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Geographic Variation in Premiums in Health Insurance Marketplaces

Abigail R. Barker, PhD; Timothy D. McBride, PhD; Leah M. Kemper, MPH; Keith Mueller, PhD

Purpose

This policy brief analyzes the 2014 premiums associated with qualified health plans (QHPs) made available through new health insurance marketplaces (HIMs), an implementation of the Patient Protection and Affordable Care Act (ACA) of 2010. We report differences in premiums by insurance rating areas while controlling for other important factors such as the actuarial value of the plan (metal level), cost-of-living differences, and state-level decisions over type of rating area. While market equilibrium, based on experience and understanding of the characteristics of the new market, should not be expected this soon, preliminary results give policymakers key issues to monitor.

Key Findings

- The 10 percent of rating areas with the highest adjusted premiums are characterized by smaller populations, greater land areas, and seven times fewer health care providers per square mile. They are twice as likely to be in the Midwest Census Region as rating areas in the lower 90 percent of the premium distribution.
- Average adjusted monthly premiums are about \$35 higher in rating areas with fewer than 100 people per square mile than in those with 1,000 or more people per square mile.
- The rating area design that assigns each Metropolitan Statistical Area (MSA) in a state to its own rating area and groups all non-MSA counties together as one additional rating area is associated with lower average adjusted premiums than other designs.
- Average adjusted premiums in State-Based Marketplaces (SBMs) are approximately \$20 lower than premiums in Federally-Facilitated and Partnership Marketplaces (FFMs).

Defining Rating Areas

The ACA required that HIMs be established in all 50 states and the District of Columbia: 15 states and D.C. operate their own marketplaces and 35 states utilize FFMs (6 of which are partnerships with states). We include all states except Hawaii.¹ Rating areas are the most relevant geographic unit in the operation of HIMs because QHPs must charge uniform premiums within a rating area, but may charge different premiums across rating areas in the same state and across states. Centers for Medicare & Medicaid Services rules require that rating areas be combinations of counties or three-digit ZIP codes. States may define the rating areas themselves, or they may accept the default design in which each MSA is one rating area and the balance of the state comprises one additional rating area. Rating area designs vary by size considerably across states, from as large as the state to as small as a county. Many rating areas are a contiguous mixture of metropolitan, micropolitan, and rural counties, making it difficult to systematically characterize the 501 rating areas across the United States as “rural” or “urban.” For this analysis, we use population density as a measure of population dispersion that could be related to decisions to set premiums, and also as a proxy indicator of “ruralness” of the rating area.



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RUPRI Center for Rural Health Policy Analysis,
University of Iowa College of Public Health,
Department of Health Management and Policy,
145 N. Riverside Dr., Iowa City, IA 52242-2007,
(319) 384-3831 Email: cph-rupri-inquiries@uiowa.edu

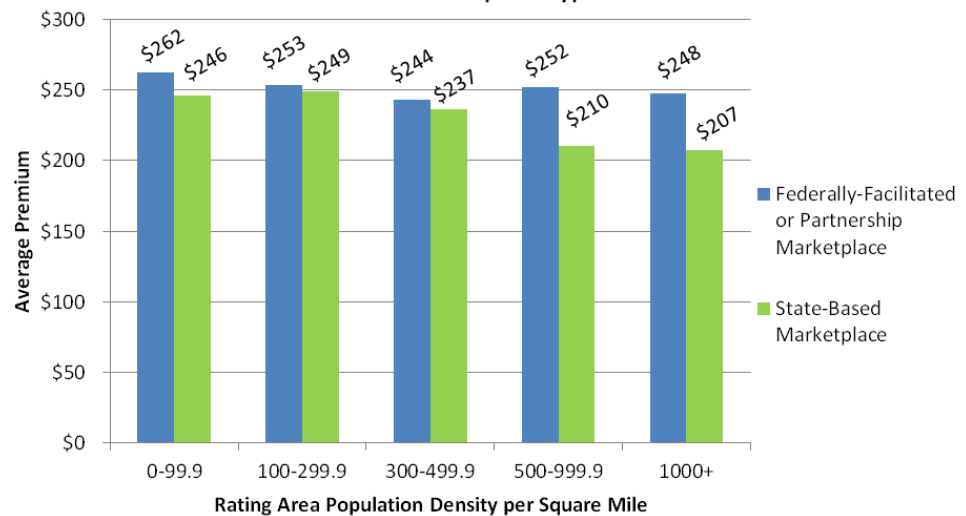
Adjusted Premiums by Population Density and Type of Marketplace

Across the 500 rating areas for which data are available², average adjusted premiums range from \$146 to \$414. Figure 1 shows how average premiums vary across rating areas according to their population densities, using population and land area information summed to the rating area level from the county-level.³ Throughout this brief, premiums are fully comparable in that they control for a range of factors: in all cases average

premiums are shown for single persons who are 27 years old and do not use tobacco—and they are adjusted to control for differing availability of plans by metal level in the rating area and average cost-of-living differences in the rating area.⁴ Holding all these factors constant, premiums are lower in areas where population is more concentrated. In particular:

- Figure 1 shows that premiums are lower (about \$20 overall, across all density categories) in SBM states than in FFM states.⁵
- Figure 1 also shows that as population density increases, premiums decrease. In SBM states, premiums are \$39 lower in rating areas with population density of more than 1,000 people per square mile (\$207) than in those with population density of fewer than 100 people per square mile (\$246). In FFM states the difference in premiums in the lowest and highest density categories is about \$14 per month (comparing \$262 to \$248).
- These premium averages and differences are cited for a 27-year-old, but because of the age adjustment insurers make to premiums, a \$20 per month difference becomes a \$50 per month difference for a 60-year-old. As rural populations tend to be older, the effective impact of any rural/urban differential will be larger. However, lower rural incomes and concomitant higher subsidy eligibility levels may mitigate this effect.

Figure 1: Average Adjusted Premium for 27-Year-Olds, by Population Density and Marketplace Type



Rating Area Design in Low-Density Areas

In Table 1, we report average premiums by rating area design and marketplace type, separated into lower population density (fewer than 100 people per square mile) and higher population density categories. In Table 1, “MSAs+1” refers to the default rating area design adopted by seven states. “Individual Counties” refers to the rating area design adopted by three states in which each county constitutes a separate rating area.⁶ “Whole State” refers to the seven states that chose one statewide rating area, while “Other Methods” refers to states that created clusters of counties or three-digit ZIP codes, mixing rural and urban counties. In the lowest-density rating areas, the average premium differs by about \$20 depending on marketplace type (FFM vs. SBM). Premiums are lowest, on average, in rating areas designed using the MSAs+1 option and the whole-state option, regardless of population density or marketplace type. This relationship between premiums and rating area design holds even in the least densely populated areas, even though the three rating areas in Wyoming, which belong to the MSAs+1 category, have unusually high average premiums. States using individual counties as the rating areas had slightly higher premiums (roughly \$15-\$17 per month in FFMs). Finally, premiums were highest in states in the Other Methods category.

Table 1. Average Adjusted Premiums by Rating Area Design⁷

Design	Federally Facilitated and Partnership Marketplaces		State-Based Marketplaces	
	≤100 pop/mi ²	>100 pop/mi ²	≤100 pop/mi ²	>100 pop/mi ²
MSAs+1 Default	\$241.73 n = 27	\$233.57 n = 41	none	none
Individual Counties	\$258.86 n = 56	\$248.03 n = 57	none	\$205.28 n = 8*
Whole State**	none	\$232.65 n = 3	none shown	\$167.22 n = 2
Other Methods	\$269.18 n = 113	\$259.81 n = 103	\$240.35 n = 39	\$216.18 n = 42

*These are the eight rating areas of Connecticut.

**Although there are seven "Whole State" rating areas, data for Hawaii were unavailable and data for Vermont are not shown because their requirement of uniform premiums across ages yields data that are more comparable with premiums for the middle-aged. New York data are not included in the "Other Methods" results for the same reason. Additionally, note that one of the two "Whole State" rating areas shown is Washington, D.C., which has unusually low premiums and high population density.

Characteristics of the Highest-Premium Rating Areas

Rating areas with premiums in the top 10 percent of the distribution (the 49 highest averages among the 491 rating areas which exclude those in New York and Vermont) have premiums that range from \$296 to \$414. When compared to the lower 90 percent of rating areas, these high-premium rating areas have lower populations, greater land area, and significantly fewer health care professionals⁸ (Table 2). Although the number of health care professionals, particularly specialists, is much lower in the high-premium rating areas, the number per capita is comparable (we use the number of physicians here to be illustrative of the issue of provider supply, perhaps as a proxy for provider supply in general). However, the lower 90 percent of rating areas have about seven times as many health care professionals per square mile as do the rating areas in the top 10 percent. The differences between high premium rating areas and others suggest that unusually high premiums are associated with rurality.

Table 2 also breaks down the rating areas in each of the two categories by the Census Region to which they belong. Rating areas with the highest premiums are concentrated in the Midwest, with 47 percent of the most expensive rating areas located there as compared to only 23 percent of the lower-premium rating areas being in the Midwest. Rating areas in the Northeast and South are disproportionately likely to be in the lower 90 percent category.

Table 2: Selected Characteristics of Rating Areas, Averaged by Premium Ranking Category

Characteristic (by Rating Area)		Rating Areas with Highest Premiums (Top 10%)	All Other Rating Areas (Lower 90%)
Population (average)		288,049	619,700
Land area, average, in square miles		9,393	7,155
Population density per square mile		87	350
Distribution of rating areas across Census Regions	Northeast	2%	7%
	Midwest	47%	23%
	South	35%	54%
	West	16%	17%
Mortality rate (deaths per 1,000)		9.3	9.0
Number of health care professionals	Health care professionals per rating area	1,005	2,861
	Health care professionals per square mile	0.3120	2.2319
	Health care professionals per capita	0.0030	0.0036

Note: New York and Vermont are excluded due to the uniformity of their premiums across all ages, which make it impossible to rank them relative to other rating areas.

Discussion

We have analyzed the *first year* experience with premium levels in HIMs, revealing that premiums may be slightly higher in sparsely populated rating areas. Although this finding is consistent with that found in another recent study⁹, this analysis differs in that it takes a comprehensive look at all the plans offered in each rating area and uses a framework for controlling for a range of factors (e.g., actuarial value of the plans, cost of living). Moreover, this study highlights the potential importance of rating area design as a factor explaining some of the variation in premiums across the U.S. All analysis has the critical limitation that market equilibrium, based on experience and understanding of the characteristics of the new market, should not be expected this soon, making all findings preliminary.

As shown here, any local cost variations (or concerns about costly outliers) may be more likely to be reflected in premiums, especially when the rating areas to which they belong form small pools for risk sharing. When setting premiums in the HIMs, insurers know that local variations in cost, due either to health care delivery system (in) efficiency or to local utilization patterns, have to be absorbed; firms may recalibrate premiums to reflect these differences, which may explain some of the findings presented here. Although it is not easily controlled for in the data, insurers may also offset some variations in local costs by restricting, or “narrowing,” their networks, i.e., contracting with only the lowest-cost providers so that consumers lose flexibility. In highly populated areas with many providers well within the prevailing network adequacy definitions, it may be easier for insurers to narrow networks than to charge higher premiums, especially since the online marketplaces facilitate premium comparisons. In areas with low population density and sparsely distributed providers, it may not be feasible for insurers to use this lever to keep premiums low due to the need to include most or all local providers within the network in order to meet adequacy standards.

Although these findings suggest that certain policy choices, such as operating SBMs and using the “MSAs+1” or “Whole State” rating area design, may help to mitigate the upward pressure on premiums in areas with low population density and sparsely distributed providers, caution is necessary in assigning causality. More years of data, and analysis of premiums based on insurers’ cost data (controlling for service areas), will be needed to determine whether policy recommendations can be made in favor of these choices. Moving forward, states may be able to affect premiums by operating (and perhaps actively managing) their own marketplaces to achieve whatever policy goal state policymakers seek to achieve. States may also influence premiums through the design of rating areas and should consider, in particular, the pros and cons of segregating all rural residents into a single rating area, as the default of “MSAs+1” accomplishes. It is also possible that mechanisms such as reinsurance or other risk-sharing measures (included in the ACA) will mitigate premium variation, specifically for sparsely populated rating areas.

Notes

¹ Due to the structure of Hawaii’s website, it was not possible to browse insurance plans without being a resident of the state. Requests to the state insurance commission were declined.

² We were not able to obtain data for Hawaii, so results are reported here for 500 of the 501 rating areas.

³ County-level data come from the 2011-2012 Area Health Resource File.

⁴ We use the different actuarial values associated with each metal level to make that adjustment. For example, a \$200 bronze premium is equivalent to a \$233.33 silver premium since $\$200 \times 0.7/0.6 = \233.33 . Normalization of some states’ premiums by age is also necessary due to their publication of premiums for ages other than 27. For a more detailed discussion of the premium adjustment methodology, see <http://cph.uiowa.edu/rupri/publications/policybriefs/2014/Rural%20HIM.pdf>.

⁵ The cost-of-living adjustments are a significant factor in generating this result, because many of the SBMs are operating in very urban places that have high cost-of-living indices.

⁶ See <http://cph.uiowa.edu/rupri/publications/policybriefs/2014/Rural%20HIM.pdf> for listings of states.

⁷ Although another valid rating area design is to designate the entire state as one rating area, averages were not reported for this category due to the fact that Vermont, the only state using this method and also having population density below 100, also requires that premiums not vary by age. Thus premiums in Vermont are not directly comparable to those in other states.

⁸ Healthcare professionals include the following variables reported by the Area Resource Health File: total active MDs, total number of specialists in patient-centered settings, total active DPs, advance practice RNs, and nurse practitioners.

⁹ Polsky D, Weiner J, Nathenson R, Becker N, and Kanneganti M. 2014. “How Did Rural Residents Fare on the Health Insurance Marketplaces?” Leonard Davis Institute of Health Economics and Robert Wood Johnson Policy Brief, retrieved August 2014, http://www.rwjf.org/en/research-publications/find-rwjf-research/2014/08/how-did-rural-residents-fare-on-the-health-insurance-marketplace.html?cq_ck=1407253082970