

Rural-Urban Differences in the Rate of Health Insurance Coverage

Mark Holmes and Thomas C. Ricketts III

North Carolina Rural Health Research and Policy Analysis Center
Cecil G. Sheps Center for Health Services Research
University of North Carolina at Chapel Hill
<http://www.shepscenter.unc.edu>

*Rural residents are more likely than their urban counterparts to be uninsured.
The rural-urban gaps range from 11% more uninsured in Colorado to 4.6% fewer in New York.*

Introduction

Lack of health insurance continues to be a substantial barrier to quality health care for millions of Americans. Over the last few years, the number of individuals without health insurance has continued to climb. In 2003, approximately 8.2 million individuals not residing in a metropolitan area were uninsured, an increase of 321,000 from the previous year.¹ This translates to approximately 15.5 percent of all persons living in nonmetropolitan areas.

There are many factors known to affect the rate at which individuals are covered by health insurance, such as the age, labor force status, and income of the individual. To the extent that these characteristics vary by rurality, rates of health insurance coverage will differ for rural and urban areas. For example, since rural residents are, on average, older, they are more likely to be eligible for Medicare. Rural residents are also more likely to be living in poverty than urban residents. Therefore, we might expect the rate of insurance coverage for the under 65 population to be lower in rural areas than in urban areas. A study using the Medical Expenditure Panel Survey found that isolated rural residents had uninsured rates 6 percentage points higher than their urban counterparts.² We sought to determine whether this gap persisted in other surveys as well.

Analytical Approach

We analyzed the latest three years of data from the Annual Social and Economic Supplement of the Current Population Survey (CPS) published by the Bureau of the Census and the Bureau of Labor Statistics. These data serve as the federal government's official source of statistics on the rate of health insurance coverage. Rural places may have very different characteristics. For example, rural communities in Florida can be quite different from rural communities in Montana in terms of how people work, the kinds of social and economic structures they have available to them, and the degree to which state government provides access to health care and health insurance. Rather than consider the nation as a whole and mask varying circumstances which people may encounter, we consider each state separately. Thus, we compare the rate of insurance coverage in rural Michigan, for example, to the rate of insurance coverage in urban Michigan.

Insurance status was defined by an algorithm utilizing responses to a series of health insurance questions.³ Rural/urban status was defined based on the response to whether a person lived in a metropolitan area or not. The MSA status for a small proportion of respondents is suppressed in the Public Use File to maintain respondent anonymity. These respondents are dropped in our analysis. Note that statistics in official CPS reports do not use this suppression, and hence official estimates may differ from ours slightly.

Our analytical approach was to estimate the difference in the rate of uninsured between rural and urban residents in a given age category in a given year. In other words, we are holding constant (or “adjusting for”) age groups and survey year. This was accomplished using ordinary least squares regression (corrected for the design of the CPS) with indicator variables for age group, year, and interactions. Thus, the rural-urban difference we present is the average difference in the rate of uninsured for individuals in the same age group in a given year. Age groups are defined as 0-17, 18-64, and 65 or over. We pool data for 2001, 2002, and 2003 to compute three year averages, weighting recent years more heavily.

Results

Our estimates agree with the Census Bureau estimates that 15.6 percent of Americans lacked health insurance in 2003. Our rural-urban breakdowns also match the Census Bureau finding of very little difference in insurance coverage by metropolitan status – rural residents have a rate of insurance coverage .1 percentage points higher than urban residents. However, this similarity is misleading due to the inclusion of Medicare eligibles. In 2003, 11.4 percent of urban residents were 65 or older, while 17.1 percent of rural residents were age 65 or over. When we consider only the 0-64 population, the rates of insurance coverage vary by rurality — 17.5 percent of metro residents lacked insurance coverage, while 18.1 percent of rural residents did. Thus, when we consider only the population below the age of 65, rural residents are more likely to be uninsured.

We now turn to state specific comparisons. Of the 50 states, 46 have both rural and urban respondents in the CPS. The difference in the rate of uninsured varies from 5 percentage points lower in rural areas (New York) to eleven points higher in rural areas (Colorado). Eight states have rural insurance coverage rates that are higher than urban rates. Of these states, four (Texas, New York, Illinois, Ohio) have differences that are statistically significant. In thirty-seven states, rural residents are more likely to be uninsured. Twenty-two of these states (Montana, Vermont, Wyoming, Missouri, Florida, Maine, Kentucky, Indiana, Nebraska, Mississippi, Utah, Pennsylvania, Minnesota, West Virginia, Arkansas, Virginia, Washington, North Dakota, New Mexico, Oklahoma, North Carolina, and Colorado) have statistically different rates.

Conclusion

Although national estimates of health insurance coverage rates typically show little or no difference between rural and urban areas in the percent of residents with health insurance, if only individuals below the age of 65 are considered, rural residents are more likely to lack health insurance. When individual states are considered, rural residents are typically more likely to be uninsured than their urban counterparts. The four states in which urban residents are more likely to be uninsured tend to have large central cities. Our analysis provides evidence of a slight, yet important, lower rate of insurance coverage in rural communities.

¹ DeNavus-Walt, Carmen, Bernadette D. Proctor and Robert J. Mills, US Census Bureau, Current Population Reports, P60-226, Income, Poverty and Health Insurance Coverage in the United States: 2003, US Government Printing Office, Washington, DC, 2004.

² Ziller, Erica C., Andrew F. Coburn, Stephanie L. Loux, Catherine Hoffman, and Timothy D. McBride. “Health Insurance Coverage in Rural America”. Kaiser Commission on Medicaid and the Uninsured, Publication 4093, 2003.

³ U.S. Census Bureau. “Programming Code: Estimates of Health Insurance Coverage.”
<http://www.census.gov/hhes/hlthins/hlthinsvar.html>. Accessed October 26, 2004.

Table 1: Urban Rural Differences in Uninsured Rates: 2001-2003

Alabama	1.2	Montana	3.1*
Alaska	1.4	Nebraska	2.8*
Arizona	0.5	Nevada	1.1
Arkansas	5.1*	New Hampshire	1.6
California	-2.3	New Jersey	N/A
Colorado	10.9*	New Mexico	6.4*
Connecticut	N/A	New York	-4.6*
Delaware	0.07	North Carolina	5.8*
District of Columbia	N/A	North Dakota	4.5*
Florida	4.2*	Ohio	-2.4*
Georgia	0.7	Oklahoma	6.5*
Hawaii	1.9	Oregon	1.5
Idaho	1.0	Pennsylvania	3.3*
Illinois	-3.0*	Rhode Island	N/A
Indiana	2.8*	South Carolina	2.0
Iowa	1.3	South Dakota	2.0
Kansas	-0.2	Tennessee	-1.4
Kentucky	3.1*	Texas	-4.5*
Louisiana	1.1	Utah	3.9*
Maine	2.4*	Vermont	2.0*
Maryland	N/A	Virginia	5.4*
Massachusetts	0.0	Washington	5.7*
Michigan	1.8	West Virginia	4.3*
Minnesota	2.9*	Wisconsin	-0.1
Mississippi	4.0*	Wyoming	2.4*
Missouri	2.5*		

Cell value is difference in percentage of rural and urban residents who are uninsured, holding age group and year constant. Positive values denote rural residents are more likely to be uninsured.

*Denotes statistical significance at 5%.

N/A denotes insufficient data (no rural residents)

National maps are available both in color and black and white versions on the Cecil G. Sheps Center for Health Services website at: <http://www.shepscenter.unc.edu/>

North Carolina Rural Health Research Program
 Cecil G. Sheps Center for Health Services Research
 The University of North Carolina at Chapel Hill
 725 Airport Road CB# 7590
 Chapel Hill NC 27599-7590