

Does Medicaid Expansion Effect Healthcare Premiums?

An Analysis of the Effects of Expansion Under the Affordable Care Act

Emma Flournoy

Department of Political Science

Oklahoma State University

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Abstract

This paper looks at how the Affordable Care Act affected private health insurance premiums, with a focus on the expansion of Medicaid. Previous research on healthcare premiums are divided, with some suggesting that more provider options leads to lower premiums while, others suggest that more options does little to affect premium prices. I hypothesize that the expansion of Medicaid would lead to an decrease in private insurance premium growth rates and test this hypothesis with state level data on private insurance premium growth rates between 2014 and 2019 as my dependent variable and implementation of Medicaid expansion as my independent variable. I use a linear regression and also control for population growth rate, obesity growth rate, nurse pay growth rate, income growth rate, and drug cost growth rate. The linear regression revealed that the implementation of Medicaid expansion led to a 30.676% decrease in premium growth rates, confirming my hypothesis and suggesting that Medicaid expansion under the Affordable Care Act did help control insurance premium growth rates.

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In 2010, the U.S. Congress passed the Affordable Care Act (ACA), also known as Obamacare. This legislation added several new regulations to the private insurance market with the goal of lowering healthcare costs and improving the U.S. healthcare system. There are some sections of the ACA that are more well known than others. When it passed, it contained an individual mandate that required people to have health insurance, with those who remained uninsured being required to pay a fine at the end of each year. This section was later repealed. It limited insurance providers abilities to deny people coverage due to preexisting conditions. It also allowed people under 25 to remain on their parent's health insurance.

Since the passing of the ACA, it has been heavily criticized from both sides of the political spectrum. Some people claim it does not do enough to meet its goals, others claim it is too restrictive to insurance providers, and some even criticize it as "socialism". I am interested in how the ACA has affected the private health insurance market. The effects could help to show if the ACA is living up to its promises, or if it needs to be revised to better fulfill its goals. I am focusing on the expansion of Medicaid. Proponents of the expansion argue it would help low income families purchase health insurance which would help to reduce costs of uninsured people seeking healthcare (Angeles 2012). Critics argue that the expansion was coercive to states and will cost them significantly more money (Angeles 2012). In 2012, the U.S. Supreme Court decided that the federal government could not force states to expand Medicaid by threatening to revoke all Medicaid funding for the state (Oyez 2012). As Medicaid expansion became a voluntary policy,

this sets up an interesting puzzle on whether states that chose to adopt this policy did see the reduction in healthcare costs that proponents have argued, or whether there was little impact on healthcare costs over time.

This is important research because it could help identify some of the benefits or shortcomings of the ACA, which is a policy with highly disputed impacts. The ACA is also one of the main healthcare policies in the U.S., so it is one of the most often debated when it comes to healthcare policy. The results of this research could help give a clearer direction to future policies regarding healthcare because it will give a clearer answer to how certain changes affect different parts of the healthcare system.

The Research about Healthcare

Healthcare in the U.S. is both lower quality and more expensive than healthcare in other countries. Even though Americans go to the doctor less often than citizens of most other countries, the U.S. spends more on healthcare than any other comparable country in the Organization for Economic Cooperation and Development (OECD) (Commonwealth Fund 2019). Despite this high level of spending, Americans have less access to doctors and other medical professionals than other countries, meaning that they are also paying more for less (Anderson, Hussey, and Petrosyan 2019). Furthermore, this expensive price tag also does little to make Americans any healthier, as the U.S. has the lowest life expectancy, highest rate of adults diagnosed with two or more chronic diseases, and the highest obesity rate of the OECD countries (Commonwealth Fund 2019). There is not a significant difference between the US and other countries when it comes to public spending, with the U.S. spending amounts similar to other OECD countries (Commonwealth Fund 2019).

Instead, the high cost of healthcare seems to relate to the U.S.'s private market. According to Papanicolas, Woskie, and Jha (2018), the cause of the higher healthcare prices in the U.S. relates to the higher prices for labor, goods (including medicine and devices), and administrative costs that are present in the US healthcare market. Other research finds that U.S. insurance covers far less than comparable insurance programs in other countries (Anderson, Hussey, and Petrosyan 2019), meaning that the higher costs are being fully absorbed by private individuals. This information helps to identify the areas the US can try to limit costs to lower overall healthcare spending. There is other research that suggests hospital prices are causing healthcare spending to increase. Kacik (2019) supports this theory, saying that "33% of total healthcare spending is directed towards hospital care."

Healthcare prices can also vary widely across states, with some premiums being much higher than others. States also have different premium growth rates. The difference in premiums for an average second-lowest cost silver tier plan in the most expensive state and the least expensive state is \$539 as of 2019 (Kaiser Family Foundation 2020a). This could be because of variations in the cost of living and the cost of labor, which varies throughout states. It could also be caused by differences in population health among states, with some states having higher obesity rates – a known contributor to other health problems (Center for Disease Control 2020a). All these factors could lead some states to have much higher premiums, which makes looking at healthcare premium variation at the state level necessary.

The most popular school of thought concerning healthcare premiums is focused on the size of the market for health insurance. This school of thought talks about health insurance providers in terms of health maintenance organizations (HMO). They are health insurance plans that limit coverage to doctors who work for or contract with them, and will only cover care that is out of

their network in an emergency (Healthcare.gov 2020). The HMOs collect premium payments from buyers, then promise to pay for medical care if the buyer needs it, which means they are bearing some risk by insuring people. Feldstein and Wickizer (1995) find that a higher level of “HMO penetration” has a significant negative effect on premium growth. This suggests that if there are more HMOs in a market, the cost of premiums are likely to be lower in that market. Trish and Herring (2015) also find that more competitive markets have lower premiums. Robinson (2004) focuses more on what causes the lack of competition among HMOs, finding that the lack of competition is mostly seen as a result of consolidation. Robinson says lack of competition may also be caused by barriers of entry, and that substitute products should be considered as a way for new HMOs that have little leverage to draw customers from existing HMOs. These papers all focus on how the lack of competition in the healthcare marketplace is affecting premiums and it is causing premiums to rise. They all conclude that more competition is needed to lower premiums.

Other scholars contend that competition in HMOs has little impact on healthcare premiums, however, since few Americans have the freedom to “shop around” for good healthcare deals. Enthoven (2004) points out that most Americans buy health insurance through their employer, which normally only allows people to choose plans from one HMO. This means that even if there are several HMOs in an area, people will not have the ability to choose the lowest cost provider. Instead they will be buying health insurance through whichever HMO their employer provides. Furthermore, the businesses who are purchasing insurance also seem to be doing little to take advantage of a competitive insurance market – they fail to “shop around.” Dafny (2010) finds that businesses with higher profits are being charged higher premiums and have a higher rate of premium growth. Furthermore, this price difference occurs even when different businesses use the same insurance plans. He contends that this shows how the healthcare marketplace is not as

competitive as some might claim, and that getting health insurance through an employer can affect people's ability to find the lowest cost insurance.

How the Affordable Care Act Affected Healthcare

The Affordable Care Act (ACA) had several goals when it passed. As described by the National Conference of State Legislatures (2011), it aimed to expand access to insurance coverage, increase consumer insurance protections, emphasize prevention and wellness, improve health quality and system performance, promote health workforce development, and curb rising health costs. In considering the relative success or failure of this policy, I limit my analysis to one policy provision and one policy goal: whether expanding access to coverage results in lower insurance rates. The ACA planned to achieve this goal by, among other things, expanding Medicaid to cover anyone who's income is below 133% of the federal poverty line. This expansion allowed more people to get low cost (or free) health insurance through the government rather than buying it from a private company. The Medicaid expansion was supposed to reduce insurance costs because low income populations are more likely to be uninsured and unable to pay off healthcare costs when they need to seek care (Angeles 2012). Because low income populations are unable to pay off their healthcare costs, consumers, insurance companies, and state governments are forced to cover the costs (Angeles 2012).

Due to the 2012 U.S. Supreme Court decision stating that the federal government cannot force states to adopt Medicaid expansion, not all states adopted and implemented this section of the ACA. According to the Kaiser Family Foundation (2020c), out of 50 states, only 36 have adopted and implemented the expansion, 2 states have adopted but not implemented the expansion, while 12 states have neither adopted nor implemented the expansion. Furthermore, these states adopted this policy at different times, with early adopters like California and Arkansas

implementing Medicaid expansion in 2014, while later adoptees like Montana only put this expansion into effect in 2020 (Kaiser Family Foundation 2020c). This means that the ACA could affect states in different ways depending on adoption and implementation choices.

The expansion of Medicaid could have caused private insurance premium growth rates to be lower in the states that adopted and implemented it. The implementation of Medicaid expansion could have reduced the number of uninsured people because people with lower incomes now had access to affordable health insurance. This would decrease the amount of care that was received and unpaid for. Because the amount of unpaid care would likely decrease, this would ease the burden placed on private insurers to make up for the lost revenue of the care providers (Angeles 2012). This would reduce the growth rate of private insurance premiums because they would no longer need to make up for revenue lost from other patients.

H1: States that have adopted the expansion of Medicaid have a lower private insurance premium growth rate.

Research Design

For my study, I construct a state-level dataset comparing the differences in private insurance premiums of U.S. states. I include all 50 states for this analysis. I am collecting my data for both 2014, since it was the year the first US states adopted Medicaid expansion, and 2019, because it is the most recent year in which complete data is available.

Dependent Variable: Insurance Premiums

To collect data on the cost of private insurance premiums by state, I use data from the Kaiser Family Foundation (2020a). This data lists the average “benchmark premium” which estimates the second-lowest cost silver premium insurance plan for a 40-year-old in each state. This is the lowest level of health insurance eligible for an ACA subsidy. I compare each state’s

premium in 2014 and 2019 and calculate the premium growth rate for each state. Higher values represent states whose insurance rates are increasing faster, and lower (and negative) values represent declining premium rates. Since the “growth rate” variable is a percentage which can be positive or negative, it is operating as a continuous variable. For this reason, I will be using a linear regression, since this type of statistical model is ideal for most multivariate models analyzing continuous dependent variables.

Independent Variable

For my independent variable, I will be coding a dichotomous variable measuring whether a state has adopted and implemented the Medicaid expansion that was part of the ACA. The source of this variable is from the Kaiser Family Foundation (2020b) interactive graphic, which shows which states have implemented the expansion (as of 2020), as well as the dates they implemented this policy. This will be represented by a 1 if, by the end of 2018, the state has adopted *and* implemented Medicaid expansion and a 0 if the state did not implement the policy that year.

Control Variables

To account for other factors that may lead to differing insurance premium rates in different states, I include a number of state-specific control variables. First, I will be controlling for the population growth rates from 2014 to 2019 by state using data from the US Census Bureau (2019). This data source has estimates of population by state from 2010 to 2019. I think this is an important control because population can impact the size of the “consumer market” for insurance. More people means there are more possible buyers of private insurance. If there are

more buyers, this could drive down prices because the insurance companies can lower their premiums but still have the same amount of money going into their cash pool.

While a larger “consumer market” might decrease premiums, an unhealthy population makes it more expensive for a company to offer insurance to those people. For this reason, I will be controlling for obesity growth rates from 2014 to 2019. Using data from the Center for Disease Control (2019, 2020b) with one showing yearly obesity rates by state for 2014 and the other showing obesity rates by state for 2019. I am controlling for this because higher obesity rates are related to more serious medical issues, and could lead to more doctor and hospital visits, which could drive up premiums.

Health insurance premiums are also likely to be impacted by the average cost of treatment, which I seek to capture in two ways. First, I will be controlling for prescription drug spending growth rates as a proxy for overall treatment expenses. I will be using data from the Center for Medicare and Medicaid Services (2019) for 2014 and data from the Kaiser Family Foundation (2020c) for 2019. I will be using the total prescription drug spending in the United States because I could not find state by state data for 2014. This is important to control for because if prescription spending is increasing, this likely means that insurance companies are paying more for prescriptions, which would cause them to raise premiums to make up for increased spending.

Second, medical costs are also impacted by labor costs of medical professionals. While I was unable to find reliable state-by-state comparisons of doctors pay, I will be controlling for average nurse pay growth rates using data from the US Bureau of Labor Statistics (2015, 2020). This is state-by-state data, so it will show if the overall cost of living has changed more in some areas between 2014 and 2019.

Finally, I will also be controlling for the overall cost of living using the growth rate of the median income per state from 2014 (US Census Bureau 2020a) to 2019 (US Census Bureau 2020b) from the US Census Bureau. The dataset for 2019 is missing data for New Jersey, so I will be using the 2018 rate as a substitute (US Census Bureau 2020a). This is state specific data, which will help show which states may have a higher cost of living. This could affect premium prices because as the cost of living increases, premiums will increase to match.

Analysis

As Table 1 shows, the relationship between Medicaid expansion and premium growth rates is negative and statistically significant at a 95% confidence interval. Translated into a more accessible language, a state that adopted Medicaid expansion has a 30.676% lower rate of premium growth than states that did not. This holds true for population growth rates, obesity growth rates, nurse pay growth rates, income growth rates, and drug cost growth rates. Furthermore, none of these controls reach statistical significance in my model.

Table 1: Premium Growth Rates (2014 to 2019)

Expansion Adoption	-30.676** (15.014)
Population Growth Rate	1.725 (2.268)
Obesity Growth Rate	2.351 (1.555)
Nurse Pay Growth Rate	2.507 (2.639)
Income Growth Rate	-0.651 (.888)
Drug Cost Growth Rate (Constant)	1.581 (1.168)
Observations	50
F	2.63**
R-Squared	.230

Note: Standard errors in parenthesis. *p<.10, **p<.05, ***p<.01

The outcome of the regression did confirm my hypothesis. This finding may be because people whose income is within 133% of the federal poverty line may not have a large amount of disposable income to spend on health insurance, so they had no health insurance before the expansion. The expansion of Medicaid allowed people whose income is within 133% of the federal poverty line to have access to health insurance. This would help to reduce the amount of unpaid care, which would then reduce the amount care providers would need to charge to compensate for the money they lose treating patients who cannot pay (Angeles 2012). The reduction in the amount private insurance providers were charged would lead to them raising premiums at a slower rate. This would allow private insurance providers to charge less while still being able to pay for their customers care.

Policy Implications and Directions for Future Research

This is a preliminary study, and there are some significant challenges that would need to be corrected before making a strong statement on the implication of these findings. The outcome of the regression lacks nuance due to the comparison of only 2014 and 2019 data. An annual dataset could give a better look at how soon the decrease in premium growth rates occurs after implementation. This would also show if the decrease in growth rates is sustained over several years or if it only happens for a few years after implementation.

My proxies for average cost of treatment could have affected the outcome of the regression. The use of average nurse pay growth rates and average drug spending growth rates could be insufficient proxies for actual medical staff pay and actual medical consumable spending. State-by-state drug spending growth rates might have also given a different outcome, rather than drug spending growth rates for the U.S. These problems could be fixed with more time and better access to data.

The results could also be affected by other sections of the ACA that were implemented around the same time as Medicaid expansion. This could lead to my results overrepresenting or underrepresenting the impacts of the implementation of Medicaid expansion on its own. The actual impacts of Medicaid expansion could be better shown with yearly data. This would make it easier to see the effects of the expansion soon after the implementation, and the states who implemented the expansion later could help separate the effects of the expansion and other sections of the ACA.

Even so, this research does offer tentative support that at least this provision of the ACA is acting in a way that its supporters have argued. Further research regarding the impacts of the ACA could help to diffuse the tension between political parties and make the discussion about the ACA more factual, as it is currently a polarizing piece of legislation. The expansion of Medicaid leading to slower premium growth could be used to better justify Medicaid expansion. People may be more receptive to the idea of expansion if they know it will positively affect their premium prices, even if they are not receiving Medicaid themselves. This may make voters more likely to vote for and support expansions to Medicaid, as well as political candidates whose platform involves Medicaid expansion. The states that have not yet adopted and implemented the expansion may also see the slowing of premium growth rates as a reason to consider adoption and implementation.

These findings could also lead to research in other areas of government public spending programs. Research could be done looking to see if the implementation or expansion of other public spending policies has benefitted people not directly receiving the government support. There could be a diffusion of benefits in other areas of public spending much like that of Medicaid expansion. It could also lead to research looking at the effects of contractions of public

spending programs, and if those contractions led to a worse outcome for people who were not directly receiving the benefits from the public spending programs before the contraction

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