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TO: Harvey Rosen

FROM: William Congdon, Amanda Kowalski and Mark Showalter

SUBJECT: Effect of State Regulations on the Price of Health Insurance Policies in the Non-Group Market

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This memorandum discusses the results of a statistical analysis of the impact of state regulations on the price of high-deductible health insurance policies (HDIPs). The main conclusions are:

- Mandated benefits raise the expected price of an individual policy by approximately 0.4 percent per mandate. For family policies the increase is approximately 0.5 percent per mandate. The typical state has about 20 mandates (with a range from 6 to 48) so a reduction from 20 to 10 mandates would imply a 4 percent decrease in price for individual policies, and a 5 percent decrease for family policies.
- "Any-Willing-Provider" laws, which limit insurers' ability to exclude hospitals and doctors from their networks, raise prices by 1.5 percent for individual policies and 5.3 percent for family policies.
- "Community Rating" laws, which limit insurers' ability to charge different prices to different customers, raise prices by 20.3 percent for individual policies and 27.3 percent for family policies

We begin by providing some background information on the policy debate. We then describe the data and basic methodology, and present the results. The conclusion notes some limitations of the analysis.

Motivation

The passage of the Medicare Modernization Act included the creation of Health Savings Accounts (HSAs). HSAs are viewed by many analysts as having the potential to fundamentally change the provision of health care in the United States by encouraging less use of third-party payments and more price-shopping by consumers seeking value for their health care expenditures.

But a consumer can only open an HSA if he or she has as their sole health insurance a high-deductible plan (HDIP), where the HDIP has a minimum deductible and other

parameters defined in the statute. Thus, the availability and characteristics of HDIPs are of critical importance to the impact of this policy change.

Of special interest in this policy debate is the effect of state regulations on the price of health insurance generally, and HDIPs in particular. While large firms that are subject to federal ERISA rules for their insurance provision are exempt from state regulations, individuals and other firms are subject to state regulation of the insurance market and there is considerable variation across states in these regulations. Concerns have been raised that these regulations increase the cost of the HDIP policies. This study examines the impact of state regulations on the price of family and individual polices available for purchase directly from insurers (the "individual" market).

Although there are numerous ways to regulate insurance markets, a few regulations are often suspected to have a disproportionately large effect on markets. We focus on the following four:

1) **Mandated Benefits**: Regulations that require insurers to provide particular services. We focus on "service" and "provider" mandates. Service mandates include mandates that require insurers to offer coverage for a variety of medical benefits (e.g. alcoholism treatment, bone marrow transplants). Provider mandates include mandated coverage for health care providers like chiropractors and social workers.
2) **Any-Willing-Provider (AWP)**: Regulations that restrict insurers' ability to exclude hospitals and doctors from their networks. Typically, such laws are motivated by a desire to offer consumers more choice and flexibility in receiving health care services. But such laws might hinder insurers' ability to contain costs.
3) **Community Rating**: Regulations that limit premium differences across policies. For example, the most stringent form of community rating leads to all policy holders paying exactly the same premium, regardless of factors such as age, gender, and health status. These laws are usually motivated using the language of "fairness." But such regulations might make policies unattractive to "low-cost" individuals (the young and healthy) and thereby lead to government-induced "adverse selection" with only the least healthy and most expensive individuals purchasing insurance.
4) **Guarantee Issue**: Regulations that limit insurers' ability to deny coverage. Insurers can be forced to offer coverage to any individual who applies, or forced to renew policies they would prefer to drop. These laws are often used in tandem with community rating; otherwise firms could charge very high premiums to discourage purchases from people they would otherwise deny coverage to.

Data

We have assembled a unique and up-to-date data set for this study. The primary data are from the firm EHealthInsurance.Com, a web-based firm that provides an online store for purchasing health insurance from a variety of insurance companies. The data include a sample of high-deductible individual and family policies sold in the non-group market for calendar year 2003, a total of 23,219 individual policies and 6,592 family policies. EHealthInsurance.Com aggregated the data into groups based on metropolitan area, state, number of covered individuals, gender, smoking status, student status, and out-of-pocket limit on the policy.[1] For the family policies, the characteristics refer to the purchaser of the policy. All other product and purchaser attributes are averaged within each group—premium, deductible, coinsurance, and age. The number of policies per observation in the data is generally small because the cross-tabulations are so detailed. Over half of the family observations and over fifteen percent of individual observations represent a single policy. All reported statistics weight by the number of policies within each observation.

We augment these data with information on state level regulations obtained from the Blue Cross and Blue Shield Association (BCBS) through America's Health Insurance Plans (AHIP). One disadvantage of these data is that they do not make a distinction between mandates that apply to the group market versus the non-group market. We therefore supplement this data source with information from the National Conference of State Legislatures (NCSL) for December 2003, a summary of consumer protections compiled by the Georgetown Health Policy Institute. The NCSL data are more detailed than the BCBS data and thus allows us to distinguish between group and non-group mandates, but they is not as comprehensive as BCBS and more difficult to quantify. We add data on state premium taxes compiled by the National Association of Insurance Commissioners (NAIC). We also include the Medicare Wage Index for FY 2003 which allows us to roughly account for differences in the cost of providing health care across geographic areas.

To supplement the analysis, we constructed an entirely different data set—information on *offered* policies from the firm Golden Rule, a major provider of insurance in the individual market. Golden Rule provided price quotes for a single policy—family of four, non-smoking, non-student, high-deductible—from a set of randomly selected zip codes within the set of metropolitan areas that they serve. Unlike the data from EHealthInsurance.Com, these data are from a single company for a single policy. Hence, the Golden Rule data allow us to assess the robustness of the EHealthInsurance.Com results.

Results

To begin, we provide a graphical summary of how premiums for single-policies in the non-group market vary across states depending on the regulatory regime. In the first

[1] This was the form in which the data were provided by EHealthInsurance.Com. It would have been preferable to obtain actual policies in all cases instead of the aggregated summaries, but that option was not available to us.

panel of Figure 1, we see that states without Any-Willing-Provider (AWP) regulations have an average monthly premium of $119; states with AWP regulations have a price that is $8 higher, $127. Community rating has a much bigger impact--$119 versus $164—although the number of states with such laws is much smaller: only 3 versus 16 states that have AWP laws. Finally, the difference in price for guarantee issue laws is $113 (233-120), but only a single state in our sample has such a law (New Jersey). Eight states have no policies in our dataset; all eight have either community rating or guarantee issue, sometimes both.

The second and third panels within Figure 1 present the same exercise for the average coinsurance rate and the average deductible. We see that the presence of regulations tends to be associated with less generous insurance (higher coinsurance rates, higher deductibles) as well as higher prices. Figure 2 replicates the same exercise for family policies in the non-group market and the same results are seen: regulation is associated with more expensive and less generous insurance.

Econometric Results

The simple statistics listed above are certainly suggestive, but a more rigorous analysis that accounts for differences in other factors that affect health insurance markets would allow for more refined estimates of the impact of insurance regulations. For this purpose we use the standard econometric technique of "multivariate regression," which allows one to estimate the *independent* effect of a given variable, taking into account other variables that may also influence the outcome. The key variables of interest in our analysis include: 1) a count of the total number of mandates in a given state, 2) a variable accounting for whether or not a state has any AWP laws, 3) a variable that accounts for whether or not a state has any community rating regulations (without guaranteed issue), and 4) a variable that accounts for whether or not a state has both community rating and guaranteed issue regulations. Other variables that affect the price of insurance for which we control are individual characteristics (age, smoking status, student status, gender), the cost of medical care, premium taxes, the existence of a state high-risk pool, and characteristics of the policy (coinsurance, deductible, stoploss level).[2]

Our measures of regulation are admittedly imperfect. The actual effect of regulations can vary considerably depending both on the details of implementation and on the vigorousness of enforcement. But our measures have the advantage of being relatively simple to interpret and serve as a useful benchmark for determining the average effect of broad classes of regulation.

The primary results of this study are outlined in Table 1. The key finding is that **each state mandate raises the price of an individual policy by about 0.4 percent; for a family policy it increases the price by about 0.5 percent. With the typical state having 20 mandates, this implies that such a state could reduce the average price of an individual policy by 8 percent by eliminating all mandates.** Of course, such

[2] We use the log of price as our dependent variable. A more detailed description of our methodology will be included in a technical working paper to accompany this report.

projections must be viewed with caution because they extend the analysis beyond what we actually observe in the data—no state is completely mandate free. However we do observe states with as few as 6 mandates and several more in the range from 10 to 15. A reduction from 20 mandates to 10 would imply a premium reduction of 4 percent. **For family policies, the effect is somewhat larger at 0.5 percent per mandate. Thus reducing mandates from 20 mandates to 10 would lead to a drop in price for family policies of 5 percent.**

Other important findings that emerge are:

- **Any-Willing-Provider regulations raise prices on policies for individuals by 1.5 percent, although this effect is statistically weak (unlike all other results presented in Table 2); for family policies, they tend to raise prices by 5.3 percent.**
- **Community Rating without Guarantee Issue raises the price of an individual policy by 20.3 percent. It raises the price of a family policy by 27.3 percent.**

An intriguing finding in the Table is that Community Rating combined with Guarantee Issue raises prices by 135 percent for individual polices and 122 percent for family policies. However, only one state in our sample has both these laws, New Jersey, so the results for the combination of these laws is essentially measuring how much higher premiums are in New Jersey, controlling for other observable characteristics. In other words, the result might be due to particular characteristics of New Jersey, as opposed to the regulations per se. There are states other than New Jersey with this combination of laws, but we have no price data for them. Such data would enable us to obtain a reliable estimate of the joint effect of Community Rating and Guarantee Issue.[3]

In any case, the key result is that the various regulations tend to have a moderate to large effect on premiums, a finding that is consistent with the previous graphical analyses in Figures 1 and 2.[4]

Additional Data from Golden Rule

We performed numerous analyses to assess the robustness of our results. One of particular importance used a different data set from a major supplier of HDIPs, Golden Rule. They provided price quotes (contrasted with actual transaction prices from EHealthInsurance.com) for a given policy from a set of randomly selected zip codes within the set of states they service. Golden Rule offers no policies in states with community rating or guarantee issue laws, but we were able to estimate the effect on offer prices of mandates and any-willing-provider laws. We used these data to estimate a similar set of regression models.[5] **The estimated effect of each additional mandate**

[3] In any case, dropping New Jersey observations from the sample has little impact on the estimates for the other laws and regulations.

[4] The regression results are somewhat smaller than the figures would suggest because the figures do not account for other differences across states like the cost of medical care.

[5] Control variables include cost of medical care, premium taxes, and the existence of a state high-risk pool. Other individual and policy variables were identical across all observations by design.

was a 0.9 percent increase in the price of a family policy. AWP laws increased the price by 9 percent, other things being the same (Table 1). Because these are offers rather than actual transactions they are not directly comparable to the EHealthInsurance.Com results, but they tell the same story: state mandates lead to statistically significant and quantitative important increases in health insurance.

State-Level Policy Simulation

Table 2 presents the results of a simulation of a policy experiment based on the econometric estimates in Table 1. The simulation examines the impact of reducing state regulations as follows: all AWP, community rating, or guarantee issue laws are eliminated, and each state has only 10 benefit mandates. All other determinants of price, such as deductibles and coinsurance rates, are set at the current means within states.

For individual policies, reducing state regulations in this way leads to prices falling by an average of 10.2 percent, weighted by state population. Excluding New Jersey, which experiences a 76.6 percent drop in price, the weighted average is 7.9 percent. Idaho is predicted to have an increase, but this is because they have only 6 mandates currently so 10 mandates is an increase. The effect on family polices is somewhat larger. Including New Jersey, the regulation reduction leads to a 12.1 percent decline in average premium. Excluding New Jersey, the drop is 9.9 percent. We ran the same experiment using Golden Rule data and regression results. For a family of 4, eliminating AWP regulations and limiting mandates to 10 reduces prices by an average of 15.9 percent.

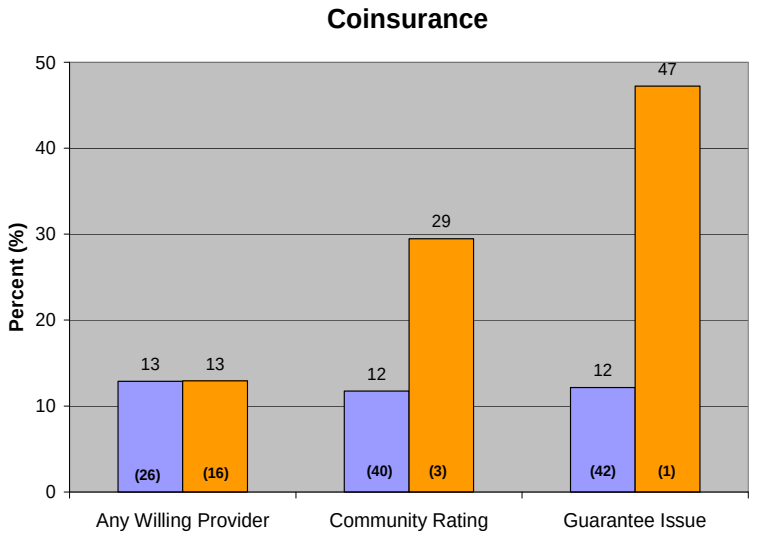
Summary

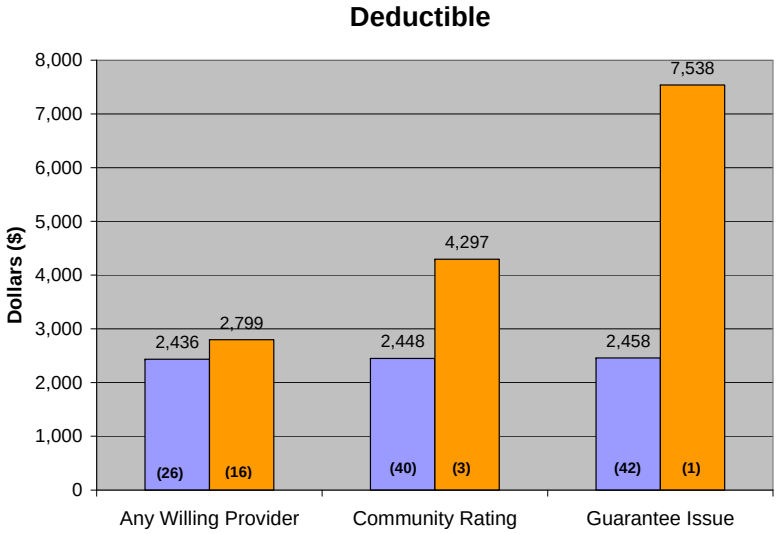
This research suggests that state mandates and regulations have a substantial effect on the price of insurance policies in the non-employer market. Although we have focused on HDIP plans, we suspect that analyses of other types of health insurance policies would yield similar results.

As is true of the results of any econometric analysis, our results must be interpreted with caution. Of necessity, this study relies on variation in laws across the country to estimate the price effect of regulations. This leaves open the possibility that idiosyncratic state characteristics that are correlated with the propensity to enact mandates might be driving the results. We do not believe this to be the case, but we cannot rule it out definitively.

Finally, while our results provide evidence of the costs of state level health insurance regulations, we make no attempt to determine whether the mandates generate any benefits, and if so, how large. Consequently, while our findings are a necessary first step, they do not completely answer the question of whether these regulations are "worth" their costs.

Figure 1: Differences in Insurance Characteristics by Type of Regulation – Policies for Individuals





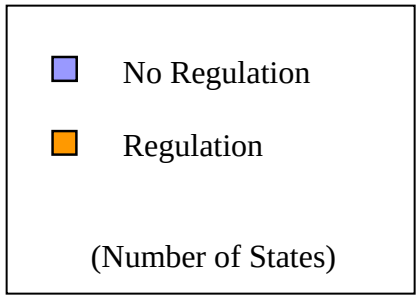


Figure 2: Differences in Insurance Characteristics by Type of Regulation – Policies for Families

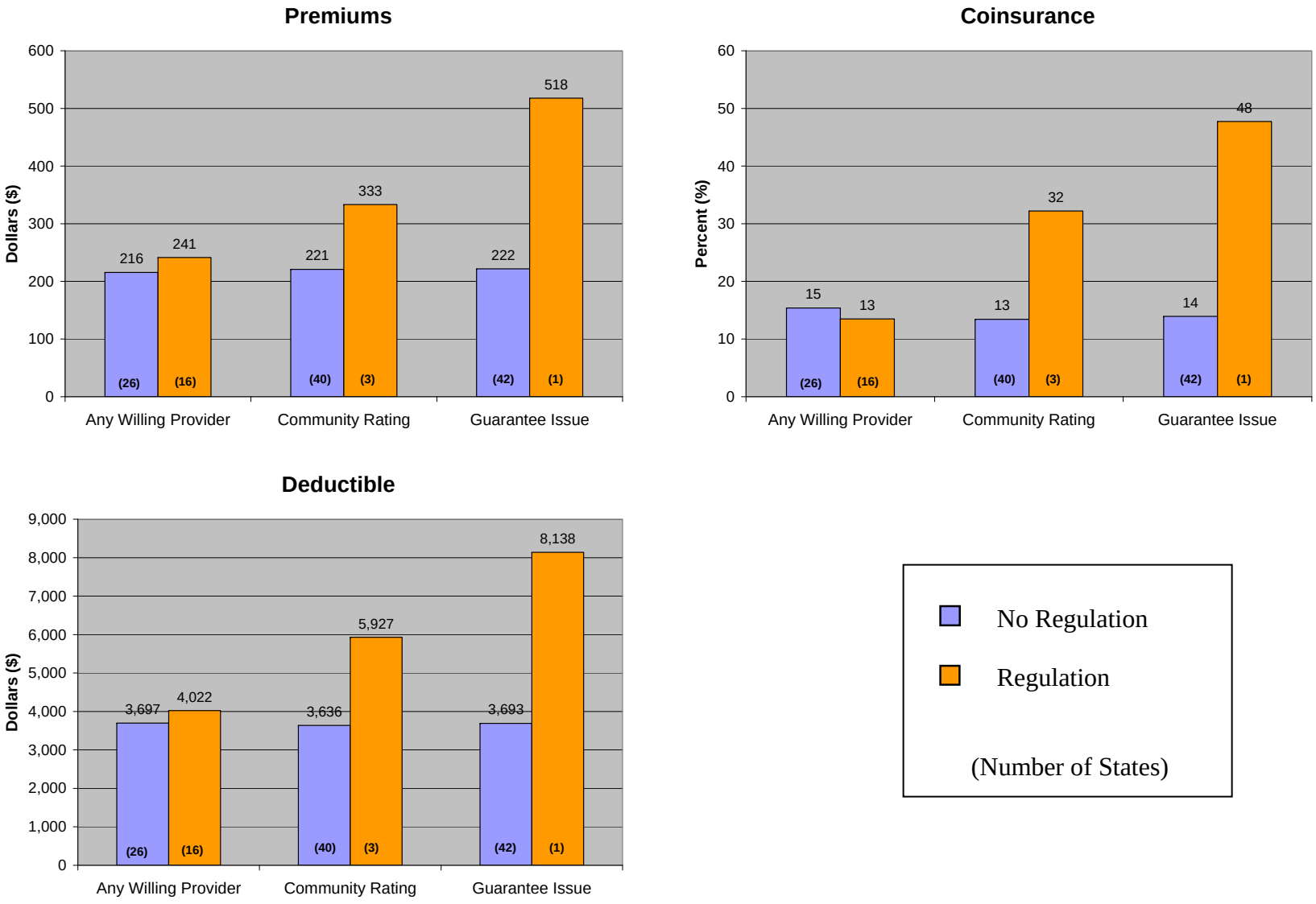


Table 1 - Effect of Various State Insurance Regulations on Insurance Premiums

	Actual Transactions for 2003, 42 States, Various firms and policies:		Price Quotes for 2004, 23 States, Identical policy, Random selection by zip code within states
	Increase in Insurance Premiums		Increase in Insurance Premiums
Type of Regulation:	**Individual**	**Family**	**Family**
Mandated Benefits (per mandate)	0.4%	0.5%	0.9%
Any Willing Provider	1.5%	5.3%	9%
Community Rating (without Guarantee Issue)	20.3%	27.3%	
Community Rating and Guarantee Issue	135%	122%	

Note: Figures in the table show the independent effect of the associated characteristic on insurance premiums, taking into account other variables that affect insurance premiums.

Table 2 - Expected Annual Saving from Eliminating AWP, Community Rating, Guarantee Issue, and Limiting to 10 Mandates

State	Individual Policies			Family Policies		
	Current Average Annual Premium	Expected Savings ($)	Percent	Current Average Annual Premium	Expected Savings ($)	Percent
AK	1,529	53	3.5	2,683	102	3.8
AL	1,645	24	1.5	3,447	177	5.1
AR	1,440	56	3.9	1,953	84	4.3
AZ	1,570	68	4.3	2,178	104	4.8
CA	1,640	139	8.5	2,799	260	9.3
CO	1,311	57	4.3	2,811	134	4.8
CT	2,084	286	13.7	3,739	674	18.0
DE	1,220	65	5.3	2,026	186	9.2
FL	1,551	144	9.3	2,879	292	10.2
GA	1,674	94	5.6	3,679	226	6.1
IA	1,123	10	0.9	1,386	13	1.0
ID	1,572	-5	-0.3	3,248	106	3.3
IL	1,657	136	8.2	2,670	327	12.2
IN	1,296	74	5.7	2,505	241	9.6
KS	1,333	69	5.2	3,413	194	5.7
KY	1,304	58	4.5	2,456	204	8.3
LA	1,372	54	3.9	2,826	121	4.3
MD	1,231	190	15.5	2,100	355	16.9
MI	1,140	40	3.5	1,957	75	3.8
MN	1,546	194	12.5	2,828	475	16.8
MO	1,339	80	6.0	2,607	172	6.6
MS	1,205	38	3.2	2,009	140	7.0
MT	1,361	87	6.4	2,016	142	7.0
NC	1,237	121	9.8	2,607	363	13.9
NE	1,357	41	3.0	2,500	84	3.4
NJ	2,732	2,091	76.6	6,004	4,471	74.5
NM	1,202	72	6.0	2,204	145	6.6
NV	1,930	202	10.5	3,654	419	11.5
OH	1,342	52	3.9	2,424	104	4.3
OK	1,476	89	6.0	2,296	151	6.6
OR	1,493	316	21.2	2,435	653	26.8
PA	1,251	91	7.2	2,055	163	7.9
RI	1,298	89	6.8	2,584	194	7.5
SC	1,576	28	1.8	2,804	54	1.9
SD	1,135	55	4.9	2,727	239	8.7
TN	1,362	78	5.7	2,602	251	9.6
TX	1,531	180	11.8	2,891	462	16.0
UT	1,308	84	6.4	2,530	178	7.0
VA	1,572	165	10.5	2,619	300	11.5
WA	1,634	357	21.9	3,342	920	27.5
WI	1,334	76	5.7	1,860	179	9.6
WY	1,185	87	7.4	2,140	243	11.4
Population Weighted Average			10.2%			12.1%