U.S. Health Reform—Monitoring and Impact

# Are Marketplace Premiums Higher in Rural Than in Urban Areas?

November 2018

By Erik Wengle, Linda J Blumberg, and John Holahan

Robert Wood Johnson Foundation

URBAN INSTITUTE

Support for this research was provided by the Robert Wood Johnson Foundation. The views expressed here do not necessarily reflect the views of the Foundation.

With support from the Robert Wood Johnson Foundation (RWJF), the Urban Institute is undertaking a comprehensive monitoring and tracking project to examine the implementation and effects of health reform. The project began in May 2011 and will take place over several years. The Urban Institute will document changes to the implementation of national health reform to help states, researchers and policymakers learn from the process as it unfolds. Reports that have been prepared as part of this ongoing project can be found at **www.rwjf.org** and **www.healthpolicycenter.org**.

# INTRODUCTION

The Affordable Care Act (ACA) aimed to increase access to adequate, affordable health insurance coverage. Given the higher cost of living in urban compared with rural areas, one might assume health insurance would be more expensive in urban areas. However, factors like market competition and the structure of the ACA premium tax credits may lead to different premiums for insurers in the ACA nongroup marketplaces in rural versus urban areas. Consequently, we analyze the monthly premium differences between the 499 urban and rural premium rating regions for ACA-compliant nongroup marketplaces across the country. Urban areas tend to have higher-cost provider systems (e.g., teaching hospitals and trauma centers), potentially increasing average costs. However, urban areas also have larger populations, making them more attractive to insurers, increasing competition, and likely lowering premium prices. And competition in the provider sector tends to be greater in urban areas, which could also lower insurance prices.

We examine silver benchmark premiums for every rating region for 2016 and 2017, differentiating between predominantly urban and rural premium rating areas. We use 2016 and 2017 data because these are the most recent years preceding various federal policy changes (e.g., elimination of direct federal cost-sharing reduction reimbursements; changes in actuarial value standards; significantly decreased federal funding for outreach and enrollment assistance; uncertainty about the enforcement of the individual mandate and its eventual repeal; and executive orders expanding short-term limited-duration plans, association health plans, and health reimbursement accounts) that created confusion among insurers and state regulators, which in turn affected premium setting in complicated ways.

We find that predominantly urban rating regions tend to have significantly lower marketplace benchmark premiums, even after controlling for various market characteristics that could influence premium levels.

# DATA AND METHODS

We present descriptive data on differences between state average premiums for urban and rural areas in 2016 and 2017 in each state and the District of Columbia. We also estimate linear probability models for 2016 and 2017, including data on all 499 marketplace premium rating regions in the country, the geographic areas defined by states and the federal government within which an insurer does not vary premiums for a given health plan. The regression models summarize the differences between marketplace premiums in rural and urban rating regions, accounting for the greater rating region level detail. The dependent variable in the regressions is the monthly benchmark (second-lowest silver) premium for a 40 year-old non-smoker. The key independent variable is an indicator set equal to one if the rating region is predominantly urban and zero if it is rural.[1] Our urban/rural classification is determined by whether a rating region has more urban or rural counties. We also control for other characteristics of the rating region: number of insurers offering marketplace coverage in the preceding year,[2] indicators for the types of insurers offering marketplace coverage (Medicaid-managed

care organizations; co-ops; national, regional, and local insurers; provider-sponsored insurers; and Blue Cross Blue Shield affiliates), an indicator for states with pure community rating in the nongroup market (i.e., no premium variation by age or tobacco use), census region, and Medicaid expansion status. This approach allows us to see whether the association between marketplace premiums and urbanicity is actually the consequence of a correlation between being an urban area and these other market-related factors.

Our analysis uses premiums for a 40 year-old non-smoker in each rating region. Because all states use standard age rating curves for ACA-compliant nongroup coverage, choosing a 40-year-old does not affect the findings of relationships between premiums and urban status or other variables. We control for New York and Vermont, which have pure community rating, because their premiums reflect the average health care costs of all nongroup enrollees, not the average cost for 40-year-olds.

# FINDINGS

Table 1 shows that, of the 40 states[3] with both predominantly urban and rural rating regions, the average benchmark premium was higher in rural areas than in urban areas in 32 states in 2016 (80 percent of states with both urban and rural premiums). In 2016, the difference between average urban and rural premiums in these states ranged from less than $1 per month in Alabama to $126 per month in Nevada. In 2017, average benchmark premiums increased significantly in many areas, and the number of states where the urban-area benchmark premium was lower than that of rural areas decreased to 29 of the 50 states and the District of Columbia (72.5 percent). To assess whether this pattern is consistent across the country, we expanded our analysis to include every rating region in every state and then controlled for additional factors likely to affect premiums, some of which vary across urban and rural areas.

Table 2 provides descriptive statistics for the variables included in our linear probability models for all rating regions combined and separately for urban and rural areas. Twenty-nine percent of the nation's 499 rating regions had at least one insurer participating in the 2016 marketplace that operated as a Medicaid-managed care insurer before ACA coverage reforms were implemented in 2014. These rating regions include 49 percent of the national population. Medicaid insurer participation differs markedly between urban and rural rating regions, however. In 2016, at least one Medicaid-managed care insurer sold coverage in one-third of urban areas but only in 23 percent of rural areas. Differentials in marketplace participation were similar in 2017. In both years, urban rating regions were also more likely to have provider-sponsored and national insurers participating in their marketplaces.

In 2016, on average, benchmark premiums were $26 more per month (9 percent higher) in rural areas than urban areas; the population-weighted average difference in premiums was $20 per month (7 percent higher in rural areas). In 2017, rural-area benchmark premiums were, on average, $39 more per month (10 percent higher) than those in urban areas. When weighted by rating population, the average difference was $33 per month (10 percent higher in rural areas).

Next, we regressed premiums by urban status, types of insurers participating in each rating region, number of insurers participating in the region's marketplace in the preceding year, an indicator for states with pure community rating in the nongroup market, census regions (excluding Midwest as the comparison), rating region population, and an indicator equal to one for states with expanded Medicaid eligibility under the ACA (table 3). We found that premiums in urban areas were significantly lower than premiums in rural areas, even after controlling for these other characteristics. Urban-area benchmark premiums were about $16 lower per month than in rural areas in 2016 and $21 lower per month in 2017, after controlling for these other factors.

Other characteristics were also associated with significant premium differences. Having a Medicaid insurer in the marketplace was associated with significantly lower benchmark premiums in both years, as was having a provider-sponsored insurer in the marketplace. Both provider-sponsored and Medicaid insurers may have been able to establish lower provider payment rates, and thus lower premiums, based on narrow networks and long-standing or close relationships with providers. Having them in a market may prompt other insurers to compete more aggressively on price as well. These differences in premiums increased markedly in 2017 compared with 2016. The presence of a Blue Cross Blue Shield insurer was associated with higher premiums in 2016 but lower premiums in 2017; this may reflect that Blue Cross Blue Shield insurers in several states moved from broad network preferred provider organization, or PPO, products to more narrow network options, because the former struggled to survive in many markets.[4] More insurers competing in the marketplaces in the previous year was also associated with lower premiums. Premiums in the western US were significantly higher than those in the Midwest. Controlling for rating regions in pure community–rated states also affected premium differences.

## Table 1. Average Benchmark Monthly Premiums in Rural and Urban Areas by State, 2016 and 2017

| | 2016 Second-Lowest Silver Premium | | | | 2017 Second-Lowest Silver Premium | | | |
|---|---|---|---|---|---|---|---|---|
| State | Urban area average (dollars) | Rural area average (dollars) | Difference in level (dollars) | Percent difference | Urban area average (dollars) | Rural area average (dollars) | Difference in level (dollars) | Percent difference |
| Alabama | 299 | 300 | <1 | 0 | 476 | 448 | 28 | 6 |
| Alaska | n/a | 719 | n/a | n/a | n/a | 927 | n/a | n/a |
| Arizona | 227 | 308 | -81 | -36 | 537 | 618 | -81 | -15 |
| Arkansas | n/a | 298 | n/a | n/a | n/a | 302 | n/a | n/a |
| California | 311 | 363 | -52 | -17 | 332 | 402 | -70 | -21 |
| Colorado | 282 | 402 | -120 | -43 | 326 | 439 | -113 | -35 |
| Connecticut | 353 | 344 | 9 | 3 | 437 | 410 | 27 | 6 |
| Delaware | 356 | n/a | n/a | n/a | 423 | n/a | n/a | n/a |
| District of Columbia | 245 | n/a | n/a | n/a | 298 | n/a | n/a | n/a |
| Florida | 291 | 356 | -65 | -23 | 332 | 458 | -127 | -38 |
| Georgia | 307 | 319 | -11 | -4 | 289 | 382 | -93 | -32 |
| Hawaii | 262 | n/a | n/a | n/a | 347 | n/a | n/a | n/a |
| Idaho | 273 | 288 | -14 | -5 | 348 | 360 | -11 | -3 |
| Illinois | 238 | 307 | -69 | -29 | 333 | 452 | -119 | -36 |
| Indiana | 282 | 271 | 11 | 4 | 275 | 276 | -1 | 0 |
| Iowa | 268 | 308 | -40 | -15 | 295 | 375 | -79 | -27 |
| Kansas | 246 | 251 | -4 | -2 | 359 | 365 | -6 | -2 |
| Kentucky | 247 | 256 | -8 | -3 | 264 | 268 | -4 | -2 |
| Louisiana | 350 | 359 | -8 | -2 | 402 | 437 | -35 | -9 |
| Maine | 285 | 333 | -48 | -17 | 341 | 402 | -61 | -18 |
| Maryland | 253 | n/a | n/a | n/a | 309 | n/a | n/a | n/a |
| Massachusetts | 259 | 268 | -9 | -4 | 251 | 255 | -4 | -1 |
| Michigan | 248 | 259 | -12 | -5 | 260 | 282 | -22 | -8 |
| Minnesota | 246 | 287 | -41 | -17 | 420 | 496 | -77 | -18 |
| Mississippi | 279 | 257 | 22 | 8 | 350 | 313 | 37 | 10 |
| Missouri | 290 | 350 | -60 | -21 | 325 | 431 | -106 | -33 |
| Montana | n/a | 322 | n/a | n/a | n/a | 450 | n/a | n/a |
| Nebraska | 313 | 346 | -34 | -11 | 368 | 555 | -187 | -51 |
| Nevada | 272 | 398 | -126 | -46 | 290 | 421 | -130 | -45 |
| New Hampshire | n/a | 261 | n/a | n/a | n/a | 267 | n/a | n/a |
| New Jersey | 325 | n/a | n/a | n/a | 339 | n/a | n/a | n/a |
| New Mexico | 233 | 208 | 25 | 11 | 263 | 239 | 24 | 9 |

| State | 2016 Second-Lowest Silver Premium | | | | 2017 Second-Lowest Silver Premium | | | |
|---|---|---|---|---|---|---|---|---|
| | Urban area average (dollars) | Rural area average (dollars) | Difference in level (dollars) | Percent difference | Urban area average (dollars) | Rural area average (dollars) | Difference in level (dollars) | Percent difference |
| New York | 386 | 390 | -4 | -1 | 457 | 431 | 27 | 6 |
| North Carolina | 385 | 389 | -4 | -1 | 525 | 581 | -55 | -11 |
| North Dakota | 318 | 322 | -4 | -1 | 337 | 331 | 6 | 2 |
| Ohio | 252 | 282 | -29 | -12 | 255 | 293 | -38 | -15 |
| Oklahoma | 300 | 292 | 8 | 3 | 504 | 501 | 2 | 0 |
| Oregon | 266 | 275 | -9 | -3 | 318 | 334 | -16 | -5 |
| Pennsylvania | 255 | 229 | 26 | 10 | 394 | 266 | 128 | 33 |
| Rhode Island | 263 | n/a | n/a | n/a | 261 | n/a | n/a | n/a |
| South Carolina | 301 | 304 | -3 | -1 | 390 | 392 | -3 | -1 |
| South Dakota | 309 | 356 | -47 | -15 | 448 | 462 | -14 | -3 |
| Tennessee | 281 | 302 | -21 | -7 | 415 | 601 | -187 | -45 |
| Texas | 257 | 246 | 11 | 4 | 297 | 206 | 91 | 31 |
| Utah | 254 | 293 | -39 | -15 | 305 | 386 | -81 | -26 |
| Vermont | n/a | 468 | n/a | n/a | n/a | 492 | n/a | n/a |
| Virginia | 292 | 284 | 8 | 3 | 320 | 313 | 7 | 2 |
| Washington | 237 | 260 | -23 | -10 | 249 | 245 | 3 | 1 |
| West Virginia | 337 | 368 | -31 | -9 | 446 | 471 | -25 | -6 |
| Wisconsin | 301 | 323 | -22 | -7 | 353 | 375 | -22 | -6 |
| Wyoming | 445 | 468 | -23 | -5 | 484 | 509 | -25 | -5 |

Source: Urban Institute analysis of marketplace premium data from the Healthcare.gov public use files and relevant state based marketplace websites.

Note: Premiums displayed are monthly benchmarks for a 40 year-old non-smoker

## Table 2. Descriptive Statistics for All Marketplace Rating Regions and by Rating Region Urban/Rural Status, 2016 and 2017

*Variables used in linear probability models*

| | All Rating Regions | | Urban Rating Regions | | Rural Rating Regions | |
|---|---|---|---|---|---|---|
| Observations | 499 | | 300 | | 199 | |
| | Mean | Weighted mean[a] | Mean | Weighted mean | Mean | Weighted mean |
| Dependent variables | | | | | | |
| 2016 second-lowest silver monthly premium | $309 | $294 | $299 | $290 | $325 | $310 |
| 2017 second-lowest silver monthly premium | $386 | $356 | $371 | $348 | $410 | $382 |
| Independent variables | | | | | | |
| Types of insurers participating in plan year | | | | | | |
| Medicaid insurer in 2016? | 0.29 | 0.49 | 0.33 | 0.52 | 0.23 | 0.35 |
| Medicaid insurer in 2017? | 0.36 | 0.49 | 0.40 | 0.62 | 0.30 | 0.48 |
| Co-op insurer in 2016? | 0.16 | 0.20 | 0.17 | 0.20 | 0.16 | 0.17 |
| Co-op insurer in 2017? | 0.07 | 0.07 | 0.07 | 0.07 | 0.08 | 0.09 |
| National insurer in 2016? | 0.70 | 0.76 | 0.74 | 0.77 | 0.64 | 0.75 |
| National insurer in 2017? | 0.17 | 0.32 | 0.21 | 0.34 | 0.12 | 0.22 |
| Regional or local insurer in 2016? | 0.36 | 0.52 | 0.36 | 0.54 | 0.36 | 0.44 |
| Regional or local insurer in 2017? | 0.25 | 0.33 | 0.26 | 0.34 | 0.25 | 0.27 |
| Provider-sponsored insurer in 2016? | 0.38 | 0.55 | 0.41 | 0.57 | 0.32 | 0.48 |
| Provider-sponsored insurer in 2017? | 0.34 | 0.47 | 0.39 | 0.49 | 0.28 | 0.41 |
| Blue Cross Blue Shield insurer in 2016? | 0.93 | 0.95 | 0.93 | 0.96 | 0.93 | 0.92 |
| Blue Cross Blue Shield insurer in 2017? | 0.93 | 0.92 | 0.93 | 0.92 | 0.94 | 0.94 |
| Number of participating insurers in 2016 | 3.92 | 5.34 | 4.14 | 5.53 | 3.60 | 4.58 |
| Number of participating insurers in 2017 | 2.72 | 3.75 | 2.96 | 3.93 | 2.35 | 3.05 |
| Rating region urban? | 0.60 | 0.80 | 1.00 | 1.00 | 0.00 | 0.00 |
| Census Region | | | | | | |
| South | 0.51 | 0.38 | 0.53 | 0.37 | 0.47 | 0.40 |
| West | 0.15 | 0.23 | 0.18 | 0.26 | 0.11 | 0.15 |
| Northeast | 0.08 | 0.17 | 0.09 | 0.19 | 0.07 | 0.13 |

| | All Rating Regions | | Urban Rating Regions | | Rural Rating Regions | |
|---|---|---|---|---|---|---|
| | Mean | Weighted mean[a] | Mean | Weighted mean | Mean | Weighted mean |
| Medicaid expansion status in plan year | | | | | | |
| 2016 | 0.43 | 0.60 | 0.43 | 0.61 | 0.44 | 0.55 |
| 2017 | 0.45 | 0.61 | 0.44 | 0.62 | 0.46 | 0.57 |
| Pure community rating? | 0.02 | 0.06 | 0.02 | 0.07 | 0.02 | 0.05 |
| Rating region population | 653,976 | 2,356,310 | 866,970 | 2,736,925 | 331,258 | 846,993 |

Source: Urban Institute analysis of marketplace premium data from the Healthcare.gov public use files and relevant state based marketplace websites.

Census region and populations are from the U.S. Census Bureau

Note: [a] All weighted means are weighted by 2017 rating region population.

## Table 3. Summary of Relationship between Urban Status and Benchmark Premiums, Controlling for Other Market Characteristics, 2016 and 2017

*Linear probability model with dependent variable equal to rating region's second-lowest silver premium*

| | 2016 | 2017 |
|---|---|---|
| Independent variables | | |
| Types of insurers participating in plan year | | |
| Medicaid | -15.343*** | -76.768*** |
| Co-op | -11.010 | -22.176 |
| National | 5.541 | -16.437 |
| Regional or local | 27.434*** | -11.754 |
| Provider-sponsored | -18.586*** | -50.719*** |
| Blue Cross Blue Shield | 23.014** | -27.881* |
| Number of participating insurers in lagged year | -9.921*** | -12.330*** |
| Rating region urban? | -15.860*** | -21.022*** |
| Census region | | |
| South | 4.51 | -12.222 |
| West | 48.958*** | 47.092*** |
| Northeast | 1.447 | -5.88 |
| Medicaid expansion in plan year? | -6.797 | 11.356 |
| Pure community rating? | 152.798*** | 168.851*** |
| Rating region population | -4.08E-06* | 1.57E-06 |
| Intercept | 333.381 | 516.35 |
| $R^2$ | 0.378 | 0.443 |
| n | 499 | 499 |

Source: Urban Institute analysis of marketplace premium data from the Healthcare.gov public use files and relevant state based marketplace websites.

Census region and populations are from the U.S. Census Bureau

Notes: *P<.10. **P<.05. ***P<.01.

# DISCUSSION

Both a comparison of simple means and an analysis using controls for various market characteristics show that urban rating areas tend to have lower marketplace benchmark premiums than their rural counterparts. Factors such as insurer competition and types of insurers participating in the marketplaces influenced benchmark premiums. However, these factors do not account for all differences between urban and rural premiums. Though the ACA requires that insurers treat the entire state as a single risk pool, insurers may not follow that requirement when they set their premium; this is difficult to verify. Thus, premium differences may be partially attributable to differences in health care needs between rural and urban populations. However, it is very likely that a central factor in the difference is provider competition, as this tends to be greater in urban than in rural areas. Less competition in provider markets may necessitate insurers pay higher payment rates to hospitals and/or physicians, which increases premiums.

# ENDNOTES

1. The University of Iowa College of Public Health. 2018. "Health Insurance Marketplace Rating Areas: Maps of State Rating Areas." Accessed October 31. https://cph.uiowa.edu/rupri/publications/policybriefs/2014/premiums/
2. We use the preceding year's number of insurers because this is the information insurers have when they file their rates. Additionally, we ran the same regressions using the current-year number of insurers and found no meaningful differences.
3. The remaining 10 states and the District of Columbia are either entirely urban or entirely rural.
4. Robert Wood Johnson Foundation. 2018. "Table 2. Marketplace plans by plan type, FFM states only." Accessed October 31. https://www.rwjf.org/content/dam/images/restricted/2017HIXcompare-table2.png

**Acknowledgments**
The authors are appreciative of the comments and suggestions from Kevin Lucia and Sabrina Corlette as well as Caroline Elmendorf for research assistance.

**About the Robert Wood Johnson Foundation**
For more than 45 years the Robert Wood Johnson Foundation has worked to improve health and health care. We are working alongside others to build a national Culture of Health that provides everyone in America a fair and just opportunity for health and well-being. For more information, visit **www.rwjf.org**. Follow the Foundation on Twitter at **www.rwjf.org/twitter** or on Facebook at **www.rwjf.org/facebook**.

**About the Urban Institute**
The nonprofit Urban Institute is dedicated to elevating the debate on social and economic policy. For nearly five decades, Urban scholars have conducted research and offered evidence-based solutions that improve lives and strengthen communities across a rapidly urbanizing world. Their objective research helps expand opportunities for all, reduce hardship among the most vulnerable, and strengthen the effectiveness of the public sector. For more information, visit **www.urban.org**. Follow the Urban Institute on **Twitter** or **Facebook**. More information specific to the Urban Institute's Health Policy Center, its staff, and its recent research can be found at **www.healthpolicycenter.org**.