Why Are the Health Insurance Marketplaces Thriving in Some States but Struggling in Others?

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ABSTRACT

ISSUE: In 2017, health insurance marketplaces in some states were thriving, while those in other states were struggling. What explains these differences?

GOAL: Identify factors that explain differences in issuers' participation levels in state insurance marketplaces.

METHODS: Analysis of the Robert Wood Johnson Foundation's HIX Compare dataset, and the National Association of Insurance Commissioners' *2010 Supplemental Health Care Exhibit Report*.

FINDINGS AND CONCLUSIONS: State policies and insurance regulations were key factors affecting the number of issuers participating in the marketplaces in 2017. Marketplaces run by states had more issuers than states that rely on the federally facilitated marketplace. States with fewer than four issuers tended to have policies in place that could have been destabilizing — for example, permitting the sale of plans not compliant with the Affordable Care Act's requirements regarding essential health benefits or guaranteed issue. Consumers in states that did not take steps to enforce these insurance market reforms still benefited from their protections, however; they were just enforced at the federal level. States with more issuers were also more likely to have expanded Medicaid. States with fewer issuers tended to be rural and have smaller populations, more concentrated hospital markets, and lower physicianto-population ratios.

TOPLINES

- Competition among health insurers — and consumer choice of health plans — varies widely in state insurance marketplaces: five states had only one issuer in 2017, while five had 11 or more.
- State policies and insurance regulations were key factors affecting the number of health insurers participating in the ACA marketplaces in 2017.



BACKGROUND

After multiple earlier efforts to repeal the Affordable Care Act (ACA) ended in failure, Congress enacted the Tax Cut and Jobs Act in December 2017, which repealed the penalties associated with the individual requirement to have health insurance.¹ The Congressional Budget Office estimates that the repeal of this requirement will increase the number of uninsured Americans between 2017 and 2028 from 29 million to 35 million.² Nonetheless, an altered ACA remains the law of the land.

Although ACA supporters and opponents hold vastly different views about health policy, they do share a common goal: increasing the number of issuers participating in the individual insurance market. Higher participation translates into more consumer choice and greater price-based competition among issuers.³

In 2017, marketplace competition, measured by the number of participating issuers, varied widely. Five states — Alabama, Alaska, Oklahoma, South Carolina, and Wyoming — each had only one issuer (the state's Blue Cross/Blue Shield plan). Five states — California, New York, Ohio, Virginia, and Wisconsin — had 11 or more issuers.

We examine contemporary and historical factors associated with the broad disparities in issuer participation in state marketplaces and the reasons that some are thriving while others are not. Our principal data come from the Robert Wood Johnson Foundation's HIX Compare, a national database on marketplace plans that contains information on issuer participation, premiums, and benefit design, among other characteristics, covering the period 2014 to 2017. Our second data source is the National Association of Insurance Commissioners' 2010 Supplemental Health Care Exhibit Report, released in April 2011, which provides names of issuers offering coverage and their 2010 individual market enrollment in each state prior to implementation of the ACA marketplaces.

FINDINGS

Issuer Participation Before and After the ACA

In the pre-ACA individual market of 2010, issuer participation varied widely. Exhibit 1 shows that in all states, one or more issuers had at least a 5 percent share of the individual market.⁴ In most states, Blue Cross/Blue Shield plans had dominant market shares — more than 50 percent in 41 states and the District of Columbia. Ten states and the District of Columbia had four or more issuers that participated, with the others having two or three.

In 2015, the ACA marketplaces' second year of operation, issuer participation had increased substantially from 2014. Only two states and the District of Columbia had a single issuer, while most of the rest had four or more (Exhibit 2). By 2017, the number of states with a single issuer had increased to five, still fewer than in the pre-ACA market.⁵ The number of states with four or more issuers declined to 26, but in all, the number of those states remained substantially higher than in 2010.

State Sociodemographic Effects on Issuer Participation

Issuer participation in the marketplaces varied considerably by state sociodemographic characteristics. States with one issuer had populations that were substantially more rural: 38 percent in single-issuer states, compared to 31 percent in two- or three-issuer states and 23 percent in four-or-more-issuer states (Exhibit 3). States with four or more issuers were much more likely to have a large population — in fact, more than three times the average population of the five single-issuer states.

Median family income was correlated with the number of issuers participating. For example, three of the five single-issuer states had median incomes in the lower third of the country, whereas only five of the 26 states with four or more issuers had median incomes in that lower Exhibit 1. Number of Issuers with 5 Percent or Greater Market Share in Individual Market and Combined Market Share of All Blue Cross/Blue Shield Plans in Individual Market, by State, 2010



Data: National Association of Insurance Commissioners, 2010 Supplemental Health Care Exhibit Report (NAIC, 2011).

Exhibit 2. Number of Issuers Participating on Individual Marketplaces, by State, 2015 and 2017



Data: Robert Wood Johnson Foundation, HIX Compare, 2015–2017.

bracket. At the rating-area level (see Appendix 1), greater population was significantly associated with higher issuer participation, while state-level rurality was not a significant factor.

Influence of Market Forces and Rates of Uninsured on Individual Insurance Marketplace

Differences in issuer participation rates also were associated with market power and rates of the uninsured in each state. States with four or more participating issuers had more physicians per 1,000 people than states with one issuer (Exhibit 3). The higher rates of physicians in these states suggest that insurers had more power to build physician networks and negotiate with providers for prices more favorable to the insurers. Conversely, states with a smaller number of issuers were more likely states with greater hospital concentration (measured by gross patient revenue), suggesting that hospitals had more influence in negotiating prices with insurers and this may have deterred insurers from remaining in or entering the state. The Herfindahl-Hirschman Index, a measure of market concentration, was 1,152 in single-issuer states compared to 446 in states with four-plus issuers⁶ (the higher the score, the more concentrated the market). In addition, single-issuer states had a higher share of uninsured residents prior to ACA implementation compared to states with more issuers participating — a finding that may be related to the heavily rural, smaller populations and higher market concentration of single-issuer states.

The number of issuers participating in the individual market in 2010 was a weak predictor of issuer participation in 2017. Despite states' differences in issuer participation in 2017, all states had similar issuer numbers competing in 2010 (Exhibit 3). What appears instead to have been a more important factor was whether states' marketplaces were state-based or federally facilitated. (Exhibit 4). All five single-issuer states used the federally facilitated marketplace, whereas only 57 percent of states with four or more issuers used it. In general, state-based marketplaces used their wider authority to reduce consumer uncertainty and promote stability.^{7,8}

Exhibit 3. Number of Issuers Participating in States, by Sociodemographic and Health Care Market Characteristics, 2017

| One issuer (n=5) | 2–3 issuers (n=20) | 4+ issuers (n=26) | National average |
|---------------------|---|---|---|
| 38% | 31% | 23% | 28% |
| 3 million | 3 million | 9 million | 6 million |
| \$61,536 | \$63,936 | \$65,378 | \$64,436 |
| 2.8 | 2.6 | 2.7 | 2.7 |
| 63% | 64% | 60% | 62% |
| 2.3 | 3.1 | 2.9 | 2.9 |
| 1,152 | 1,360 | 446 | 874 |
| 18% | 12% | 15% | 14% |
| | (n=5) 38% 3 million \$61,536 2.8 63% 2.3 1,152 | (n=5)(n=20)38%31%3 million3 million\$61,536\$63,9362.82.663%64%2.33.11,1521,360 | (n=5)(n=20)(n=26)38%31%23%3 million3 million9 million\$61,536\$63,936\$65,3782.82.62.763%64%60%2.33.12.91,1521,360446 |

Data: Robert Wood Johnson Foundation, HIX Compare, 2017; National Association of Insurance Commissioners, *Supplemental Health Insurance Exhibit Report;* American Community Survey 5-Year Estimates, 2011–2015; 2010 United States Census; 2015–2016 Area Health Resource File; 2012 Dartmouth Atlas; Kaiser Family Foundation; American Hospital Directory Hospital Statistics by State, 2017.

Note: The Herfindahl-Hirschman Index measures market concentration — the larger the index, the more concentrated the market.

Exhibit 4. Average Premiums and Medical Claims, 2012–2016

| | One issuer (n=5) | 2–3 issuers (n=20) | 4+ issuers (n=26) |
|---|----------------------------------|----------------------------------|----------------------------------|
| Total number of state regulations possibly affecting market stabilization | 4.8 | 3.0 | 3.0 |
| State's regulatory environment | Share of states + D.C. (%) | Share of states + D.C. (%) | Share of states + D.C. (%) |
| Presence of antinavigator law | 40% | 30% | 46% |
| Absence of market reforms | 80% | 30% | 31% |
| No Medicaid expansion | 80% | 40% | 27% |
| Marketplace was federally facilitated | 100% | 80% | 69% |
| Grandmothered plans allowed after January 1, 2014 | 100% | 75% | 73% |
| State participation in NFIB lawsuit | 80% | 40% | 58% |
| Acquisition of CCIIO consumer outreach grants | 0% | 30% | 23% |

Data: Robert Wood Johnson Foundation, HIX Compare, 2017; Henry J. Kaiser Family Foundation; and Center for Consumer Information and Insurance Oversight's Health Insurance Oversight System. Data provided by the Center for Health Insurance Reform, Georgetown University.

Effect of State Health Policy

Regulations and other ACA-related state policies were also associated with 2017 marketplace issuer participation (Exhibit 4).

We summed several state policies that could potentially destabilize the marketplaces. (See "How We Conducted This Study" for further detail.) States with one issuer in 2017 averaged 4.8 such policies, whereas states with four or more issuers averaged 3.0 policies.

Specifically, compared with single-issuer states, states with four or more issuers were:

- more likely to have expanded Medicaid
- less likely to permit grandmothered plans (73% vs. 100% of single-issuer states)⁹
- more likely to have adopted into state law 2014 ACA market reforms, such as guaranteed issue and essential health benefits.¹⁰

The absence of state-level market reform legislation consistent with the ACA could have raised concerns about potential gaps in the law's enforcement.¹¹ Moreover, singleissuer states in 2017 were less likely to have applied for and to have received a federal outreach grant from the Centers for Medicare and Medicaid Services (CMS).¹²

Behind the Numbers

Our analysis found some common state characteristics associated with either thriving or struggling marketplaces. States using the federal marketplace tended to have fewer issuers, as did states that did not expand Medicaid and did not adopt into state law various 2014 insurance market reforms.¹³ We also found that states' anti-ACA policies were associated with a reduction in the number of issuers participating.

Since the 2017 plan year, enrollment in states using the federal marketplace declined from 9.2 million to 8.7 million, while enrollment through state-based marketplaces remained stable.¹⁴ Many of these latter states invested in enhanced marketing and publicized that their marketplaces were still fully functioning. Moreover, most extended the enrollment period beyond that set by the federal marketplace, and some engaged in other measures promoting enrollment, such as earlier, more targeted advertising and an increased advertising budget.¹⁵

CMS reports that 11.8 million people were enrolled in the marketplaces at the end of the 2018 plan year enrollment period, a decline of 3.7 percent from the prior year.^{16,17} Recent federal policy initiatives have sought to scale back the ACA, such as by nearly eliminating the ACA advertising budget, reducing funding for navigator groups, and halving the duration of the sign-up period.¹⁸ More recently, the

U.S. Department of Health and Human Services announced it would cut navigator funding to just \$10 million for the current enrollment period, down from \$34 million from the previous year and down \$63 million in 2017.¹⁹ Other measures — ending cost-sharing reduction payments to issuers, an executive order allowing smaller employers as well as individuals access to non-ACA-compliant association health plans, and expanded access to short-term plans not required to comply with ACA individual health insurance regulations — also could have significant implications for costs and the stability of the marketplaces.^{20,21}

While the repeal of the individual mandate included in the tax reform legislation passed in December 2017 will not go into effect until 2019, this measure has the potential to increase adverse selection, which would increase premiums for those purchasing health insurance. In the face of these measures, the relatively slight decline in enrollment appears to demonstrate the marketplaces' resiliency thus far. The fact that 83 percent of 2017 plan-year enrollees received premium subsidies, resulting in an average monthly premium of \$89, likely contributed to the lack of a major enrollment decline.²²

CONCLUSION

Many factors contribute to why some marketplaces have thrived while others have not. In 2017, factors affecting the number of issuers participating included state-run versus federally facilitated status, rural population, Medicaid expansion, and state responses to 2014 market reforms. The more recent legislative and regulatory changes, such as major reductions in federal advertising and navigator funding, also could have implications going forward, in particular for federal marketplace states.

Strengthening markets for consumers and issuers alike will require initiatives at the federal or state level. At this time, it is not clear whether Congress might make another effort to stabilize the markets by, for example, reestablishing a reinsurance program. If legislative or regulatory changes do not occur at the federal level, states also could take steps to pass their own reinsurance programs to help stabilize individual markets, as was done in Minnesota, Alaska, and Oregon.^{23,24}

HOW WE CONDUCTED THIS STUDY

Data

We used data from two primary sources: the Robert Wood Johnson Foundation's HIX Compare dataset and the National Association of Insurance Commissioners' *2010 Supplemental Health Care Exhibit Report* (SHCE), released in April 2011. The HIX Compare dataset provides information on the universe of marketplace plans from 2014 to 2017, while the SHCE dataset provides information on the individual insurance market in plan year 2010.

For marketplace years 2014–2017, using the Center for Consumer Information and Insurance Oversight's (CCIIO) Health Insurance Oversight System database, we counted all issuers that operated in a given state in a given year, identified by a five-digit code. For 2010, using SHCE data, we limited our universe of issuers to those with 3 percent or 5 percent or greater market share of the individual market that year. This prevented legacy issuers (those who did not enroll new members but whose long-term members were grandfathered in) and other very small issuers from affecting estimates. We calculated each issuer's market share based on total premiums earned. In addition, we calculated figures that helped describe each state's insurance market concentration in 2010, including the market shares of the top three issuers, the top Blues plan, and all Blues plans.

For context, we examined several historical, geographical, and market-level factors that could affect issuer participation– namely, state and county-level data on total population, population by race/ethnicity, and uninsured population from the American Community Survey five-year estimates, 2011– 2015; We used the 2010 Census information to determine each state's rural population; the 2015–2016 Area Health Resource File to calculate each state's number of physicians per 1,000 residents; the Dartmouth Atlas to determine each state's number of inpatient hospital beds per 1,000 residents in 2012; Kaiser Family Foundation data on each state's hospital-adjusted expenses per inpatient;²⁵ and the American Hospital Directory to calculate state-level hospital market concentration of discharges, patient days, hospital beds, and gross patient revenue using a Herfindahl-Hirschman Index.

We also worked with researchers from the Center on Health Insurance Reforms at Georgetown University to incorporate measures of state regulatory policies that could impact market stabilization, including the decision to expand Medicaid (as of January 2017),²⁶ allowing non-ACA-compliant plans after 2014 (known as "grandmothered" plans),²⁷ whether states enacted legislation imposing restrictions on navigators or other ACA consumer assisters (as of June 2014),²⁸ the decision to adopt market reform policies called for in the ACA,²⁹ the acquisition of grants from CCIIO to aid in consumer outreach efforts regarding the marketplaces,³⁰ and a state's decision to participate in the landmark *National Federation of Independent Business v. Sebelius* Supreme Court case that challenged the Affordable Care Act.³¹ All figures were weighted by state population.

Analysis

We calculated both descriptive and multivariate statistics using unweighted data, as we wanted to assess the relationship between states' policy and political decisions and issuer participation in states' marketplaces. The unit of analysis for descriptive statistics was the state because it is the locus of most policy decisions. For multivariate analysis, the unit was the rating area — a subunit of the state, such as counties or metropolitan statistical areas, that insurers use to adjust premium rates--to provide a sufficient number of observations (n=499 versus n=51). However, because many analytic variables did not differ across rating areas (and differed only across states), a flattening of the results may have occurred because of redundant data in the analysis.

Appendix 1 displays regression results without state-level fixed effects. The dependent variable was the expected number of issuers competing in a rating area, which was transformed to a natural log (Ln). Multicollinearity necessitated omitting some the policy and control variables. We used a Poisson distribution for statistical testing. The distribution for the dependent variable, number of issuers in a rating area, was truncated at 0. Control variables included the rating area's population and the state's physicians per 1,000 population, hospital beds per 1,000 persons, hospital concentration, and share of its rural population.

Multivariate Findings

To isolate the effects of individual variables on issuer participation in rating areas, we conducted multivariate analysis. Two variables — allowance of grandmothered plans and antinavigator laws — had anomalous positive effects. This was likely related to the high degree of collinearity between a state's various policy decisions and alternate modeling specifications that produce coefficients that are different, but no more robust.

NOTES

1. Paige Winfield Cunningham, "The Health 202: A Eulogy for the Individual Mandate," *Washington Post*, Dec. 21, 2017.

2. Congressional Budget Office, *Federal Subsidies for Health Insurance Coverage for People Under Age 65: Tables from CBO's Spring 2018 Projections* (CBO, n.d.).

3. Richard G. Frank and Thomas G. McGuire, "Regulated Medicare Advantage and Marketplace Individual Health Insurance Markets Rely on Insurer Competition," *Health Affairs* 36, no. 9 (Sept. 2017): 1578–84.

4. We used the 5 percent threshold to exclude legacy issuers who are not enrolling new members.

5. The states with one issuer were not the identical states in 2010 and 2017.

6. The Herfindahl-Hirschman Index measures market concentration. It is calculated as the sum of the square of the market share for each firm. We have converted percentages to integers. The larger the Herfindahl-Hirschman Index, the more concentrated is the market.

7. Justin Giovannelli and Emily Curran, *How Did State-Run Health Insurance Marketplaces Fare in 2017?* (Commonwealth Fund, March 2018).

8. Giovannelli and Curran, How Did State-Run? 2018.

9. Facing an uproar over higher premiums for individual and small-group plans in November 2013, the U.S. Department of Health and Human Services allowed plans that took effect from March 2010 and October 2013 to continue. These so-called grandmothered plans did not need to meet many of the requirements of the ACA.

10. Katie Keith and Kevin Lucia, *Implementing the Affordable Care Act: The State of the States* (Commonwealth

Fund, Jan. 2014). States identified as a "yes" failed to pass a new law or issue a regulation addressing any of the early market or 2014 ACA market reforms. In a number of these states, officials reported they were reviewing insurance policy forms, rates, and/or other materials for compliance with one or more reforms. In addition, some states may have decided not to address a particular reform because state law was already consistent with it or because the state had the authority to enforce federal law. The exhibit does not account for such existing laws or authority.

11. Katie Keith and Kevin Lucia, "New Guidance: Federal Regulators Allow 'Collaborative Arrangements' for Enforcement," *To the Point* (blog), Commonwealth Fund, Apr. 5, 2013.

12. Two notable anomalies occur with regard to these policies. First, states with more issuers in 2017 were highly likely to have joined in the National Federation of Independent Business (NFIB) lawsuit against the ACA, which could be seen as destabilizing. Here are two possible explanations for this incongruity. First, larger federal marketplace states (Florida, Georgia, Indiana, Michigan, Pennsylvania, Texas, Virginia, and Wisconsin), all with four or more participating issuers in 2017, joined in the lawsuit. Smaller federal marketplace states (e.g., Montana, Nebraska, Oklahoma, and West Virginia) did not. Second, states with four or more issuers in 2017 were more likely to have passed state legislation limiting activities of navigators as well. Many large states - Florida, Georgia, Illinois, Indiana, Ohio, Texas, Virginia, and Wisconsin — passed statutes that limited the role of navigators.

13. Abby Goodnough, "After Years of Trying, Virginia Finally Will Expand Medicaid," *New York Times*, May 30, 2018.

14. Centers for Medicare and Medicaid Services, *Health Insurance Exchanges 2018 Open Enrollment Period Final Report* (CMS, April 3, 2018).

15. Giovannelli and Curran, How Did State-Run? 2018.

16. CMS, Health Insurance Exchanges, 2018.

17. Sara R. Collins et al., *Americans' Views on Health Insurance at the End of a Turbulent Year* (Commonwealth Fund, Mar. 2018).

18. Kim Soffen, "These Are the Steps the Trump Administration Is Taking to Undermine the ACA," *Washington Post*, updated Oct. 13, 2017. 19. Virgil Dickson, "CMS Slashes Navigator Funding to Just \$10 Million," *Modern Healthcare*, July 10, 2018.

20. Centers for Medicare and Medicaid Services, "Trump Administration Delivers on Promise of More Affordable Health Insurance Options," news release, Aug. 1, 2018.

21. Soffen, "These Are the Steps," 2017.

22. CMS, Health Insurance Exchanges, 2018.

23. Governor Bill Walker, "Federal Government to Distribute \$58 Million to Alaska Reinsurance Program in 2018," press release No. 18-020, Feb. 9, 2018.

24. State Health Access Data Assistance Center, *Resource: 1332 State Innovation Waivers for State-Based Reinsurance* (SHADAC, updated Sept. 18, 2018).

25. Henry J. Kaiser Family Foundation, "Hospital Adjusted Expenses per Inpatient Day," State Health Facts (KFF, 2016).

26. Henry J. Kaiser Family Foundation, "Status of State Action on the Medicaid Expansion Decision," State Health Facts (KFF, as of Nov. 7, 2018).

27. Kevin Lucia, Sabrina Corlette, and Ashley Williams, "The Extended 'Fix' for Canceled Health Insurance Policies: Latest State Action," *To the Point* (blog), Commonwealth Fund, updated Nov. 21, 2014. Note that Colorado, New Mexico, and Oregon allowed the existence of noncompliant policies through 2015. At the time of publication, Arizona and Illinois allowed noncompliant policies through 2016, while leaving open the option to permit these policies to continue through 2017.

28. Justin Giovannelli, Kevin Lucia, and Sabrina Corlette, "State Restrictions on Health Reform Assisters May Violate Federal Law," *To the Point* (blog), Commonwealth Fund, June 23, 2014. These data are available for federally facilitated marketplaces only and do not include any actions that may have been taken by the states (including D.C.) that operate their own marketplace. 29. Keith and Lucia, *Implementing the Affordable Care Act*, 2014. States identified as a "yes" failed to pass a new law or issue a regulation addressing any of the early market or 2014 market reforms of the ACA. In a number of these states, officials reported that they were reviewing insurance policy forms, rates, and/or other materials for compliance with one or more reforms. In addition, some states may have decided not to address a particular reform because state law was already consistent with it or because the state has the authority to enforce federal law. The exhibit does not consider such existing laws or authority.

30. Center for Consumer Information and Insurance Oversight, *Consumer Assistance Program Grants: How States Are Using New Resource to Give Consumers Greater Control of Their Health Care* (CCIIO, n.d.).

31. Henry J. Kaiser Family Foundation, "States' Positions in the Affordable Care Act Case at the Supreme Court," State Health Facts (KFF, 2012).

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Sam Stromberg is a former principal data analyst in the Health Care Evaluation Department at NORC at the University of Chicago. He worked on a series of projects focusing on the individual and small-group health insurance markets, before and after the implementation of marketplaces, across plan years 2007–2017. Other project work has included analysis of Medicare Part D beneficiary records, Medicaid enrollment, and survey data. Mr. Stromberg holds a B.A. from Pomona College. **Matthew Green, M.P.P.,** is a former principal research analyst in the Health Care Evaluation Department at NORC at the University of Chicago. While at NORC, he worked on numerous projects related to the private health insurance market, focusing mainly on trends in premiums and plan offerings for the individual and small-group markets since the passage of the Affordable Care Act. Mr. Green holds a master's degree in public policy from the University of Chicago Harris School of Public Policy and a bachelor's degree from the University of Chicago.

Editorial support was provided by Deborah Lorber.

ACKNOWLEDGMENTS

We thank the Commonwealth Fund for the financial support that made this issue brief possible, and also Sara Collins for her insightful comments throughout the project. We also are grateful to Kevin Lucia of Georgetown University for his thoughtful review and guidance in examining Georgetown-collected data.

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About the Commonwealth Fund

The mission of the Commonwealth Fund is to promote a highperforming health care system that achieves better access, improved quality, and greater efficiency, particularly for society's most vulnerable, including low-income people, the uninsured, and people of color. Support for this research was provided by the Commonwealth Fund. The views presented here are those of the authors and not necessarily those of the Commonwealth Fund or its directors, officers, or staff.

Appendix 1. Poisson Regression Model Estimates for Number of Issuers Offering in a Geographic Rating Area in 2017

| Variable | Estimate | Expected effect on count of issuers participating | P-value |
|---|----------|---|---------|
| Intercept | 1.73 | 5.63 | <.001 |
| Herfindahl-Hirschman Index (gross patient revenue) | 0.00 | 1.00 | 0.165 |
| State did not expand Medicaid | -0.26 | 0.77 | <.001 |
| State is a federally facilitated marketplace state | -0.49 | 0.61 | <.001 |
| State did not adopt market reforms | -0.41 | 0.66 | <.001 |
| State has antinavigator law | 0.17 | 1.18 | 0.024 |
| State allows grandmothered plans | 0.28 | 1.33 | 0.045 |
| Number of issuers in state with 3% or greater market share (2010) | -0.02 | 0.98 | 0.325 |
| Percent of state population in rural areas | 0.00 | 1.00 | 0.567 |
| Physicians per 1,000 people (state) | 0.07 | 1.08 | 0.087 |
| Market share of all Blue Cross/Blue Shield plans in state (2010) | -0.01 | 0.99 | <.0001 |
| Rating area population | 0.09 | 1.09 | <.0001 |
| | | | |

Data: Robert Wood Johnson Foundation, HIX Compare, 2017; National Association of Insurance Commissioners, *Supplemental Health Insurance Exhibit Report;* American Community Survey 5-Year Estimates, 2011–2015; 2010 United States Census; 2015–2016 Area Health Resource File; 2012 Dartmouth Atlas; Kaiser Family Foundation; American Hospital Directory Hospital Statistics by State, 2017. Data provided by the Center for Health Insurance Reform, Georgetown University.

Notes: The estimated effect is derived by exponentiation of the Estimate column. This represents the expected multiplicative effect that a one-unit increase in the variable would have on the number of issuers participating in a given rating area. This statistic is also known as the incidence rate ratio (IRR). The Herfindahl-Hirschman Index measures market concentration. It is calculated as the sum of the square of the market share for each firm.

Appendix 2. Number of Issuers with 5 Percent or Greater Market Share in Individual Market, Combined Market Share of All Blue Cross/Blue Shield Plans in Individual Market, and Number of Issuers Participating on Individual Marketplaces, by State, 2015 and 2017

| State | lssuers with 5% or greater market share, 2010 | Market share of all Blues plans, 2010 | Marketplace issuers, 2015 | Marketplace issuers, 2017 |
|----------------------|--|--|------------------------------|------------------------------|
| Alabama | 2 | 87% | 3 | 1 |
| Alaska | 5 | 64% | 2 | 1 |
| Arizona | 5 | 53% | 13 | 2 |
| Arkansas | 2 | 76% | 4 | 4 |
| California | 4 | 73% | 11 | 11 |
| Colorado | 6 | 34% | 10 | 7 |
| Connecticut | 4 | 57% | 3 | 2 |
| Delaware | 4 | 55% | 3 | 3 |
| District of Columbia | 4 | 67% | 1 | 3 |
| Florida | 5 | 46% | 14 | 7 |
| Georgia | 6 | 56% | 8 | 5 |
| Hawaii | 2 | 54% | 2 | 2 |
| Idaho | 2 | 86% | 4 | 5 |
| Illinois | 3 | 66% | 10 | 5 |
| Indiana | 3 | 68% | 8 | 4 |
| lowa | 2 | 85% | 4 | 5 |
| Kansas | 5 | 69% | 5 | 3 |
| Kentucky | 2 | 88% | 5 | 3 |
| Louisiana | 2 | 76% | 6 | 4 |
| Maine | 3 | 46% | 3 | 3 |
| | | 71% | | |
| Maryland | 3 | | 5 | 5 9 |
| Massachusetts | | 61% | 12 | |
| Michigan | 1 | 60% | 16 | 10 |
| Minnesota | 1 | 74% | 5 | 4 |
| Mississippi | 2 | 56% | 3 | 2 |
| Missouri | 3 | 56% | 7 | 4 |
| Montana | 2 | 50% | 4 | 3 |
| Nebraska | 2 | 67% | 4 | 2 |
| Nevada | 2 | 43% | 5 | 4 |
| New Hampshire | 2 | 74% | 5 | 4 |
| New Jersey | 2 | 74% | 6 | 3 |
| New Mexico | 2 | 62% | 5 | 4 |
| New York | 2 | 33% | 16 | 16 |
| North Carolina | 1 | 83% | 3 | 2 |
| North Dakota | 2 | 83% | 3 | 3 |
| Ohio | 2 | 4% | 16 | 11 |
| Oklahoma | 3 | 56% | 4 | 1 |
| Oregon | 3 | 54% | 10 | 6 |
| Pennsylvania | 3 | 64% | 15 | 8 |
| Rhode Island | 1 | 89% | 3 | 2 |
| South Carolina | 2 | 54% | 4 | 1 |
| South Dakota | 1 | 77% | 3 | 2 |
| Tennessee | 2 | 44% | 5 | 3 |
| Texas | 1 | 55% | 15 | 10 |
| Utah | 3 | 28% | 6 | 3 |
| Vermont | 2 | 80% | 2 | 2 |
| Virginia | 1 | 83% | 9 | 11 |
| Washington | 3 | 72% | 10 | 9 |
| West Virginia | 3 | 50% | 1 | 2 |
| Wisconsin | 4 | 23% | 15 | 15 |
| Wyoming | 2 | 53% | 1 | 1 |

Data: National Association of Insurance Commissioners, 2010 Supplemental Health Care Exhibit Report (NAIC, 2011); and Robert Wood Johnson Foundation, HIX Compare, 2015–2017.



A Century of Advancing Health Care for All