One of the ongoing questions about the Affordable Care Act (ACA) is its impact on rural areas, many of which had lacked a competitive individual market for health insurance. Would the ACA foster competition among plans in these areas? Or would they be dominated by one or two insurers and face higher premiums and fewer plan choices than their urban counterparts? This Data Brief examines 2014 premiums, issuers, and plans offered to residents of urban and rural counties. In 2014, while it appears that residents of rural counties, as a whole, did not face higher premiums than residents of urban counties, substantial differences emerge within a number of states and between states of varying degrees of rurality. In particular, states with largely rural populations face fewer choices and higher premiums. These are the states to watch in the coming months as new issuers enter the marketplaces and 2015 premiums are filed.

One of the cornerstones of the ACA health reforms was the establishment of private market, government-regulated “marketplaces” in which individuals could shop for health insurance coverage. In theory, the marketplaces would foster competition among insurers for millions of newly covered people, thereby leading to lower premiums and expanded choices for consumers.

Reasons for higher costs in rural areas may include lack of economies of scale and lack of competition among providers. And the relationship between insurance plan competition and premiums is complicated by the level of provider consolidation; that is, the bargaining power of insurers is constrained in markets with just a few dominant hospitals and health systems.

Our goal is to examine and compare 2014 premiums, issuers, and plans offered on health insurance exchanges to residents of urban and rural areas.

APPROACH

To accomplish this goal we use premium and plan data from the HIX Compare dataset of all silver plans offered in the new health insurance marketplaces, as well as information on geographic rating areas from the HIX 2.0 dataset. We take a unique approach to this question by summarizing the marketplace offerings from the perspective of residents eligible to participate in the health insurance marketplace. We do this by using county-level weighted means where the weights are based on the number of residents in a county eligible for health insurance exchanges. Eligibility is based on adding estimates of the number of uninsured in a county ineligible for Medicaid (thus eligible for the health insurance marketplace) and the number of participants in the individual insurance market to create a county-level estimate of individuals eligible to buy health insurance in the marketplace. We identify urban counties as those counties that meet the Office of Management and Budget criteria for metropolitan counties. These are counties that are part of or adjacent to an urbanized area of 50,000 or more population. The rural counties in this study are defined by all nonmetropolitan counties. As shown in Table 1, rural counties outnumber urban counties (1,976 vs. 1,167), but urban counties have more people (265 million vs. 46 million).

Variation in the characteristics of health insurance marketplace plans facing urban and rural residents could be driven by differences in the plans facing residents of states that are more or less urban, or they can be driven by differences between the urban and rural areas within states. Only because premiums under the ACA are permitted to vary based on geographic rating area are within-state variations in premiums and plans possible. States have some flexibility in defining their geographic rating areas. According to the Centers for Medicare and Medicaid Services:

[E]ach state will have a set number of
geographic rating areas that all issuers in the state must uniformly use as part of their rate setting. The default geographic rating areas for each state will be the Urban Statistical Areas (MSAs) plus the remainder of the State that is not included in a MSA. States may seek approval from Health and Human Services (HHS) for a number of geographic rating areas that is greater than the number of MSAs in the state plus one (MSAs+1), provided the rating areas are based on counties, three-digit zip codes, or MSAs/non-MSAs.

Six states (DE, HI, NH, NJ, RI, and VT) and D.C. have one statewide rating area; 7 states chose the default of the MSAs+1 (AL, ND, NM, OK, TX, VA, and WY) ; and the remaining 37 states had more rating areas than MSA+1 that were, with few exceptions, defined based on groups of contiguous counties. We note states with a single rating area with an asterisk when examining within-state differences between urban and rural areas, as no within-state variation is possible for these states.

**WHAT WE FOUND**

As a first step, we mapped the rural counties and their 2014 marketplace premiums for a 50-year-old nonsmoker choosing the silver plan with the second lowest premium. As shown in the map above, there is far more variation between states than within states.

Table 1 compares the number of issuers, plans, plan types, and premiums for a 50-year-old individual in urban vs. rural counties. Urban counties have 32% more issuers than rural counties (mean, 5.0 vs. 3.8) and 20% more plans (mean, 17.0 vs. 14.2) and plan types (mean, 2.5 vs. 2.1). Monthly premiums are slightly higher in rural areas than urban areas ($387 vs. $369), and the “spread” between the minimum and maximum silver plan is slightly smaller in non-urban areas. Thus, rural residents do not have as many choices as urban residents in terms of premiums, issuers, plans, and plan types. They also have less availability of HMOs, EPOs, and PPOs, and greater availability of POS plans. Most notable is the fact that Exclusive Provider Networks (EPOs) are available to half the number of rural residents as urban residents. These differences in plan types may reflect the notion that it is easier to develop and more strictly enforce a restrictive provider network in urban areas than in the more sparsely populated rural areas where there are fewer convenient choices of providers.

### Table 1. Silver Plan Characteristics by Urban Classification of County

<table>
<thead>
<tr>
<th></th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counties</td>
<td>1167</td>
<td>1967</td>
</tr>
<tr>
<td>Population (Million)</td>
<td>265.0</td>
<td>46.3</td>
</tr>
<tr>
<td>Exchange Eligible</td>
<td>39.5</td>
<td>6.6</td>
</tr>
<tr>
<td>Population (Million)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Issuers</td>
<td>5.0</td>
<td>3.8</td>
</tr>
<tr>
<td>Number of Plans</td>
<td>17.0</td>
<td>14.2</td>
</tr>
<tr>
<td>Number of Plan Types</td>
<td>2.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Premium (Second-Lowest Silver) 50-Year-Old Ind</td>
<td>$369</td>
<td>$387</td>
</tr>
<tr>
<td>Max-Min Spread, 50-Year-Old Silver Plan Premiums</td>
<td>$160</td>
<td>$147</td>
</tr>
<tr>
<td>Plan Type Availability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPO</td>
<td>84%</td>
<td>83%</td>
</tr>
<tr>
<td>HMO</td>
<td>84%</td>
<td>61%</td>
</tr>
<tr>
<td>EPO</td>
<td>39%</td>
<td>18%</td>
</tr>
<tr>
<td>POS</td>
<td>25%</td>
<td>35%</td>
</tr>
</tbody>
</table>
### Table 2. Premium Differences Between Urban and Rural Counties Within States

<table>
<thead>
<tr>
<th>State</th>
<th>Rural (9% of State Eligible Pop.)</th>
<th>Urban Premium ($)</th>
<th>Rural Premium ($)</th>
<th>Premium Difference ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nevada</td>
<td>9%</td>
<td>$353</td>
<td>$554</td>
<td>$-201</td>
</tr>
<tr>
<td>Colorado</td>
<td>14%</td>
<td>$352</td>
<td>$532</td>
<td>$-181</td>
</tr>
<tr>
<td>Georgia</td>
<td>18%</td>
<td>$385</td>
<td>$478</td>
<td>$-93</td>
</tr>
<tr>
<td>New Mexico</td>
<td>34%</td>
<td>$297</td>
<td>$370</td>
<td>$-73</td>
</tr>
<tr>
<td>Kentucky</td>
<td>44%</td>
<td>$322</td>
<td>$380</td>
<td>$-58</td>
</tr>
<tr>
<td>Minnesota</td>
<td>23%</td>
<td>$236</td>
<td>$292</td>
<td>$-55</td>
</tr>
<tr>
<td>Missouri</td>
<td>27%</td>
<td>$388</td>
<td>$442</td>
<td>$-54</td>
</tr>
<tr>
<td>Illinois</td>
<td>10%</td>
<td>$313</td>
<td>$366</td>
<td>$-53</td>
</tr>
<tr>
<td>Maine</td>
<td>44%</td>
<td>$433</td>
<td>$484</td>
<td>$-51</td>
</tr>
<tr>
<td>Arizona</td>
<td>6%</td>
<td>$282</td>
<td>$329</td>
<td>$-47</td>
</tr>
<tr>
<td>Michigan</td>
<td>18%</td>
<td>$337</td>
<td>$383</td>
<td>$-46</td>
</tr>
<tr>
<td>Florida</td>
<td>3%</td>
<td>$371</td>
<td>$417</td>
<td>$-46</td>
</tr>
<tr>
<td>Wyoming</td>
<td>71%</td>
<td>$551</td>
<td>$596</td>
<td>$-44</td>
</tr>
<tr>
<td>Ohio</td>
<td>21%</td>
<td>$355</td>
<td>$390</td>
<td>$-36</td>
</tr>
<tr>
<td>California</td>
<td>2%</td>
<td>$419</td>
<td>$454</td>
<td>$-35</td>
</tr>
<tr>
<td>Utah</td>
<td>11%</td>
<td>$311</td>
<td>$337</td>
<td>$-27</td>
</tr>
<tr>
<td>Tennessee</td>
<td>23%</td>
<td>$270</td>
<td>$291</td>
<td>$-21</td>
</tr>
<tr>
<td>North Carolina</td>
<td>23%</td>
<td>$411</td>
<td>$429</td>
<td>$-19</td>
</tr>
<tr>
<td>Iowa</td>
<td>42%</td>
<td>$342</td>
<td>$359</td>
<td>$-17</td>
</tr>
<tr>
<td>Louisiana</td>
<td>17%</td>
<td>$422</td>
<td>$439</td>
<td>$-17</td>
</tr>
<tr>
<td>Oregon</td>
<td>17%</td>
<td>$292</td>
<td>$308</td>
<td>$-16</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>36%</td>
<td>$294</td>
<td>$308</td>
<td>$-15</td>
</tr>
<tr>
<td>West Virginia</td>
<td>40%</td>
<td>$389</td>
<td>$401</td>
<td>$-12</td>
</tr>
<tr>
<td>Kansas</td>
<td>34%</td>
<td>$312</td>
<td>$324</td>
<td>$-12</td>
</tr>
<tr>
<td>North Dakota</td>
<td>51%</td>
<td>$391</td>
<td>$401</td>
<td>$-10</td>
</tr>
<tr>
<td>South Dakota</td>
<td>54%</td>
<td>$398</td>
<td>$407</td>
<td>$-10</td>
</tr>
<tr>
<td>South Carolina</td>
<td>16%</td>
<td>$380</td>
<td>$384</td>
<td>$-4</td>
</tr>
<tr>
<td>Washington</td>
<td>11%</td>
<td>$399</td>
<td>$401</td>
<td>$-3</td>
</tr>
<tr>
<td>Idaho</td>
<td>36%</td>
<td>$328</td>
<td>$330</td>
<td>$-2</td>
</tr>
<tr>
<td>Indiana</td>
<td>23%</td>
<td>$451</td>
<td>$452</td>
<td>$-1</td>
</tr>
<tr>
<td>Montana</td>
<td>66%</td>
<td>$354</td>
<td>$355</td>
<td>$-1</td>
</tr>
<tr>
<td>Maryland</td>
<td>3%</td>
<td>$310</td>
<td>$311</td>
<td>$-1</td>
</tr>
<tr>
<td>Arkansas</td>
<td>40%</td>
<td>$410</td>
<td>$410</td>
<td>$0</td>
</tr>
<tr>
<td>Hawaii*</td>
<td>21%</td>
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<td>$256</td>
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</tr>
<tr>
<td>New Hampshire*</td>
<td>39%</td>
<td>$404</td>
<td>$404</td>
<td>$0</td>
</tr>
<tr>
<td>Vermont*</td>
<td>67%</td>
<td>$413</td>
<td>$413</td>
<td>$0</td>
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<tr>
<td>Delaware**</td>
<td>0%</td>
<td>$404</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>District of Columbia**</td>
<td>0%</td>
<td>$355</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>New Jersey**</td>
<td>0%</td>
<td>$444</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Rhode Island**</td>
<td>0%</td>
<td>$411</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>27%</td>
<td>$408</td>
<td>$405</td>
<td>$2</td>
</tr>
<tr>
<td>Virginia</td>
<td>14%</td>
<td>$377</td>
<td>$373</td>
<td>$3</td>
</tr>
<tr>
<td>New York</td>
<td>6%</td>
<td>$357</td>
<td>$349</td>
<td>$8</td>
</tr>
<tr>
<td>Alaska</td>
<td>37%</td>
<td>$600</td>
<td>$589</td>
<td>$12</td>
</tr>
<tr>
<td>Alabama</td>
<td>25%</td>
<td>$359</td>
<td>$347</td>
<td>$12</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>2%</td>
<td>$333</td>
<td>$317</td>
<td>$15</td>
</tr>
<tr>
<td>Texas</td>
<td>11%</td>
<td>$342</td>
<td>$323</td>
<td>$20</td>
</tr>
<tr>
<td>Nebraska</td>
<td>36%</td>
<td>$363</td>
<td>$326</td>
<td>$37</td>
</tr>
<tr>
<td>Connecticut</td>
<td>5%</td>
<td>$511</td>
<td>$461</td>
<td>$50</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>12%</td>
<td>$325</td>
<td>$274</td>
<td>$51</td>
</tr>
<tr>
<td>Mississippi</td>
<td>55%</td>
<td>$542</td>
<td>$470</td>
<td>$72</td>
</tr>
</tbody>
</table>

*Single Rating Area, **Only Urban Counties
Overall, national averages of urban and rural residents may mask within-state and between-state differences. We observe within-state differences in urban/rural premiums by state in Table 2. In nine states, average monthly premiums for the second-lowest silver plan are at least $50 higher in rural areas than in urban areas; in seven other states, that difference ranges between $25 and $50. Just four states have rural premiums that are at least $25 lower than urban premiums. These within-state differences in premiums are not apparent from the $18 difference in national averages for urban and rural areas as shown in Table 1 ($369 vs. $387).

Finally, we explore between-state differences in plan characteristics based on the rurality of the state. Column 1 of Table 2 lists the percentage of each state’s marketplace-eligible population in rural counties. In our final analysis, we grouped states by their percentage of rural population (less than 5%; 5%-25%; 25%-50%, and 50% or higher). Table 3 compares the number of issuers, plans, plan types, and premiums for our 50-year-old in these different groups of states. Here we see a stark two-fold difference between the most urban and most rural states in number of issuers (mean, 4.8 vs. 2.4). The number of plans (mean, 11.8 vs. 8.2) and plan types are also 35 percent greater in urban areas. From this perspective we also now see that monthly premiums are meaningfully lower in states that are the most urban when compared to the least urban ($402 vs. $452).

**Table 3. Silver Plan Characteristics by Fraction of State’s Exchange Eligible Population in Rural Counties**

<table>
<thead>
<tr>
<th>% of State’s Exchange-Eligible Pop. in Rural Counties</th>
<th>Counties</th>
<th>Population (Million)</th>
<th>Exchange Eligible Population (Million)</th>
<th>Number of Issuers</th>
<th>Number of Plans</th>
<th>Number of Plan Types</th>
<th>Premium (Second-Lowest Silver) 50-Year-Old Ind</th>
<th>Min-Max Spread, 50-Year-Old Silver Plan Premiums</th>
<th>Plan Type Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5%</td>
<td>201</td>
<td>84.1</td>
<td>13.1</td>
<td>4.8</td>
<td>11.8</td>
<td>2.7</td>
<td>$402</td>
<td>$140</td>
<td>88% PPO</td>
</tr>
<tr>
<td>5-25%</td>
<td>1705</td>
<td>181</td>
<td>26.6</td>
<td>5.2</td>
<td>13.8</td>
<td>2.3</td>
<td>$353</td>
<td>$172</td>
<td>92% HMO</td>
</tr>
<tr>
<td>25-50%</td>
<td>943</td>
<td>39.5</td>
<td>5.4</td>
<td>3.3</td>
<td>13.9</td>
<td>2.0</td>
<td>$369</td>
<td>$144</td>
<td>77% EPO</td>
</tr>
<tr>
<td>50+%</td>
<td>294</td>
<td>6.7</td>
<td>1.1</td>
<td>2.4</td>
<td>8.2</td>
<td>2.0</td>
<td>$452</td>
<td>$115</td>
<td>18% POS</td>
</tr>
</tbody>
</table>

WHAT DOES IT MEAN?

These data reflect the state-based nature of health insurance markets, oversight, and regulations. In 2014, while it appears that residents of rural counties, as a whole, did not face higher premiums than residents of urban counties, substantial differences emerge within a number of states and between states of varying degrees of rurality. In particular, states that have largely rural populations face more challenges in terms of increasing the choices available on their exchanges and in terms of premiums. These are the states to watch in the coming months as new issuers enter the marketplaces and 2015 premiums are filed.
**About the Authors**
This Data Brief was written by Daniel E. Polsky, PhD, MPP, Janet Weiner, MPH, Robert A. Nathenson, PhD, MSE, MSc, Nora Becker, and Mounika Kanneganti.

**About The Leonard Davis Institute of Health Economics**
The Leonard Davis Institute of Health Economics (LDI) is the University of Pennsylvania’s center for research, policy analysis, and education on the medical, economic, and social issues that influence how health care is organized, financed, managed, and delivered. LDI, founded in 1967, is one of the first university programs to successfully cultivate collaborative multidisciplinary scholarship. It is a cooperative venture among Penn’s health professions, business, and communications schools (Medicine, Wharton, Nursing, Dental Medicine, Law School, and Annenberg School for Communication) and the Children’s Hospital of Philadelphia, with linkages to other Penn schools, including Arts & Sciences, Education, Social Policy and Practice, and Veterinary Medicine.

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