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Health Insurance Coverage in Rural and Urban Missouri

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OVERVIEW

People living in rural Missouri are more likely than those living in urban areas to be covered by public programs (including Medicaid), and less likely to be covered by private insurance (including employer sponsored health insurance). The most significant difference is in Medicaid coverage; in Missouri 23.8% of rural residents are covered by Medicaid, compared to 15.8% in urban areas. In part the higher enrollment in public programs is driven by lower coverage rates for private coverage for rural persons: 60.0% of rural residents had private insurance in 2023, 11 percentage points lower than urban residents (71.0%). Employer-based insurance is the primary driver of this difference: only 45.2% of rural Missourians had employer-based coverage compared to 60.1% in urban areas—a substantial 14.9-point gap.

Despite rural residents being more likely to have public insurance coverage, the uninsured rate for those living in rural areas in Missouri was 9.5% in 2023, significantly higher than the 6.8% rate in urban areas. While a similar pattern is observed nationwide—8.3% uninsured in rural areas versus 7.8% in urban areas—the rural-urban gap in Missouri is more pronounced.

This brief explores comparisons of insurance coverage for persons living in rural and urban areas in Missouri, with comparisons to national averages during the 2021 to 2023 period.

DATA AND METHODS

As outlined in the Appendix, there are several data sources and methods that could be used to measure rural and urban differences across the populations, and the findings will also be affected by the methods used, and the data sources used. This brief is mostly based on data from the American Community Survey (ACS), augmented by other sources. See the Appendix for more details on the data, definitions and methods used here.

KEY FINDINGS

- While 7.4 percent were uninsured in Missouri, uninsured rates were higher in rural areas, as compared to urban areas. While a similar pattern is observed nationwide the rural-urban gap in Missouri is more pronounced.
- People in rural areas in Missouri were less likely to hold private sources of coverage than people living in urban areas. In contrast, people living in rural areas in Missouri were more likely than people in urban areas to hold public sources of coverage, especially Medicaid coverage.
- In the 2021-23 period, insurance coverage rates changed markedly in Missouri, as the Medicaid expansion was implemented. The percentage of persons with Medicaid coverage grew significantly in rural and urban areas, especially for those age 19-64.
- Insured rates vary significantly by age group: uninsured rates are lowest for those above age 65, due to near universal coverage from Medicare. Uninsured rates are highest in the age 19-64 age group in all areas.

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RESULTS

In 2023, Missouri's uninsured rate stood at 7.4%, slightly lower than the national average of 7.9%, indicating that Missouri's insurance coverage rates line up close to the national average (not shown here; see Appendix for details). Missouri exhibits notable rural-urban differences in health insurance coverage, with a larger gap compared to the national average, as shown in **Figure 1**. The uninsured rate in rural Missouri was 9.5% in 2023, significantly higher than the 6.8% rate in urban areas. While a similar pattern is observed nationwide—8.3% uninsured in rural areas versus 7.8% in urban areas—the rural-urban gap in Missouri is more pronounced. Additionally, rural Missourians experience a higher uninsured rate than their national counterparts by 1.3 percentage points, whereas urban Missourians fare better, with an uninsured rate 1.1 points lower than the national urban average.

*Figure 1. Insurance Coverage Rates, by Residence, Compared with the US, 2023**

Insurance Coverage (2023)	Rural			Urban		
	Missouri	U.S.	Missouri - U.S.	Missouri	U.S.	Missouri - U.S.
Uninsured	9.5%	8.3%	1.3%	6.8%	7.8%	-1.1%
Insured	90.5%	91.7%	-1.3%	93.2%	92.2%	1.1%
Private	60.0%	62.7%	-2.7%	71.0%	67.8%	3.2%
Employer-based	45.2%	48.8%	-3.6%	60.1%	55.7%	4.4%
Direct-purchase	14.4%	15.3%	-0.9%	12.4%	13.7%	-1.3%
TRICARE	4.3%	3.0%	1.4%	2.4%	2.7%	-0.3%
Public	44.2%	44.3%	-0.1%	33.5%	36.3%	-2.8%
Medicare	23.3%	23.3%	0.1%	19.1%	18.1%	1.0%
Medicaid	23.8%	24.4%	-0.7%	15.8%	20.8%	-5.0%
VA	3.7%	3.0%	0.7%	2.4%	2.1%	0.3%

NOTES: *Individuals may hold more than one form of primary health insurance; thus, the totals may add to more than 100 percent. TRICARE is the health insurance program for the U.S. military, managed by the Pentagon's Defense Health Agency; the Census Bureau classifies TRICARE as private coverage because it is employer-based. The VA coverage refers to the Civilian Health and Medical Program of the Department of Veterans Affairs comprehensive health care program provided by the Department of Veterans Affairs (VA) for former military.

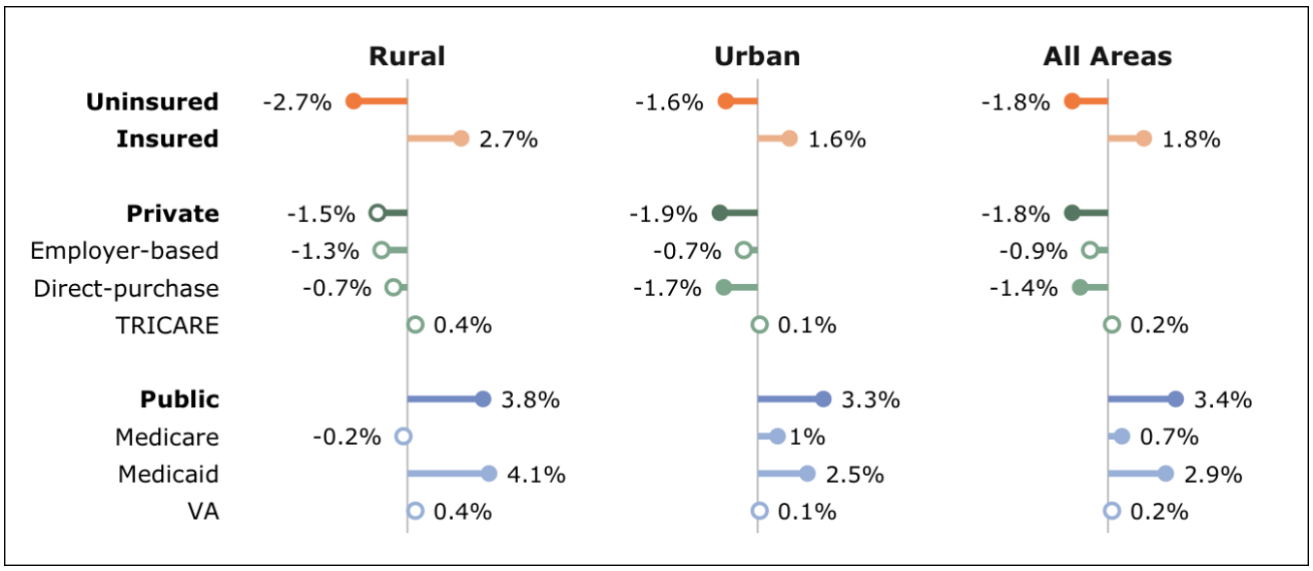
Private Insurance: Lower Coverage in Rural Missouri. Urban Missourians are more likely to have private insurance than their rural counterparts. Statewide, 60.0% of rural residents have private insurance, 11 percentage points lower than urban residents (71.0%). Employer-based insurance is the primary driver of this difference: only 45.2% of rural Missourians have employer-based coverage compared to 60.1% in urban areas—a substantial 14.9-point gap. Conversely, direct-purchase insurance (whether purchased in the ACA marketplaces or otherwise) is slightly more common in rural areas (14.4%) than in urban ones (12.4%), as is TRICARE (4.3% rural vs. 2.4% urban). Compared to national trends, rural Missourians are less likely to have private insurance than rural residents nationwide (-2.7 percentage points), mainly due to lower employer-based coverage (-3.6 points). However, Missouri's urban residents have a higher private insurance rate than urban residents nationwide (+3.2 points), driven by a greater prevalence of employer-based insurance (+4.4 points). Direct-purchase insurance is slightly less common in Missouri across both rural (-0.9 points) and urban (-1.3 points) areas compared to the national average.

Public Insurance: More Common in Rural Areas. Public insurance plays a more significant role in rural Missouri, covering 44.2% of rural residents, 10.7 percentage points higher than urban Missouri (33.5%). Specifically, 23.3% of rural Missourians have Medicare, 23.8% have Medicaid, and 3.7% are covered by VA benefits. In contrast, urban coverage rates are lower across all categories: 19.1% for Medicare, 15.8% for Medicaid, and 2.4% for VA. Compared to national figures, Missouri's rural public insurance coverage aligns closely with the U.S. average, with only minor differences (-0.1 points public, +0.1 points Medicare, -0.7 points Medicaid, +0.7 points VA). However, those living in urban Missouri lag behind the U.S. urban residents by 2.8 percentage points. The most significant gap is in Medicaid, where Missouri's urban coverage rate (15.8%) is five percentage points lower than the U.S. urban rate (20.8%).

Shifts in Health Insurance Coverage (2021–2023). Between 2021 and 2023, Missouri experienced a decline in the uninsured rate across all areas, accompanied by a shift from private to public insurance coverage (**Figure 2**). This trend highlights the increasing role of public insurance programs, particularly in rural areas, while raising concerns about the decline in employer-based and direct-purchase private insurance. Public insurance coverage expanded significantly, due to the implementation of the Medicaid expansion (as well as people remaining on the Medicaid rolls through the Public Health Emergency, PHE). Rural Missouri saw the most substantial increase, with public insurance enrollment rising by 3.8 percentage points, compared to a 3.3-point increase in urban areas and 3.4 points statewide. Medicaid played a central role in this expansion, increasing by 4.1 points in rural areas, 2.5 points in urban areas, and 2.9 points statewide. Medicare coverage remained stable overall, with a slight increase in urban enrollment (+1 points) and statewide (+0.7 points).

The uninsured rate fell statewide by 1.8 percentage points, with rural areas seeing the largest reduction at 2.7 points, followed by urban areas at 1.6 points. However, this decline in the uninsured rate coincided with a reduction in private insurance coverage. Overall, private insurance enrollment dropped by 1.8 percentage points, with a slightly greater decline in urban areas (1.9 points). Most changes in private insurance coverage rates from 2021 to 2023 were not statistically significant, except for direct-purchase insurance, which saw declines of 1.7 points in urban areas and 1.4 points statewide.

Figure 2. Changes in Insurance Coverage Rate, by Residence, from 2021 to 2023



NOTES: Open circles indicate changes between 2021 and 2023 that are NOT statistically significant at the 95% confidence level, while filled circles represent statistically significant changes.

RURAL AND URBAN ENROLLMENT IN MEDICAID BASED ON ADMINISTRATIVE DATA

As noted above, people residing in rural places in Missouri are more likely than those living in urban areas to be enrolled on Medicaid. This conclusion was based on an analysis of survey data from the Census Bureau. Another way to look at enrollment on Medicaid is to look at the "administrative data," that is the officially reported enrollment on Medicaid from the State of Missouri's Department of Social Services (DSS), at the county level, and use the characterization of the county to identify rural and urban counties (see Appendix for more discussion of this data).

Table 1. Rural and Urban Enrollment in Medicaid in Missouri, November 2024

Area of residence	Medicaid enrollment, Nov. 2024 (thousands)	Population (thousands)	Percent of population enrolled in Medicaid
Rural	395.8	1,505.9	26.3%
Urban	864.6	4,649.0	18.6%
TOTAL	1,260.3	6,154.9	20.5%

Sources: enrollment data in Medicaid based on reports from Missouri Department of Social Services, Monthly Management Report; data on county level population from U.S. Census.

Using this method, 26.3% of people living in rural areas were enrolled on Medicaid in November 2024, as compared to 18.6% in urban areas (see Table 1). While these rates of enrollment in Medicaid are higher than the numbers computed from the Census survey (cited above), this difference between enrollment based on administrative data and enrollment based on individual surveys has been noted for years in the literature.[1] It is worth noting that the difference between enrollment rates in Medicaid based on administrative data are consistent across rural and urban areas (about 2.5-3 percentage points in both areas).

CHARACTERISTICS OF THE RURAL AND URBAN UNINSURED

Exploring the characteristics of those without health insurance increases the understanding of challenges faced by rural and urban Missouri. Figures 3-6 present a range of characteristics of people without health insurance in Missouri.

Figure 3. Uninsured rate, by income relative to Federal Poverty Line (FPL) in Rural and Urban areas, Missouri and the U.S.

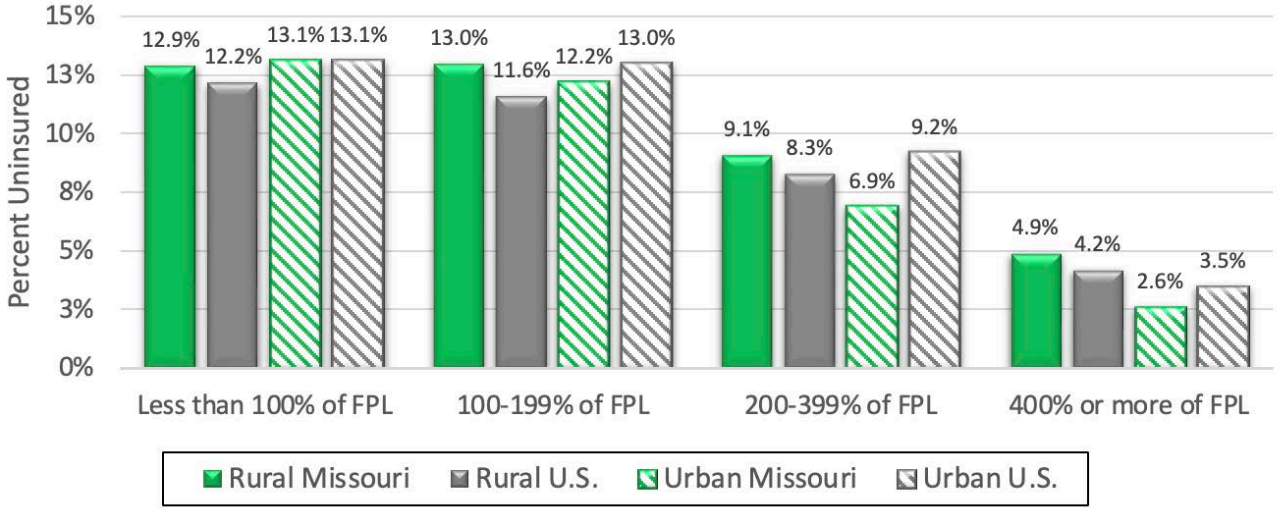


Figure 3 shows how uninsurance rates vary by incomes relative to the federal poverty line (FPL), defined as $15,650 for one person and $26,650 for a family of three persons in 2025.[2] As shown, uninsurance rates are highest among those with incomes below 200% of the FPL in Missouri and in the US, and lowest for those above 400% of the FPL. In general, the higher uninsured rates among those with lower incomes result from lack of access to employer sponsored insurance (ESI), and inability to afford private health insurance.

It is notable that uninsurance rates are higher for rural people in Missouri, across all income levels, as compared to those living in urban areas in Missouri. It is likely that this results from factors such as the lack of access to employer sponsored health insurance in rural areas[3], because incomes are lower and poverty rates higher in rural areas[4], or because health insurance premiums are higher in rural areas (for example, in the ACA marketplaces).[5]

Uninsurance rates for rural people in Missouri are slightly higher (12.9%) than in the U.S. (12.2%) for those with income under the poverty line, and between 100% and 199% of the FPL. In Missouri, uninsurance rates are similar in rural areas, compared to people living in urban areas for those under the poverty line, though higher for those in the 100-199% category in Missouri. Uninsurance rates are significantly higher for those who have incomes above 200% of FPL for rural people in Missouri, compared to urban people in Missouri.

People of Hispanic origin have the highest uninsured rates of any group in Missouri and in the U.S. (see Figure 4 and Appendix table 1). Uninsurance rates are also high for African Americans in Missouri and the U.S. The lowest uninsured rates are for white persons, not of Hispanic origin. In general, these differences stem from social demographic factors, related to the jobs held by individuals; those with lower wage jobs are less likely to have ESI coverage or to be able to afford health insurance.

Figure 4. Uninsured rate, by Race and Ethnicity, in Rural and Urban areas, in Missouri and the U.S.

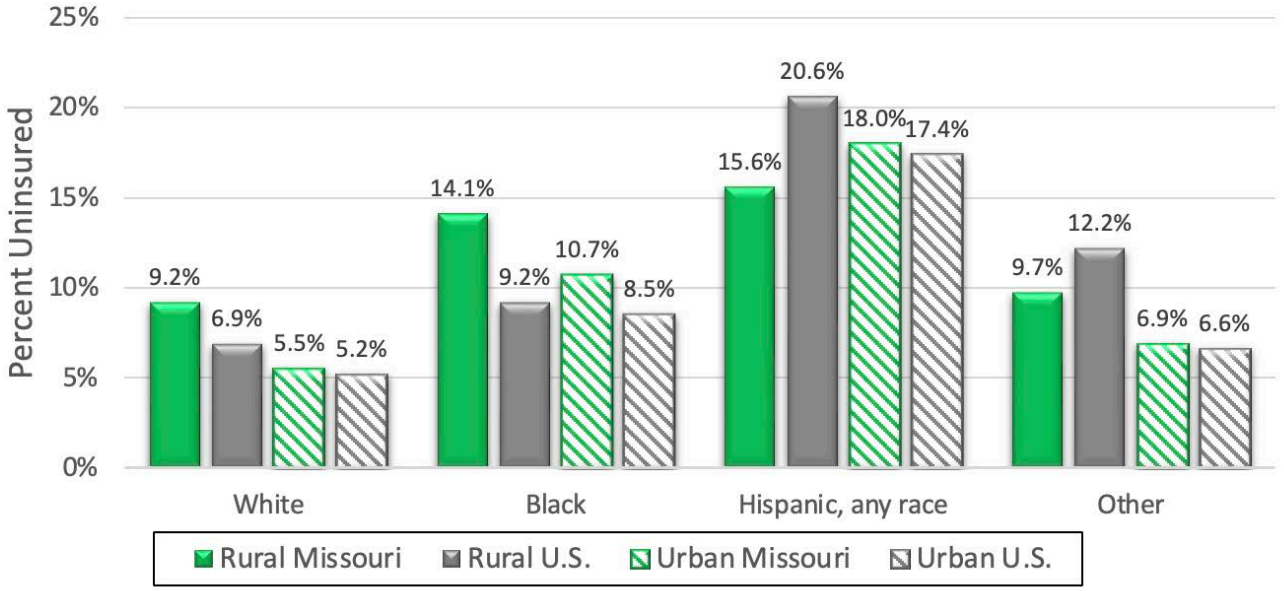
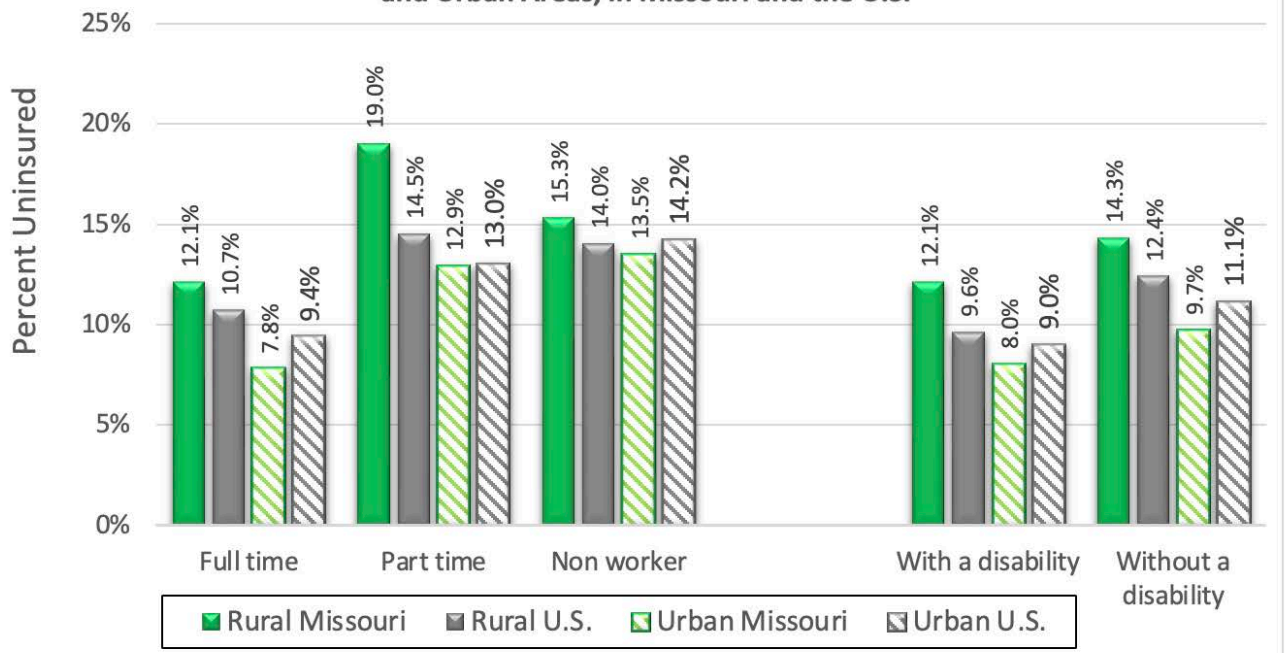


Figure 4 shows that uninsurance rates are higher for Black persons (14.1%) living in rural areas in Missouri than Black persons living in urban areas in Missouri (10.7%), and Black persons living in rural or urban areas across the U.S. Uninsurance rates are higher for people of Hispanic origin in rural areas (15.6%), but notably lower than uninsurance rates for Hispanic people living in urban Missouri (18%) or Hispanic persons living in rural or urban areas across the U.S. It is worth noting that a much smaller percentage of the uninsured population living in rural or urban Missouri are of Hispanic (under 5%), compared to the U.S. (35%).

Turning to working age (age 19-64) people, uninsured rates are highest for those who are part-time workers or not working, compared to those who work full time (Figure 5). In general, this is because full time workers are more likely to be offered ESI and have higher incomes, making health insurance more affordable. Rural persons in Missouri have higher uninsurance rates regardless of their work status, appreciably higher than uninsurance rates for workers aged 19-64 living in urban areas in Missouri or across the U.S. However, uninsurance rates are highest for part time workers living in rural areas in Missouri (19%), and non-workers (15.3%).

Figure 5. Uninsured rate, Age 19-64, by Work Status and Disability Status, in Rural and Urban Areas, in Missouri and the U.S.



Persons aged 19-64 without a disability have somewhat higher uninsurance rates in Missouri and in the U.S., in part because those with a disability are more likely to be covered by Medicaid. Uninsurance rates are highest for people living in rural areas in Missouri whether they have a disability or not, significantly higher than uninsurance rates for people living in urban areas, or rural and urban persons living in the U.S.

IMPLICATIONS, LIMITATIONS AND FURTHER RESEARCH

Insurance coverage rates have increased significantly in Missouri since 2021, primarily due to the implementation of the Medicaid expansion in the state. Gaps remain between insurance coverage rates in rural areas and urban areas, with rural areas having a higher uninsured rate and higher coverage through Medicaid than urban Missouri, regardless of most sociodemographic characteristics. Further analysis presented here confirms what has been found in other studies; that much of the reason why uninsurance rates are higher in rural areas relates to several factors: (1) rural workers are less likely to have access to ESI; (2) rural workers who work part time are less likely to have access to ESI, (3) health insurance premiums are higher in rural areas, (4) incomes are lower in rural areas making it more difficult to afford health insurance, and (5) rural people are more likely to have disabilities creating challenges for people seeking to access health insurance.[6]

The analysis presented here provides important details about how insurance coverage rates vary between rural and urban areas in Missouri, and how it compares to the U.S. It will be important to monitor changes in insurance coverage in Missouri, and how it compares to the U.S., especially as the Medicaid expansion is fully implemented in the state, and annual reverifications have started again after the PHE ended.

APPENDIX: DATA AND METHODS

There are several methods that could be used to measure rural and urban differences across the populations, and the findings will be affected by the methods used, and the data sources used.[7]

Rural definition. The 2023 Rural-Urban Continuum Codes are used to identify urban (RUCC=1-3) and rural (RUCC=4-9) counties.[8] The data set used here, the American Community Survey (ACS)[9], was analyzed at the Public Use Microdata Area (PUMA) level, for those who were not institutionalized.[10] Urban and rural classifications were determined using the Census Bureau's 2020 PUMA population estimates and geographic delineations, along with the 2023 Rural-Urban Continuum Codes (RUCC).[11]

Alternative definitions could be used to identify rural areas in Missouri or the U.S., leading to slightly different results. The definition used should be guided by the planned use for the analysis.[12]

Insurance data: In this brief we primarily used data from the U.S. Census Bureau, the American Community Survey (ACS) for the analysis of insurance status. The U.S. Census Bureau released the ACS data for the United States in September 2024, based on insurance status for 2023, and in previous years. The ACS provides individual-level data to describe population characteristics, which historically has been the most-often cited source of health insurance coverage in the United States. The survey allows for a comprehensive look at the health insurance coverage of people in Missouri and the U.S., including private, employer, and public (Medicare and Medicaid) coverage. The ACS data allows for analysis of socioeconomic, employment, and health characteristics. The insurance coverage was analyzed in relation to demographic, economic, employment, and health characteristics using cross-tabulation. The analysis describes the insured and uninsured populations in 2023 and tracks the changes from 2021 to 2023.

Although most of the analysis presented here is based on Census data, another way to look at enrollment on Medicaid is to look at the "administrative data," that is the officially reported enrollment on Medicaid from the State of Missouri's Department of Social Services (DSS).[13] In other words, these are the official counts of enrollment computed by Missouri's Medicaid agency (MOHealthNET). DSS releases this data at the county level, allowing for a characterization of the enrollment by county by rural and urban residence, since most definitions of rurality are based on county-level definitions.

Methods. Statistical testing is used to assess whether the changes were statistically significant.[14]

Appendix Table 1. Characteristics of Uninsured Population in Missouri and the U.S., 2023										
		Missouri								
		All Areas			Rural			Urban		
		Number Uninsured	Percent Uninsured	Percent of Uninsured in Group	Number Uninsured	Percent Uninsured	Percent of Uninsured in Group	Number Uninsured	Percent Uninsured	Percent of Uninsured in Group
TOTAL UNINSURED, ALL AGES		454,441	7.40%	100.00%	141,179	9.50%	100.00%	313,262	6.80%	100.00%
By race/ethnicity										
	White	309,338	6.50%	68.10%	122,200	9.20%	86.60%	187,138	5.50%	59.70%
	Black	71,194	10.90%	15.70%	4,537	14.10%	3.20%	66,657	10.70%	21.30%
	Asian	7,557	5.90%	1.70%	459	5.30%	0.30%	7,098	6.00%	2.30%
	Hispanic, any race	41,828	17.60%	9.20%	6,007	15.60%	4.30%	35,821	18.00%	11.40%
	2 or more races	19,463	6.70%	4.30%	6,582	9.50%	4.70%	12,881	5.90%	4.10%
	Other	5,061	12.30%	1.10%	1,394	12.00%	1.00%	3,667	12.40%	1.20%
By income as percent of poverty										
	Less than 100% of FPL	103,427	13.10%	22.80%	30,417	12.90%	21.50%	73,010	13.10%	23.30%
	100-199% of FPL	134,487	12.40%	29.60%	44,439	13.00%	31.50%	90,048	12.20%	28.70%
	200-399% of FPL	149,423	7.50%	32.90%	47,488	9.10%	33.60%	101,935	6.90%	32.50%
	400% or more of FPL	67,104	3.00%	14.80%	18,835	4.90%	13.30%	48,269	2.60%	15.40%
Total Uninsured, Age 19-64										
Age 19-64 Uninsured		374,900	10.50%	100.00%	114,518	13.90%	100.00%	260,382	9.50%	100.00%
By disability status										
	With a disability	42,651	9.20%	11.40%	16,808	12.10%	14.70%	25,843	8.00%	9.90%
	Without a disability	332,249	10.70%	88.60%	97,710	14.30%	85.30%	234,539	9.70%	90.10%
By work status										
	Full time	209,060	8.80%	55.80%	62,081	12.10%	54.20%	146,979	7.80%	56.40%
	Part time	77,905	14.30%	20.80%	23,651	19.00%	20.70%	54,254	12.90%	20.80%
	Non-worker	87,935	14.10%	23.50%	28,786	15.30%	25.10%	59,149	13.50%	22.70%

		United States								
		All Areas			Rural			Urban		
		Number Uninsured	Percent Uninsured	Percent of Uninsured in Group	Number Uninsured	Percent Uninsured	Percent of Uninsured in Group	Number Uninsured	Percent Uninsured	Percent of Uninsured in Group
TOTAL UNINSURED, ALL AGES		26,059,514	7.90%	100.00%	3,727,905	8.30%	100.00%	22,331,583	7.80%	100.00%
By race/ethnicity										
	White	11,030,195	5.50%	42.30%	2,453,640	6.90%	65.80%	8,576,542	5.20%	38.40%
	Black	3,363,112	8.50%	12.90%	284,810	9.20%	7.60%	3,078,301	8.50%	13.80%
	Asian	1,052,719	5.30%	4.00%	30,671	6.90%	0.80%	1,022,049	5.30%	4.60%
	Hispanic, any race	9,152,351	17.60%	35.10%	647,782	20.60%	17.40%	8,504,564	17.40%	38.10%
	2 or more races	930,519	6.40%	3.60%	144,043	7.60%	3.90%	786,675	6.20%	3.50%
	Other	530,618	12.70%	2.00%	166,961	17.10%	4.50%	363,653	11.40%	1.60%
By income as percent of poverty										
	Less than 100% of FPL	5,745,308	12.90%	22.00%	878,833	12.20%	23.60%	4,866,467	13.10%	21.80%
	100-199% of FPL	6,544,190	12.70%	25.10%	1,012,644	11.60%	27.20%	5,531,540	13.00%	24.80%
	200-399% of FPL	8,829,180	9.10%	33.90%	1,246,367	8.30%	33.40%	7,582,802	9.20%	34.00%
	400% or more of FPL	4,940,836	3.60%	19.00%	590,060	4.20%	15.80%	4,350,772	3.50%	19.50%
Uninsured, Age 19-64										
Total Uninsured, Age 19-64		21,447,158	11.00%	100.00%	3,009,983	12.00%	100.00%	18,437,157	10.90%	100.00%
By disability status										
	With a disability	1,990,364	9.10%	9.30%	358,974	9.60%	11.90%	1,631,386	9.00%	8.80%
	Without a disability	19,456,794	11.20%	90.70%	2,651,009	12.40%	88.10%	16,805,771	11.10%	91.20%
By work status										
	Full time	12,333,500	9.60%	57.50%	1,704,676	10.70%	56.60%	10,628,815	9.40%	57.60%
	Part time	4,039,534	13.20%	18.80%	540,664	14.50%	18.00%	3,498,866	13.00%	19.00%
	Non-worker	5,074,124	14.20%	23.70%	764,643	14.00%	25.40%	4,309,475	14.20%	23.40%

ENDNOTES

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[8]USDA, Economic Research Service, "Rural-Urban Continuum Codes," updated January 2025. https://www.ers.usda.gov/data-products/rural-urban-continuum-codes

[9]U.S. Census Bureau, American Community Survey 2023 1-Year Estimates Public Use Microdata Sample, accessed September 12, 2024,https://www2.census.gov/programs-surveys/acs/data/pums.

[10]This follows procedures used by the Census Bureau in their reports on health insurance status, as they also excluded people in institutions See: https://www2.census.gov/programs-surveys/demo/tables/health-insurance/2024/acs-hi/hi05_acs.xlsx . For the geographic analysis presented here, the likelihood of an individual residing in ether a metropolitan or non-metropolitan area was determined using the Census Bureau's 2020 PUMA population estimates and geographic delineations,[10] along with the 2023 Non-Metropolitan-Metropolitan Continuum Codes (RUCC). See: U.S. Census Bureau, "Profile of General Population and Housing Characteristics", *Decennial Census, DEC Demographic Profile, Table DP1*, 2020, accessed September 12, 2024, https://data.census.gov/table/DECENNIALDP2020.DP1?g=010XX00US$0500000&d=DEC%20Demographic%20Profile. The methods for doing this are the following: An allocation factor, or the proportion of a PUMA population residing in each county, was established for each PUMA-county pair (following description found in Missouri Census Data Center "Geocorr 2022: Geographic Correspondence Engine," accessed October 16, 2024, https://mcdc.missouri.edu/applications/geocorr2022.html.) Each county was categorized as either metropolitan (RUCC 1-3) or non-metropolitan (RUCC 4-9), following guidance from ERS, based on U.S. Department of Agriculture, Economic Research Service Non-metropolitan-Metropolitan Continuum Codes, January 2024. The county-level allocation factors were summed within each metropolitan and non-metropolitan category at the PUMA level, with each summation reflecting the probability of an individual residing in each PUMA to be categorized as metropolitan or non-metropolitan. These probabilities were then weighted using Public Use Microdata Sample (PUMS) person weights. In response to the Connecticut Office of Policy and Management Secretary's 2019 request, the U.S. Census Bureau implemented the state's nine planning regions as county-equivalent geographic units for statistical purposes in 2023. Therefore, Connecticut 2020 PUMA census data, along with allocation factors, were cross-walked to and replaced by county-equivalent planning region-related data and matched to planning region FIPS codes in the 2023 RUCC. (See Missouri Data Center, 2024). The 2023 RUCC metropolitan and non-metropolitan categorizations of counties is like the 2013 Metropolitan Influence Codes,[10] another commonly used classification scheme, based on standard Office of Management and Budget (OMB) definitions. Because the 2023 RUCC are based on the most recent (2023) OMB delineations of metropolitan and non-metropolitan areas, which in turn are based on 2020 census data,[10] this document utilizes the 2023 RUCC for categorizing counties accordingly. The county-level data in the 2023 RUCC also enables more detailed non-metropolitan/metropolitan classifications, featuring three metropolitan codes and six non-metropolitan codes. This facilitates more refined analyses of differences between metropolitan and non-metropolitan areas in insurance coverage in our future research. See: U.S. Department of Agriculture, Economic Research Service. Metropolitan Influence Codes. May 2013, and OMB Bulletin No. 23-01.

[11]The methods for doing this are the following: An allocation factor, or the proportion of a PUMA population residing in each county, was established for each PUMA-county pair (following description found in Missouri Census Data Center "Geocorr 2022: Geographic Correspondence Engine," accessed October 16, 2024, https://mcdc.missouri.edu/applications/geocorr2022.html.) Each county was categorized as either urban (RUCC 1-3) or rural (RUCC 4-9), following guidance from ERS, based on U.S. Department of Agriculture, Economic Research Service Rural-Urban Continuum Codes, January 2024. The county-level allocation factors were summed within each urban and rural category at the PUMA level, with each summation reflecting the probability of an individual residing in each PUMA to be categorized as urban or rural. These probabilities were then weighted using Public Use Microdata Sample (PUMS) person weights. In response to the Connecticut Office of Policy and Management Secretary's

2019 request, the U.S. Census Bureau implemented the state's nine planning regions as county-equivalent geographic units for statistical purposes in 2023. Therefore, Connecticut 2020 PUMA census data, along with allocation factors, were cross-walked to and replaced by county-equivalent planning region-related data and matched to planning region FIPS codes in the 2023 RUCC. (See Missouri Data Center, 2024).

[12]RUPRI Health Panel. 2020. "Considerations for Defining Rural Policies and Programs," May 2020. https://rupri.org/2020/05/07/considerations-for-defining-rural-places-in-health-policies-and-programs/

[13]State of Missouri, Department of Social Services, Monthly Management Report, various months, found here: https://dss.mo.gov/re/fsd_mhdmr.htm

[14]To assess for statistical significance, a Z-test is used, and significance is assessed at the 95-percent level.