NC Rural Health Research & Policy Analysis Center

State Profiles of Medicaid and SCHIP in Rural and Urban Areas

Final Report No. 91

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Medicaid and the State Children's Health Insurance Program (SCHIP) are publicly funded health insurance programs that provide coverage to more than 60 million low-income children, parents, pregnant women, and elderly and disabled adults. These programs have a major impact on the U.S. health care system: Nearly one of every five dollars spent on personal health care comes from Medicaid alone.[1,2,3]

In many ways, these programs play a bigger role in rural than in urban America. Nationally, Medicaid provides health insurance to a larger share of the population in rural areas.[4] Further, these programs are critical sources of income for rural health care providers, and they contribute to economic development in rural communities.[5]

There are many resources on Medicaid and SCHIP at the national and state level that provide important information to policymakers, advocates, researchers, and others. However, despite the impact of these programs in rural America, it is difficult to obtain state-specific information on characteristics of Medicaid and SCHIP in rural areas. There is no easily-accessible national source of Medicaid or SCHIP administrative data that differentiates between urban and rural areas, and surveys of health insurance coverage and expenditures often lack the sample size to analyze individual states or smaller geographic areas within them.

To address this information gap for state officials and others interested in how Medicaid and SCHIP are operating in different geographic areas of a state, we collected data from a number of sources with an emphasis on program characteristics relevant to rural areas. This final report is one component of a larger project that includes the development of web-based State Profiles of Medicaid and SCHIP in Rural and Urban Areas (www.shepscenter.unc.edu/medicaidprofiles). This document provides national tables of data drawn from the state-specific profiles, focusing on the comparison of Medicaid enrollment and expenditures in rural and urban counties. In addition, a summary of these and other data found in the State Profiles is included.

A common source of information on health insurance coverage in the United States is the Census Bureau's Current Population Survey (CPS). The CPS is the most widely used source of state-level estimates of insurance status. During March of each year, the CPS

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[1] "The Medicaid Program at a Glance." Kaiser Commission on Medicaid and the Uninsured, March 2007.
[2] "State Children's Health Insurance Program (SCHIP) at a Glance." Kaiser Commission on Medicaid and the Uninsured, January 2007.
[3] Medicaid covers both children and adults who meet specific eligibility requirements, whereas the SCHIP program is primarily limited to uninsured children with family incomes that are too high to qualify for Medicaid but not sufficient to cover private insurance. Both programs are funded jointly by the federal and state governments. The federal government establishes the broad program guidelines, and states have flexibility to set specific eligibility criteria within these guidelines.
[4] Agency for Healthcare Research and Quality. Medical Expenditure Panel Survey Household Component 2004 public use data. Accessed via MEPSnet Query Tool, July 2007. http://www.meps.ahrq.gov/mepsweb/data_stats/meps_query.jsp
[5] Silberman P, Rudolf M, D'Alpe C, Randolph R, Slifkin R. "The Impact of the Medicaid Budgetary Crisis on Rural Communities." Working Paper No 77. North Carolina Rural Health Research & Policy Analysis Center, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, 2003.

asks respondents a series of questions about their health insurance over the previous calendar year, including whether they were ever covered by Medicaid during that time.

An analysis of CPS data shows that in 22 states the share of total residents covered by Medicaid was higher in rural counties than in urban counties at a statistically significant level (Table 1). Nationwide, 15.6 percent of rural residents reported being enrolled in Medicaid, compared to 12.5 percent of urban residents. Among children ages 18 and younger, Medicaid coverage was higher in rural areas in 21 states and higher in urban areas in one state (California). Among non-elderly adults ages 19 to 65, Medicaid coverage was higher in rural areas in 15 states. There are fewer statistically significant differences among elderly adults; this may be due in part to the small number of rural elderly adults included in the survey.

Table 1: Percent of Residents with Any Medicaid Coverage During the Past Year in Rural and Urban Counties by State and Age

Current Population Survey, 2004-2005

State	Total		Age 0-18		Age 19-64		Age 65+	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
United States	15.6 *	12.5	31.7 *	25.2	10.1 *	7.5	10.1	9.4
Alabama	19.2 *	13.4	42.9 *	29.1	11.3	7.6	11.5	9.4
Alaska	16.1	16.0	30.7	31.4	8.0	8.9	20.8	20.2
Arizona	19.9	15.3	33.4	29.2	16.0	10.7	10.2	5.8
Arkansas	20.1 *	12.2	50.3 *	30.9	8.9 *	4.8	14.3	7.6
California	13.3	16.3	16.5 *	30.2	15.3	9.9	5.1 *	16.0
Colorado	12.4 *	7.0	26.3 *	14.2	6.3	3.9	9.8	8.1
Connecticut	15.3	10.8	11.8	19.7	17.9	7.6	5.3	8.7
Delaware	9.6	10.8	23.4	19.4	6.1	8.0	5.9	7.0
District of Columbia	N/A	20.9	N/A	45.2	N/A	14.5	N/A	12.2
Florida	14.8	10.9	36.4 *	23.9	7.2	6.2	7.7	8.9
Georgia	19.9 *	12.5	43.6 *	29.5	10.8 *	5.8	10.7	7.4
Hawaii	11.7	9.8	24.7	20.6	7.9	5.5	5.7	9.5
Idaho	12.9	11.2	26.6	22.3	8.1	6.1	4.9	7.5
Illinois	13.4 *	9.7	26.9	19.9	10.3 *	5.8	3.5	6.0
Indiana	11.4	12.1	25.0	27.5	6.9	6.5	4.0	4.2
Iowa	11.3	11.8	21.1	24.1	7.4	7.2	10.7	10.7
Kansas	10.8	9.9	23.0	22.4	6.5	4.6	6.8	7.5
Kentucky	17.4 *	12.1	33.2	27.3	11.2 *	6.7	15.2	8.7
Louisiana	22.7 *	13.8	45.4 *	31.8	12.8 *	7.0	4.6	8.5
Maine	23.4 *	17.1	37.5 *	27.8	20.0 *	13.6	15.6	14.8
Maryland	16.8	8.6	40.1	20.0	8.5	4.1	11.5	7.5
Massachusetts	9.7	14.0	16.1	22.7	9.3	12.0	0.0 *	6.2
Michigan	15.1	12.9	30.4	26.1	10.8	8.2	5.9	6.5
Minnesota	12.9 *	7.7	24.7 *	13.6	9.8 *	5.2	6.9	7.7
Mississippi	23.6 *	15.9	43.3 *	33.3	13.5 *	7.9	24.9	16.1
Missouri	22.7 *	10.7	45.4 *	23.4	15.7 *	6.4	14.1 *	4.6
Montana	11.5	11.0	25.0	24.3	7.0	6.8	8.2	4.3
Nebraska	13.5 *	8.3	30.5 *	20.1	7.7 *	3.6	6.9	5.7
Nevada	5.2	7.2	9.0	14.2	1.6	4.0	15.5	7.4
New Hampshire	8.3 *	4.0	23.8 *	10.5	3.8 *	1.4	3.1	4.1
New Jersey	N/A	7.9	N/A	16.1	N/A	4.5	N/A	7.5
New Mexico	19.3	16.0	39.3	37.0	10.6	8.5	11.6	9.4
New York	17.4	18.3	29.7	31.9	14.6	13.4	9.7	14.8
North Carolina	15.8 *	11.2	33.1 *	20.8	9.5	7.2	11.5	9.1
North Dakota	9.7 *	5.7	22.1 *	13.1	5.9	3.4	3.4	3.8
Ohio	11.2	12.3	20.9	24.8	7.6	8.3	8.2	6.1
Oklahoma	17.8 *	10.7	44.3 *	25.9	8.4 *	4.7	12.1	7.5
Oregon	11.9	11.5	24.8	24.5	9.4	6.9	2.5	6.9
Pennsylvania	12.0	11.3	24.4	22.7	8.3	7.7	6.9	6.8
Rhode Island	N/A	17.4	N/A	29.9	N/A	12.7	N/A	15.5
South Carolina	19.3 *	12.8	40.3 *	28.4	10.1	7.2	18.2 *	8.3
South Dakota	12.8 *	9.9	29.3 *	21.5	6.5	5.5	8.0	8.0
Tennessee	22.9 *	14.3	41.9 *	25.6	17.0 *	10.7	17.5 *	7.9
Texas	13.0	12.1	26.4	27.2	6.8	4.9	11.7	10.1
Utah	11.0	8.8	16.5	16.6	7.6	4.9	7.8	4.2
Vermont	20.8 *	14.5	43.4 *	28.5	15.6 *	9.5	8.2	12.2
Virginia	11.5 *	6.9	27 *	15.7	6.4	3.3	8.3	6.6
Washington	12.7	11.5	28.0	26.3	8.5	6.1	0.0 *	8.2
West Virginia	18.2 *	11.3	38.2 *	28.5	12.6 *	6.1	12.2	6.0
Wisconsin	13.6	11.5	28.8	23.3	9.6	7.5	4.8	6.9
Wyoming	11.1	10.3	25.3	22.1	5.7	5.7	11.3	9.6

*Significantly different than urban at the 5% level.

Source: Current Population Survey, 2004 and 2005 pooled.

Notes: Figures include individuals who report having any Medicaid coverage during the past year. Individuals with SCHIP are not included. Standard errors were calculated using the generalized variance estimation procedures outlined in the CPS Technical Documentation. Urban counties are those designated as a Metropolitan Statistical Area (MSA). Individuals with suppressed MSA status (0.6% of respondents) are not included.

Despite its wide use, there are concerns about the accuracy of CPS estimates of Medicaid coverage—they are consistently lower than estimates from other surveys and enrollment numbers from the Centers for Medicare and Medicaid Services. Several factors may explain this discrepancy, including the long period of time that the CPS asks respondents to recall and the possibility that Medicaid recipients may identify their insurance by a state-specific program name or the name of a Medicaid managed care organization, rather than "Medicaid".[6] Further, certain population groups, including those in rural areas and those likely to be eligible for Medicaid, may be underrepresented in the CPS sample.[7]

Given these concerns, we also collected all available county-level administrative eligibility data from official state web sites to gain another perspective on Medicaid enrollment in rural and urban areas. Note that in the Medicaid program, the term "eligibles" refers to individuals who are actually enrolled, rather than the larger population that could potentially enroll. We were able to obtain county-level data on eligibles for 30 states (Table 2). In 25 of these 30 states, Medicaid enrollment as a share of the population was higher in rural than in urban areas. For 14 states, the rural-urban variation was greater than five percentage points.

[6] Holahan J, Hoffman C. "What is the Current Population Survey Telling Us about the Number of Uninsured?" Kaiser Commission on Medicaid and the Uninsured. August 2005.
[7] Blewett LA, Davern M. "Meeting the Need for State-Level Estimates of Health Insurance Coverage: Use of State and Federal Survey Data." *Health Services Research* 41(3 pt 1): 946-975. 2006.

Table 2. Medicaid Eligibles in Rural and Urban Counties by State
Administrative Data From State Web Sites

State	Rural		Urban		Time Period of Data
	Number of Eligibles	Eligibles as % of Population	Number of Eligibles	Eligibles as % of Population	
Alabama	339,395	25.6%	648,811	20.1%	FY 2006
Arizona	168,887	26.2%	860,697	16.3%	Jan 2007
Arkansas	354,081	30.7%	406,086	25.0%	FY 2006
California	144,476	17.2%	6,339,339	18.0%	Oct 2006
Georgia	542,067	31.1%	1,733,736	23.7%	FY 2006
Indiana	178,666	12.8%	621,938	12.8%	Aug 2006
Iowa	159,977	11.9%	184,408	11.3%	Jul 2006
Kentucky	398,988	22.1%	287,573	12.1%	FY 2005
Louisiana	310,393	27.6%	737,655	21.9%	FY 2003
Michigan	301,390	16.0%	1,223,047	14.8%	Nov 2006
Minnesota	193,194	13.7%	404,470	10.9%	Dec 2006
Mississippi	378,043	22.9%	180,251	15.1%	CY 2000
Missouri	310,740	19.9%	582,121	13.7%	FY 2006
Montana	54,124	8.9%	27,221	8.3%	Sep 2006
Nebraska	97,107	12.8%	107,177	11.0%	FY 2003
New Jersey	NA	NA	1,001,309	11.5%	Sep 2006
New Mexico	166,910	24.8%	247,459	19.7%	Nov 2006
New York	256,128	16.3%	3,911,484	22.1%	Jul 2006
North Carolina	455,173	17.0%	755,354	12.6%	May 2007
Ohio	468,199	21.0%	1,662,214	18.0%	FY 2005
Oklahoma	314,806	24.2%	421,940	18.8%	FY 2006
Oregon	102,768	12.3%	265,520	9.5%	Oct 2006
South Carolina	315,103	30.4%	703,476	22.2%	FY 2004
South Dakota	62,059	14.2%	36,836	10.8%	Aug 2006
Tennessee	371,461	22.8%	809,362	18.7%	Jul 1 2006
Texas	454,992	15.2%	2,318,064	11.7%	May 2006
Vermont	103,981	24.9%	37,501	18.3%	CY 2006
West Virginia	151,090	18.5%	127,796	12.8%	Feb 2003
Wisconsin	203,656	13.3%	511,586	12.8%	Jan 2007

Source: Eligibles data collected from state web sites. Individual citations are included in each state's profile at www.shepscenter.unc.edu/medicaidprofiles. Population data are from the U.S. Census.
Notes: States are not shown if data for the state were not found in a search of state web sites. Counties are defined as rural and urban based on the Core Based Statistical Area (CBSA) designations from the Office of Management and Budget. Rural counties are those defined as micropolitan and those not in a CBSA. FY is fiscal year; CY is calendar year.

We were able to obtain information on Medicaid expenditures by the recipient's county of residence for 17 states (Table 3). It is important to note that differences in the characteristics of Medicaid eligibles in rural and urban areas may account for some of the geographic differences in expenditures per eligible. For example, per eligible expenditures in rural areas may be higher than those in urban areas if a higher proportion of the rural Medicaid eligibles are elderly or people with disabilities. These groups use more intense acute and long-term care services and therefore have much higher per capita spending than other adults and children.[8] For this reason, comparisons of expenditures across rural and urban areas should be interpreted with caution.

Table 3. Medicaid Expenditures in Rural and Urban Counties by State
Administrative Data From State Web Sites

	Rural		Urban		
State	Total Expenditures	Per Eligible	Total Expenditures	Per Eligible	Time Period of Data
Alabama	$1,182,000,000	$3,483	$2,226,900,000	$3,432	FY 2006
Arkansas	$1,291,010,586	$3,646	$1,433,015,601	$3,529	FY 2006
California	$609,051,609		$16,142,582,147		FY 2004
Georgia	$1,812,825,434	$3,344	$4,685,371,706	$2,702	FY 2006
Iowa	$99,865,038	$624	$106,348,195	$577	Jul 2006
Louisiana	$1,220,384,705	$3,932	$2,715,029,064	$3,681	FY 2003
Minnestoa	$1,734,635,098		$3,808,372,900		CY 2004
Missouri	$1,887,000,000	$6,073	$3,285,600,000	$5,644	FY 2006
Montana	$29,147,085	$539	$12,760,395	$469	Sep 2006
Nebraska	$626,888,000	$6,456	$653,117,000	$6,094	FY 2003
New York	$1,853,298,441		$33,087,241,789		CY 2004
North Carolina	$2,975,004,812	$6,536	$4,587,082,627	$6,073	FY 2005
Ohio	$2,476,776,127	$5,290	$9,493,387,359	$5,711	FY 2005
Oklahoma	$1,273,766,685	$4,046	$1,520,373,148	$3,603	FY 2006
South Carolina	$895,390,333		$2,172,597,538		FY 2003
Virginia	$778,103,434		$1,505,365,337		FY 2006
Washington*	$480,283,150	$2,585	$2,684,677,950	$2,484	FY 2005

Source: Expenditures and eligibles data collected from state web sites. Individual citations are included in each state's profile at www.shepscenter.unc.edu/medicaidprofiles.
Notes: Expenditures are allocated to rural and urban areas based on the eligibles' counties of residence, which are not necessarily the counties in which the expenditures are made. States are not shown if data for the state were not found in a search of state web sites. Counties are defined as urban and rural based on the Core Based Statistical Area (CBSA) designations from the Office of Management and Budget. Rural counties are those defined as micropolitan and those not in a CBSA. FY is fiscal year; CY is calendar year.
Caveat: The expenditure comparisons across rural and urban need to be interpreted with caution. Differences in the composition of the Medicaid eligibles may account for some of the geographic differences in expenditures per eligible. For example, per eligible expenditures in rural areas may be higher than those in urban areas if a higher proportion of rural Medicaid eligibles are elderly and people with disabilities than in urban areas.
*Washington data are spending per recipient (eligibles who used at least one service), not all eligibles.

[8] "The Medicaid Program at a Glance." Kaiser Commission on Medicaid and the Uninsured, March 2007.

County-level data on Medicaid managed care enrollment were available on 11 state web sites (Table 4). States operate several different managed care arrangements for their Medicaid enrollees, including use of commercial or Medicaid managed care organizations, health insuring organizations, primary care case management programs, prepaid inpatient health plans, prepaid ambulatory health plans, or Programs of All-Inclusive Care for the Elderly.[9] Individual states may operate multiple types of managed care programs. The figures in Table 4 may include individuals in any of these arrangements.

[9] The Centers for Medicare and Medicaid Services (CMS) describes these managed care arrangements as follows: A commercial managed care organization (MCO) is "a health maintenance organization, an eligible organization with a contract under Section 1876 or a Medicare+Choice organization, a provider sponsored organization or any other private or public organization, which meets the requirements of Section 1902(w)." A Commercial MCO provides comprehensive services to Medicaid and commercial and/or Medicare populations; a Medicaid MCO provides comprehensive services to only Medicaid beneficiaries, not to commercial or Medicare populations; a Health Insuring Organization is "a managed care entity which, by law, is exempt from certain rules governing MCO program operation such as the requirement for beneficiaries to have a choice of at least two managed care entities in mandatory programs"; a Primary Care Case Management provider is "a provider (usually a physician, physician group practice, or an entity employing or having other arrangements with such physicians, but sometimes with such physicians, but sometimes also including nurse practitioners, nurse midwives, or physician assistants who contracts directly with the State to locate, coordinate, and monitor covered primary care (and sometimes additional services). This category also includes those PIHPs that contract with the State as "primary care case managers"; a Prepaid Inpatient Health Plan is a plan that "provides less than comprehensive services on an at-risk or other than state plan reimbursement basis, and provides, arranges for, or otherwise have responsibility for provision of any inpatient hospital institutional services." States can offer PIHPs for medical services, mental health, substance abuse disorders, or long-term care services; a Prepaid Ambulatory Health Plans is a plan that "provides less than comprehensive services on an at-risk or other that state plan reimbursement basis; and does not provide, arrange for, or otherwise have responsibility for provision of any inpatient hospital or institutional services." States may offer PAHPs for medical services, mental health, substance abuse disorders, dental, transportation or disease management; the Program for All-inclusive Care for the Elderly (PACE) is a "program that provides prepaid, capitated comprehensive, health care services to the frail elderly."

Table 4. Medicaid Managed Care Enrollment in Rural and Urban Counties by State
Administrative Data From State Web Sites

State	Rural		Urban		Time Period of Data
	Total Enrollment	% of Eligibles	Total Enrollment	% of Eligibles	
Arizona	105,363	62.4%	729,251	84.7%	Apr 2007
Florida	14,673	NA	604,540	NA	Apr 2007
Hawaii	54,079	NA	104,960	NA	Jan 2007
Indiana	130,469	73.0%	472,599	76.0%	Aug 2006
Michigan	141,465	46.9%	818,804	66.9%	Apr 2007
New York	41,508	16.2%	1,958,180	50.1%	Mar 2007
North Carolina	315,696	69.4%	530,561	70.2%	May 2007
Ohio	212,707	45.4%	868,520	52.3%	Apr 2007
Oregon	71,426	69.5%	206,990	78.0%	Oct 2006
Pennsylvania	55,041	NA	1,021,042	NA	Jan 2007
Wisconsin	69,068	33.9%	290,454	56.8%	Jan 2007

Source: Managed care enrollment and eligibles data collected from state web sites. Individual citations are included in each state's profile at www.shepscenter.unc.edu/medicaidprofiles.
Notes: See individual state profiles for notes on each state's managed care plans. In general, enrollment figures include all forms of managed care: commercial and Medicaid managed care organizations, health insuring organizations, primary care case management plans, prepaid inpatient health plans, and prepaid ambulatory health plans. States are not shown if data for the state were not found in a search of state web sites. Counties are defined as urban and rural based on the Core Based Statistical Area (CBSA) designations from the Office of Management and Budget. Rural counties are those defined as micropolitan and those not in a CBSA. FY is fiscal year; CY is calendar year

Comparisons between states in Tables 2-4 should be made with caution: data are from varying time periods and there may be slight differences in the way some data elements (e.g., expenditures) were calculated by each state. The purpose of these summary tables is to show the urban-rural variation *within* each state.

In addition to the data presented here, the on-line State Profiles of Medicaid and SCHIP in Rural and Urban Areas (available at www.shepscenter.unc.edu/medicaidprofiles) contain information on several features of the programs in each state, including:

- **Medicaid Eligibility**: The maximum family income that an individual or family in a Medicaid eligibility group can have and qualify for Medicaid.

- **SCHIP Features**: The state's SCHIP enrollment, maximum income limits, and program structure (a state's SCHIP program may be structured as a separate state program, a Medicaid expansion, or a combination thereof).

- **Services Covered**: The Kaiser Family Foundation's Medicaid Benefits Online Database provides information on services covered by each state's Medicaid program, and a link is provided to this data source.

- **Delivery System Description**: Statewide Medicaid enrollment by delivery system type (fee-for-service or managed care) as of June 30, 2005. Managed care enrollment

data are presented by type of managed care arrangement: commercial or Medicaid HMOs, health insuring organizations, primary care case management programs, prepaid inpatient health plans, prepaid ambulatory health plans, or Programs of All-Inclusive Care for the Elderly.

- **Rural Information**: Data that compare Medicaid enrollment and spending in urban and rural counties and information on some state Medicaid program characteristics that are relevant to rural areas, including:

  1) Current Population Survey (CPS) Data: The percentage of urban and rural residents who reported that they had any Medicaid coverage during the past year.

  2) State Website Data: County-level data on Medicaid eligibles or recipients, expenditures, and managed care enrollment aggregated into urban and rural areas. County level data were not available for all states.

  3) Critical Access Hospitals Reimbursement: Whether the state Medicaid program pays critical access hospitals using cost-based reimbursement.

  4) State Plan Amendment under the Deficit Reduction Act (DRA). The DRA of 2005 gave states the authority to offer different services to Medicaid recipients in different geographic areas of the state. For those states that have filed a State Plan Amendment under the DRA, this chart provides information on whether they are varying benefits by geographic area.