

Metro/ Non-Metro Differences in the Uninsured Populations within States
By Lauren Bowers and Tamara Lee

In 2010, 83.7% of Americans lived in metropolitan areas ¹. Among the 49.9 million uninsured Americans, nearly 7.8 million live in non-metropolitan communities ². This paper investigates the differences in the uninsured population in metro and non-metro counties within states. The analysis uses the 2010 county-level health insurance estimates released by the U.S. Census Bureau's Small Area Health Insurance Estimates (SAHIE) program to answer these questions: (1) Within each state, do metro and non-metro counties differ statistically in health insurance coverage? (2) Do these results vary by age and income groups?

Prior studies at the national level have shown that non-metro populations are less likely than metro populations to have health insurance coverage, which may severely limit their access to needed health services ³⁻⁶. State level studies have been inconsistent about the metro-non-metro differences in health insurance coverage. As responsibility for the design of health policies shifts from the federal government to the states, it is becoming increasingly important for state health administrators to recognize the urban-rural differences in health care insurance coverage and patterns within their states.

Methods:

Data: The 2010 SAHIE estimates used for this study are model-based estimates of the number of people with and without health insurance coverage for every county in the United States by age, sex, and income group. The SAHIE program models health insurance coverage by combining data from the American Community Survey with demographic population estimates, aggregated federal tax returns, participation records for the Supplemental Nutrition Assistance Program, County Business Patterns, Medicaid and Children's Health Insurance Program participation records and Census 2010.

Metro/Non-Metro Classification: We used the Office of Management and Budget's definition of metro statistical area (MSA) as a core urban area population of 50,000 or more. A county within an MSA is defined as a metro county. All other counties are non-metro.

IPR groups: SAHIE is currently unique in its ability to estimate the uninsured at income-to-poverty ratios that are relevant to the 2010 Affordable Care Act for every county. Income groups are defined by the income-to-poverty ration (IPR)-the ratio of family income to the appropriate federal poverty threshold. Estimates utilized in this paper include two income groups: at or below 138 percent and all incomes. The 138% IPR group was included for analysis because of its relevance to the Affordable Care Act. This Act helps families gain access to health care by allowing Medicaid to cover families with incomes up to 138 percent of the poverty line.

Age groups: Children and working age adults have different health profiles, needs and insurance availability. Thus we tested the difference first with the under age 65 population, then children (0-18) and working age adults (18-64) separately.

Data Analysis:

Data from all 3,143 counties were examined. Two states—New Jersey and Rhode Island—and the District of Columbia were excluded because there are no non-metro counties within these states. We used t-tests to determine if the differences between metro and non-metro uninsured rates are significant at the 90 percent level of confidence.

Results:

We found that there is a statistically significant difference between metro and non-metro counties in 46 out of 48 states for individuals under 65 and working age adults at all income levels. All 46 states had higher rates of uninsured in non-metro areas. We found that there is a statistically significant difference between metro and non-metro counties in 36 out of 48 states for children at all income levels. 35 states had higher rates of uninsured in non-metro areas. Among populations under 65 and living at or below 138% poverty, only 27 out of 48 states saw metro and non-metro counties that were statistically different. Of the 27 states, 82 percent had higher rates of uninsured in metro counties. Among children living at or below 138% poverty, only 25 out of 48 states saw metro and non-metro counties that were statistically different. Of the 25 states, 64 percent had higher rates of uninsured in metro counties and 36 percent had higher rates in non-metro counties. Among working age adults living at or below 138% poverty, only 29 out of 48 states saw metro and non-metro counties that were statistically different. Of the 29 states, 79 percent had higher rates of uninsured in metro counties.

Sources:

1. U.S. Census Bureau. (2010). *2010 Census*.
2. U.S. Census Bureau. (2011). *Current Population Survey, 2011 Annual Social Economic Supplement*.
3. Bennett, K. J., Olatosi, B., & Probst, J. C. (2008). Health disparities: A rural-urban chartbook. South Carolina Rural Health Research Center.
4. Coburn, A. F., Kilbreth, E. F., Long, S. H., & Marquis, M. S. (1998). Urban-rural differences in employer-based health insurance coverage of workers. *Medical Care Research and Review*, 55(4), 484-496.
5. Laditka, J. N., Laditka, S. B., & Probst, J. C. (2009). Health care access in rural areas: Evidence that hospitalization for ambulatory care-sensitive conditions in the United States may increase with the level of rurality. *Health & Place*, 15, 761-770.
6. Lu, N., Samuels, M. E., Kletke, P. R., & Whitler, E. T. (2010). Rural-urban differences in health insurance coverage and patterns among working-age adults in Kentucky. *The Journal of Rural Health*, 26, 129-138.
7. Ormond, B. A., Zuckerman, S., & Lhila, A. (2000). Rural/urban differences in health care are not uniform across states. Washington, D.C.: Urban Institute.

Table 1. State Average Percent Uninsured Among Metro and Non-metro Counties for all Incomes by Age Group

State	Number of Counties		Percent Uninsured 0-64		Percent Uninsured 18-64		Percent Uninsured Under 19	
	Non-metro	Metro	Non-metro	Metro	Non-metro	Metro	Non-metro	Metro
United States	2042	1099	18.4	17.6	22.3	21.4	8.8	8.4
Alabama	39	28	18.6*	16.3	23.2*	20.4	6.9*	6.1
Alaska	26	3	25.8*	19.3	30.4*	22.6	15.32*	12.0
Arizona	8	7	19.6	19.3	23.1*	22.1	12.9	13.1
Arkansas	55	20	21.5*	19.9	27.3*	25.2	7.7	7.5
California	21	37	19.3	20.7*	23.0	25.4*	9.2	9.5
Colorado	47	17	21.8*	17.1	24.6*	20.0	14.6*	10.0
Connecticut	2	6	9.6	10.5*	11.8	13.3*	3.2	3.2
Delaware	1	2	14.7*	10.8	17.4*	13.0	7.1*	5.2
Florida	28	39	24.7	25.4*	28.9	29.8*	13.5	13.4
Georgia	89	70	23.2*	21.6	28.6*	26.5	10.5	10.3
Hawaii	3	1	11.2*	7.9	13.4*	9.6	5.2*	3.6
Idaho	32	12	22.9*	18.9	27.6*	23.2	13.0*	10.2
Illinois	65	37	13.6	15.9*	17.1	20.3*	4.3	5.0*
Indiana	46	46	18.3*	16.6	21.5*	19.9	11.0*	8.6
Iowa	79	20	11.5*	10.2	14.5*	12.8	4.6*	3.6
Kansas	85	20	17.9*	14.8	21.5*	18.1	9.7*	7.4
Kentucky	85	35	19.2*	16.4	23.8*	20.4	7.2*	6.3
Louisiana	35	29	21.1*	20.3	27.5*	25.9	6.5*	6.4
Maine	11	5	13.4*	11.3	16.2*	13.8	5.0*	4.1
Maryland	7	17	13.0	12.7	15.8	15.5	6.0*	5.3
Massachusetts	2	12	8.2*	5.1	9.7*	6.4	3.2*	1.7
Michigan	57	26	15.4*	14.1	19.4*	18.0	5.1*	4.4
Minnesota	64	23	11.6*	10.0	13.2*	11.5	7.9*	6.3
Mississippi	65	17	21.8*	20.1	27.3*	25.0	9.2*	8.9
Missouri	79	36	17.8*	14.5	21.8*	17.9	8.1*	6.1
Montana	52	4	21.7*	18.8	24.8*	22.0	14.0*	10.3
Nebraska	84	9	14.9*	12.4	18.3*	15.5	7.0*	5.1
Nevada	13	4	23.8	25.2*	26.1	28.5*	18.8	17.7
New Hampshire	7	3	14.5*	12.2	17.3*	14.9	5.9*	4.8
New Jersey	0	21	-	15.0	-	18.5	-	6.3
New Mexico	26	7	23.7*	22.1	29.4*	27.0	11.2	10.9
New York	26	36	13.2	13.8*	15.9	16.9*	6.2*	5.0
North Carolina	60	40	20.7*	18.5	25.5*	22.7	8.7*	8.2
North Dakota	49	4	12.50*	10.3	14.5*	12.4	7.6*	4.5
Ohio	48	40	15.5*	14.1	18.7*	17.3	7.8*	5.9
Oklahoma	60	17	23.4*	21.0	28.4*	25.8	11.8*	9.9
Oregon	25	11	21.4*	19.3	25.6*	23.2	10.4*	8.8
Pennsylvania	35	32	13.4*	11.8	16.1*	14.3	6.3*	5.3
Rhode Island	0	5	-	13.8	-	16.7	-	6.0
South Carolina	25	21	21.7*	19.9	26.4*	23.9	10.0	9.8
South Dakota	59	7	15.3*	12.4	18.0*	15.0	9.3*	6.6
Tennessee	57	38	17.5*	16.3	22.0*	20.4	5.7	5.6
Texas	177	77	28.0*	26.1	33.3*	31.4	16.8*	15.1
Utah	19	10	19.5*	16.4	23.3*	19.6	13.1*	10.6
Vermont	11	3	10.2*	8.8	12.8*	11.1	2.3*	1.8
Virginia	54	80	17.8*	14.3	21.4*	17.3	8.0*	6.8
Washington	22	17	19.3*	15.7	23.5*	19.2	8.4*	6.5
West Virginia	34	21	18.6*	16.5	23.1*	20.5	5.3*	4.8
Wisconsin	47	25	11.7*	10.5	13.7*	12.8	6.7*	4.8
Wyoming	21	2	17.7*	16.4	21.2	20.3	9.0*	6.7

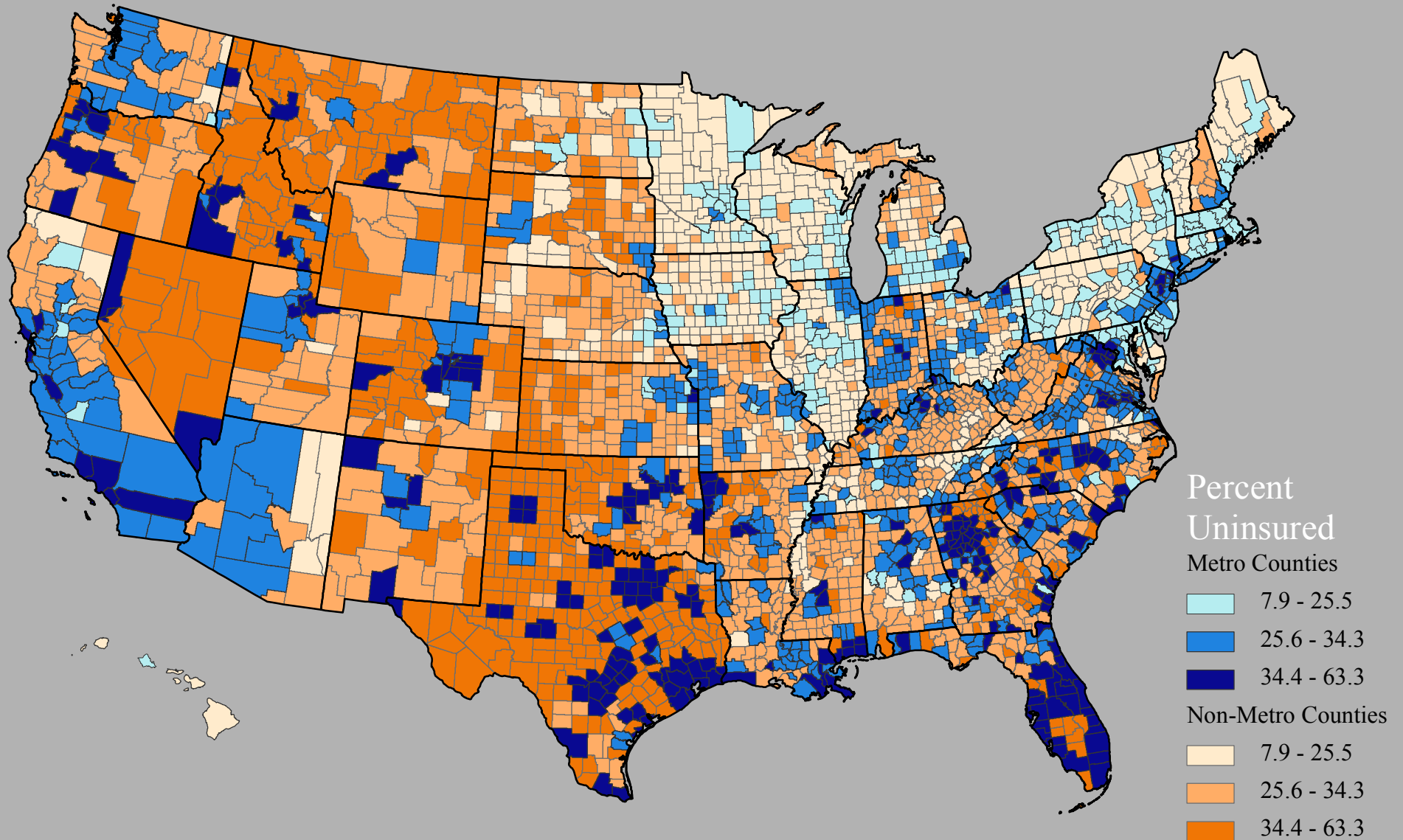
* Indicates the difference between metro and non-metro areas is significant at the 90 percent confidence level; asterisk (*) is placed next to the higher value.

Table 2. State Average Percent Uninsured Among Metro and Non-metro Counties for the Population Living at or Below 138% Poverty by Age Group

State	Number of Counties		Percent Uninsured 0-64		Percent Uninsured 18-64		Percent Uninsured Under 19	
	Non-metro	Metro	Non-metro	Metro	Non-metro	Metro	Non-metro	Metro
United States	2042	1099	29.1	31.4	40.0	42.4	10.9	12.8
Alabama	39	28	29.0	29.8	41.3	41.7	8.3	8.9
Alaska	26	3	37.0	35.1	50.3*	45.9	15.6	17.8
Arizona	8	7	24.6	31.5*	32.9	40.0*	13.3	18.8*
Arkansas	55	20	31.6	33.7*	46.1	48.6*	8.7	10.1*
California	21	37	27.3	33.2*	35.4	45.1*	11.3	13.7*
Colorado	47	17	35.9*	33.6	44.5*	42.7	20.3*	17.6
Connecticut	2	6	19.0	21.1*	26.0	29.1*	5.2	6.0
Delaware	1	2	22.5	20.5	32.0*	28.2	8.1	7.4
Florida	28	39	34.5	40.6*	45.9	52.2*	14.8	18.7*
Georgia	89	70	33.7	38.3*	46.9	52.5*	12.4	15.8*
Hawaii	3	1	18.2*	15.6	24.6*	20.9	7.1	5.4
Idaho	32	12	35.3	34.4	46.0	46.3	17.7	16.5
Illinois	65	37	22.3	29.0*	31.5	42.3*	5.4	7.3*
Indiana	46	46	31.0	30.5	42.3	41.3	14.5*	12.7
Iowa	79	20	23.0	22.4	32.6*	30.2	7.2	6.9
Kansas	85	20	30.7	31.2	41.8	41.9	13.8	13.8
Kentucky	85	35	29.3	30.8*	40.6	42.9*	8.2	9.4*
Louisiana	35	29	29.5	31.8*	44.1	46.4*	6.9	7.9*
Maine	11	5	20.0	19.5	26.9	25.7*	6.2	6.5
Maryland	7	17	22.4	25.1*	31.5	34.5*	7.7	8.2
Massachusetts	2	12	14.9*	10.1	18.8*	13.5	4.9*	2.9
Michigan	57	26	25.1	24.6	35.1	35.0	6.4	6.3
Minnesota	64	23	19.6	21.4*	25.0	26.4*	11.2	12.4*
Mississippi	65	17	30.3	33.1*	43.4	47.1*	10.0	11.9*
Missouri	79	36	26.7	28.8*	37.2	39.9*	9.3	9.4
Montana	52	4	36.7*	34.6	46.0	43.3	20.0*	16.2
Nebraska	84	9	26.7	26.4	37.6	36.5	9.8	9.1
Nevada	13	4	41.5	42.1	50.7	52.5	26.9	25.4
New Hampshire	7	3	27.3	28.8	35.6	38.1	8.9	9.4
New Jersey	0	21	-	29.2	-	40.0	-	10.6
New Mexico	26	7	33.4	35.7*	47.4	49.5*	13.2	14.6
New York	26	36	20.6	21.3*	27.5	28.9*	8.8*	7.3
North Carolina	60	40	31.9	33.8*	44.8	46.3*	10.2	12.3*
North Dakota	49	4	24.1*	21.6	31.2*	26.6	12.2*	9.2
Ohio	48	40	25.3	25.9	34.9	36.0*	9.9*	8.5
Oklahoma	60	17	34.4	35.8*	47.5	50.5*	13.3	13.3
Oregon	25	11	32.1	35.6*	43.2	46.4*	12.4	13.8*
Pennsylvania	35	32	22.5	22.3	30.5	29.8	8.6	8.5
Rhode Island	0	5	-	25.8	-	34.3	-	9.6
South Carolina	25	21	31.6	33.6*	43.7	45.2*	11.3	13.6*
South Dakota	59	7	27.1	28.5	35.2	37.5	14.0	13.6
Tennessee	57	38	26.4	28.4*	37.5	40.1*	6.6	8.2*
Texas	177	77	39.5	41.7*	54.5	57.7*	18.6	19.8*
Utah	19	10	31.5	31.2	42.0	40.1	18.2	18.5
Vermont	11	3	15.7	15.0	21.6	19.7	3.3	3.4
Virginia	54	80	27.8	31.0*	38.1	41.7*	8.9	11.3*
Washington	22	17	29.2	30.2	39.7	41.1	9.7	10.3
West Virginia	34	21	29.4	29.4	40.4	39.8	6.4	7.0
Wisconsin	47	25	21.6	21.4	28.3	28.9	10.7*	8.4
Wyoming	21	2	32.5	30.9	42.4	43.4	13.8*	9.7

* Indicates the difference between metro and non-metro areas is significant at the 90 percent confidence level; asterisk (*) is placed next to the higher value.

2010 Percent Uninsured, Under Age 65, At or Below 138% Poverty, by Metro and Non-Metro County



Source: U.S. Census Bureau, Small Area Health Insurance Estimates (SAHIE), August 2012