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INTRODUCTION

Uninsured rates in both rural and urban areas have decreased since the Affordable Care Act (ACA) was enacted,[1] though rural enrollment across the Health Insurance Marketplaces varies by state.[2] Little is known about rural residents' health insurance literacy—that is, their understanding of the insurance terms and concepts that are necessary to make informed choices when purchasing health insurance under the ACA and under alternative plans currently being debated as replacements.

Health insurance literacy is defined as the "degree to which individuals have the knowledge, ability, and confidence to find and evaluate information about health plans, select the best plan for their own (or their family's) financial and health circumstances, and use the plan once enrolled."[3] Empirical research on the topic is limited and indicates that health insurance literacy differs substantially across demographic groups. One aspect of health insurance literacy is knowledge of health insurance terminology, such as "deductible" and "coinsurance." Familiarity with and understanding of health insurance terminology is lowest among young adults,[4-7] those with lower incomes[4,8-11] or lower educational attainment,[5,6,9,11,12] the uninsured,[4,10,13] the unemployed,[4] and those who are non-white.[4,5,11,14,15]

Although health insurance literacy varies among demographic groups, it is generally low across all groups. A national 2013 survey found that about 40 percent of consumers were very or somewhat confident in their understanding of basic insurance terms—with the highest level of confidence at 50 percent among consumers aged 50-64.[4] However, these findings may overestimate knowledge of health insurance terminology, as research also suggests that consumers are overconfident about their knowledge. In a survey of actual and self-perceived comprehension of insurance concepts, 93 percent of respondents reported that they understood the concept of maximum out-of-pocket costs, while only 59 percent of those who thought they understood the concept could correctly answer a question testing that concept.[9]

Key Findings

Although rural and urban residents reported comparable knowledge and comfort with most measures of health insurance literacy, rural residents were less likely to express confidence in determining the maximum out-of-pocket costs for their health plans.

In 2014, rural residents were somewhat less likely than their urban counterparts to be aware of the Affordable Care Act's insurance mandate or the availability of premium subsidies.

The percentage of rural residents who were familiar with the Affordable Care Act and/or sought information on Marketplace plans increased between 2013 and 2014.

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To fully benefit from policy efforts to improve access to affordable health insurance, rural residents must have the ability to select the plan best suited to meet their health care needs. However, a higher proportion of rural residents possess characteristics that may put them at risk of lower health insurance literacy, including lower incomes and educational attainment, lower private insurance enrollment, and historically higher uninsured rates. While this study focuses on some concepts that are specific to ACA policy changes, its results have implications for alternative reforms under consideration by Congress that may require consumer awareness and input. This study examined whether rural and urban residents demonstrated different knowledge and/or use of the ACA Marketplace and subsidies; enrollment information sources (e.g., Healthcare.gov, the Marketplace); the health insurance mandate; and health insurance concepts. Additionally, we examined whether knowledge and use changed between the fourth quarters of 2013 and 2014.

APPROACH

Data Source. The Health Reform Monitoring Survey (HRMS) is designed to provide timely information on ACA implementation and changes in health insurance coverage and related health outcomes.[16] The HRMS oversamples low-income, non-elderly adults and adults from select states. The HRMS asks respondents about health insurance coverage, access to and use of health care, health care affordability, health status, and socio-demographic characteristics. The survey was developed by the Urban Institute and conducted quarterly by the market research firm GfK from the second quarter of 2013 through the fourth quarter of 2014 (at which point it shifted to a semiannual schedule). The survey collected data from approximately 7,500 adults ages 18-64 in each quarter. We examined data collected during the fourth quarters of 2013 and 2014.

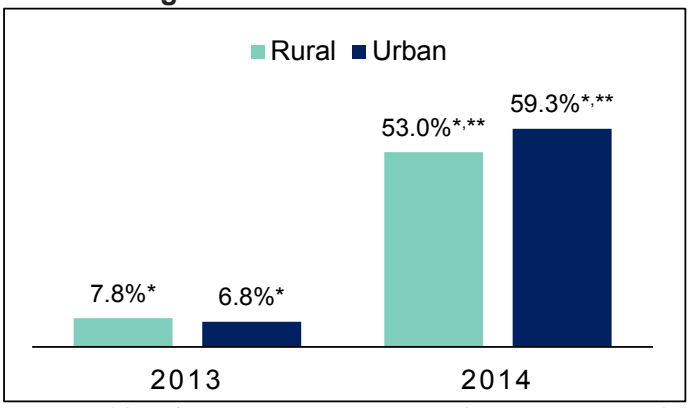
Variables. Our primary independent variables were rural-urban residence and year (2013 and 2014). Rural or urban residence was based on the U.S. Office of Management and Budget's metropolitan/non-metropolitan designation. Metropolitan Statistical Areas (MSAs) were identified as urban areas, and non-MSAs as rural. Additional socio-demographic information collected by the survey includes age, sex, race and Hispanic origin, education, income, household size, marital status, employment status, and whether the respondent reported a mental or physical health condition.

Analysis. We used bivariate analyses to address the question of whether rural residents demonstrate different knowledge and/or use of the state-based and federally-facilitated Marketplaces and subsidies; enrollment information sources (e.g., Healthcare.gov, the Marketplace); the health insurance mandate; and health insurance concepts. For these analyses, frequency differences were evaluated with chi-square tests of significance. We used multivariate logistic regression models to estimate: 1) the odds of hearing "a lot" or "some" about the Marketplace or Healthcare.gov; 2) the odds of hearing about Marketplace subsidies; and 3) the odds of being confident in one's ability to determine maximum out-of-pocket costs under a health insurance plan. Results are presented as odds ratios with 95 percent confidence intervals. We weighted our analyses to adjust for the sampling design of the HRMS. All statistical tests were completed in SUDAAN version 11 (Research Triangle Institute, Research Triangle Park, NC) to adjust for clustering and to yield valid standard errors for weighted data.

FINDINGS

Knowledge of the Marketplace. Between 2013 and 2014, the percent of rural and urban residents who had heard about the Marketplace or Healthcare.gov increased. In 2013, 7.8 percent of rural residents and 6.8 percent of urban residents reported hearing "a lot" or "some" about the Marketplace or Healthcare.gov (Figure 1). Though rural residents' knowledge increased between 2013 and 2014, they were less likely than urban residents to know about the Marketplace or Healthcare.gov in 2014 (53 percent vs. 59.3 percent).

Figure 1. Knowledge of the Marketplace or Healthcare.gov Increased between 2013 and 2014



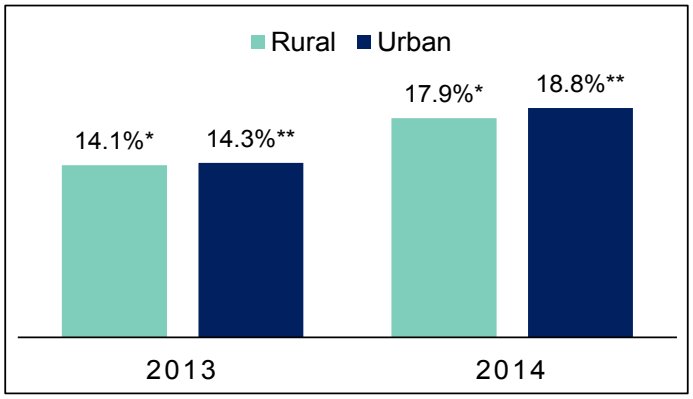
Data: Health Reform Monitoring Survey, 4th Quarter 2013 and 4th Quarter 2014

* Year differences significant at p<.001

** Residence differences significant for 2014 at p<.001

Use of the Marketplace. Looking for information on health plans in the Marketplace increased between 2013 and 2014 for both rural and urban residents, though there was no significant difference by residence in either year (Figure 2). Among rural residents, individuals looking for information on plans in the Marketplace increased from 14.1 percent to 17.9 percent. Among urban residents this percentage increased from 14.3 percent to 18.8 percent. The annual increase in the percentage of individuals who looked for health plan information on healthcare.gov or other Marketplaces may be due, in part, to technical issues that affected the functionality and reliability of Healthcare.gov during the first open enrollment period in 2013.

Figure 2. Persons Seeking Marketplace Plan Information Increased Between 2013 and 2014



Data: Health Reform Monitoring Survey, 4th Quarter 2013 and 4th Quarter 2014
* Year differences for rural significant at p<.05
** Year differences for urban significant at p<.001

Knowledge of subsidies, mandate, and out-of-pocket costs. In 2014, rural residents reported less knowledge than their urban counterparts of Marketplace premium subsidies and the individual mandate.* They also indicated lower confidence in their ability to determine the maximum amount they would need to pay out-of-pocket for services covered by their health plan (Figure 3). For example, 56.1 percent of rural residents reported hearing a lot or some about the individual mandate compared with 60.8 percent of urban residents. Rural residents were also somewhat less likely to feel confident in their ability to determine the maximum out-of-pocket costs of a health plan (70.9 percent versus 74.7 percent).

Knowledge of health insurance terms. As shown in Table 1, there were no statistically significant rural-urban differences in respondents' reported confidence in understanding seven health insurance terms, including premium, deductible, and maximum out-of-pocket cost. There were also no statistically significant rural-urban differences in respondents' reported confidence in determining if a provider is in network, if services are covered by a plan, the cost of prescriptions, and the cost of a visit or service.

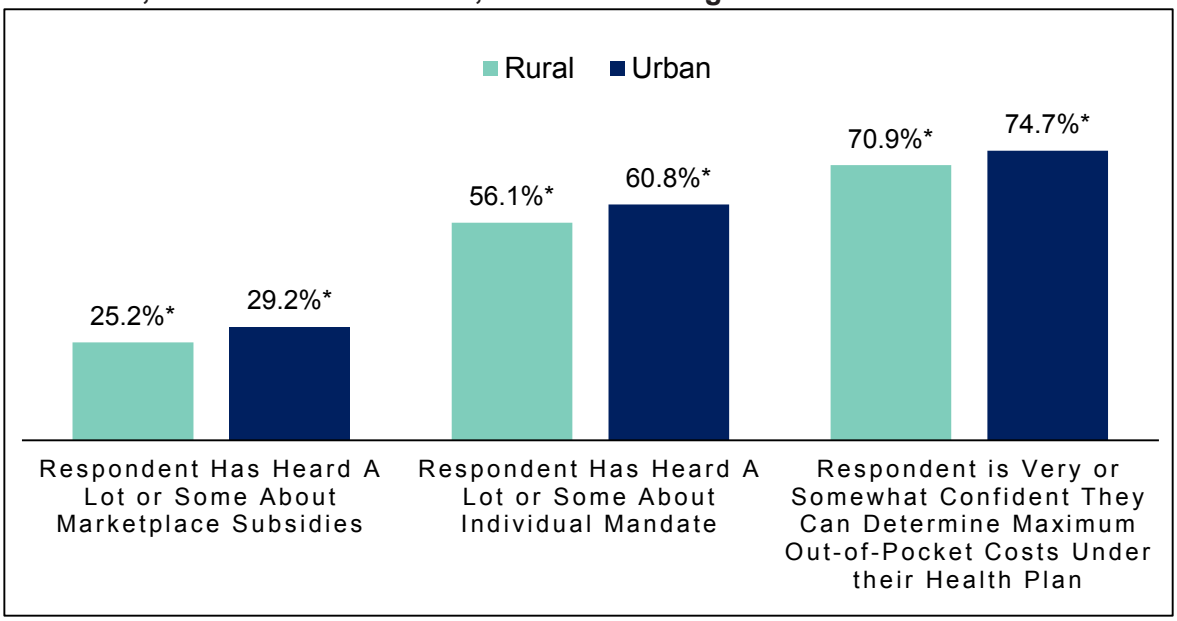
Factors associated with knowledge of the Marketplace and subsidies and confidence in determining maximum out-of-pocket costs. In keeping with our bivariate findings, rural residents had lower odds of hearing "a lot" or "some" about the Marketplace or Healthcare.gov compared with urban residents, controlling for socio-demographic characteristics (Table 2; OR: 0.80, CI: 0.68, 0.94). While controlling for factors like education and income reduced the rural-urban difference somewhat, it did not completely eliminate it. Likewise, rural residents had 20 percent lower odds of hearing "a lot" or "some" about Marketplace subsidies compared with urban residents, controlling for socio-demographic characteristics (OR: 0.80, CI: 0.65, 0.98). In contrast to our bivariate findings, the probability of confidence in determining maximum out-of-pocket costs under their health insurance plan did not differ by rural or urban residence once we controlled for the difference in characteristics between rural and urban respondents.

Our analysis also found statistically significant differences in knowledge of health insurance terms and concepts across other sociodemographic characteristics. In line with previous research findings, young respondents between the ages of 18-26, as well as those with less than a college degree, were less likely to have heard about Marketplace subsidies or the Marketplace/Healthcare.gov compared to older respondents and those with a college degree (Table 2). For example, persons with less than a high school degree had 57 percent lower odds of hearing "a lot" or "some" about Marketplace subsidies compared with those who had a college degree (OR: 0.43; CI: 0.34, 0.54). Additionally, the odds of being confident in determining maximum out-of-pocket costs were significantly lower among those with income below 250% of poverty and those in less than very good or excellent health compared to those with higher incomes and those in excellent health.

Limitations. At the time of this writing, the 2013-2014 HRMS data are the most recently released HRMS data collected in the fourth quarter of their respective survey year, which was selected to

*Premium subsidies are defined as premium tax credits to eligible individuals with incomes between 100-400% FPL. The individual mandate is the requirement that individuals have qualifying health coverage. An out-of-pocket maximum is the highest amount of money the policy holder would pay during a year toward health care services.

Figure 3. In 2014 Rural Residents were Less Knowledgeable about Marketplace Subsidies, the Individual Mandate, and Determining Out-of-Pocket Costs



Data: Health Reform Monitoring Survey, 4th Quarter 2014
*Residence differences significant at p<.05

correspond with the Marketplace open enrollment period. Because of the age of the data, this analysis does not reflect any changes in knowledge and/or use of the ACA Marketplace, premium subsidies, and health insurance terms since 2014. Additionally, data that reflect high levels of respondent confidence in knowing how to perform various health-insurance related tasks may not reflect actual ability to perform those tasks.[9] Technical issues that affected Healthcare.gov during the first open enrollment period in 2013 may have also factored into differences in the use of the Marketplace systems by 2014.

DISCUSSION & POLICY IMPLICATIONS

Health insurance literacy is central to determining eligibility for coverage and subsidies, choosing a plan, and connecting to care and will affect the health insurance system under any future health reform scenarios. Between 2013 and 2014, familiarity with Healthcare.gov and the Marketplace increased dramatically among both rural and urban residents, from less than 10 percent of all residents having heard about them in 2013 to more than 50 percent in late 2014. However, knowledge in rural areas lagged somewhat behind that of urban residents. In addition to lower familiarity with the Marketplace in general, a lower proportion of rural residents had heard about subsidies available through the Marketplace and a lower proportion were familiar with the individual mandate requiring the purchase of health insurance coverage. Even after controlling for rural-urban population characteristics, overall knowledge about these aspects of the ACA was somewhat lower among rural versus urban populations before and during early implementation.

Rural and urban residents appear to have comparable levels of health insurance literacy. Rural and urban respondents report similar levels of understanding on key health insurance terms related to cost sharing, provider networks, and covered services. Rural respondents' lower ability to determine their plan's out-of-pocket maximum was the one rural-urban difference in health insurance literacy. This difference appears to be related to differences in rural and urban populations' characteristics such as education and income.

While rural and urban residents report relatively high levels of confidence in their health insurance literacy, the results should be interpreted with some caution. Prior studies indicate that there is often a large gap between what survey respondents say about their capacity to evaluate health insurance plan features and their actual ability to do so when tested on this knowledge.[9] While it is unclear whether rural residents would be more likely than those in urban areas to report a higher level of understanding of health insurance concepts than they actually possess, future research in this area may be warranted.

Rural enrollment in the Health Insurance Marketplaces varies widely by state, regardless of degree of rurality or Medicaid expansion status[2] and our findings point to the need for plain language communications and outreach to promote enrollment in health insurance expansion efforts for both urban and rural Americans. However, in some rural areas plan choice is limited and knowledge of plan features may have minimal value other than to direct the consumer in its appropriate use after enrollment. In the interim, it is clear that rural residents have lower incomes than urban[17] and lower educational attainment,[18] suggesting that they may need additional support to select the most cost-beneficial health plans and to fully understand their benefit packages.

Table 1. Respondent Confidence in Understanding of Health Insurance Terms and Ability to Perform Various Health Insurance-related Activities

	Rural	Urban
Respondent was very/somewhat confident that they understood what these terms mean for health insurance coverage.[1]		
• **Premium**	77.1%	75.6%
• **Deductible**	78.6	78.2
• **Co-payments**	81.6	80.7
• **Co-insurance**	60.0	59.9
• **Maximum out-of-pocket cost**	72.3	72.6
• **Provider network**	72.0	74.6
• **Covered services**	74.9	76.3
Respondent was very/somewhat confident that they knew how to do the following activities.[2]		
• **Find a doctor or other health provider who is in their health plan's network**	90.6	90.5
• **Determine whether a service is covered by their plan**	81.4	83.8
• **Determine which prescription drugs are covered by their plan**	81.1	82.2
• **Determine how much they will have to pay for a prescription**	77.2	78.5
• **Determine how much a health care visit or service will cost them**	75.9	78.1
• **Determine which health care costs will count toward their plan's deductible**	71.1	73.4
• **Determine how much it will cost to visit a health care provider or use a service that in not in their health plan's network**	66.9	67.6

Data: Health Reform Monitoring Survey, 4th Quarter 2013[1] 4th Quarter 2014.[2] Statistics are weighted to population level using weights provided with the HRMS. Residence differences are not statistically significant.

Table 2. Knowledge of Health Insurance Marketplace, the Individual Mandate, and Confidence in Determining Out-of-Pocket Costs, 2014

	Odds of Hearing "A Lot" or "Some" About the Health Insurance Marketplace or Healthcare.gov		Odds of Hearing "A Lot" or "Some" About Marketplace Subsidies		Odds of Confidence in Determining Maximum OOP Costs Under Health Plan	
Characteristic (Referent)	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Residence (urban)						
Rural	0.80 [b]	0.68, 0.94	0.80 [a]	0.65, 0.98	0.85	0.71, 1.03
Age (18-26)						
27-34	1.35 [b]	1.09, 1.66	1.40 [a]	1.07, 1.84	1.32 [a]	1.02, 1.70
35-54	1.58 [c]	1.31, 1.90	1.49 [c]	1.17, 1.90	1.15	0.93, 1.44
55-64	2.21 [c]	1.82, 2.69	2.32 [c]	1.80, 2.98	1.12	0.89, 1.40
Sex (Male)						
Female	0.97	0.86, 1.09	0.94	0.81, 1.10	0.88	0.77, 1.01
Race / Ethnicity (White, not Hispanic)						
Not White, not Hispanic	0.87	0.74, 1.02	0.84	0.68, 1.04	0.88	0.73, 1.07
Hispanic	0.84	0.70, 1.01	1.04	0.84, 1.30	0.83	0.66, 1.03
Health status (Excellent / Very good)						
Good	0.90	0.79, 1.03	0.86	0.73, 1.03	0.71 [c]	0.61, 0.82
Fair / poor	0.82 [a]	0.68, 0.98	0.84	0.67, 1.05	0.62 [c]	0.50, 0.76
Education status (College)						
Less than high school	0.43 [a]	0.34, 0.54	0.61 [c]	0.49, 0.81	1.01	0.76, 1.35
High school / Some college	0.64 [a]	0.56, 0.72	0.69 [c]	0.58, 0.81	1.09	0.94, 1.26
Marital status (Married)						
Not married	0.97	0.85, 1.10	1.08	0.92, 1.28	1.10	0.95, 1.27
Income (250 to 399% FPL)						
Less than 138%	0.92	0.77, 1.10	0.98	0.80, 1.19	0.61 [c]	0.49, 0.76
138 to 249% FPL	1.07	0.93, 1.24	1.09	0.91, 1.32	0.69 [c]	0.59, 0.81

Data: Health Reform Monitoring Survey, 2014. Statistics are weighted to population level using weights provided with the HRMS. Odds ratios significant at $p \leq .05^a$; $p \leq .01^b$; $p \leq .001^c$.
Note: An odds ratio (OR) below 1.00 means the odds are lower than the referent group designated in parentheses.

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