Introduction and National Summary Tables

Medicaid and the Children's Health Insurance Program (CHIP) are publicly funded health insurance programs that provide coverage to almost 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 six 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 CHIP 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 CHIP in rural areas. There is no easily-accessible national source of Medicaid or CHIP administrative data that differentiates between rural and urban 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 CHIP 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. State-specific information and data can be found in the State Profiles. This document provides a summary of the data found in these profiles, focusing on the comparison of Medicaid enrollment and expenditures in rural and urban counties.

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

An analysis of CPS data shows that in 23 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, 16.1 percent of rural residents reported being enrolled in Medicaid, compared to 13.2 percent of urban residents. Among children ages 18 and younger, Medicaid coverage was statistically significantly higher in rural areas in 19 states. Among non-elderly adults ages 19 to 65, Medicaid coverage was statistically significantly higher in rural areas in 13 states. There are fewer (4) 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, 2008-2009

	0-18		19-64		65 and over		Total	
State	*Rural*	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*
United States	34.7*	27.6	10.1*	7.9	8.6	9.1	16.1*	13.2
Alabama	35.6	29.1	10.6	7	15.1	11.7	17.7*	13.3
Alaska	25.3	19.9	7.1	7.3	13.8	9.1	12.4	11.2
Arizona	46.0*	30.6	23.3*	10	11.4	6.7	28.5*	15.3
Arkansas	54.6*	39.2	8.3*	4.7	9.7	6.5	20.8*	14.2
California	46.3	32.7	11.6	9.4	4.5*	16.5	19.3	16.6
Colorado	N/A	16.6	N/A	5.2	N/A	10.8	N/A	8.7
Connecticut	27.7	23.5	13	7.7	3.6	5	15.6	11.3
Delaware	40.2*	22.1	11.8	9	1.7*	6.4	15.2	12.3
District of Columbia	N/A	41.7	N/A	15.7	N/A	10.2	N/A	20.3
Florida	37.6*	22.6	16.3*	5.4	11.1	7.3	19.8*	9.8
Georgia	37.1	28.8	7	4.7	8.5	6.4	14.8	11.7
Hawaii	33.5*	24	9.4	6.1	5.4	10.6	15.4*	11
Idaho	22.9	22.9	4.8	5.4	4.4	9.6	9.9	11.1
Illinois	34.5	28.4	11.7*	6.6	4.2	4.6	16.3*	12.2
Indiana	28.3	32.2	5.3	6.7	3.2	4.9	11.2	13.4
Iowa	29.8	21.9	6.3	7.7	5.8	9.3	11.9	11.6
Kansas	27.3	26.3	5.2	6	3.5	3.5	10.4	11.7
Kentucky	33.9	34.2	12.9*	6.8	11.4	10	18.0*	14
Louisiana	N/A	32	N/A	6.3	N/A	10.2	N/A	13.8
Maine	40.7*	28.8	18.6*	12	19.3	16.1	23.4*	16.5
Maryland	47.3*	20.8	8	5.3	7.3	7.6	18.6*	9.6
Massachusetts	10.5*	27.8	2.3*	16	0.0*	9.6	4.4*	18
Michigan	36.9*	27.7	9.8	8.6	3.7	4.7	15.7	13.1
Minnesota	33.2*	16.7	15.4*	7	6.7	5.3	19.2*	9.2
Mississippi	46.2*	35.2	12.3	10.9	20	24.1	23.1*	19
Missouri	50.2*	22.8	13.2*	6	8.5	8.4	21.6*	10.7
Montana	31.3	24.6	7.4	7.2	6.2	3.8	13.3	10.5
Nebraska	28.4*	19.8	8.2	5.1	6.8	5.7	13.4*	9.1
Nevada	N/A	15.9	N/A	4.5	N/A	7.1	N/A	7.9
New Hampshire	25.1*	14.4	3.8	3	2.1	5.1	8.5	6
New Jersey	N/A	17.3	N/A	6.1	N/A	7.1	N/A	9.1
New Mexico	45.1*	30.2	10.7	8.1	7	10	19.9*	14.2
New York	24.8*	35.2	11.9	14.8	8.2*	16.3	14.5*	20
North Carolina	36.4*	27.1	10.8*	6.5	9.1	7.7	17.1*	12.1
North Dakota	23.1	17.5	5.5	3.6	6.4	5.5	10.1*	7.2
Ohio	23	28.4	8	7.7	3.4	3.8	10.9	12.7
Oklahoma	37.8	33.3	10.1*	5.6	8.5	4.5	17.5*	13
Oregon	31.3	24	8.1	6.8	8.2	5	13.4	10.8
Pennsylvania	28	25.8	9.4	9.3	8.5	5.1	13.6	12.7
Rhode Island	N/A	28.3	N/A	11.1	N/A	7.5	N/A	14.8
South Carolina	37.8*	22	11.5*	6.6	14	7.7	18.8*	10.6
South Dakota	27.3	20.4	7.2*	3.8	4.9	9.3	11.9*	9.1
Tennessee	40.7	32.5	13.7	10	11.7	12	20.0*	15.9
Texas	35.7	30.1	6.6	5.6	11.8	8.8	15.4	13.2

Utah	N/A	13.3	N/A	3.9	N/A	7.1	N/A	7.2
Vermont	39.1	34	15.5	12.4	13.9	8.4	20.4	16.7
Virginia	32.4*	17.2	8.0*	3.8	9.1	6.3	14.4*	7.5
Washington	32.2	25.4	10.9	8.4	6.7	6.1	15.8	12.5
West Virginia	41.6	34.3	9.6	8.1	7	4.4	16.5	13.6
Wisconsin	28.5	25.2	10.2	9.4	4	6.2	14	13
Wyoming	24.4	18.9	5.9	5.8	6.2	3.7	10.7	9.1

*Significantly different than urban at the 5% level.
Source: Current Population Survey, 2008 and 2009 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 county-level administrative 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 35 states and the District of Columbia (Table 2). In 31 of these states, Medicaid enrollment as a share of the population was higher in rural than in urban areas. Medicaid enrollment as a share of the population was higher in urban than in rural areas in 3 states. (The remaining areas, New Jersey and the District of Columbia, have no rural counties). For 13 states, the variation between rural and urban areas was at least five percentage points.

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	290,012	21.6%	560,873	16.6%	Apr 2010
Arizona	202,927	30.3%	1,156,124	19.5%	May 2010
Arkansas	354,008	30.8%	420,497	24.6%	FY 2009
California	159,929	19.1%	6,957,692	19.2%	May 2010
Colorado	76,640	11.1%	435,610	10.0%	Mar 2010
District of Columbia	NA	NA	144,910	24.5%	FY 2008
Florida	203,965	17.3%	2,713,023	15.6%	Feb 2010
Georgia	332,098	18.4%	928,385	11.7%	FY 2008
Hawaii	92,075	23.7%	157,800	17.3%	Jan 2010
Idaho	72,600	13.6%	134,246	13.2%	Dec 2009
Indiana	193,362	13.9%	674,035	13.6%	Dec 2007
Iowa	198,453	15.2%	244,094	14.3%	Mar 2010
Kentucky	419,942	23.0%	328,340	13.1%	FY 2009
Louisiana	344,598	30.3%	800,015	23.8%	Apr 2010
Maine	111,411	20.4%	120,355	15.5%	Feb 2010
Maryland	40,346	13.2%	586,758	10.0%	SFY 2009
Michigan	357,544	19.4%	1,512,731	18.5%	Mar 2010
Minnesota	174,560	13.2%	431,092	10.9%	Dec 2009
Missouri	271,936	18.3%	544,019	12.6%	FY 2008
Montana	56,728	8.5%	29,605	9.0%	Mar 2010
Nebraska	90,833	12.1%	110,403	10.7%	FY 2007
New Jersey	NA	NA	902,080	10.3%	Apr 2010
New Mexico	183,113	27.1%	298,575	22.3%	Jan 2010
New York	281,364	18.2%	4,238,825	23.5%	Sep 2009
North Carolina	522,637	18.9%	925,653	13.9%	Jul 2010

Ohio	379,004	21.4%	1,704,509	18.4%	SFY 2006
Oklahoma	336,190	25.5%	467,074	20.0%	SFY 2009
Oregon	118,492	14.1%	317,577	10.7%	Dec 2008
South Carolina	270,865	25.4%	632,532	18.4%	FY 2008
South Dakota	67,342	15.5%	44,064	11.7%	Apr 2010
Tennessee	371,528	22.3%	813,184	17.6%	Feb 2010
Texas	428,234	14.3%	2,582,567	11.9%	May 2010
Vermont	105,399	25.2%	38,349	18.6%	Jan 2008
Washington	182,258	22.4%	1,059,073	18.1%	FY 2009
West Virginia	147,942	18.3%	140,168	13.8%	Feb 2010
Wisconsin	218,163	14.3%	545,196	13.2%	Apr 2010

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: The term “eligibles” refers to individuals who are enrolled in Medicaid (and therefore eligible to use Medicaid services), rather than the larger population that is potentially qualified to enroll in Medicaid. States are not shown if data from 2006 or a more recent time period were not found in a search of the state’s Medicaid 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 19 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	Year
Alabama	$1,377,700,000	$4,366	$2,885,900,000	$4,785	Apr 2010
Arkansas	$1,455,418,259	$4,111	$1,721,019,687	$4,092	FY 2009
California	$609,051,609	$4,060	$16,142,582,147	$2,452	FY 2008
Georgia	$1,772,734,649	$5,338	$4,636,367,881	$4,994	FY 2008
Indiana	$86,258,935	$446	$261,972,383	$388	Dec 2007
Iowa	$120,681,362	$608	$138,699,413	$568	Mar 2010
Louisiana	$1,220,384,705	$3,197	$2,715,029,064	$3,172	FY 2007/08
Minnesota	$1,947,646,930	$11,157	$5,061,599,070	$11,741	Dec 2009
Missouri	$1,887,000,000	$6,939	$3,285,600,000	$6,039	FY 2008
Montana*	$39,527,765	$696	$20,089,644	$678	Mar 2010
Nebraska	$626,888,000	$6,902	$653,117,000	$5,916	FY 2007
New York	$161,188,733	$572	$3,038,353,135	$716	May 2008
North Carolina	$3,061,495,133		$4,845,776,702		CY 2006
Ohio	$2,394,429,946	$5,478	$9,337,836,552	$4,998	FY 2006
Oklahoma	$1,543,192,335	$4,590	$1,970,376,226	$4,218	FY 2009
South Carolina	$1,056,972,871	$3,902	$2,677,798,466	$4,233	FY 2008
Tennessee	$2,043,100,040	$1,224	$4,072,099,639	$879	Feb 2010
Virginia	$778,103,434		$1,505,365,337		FY 2006
Washington	$480,283,150	$2,517	$2,684,677,950	$2,535	FY 2007

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: The term "eligible" refers to individuals who are enrolled in Medicaid (and therefore eligible to use Medicaid services), rather than the larger population that is potentially qualified to enroll in Medicaid. 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 from 2006 or a more recent time period were not found in a search of the state's Medicaid 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.
*Montana data are spending per recipient (eligibles who used at least one service), not all eligibles.

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.

. **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	119,250	62.0%	859,817	81.0%	May 2009
Florida	342,255	NA	473,201	NA	May 2009
Hawaii	64,611	NA	113,614	NA	Nov 2008
Indiana	113,801	64.0%	422,030	68.0%	Dec 2007
Michigan	141,465	NA	818,804	NA	May 2009
New York	75,775	45.0%	2,423,283	86.0%	June 2009
North Carolina	392,636	82.0%	711,341	82.0%	May 2010
Ohio	277,239	95.1%	1,096,758	97.4%	July 2009
Oregon	100,298	77.9%	297,243	83.9%	Apr 2010
Pennsylvania	53,455	NA	1,023,980	NA	Dec 2007
Wisconsin	71,859	39.2%	446,236	66.8%	Oct 2008

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: The term "eligibles" refers to individuals who are enrolled in Medicaid (and therefore eligible to use Medicaid services), rather than the larger population that is potentially qualified to enroll in Medicaid. 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 from 2006 or a more recent time period were not found in a search of the state's Medicaid 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 variation between rural and urban areas *within* each state.

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[1] "The Medicaid Program at a Glance." Kaiser Commission on Medicaid and the Uninsured, November 2008.
[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.
[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.
[8] "The Medicaid Program at a Glance." Kaiser Commission on Medicaid and the Uninsured, March 2007.
[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."