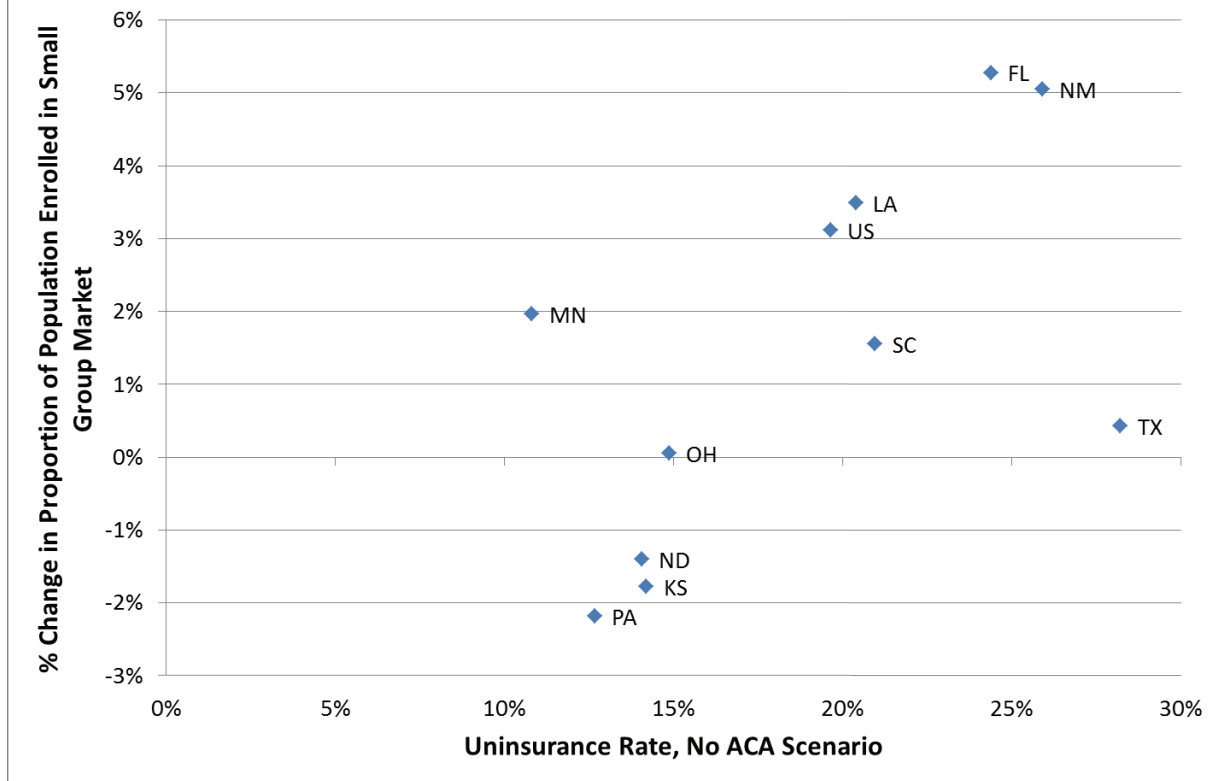
Figure 15: Percent of Non-Elderly Population Enrolled in the Small Group Market



This figure shows the estimated share of the nonelderly population that will enroll in the small group health insurance market in 2016 in scenarios with and without the Affordable Care Act.

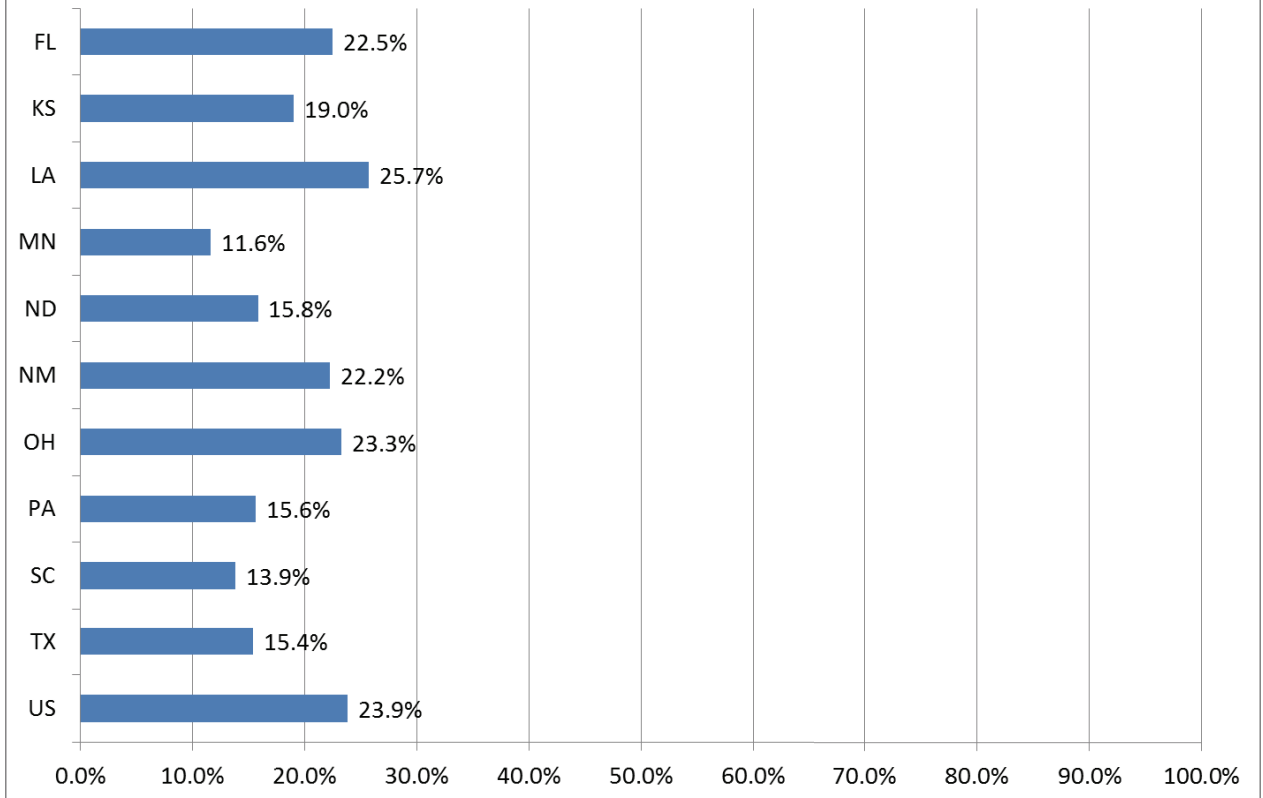
SOURCE: RAND COMPARE model estimates for 2016. Scenarios with the Affordable Care Act assume that all states expand their Medicaid programs.

Figure 16: Change in Small Group Enrollment vs. Pre-ACA Uninsurance Rate



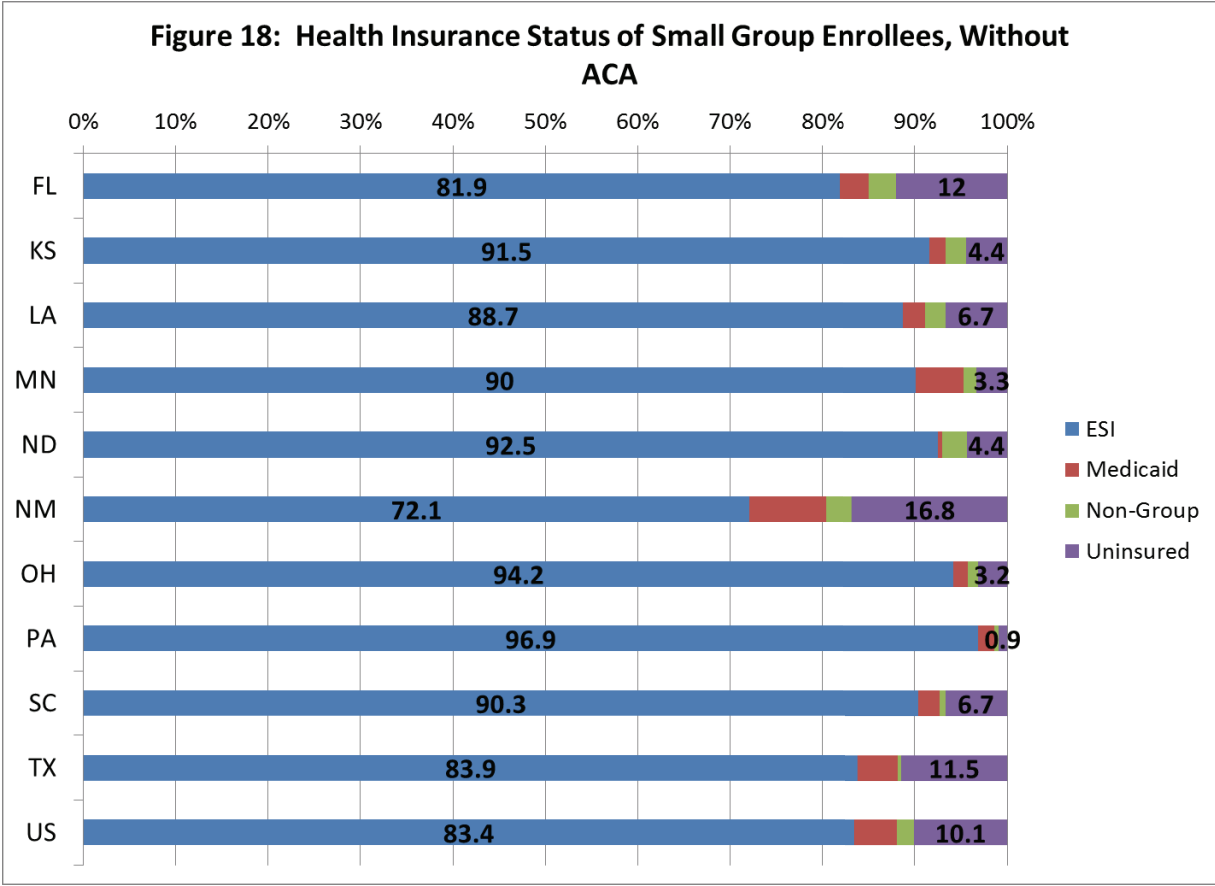
SOURCE: RAND COMPARE model estimates for 2016. The correlation between the percentage change in the proportion of the population enrolled in the small group market and the uninsured rate without the Affordable Care Act is 0.61. The percentage change in the proportion of the population enrolled in the small group market represents the change in small group enrollment with and without the Affordable Care Act, assuming that all states expand their Medicaid programs.

Figure 17: Share of Small-Group Enrollees at Firms Eligible for Tax Credits



This figure shows the share of small group enrollees in 2016 scenarios with the Affordable Care Act whose firms qualify for temporary federal premium tax credits.

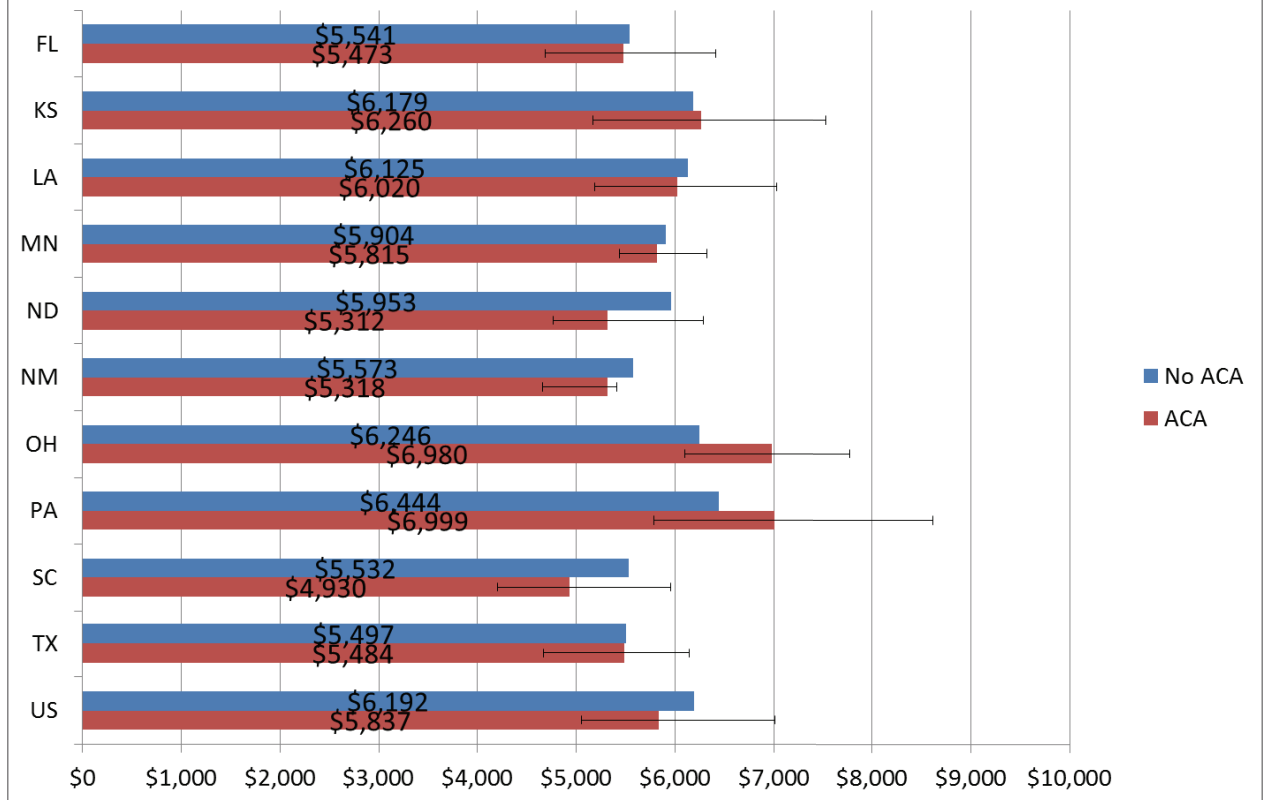
SOURCE: RAND COMPARE model estimates for 2016, assuming that all states expand their Medicaid programs.



This figure shows the estimated health insurance status of 2016 small group enrollees in scenarios in which the Affordable Care Act had not been enacted. For example, among those estimated to enroll in Florida’s small group market under the law, 81.9 percent would have been on ESI, 12 percent would have been uninsured, and the remainder would have had other coverage if the Affordable Care Act had not been enacted.

SOURCE: RAND COMPARE model estimates for 2016, assuming that all states expand their Medicaid programs.

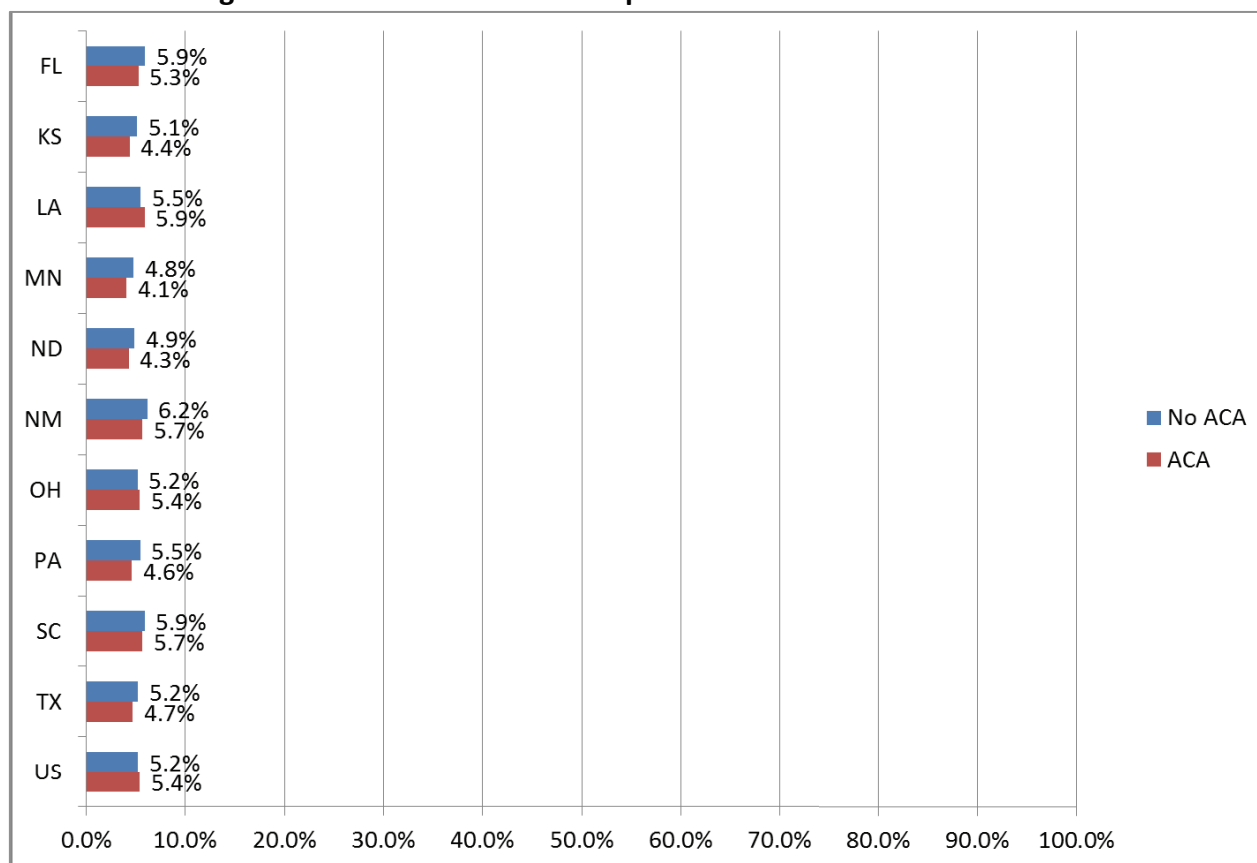
Figure 19: Age, Tobacco-Use, and Actuarial Value Standardized Average Premiums, Small Group Market



This figure shows small group premium estimates with and without the Affordable Care Act but standardized using the age, tobacco use, and actuarial value distribution of the small group market without the Affordable Care Act.

SOURCE: RAND COMPARE model estimates for 2016, assuming that all states expand their Medicaid programs. Confidence bars are based on a Monte Carlo simulation described in the main text.

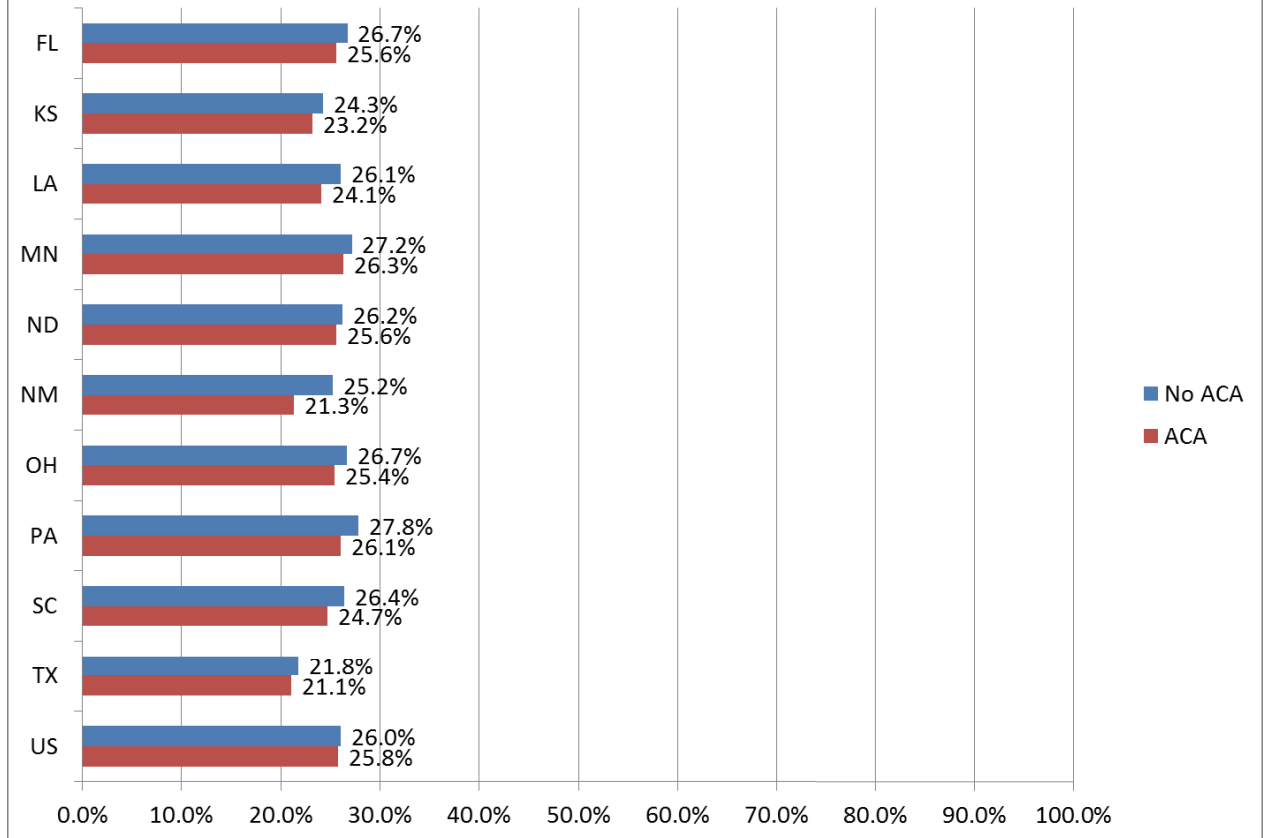
Figure 20: Percent of Small Group Enrollees in Fair or Poor Health



This figure shows the share of small group enrollees under age 65 estimated to self-report fair or poor health.

SOURCE: Estimates in scenarios with the Affordable Care Act come from the RAND COMPARE model for 2016, assuming that all states expand their Medicaid programs. Estimates without the Affordable Care Act are based on the April 2010 panel of the 2008 Survey of Income and Program Participation.

Figure 21: Percent of Small Group Enrollees Ages 50-64

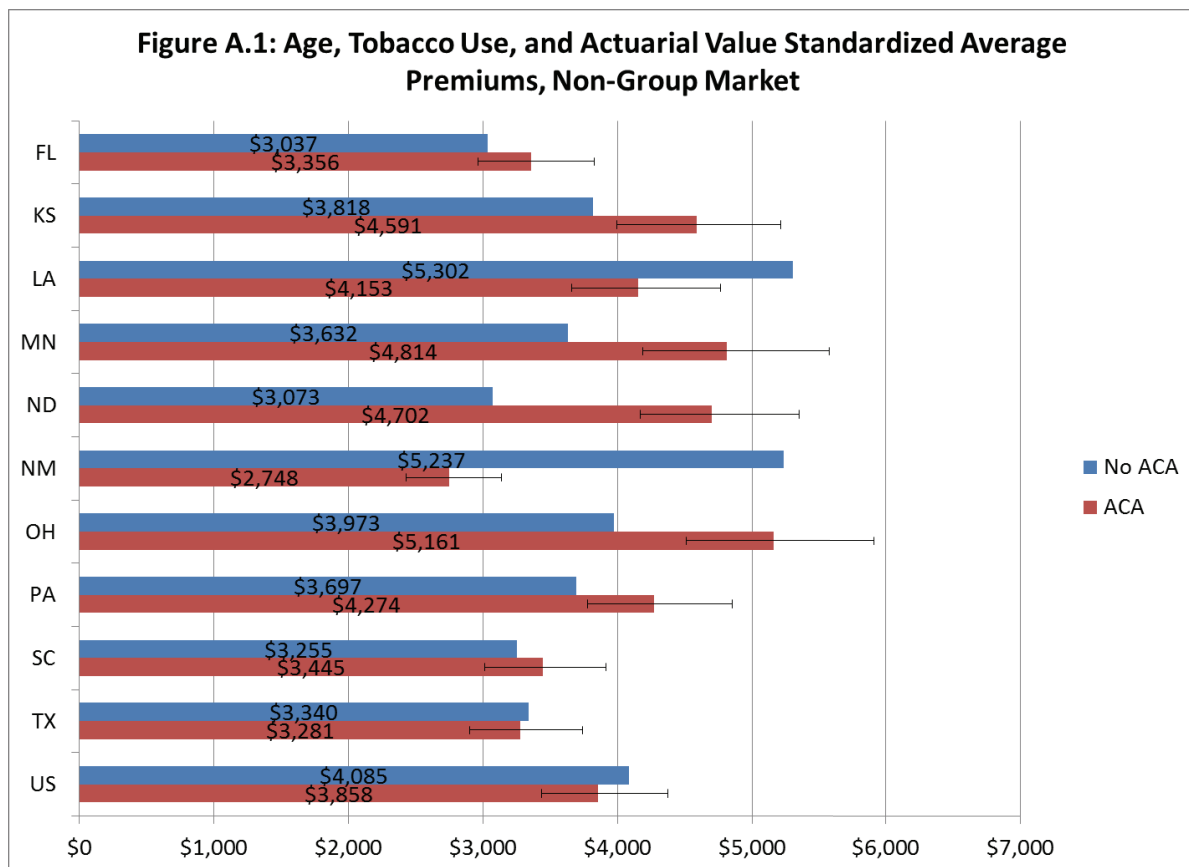


This figure shows the share of small group enrollees under age 65 estimated to be between ages 50 and 64.

SOURCE: Estimates in scenarios with the Affordable Care Act come from the RAND COMPARE model for 2016, assuming that all states expand their Medicaid programs. Estimates without the Affordable Care Act are based on the April 2010 panel of the 2008 Survey of Income and Program Participation.

Appendix A: Sensitivity to MLR Assumptions

In our main analyses, we assumed that the Affordable Care Act would lead to a 10–percentage point increase in the MLR for nongroup plans because of new lower bounds on allowable MLR amounts. However, our assumptions could overstate the effect of the Affordable Care Act’s MLR requirements because of changes in the way MLR is calculated. While traditionally the numerator of the MLR has included only claims costs, the Affordable Care Act allows insurers to include some nonclaims costs—for example, costs related to quality improvement activities—in the numerator of the equation. In Figure A.1, we show age-, actuarial value-, and tobacco use–standardized nongroup premiums after reestimating the model with the assumption that the act leads only to a 5–percentage point increase in MLR. This change leads to an increase in 2016 premiums in scenarios with the Affordable Care Act relative to those reported in Figure 7. We now find increases in premiums for five states (Kansas, Minnesota, North Dakota, Ohio, and Pennsylvania) and decreases in two states (Louisiana and New Mexico). We continue to find no statistically significant change in premiums for the United States overall and for three of the ten states evaluated (Florida, South Carolina, and Texas).



Appendix B: Key Assumptions

In this section, we summarize the key assumptions used in this version of the model.

Actuarial Values in the Group Market. Prior to the implementation of the Affordable Care Act, we used actuarial values of 0.75, 0.80, and 0.85 for small (≤ 25 workers), medium (26–100 workers), and large (101+ workers) firms. After 2014, firms with 100 or fewer workers have the choice of offering bronze, silver, gold, or platinum plans with corresponding actuarial values of 0.60, 0.70, 0.80, and 0.90. In estimating the model, we assume that firms with 100 or fewer workers choose the plan tier that provides the best value for the most workers, using a utility maximization approach. However, this leads to disproportionate enrollment in platinum plans caused by the strong tax advantage associated with ESI. After consulting with actuarial experts, we determined that the movement into platinum plans was unlikely, perhaps because the utility maximization is not capturing certain nuances of the firms’ decision process. To address this concern, we make an out-of-model adjustment to our post–Affordable Care Act estimates to reassign small group enrollees across plan tier according to industry. The mapping we use for this reassignment is shown in Table B.1.

Table B.1: Post–Affordable Care Act Small Group Plan Reassignments

Industry	Plan Tier
Agriculture	Bronze
Mining	Gold
Construction	Gold
Manufacturing	Gold
Transportation, communication, and utilities	Platinum
Wholesale trade	Bronze
Retail trade	Bronze
Finance/real estate	Silver
Services (1–25 employees)	Gold
Services (>25 employees)	Silver
Education	Platinum

Industry	Plan Tier
Government	Gold
Health care	Silver

We assume that actuarial values for firms with more than 100 workers will remain constant at 0.85 with and without the Affordable Care Act.

MLR Without the Affordable Care Act. In the status quo (pre– Affordable Care Act) group market, as well as for grandfathered and large group plans, the MLRs were a function of firm size as follows: 0.80 for firms under 25 workers, 0.87 for firms having between 26 and 100 workers, and 0.92 for firms with more than 100 employees. In the nongroup market, we assumed an MLR of 0.70. These values were set in consultation with ASPE and CCIIO.

MLR with the Affordable Care Act. Because of provisions in the Affordable Care Act that require minimum MLR values, we assumed that the MLR would increase to 0.88 for plans offered in the regulated small group market (≤ 100 workers) and to 0.80 for plans in the regulated nongroup market.

Regulated Nongroup and Small Group Risk Pools. With the exception of the sensitivity analyses, we assumed that these two types of risk pools were split.

Grandfathered Nongroup Market. We assume that the grandfathered nongroup market ceases to exist by 2016.

Minimum Firm Size That Can Access SHOP. We assumed that SHOP is available to firms with fewer than 100 workers.

Medicaid. In the main analysis, we assumed that all states would expand Medicaid. However, for the sensitivity analyses, we assumed that three states—Texas, Louisiana, and Florida—decided not to exercise Medicaid expansion. For all estimates, we assumed that Medicaid eligibility for groups eligible as of March 23, 2010 (e.g., low-income parents), would be maintained, regardless of expansion decisions.