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Sources of Insurance Coverage in Nonmetropolitan Areas: The Role of Public and Private Insurance Since 2009

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Purpose

Over the past decade, health insurance coverage trends show an increased reliance on public sources of coverage. However, little is known regarding the relative importance of the different sources of coverage in nonmetropolitan areas compared to metropolitan areas. This brief uses the American Community Survey (ACS) 5-year estimates from 2009 to 2013 and 2013 to 2017 to compare types of health insurance coverage for the nonelderly (all ages < 65) in metropolitan and nonmetropolitan areas (as defined by the Office of Management and Budget). Using these data, the regional variation in insurance coverage rates is described, examining sources of coverage before and after the implementation of the Patient Protection and Affordable Care Act (PPACA).

Key Findings

- From 2009 to 2017, nonelderly individuals in nonmetropolitan areas had significantly higher rates of public insurance coverage and lower rates of employer-sponsored insurance coverage compared to individuals in metropolitan areas.
- Post-PPACA implementation, nonelderly individuals living in Medicaid expansion states experienced significant growth in public insurance rates compared to those living in nonexpansion states. This increase was larger for those living in nonmetropolitan areas compared to metropolitan areas.
- There was little increase in the rate of employer-sponsored insurance in either metropolitan or nonmetropolitan areas from 2009 to 2017. Most of the growth in private insurance coverage was composed of direct purchases from the marketplace. The rate of direct purchase of health insurance was higher in nonexpansion states than in expansion states.
- Pre and post-PPACA, uninsured rates were higher in nonmetropolitan areas than in metropolitan areas and remained the highest in nonexpansion states. The overall differential in uninsured rates between metropolitan and nonmetropolitan areas grew between 2009 and 2017 and was driven by expansion status.

Background

The sources of health insurance coverage have changed significantly over the past several years. The 2008 recession reduced the number of individuals insured by their employers; nearly 6 million nonelderly adults lost their employer-sponsored coverage from 2007 to 2009.[1] In 2014, due to the PPACA, low-income adults with incomes up to 138 percent of the Federal Poverty Level became eligible for public insurance coverage in states that chose to expand Medicaid. Individuals and families also had the option to purchase private health insurance directly on the Health Insurance Marketplaces,

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with premium subsidies available to households with incomes below 400 percent of Federal Poverty Level. These policies affected the potential sources of health insurance coverage in urban and rural areas differently.

For example, economic uncertainty from the recession disproportionately impacted small businesses, a staple of rural communities, and exacerbated the concern that small employers were less likely to offer employer provided coverage.[2,3] While the number of jobs in urban areas has recovered, increasing by nearly 8 percent from 2007 levels by 2017, rural areas are still 2 percent below their 2007 peak.[4] Additionally, states that did not initially expand Medicaid also have a higher proportion of the population that is rural.[5] This analysis will provide information on the impact of these policy changes on rates of coverage sources in nonmetropolitan and metropolitan areas over the past several years.

Methods

While metropolitan and nonmetropolitan analysis of overall insurance coverage trends can be accomplished using Small Area Health Insurance Estimates, to analyze sources of insurance coverage by metropolitan and nonmetropolitan designation over time, we compared 5-year ACS estimates in 2009-2013 and 2013-2017 at the Public Use Microdata Area (PUMA) level. This comparison effectively cancels the 2013 data (and about 20 percent of rural counties) from the analysis because the same data are repeated across the two data sets. PUMAs are the most detailed geographic identifier in the publicly available ACS and are defined as areas that partition each state into contiguous geographic units containing roughly 100,000 people each.[6] PUMAs were categorized as metropolitan or nonmetropolitan following classifications developed by the United States Department of Agriculture Economics Research Service using Office of Management and Budget 2013 metropolitan definitions: if more than 50 percent of the PUMA's population (2010 census) resided in a metropolitan county, the PUMA was considered metropolitan.[7]

As individuals can hold multiple sources of coverage, a hierarchy of insurance coverage was used to assign a single primary source of coverage (based generally on which source of coverage may be the primary payer of bills). Consistent with other literature, Medicare is first in the hierarchy, followed by Veterans Affairs (VA) coverage, Medicaid, employer-sponsored, and direct purchase.[8] TRICARE was grouped with employer-sponsored insurance. The data were further examined by census region and by expansion status. States that had expanded on January 1, 2014, were categorized as expansion states (24 states[9]) and states that had not expanded as of December 31, 2018, were categorized as non-expansion (18 states). States that expanded between January 1, 2014, and December 31, 2018, as well as Wisconsin,[10] were excluded from analyses comparing insurance coverage sources in expansion vs. nonexpansion states (8 states). This brief focuses on the nonelderly population (all ages < 65).

Results

The proportion of coverage sources was significantly different for metropolitan vs. nonmetropolitan areas. Across both periods, nonelderly (age < 65) individuals in nonmetropolitan areas had higher rates of public insurance and lower rates of private insurance compared to those in metropolitan areas (Table 1). From 2009 to 2013, 24.2 percent of nonelderly individuals in nonmetropolitan areas had public insurance and 56.8 percent had private insurance compared to 19.5 percent and 63.4 percent of nonelderly individuals in metropolitan areas. This trend continued from 2013 to 2017, when public insurance levels increased to 27.2 percent in nonmetropolitan areas and to 22.7 percent in metropolitan areas. Private insurance rates also increased, but to a lesser extent than public coverage.

Across geographic areas, uninsured rates for the nonelderly fell from 17.4 percent in 2009-2013 to 12.6 percent in 2013-2017. Nonelderly uninsured rates were higher in nonmetropolitan areas than in metropolitan areas across time. Nonmetropolitan areas experienced a smaller decrease in the rate of uninsured (-4.4 percentage points) than did metropolitan areas (-4.9 percentage points) in 2013-2017 as the difference in the uninsured rate between metropolitan and nonmetropolitan areas grew larger. A larger decrease in uninsured rates than the overall increase in public insurance coverage can be attributed to an increase in the utilization of private insurance through the option of directly purchasing health insurance from the marketplace. Most of the growth in private insurance coverage was due to an increase in the rate of direct purchase, as the rate of employer-sponsored insurance increased only slightly in both metropolitan and nonmetropolitan areas.

Table 1. Health Insurance Rates for Nonelderly in Metropolitan and Nonmetropolitan Areas, 2009-2017

	2009-2013			2013-2017		
	Nonmetro	Metro	All areas	NonMetro	Metro	All Areas
Uninsured	19.0%	17.1%	17.4%	14.6%	12.2%	12.6%
Private Insurance	56.8%	63.4%	62.4%	58.3%	65.1%	64.1%
Employer sponsored†	50.6%	57.4%	56.3%	50.8%	57.6%	56.6%
Direct purchase	6.2%	6.0%	6.1%	7.4%	7.5%	7.5%
Public Insurance	24.2%	19.5%	20.2%	27.2%	22.7%	23.4%
Medicaid	18.8%	15.9%	16.4%	21.6%	18.9%	19.3%
Medicare	4.1%	2.5%	2.8%	4.3%	2.7%	3.0%
VA	1.4%	1.0%	1.1%	1.3%	1.0%	1.1%
Total	100%	100%	100%	100%	100%	100%

† Note that the employer-sponsored category includes TRICARE.
* The rate of coverage for metropolitan vs. nonmetropolitan areas is significantly different for all sources of coverage at the 5 percent level.

Regionally, there were modest enrollment gains in overall public and private sources of coverage in the Midwest and South (Figure 1). In contrast, the Northeast and West saw large increases in public insurance coverage (mainly Medicaid) in 2013-2017, increasing +5.4 percentage points in the West to 25.3 percent of the nonelderly, and +3.2 percentage points in the Northeast to 24.2 percent of the nonelderly. There was little difference in the amount of change between metropolitan and nonmetropolitan areas within each region (data not shown). However, note that states in the West and Northeast were more likely to have expanded Medicaid compared to states in the South and Midwest, where 75 percent of nonmetropolitan persons live (Table 2).

Figure 1. Primary Health Insurance Source of Nonelderly by Region, 2009-2017

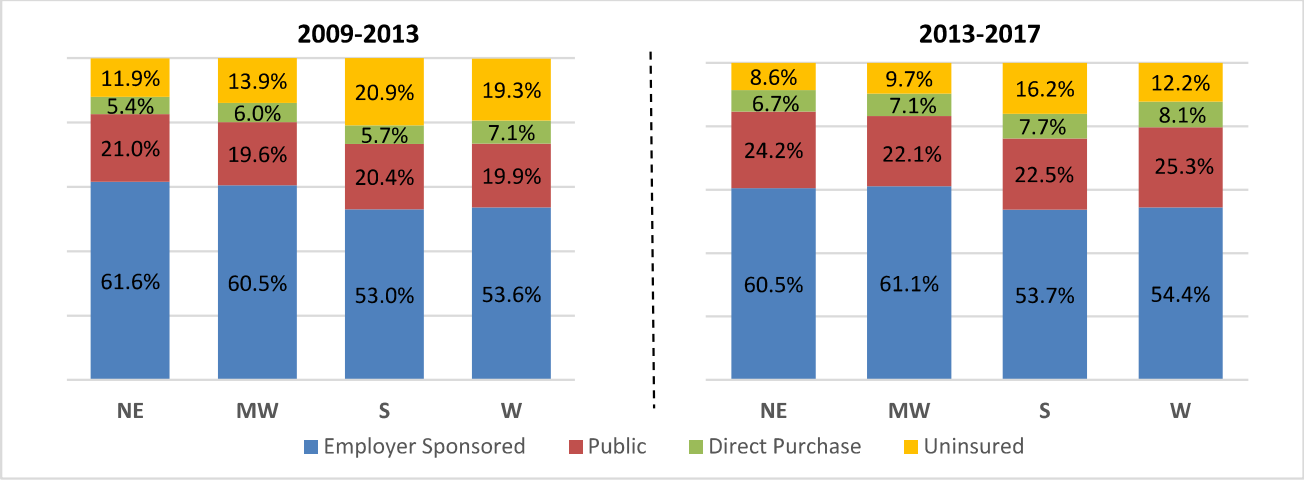

Table 2. Nonelderly in Metropolitan and Nonmetropolitan Areas by Region, 2013-2017

	Northeast	Midwest	South	West
Share of Nonmetropolitan Nonelderly Population per Region				
Total Nonelderly Population	47.4m	57.5m	103.2m	65.4m
Nonmetropolitan Population	4.2m	12.7m	18.9m	6.2m
Nonmetropolitan Share within Each Region	8.9%	22.1%	18.3%	9.5%
Share of Total Nonmetropolitan Population by Region	10.0%	30.2%	44.9%	14.8%

There was a slight decrease in the percentage covered by employer-sponsored insurance in the Northeast (-0.9 percentage points), and little increase among the other three regions. Lower employer-sponsored insurance rates were not associated with higher public insurance coverage rates

across regions. This is likely due to the variation in uninsured rates across the four regions, as seen in Figure 1 above. The highest uninsured rate was in the South, where two thirds of states that did not expand Medicaid are located. The South also had the largest increase in the rate of direct purchase (+2.0 percentage points) in 2013-2017, when direct purchase rates increased in all regions.

As expected, public insurance rates increased significantly more in Medicaid expansion states than in nonexpansion states (Table 3). Public coverage increased +4.6 percentage points in expansion states compared to only +1.5 percentage points in nonexpansion states. Nonmetropolitan areas in expansion states experienced a greater increase in public coverage than metropolitan areas; rates of public insurance increased +5.5 percentage points to cover 30.3 percent of the nonelderly in nonmetropolitan areas compared to a +4.6 percentage point increase to cover 24.6 percent of the nonelderly in metropolitan areas.

In expansion states, uninsured rates fell by a similar amount in both nonmetropolitan (-5.7 percentage points) and metropolitan areas (-5.6 percentage points). In nonexpansion states, the uninsured rate decreased less for nonmetropolitan areas (-3.8 vs. -4.4 percentage points). Increases in direct purchase in nonexpansion states were double those in expansion states (+2.0 vs. +1.0 percentage points) and were larger for metropolitan areas compared to nonmetropolitan areas (+2.2 vs. +1.6 percentage points).

Table 3. Health Insurance Rates for Nonelderly in Metropolitan and Nonmetropolitan Areas by Expansion Status, 2009-2017

	2009-2013			2013-2017		
	Nonmetro	**Metro**	**All areas**	**Nonmetro**	**Metro**	**All Areas**
Medicaid Expansion States						
Uninsured	16.8%	15.7%	15.8%	11.1%	10.1%	10.2%
Private	58.4%	64.3%	63.6%	58.6%	65.3%	64.6%
Employer sponsored†	52.0%	58.1%	57.4%	51.6%	58.1%	57.4%
Direct purchase	6.3%	6.2%	6.2%	7.0%	7.2%	7.2%
Public	24.8%	20.0%	20.6%	30.3%	24.6%	25.2%
Medicaid	19.5%	16.8%	17.2%	24.7%	21.2%	21.6%
Medicare	3.9%	2.3%	2.5%	4.2%	2.5%	2.7%
VA	1.4%	0.9%	0.9%	1.3%	0.9%	0.9%
Total	100%	100%	100%	100%	100%	100%
Nonexpansion States						
Uninsured	21.8%	20.6%	20.9%	18.0%	16.2%	16.5%
Private	53.6%	61.1%	59.6%	56.2%	64.0%	62.5%
Employer sponsored†	47.3%	55.1%	53.6%	48.4%	55.9%	54.4%
Direct purchase	6.2%	6.0%	6.1%	7.8%	8.2%	8.1%
Public	24.6%	18.2%	19.5%	25.8%	19.8%	21.0%
Medicaid	18.8%	14.3%	15.2%	19.8%	15.7%	16.5%
Medicare	4.4%	2.7%	3.0%	4.6%	2.8%	3.2%
VA	1.4%	1.3%	1.3%	1.4%	1.3%	1.3%
Total	100%	100%	100%	100%	100%	100%

†Note that the employer-sponsored category includes TRICARE.

Discussion

Uninsured and public insurance rates were significantly higher in nonmetropolitan areas compared to metropolitan areas over time. In states that expanded Medicaid, nonmetropolitan areas gained more public coverage than metropolitan areas. In nonexpansion states, private insurance coverage increased mainly through direct purchases in the health insurance marketplace, partially offsetting the lack of Medicaid access. Nevertheless, higher uninsured rates in nonmetropolitan areas highlight a continual need for additional coverage options in nonmetropolitan areas. It is notable that employer-sponsored coverage did not change much after the implementation of the PPACA, even though

analysts had predicted that the PPACA might lead some employers to drop employer-sponsored coverage.[11,12] Since this analysis includes children, for whom the overall drop in uninsurance and increase in public coverage in nonmetropolitan areas is largely due to children gaining insurance coverage through the Children's Health Insurance Program (CHIP),[13] not all coverage changes are directly attributable to the PPACA. By examining the trends in insurance coverage and understanding differences in rural and urban insurance markets, this analysis can serve as a benchmark against which future policy improvements can be measured.

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[1] Holahan J. *The 2007–09 Recession And Health Insurance Coverage*. Health Aff. 2011;30(1):145-152. doi:10.1377/hlthaff.2010.1003

[2] Şahin A, Kitao S, Cororaton A, Laiu S. *Why Small Businesses Were Hit Harder by the Recent Recession*. Current Issues in Economics and Finance. 2011;17(4). www.newyorkfed.org/research/current_issues. Accessed September 2019.

[3] Mueller KJ, Alfero C, Coburn A, et al. *Insuring Rural America: Health Insurance Challenges and Opportunities*. 2018. http://www.rupri.org/wp-content/uploads/Insuring-Rural-America.pdf. Accessed February 17, 2019.

[4] United States Department of Agriculture Economic Research Service. *Rural Employment and Unemployment*. Updated September, 2019. https://www.ers.usda.gov/topics/rural-economy-population/employment-education/rural-employment-and-unemployment/. Accessed October 2019.

[5] Barker A, Huntzberry K, McBride T, Mueller K. *Changing Rural and Urban Enrollment in State Medicaid Programs*. Rural policy brief 2017; 1-4. https://rupri.publichealth.uiowa.edu/publications/policybriefs/2017/Changing%20Rural%20and%20Urban%20Enrollment %20in%20State%20Medicaid%20Programs.pdf. Accessed September, 2019.

[6] Census Bureau U. *AMERICAN COMMUNITY SURVEY 2013-2017 ACS 5-YEAR PUMS FILES ReadMe*. 2019. https://tigerweb.geo.census.gov/tigerwebmain/tigerweb_main.html. Accessed September 2019.

[7] United States Department of Agriculture Economic Research Service. *Identifying the MetroNonmetro Status of Public Use Microdata Areas*. 2016; https://www.ers.usda.gov/topics/ruraleconomy-population/rural-classifications/. Accessed November 2018.

[8] Finegold K. *New Census Estimates Show 3 Million More Americans Had Health Insurance Coverage in 2012*. Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation. 2013. https://aspe.hhs.gov/report/new-census-estimates-show-3-million-more-americans-had-health-insurance-coverage-2012. Accessed February 2019.

[9] AR, AZ, CA, CO, CT, DE, HI, IL, IA, KY, MA, MD, MN, ND, NJ, NM, NV, NY, OH, OR, RI, VT, WA WV expanded by 1/1/2014.

[10] Wisconsin covers adults up to 100% FPL in Medicaid but did not adopt the ACA expansion

[11] Holtz-Eakin, D and Smith, C. Labor markets and health care reform: new results. In Washington, DC: American Action Forum. 2010. http://americanactionforum. org/files/LaborMktsHCRAAF5-27-10.pdf

[12] Buchmueller, T., Carey, C., Levy, H. G. *Will employers drop health insurance coverage because of the Affordable Care Act?* Health Aff. 2013; 32(9): 1522-1530. https://doi.org/10.1377/hlthaff.2013.0526

[13] Ziller EC. *Health Insurance Coverage of Low-Income Rural Children Increases and is More Continuous Following CHIP Implementation*. Maine Rural Health Research Center. March 2014. http://muskie.usm.maine.edu/Publications/rural/Health-Insurance-Coverage-Rural-Low-income-Children.pdf. Accessed November 2019.