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The Impact of the Coverage-Related Provisions of the Patient Protection and Affordable Care Act on Insurance Coverage and State Health Care Expenditures in Connecticut

An Analysis from RAND COMPARE

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Executive Summary

The Patient Protection and Affordable Care Act (ACA) contains substantial new requirements aimed at increasing rates of health insurance coverage. These include a mandatory expansion of Medicaid programs to cover individuals in households with incomes below 133 percent of the federal poverty level, a requirement that states develop and run health insurance exchanges through which individuals and small businesses can purchase health care coverage, a requirement that large and mid-sized employers—including state governments—provide qualifying coverage to employees or face the possibility of penalties, and a requirement that most individuals purchase or otherwise obtain coverage.¹ Because many of these provisions impose additional costs on the states, officials need reliable estimates of the likely impact of the ACA in their state. To demonstrate the usefulness of modeling for state-level decisionmaking, RAND undertook a preliminary analysis of the impact of the ACA on five states—California, Connecticut, Illinois, Montana, and Texas.

To estimate the ACA's impact on coverage and health care spending in Connecticut, we used the RAND COMPARE (*Comprehensive Assessment of*

Reform Efforts) microsimulation model.² The following represents our best estimates of the effect of the coverage-related provisions of the ACA, though there is, of course, considerable uncertainty associated with these projections. Unless otherwise indicated, all projections apply to the year 2016, the year that all of the provisions in the ACA related to coverage expansion will be fully implemented:

- The proportion of Connecticut residents with health insurance will increase from 89 to 95 percent—a reduction in the uninsured of 170,000.
- The nature of employer-sponsored coverage will change slightly after implementation of the ACA: There will be little change in the number of employees offered coverage, but approximately 40,000 employees will be covered through the exchange.
- By 2016, 10 percent of the insured, nonelderly population (roughly 310,000) will have coverage through the exchange.
- Enrollment in Medicaid will increase by 31 percent (130,000).
- Although state Medicaid spending will increase, total state government spending on health care will be 10 percent lower for the combined 2011–2020 period—mostly because of federal subsidies for res-

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¹ ACA also involves substantial changes to Medicare, insurance regulation, and other aspects of health care that could substantially impact state and private-sector costs and coverage—factors that are not included in this analysis.

² For a detailed description of the methods used in the RAND COMPARE microsimulation model, including a discussion of the parameters and assumptions used in the modeling, see Girosi et al., 2009.

idents who would have been covered by Connecticut's state-run health insurance program, SAGA (State-Administered General Assistance). In dollar terms, this amounts to a \$300 million reduction in state spending in 2016.

I. Introduction and Background

The Patient Protection and Affordable Care Act (P.L. 111-148, or ACA), along with amendments attached through the Health Care and Education Reconciliation Act of 2010 (P.L. 111-152), introduce new obligations for states pertaining to health care coverage. Among these requirements are mandatory expansion of Medicaid to cover individuals in households with incomes below 133 percent of the federal poverty level (FPL) (\$14,404 for a single person; \$29,327 for a family of four), a requirement that states develop and run health insurance exchanges through which individuals and small businesses can purchase health care coverage, a requirement that large and mid-sized employers—including state governments—provide qualifying coverage to employees or face the possibility of penalties, and a requirement that individuals purchase or otherwise obtain coverage (unless they qualify for a waiver). These requirements, particularly the Medicaid expansion and the additional Medicaid take-up among the currently eligible, have potential consequences for state budgets.

While the law contains numerous provisions intended to improve health care delivery and reform how health care providers are paid (provisions that could have substantial impacts on the cost and quality of health care), in this analysis, we consider the implications of the main coverage provisions of the ACA for the state of Connecticut, focusing on total health insurance coverage in the state, Medicaid expenditures, exchange enrollment, and spending on private health insurance for state employees.³

Overview of the ACA

The ACA includes several provisions that will dramatically alter levels of coverage and associated costs at the state level. These include the following:

Medicaid expansion. As noted above, the ACA requires that states expand Medicaid eligibility to include anyone in households with income below 133 percent of the federal poverty level (FPL) (\$14,404 for a single person; \$29,327 for a family of four). Initially, the federal government will pay all of the Medicaid expenses for the newly eligible; this will later decline to 90 percent, a far higher federal share than is historically associated with Medicaid

programs.⁴ States are not required to expand eligibility until 2014, but federal Medicaid contributions for newly eligible populations will be made available immediately to any state that chooses to expand eligibility ahead of the deadline.

State-based health insurance exchanges. Beginning in 2014, state health insurance exchanges (Internet-based virtual marketplaces for private insurance plans) must be made available to individuals and to businesses with 50 or fewer workers. By 2016, all businesses with 100 or fewer workers must be permitted to offer coverage through the exchanges, and states can opt to expand the exchange eligibility to all businesses, regardless of size, in 2017. Even when the option is available to them, employers will not be required to offer exchange coverage to their employees; for employers that choose to offer coverage on their own in lieu of the exchanges, their employees will not be permitted to obtain coverage through the exchanges. States also have the option of joining together to create regional exchanges, or they may opt to make use of the federal “fall-back” of an exchange operated by the federal government. In addition, states have the option to offer a basic health plan for individuals with incomes between 133 and 200 percent of the FPL in lieu of coverage through the exchanges for this group.

Individual mandate. The ACA requires that, beginning in 2014, everyone must have health insurance, either through a private source or a public program. Those who do not must pay a penalty. For individuals with incomes between 100 and 400 percent of the FPL who do not have qualifying health insurance offers through their employer, federal subsidies in the form of tax credits are available to offset the cost of purchasing insurance. Subsidies, however, are available only for plans purchased through the health insurance exchanges.

Employer penalties. Under the ACA, beginning in 2014 mid-sized and large employers (defined as those with more than 50 workers) will face penalties if they do not offer coverage and any of their workers receive subsidized coverage on the exchanges. The penalty is \$2,000 per worker, with the first 30 workers excluded from the payment calculation. Although the penalty is triggered only if a worker receives subsidized coverage from the exchanges, the penalty amount is calculated based on the total size of the firm's workforce. For example, if a firm had 50 employees and did not offer coverage, the penalty would be $(50 - 30) \times \$2,000 = \$40,000$. Mid-sized and large businesses are also at risk for penalties if a worker's premium contribution share exceeds 9.5 percent of that

³ The analysis does not consider the possibility that Connecticut would seek to obtain a state innovation waiver, which would supplant many of the requirements, including the individual mandate, with a state-designed system that would be required to achieve the same coverage goals.

⁴ The federal matching rate for newly eligible Medicaid enrollees is set at 100 percent for FY2014 through FY2016; it falls to 95 percent for FY2017, to 94 percent for FY2018, to 93 percent for FY2019, and to 90 percent for FY2020 and beyond.

employee's income or if the actuarial value of offered coverage is lower than 60 percent.

Finally, starting in 2018, some premiums in excess of \$10,200 for single coverage and \$27,500 for family coverage will be subject to an excise tax (the so-called Cadillac tax). Those thresholds will be higher if premiums grow faster than expected, and in 2018 the excise tax is expected to affect only a small fraction of policies. However, in the following years, the threshold for the tax rises only with general inflation, so that if premiums continue to increase more quickly than inflation, the tax will affect more and more policies with each subsequent year.

In previous analyses, RAND projected that the coverage expansion options included in the ACA will result, at the national level, in the number of uninsured being reduced from 52 million to 22 million—a reduction of 56 percent. Although the Congressional Budget Office (CBO) estimates that the coverage expansion provisions alone would increase the national deficit by \$938 billion between 2010 and 2019, CBO estimates that other aspects of the ACA—including fees imposed on health insurers, cuts to payments to private plans offering the Medicare benefit, revenues from the Cadillac tax, and adjustments to Medicare reimbursement rates—will reduce federal government health care spending by more than \$1 trillion, resulting in a net savings of \$143 billion over that time period (Elmendorf, 2010). States will not benefit from most of these federal revenue provisions.

Overview of Health Insurance in Connecticut

Connecticut currently has a relatively low uninsured rate. In 2011, approximately 11 percent of the state's nonelderly population is uninsured, compared with the national average of 17 percent. Connecticut's lower rate is due, in part, to its high rate of employer-sponsored coverage (approximately 68 percent of the nonelderly in 2011, compared with the national average of 59 percent), its relatively generous eligibility limits for Medicaid, and its state-run insurance program (State-Administered General Assistance, or SAGA), which covers about 45,000 low-income adults who did not qualify for Medicaid under previous federal regulations. Approximately 8 percent of the state's nonelderly are covered in the individual market or by other insurance programs, such as military coverage or Medicare disability coverage. Many of the former would likely opt to obtain federal subsidies under the ACA to transfer their coverage to the exchange, but these shifts in coverage will generally not have much consequence for state costs.

State Consequences of Medicaid Expansion

The expansion of Medicaid will increase state spending, since—in the long run—states will be required to pay 10 percent of Medicaid costs for the newly eligible

population. Although this is far less than the traditional state share of Medicaid funding (ranging from 50 to 20 percent, depending on the state's per capita income), it is more than the states would spend if these individuals remained uninsured. However, those states that currently cover or subsidize the coverage of low-income individuals who are not Medicaid-eligible may financially benefit from the new requirement, since the federal government will pay most of the costs for these populations through federal Medicaid matching dollars or exchange subsidies.⁵ We expect that individual mandates will induce some Medicaid-eligible individuals who are not currently enrolled to take up coverage. To the extent that these individuals subsequently use health care, this will increase state and federal expenditures. At the same time that these changes are happening, employer penalties and the option for some employers to offer health insurance coverage in the exchanges may increase eligibility for employer-sponsored insurance, leading some currently and newly Medicaid-eligible individuals to take up employer-sponsored coverage instead of Medicaid. Our analysis projects expected levels of Medicaid enrollment and state spending for the years 2011 to 2020, enabling us to determine their net effects.⁶

Exchange Operation

Only three states—Massachusetts, Utah, and Washington—currently operate health insurance exchanges, and their level of investment varies widely. Annual operating budgets range from \$700,000 to more than \$30 million. California was the first state to authorize the creation of a state exchange, which is expected to be fully functional by 2014, to accommodate the ACA; it set up the entity to fund itself entirely from assessments on premiums, so it does not require state funds. Expenses vary depending on both exchange enrollment and the level of services provided by the exchange, which could include regulation of plans, risk adjustment, assessment of exchange eligibility, customer service, and marketing. We assume that states will attempt to recoup all costs associated with running health insurance exchanges through administrative charges levied on plans; for example, Massachusetts currently levies fees equal to 4.5 percent of premiums or 4 percent of capitated expenditure for subsidized plans (Lischko, Bachman, and Vangeli, 2009). Under the ACA, the federal government will also provide

⁵ Also, states that currently extend Medicaid eligibility for adults beyond 133 percent of the FPL could save state dollars by rolling back the eligibility threshold to 133 percent by 2014, at which time the federal government would cover those individuals through exchange subsidies. We do not account for this possibility in the model; rather, we assume that states with eligibility thresholds above 133 percent of FPL will maintain those levels under the ACA.

⁶ State costs associated with administering the Medicaid program are not included in this analysis, nor are the effects of enhanced federal matching rates for the Children's Health Insurance Program (CHIP) from 2015 to 2019.

start-up grants to states for the initial costs of establishing exchanges, but the amount of money available is not specified in the ACA.

Since it is unclear which services each state exchange will provide or how much of these expenses will be financed through administrative charges levied on plans, we did not attempt to project the costs of establishing and operating a health insurance exchange in Connecticut. Instead, we estimated the number of people that will be enrolled in the exchange, in both the individual market and the small group market. Citing the Massachusetts experience, Lishko, Bachman, and Vangeli (2009) argue that the number of exchange enrollees is the most important predictor of total exchange operating costs.

Spending on State Employee Health Insurance

The mandate requiring all individuals to obtain health insurance or pay a penalty could increase the number of state employees who have health insurance. To the extent that these workers enroll in plans offered by the state and use covered health care benefits, state outlays on health insurance will increase. However, it is possible that some state employees or dependents will enroll in alternative health insurance options after the ACA is implemented (e.g., if a spouse's employer begins to offer coverage), so the net effect on enrollment in state health insurance policies is uncertain. In our analysis, we consider the total number of state employees enrolled in state-sponsored health insurance coverage before and after the reform and the net impact on state health insurance spending.

States will also have to ensure that health benefits offered to their employees meet the standards outlined in the ACA, or else face penalties (separate from the penalties related to the failure to offer or accept coverage). Specifically, if any state employee receives subsidized coverage through the health insurance exchange, the state will be subject to a fine equal to the lesser of \$3,000 per worker receiving subsidized coverage or \$2,000 per worker. Employees are eligible to receive subsidies from the exchange only if their employer does not offer qualifying coverage or if the employee would be required to spend more than 9.5 percent of household income on premium contributions for employer-sponsored coverage. As of 2009, health benefits provided by Connecticut appeared to meet most of the requirements for qualified health plans under the ACA, so it is unlikely that the state will face fines associated with the quality of coverage. It is possible that employer contribution requirements for some low-income workers could exceed 9.5 percent of household income. However, for the purpose of this analysis, we assume that the state will not face any penalties associated with inadequate benefit generosity.

Other Impacts

There are several other possible impacts of the ACA on Connecticut spending or health care provision more broadly that we are not able to estimate precisely and thus do not include in the quantitative analysis. As a result of a reduction in the number of uninsured, health care providers will likely provide less charity or "uncompensated" care, and, therefore, state or private subsidies for that care might be reduced. Private and state employee premiums could go down if part of these premiums is currently covering the costs of uncompensated care. On the other hand, federal disproportionate share hospital (DSH) subsidies to state hospitals will also be reduced, so the net effect of the reduction in the number of uninsured on state spending is uncertain. Separately, if spending on employer-sponsored insurance is reduced (because of fewer people enrolled, lower premiums in the employer market, or lower premiums because small employers shifted their workers to the exchange), some of the avoided spending may be paid out to employees as higher wages, a move that would boost state income tax revenues.

Finally, there are numerous potential impacts of the ACA that could have spillover, or indirect, effects on state budgets—effects that are very difficult to estimate.⁷ For example, the law reduces Medicare payment rates to hospitals and to private insurers that administer Medicare Advantage plans. Both of these moves will reduce federal spending on Medicare, but they may also reduce access to care for some elderly residents. There are also provisions designed to encourage more-efficient and higher-quality care, such as withholding payments to hospitals for readmissions, provisions that create accountable care organizations, and a measure that creates a new cost-cutting board to oversee Medicare payment policy. All together, those provisions may have a major effect on the costs and quality of health care for both Medicare-eligible and non-Medicare-eligible Connecticutians, though the magnitude of impact is highly uncertain.⁸

II. How We Estimated the Effect of the ACA on Connecticut

In the appendix to this report, we provide a more detailed explanation of the methods used to estimate the effect of the ACA in Connecticut. We briefly summarize our approach here so that readers can understand the basis of our results.

⁷ Secondary effects of changes in premiums on the overall business climate or labor market, or changes in the overall health of the population due to changes in insurance coverage, are beyond the scope of this report.

⁸ For example, although the Congressional Budget Office and the Centers for Medicare and Medicaid Services Office of the Actuary have estimated relatively minor impacts of the ACA on the overall health care system, some analysts estimate substantial reductions in costs. See, for example, Cutler, Davis, and Stremikis, 2010.

We conducted this analysis using a microsimulation model developed by RAND researchers for the COMPARE project. This sophisticated model produces estimates of the effects of various coverage expansion policy changes on the number of people who newly obtain insurance and/or change sources of insurance, the types of plans they choose to enroll in, and the resulting changes in private- and public-sector spending. The microsimulation model provides a way of looking at the choices made by individuals, employers, insurance companies, and governments in response to changes in their opportunities for obtaining health insurance. Typically, people and employers consider the option that is in their best financial interest, taking into account both expected spending on health care and the risk of experiencing high costs associated with a very expensive health problem (e.g., hospitalization or major surgery). Two of the more important assumptions relevant to this analysis are the effect of the individual mandate on decisions to obtain insurance and the stigma associated with Medicaid coverage, both of which affect Medicaid take-up rates. Parameters that govern those assumptions were chosen to be consistent both with economic theory and with empirical estimates of these effects, where available. We estimated the results for each year from 2011 to 2020, noting that it is not until 2016 that all of the changes in the law related to coverage expansion will be fully implemented.⁹ We then compared these results to projections of what would have occurred if the law had not been enacted.

III. Results

Using our COMPARE model, we predict that, under the ACA, the proportion of Connecticut residents with insurance will climb from 89 to 95 percent. (See Table 1.) As a result, the number of nonelderly Connecticut residents without insurance in 2016 will be about half of what it would have been in absence of the law (170,000 uninsured instead of 340,000). When the law is fully implemented, the percentage of nonelderly Connecticut residents who are uninsured will drop from 11 percent to about 5 percent.

The nature of employer sponsored coverage will change only slightly under the ACA. We predict that slightly more employers will opt to offer coverage through the exchange. The largest source of coverage in Connecticut will continue to be employer-sponsored insurance. However, some employers (mostly small) may opt to offer coverage through the exchange rather than on their own. We estimate that, once the exchange is in

place, approximately 40,000 people (representing 2 percent of all employer-sponsored coverage in Connecticut) will get their health insurance through an employer plan offered through the state's new health insurance exchange.¹⁰

By 2106, 10 percent of the insured, nonelderly population of Connecticut will get coverage through the exchange. In addition to the 40,000 Connecticut residents who get small employer-sponsored insurance provided through the exchange, we predict that, by 2016, an additional 270,000 Connecticut residents will purchase private health insurance through the exchange. This will bring the total number of Connecticut residents insured through the exchange to 310,000, or just over 10 percent of the state's insured, nonelderly insured population in 2016. Approximately 54 percent of Connecticut residents who will be enrolled in the exchange as individuals in 2016, some 140,000 people, will receive federal government subsidies to purchase this coverage.

Once the law is fully implemented, enrollment in Medicaid will have increased by 31 percent, relative to what it would be in the absence of the ACA. In 2016, an additional 130,000 Connecticut residents will be enrolled in Medicaid, an increase of 31 percent. But while Medicaid enrollment will increase, enrollment in the SAGA program will drop to zero. Total enrollment in either type of public coverage (Medicaid or SAGA) will therefore increase from 450,000 to 540,000 under the ACA, an increase of 20 percent.

Total state government spending on health care will be 10 percent lower for the combined 2011–2020 period because of the ACA. Table 2 shows the cumulative changes in state government spending for Medicaid, on SAGA, and on private coverage for state employees. The net effect on State Employee Insurance will be very small and will arise from minor changes in premiums and enrollment. Although Medicaid enrollment and spending will increase substantially under the ACA, the combined effect of the decline in SAGA enrollees and higher federal assistance will result in a 10 percent reduction in total state spending for the period from 2011 to 2020, a total of roughly \$2.7 billion. These savings are driven primarily by the fact that Connecticut currently extends public coverage to low-income adults who do not qualify for traditional Medicaid and pays all of the costs of that program from state funds. The ability to receive federal cost-sharing assistance for this population under ACA will lead to net savings for the state.

⁹ In the analysis, we did not assume a start-up period, or "phase-in," of the full effect of the law from the date when the provision becomes law, because such implementation lags would vary extensively by state in ways that would be hard to predict.

¹⁰ In arriving at this estimate, the model does not account for the fact that many employers will eventually face having to comply with the new benefit requirements under the ACA because of changes they wish to make to their plans that will end their grandfathered status. That, in turn, will lead more employers to offer insurance through the exchanges than are estimated here.

Table 1: Predicted Health Insurance Enrollment in Connecticut, 2011–2020 (thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total nonelderly population	3,040	3,060	3,070	3,080	3,100	3,110	3,130	3,140	3,150	3,170
Status Quo										
Insured, nonelderly	2,690	2,700	2,720	2,740	2,750	2,770	2,780	2,790	2,800	2,820
Employer-sponsored insurance	2,050	2,060	2,060	2,080	2,090	2,100	2,110	2,120	2,130	2,140
Traditional employer policies	1,970	1,980	1,980	2,000	2,010	2,020	2,030	2,040	2,050	2,060
State employer policies	80	80	80	80	80	80	80	80	80	80
Exchanges	–	–	–	–	–	–	–	–	–	–
Medicaid	390	390	400	400	400	410	410	410	410	420
SAGA	40	50	50	50	50	50	50	50	50	50
Nongroup/other	210	200	210	210	210	210	210	210	210	210
Individual exchanges	–	–	–	–	–	–	–	–	–	–
Uninsured	350	360	350	340	350	340	350	350	350	350
% Nonelderly with insurance	88.5	88.2	88.6	89.0	88.7	89.1	88.8	88.9	88.9	89.0
Change Under the ACA										
Insured, nonelderly	0	10	10	140	160	170	190	180	200	180
Employer-sponsored insurance	0	0	20	–10	–10	–10	–10	–20	–20	–30
Traditional employer policies	0	0	20	–50	–40	–50	–40	–60	–60	–70
State employer policies	0	0	0	0	0	0	0	0	0	0
Exchanges	0	0	0	40	30	40	30	40	40	40
Medicaid	40	50	40	120	120	120	130	130	140	130
SAGA	–40	50	–50	–50	–50	–50	–50	–50	–50	–50
Nongroup/other	0	10	0	–80	–160	–160	–150	–150	–150	–150
Individual exchanges	0	0	0	160	260	270	270	270	280	280
Uninsured	0	–10	–10	–140	–160	–170	–190	–180	–200	–180
% Nonelderly with insurance	88.5	88.6	88.9	93.5	93.9	94.5	94.9	94.6	95.2	94.6

NOTES: The upper portion of the table, labeled “Status Quo,” is our estimate of what the distribution of insurance enrollment would have been had the ACA not been enacted. Everything in the lower panel represents the change under the ACA from the status quo, except for the final, shaded row, which provides the resulting percentage of insured under the ACA. Values in the table have been rounded to the nearest 10,000 and therefore may not sum to total.

Roughly the same percentage of Connecticut workers will be offered health insurance coverage from an employer. Figure 1 shows the change in the percentage of Connecticut workers offered coverage through their employer with and without the ACA. The total number of workers offered coverage will change very little. The slight increase in larger firms is due mainly to the individual mandate and penalties for not offering coverage, which *increase* demand for employer coverage, more than offsetting the subsidies available in the exchange, which *decrease* demand for employer coverage. While these incentives are also present for smaller firms, the admin-

istrative costs of exchange coverage are lower than those for the smallest firms but higher than for typical large firms, providing an added incentive for small firms to drop coverage in favor of letting their employees purchase their own coverage through the exchange. Thus, there is a small net reduction in the proportion of workers offered coverage among the smallest firms in the later years.

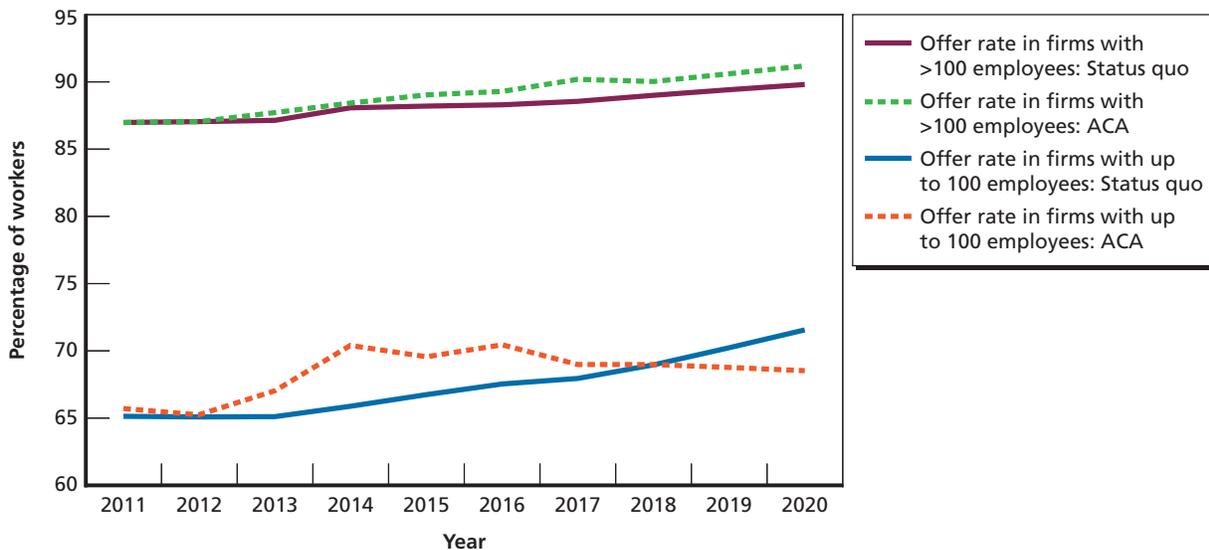
Bottom Line: More Connecticut residents will be insured, and at a lower cost to the state. We predict that under ACA there will be roughly 170,000, or 50 percent, fewer uninsured Connecticutians in 2016 than there would be in the absence of the ACA. This increase

Table 2: Connecticut State Spending on Health Insurance, 2011–2020 (\$ millions)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total, 2011–2020
Status Quo											
Medicaid	1,000	1,370	1,460	1,560	1,660	1,780	1,900	2,030	2,170	2,310	17,230
SAGA	220	240	250	270	290	310	330	350	370	390	3,010
State health insurance	410	430	450	470	500	530	570	610	650	700	5,310
Total	1,630	2,040	2,160	2,300	2,450	2,620	2,800	2,990	3,190	3,400	25,550
Change Under the ACA											
Medicaid	110	120	120	30	20	20	70	90	100	130	460
SAGA	-220	-240	-250	-270	-290	-310	-330	-350	-370	-390	-3,010
State health insurance	0	0	0	0	-10	-10	-20	-20	-20	-30	-110
Total	-110	-120	-130	-240	-280	-300	-280	-280	-290	-290	-2,660

NOTES: The upper portion of the table, labeled “Status Quo,” is our estimate of what Connecticut would have spent between 2011 and 2020 had the ACA not been enacted. Values in the table have been rounded to the nearest \$10 million and therefore may not sum to total.

Figure 1: Percentage of Connecticut Workers Offered Coverage, 2011–2020



NOTE: “Status quo” refers to the offer rate that we estimate would have occurred in Connecticut had the ACA not been enacted.
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in coverage will be accompanied by a 10 percent decline in state government spending between 2011 and 2020, for a total savings of nearly \$2.7 billion over this period. The decline in government spending is driven by the state’s ability to shift SAGA program costs to the federal government.

The estimates provided in this analysis are rooted both in economic theory and in past experience, and, to the extent that the future brings unforeseen challenges and incentives, actual impacts could differ from these projections. Furthermore, it is important to note that there is a good deal of flexibility in how individual states implement various provisions of the ACA. Some

of these decisions could alter our projections. The timing of implementation, the management and oversight of the exchanges, the mechanisms created for determining Medicaid or subsidy eligibility, and the extent of outreach efforts designed to enroll individuals in Medicaid or the exchanges will affect rates of coverage and, by extension, state costs. Finally, there are many courses of action that states can take to reduce health care spending generally, many of which are summarized in a recent RAND report for the state of Massachusetts, which has been struggling with many of the same issues that the nation will be upon full implementation of the ACA (Eibner et al., 2009).

Methodological Appendix

Overview of COMPARE Model

We modeled the effects of the ACA on state health expenditure and state-specific health insurance enrollment levels for Connecticut using RAND's COMPARE microsimulation model. The analysis accounts for the individual mandate, employer penalties associated with not offering coverage, subsidies for low-income individuals, and the Medicaid expansion. The COMPARE model is based on a nationally representative population of synthetic individuals and firms derived from data sources including the Survey of Income and Program Participation (SIPP), the Medical Expenditure Panel Survey (MEPS), and the Kaiser/Health Research and Educational Trust (Kaiser/HRET) employer survey. Individuals in the model make decisions about health insurance enrollment by comparing the benefits of an option (e.g., reduced out-of-pocket expenditure, lower risk) to its costs (e.g., higher premiums). Firms in the model decide whether and what type of insurance to offer based on a "group choice" algorithm, in which they consider preferences of their workers and the costs of providing coverage. The firm decisionmaking process accounts for the fact that some workers may be eligible for Medicaid or subsidized coverage on the exchanges, both of which reduce the incentives to the employer to offer company-sponsored health insurance. It also accounts for penalties that may be levied on firms with 50 or more workers that do not offer coverage and for the fact that firms with 100 or fewer workers will have the option to offer coverage from the exchanges. A full description of the model methodology can be found in Eibner et al. (2010).

Premiums in the COMPARE model are determined endogenously, using the predicted expenditure of enrollees in each health insurance plan. In calculating employer health insurance premiums, we assume that plans offered by businesses with less than 25 workers have an actuarial value of 0.75, plans offered by businesses with 25 to 99 workers have an actuarial value of 0.80, and plans offered by businesses with 100 or more workers have an actuarial value of 0.85. Actuarial values (the percentage of expected health expenses that will be paid for by the insurance plan) for employer health insurance coverage in the COMPARE model correspond with actuarial values reported in the literature (e.g., Buntin et al., 2003; Gabel et al., 2006). Exchange plans have actuarial values of 0.60 (bronze), 0.70 (silver), 0.80 (gold), and 0.90 (platinum). We assume that administrative costs will be lower on the exchanges than in the grandfathered employer-sponsored health insurance (ESI) market (12 percent of premiums on the exchanges versus 20 percent of premiums for firms with fewer than 25 workers in grandfathered ESI plans and 13 percent of premiums for firms

with 25–99 workers in grandfathered ESI plans). Administrative costs for traditional ESI plans correspond to values used by another health insurance microsimulation model (Blumberg et al., 2003). We further assume that health insurance exchanges will be open to all businesses with 100 or fewer workers. Many of these assumptions are currently uncertain, and actual details could well vary from state to state. We have the ability to adjust these assumptions if and when state-specific information becomes available to guide our choice of parameters.

For purposes of this report, we did not model the creation of a basic health plan. In addition, we assumed that Connecticut will ultimately decide to establish a state-specific health insurance exchange rather than participate in a regional compact or defer operation of the state's exchange to the federal government.

Connecticut-Specific Adjustments

Although the original COMPARE microsimulation model was nationally representative, the number of observations in each state was too small to support state-specific estimates. To address this issue, we reweighted all of the data in the COMPARE model to reflect the distribution of workers and firms in Connecticut.¹¹ The reweighting procedure accounted for race, insurance status (public, employer-based, nongroup, other insurance, or uninsured), employment status, firm size, and the joint distribution of age and poverty category among all Connecticut residents. We also recalculated the Medicaid eligibility status of modeled individuals using criteria specific to Connecticut and based on a Congressional Research Service report and information from the Kaiser Family Foundation (Hearne, 2005). To account for population changes over time, we calibrated the model to reflect Connecticut-specific population projections based on data from the U.S. Census and the American Community Survey. Our population adjustments account for changes in the total size of the population and the distribution of the population by age, race, and sex. We did not adjust for possible differences in health status for Connecticut residents versus the nation as a whole. Medicaid enrollment in the state under the status quo was adjusted to match estimates from the Kaiser Family Foundation.

We adjusted health care spending in the model to match the state health insurance expenditure accounts (SHEAs) reported by the Centers for Medicare and Medicaid Services (CMS). Since state health expenditure data from CMS are available only through 2004, we projected expenditures forward using historical expenditure growth rates for Connecticut derived from the SHEAs. In rec-

¹¹ The reweighted procedure that we use is known as iterative proportional fitting.

onciling our figures with the SHEA data, we accounted for both overall spending and for spending for particular categories of payer (e.g., private expenditure, Medicaid, Medicare, other federal, and other state and local expenditures).

For the purposes of this analysis, we accounted for the SAGA program by assigning SAGA status to individuals based on income level, Medicaid eligibility, and current receipt of public health insurance coverage. We calibrated the model so that a total of 45,000 individuals currently enrolled in SAGA will be shifted into the Medicaid program after the ACA implementation; this adjustment is based on Connecticut's agreement with the federal government to transfer 45,000 from the SAGA program into Medicaid under the new ACA rules ("Governor Rell," 2010). Connecticut's total SAGA expenditures were \$215 million for 2009–2010; we used this figure to calibrate SAGA expenditures in the model in order to estimate the expected savings in subsequent years, under the assumption that, beyond 2014, those individuals below 133 percent of the FPL will be considered "newly eligible" for Medicaid and covered fully by federal Medicaid dollars (in the first few years after 2014). With more detailed information on SAGA eligibility criteria and the demographic composition of SAGA enrollees from the state, we could more accurately model current program receipt, the likelihood of enrolling in Medicaid after the reform, and the total impact on state spending.

We identified state government employees by (1) selecting workers in SIPP who reported that they are employed by the government and (2) reweighting a subset of this population to represent all state government workers in Connecticut (the remainder are assumed to be federal government employees—state and federal workers cannot be disentangled using the SIPP question). Using Connecticut-specific data from the 2008 American Community Survey, the reweighting strategy adjusted the data so that approximately 56,000 individuals were flagged as full-time employees of the state of Connecticut in our model. This figure includes all state employees, including university workers, workers employed by public utilities, and workers employed by the state correctional system. With additional information from Connecticut state government, we could more accurately describe the population of state workers.

To estimate new health expenditures related to insuring state employees, we assume that the state of Connecticut pays the entire premium for state government workers and 70 percent of premiums for family members. These figures come from information published by the Connecticut State Department of Children and Families (see "State of Connecticut Fringe Benefits," 2011). With additional input from the state, we could refine these

assumptions to ensure that cost-sharing assumptions are up-to-date and accurate for all state employees.

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About This Report

The Patient Protection and Affordable Care Act (ACA) contains substantial new requirements aimed at increasing rates of health insurance coverage. Because many of these provisions impose additional costs on the states, officials need reliable estimates of the likely impact of the ACA in their state. To demonstrate the usefulness of modeling for state-level decisionmaking, RAND undertook a preliminary analysis of the impact of the ACA on five states—California, Connecticut, Illinois, Montana, and Texas—using the RAND COMPARE microsimulation model. This technical report presents the findings for Connecticut. This research was sponsored by and conducted in partnership with the Council of State Governments. It was carried out within the Economics, Finance, and Organization Program of RAND Health, which addresses the financing and delivery of health care services, health insurance, cost control, the reorganization of health care markets and providers, and distributional issues in health and health care. The program includes RAND COMPARE.

About RAND COMPARE

COMPARE (*Comprehensive Assessment of Reform Efforts*) is a transparent, evidence-based approach to providing information and tools to help policymakers, the media, and other interested parties understand, design, and evaluate health policies. RAND Health, a division of the RAND Corporation, is conducting COMPARE. The RAND Corporation is a nonprofit institution that helps improve policy and decision-making through research and analysis. RAND Health is one of the world's largest private health research groups, with an annual budget of more than \$60 million and a research portfolio that focuses on health care quality, costs, and delivery, among other topics.

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