Any Willing Provider Legislation: A Cost Driver?

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Introduction

Any Willing Provider legislation (AWP) requires health care plans to allow any qualified health care provider who agrees to the plan terms to participate as an in-network provider. Without such legislation, health care plans are free to limit reimbursements to select contracted providers, reimbursing out-of-network providers at a different rate, or not at all. In brief, AWP prevents health plans from excluding qualified providers who meet the terms and conditions of the plan from participating in the plan.

Freedom of Choice legislation (FOC) requires health care plans to reimburse any qualified provider chosen by the patient, and may or may not specify that the reimbursement be the same as for in-network providers. Also, patients may incur higher “out-of-pocket” costs when using non-network providers.

Currently, South Dakota does not have AWP legislation with respect to hospitals and physicians, but does have an AWP-style law with respect to pharmacies and pharmacists (SDCL 58-18-37). The state also has several laws that would be classified as FOC laws that only concern optometric services (SDCL 58-17-53) and mental health professionals (SDCL 58-17-56). South Dakota also has an FOC law limited to self-insured plans for public employees (SDCL 58-17-54) and a law for hospitals (SDCL 58-17-55) which prevents plans from excluding out-of-plan hospitals from reimbursement.

This report focuses on the effect of an AWP law that would apply to hospitals and physicians in South Dakota. While there is a great deal of speculation on the effects of AWP laws, studies that actually examine expenditure data are sparse. In this report we examine
health care expenditures in different states over time, and test whether the adoption of AWP has any significant effect on health care expenditures. Specifically, we estimate how the enactment of AWP in South Dakota would affect personal health care expenditures, and whether the adoption of an Any Willing Provider law would increase the cost of health care for South Dakota citizens.

Previous Studies

Several studies have looked at AWP related issues, but none specifically address the cost effect of adding AWP legislation for physicians and hospitals. Most discuss the possible effect of AWP on costs, but few follow up with empirical analysis. Those that use data are either focused on the effects of AWP on profitability, or fail to isolate the effect of AWP in particular. While none of these studies are directly applicable to the question of how AWP law would affect health care expenditures in South Dakota, a review of what they have done is worthwhile.

Hellinger (1995) discusses the theoretical pros and cons of AWP and FOC legislation\(^1\). On the con side, he posits that AWP/FOC laws will increase administrative costs for the health plan if they increase the number of providers in the network, and that by restricting or eliminating selective contracting, these laws may decrease the ability of health plans to negotiate volume discounts. On the other side, Hellinger notes that cost savings from selective contracting may well come from reduced quality of care and that health plans have clear incentives to selectively contract with low-utilization physicians. He concludes that more study is needed to determine the effects of AWP and FOC.

Marsteller et al. (1997) primarily looked at the characteristics that make a state more or less likely to enact AWP legislation. They did not estimate the actual effects of AWP laws on healthcare costs, but they do discuss the arguments for and against selective contracting restrictions. On the con side, they suggest that AWP laws might hinder a health care plan from altering healthcare provider behavior in cost-saving ways if enforcing provider compliance with terms and conditions is costly. On the pro side, they argue that any cost savings from allowing restrictive contracting may stem from reducing the quality of care, or by discouraging participation from higher-risk patients. (Health plans could, for example, exclude providers in areas with less healthy populations.) They also point out that in an area with a “highly consolidated market” in health care plans, laws like AWP could “help prevent the use of market power by dominant health plans” (p. 1164), meaning that AWP could lower costs.

\(^1\) Most studies to date make a clear distinction between AWP and FOC legislation, but then lump the two types of law together in their discussion of the effects of limiting selective contracting.
Ohfeldt et al. (1998) examined the spread of state AWP laws over time, and attempted to explain what factors lead a state to adopt AWP/FOC legislation. They devoted a portion of their report to describing the argument that selective contracting allows health care firms to negotiate lower reimbursement rates from hospitals and may pass some of those savings to consumers in the form of lower insurance premiums. They also noted pro-AWP arguments that such savings may be at the expense of health care outcomes and patient choice, and that AWP levels the playing field for providers who may offer better care.

Vita (2001) is the first of these studies to actually attempt to empirically measure the effects of AWP and FOC legislation on costs. Vita uses classifications of state laws from Marsteller et al. (1997) to categorize state’s various AWP and FOC laws as collectively Weak, Strong, or non-existent. This means Vita is testing the effect of strong restrictions on selective contracting, but not explicitly testing the effect of a particular law. For example, Alabama’s legal restrictions on selective contracting are classified as Strong, but Alabama does not have an AWP law affecting physicians and hospitals. This means there is no way to determine the effect of adding AWP to a state’s existing framework unless it happens to move them into the Strong category. Using data from 1983-1997, Vita finds that the presence of ‘strong’ AWP/FOC laws increase annual health care costs by between $33 and $52 per person. He does not explicitly state the effect of moving from Weak (which is how SD is classified) to Strong, nor is it clear that adding an AWP law for physicians and hospitals would move South Dakota to his Strong category. If it did not, his model actually forces the effect to be $0. If AWP for physicians and hospitals did move South Dakota into Vita’s Strong category, it can be inferred from his estimates that annual costs would rise by $36-$53 per person. Still, since Vita does not specifically address the effect of adding an AWP law, using his estimates to do so is clearly problematic.

Carroll and Ambrose (2002) use ordinary least-squares regression to examine the effect of AWP laws from 1992-1995 on HMO inpatient expenses, administrative expenses, and profit margin. They found the effects to be very limited and concluded that AWP laws do not affect overall profitability of HMOs. They do include a separate indicator for AWP laws applying only to pharmacies, and find weak evidence that such laws decrease HMO profitability. Carroll and Ambrose are not testing the effect of AWP laws on overall costs, so their work does not address the question of how AWP would affect costs in a particular state.

**Theoretical Effects of AWP on Healthcare Costs**

Before we introduce our empirical model, it may be useful to consider the theoretical effects of AWP legislation on healthcare costs. In the following three sections, we provide a brief overview of the possible effects.
Why AWP laws might increase costs:

The most common argument against AWP legislation is that health care plans contract with hospitals and physicians and negotiate lower rates by offering higher volume. Under this system, contracted providers have access to a large group of patients who are restricted from using other providers. In essence, the contracted provider accepts lower reimbursements in exchange for greater volume. A secondary argument is that there may be administrative savings for the health care plan by contracting with a smaller number of providers.

While lower reimbursement rates are attractive to health care plans, they are not synonymous with lower patient costs. Healthcare expenditures of consumers would only be affected to the extent that these cost savings to the insurance plan are passed on to consumers. If AWP legislation actually reduced the cost savings from selective contracting, and if those savings are passed on to consumers, AWP could lead to higher personal health costs.

It is also possible that health care plans encourage contracted providers to be more cost-effective in assigning care, thus reducing the moral hazard problems that arise in third-party payer systems like health insurance. This may well be true, but it is unclear that AWP would reduce the health plans ability to encourage efficiency.

Why AWP might lower costs:

Although some accept on its face the theory that AWP laws could drive health care costs, they may actually lower health care costs. Indeed, in South Dakota, insurance companies and their partners might simply be excluding certain providers because they are competitors. If, for example, a particular health care market is dominated by a small number of insurance providers which own (or are owned by) hospitals, these firms could use their market power to keep prices artificially high by excluding competing providers.

In this case, AWP laws would actually increase competition among health care providers and decrease costs. The only reason a rational patient would switch, of course, is if the new providers offered either lower costs or better care. AWP may reduce costs by increasing quality of care thereby reducing long-term care costs to the insurer.

Why AWP might have no effect:

The main argument made to suggest that AWP law would increase costs is that it would prevent the costs savings from having a small number of providers with high volume. If, however, having high volume results in cost savings under selective contracting, there is little reason to think that AWP would disrupt that. High-volume providers would still have
whatever cost savings they had before AWP. Providers would still find it advantageous to organize in such a way as to handle high volume. Smaller providers would still be at a disadvantage relative to the larger providers. Since health care plans would still be allowed to set requirements and reimbursement rates, large providers would still be better able to profitably meet those requirements. In this case, AWP laws would have little effect on costs, as patients would continue to be served by large providers.

Alternatively, if there are no significant returns to scale, there is no reason to think that selective contracting would result in cost savings, and, accordingly, AWP legislation would also have little effect on costs.

Another way that AWP could have no effect on expenditures is that any cost savings from selective contracting might simply be retained by the insurance company as profit (rather than passed on to consumers), AWP would simply shift those profits back to providers, leaving personal health care expenditures unchanged. Finally, some combination of the arguments for and against AWP as a cost-driver could simply balance out, resulting in little or no change in health care costs.

Econometric Model:

Our model of interest considers how personal health care costs, by state, are related to the presence of AWP and FOC laws in that state. We use a fixed-effects regression model to account for unobserved heterogeneity in health care expenditures by state that may be correlated with the independent variables in the model. Specifically:

\[
Health\text{ }expenditures_{i,t} = \beta_0 + \beta_1 \cdot AWPmed_{i,t} + \beta_2 \cdot FOCmed_{i,t} + \beta_3 \cdot AWPpharm_{i,t} + \beta_4 \cdot FOCpharm_{i,t} + \text{AWP interactions}_{i,t} + \beta \cdot X_{i,t} + a_i + u_{i,t}
\]

where the variables are defined as follows:

\(Health\text{ }expenditures_{i,t}\) is the real personal health care expenditures per capita in state \(i\) in year \(t\).

\(AWPmed_{i,t}\) is an indicator variable equal to 1 if state \(i\) has an AWP law that applies to physicians and hospitals in effect at time \(t\).

\(FOCmed_{i,t}\) is an indicator variable equal to 1 if state \(i\) has a FOC law that applies to physicians and hospitals in effect at time \(t\).
\( AWP_{pharm,i,t} \) is an indicator variable equal to 1 if state i has an AWP law that applies to pharmacies and pharmacists in effect at time t.

\( FOC_{pharm,i,t} \) is an indicator variable equal to 1 if state i has a FOC law that applies to pharmacies and pharmacists in effect at time t.

\( AWP_{interactions,i,t} \) are all possible combinations of the four indicator variables.

\( X_{i,t} \) is a vector of time-variant state control variables\(^2\).

\( a_i \) is a state-level unobserved fixed-effect parameter.

\( u_{i,t} \) is the error term.

The \( \beta \) are all coefficients to be estimated by the model. Of particular interest is \( \beta_1 \), the coefficient associated with \( AWP_{med} \), and the associated interaction terms. These are the parameters which estimate the effect of adding an AWP law concerning physicians and hospitals, holding other variables constant.

A key contribution of this paper is that unlike Vita (2001), the use of interaction terms allows us to distinguish the effect of an AWP law that applies to physicians from AWP or FOC laws that would apply to other entities. Instead of lumping all AWC and FOC laws together, regardless of how they apply, we will be able to separate out the effect of a proposed AWP law in South Dakota\(^3\) which covers physicians and hospitals.

Note that the purpose of this paper is to estimate the effect of AWP laws, which means the emphasis is on obtaining an unbiased estimate of \( \beta_1 \) and the related interaction terms. It is not necessary to control for every variable that could conceivably influence health care costs, only those that might interfere with estimation of the effect of \( AWP_{med} \) on Health expenditures. Such variables include the other AWP and FOC indicators, and the state control variables included in \( X \).

\(^2\) State control variables include the following:

- **Enrollment rate** – The proportion of the population enrolled in an HMO.
- **Over 65** – The proportion of the population age 65 or older.
- **Disposable income** – Real disposable personal income per-capita.
- **Unemployment rate** – The average seasonally adjusted unemployment rate.

and transformations of these variables as indicated below.

\(^3\) This is not a criticism of Vita’s work. We are concerned with a specific change in South Dakota law, and that is what led us to this particular approach.
Data

The data that form our indicator variables, including $AWP_{med}$, come from a combination of Ohsfeldt (1998), Marsteller (1997), and analysis of subsequent changes to state AWP and FOC laws. The data covers the period from 1983 – 2001, which captures the flurry of enactments of these laws in the mid-1990s and several years before and after those changes. All other variables come from the Department of Health and Human Services, with the exception of Disposable personal income per capita (Bureau of Economic Analysis) and Unemployment rate (Bureau of Labor Statistics). The data covers all fifty states and the District of Columbia.

Table 1: Summary Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health expenditures</td>
<td>Annual personal health expenditures per capita, 2010 dollars</td>
<td>$4,147.04</td>
<td>1076.649</td>
</tr>
<tr>
<td>Enrollment rate</td>
<td>Proportion of state population enrolled in an HMO</td>
<td>0.1392</td>
<td>0.1331</td>
</tr>
<tr>
<td>Over 65</td>
<td>Proportion of state population aged 65 or older</td>
<td>0.1241</td>
<td>0.0214</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>Average seasonally-adjusted unemployment rate over the year</td>
<td>5.8</td>
<td>2.0</td>
</tr>
<tr>
<td>Disposable income</td>
<td>Annual disposable personal income per capita, 2010 dollars</td>
<td>$27,847.98</td>
<td>$4,518.62</td>
</tr>
</tbody>
</table>

Number of observations: 969
(50 states plus the District of Columbia over 19 years.)
Table 2: States with AWP legislation affecting physicians (1983-2001)

<table>
<thead>
<tr>
<th>Georgia</th>
<th>Louisiana</th>
<th>Utah</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idaho</td>
<td>Montana</td>
<td>Virginia</td>
</tr>
<tr>
<td>Illinois</td>
<td>New Mexico</td>
<td>Washington</td>
</tr>
<tr>
<td>Indiana</td>
<td>Pennsylvania</td>
<td>Wyoming</td>
</tr>
<tr>
<td>Kentucky</td>
<td>Texas</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Montana and Washington AWP laws are no longer in effect. Arkansas enacted AWP in 1995, but it was not enforced during our sample period.

Results

We estimate two versions of the econometric model, both using fixed-effects multivariate regression. The first uses the variables in straight level form as described above. Using South Dakota’s legal characteristics, we find that the addition of an AWP law affecting physicians and hospitals is associated with a decrease in personal health care expenditures per-capita by $246.49 per year. To put this value in context, real per-capita health care costs in South Dakota range from $2,651 in 1983 to $6,149 in 2001, with an average of $4,147 over that time period.

In our second model, we use a more flexible functional form, taking the natural log of Health expenditures, Over 65, and Disposable income, and include quadratic terms for time and enrollment rate. This allows for non-linear effects of our explanatory variables. Estimation of this second model finds that the addition of an AWP law affecting physicians and hospitals is associated with a 5.7% decrease in personal health care expenditures per capita, or about $311.56 in 2001, the last year of our sample. This estimate is somewhat larger than the first model, but not significantly so.

Some cautions about these findings must be noted. First, while it seems reasonable to think that AWP laws affect costs, we cannot rule out that costs might also affect the adoption of AWP. If, for example, states with lower costs in general are more likely to adopt AWP, that could bias our results in favor of AWP. While the use of a fixed-effects model helps control for state differences, we cannot rule out the presence of some simultaneity. Absent a randomized experiment or suitable instrumental variable (neither of which are available), no study can fully discount this issue.

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4 All results are reported in 2010 dollars.
Second, these estimates have the usual ‘ceteris paribus’ interpretation. That is, AWP is associated with a decrease in health expenditures holding constant other variables. Healthcare costs are increasing over time in every state, and will almost certainly continue to do so regardless of a state’s adoption of AWP. Our estimates suggest that costs would be $246-$311 lower than they otherwise would be, not that overall costs would actually decrease.

Finally, while these findings indicate AWP legislation is likely to decrease health expenditures in South Dakota, we are not able to determine the mechanism through which cost savings would occur. The dilution of the market power of large health plans is one possible explanation.

**Conclusion**

We find no evidence that AWP legislation would increase personal health expenditures in South Dakota. Using a multivariate regression with fixed effects, we find that AWP is actually associated with lower costs for states with regulatory statutes similar to South Dakota. Many factors have contributed to increasing expenditures on health care costs over time, but AWP does not appear to be one of them.

It is also worth noting that our empirical analysis does not include the other possible benefits of AWP legislation. Having more options to choose from when selecting a health care provider is generally associated with an improvement in patient satisfaction with their physicians, clinics, and hospitals as well as with the quality of care they receive.
References


