Consumer Response to a National Marketplace for Individual Insurance

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Introduction

Federal lawmakers are interested in changing the law that prohibits non-group/individual health insurance from being sold across state lines. For example, Representative John Shadegg's (R-AZ) and Senator Jim DeMint's (R-SC) Health Care Choice Act (H.R. 2355 and S.1015) would amend current law to allow for interstate commerce in health insurance plans while preserving states' primary responsibility for the regulation of health insurance. Advocates of this reform argue that state-level mandates for providers, benefits, and coverage, as well as other types of regulations (e.g. guaranteed issue, community rating, and any willing provider status) distort prices and that permitting national competition for such insurance has the potential to increase demand for individual health insurance policies. The objective of this analysis is to simulate the difference between national and state-specific individual insurance markets on take-up of individual health insurance. Though the analysis focuses on the individual insurance market, results are presented for both the individual and group markets because the effects a national marketplace for insurance will also affect the small employer group market as well.

Policy Analysis Objective

To simulate the difference between national and state-specific individual insurance markets on take-up of individual health insurance.

Methods

This analysis was completed in three steps. First, an inventory of available literature was completed to identify parameters for the simulation. Second, we reviewed the literature and used empirical data to develop premium estimates for the simulation that reflect case-mix as well as state-specific differences. Third, we used a revised version of the 2005 Medical Expenditure Panel Survey (MEPS) to complete a set of simulations to identify the impact of three different scenarios for national market development. We briefly summarize these steps. A more detail description of our methods is provided in Appendix 1.

Characterize the state-specific individual insurance markets

The first step in this simulation is to describe the regulatory environment of the individual insurance market in each state. We used several secondary sources for this description, including Blue Cross/Blue Shield for state mandates; the Georgetown University Health Policy Institute for guaranteed issue and community rating; and Thomson-West's Netscan/Health Policy Tracking Service ("Major Health Care Policies, 50 State Profiles, 2003/2004") for any willing provider laws.

The second step is to identify the marginal cost of particular regulations, including mandates, guaranteed issue, community rating, and any willing provider laws.

- Mandates are state regulations that require insurers to cover particular services or providers. We opted to use the count of mandates in a state rather than trying to identify the separate cost of each mandate. This decision follows the empirical work, which typically uses a count of state mandates.

- Guaranteed issue laws require insurers to sell insurance to all potential customers regardless of health or pre-existing conditions. However, this doesn't necessarily mean that insurers can't put riders on pre-existing conditions or incorporate premium adjustments for them. Guaranteed issue provisions can be broad (e.g. applying to all products, all consumers, at all times) or narrow (e.g. applying to very specific populations or during specific open enrollment periods). Our coding rules are biased toward those states that had fairly broad guaranteed issue provisions.

- Community rating requires insurers to limit premium differences across individuals. We coded a state as having community rating if it had 'pure' (no premium differences are allowed) or 'adjusted' community rating. We did not consider rating bands as part of this definition.

- Any willing provider (AWP) laws restrict insurers' ability to exclude providers from their networks. There is a lot of variability here as well. Many states apply AWP laws narrowly (e.g. to pharmacies only). We coded a state as having an AWP law if it applied broadly to providers.

We conducted a literature review to identify estimates of the impact of these state laws and regulations on health insurance premiums.[1] We used only studies of the individual insurance market, since this is the market in which we are interested. This ruled out using studies that focus on the relationship between regulations and premiums in the small-group market (e.g. Simon, 2005).

We utilized estimates from the following four studies: Congdon, et al. (2005); Henderson, et al. (2007); New (2006); and Hadley and Reschovsky (2003). It should be noted that only the Hadley and Reschovsky (2003) paper has been published in a peer-reviewed journal. The other three are working papers.[2] In Table 1, we summarize the key findings:

[1] A copy of the literature review with complete references is attached as Appendix 2.

[2] Other studies, particularly from the Urban Institute, have examined the effects of mandates on insurance coverage. However, these studies did not have sufficient information to inform the modeling requirements of our analysis. In order to use them for our purposes, we would have needed to adjust them with estimates of the responsiveness of coverage to prices, i.e. dPrice/dRegulation = (dCoverage/dRegulation) / (dCoverage/dPrice). The addition of a second level of uncertainty into our simulations is the drawback of this two-step approach.

Table 1
Summary of Studies of the Effects of Sate Regulations on Premiums in the Individual Health Insurance Market

Regulation/Law	Congdon, et al.	Henderson, et al.	New	Hadley & Reschovsky
Guaranteed Issue	94-114% increase in premium in one state (NJ)	No effect	NA (not assessed)	No effect
Community Rating	20-27% increase in premium	No effect	NA	15-34.6% increase in premium
Any Willing Provider	1.5-9% increase in premium	5-12% increase	NA	NA
Mandates	Each additional mandate increases premium .4-.9%.	Used indicator variables for a very comprehensive set of mandates. Some increase and some decrease premium.	Each additional mandate raises the monthly premium by 75 cents, approximately .5%.	NA

To make our analysis comprehensive, we used three summary measures of the regulatory effects: (1) the midpoint of the range[3] of the estimated effect of each regulation/mandate – our moderate estimate; (2) the minimum estimated effect; and (3) the maximum estimated effect. These effects are summarized in Table 2.

Table 2
Minimum, Maximum, and Midpoint Estimates of the Effects of Regulations

Regulation	Minimum Increase	Midpoint Increase	Maximum Increase
Guaranteed Issue	0	57%	114%
Community Rating	0	17.3%	34.6%
Any Willing Provider	1.5%	6.75%	12%
Mandates	.4% per mandate	.65% per mandate	.9% per mandate

[3] The midpoint is simply the calculated mean between the minimum and maximum increase effects of the regulations.

Regulations and mandates represent important differences across state-specific individual insurance markets, but there may be other factors as well.

Calculate simulation premiums

The second step in the analysis requires calculation of premiums adjusted for the effects of state regulations. The basic idea behind a national market is that a person living in State A will be able to buy insurance licensed in State B. Suppose I live in State A where the premium is $100 per month. This reflects the influence of my state's medical practice style and provider prices (which would not change if I bought insurance in State B) and the effects of regulations (which would change). If I bought insurance in State B, the premium would be $100 minus the effects of fewer regulations in State B.

To implement this step, we relied on the premiums reported by Congdon, Kowalski, and Showalter (2005). These premiums were first adjusted by age and sex to reflect standard actuarial differences in health care costs, and then they were adjusted by the effects of regulations as summarized in Appendix 3. The adjusted premiums were used as inputs into the insurance take-up simulation model.

Simulation

In the third step we simulated the effect of a national market on take-up of individual health insurance. This step requires that we know the state of residence for people in the MEPS-Household Component, (MEPS-HC), but the MEPS will not release person-specific state IDs. Therefore, we had to devise a method for imputing each person's state of residence. This step is described in more detail in Appendix 1.

<u>Application of State-Specific MEPS to National Simulation Model</u>

Using a simulation model developed from previous analyses (Feldman, Parente, Abraham, et al., 2005; Parente, Feldman and Abraham, 2007), we applied the Synthetic State MEPS (SS-MEPS) described above and in Appendix 1 to develop a set of national estimates. The simulation model is capable of generating estimates of national health plan take-up for both the individual and employer-sponsored insurance (ESI) markets.

One of the distinguishing attributes of the simulation model is the presence of consumer driven health plans (CDHPs). Specifically, there are two types of CDHPs: a low-option Health Reimbursement Arrangement (HRA) and a high-option HRA. The low-option HRA is very similar in deductible, coinsurance and premium structure to a Health Savings Account (HSA) plan. This enabled us to model both HRA and HSA choices in the simulation as well as high, moderate and low-option Preferred Provider Organizations (PPOs), and a Health Maintenance Organization (HMO).

In the simulation, consumers in the individual market have five choices: high, moderate and low-option PPO, HSA, and the choice to be uninsured. Consumers with employer-sponsored coverage are given up to eight choices including HMO, three PPO options, an

HRA, an HSA where the employee opts out of employer sponsored coverage, an HSA where the employer picks up most of the cost of the HSA/high deductible insurance policy, and finally a choice to turn down coverage for any reason (e.g. already had coverage from spouse).

Chronic illness is modeled at the contract level in the simulations. That is, either the person choosing insurance, or someone covered by their insurance contract, has a chronic illness. This assumption was made because the data used to estimate the health plan choice model could only be attributed to contract holders, not the person receiving care under a contract. As a result, the chronic illness metric reflects a household's illness burden, more than that of one individual, unless the person is buying a single-coverage contract.

The simulation model adjusts premiums for the tax treatment of health insurance offered by employers in the ESI market. Specifically, premiums are adjusted to take into consideration the federal marginal tax rate as well as the social security tax burden. The capability to adjust for state tax effects is also possible, but not considered in this model in order to identify the pure effects of differences in insurance regulations by state.

We use premium estimates for each of the plan choices based on our earlier work (Feldman, Parente, Abraham, et al., 2005). These premium estimates are derived from a combination of ehealthinsurance.com and Kaiser/Commonwealth estimates of premium prices. These premium estimates are adjusted to 2008 dollars.

We develop state-specific premium inflators/deflators from the AHIP individual market single and family coverage report. Individual market premiums were experience rated for age and gender (with the exception of community rated states). For this analysis, we define the small group market as one where an employer has less than 250 employees. At this level, employers generally do not self-insure. Premiums for employers with less than 250 employees were adjusted by state-specific regulatory effects. Finally, HSA premiums include a $1,000/$2,000 investment in accounts depending upon whether the person was choosing a single or family insurance product, respectively.

The simulation is based only on choices made by adults aged 19-64 who are not students, not covered by public insurance, and not eligible for coverage under someone else's ESI policy. As a result, our baseline uninsured and turned down population represents 32.3 million people (we edited out military, students, age under 18 or 65 and older, and those without ESI offer who could be covered by spouse). However, we present results for our selected sample as well as a national approximation that would yield 47 million people uninsured.

Scenarios for Policy Simulation

We developed three different scenarios for policy simulation. Each of these simulations was run on a set of minimum, moderate and maximum impacts of state-specific regulations as derived from the literature. The impact of each scenario was calculated by

multiplying a given person's original premium by a state min/mod/max specific multiplier. These multipliers are described in Appendix 4 by state. For each scenario, if the consumer faces a lower premium as a result of the proposed policy change, the consumer will choose the better price. If the new possible premium is not a better deal than that in the consumer's home state, they will stick with their home state in the simulation. The three scenarios are:

Scenario 1: Competition among 5 largest states

In this scenario, only the five largest states are permitted to be available for the national market along with the consumer's own state. The rationale for this scenario was that it was considered in a previous legislative proposal. The idea is that large states would have the critical skills in their insurance departments to take on additional regulatory responsibilities for new out-of-state consumers. The five largest states in the United States, based upon population size, are (in order of descending population size): California, Texas, New York, Florida, and Illinois. Of these, Texas has the least regulated health insurance environment and is the comparison state in the simulations.

Scenario 2: Competition among all 50 states

For this scenario, the state with the least regulation is identified as Alabama. In this simulation, all consumers are assumed to find Alabama the state to which they would switch policies unless they were already residents of Alabama. This could be the most extreme outcome of legislation similar to that proposed by Rep. John Shadegg (R-AZ) for the last few years.

Scenario 3: Competition within regions

Under this scenario, the United States' health insurance market is divided into four regions: Northeast, South, Midwest, and West. Residents in each region buy insurance from a state within their region with the most favorable premium due to decreased regulation. This scenario was based on the regional Part D and TriCare contract models for insurance carriers. For the Northeast, the state with least-cost regulation impact was New Hampshire. In the Midwest, Nebraska was the favored state. In the West, the state of choice was Arizona and in the South, the state of choice was Alabama.

Findings

The findings from the simulations are presented below. First, results for each scenario are presented. Second, we describe the impact of the moderate estimates for the national scenario in breakdowns by income and state of residence.

Impact by Insurance Scenario

For each scenario, the change in the number of insured is presented from a 2008 status quo estimate. The insurance market is divided into the individual and group markets and further demarcated by the types of health insurance taken up from the simulation model. The HSA No-offer category in the group market refers to individuals who were offered coverage but turned it down and bought an HSA policy on their own. All of the detailed numbers are from the limited sample with national approximations provided for the aggregate impacts of each scenario. For each scenario, we provide a 'within' sample and national estimate. The within sample is based on the 18-64 aged sample from MEPS and the national estimate is an extrapolation to all non-Medicare aged US citizens.

The impact of competition among the five largest states is presented in Table 3. Under the minimum, moderate and maximum effects of state policies, there is improvement in the level of insurance. The impact ranges from 69,444 (minimum) to 11.6 million (maximum) newly insured from a base number of 47 million uninsured. The moderate impact is 7.5 million newly insured individuals. Most of that effect is observed in the individual market.

Table 3
Scenario 1: Competition among 5 largest States

		Scenario 1					
	Status	Least Regulated Top 5 State - Texas					
	Quo	Mininum		Moderate		Maximum	
Individual							
HSA	4,655,291	10,337	0%	812,972	17%	1,289,019	28%
PPO High	7,515,552	27,115	0%	2,479,808	33%	4,450,141	59%
PPO Low	180,379	(267)	0%	(22,772)	-13%	(30,916)	-17%
PPO Medium	1,534,799	687	0%	16,995	1%	8,908	1%
Uninsured	28,848,310	(37,872)	0%	(3,287,002)	-11%	(5,717,152)	-20%
Group Market							
HMO	5,505,466	(6,159)	0%	(762,628)	-14%	(1,143,619)	-21%
HRA	6,166,134	(2,984)	0%	(269,016)	-4%	(438,955)	-7%
HSA Offered	307,298	(482)	0%	(56,901)	-19%	(77,608)	-25%
HSA No-offer	11,088	48	0%	10,485	95%	25,041	226%
PPO High	16,535,831	8,487	0%	1,308,780	8%	1,827,254	11%
PPO Low	665,950	(862)	0%	(161,976)	-24%	(220,539)	-33%
PPO Medium	53,470,814	12,840	0%	1,926,239	4%	2,434,256	5%
Turned Down	3,530,681	(10,888)	0%	(1,994,983)	-57%	(2,405,829)	-68%

	Within Sample	National
Mininum Insurance Estimate:	48,759	69,445
Moderate Insurance Estimate:	5,281,985	7,522,827
Maximum Insurance Estimate:	8,122,981	11,569,095

Allowing for a national market where anyone can shop for health insurance in any state yields the simulated results presented in Table 4. The reduction in the number of uninsured is greater than the first scenario across the minimum, moderate and maximum regulation effects. The moderate national impact is just over 12 million previously uninsured who now have coverage. As in the first scenario, the greatest improvement occurs in the individual market. The greatest take-up is for the high-option PPO, followed by the Health Savings Account. There is a net transfer out of low-option PPO plans toward high-option PPO plans. This finding makes sense in that if someone could afford a more generous plan design due to a lower premium they would make the switch. In the employer-sponsored market, there is movement out of the HMO in favor of medium-option PPOs. Once again, the medium-option PPO is more expensive than the HMO and also more favored than the HMO. As a result, if the price of health insurance is reduced, more will opt for the newly more affordable medium-option PPO.

Table 4
Scenario 2: Competition among All States

		Scenario 2					
	Status	Least Regulated State - Alabama					
	Quo	Mininum		Moderate		Maximum	
Individual							
HSA	4,655,291	345,512	7%	1,390,604	30%	1,690,744	36%
PPO High	7,515,552	973,979	13%	4,560,713	61%	7,411,603	99%
PPO Low	180,379	(10,515)	-6%	(37,603)	-21%	(52,379)	-29%
PPO Medium	1,534,799	36,214	2%	42,742	3%	28,632	2%
Uninsured	28,848,310	(1,345,190)	-5%	(5,956,457)	-21%	(9,078,600)	-31%
Group Market							
HMO	5,505,466	(220,241)	-4%	(1,114,650)	-20%	(1,529,468)	-28%
HRA	6,166,134	(96,537)	-2%	(454,184)	-7%	(660,064)	-11%
HSA Offered	307,298	(19,005)	-6%	(81,630)	-27%	(103,864)	-34%
HSA No-offer	11,088	2,522	23%	19,898	179%	43,230	390%
PPO High	16,535,831	376,588	2%	1,792,964	11%	2,343,582	14%
PPO Low	665,950	(42,910)	-6%	(214,315)	-32%	(272,079)	-41%
PPO Medium	53,470,814	613,956	1%	2,551,739	5%	3,022,911	6%
Turned Down	3,530,681	(614,374)	-17%	(2,499,822)	-71%	(2,844,248)	-81%

	Within Sample	National
Mininum Insurance Estimate:	1,959,564	2,790,894
Moderate Insurance Estimate:	8,456,279	12,043,791
Maximum Insurance Estimate:	11,922,847	16,981,025

Under the scenario of competition within four regions in the United States shown in Table 5, we find greater insurance coverage than the status quo, but less impact than a national market among all 50 states. Interestingly, coverage is higher under this scenario than under the 'five largest state' scenario. The moderate insurance estimate for this scenario indicates a net increase of just over 11 million newly insured. Movement across plans is fairly consistent with what was observed in previous tables and the greatest change occurs in the individual market. The minimum insurance estimate is

disproportionately smaller than the national market minimum estimate, suggesting that regional competition might expose greater sensitivity to expected differences in state mandates.

Table 5
Scenario 3: Competition among States in 4 Regions

		Scenario 3					
	Status	Least Regulated State in 4 Regions - AL,AZ,NE,NH					
	Quo	Mininum		Moderate		Maximum	
Individual							
HSA	4,655,291	273,357	6%	1,230,693	26%	1,557,056	33%
PPO High	7,515,552	807,254	11%	4,221,135	56%	6,868,237	91%
PPO Low	180,379	(9,175)	-5%	(35,815)	-20%	(49,615)	-28%
PPO Medium	1,534,799	33,600	2%	37,436	2%	22,584	1%
Uninsured	28,848,310	(1,105,036)	-4%	(5,453,448)	-19%	(8,398,262)	-29%
Group Market							
HMO	5,505,466	(140,557)	-3%	(994,350)	-18%	(1,408,263)	-26%
HRA	6,166,134	(75,582)	-1%	(406,888)	-7%	(605,391)	-10%
HSA Offered	307,298	(11,331)	-4%	(74,750)	-24%	(97,600)	-32%
HSA No-offer	11,088	1,936	17%	17,437	157%	37,968	342%
PPO High	16,535,831	196,143	1%	1,624,974	10%	2,182,670	13%
PPO Low	665,950	(20,858)	-3%	(194,308)	-29%	(255,140)	-38%
PPO Medium	53,470,814	323,772	1%	2,364,368	4%	2,893,495	5%
Turned Down	3,530,681	(273,524)	-8%	(2,336,483)	-66%	(2,747,738)	-78%

	Within Sample	National
Mininum Insurance Estimate:	1,378,559	1,963,403
Moderate Insurance Estimate:	7,789,931	11,094,751
Maximum Insurance Estimate:	11,146,000	15,874,606

National Impact Scenario by Income and State

Using the person specific estimates from the simulations, we generated an estimate of insurance take-up by those with annual wage income greater than $45,000 and those with less than $45,000 income. We chose to focus on the national competition scenario (#2) and used the moderate insurance estimate to identify the impact by different income levels. An income level of $45,000 was chosen to represent an estimated national mean household income. The income-specific results are shown in Table 6.

In the individual market, we find the greatest percentage increase in insurance occurring among the population with less than $45,000 income (44%), compared with those with more than $45,000 income (37%). Interestingly, we find a smaller percentage decrease in the uninsured among lower-income individuals (-19%) than higher-income individuals (-29%). This difference suggests that premium costs remain too high for lower-income individuals to take-up insurance even after the having the ability to shop in a less regulated state.

In the group market, the response is quite substantial and appears to reduce the number of people who turn down insurance by over two million. The impact is greatest for those with lower incomes in the group market.

In Table 6 we also show the impact of a combination of a national marketplace and the 2008 State of the Union (SOTU) health insurance proposals. Specifically, those buying a single coverage contract would get a $7,500 tax deduction and those buying a family contract would get a $15,000 tax deduction. For the individual market, the combination of these two policies is fairly substantial with a 70% reduction in the uninsured among those earning less than $45,000 a year. In the group market, nearly everyone opts to take health insurance.

Table 6
Impact of National Market (Scenario 2) and 2008 State of the Union Proposal by Insurance Status and Income

		Scenario 2			
	Status	AL as default least regulated State			
	Quo	National		National & SOTU 2008	
Indiviudal	Sample	Sample	% Change	Sample	% Change
Uninsured < $45K Income	25,299,301	20,379,943	-19%	7,644,207	-70%
Uninsured >= $45K Income	3,544,843	2,508,945	-29%	3,119	-100%
Insured < $45K Income	11,109,728	16,029,086	44%	28,764,822	159%
Insured >= $45K Income	2,780,459	3,816,358	37%	6,322,184	127%
Group Market					
Uninsured < $45K Income	3,084,578	990,974	-68%	18,911	-99%
Uninsured >= $45K Income	446,103	39,886	-91%	69	-100%
Insured < $45K Income	47,414,484	49,508,088	4%	50,480,151	6%
Insured >= $45K Income	35,248,098	35,654,315	1%	35,694,133	1%
		Within Sample		National	

Another perspective on the impact of a national insurance market is the effect on states. We expect states with the highest regulatory burden would have the greatest movement to a less regulated state. In Table 7, we show the range of increased insurance coverage from the state of origin in the status quo situation to a national marketplace scenario. Percent changes reflect the difference from the combined individual and group markets at status quo to a different scenario. Highly regulated states such as New Jersey, Massachusetts, and West Virginia have the greatest percent changes.

We also model the combined impact of a national marketplace and the 2008 SOTU proposal and find similar distributional patterns, but a clearly accelerated movement from states where the insured are domiciled. In New Jersey, the percent of individuals with insurance increases from 49% to 79% due to the addition of the SOTU proposal.

Conclusion

We find evidence of a significant opportunity to reduce the number of uninsured under a proposal to allow the purchase of health insurance across state lines. The best scenario to reduce the uninsured, numerically, is competition among all 50 states with one clear winner. This idea is not without precedent outside the health care industry, where Delaware has become the most favored state for incorporating a firm. The most pragmatic scenario, with a good impact, is one winner in each regional market. This is a compromise since the U.S. health insurance industry is only 'half-way' national (through large employer-sponsored national contracts with insurers with national provider panels) and this could provide a practical, more politically palatable approach. The 'five large state' policy scenario is the least effective policy for increasing the number of insured people. This is likely due to the fact that only one state of the five, Texas, had a combined regulatory burden that is greater than the 50^{th} percentile of all states.

Although we have modeled the person-level impact of a national market on coverage, we are unable to assess the impact of such a migration on provider access or quality of care. Nevertheless, a national market would lead to substantial additional health care access which should lead to health improvements among the vulnerable populations who currently find health insurance unaffordable. In addition, development of a national market requires no additional federal resources other than support for legislation to permit the development of such a change to the U.S. health insurance market.

Table 7
Impact of National Market (Scenario 2) and 2008 State of the Union Proposal by State

	Status Quo		National Market			National Market & SOTU 2008		
State	Individual	Group	Individual	Group	% Change	Individual	Group	% Change
AK	25,037	254,263	28,179	256,505	2%	88,637	268,156	28%
AL	358,089	1,524,624	358,089	1,524,624	0%	756,128	1,559,473	23%
AR	468,958	906,086	486,742	906,535	1%	591,815	907,849	9%
AZ	458,356	2,000,931	473,107	2,002,528	1%	960,364	2,024,929	21%
CA	3,463,657	12,594,829	4,134,239	12,640,976	4%	6,524,469	12,695,976	20%
CO	345,832	1,719,774	397,590	1,728,751	3%	795,157	1,750,327	23%
CT	89,322	1,416,085	112,755	1,433,670	3%	285,887	1,455,601	16%
DE	75,208	353,904	92,063	354,008	4%	102,992	354,096	7%
FL	1,144,407	5,972,619	2,149,740	6,073,232	16%	3,318,945	6,088,419	32%
GA	532,298	3,415,490	705,663	3,449,363	5%	1,459,406	3,505,182	26%
HI	136,951	513,589	189,264	514,055	8%	221,737	514,251	13%
IA	192,956	1,202,769	319,789	1,210,057	10%	457,787	1,211,651	20%
ID	134,906	464,616	235,620	470,266	18%	311,348	471,552	31%
IL	405,168	5,251,628	468,404	5,280,963	2%	1,547,788	5,369,952	22%
IN	621,452	2,330,686	728,286	2,341,523	4%	1,008,499	2,367,869	14%
KS	121,745	1,136,929	135,052	1,139,573	1%	323,920	1,150,314	17%
KY	387,604	1,474,683	436,786	1,482,466	3%	769,118	1,495,250	22%
LA	255,053	1,561,763	308,748	1,576,169	4%	715,461	1,613,713	28%
MA	19,520	2,276,118	203,552	2,623,960	23%	628,438	2,682,821	44%
MD	191,638	2,080,518	489,813	2,189,508	18%	929,713	2,207,719	38%
ME	109,339	550,625	163,509	551,523	8%	183,695	551,766	11%
MI	562,786	4,232,660	914,700	4,260,918	8%	1,418,993	4,266,494	19%
MN	226,333	2,180,219	264,055	2,184,629	2%	604,106	2,191,664	16%
MO	328,293	2,307,270	386,947	2,319,775	3%	836,461	2,348,159	21%
MS	241,562	980,110	249,421	980,632	1%	484,727	984,911	20%
MT	66,775	307,598	76,746	309,421	3%	167,966	316,351	29%
NC	640,622	2,998,459	1,137,836	3,049,092	15%	1,690,097	3,056,095	30%
ND	34,150	253,861	36,004	254,513	1%	86,926	259,888	20%
NE	81,174	671,256	85,171	672,228	1%	217,563	681,159	19%
NH	36,502	555,705	44,107	560,381	2%	113,391	572,337	16%
NJ	20,328	2,393,267	143,123	3,442,574	49%	651,233	3,666,466	79%
NM	240,329	637,256	263,614	638,385	3%	394,608	641,028	18%
NV	168,948	814,555	203,814	819,872	4%	416,470	827,414	26%
NY	121,626	6,753,047	705,435	7,714,923	22%	1,920,968	7,797,242	41%
OH	576,945	4,579,871	1,061,894	4,625,875	10%	1,746,612	4,634,302	24%
OK	209,904	1,208,503	236,684	1,216,491	2%	567,520	1,253,537	28%
OR	252,405	1,218,744	612,317	1,232,839	25%	759,688	1,234,526	36%
PA	644,614	4,853,335	1,028,563	4,877,657	7%	1,466,033	4,882,420	15%
RI	90,392	434,862	120,847	435,204	6%	137,875	435,350	9%
SC	225,440	1,395,668	237,629	1,401,073	1%	596,097	1,458,583	27%
SD	29,777	271,233	33,408	273,789	2%	88,288	283,719	24%
TN	401,215	1,948,370	463,574	1,966,210	3%	1,022,969	2,023,530	30%
TX	1,398,432	8,361,776	1,745,464	8,466,829	5%	3,672,305	8,648,112	26%
UT	371,112	876,221	387,514	876,517	1%	500,439	877,486	10%
VA	537,878	2,688,648	1,109,836	2,740,657	19%	1,547,058	2,747,230	33%
VT	48,290	252,989	74,855	253,427	9%	82,523	253,538	12%
WA	555,371	2,288,192	1,002,288	2,364,037	18%	1,298,386	2,377,834	29%
WI	276,530	2,239,075	297,050	2,243,965	1%	683,167	2,273,097	18%
WV	96,768	578,129	216,111	598,887	21%	366,364	602,540	44%
WY	35,246	177,949	43,078	180,070	5%	92,970	184,690	30%

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Appendix 1

Full Description of Simulation Methods

This analysis was completed in three steps. First, an inventory of available literature was completed to identify parameters for the simulation. Second, we reviewed the literature and used empirical data to develop premium estimates for the simulation that reflect case-mix as well as state-specific differences. Third, we used a revised version of the 2005 Medical Expenditure Panel Survey (MEPS) to complete a set of simulations to identify the impact of three different scenarios for national market development.

Characterize the state-specific individual insurance markets

(a) The first step in this simulation is to describe the regulatory environment of the individual insurance market in each state. We used several secondary sources for this description, including Blue Cross/Blue Shield for state mandates; the Georgetown University Health Policy Institute for guaranteed issue and community rating; and Thomson-West's Netscan/Health Policy Tracking Service ("Major Health Care Policies, 50 State Profiles, 2003/2004") for any willing provider laws. We attempted to be as consistent as possible by using the same sources of regulatory information used in the empirical work from which we take our cost estimates. This was challenging because some of the studies failed to provide reference information. This information was coded into a spreadsheet for use in subsequent steps of the analysis and is presented as Appendix 3.

(b) The second step is to identify the marginal cost of particular regulations, including mandates, guaranteed issue, community rating, and any willing provider laws.

- Mandates are state regulations that require insurers to cover particular services or providers. We opted to use the count of mandates in a state rather than trying to identify the separate cost of each mandate. This decision follows the empirical work, which typically uses a count of state mandates.

- Guaranteed issue laws require insurers to sell insurance to all potential customers regardless of health or pre-existing conditions. However, this doesn't necessarily mean that insurers can't put riders on pre-existing conditions or incorporate premium adjustments for them. Guaranteed issue provisions can be broad (e.g. applying to all products, all consumers, at all times) or narrow (e.g. applying to very specific populations or during specific open enrollment periods). Our coding rules are biased towards those states that had fairly broad guaranteed issue provisions.

- Community rating requires insurers to limit premium differences across individuals. We coded a state as having community rating if it had 'pure' (no

premium differences are allowed) or 'adjusted' community rating. We did not consider rating bands as part of this definition.

- Any willing provider (AWP) laws restrict insurers' ability to exclude providers from their networks. There is a lot of variability here as well. Many states apply AWP laws narrowly (e.g. to pharmacies only). We coded a state as having an AWP law if it applied broadly to providers.

We conducted a literature review to identify estimates of the impact of these state laws and regulations on health insurance premiums.[4] We used only studies of the individual insurance market, since this is the market in which we are interested. This ruled out using studies that focus on the relationship between regulations and premiums in the small-group market (e.g. Simon, 2005).

States may adopt regulations for reasons that are also related to the effect of those regulations on premiums. For example, a state may be 'pro-regulation' in all areas and that pro-regulation sentiment may enhance the effects of the regulations. However, we could not find any study that controlled for states' strong preferences for regulation. This may be due to the fact that many regulations were adopted in the 1990s or before and there is no premium data that can be matched to 'before' and 'after' the regulations were implemented. Because none of the studies controlled for self-selection, the results must be interpreted with caution.

Two studies (LaPierre, et al., 2005; Hadley and Reschovsky, 2003) analyzed the regulation-premium relationship using data on individuals who held health insurance policies. People who hold insurance may have characteristics that differ from those who shopped and didn't buy. For example, those who hold insurance may be low-risk. If these characteristics are not observed or controlled by the researcher, his or her estimates of the effects of regulations on premiums held by the insured will be biased. We eliminated the LaPierre, et al. (2005) study because they did not attempt to control for this bias. We retained the estimates from Hadley and Reschovsky (2003) since they used a selection-correction approach to control for unmeasured personal attributes related to both insurance and premiums.

We utilized estimates from the following four studies: Congdon, et al. (2005); Henderson, et al. (2007); New (2006); and Hadley and Reschovsky (2003).[5] It should be noted that only the Hadley and Reschovsky (2003) paper has been published in a peer-reviewed journal. The other three are working papers. In Table A1, we summarize the key findings:

[4] A copy of the literature review with complete references is attached.

[5] Other studies, particularly from the Urban Institute, have examined the effects of mandates on insurance coverage. However, these studies did not have sufficient information to inform the modeling requirements of our analysis. In order to use them for our purposes, we would have needed to adjust them with estimates of the responsiveness of coverage to prices, i.e. dPrice/dRegulation = (dCoverage/dRegulation) / (dCoverage/dPrice). The addition of a second level of uncertainty into our simulations is the drawback of this two-step approach.

Table A1
Summary of Studies of the Effects of Sate Regulations on Premiums in the Individual Health Insurance Market

Regulation/Law	Congdon, et al.	Henderson, et al.	New	Hadley & Reschovsky
Guaranteed Issue	94-114% increase in premium in one state (NJ)	No effect	NA (not assessed)	No effect
Community Rating	20-27% increase in premium	No effect	NA	15-34.6% increase in premium
Any Willing Provider	1.5-9% increase in premium	5-12% increase	NA	NA
Mandates	Each additional mandate increases premium .4-.9%.	Used indicator variables for a very comprehensive set of mandates. Some increase and some decrease premium.	Each additional mandate raises the monthly premium by 75 cents, approximately .5%.	NA

To make our analysis comprehensive, we used three summary measures of the regulatory effects: (1) the midpoint of the range of the estimated effect of each regulation/mandate – our moderate estimate; (2) the minimum estimated effect; and (3) the maximum estimated effect. These effects are summarized in Table A2.

Table A2
Minimum, Maximum, and Midpoint Estimates of the Effects of Regulations

Regulation	Minimum Increase	Midpoint Increase	Maximum Increase
Guaranteed Issue	0	57%	114%
Community Rating	0	17.3%	34.6%
Any Willing Provider	1.5%	6.75%	12%
Mandates	.4% per mandate	.65% per mandate	.9% per mandate

Regulations and mandates represent important differences across state-specific individual insurance markets, but there may be other factors as well. Here are a few issues:

(a) Regulations regarding look-back periods and pre-existing conditions: A lot of variation exists across states with respect to mandates regarding coverage of pre-existing conditions. This will impact people with chronic/acute illnesses differently than those who are healthy, both in terms of coverage value, prices (potentially), and take-up. Although we have information on state regulations for look-back periods and pre-existing conditions, we know of no studies that model the effect of these regulations on premiums.

(b) Premium taxes: We have not attempted to determine the effects of premium taxes on premiums in the non-group market.

(c) Provider networks and provider prices: Premium variation may also reflect differences across states (and plans within states) regarding the size of the provider network and plan types. AWP laws may capture some of this variation, but the extent of provider market power and local variation in prices is also likely to drive premiums.

Calculate simulation premiums

The second step in the analysis requires calculation of premiums adjusted for the effects of state regulations. The basic idea behind a national market is that a person living in State A will be able to buy insurance licensed in State B. Suppose I live in State A where the premium is $100 per month. This reflects the influence of my state's medical practice style and provider prices (which would not change if I bought insurance in State B) and the effects of regulations (which would change). If I bought insurance in State B, the premium would be $100 minus the effects of fewer regulations in State B.

To implement this step, we relied on the premiums reported by Congdon, Kowalski, and Showalter (2005). These premiums were first adjusted by age and sex to reflect standard actuarial differences in health care costs, and then they were adjusted by the effects of regulations as summarized in Appendix 3. The adjusted premiums will be used as inputs into the insurance take-up simulation model.

Simulation

In the third step we simulate the effect of a national market on take-up of individual health insurance. This step requires that we know the state of residence for people in the MEPS-Household Component, (MEPS-HC), but the MEPS will not release person-specific state IDs. Therefore, we had to devise a method for imputing each person's state of residence.

State-Specific Imputation of MEPS

Below, we summarize the process of imputation which resulted in the creation of 51 synthetic state populations from the 2005 MEPS-HC.

(a) We used the 2005 American Community Survey (ACS) to define the strata that would be used to generate the sample.[6] The final strata include four variables: Age (18-34, 35-44, 45-54, and 55-64); Income (1 if household income is in the lowest quartile, 0 if not); Male (1 if male, 0 if not); White (1 if white, non-Hispanic, 0 if not). Creating all possible combinations resulted in 32 cells per state. The unit of analysis for data construction is the person, not the household. Using person weights in the ACS, we tabulated the population frequencies for each of these strata by state.

(b) We divided the 2005 MEPS into four regions – Northeast, Midwest, South, and West. The District of Columbia is in the South region. We selected only 18-64 year-olds to match the ACS selection criteria. The regional MEPS samples had the following sizes:

Table A3 – 2005 Regional MEPS Sample Size by Region

Region	**Sample Size**
Northeast	2,874
Midwest	3,734
South	7,520
West	5,132

Within each of these regions, the strata were defined. We then wrote a STATA computer program to draw a random sample with replacement of 1,000 (approximately, given rounding) observations from the region containing a particular state.[7] The frequency of observations by strata was matched to represent the population (e.g. if 10% of the state is age 18-34, low-income, male, and non-white, then 100 of the 1,000 observations would be drawn from MEPS individuals of this type). After all of the random samples were drawn, the data were appended to form a national data set.

(c) While we know that the state samples match the socio-demographic criteria with respect to the strata, additionally we wanted to check to see how our samples looked with respect to insurance holding. To do this, we computed state-specific estimates of uninsurance from the 2006 Current Population Survey (CPS). We

[6] We used the ACS because it gave us state-specific distributions that were required to create the synthetic state markets for the analysis.

[7] The sample size for Hawaii had to be reduced to 600 because the MEPS sample from the Western region of the United States did not have enough representation among certain strata to accommodate the socio-demographics of Hawaii. STATA does not allow one to draw a random sample from a stratum that is larger than the population, even with replacement.

compared the uninsurance estimates generated for our synthetic state populations with the CPS estimates. This comparison fares pretty well. There are only two notable issues: (1) we tend to underestimate the amount of uninsurance in synthetic Northeast states due to the small MEPS sample and the population heterogeneity in the Northeast; and (2) uninsurance was overestimated in Washington, DC, because the sample is drawn from the entire South region and there is no easy way to account for the concentration of federal government workers in DC.

(d) After completing this exercise, we merged several other variables into the file and selected the sample to mimic the one we have used previously in simulations. In particular, we deleted cases of adult dependents who did not have an ESI offer but had a spousal offer (n = 8,609), those who reported having public insurance at any point during round 1 of MEPS (n = 4,725), and full-time students (n = 892). Also, we constructed the number of plans offered to each person by using an ordered probit model to predict whether those with an offer of ESI were offered 1, 2, 3, or 4+ plans. We computed predicted probabilities for each category and identified the category with the maximum probability as the number of offered plans.

Application of State-Specific MEPS to National Simulation Model

Using a simulation model developed from previous analyses (Feldman, Parente, Abraham, et al, 2005; Parente, Feldman and Abraham, 2007), we applied the Synthetic State MEPS (SS-MEPS) described above to develop a set of national estimates. The simulation model is capable of generating estimates of national health plan take-up for both the individual and the ESI markets. The estimates are based on predictions from a set of parameter estimates from a conditional logistic regression model of health plan choice. The conditional logistic regression model requires information on wage income, single or family status, presence of chronic illness, age, gender, and health plan premiums. The data used to generate the parameter estimates come from an aggregate database of large employers' human resources and claims data from 2003.

One of the distinguishing attributes of the simulation model is the presence of consumer driven health plans (CDHPs). Specifically, there are two types of CDHPs: a low-option Health Reimbursement Arrangement (HRA) and a high-option HRA. The low-option HRA is very similar in deductible, coinsurance and premium structure to a Health Savings Account (HSA) plan. This enabled us to model both HRA and HSA choices in the simulation as well as high, moderate and low-option Preferred Provider Organizations (PPOs), and a Health Maintenance Organization (HMO).

In the simulation, consumers in the individual market have five choices: high, moderate and low-option PPO, HSA, and the choice to be uninsured. The uninsurance parameter is calibrated based on the national rate of the uninsured in the individual market by income quartiles as determined from the 2005 MEPS sample. Consumers with employer-sponsored coverage are given up to eight choices including HMO, three PPO options, an

HRA, an HSA where the employee opts out of employer sponsored coverage, an HSA where the employer picks up most of the cost of the HSA/high deductible insurance policy, and finally a choice to turn down coverage for any reason (e.g. already had coverage from spouse).

Chronic illness is modeled at the contract level in the simulations. That is, either the person choosing insurance, or someone covered by their insurance contract, has a chronic illness. This assumption was made because the data used to estimate the health plan choice model could only be attributed to contract holders, not the person receiving care under a contract. As a result, the chronic illness metric reflects a household's illness burden, more than that of one individual, unless the person is only buying a single-coverage contract.

The simulation model adjusts premiums for the tax treatment of health insurance offered by employers in the ESI market. Specifically, premiums are adjusted to take into consideration the federal marginal tax rate as well as the social security tax burden. The capability to adjust for state tax effects is also possible, but not considered in this model in order to identify the pure effects of differences in insurance regulation by state.

We use premium estimates for each of the plan choices based on our earlier work (Feldman, Parente, Abraham, et al., 2005). These premium estimates are derived from a combination of ehealthinsurance.com and Kaiser/Commonwealth estimates of premium prices. These premium estimates are adjusted to 2008 dollars.

We develop state-specific premium inflators/deflators from the AHIP individual market single and family coverage report. Individual market premiums were experience rated for age and gender (with the exception of community rated states). For this analysis, we define the small group market as one where an employer has less than 250 employees. At this level, employers generally do not self-insure. Premiums for employers with less than 250 employees were adjusted by state-specific regulatory effects. Finally, HSA premiums include a $1,000/$2,000 investment in accounts depending upon whether the person was choosing a single or family insurance product, respectively.

The simulation is based only on choices made by adults aged 19-64 who are not students, not covered by public insurance, and not eligible for coverage under someone else's ESI policy. As a result, our baseline uninsured and turned down population represents 32.3 million people (we edited out military, students, under age 18 or 65 and older, and those without ESI offer who could be covered by spouse). However, we present results for our selected sample as well as a national approximation that would yield 47 million people uninsured.

Scenarios for Policy Simulation

We developed three different scenarios for policy simulation. Each of these simulations was run on a set of minimum, moderate and maximum impacts of state-specific regulations as derived from the literature. The impact of each scenario was calculated by

multiplying a given person's original premium by a state min/mod/max specific multiplier. These multipliers are described in Appendix 4 by state. For each scenario, if the consumer faces a lower premium as a result of the proposed policy change, the consumer will choose the better price. If the new possible premium is not a better deal than that in the consumer's home state, they will stick with their home state in the simulation. The three scenarios are:

Scenario 1: Competition among 5 largest states

In this scenario, only the five largest states are permitted to be available for the national market along with the consumer's own state. The rationale for this scenario was that it was considered in a previous legislative proposal. The idea is that large states would have the critical skills in their insurance departments to take on additional regulatory responsibilities for new consumers from out-of-state. The five largest states in the United States, based for population size, are (in order of descending population size): California, Texas, New York, Florida, and Illinois. Of these, Texas has the least regulated health insurance environment and is the comparison state in the simulations.

Scenario 2: Competition among all 50 states

For this scenario, the state with the least regulation is identified as Alabama. In this simulation, all consumers are assumed to find AL the state to which they would switch policies unless they were already residents of Alabama. This could be the most extreme outcome of the legislation similar to that proposed by Rep. John Shadegg (R-AZ) for the last few years.

Scenario 3: Competition within regions

Under this scenario, the United States' health insurance market is broken into four regions: Northeast, South, Midwest, and West. Residents in each region buy insurance from a state within their region with the most favorable premium due to decreased regulation. This scenario was based on the regional Part D and TriCare contract models for insurance carriers. For the Northeast, the state with least-cost regulation impact was New Hampshire. In the Midwest, Nebraska was the favored state. In the West, the state of choice was Arizona and in the South, the state of choice was Alabama.

Appendix 2

Literature Review for Effects of State Regulations on Health Insurance Premium in the Small Group and Non-Group Markets

Effects of "Second Generation" Small Group Health Insurance Market Reforms, 1993 to 1997

Authors: Marquis & Long, 2001

Data: NEHIS 1993-1996 and 1997 RWJF EHIS.

This study compared small group premiums in nine states that adopted guaranteed issue and rating restrictions (prohibiting the use of health status for premium rating) between 1993-1997 with 11 states and DC where none of these regulations were adopted. Outcomes were measured by premiums that took into account different plan benefits, the variability of premiums among employers, and the change of premiums over time. Only estimates from a difference-in-differences (D-in-D) model are reported in this summary. Results showed mixed effects. Regulations had a statistically significant impact only in New York where premiums for family coverage were reduced and in Oregon, where premiums increased. Between 1996 and 1997, small firms in NY had significantly lower premiums by 12.3%, while other eight states did not show statistically significant differences.

Who Gains and Who Loses with Community Rating for Small Business?

Authors: Buchanan & Marquis, 1999

Data: A half-sample of the May 1993 CPS, selecting working heads of families employed in a small firm at the time of the survey. Workers in the surveyed families were grouped into artificial small firms (under 50 workers). A simulation model predicted annual premiums, which were slightly smaller than the observed values. Experience rating and community rating were compared, using the RAND Health Plan Choice and Health Expenditures Simulation model. Simulation results showed that around 60% of the firms faced higher community-rated premiums than experience-rated premiums, and around 50% of the firms faced community-rated premiums 20% higher than the other rating policy. Also, the median premium paid by firms under experience rating was $1,132 on average, which was 40% lower than the $1,946 paid under community rating.

The Effect of State Regulations on Health Insurance Premiums: A Preliminary Analysis

Author: M. J. New, 2005

Data: Health premiums data from eHealthInsurance.com

State regulations have positive effects on premiums. A 'Health Plan Liability' law increases monthly premiums by $26.72; 'Direct-Access-To-Specialists' increases monthly premiums by $310; and 'Provider Due Process' increases premiums by $22.49. Each additional mandated benefit (not distinguished by type of mandate) increases monthly premiums by $0.89. The control group is monthly premiums for policies in states without the presence of 26 mandated benefits and the insurance laws mentioned above.

The Effect of State Regulations on Health Insurance Premiums: A Revised Analysis

Author: M. J. New, 2006

A revised paper showed results similar to the previous one. Health plan liability laws increase monthly premiums by $21.84. Direct-Access-To-Specialists increase monthly premiums by $31.15. Provider due process laws increase premiums by $16.62. Each additional mandated benefit increases premiums by $0.75.

Study of Costs of Certain Mandated Benefits in Insurance Policies 2001

Author: Wisconsin Office of the Commissioner of Insurance, 2002

This report showed that the costs of five mandated benefits as a percentage of total benefits decreased slightly compared with an earlier report, from 6.49% in 1990 to 5.53% in 2001. However, no details were presented regarding data and methods; therefore, the results of this report cannot be assessed.

Price Sensitivity of Demand for Nongroup Health Insurance

Author: Congressional Budget Office, 2005

Data: SIPP 2001-2005

This study imputed premiums for single workers in the non-group insurance market. Without state rating restrictions, premiums are estimated based on an individual's self-

reported health status, taking into account three age rates. With state rating restrictions, rating bands were applied to health or age factors based on the unregulated premiums; an additional 30% was added to premiums in states with pure community rating; this addition was proportionally reduced for states with weaker restrictions. A price ceiling of 2.5-3 times the average premium was applied to states with high-risk pools. State premium rating restrictions would reduce the annual premium for people with Fair or Poor health status, from $4,109 to $3,500 (-15%). Rating restrictions would raise the premium for people with Good, Very Good or Excellent health status, from $1,781 to $2,453 (38%). But these are not empirical results – they were created by an actuarial model to estimate the effects of regulations on take-up rates. The control group was states without rating restrictions.

Health and the Cost of Non-group Insurance

Authors: Hadley & Reschovsky, 2003

Data: 1999-2001 Community Tracking Study-household surveys

Community rating versus no health rating would increase monthly premiums by 14% under OLS estimation or by 35% under selection-adjusted estimation. The control group is households in states without community rating.

State Health Insurance Regulations and the Price of High-Deductible Policies

Authors: Congdon, Kowalski, & Showalter, 2005

Data: eHealthInsurance & Golden Rule

This study examines the impact of four state regulations on the premiums for high-deductible family and individual health insurance policies. All regulations increase premiums. Each additional mandated benefit would raise individual premiums by 0.4% and family premiums by 0.5%, relative to states with 21 or fewer mandated benefits. Any willing provider (AWP) would increase individual premiums by 1.5%, though the effect was not statistically significant, and would raise family premiums by 5.3%. Community rating would increase individual premiums by 20.3% and family premiums by 27.3%. Guaranteed Issue would raise individual premiums by 114.5% and family premiums by 95%. The control group is states without AWP, community rating, and

guaranteed issue (New Jersey was the only state that implemented this regulation in the sample), and states with 21 or fewer mandates. A simulation study examined the effect of eliminating AWP, community rating, and guaranteed issue, and limiting mandated benefits to 10. The individual premium is expected to drop by 10.2%, on average, and the family premium is expected to drop by 12.1%.

Community Rating and Sustainable Individual Health Insurance Markets in New Jersey

Authors: Monheit, Cantor, Koller, & Fox, 2004

Data: March 1996 – December 2001 New Jersey IHCP plans enrollment data.

In 1993 New Jersey adopted regulations including pure community rating, guaranteed issue, and guaranteed renewal for individual health insurance plans. Premiums for all of the four investigated IHCP plans increased during the four years, some by more than 3.5 times their initial level. By 2000, IHCP premiums exceeded and rose faster than employer-coverage premiums. From 1996 to 2000, premiums of three IHCP indemnity plans increased by 111.9%, 154.7%, and 141.0% respectively, and premiums of the IHCP HMO plan increased 48.1%. The study used the initial level of premiums in 1996 to contrast to those in 2000.

Estimating the Impact of State Health Insurance Mandates on Premium Costs in the Individual Market Using the Community Tracking Survey

Authors: LaPierre, Conover, Henderson, & Taylor, 2005

Data: Community Tracking Survey 1997-2003

This study found mixed effects for the number of mandated benefits on insurance premiums for four insurance types: single-coverage indemnity plans, family indemnity plans, single HMO plans, and family HMO plans. The total number of mandated benefits did not significantly impact premiums, but mandate waivers in the individual market reduced the family-indemnity premium by 129%. When groups of one person are permitted in the small group market, the single-indemnity premium is reduced by 32%, and the family-indemnity premium is reduced by 27%. Pure community rating reduces HMO family premium by 103%. An additional provider mandate reduces the HMO

family premium by 18% and an additional coverage mandate increases it by 70%. The mandate waivers in the individual market reduced indemnity family premium by 129%. The control group is the premium without the presence of those state regulations.

The Effect of State Community Rating Regulations on Premiums and Coverage in the Individual Health Insurance Market

Authors: Herring & Pauly, 2006

Data: NHIS 1997-2004, Community Tracking Study Household Survey 1998-2001, and MEPS 1996-2003

'Regulated' states in this study include MA, ME, NH, NJ, NY and VT, which implemented both community rating and guaranteed issue laws. The 'unregulated' states had neither community rating nor guaranteed issue. The question of interest is whether community rating and guaranteed issue change the relationship between the log of condition-related expenses and premiums. In unregulated states, annual premiums increase as condition-related expenses increase. Analysis using NHIS data showed about a 10% positive effect of log condition-related expenses on premiums, and the results from CTS data showed about 7% positive effects. In regulated states, premiums increase by 6.9% as log condition-related expenses increase in the NHIS dataset, and by 2.3% in the CTS dataset. But the differences are not statistically significant. Thus, community rating and guaranteed issue did not have much affect on the relationship between premiums and condition-related expenses. The control group was states with neither community rating nor guaranteed issue.

State-Mandated Benefits and Employer-Provided Health Insurance

Author: Gruber, 1994

Data: May CPS supplements for 1979, 1983, and 1988

This study investigated the effects of five expensive mandated benefits (mandated minimum benefits for alcoholism treatment, drug abuse treatment, and mental illness; mandated coverage for chiropractic services; and mandated continuation of coverage) on the propensity of small firms (less than 100 employees) to offer insurance. The author found that adding these five benefits to a health plan could increase premiums for the

average firm by 5%, but mandated benefits did not affect small firms' decisions to offer insurance. The control group is premiums in states without the presence of mandated benefits.

Adverse Selection in Health Insurance Markets? Evidence from State Small-Group Health Insurance Reforms

Author: Simon, 2005

Data: 1996 Medical Expenditure Panel Survey Insurance Component; 1993 NEHIS

Employer-level statistical analysis compared changes in premiums for small firms before and after 'full' reforms (both guaranteed issue and rating restrictions) to the changes for firms in non-reform states. Results showed that premiums increased on average by $7.80 a month per person after the implementation of rating restrictions and guaranteed issue laws.

Appendix 3 – State Level Variation in Regulatory Impact

STATE	Average State Premium Single 2008	Average State Premium Family 2008	State/National Premium Ratio Single	State/National Premium Ratio Family	State Regulation Presence (0/1) Community Rating	Any Willing Provider	Guaranteed Issue	Number of Mandates
AK	$3,435	$5,821	1.371	1.253	0	0	0	25
AL	$2,548	$4,545	1.017	0.978	0	0	0	15
AR	$1,440	$1,953	0.575	0.420	0	0	0	29
AZ	$2,440	$3,984	0.974	0.857	0	0	0	18
CA	$1,885	$3,972	0.752	0.855	0	0	0	40
CO	$2,198	$4,216	0.877	0.907	0	0	0	31
CT	$2,963	$5,660	1.183	1.218	0	0	0	37
DE	$1,220	$2,026	0.487	0.436	0	0	1	16
FL	$2,539	$4,882	1.013	1.051	0	0	1	38
GA	$2,910	$4,956	1.161	1.067	0	1	0	27
HI	$1,455	$2,678	0.581	0.576	0	0	1	18
IA	$1,965	$3,753	0.784	0.808	0	0	1	15
ID	$2,207	$3,788	0.881	0.815	0	1	1	6
IL	$2,591	$4,991	1.034	1.074	0	0	0	27
IN	$2,330	$2,505	0.930	0.539	0	1	0	24
KS	$2,260	$4,510	0.902	0.971	0	0	0	25
KY	$2,033	$4,442	0.811	0.956	0	1	0	23
LA	$2,858	$4,874	1.141	1.049	0	0	0	31
MA	$5,257	$10,126	2.098	2.179	1	0	1	33
MD	$3,279	$6,574	1.309	1.415	0	0	1	46
ME	$1,455	$2,678	0.581	0.576	1	0	1	33
MI	$1,926	$3,968	0.769	0.854	0	0	1	19
MN	$2,121	$4,141	0.847	0.891	0	0	0	34
MO	$2,299	$3,985	0.918	0.858	0	0	0	31
MS	$1,205	$4,721	0.481	1.016	0	0	0	20
MT	$2,418	$4,350	0.965	0.936	0	0	0	27
NC	$2,623	$4,467	1.047	0.961	0	0	1	34
ND	$2,420	$4,072	0.966	0.876	0	0	0	20
NE	$2,295	$4,119	0.916	0.887	0	0	0	19
NH	$3,134	$5,382	1.251	1.158	0	0	0	30
NJ	$6,048	$14,403	2.414	3.100	1	0	1	30
NM	$1,982	$2,985	0.791	0.642	0	0	0	29
NV	$2,364	$5,096	0.944	1.097	0	0	0	38
NY	$3,743	$9,696	1.494	2.087	1	0	1	34
OH	$2,304	$4,541	0.920	0.977	0	0	1	19
OK	$3,047	$4,813	1.216	1.036	0	0	0	26
OR	$2,162	$3,971	0.863	0.855	1	0	1	21
PA	$1,989	$3,916	0.794	0.843	0	0	1	25
RI	$1,298	$2,584	0.518	0.556	0	0	1	29
SC	$3,328	$5,230	1.328	1.126	0	0	0	20
SD	$3,133	$5,228	1.250	1.125	0	0	0	26
TN	$2,851	$5,047	1.138	1.086	0	0	0	29
TX	$2,836	$4,940	1.132	1.063	0	0	0	38
UT	$1,308	$2,530	0.522	0.545	0	0	0	28
VA	$2,332	$4,631	0.931	0.997	0	0	1	39
VT	$1,455	$2,678	0.581	0.576	1	0	1	14
WA	$3,141	$3,342	1.254	0.719	1	0	1	29
WI	$2,373	$4,462	0.947	0.960	0	0	0	21
WV	$3,141	$5,338	1.254	1.149	0	0	1	28
WY	$2,734	$4,734	1.091	1.019	0	1	0	25
USA	$2,506	$4,646	1.000	1.000				

Appendix 4 State-specific Premiums and Scenario Adjustors

STATE	S_PREM	F_PREM	S_FLATE	F_FLATE	REG	MIN	MOD	MAX	SCEN1	SCEN2	SCEN3	SCEN1_P	SCEN2_P	SCEN3_P
AK	1529	2683	1.051066	1.001716	S	1.10	1.16	1.23	TX	AL	AL	1.247	1.0975	1.0975
AL	1645	3447	1.130806	1.28696	S	1.06	1.10	1.14	TX	AL	AL	1.247	1.0975	1.0975
AR	1440	1953	0.989885	0.729165	W	1.12	1.19	1.26	TX	AL	AZ	1.247	1.0975	1.117
AZ	1570	2178	1.07925	0.813171	W	1.07	1.12	1.16	TX	AL	AZ	1.247	1.0975	1.117
CA	1640	2799	1.127369	1.045025	W	1.16	1.26	1.36	TX	AL	AZ	1.247	1.0975	1.117
CO	1311	2811	0.901208	1.049505	W	1.12	1.20	1.28	TX	AL	AZ	1.247	1.0975	1.117
CT	2084	3739	1.432584	1.39598	NE	1.15	1.24	1.33	TX	AL	NH	1.247	1.0975	1.195
DE	1220	2026	0.838653	0.75642	NE	1.06	1.67	2.28	TX	AL	NH	1.247	1.0975	1.195
FL	1551	2879	1.066189	1.074894	S	1.15	1.82	2.48	TX	AL	AL	1.247	1.0975	1.0975
GA	1674	3679	1.150741	1.373579	S	1.12	1.24	1.36	TX	AL	AL	1.247	1.0975	1.0975
HI	1454.71	2678.405	1	1	W	1.07	1.69	2.30	TX	AL	AZ	1.247	1.0975	1.117
IA	1123	1386	0.771973	0.517472	MW	1.06	1.67	2.28	TX	AL	NE	1.247	1.0975	1.1235
ID	1572	3248	1.080625	1.212662	W	1.04	1.68	2.31	TX	AL	AZ	1.247	1.0975	1.117
IL	1657	2670	1.139055	0.996862	MW	1.11	1.18	1.24	TX	AL	NE	1.247	1.0975	1.1235
IN	1296	2505	0.890897	0.935258	MW	1.11	1.22	1.34	TX	AL	NE	1.247	1.0975	1.1235
KS	1333	3413	0.916331	1.274266	MW	1.10	1.16	1.23	TX	AL	NE	1.247	1.0975	1.1235
KY	1304	2456	0.896396	0.916964	S	1.11	1.22	1.33	TX	AL	AL	1.247	1.0975	1.0975
LA	1372	2826	0.943141	1.055106	S	1.12	1.20	1.28	TX	AL	AL	1.247	1.0975	1.0975
MA	1454.71	2678.405	1.3	1.3	NE	1.13	1.96	2.78	TX	AL	NH	1.247	1.0975	1.195
MD	1231	2100	0.846214	0.784049	NE	1.18	1.87	2.55	TX	AL	NH	1.247	1.0975	1.195
ME	1454.71	2678.405	1.1	1.1	NE	1.13	1.96	2.78	TX	AL	NH	1.247	1.0975	1.195
MI	1140	1957	0.783659	0.730659	MW	1.08	1.69	2.31	TX	AL	NE	1.247	1.0975	1.1235
MN	1546	2828	1.062752	1.055852	MW	1.14	1.22	1.31	TX	AL	NE	1.247	1.0975	1.1235
MO	1339	2607	0.920456	0.973341	MW	1.12	1.20	1.28	TX	AL	NE	1.247	1.0975	1.1235
MS	1205	2009	0.828341	0.750073	S	1.08	1.13	1.18	TX	AL	AL	1.247	1.0975	1.0975
MT	1361	2016	0.935579	0.752687	W	1.11	1.18	1.24	TX	AL	AZ	1.247	1.0975	1.117
NC	1237	2607	0.850339	0.973341	S	1.14	1.79	2.45	TX	AL	AL	1.247	1.0975	1.0975
ND	1454.71	2678.405	0.9	0.9	MW	1.08	1.13	1.18	TX	AL	NE	1.247	1.0975	1.1235
NE	1357	2500	0.932829	0.933391	MW	1.08	1.12	1.17	TX	AL	NE	1.247	1.0975	1.1235
NH	1454.71	2678.405	1.1	1.1	NE	1.12	1.20	1.27	TX	AL	NH	1.247	1.0975	1.195
NJ	2732	6004	1.878032	2.241633	NE	1.12	1.94	2.76	TX	AL	NH	1.247	1.0975	1.195
NM	1202	2204	0.826279	0.822878	W	1.12	1.19	1.26	TX	AL	AZ	1.247	1.0975	1.117
NV	1930	3654	1.326721	1.364245	W	1.15	1.25	1.34	TX	AL	AZ	1.247	1.0975	1.117
NY	1454.71	2678.405	1.9	1.9	NE	1.14	1.96	2.79	TX	AL	NH	1.247	1.0975	1.195
OH	1342	2424	0.922518	0.905016	MW	1.08	1.69	2.31	TX	AL	NE	1.247	1.0975	1.1235
OK	1476	2296	1.014632	0.857227	S	1.10	1.17	1.23	TX	AL	AL	1.247	1.0975	1.0975
OR	1493	2435	1.026318	0.909123	W	1.08	1.88	2.68	TX	AL	AZ	1.247	1.0975	1.117
PA	1251	2055	0.859963	0.767248	NE	1.10	1.73	2.37	TX	AL	NH	1.247	1.0975	1.195
RI	1298	2584	0.892271	0.964753	NE	1.12	1.76	2.40	TX	AL	NH	1.247	1.0975	1.195
SC	1576	2804	1.083374	1.046892	S	1.08	1.13	1.18	TX	AL	AL	1.247	1.0975	1.0975
SD	1135	2727	0.780222	1.018143	MW	1.10	1.17	1.23	TX	AL	NE	1.247	1.0975	1.1235
TN	1362	2602	0.936266	0.971474	S	1.12	1.19	1.26	TX	AL	AL	1.247	1.0975	1.0975
TX	1531	2891	1.05244	1.079374	S	1.15	1.25	1.34	TX	AL	AL	1.247	1.0975	1.0975
UT	1308	2530	0.899146	0.944592	W	1.11	1.18	1.25	TX	AL	AZ	1.247	1.0975	1.117
VA	1572	2619	1.080625	0.977821	S	1.16	1.82	2.49	TX	AL	AL	1.247	1.0975	1.0975
VT	1454.71	2678.405	1	1	NE	1.06	1.83	2.61	TX	AL	NH	1.247	1.0975	1.195
WA	1634	3342	1.123245	1.247758	W	1.12	1.93	2.75	TX	AL	AZ	1.247	1.0975	1.117
WI	1334	1860	0.917019	0.694443	MW	1.08	1.14	1.19	TX	AL	NE	1.247	1.0975	1.1235
WV	1454.71	2678.405	0.9	0.9	S	1.11	1.75	2.39	TX	AL	AL	1.247	1.0975	1.0975
WY	1185	2140	0.814593	0.798983	W	1.12	1.23	1.35	TX	AL	AZ	1.247	1.0975	1.117

Key:

STATE	State of Insured
S_PREM	Single premium aggregate base
F_PREM	Family premium aggregate base
S_FLATE	State-specific single premium supply cost adjustment
F_FLATE	State-specific family premium supply cost adjustment
REG	Region mapping
MIN	Minimum state-specific effect of regulation
MOD	Moderate state-specific effect of regulation
MAX	Maximum state-specific effect of regulation
SCENX	X denotes scenario, State mapped for residents under scenario
SCENX_P	X denotes scenario, Scenario & state specific new regulation adjustor