Rural Enrollment in Health Insurance Marketplaces
Abigail R. Barker, PhD; Timothy D. McBride, PhD; Leah M. Kemper, MPH; Keith J. Mueller, PhD

Purpose
Our previous analysis of 2015 Health Insurance Marketplace (HIM) data on plan availability and premiums in comparison to 2014 showed only modest premium increases in many rural areas and increased firm participation in most areas. To determine whether HIM enrollment also shows a positive trend, we analyzed county-level HIM enrollment data for 2015 by geographic categories, population density, premium, and firm participation, comparing enrollment outcomes in rural places to those in urban places.

Key Findings
• In the Northeast, Midwest, and West census regions, estimated enrollment rates in rural (micropolitan and noncore) counties were similar to estimated rates in urban counties, while in the South, rural rates lagged behind urban rates.
• Estimated enrollment rates at the rating area level increased as the population density of the rating area increased.
• Various measures of rurality and geography indicate that HIMs performed well in many rural areas; however, this analysis suggests that in some rural areas, enrollment outcomes may have been weak due to factors such as the geographic scope of the rating areas, plan availability in these rating areas, or potentially fewer resources devoted to outreach and enrollment efforts.
• In general, county-level, enrollment-weighted average premiums differed more by census region than by metropolitan, micropolitan, and noncore status.
• Low enrollment rates at the rating area level were associated with a lower numbers of firms participating in HIMs. When three or more firms participated, enrollment rates were close to or above average.

Introduction
HIMs, established by the Affordable Care Act, were first implemented in the fall of 2013, enrolling over 8 million Americans into HIM plans. HIM enrollment, along with Medicaid expansion in a number of states, contributed to a 26 percent reduction in the overall uninsured rate nationally in 2014. Preliminary estimates using aggregated 2015 enrollment data show that nearly 10.2 million Americans were insured through HIMs in March 2015, contributing to a 35 percent decrease overall in the uninsured rate since October 2013.

Analysis of 2014 HIM enrollment data at the ZIP Code level released publicly by the Assistant Secretary for Planning and Evaluation at the Department of Health and Human Services indicated that rural populations enrolled at lower rates than urban populations. However, these data were censored for records below 50 enrollees, meaning that approximately 60 percent of all ZIP Codes were censored. Because these ZIP Codes are likely in rural areas, it is difficult to conduct detailed rural analysis.

The analysis presented in this brief is based on uncensored county-level enrollment data for 2015 for all states that used the federal platform, those with Federally Facilitated Marketplaces (FFM) or those that operated a Federally Supported State-Based Marketplace (FS-SBM), and therefore provides a more detailed description of enrollment trends in rural places. Data for State-Based Marketplaces were unavailable for this...
analysis. Mean enrollment rates for metropolitan, micropolitan, and noncore counties are reported for each of the four census regions. We also continue our ongoing analysis at the rating area level, using population density as a proxy for the rurality of a rating area. The rating area is an appropriate level of analysis in part because geographic variation in premiums cannot occur at any lower level, and in part because states were able to define their own rating areas according to their own objectives, and previous evidence suggests that the design itself may be a factor in achieving robust HIMs in rural areas.

Data and Methods
An ideal assessment of HIM success over the past two years would compare enrollment data to county-level measures of the potential enrollees. However, producing an exact calculation of those who are uninsured and income-eligible to participate in the HIMs is difficult because exact data do not exist. Therefore, we used the 2013 Small Area Health Insurance Estimates (SAHIE) to provide uninsured and total population counts for all persons younger than 65 years old, separated by income category, with the caveat that SAHIE provides uninsured estimates for the population above and below 138% of the Federal Poverty Level (FPL). Individuals with incomes between 100% FPL and 138% FPL may also enroll, so in states that have not expanded Medicaid, HIMs will also draw from this pool of potential eligibles. In states that have expanded Medicaid, these persons would be enrolled in Medicaid instead. In some cases, individuals now enrolled in the HIMs could have been previously insured but may have switched in 2014 or 2015 to a HIM plan. Finally, SAHIE estimates are reported with a margin of error, and in very rural counties, this margin can be up to 10 percent of the estimate. For all these reasons, the SAHIE data provide only an imprecise estimate of the number of people potentially seeking HIM coverage. In the results that follow, we first aggregated county-level enrollment and county-level potential enrollee counts and then calculated the appropriate percentage, thus minimizing the impact of the issues discussed above (since errors are greater for smaller population units, such as counties).

We also provide some analysis of enrollment in the context of average premiums and numbers of firms participating in HIMs. These data are from the federal file released by the Department of Health and Human Services in October 2014, but the premiums have been adjusted for cost-of-living differences and metal level according to methodology established in earlier briefs.

Enrollment Rates and Average Premiums by Geography
We calculated approximate enrollment rates and weighted-average premiums for groups of counties designated as metropolitan, micropolitan, and noncore rural according to 2013 Urban Influence Codes (UICs). At the national level, the rural enrollment rate (45 percent) was somewhat lower than the urban rate (48 percent). However, HIM enrollment varied substantially by region (Figure 1). In fact, enrollment rates in noncore counties in the Northeast census region were higher, at 77 percent, than in any other geographic category. In the South, metropolitan rates were significantly higher (53 percent) than micropolitan and noncore rates (41 and 40 percent, respectively), while in the Midwest and West, enrollment rates were fairly similar across all three categories. Enrollment-weighted average premiums were very similar within every region except the West, which was lower than the other three regions (Figure 2). One caveat in interpreting these data, however, is that only the enrollment in states using the federal platform, those with FFMs and FS-SBMs are represented. Many State-Based Marketplaces (SBMs) are in the Northeast and West, meaning that the results below do not necessarily represent the entire region, nor do they allow for a perfect comparison across regions.
Rating Area Enrollment
In prior work on HIMs, the RUPRI Center has focused on the rating area as a natural unit of analysis. Firms must charge the same premium to every person of the same age within the same rating area,11 and in many states, firms are encouraged to offer coverage throughout the rating area. Following our previous methodology, we calculated each rating area’s population density (i.e., number of persons per square mile of land area), grouping the rating areas by six categories measuring their population density. Thus, in the 106 rating areas with population density at or below 50 persons per square mile, the average enrollment rate was estimated at 43.2 percent (Figure 3). This rate climbed steadily as rating area population density increased, with an average enrollment rate of 59.6 percent across the 15 rating areas that had more than 1,000 persons per square mile, suggesting that enrollment rates are lower in rural areas.

Figure 4 shows the estimated enrollment rates for all 34 FFMs and 3 FS-SBMs at the rating area level. Higher rates correspond to darker colors. Metropolitan counties are indicated with cross-hatching to focus attention on rural counties, both micropolitan and noncore. In general, enrollment was strongest on the East Coast. Rural enrollment was particularly strong in Maine, Wisconsin, and Nebraska,12 with parts of rural Michigan, Missouri, and North Carolina also experiencing strong enrollment. The weakest enrollment in rural places occurred in parts of Nevada, Ohio, and West Virginia. In addition, most rural counties had enrollment levels similar to those of their adjacent or nearby urban-county neighbors. Furthermore, in some states in which all rural areas were grouped together to create a rating area and each of the Metropolitan Statistical Area (MSA) is designated a rating area13—enrollment rates in the one rural rating area were typically similar
to those of the MSAs, suggesting that perhaps grouping all rural counties together does not disadvantage rural residents with respect to enrollment. These states include: Alabama, New Mexico, North Dakota, Oklahoma, Texas, Virginia, and Wyoming.

**Enrollment Rates by Number of Firms Participating**

The degree of firm participation in each rating area may influence the enrollment rate, since a smaller number of firms results in limited choice and likely higher premiums. Conversely, low enrollment rates may also induce firms to withdraw from particular rating areas. Table 1 shows that this positive relationship was observed in the data, though the relationship was seen mostly in counties with the fewest number of plans available. Enrollment rates were lowest in rating areas with only one or two firms offering plans (34.4 percent and 43.8 percent, respectively), compared to enrollment rates of 46 to 50 percent in other rating areas. This finding suggests that a minimum of three firms operating in a rating area may be an indicator of a robust HIM, although again, this statement does not imply causality, and the finding may simply suggest that whatever is different about rating areas that have attracted fewer firms is also leading to sluggish enrollment. Furthermore, we note that very few rating areas (13 percent) are served by just one or two firms.

<table>
<thead>
<tr>
<th>Number of Firms Participating, 2015</th>
<th>Number (%) of FFM Rating Areas</th>
<th>Average Enrollment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15 (4%)</td>
<td>34.4%</td>
</tr>
<tr>
<td>2</td>
<td>39 (9%)</td>
<td>43.8%</td>
</tr>
<tr>
<td>3</td>
<td>83 (20%)</td>
<td>46.4%</td>
</tr>
<tr>
<td>4</td>
<td>90 (22%)</td>
<td>49.8%</td>
</tr>
<tr>
<td>5</td>
<td>62 (15%)</td>
<td>49.8%</td>
</tr>
<tr>
<td>6</td>
<td>40 (10%)</td>
<td>49.1%</td>
</tr>
<tr>
<td>7</td>
<td>31 (8%)</td>
<td>47.1%</td>
</tr>
<tr>
<td>8+</td>
<td>51 (12%)</td>
<td>46.4%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>411 (100%)</td>
<td>47.3%</td>
</tr>
</tbody>
</table>

**Discussion**

Enrollment data for the 2015 FFM and FS-SBMs indicates that, overall, the HIM structure is functioning as intended, including serving rural counties in three of the four census regions at rates equal or nearly equal to those of urban counties. In general, over 40 percent of people potentially eligible for coverage had signed up by the end of 2015 Open Enrollment in February 2015 in rural and urban areas. Some rural counties have experienced enrollment commensurate with urban levels. However, places with low population density, places in the South, and places with few firms participating in the HIMs were more likely to experience low enrollment, suggesting a potential for improvement by increasing the percentage of eligible uninsured populations enrolled in these areas. Our findings reinforce the notion that there is no single, definitive rural outcome of HIMs at this time: that is, although there are areas of concern, enrollment is generally robust in many rural areas.

More sophisticated analysis is needed to control for the range of factors affecting enrollment, including premiums and sociodemographic indicators, in order to understand which factors predict HIM enrollment in various types of rural settings. Such an analysis, forthcoming from the RUPRI Center, will provide more nuanced results and therefore more specific advice for policymakers at the state and federal levels.

**Notes**

5 See the first of the three briefs cited in Note 8.
7 We obtained access to these internal data on a restricted-use basis from the Assistant Secretary for Planning and Evaluation at HHS.
8 Federally-supported State-based Marketplaces operate in states that are considered to have a State-based Marketplace, and are responsible for performing all Marketplace functions, except that the state will rely on the Federally-facilitated Marketplace IT platform. Consumers in these states apply for and enroll in coverage through healthcare.gov.
10 See the three briefs cited in Note 8, particularly the second brief.
11 Conditional on tobacco use status.
12 See the three briefs cited in Note 8, particularly the second brief.
13 See the latter two of the three briefs cited in Note 8.
14 However, as noted above, individual counties within rating areas in some states are only served by one or two firms, even though additional firms operate in parts of the rating area.