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Geographic Variation in Health Insurance Coverage: United States, 2019

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Abstract

Objectives—This report presents state, regional, and national estimates of the percentage of persons who were uninsured, had private health insurance coverage, and had public health insurance coverage at the time of the interview.

Methods—Data from the 2019 National Health Interview Survey were used to estimate health insurance coverage. Estimates were categorized by age group, state Medicaid expansion status, urbanization level, expanded regions, and state. Estimates by state Medicaid expansion status, urbanization level, and expanded regions were based on data from all 50 states and the District of Columbia. State estimates are shown for 32 states and the District of Columbia.

Results—In 2019, among persons under age 65, 12.0% were uninsured, 64.3% had private coverage, and 25.9% had public coverage at the time of the interview. Among adults aged 18–64 (working-age adults), the percent uninsured ranged from 12.4% for those living in large fringe (suburban) metropolitan counties to 17.5% for those living in nonmetropolitan counties. Working-age adults living in non-Medicaid expansion states (20.8%) were about twice as likely to be uninsured compared with those living in Medicaid expansion states (10.9%). Similar patterns were observed among children aged 0–17 years. The percentage of working-age adults who were uninsured was significantly higher than the national average (14.5%) in Florida (20.6%), Georgia (22.3%), Oklahoma (25.6%), and Texas (30.5%), and significantly lower than the national average in California (11.5%), Minnesota (6.9%), New York (7.4%), Ohio (10.8%), Pennsylvania (9.8%), and Wisconsin (7.7%). The percentage of people under age 65 who were uninsured was lowest in the New England region (4.6%).

Keywords: uninsured • private • public • state level • National Health Interview Survey

Introduction

Health insurance coverage in the United States is a key measure of health care access (1–3). Previous research based on national surveys has found geographic variation in insurance coverage in the United States by urbanization level, state Medicaid expansion status, region, and state (4–6). Population estimates of health insurance coverage at the state level are necessary for the development and assessment of federal and state health care coverage programs and policies (7–9). A recent study found that more than 4 million persons would gain coverage if the remaining non-Medicaid expansion states would fully implement a Medicaid expansion under the provisions of the Affordable Care Act (ACA) (10,11).

This report examines geographic variation in health insurance coverage in the United States in 2019. Estimates of the percentage of persons who were uninsured, had private coverage, and had public coverage at the time of the interview are presented by urbanization level, state Medicaid expansion status, expanded regions, and selected states. The primary focus of this report will be on persons under age 65, because nearly

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all persons in the United States aged 65 and over are eligible for Medicare (12).

Methods

Data source

The estimates in this report are based on data from the Sample Adult and Sample Child modules of the 2019 National Health Interview Survey (NHIS), a nationally representative household survey of the U.S. civilian noninstitutionalized population. It is conducted continuously throughout the year by the National Center for Health Statistics (NCHS). In 2019, the NHIS questionnaire was redesigned to better meet the needs of data users. One sample adult from each household is randomly selected to answer detailed questions about his or her health. One sample child, if present, is also randomly selected from each household, and an adult knowledgeable and responsible for the child's health answers questions on behalf of the child. Interviews are conducted in respondents' homes, but follow-ups to complete interviews may be conducted over the telephone when necessary.

Both the Sample Adult and Sample Child modules have a full range of questions addressing health insurance, such as coverage status, sources of coverage, characteristics of coverage, and reasons for no coverage. Starting in 2019, changes were made to how the health insurance questions were administered. Although the flow and content of the questions pertaining to health insurance is similar to questions covered in the 1997–2018 NHIS Family Core, the main difference is that instead of asking about health insurance for all family or household members, health insurance information is collected about one adult and one child (if present) from each household.

The sample adult and sample child receive a similar set of health insurance questions, so the Sample Adult and Sample Child files can be combined to create a file that contains persons of all ages. Estimates are based on a combined file containing 42,331 persons (9,193 sample children and 33,138 sample adults). For 2019, the response rate for the Sample Child module was 59.1% and for the Sample Adult module was 59.1% (13). State identifiers were used to examine health insurance by state Medicaid expansion status, expanded regions, and states. These identifiers are not available on the NHIS public-use data files but are made available through the NCHS Research Data Center. For more information, see https://www.cdc.gov/rdc/index.htm.

In this report, the term "working-age adults" refers to persons aged 18–64, and the term "children" refers to persons under age 18 years.

Insurance coverage

Persons were considered uninsured if, at the time of the interview, they did not have coverage through private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), military (TRICARE, Veterans Administration [VA], and CHAMP–VA), other state-sponsored health plans, or other government programs. Persons also were defined as uninsured if they only had Indian Health Service coverage or only had a private plan that paid for one type of service, such as dental, vision, or prescription drugs.

Private health insurance coverage includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as dental, vision, or prescription drugs.

Public health plan coverage includes Medicaid, CHIP, state-sponsored or other government-sponsored health plans, Medicare, and military plans. A person may have both private and public coverage.

Definition of geographic terms

State Medicaid expansion status—Under provisions of ACA, states have the option to expand Medicaid eligibility to cover adults who have family incomes up to and including 138% of the federal poverty level. There is no deadline for states to choose to implement the Medicaid expansion, and they may do so at any time. As of January 1, 2019, 33 states and the District of Columbia had expanded Medicaid. Medicaid expansion states include: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and West Virginia. The District of Columbia also has expanded Medicaid. States without expanded Medicaid include: Alabama, Florida, Georgia, Idaho, Kansas, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Wisconsin, and Wyoming.

Urbanization level—In this report, urbanization level is measured using a condensed categorization of the NCHS urban–rural scheme (14,15). The NCHS urban–rural classification is based on metropolitan statistical area (MSA) status defined by the Office of Management and Budget according to published standards that are applied to U.S. Census Bureau data.

This report condenses the NCHS urban–rural classification into four categories: large central metropolitan (similar to inner cities), large fringe metropolitan (similar to suburbs), medium and small metropolitan, and nonmetropolitan (15,16). Large metropolitan areas have populations of 1 million or more. Metropolitan areas with populations of less than 1 million were classified as medium (250,000–999,999 population) and small (less than 250,000 population) metropolitan areas (15).

The MSA classification scheme used in this report is consistent with other NHIS reports and products (17,18). This

classification is available on the public-use data files (19).

Expanded regions—Expanded region classifications are based on a subdivision of the four Census regions (Northeast, Midwest, South, and West) into nine divisions. For this report, the nine Census divisions were modified by moving Delaware, the District of Columbia, and Maryland into the Middle Atlantic division. This approach was used previously by Holahan et al. (20):

New England—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

Middle Atlantic—Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania

East North Central—Illinois, Indiana, Michigan, Ohio, and Wisconsin

West North Central—Iowa, Kansas, Nebraska, Minnesota, Missouri, North Dakota, and South Dakota

South Atlantic—Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia

East South Central—Alabama, Kentucky, Mississippi, and Tennessee

West South Central—Arkansas, Louisiana, Oklahoma, and Texas

Mountain—Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming

Pacific—Alaska, California, Hawaii, Oregon, and Washington

State-level estimates—For this report, direct state-level estimates are provided for 32 states and the District of Columbia. No state-specific estimates are presented for Alaska, Hawaii, Idaho, Iowa, Kansas, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, South Dakota, Utah, Vermont, West Virginia, and Wyoming because they did not meet the criteria for inclusion (see Technical Notes). Note that for specific age groups and domains (uninsured, private, and public), fewer state-level estimates may be provided because estimates may not meet additional criteria for inclusion. For example, for the measure of uninsured children, state-level estimates are only provided for seven states.

Statistical analysis

Estimates by urbanization level, state Medicaid expansion status, and expanded regions are based on data from all 50 states and the District of Columbia. State estimates are shown for 32 states and the District of Columbia, which met the criteria for reporting and calculating state estimates described in more detail in the Technical Notes.

Percentages and 95% confidence intervals (CI) are presented for prevalence estimates of health insurance coverage based on questions about coverage at the time of the NHIS Sample Adult and Sample Child interviews. The 95% CIs were generated using the Korn–Graubard method for complex surveys (21). Estimates were calculated using the NHIS survey weights and are representative of the U.S. civilian noninstitutionalized population (13). In 2019, the weighting adjustment method changed from previous years to incorporate more robust multilevel models predictive of response propensity. Nonresponse-adjusted weights were further calibrated to U.S. Census Bureau population projections and American Community Survey 1-year estimates for age, sex, race and ethnicity, educational attainment, census division, and MSA status.

Point estimates and the corresponding variances were calculated using SUDAAN software version 11.0.0 (RTI International, Research Triangle Park, N.C.), a software package designed to account for the complex sampling design of NHIS. All estimates in this report met NCHS standards of reliability as specified in "National Center for Health Statistics Data Presentation Standards for Proportions" (22).

Respondents with missing data or unknown information were generally excluded from the analysis unless specifically noted. For the types of health insurance coverage shown in this report (uninsured, private, and public), the item nonresponse rate was about 0.5%.

Differences in percentages by state Medicaid expansion status were evaluated using two-sided significance tests at the 0.05 level (*t* tests). Trends by urbanization level were evaluated using orthogonal polynomials in logistic regression. Differences between national and subnational estimates were tested for statistical significance to identify those expanded regions and states that differ significantly from the national average. The estimated standard error of the differences between state and national estimates accounted for nonindependence of state and national estimates by incorporating their covariance (and similarly for the difference between regional and national estimates).

Terms such as "higher than" and "lower than" indicate a statistically significant difference. Lack of comment regarding the difference between any two estimates does not necessarily mean that the difference was tested and found to be not significant. Furthermore, these tests did not take multiple comparisons into account. For more information on NHIS, estimation methods, and definition of terms, see Technical Notes at the end of the report.

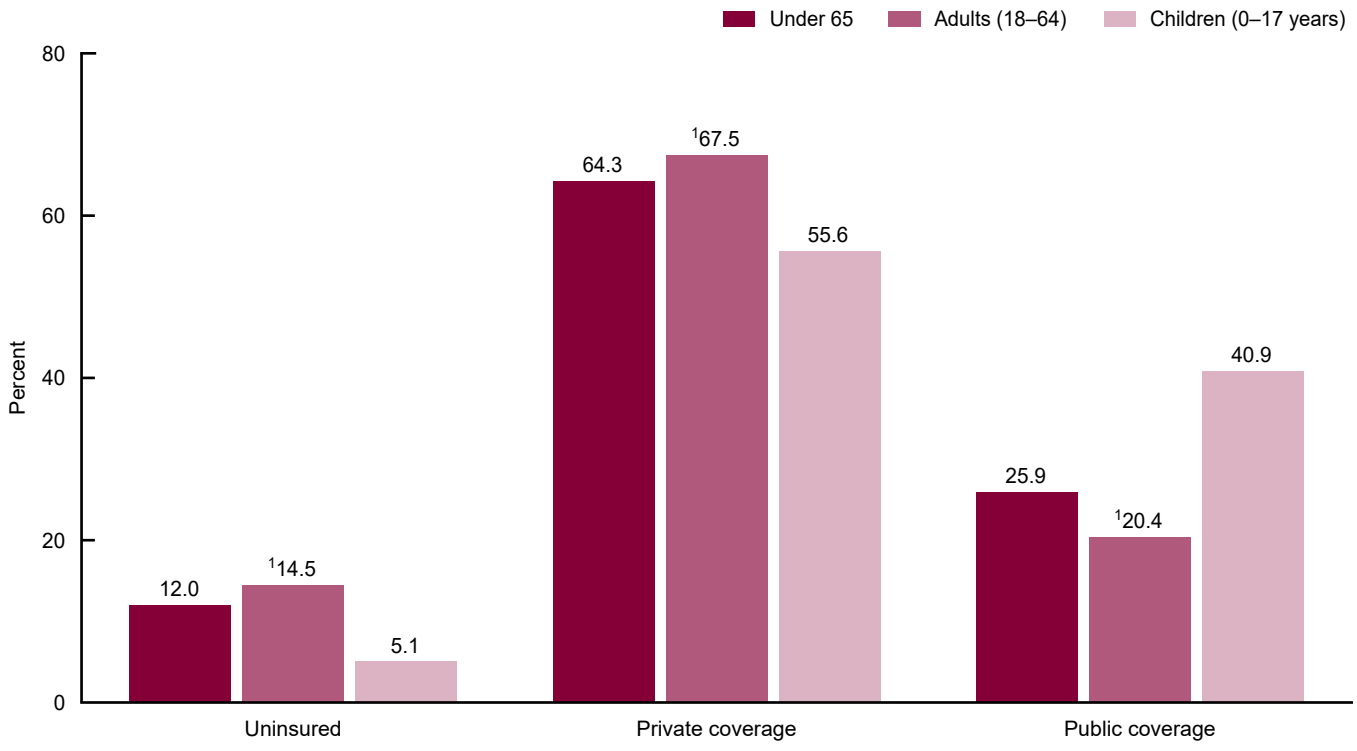
Tables 1–3 show estimates by state Medicaid expansion status, urbanization level, region, state, and nationally of the percentages of persons who were uninsured, had private coverage, and had public coverage in 2019. Additionally, these estimates are presented by geographic subdivisions and nationally for persons of all ages who were uninsured, had private coverage, and had public coverage and are shown in Table I. In this report, tables are provided for reference and detailed results may not be discussed.

Results

National estimates of health insurance coverage

In 2019, among persons under age 65, 12.0% were uninsured, 64.3% had private coverage, and 25.9% had public coverage at the time of the interview (Figure 1). Children aged 0–17 years were less likely than adults aged 18–64 to be uninsured (5.1% and 14.5%, respectively) and have private coverage (55.6% and 67.5%, respectively),

Figure 1. Percentages of persons under age 65 who were uninsured, had private coverage, or had public coverage at the time of interview, by age group: United States, 2019



[1]Significantly different from children ($p < 0.05$).
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

but they were more likely to have public coverage (40.9% and 20.4%, respectively).

National estimates of health insurance coverage by urbanization level

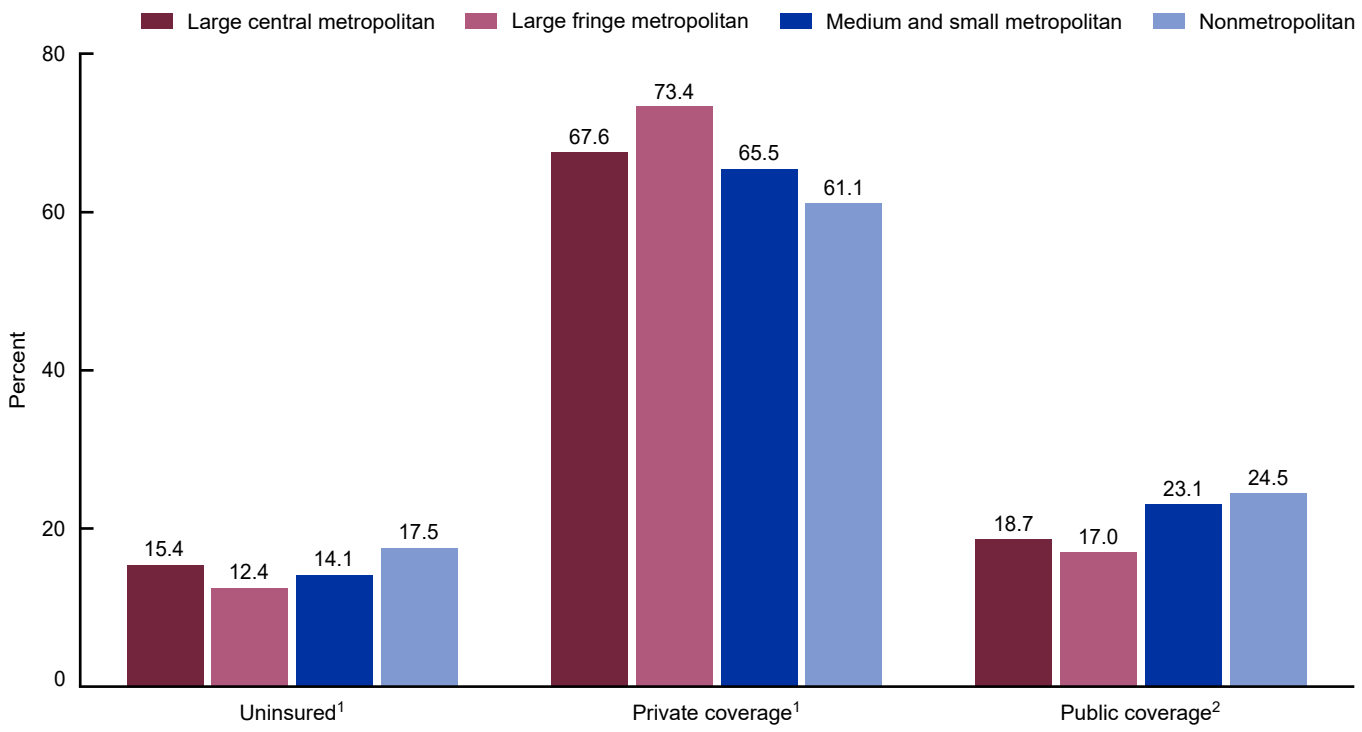
In 2019, among persons under age 65, health insurance coverage varied by urbanization level. Among adults aged 18–64, the percentage who were uninsured was lower for those living in large fringe metropolitan counties (12.4%) compared with those living in large central metropolitan counties (15.4%), and then increased with decreasing levels of urbanization (Figure 2). Working-age adults living in large fringe metropolitan counties (73.4%) were more likely to have private coverage than those living in large central metropolitan (67.6%), medium and small metropolitan (65.5%), and nonmetropolitan (61.1%) counties. Working-age adults living in large central (18.7%) and large fringe (17.0%) metropolitan counties were less likely than those living in medium and small metropolitan (23.1%) and nonmetropolitan (24.5%) counties to have public coverage.

For children, the observed differences in the percentage of those who were uninsured between those living in large central, large fringe, and medium and small metropolitan counties (4.8%, 4.5%, and 5.0%, respectively) and those living in nonmetropolitan counties (6.9%) were not statistically significant (Figure 3). Children living in large fringe metropolitan counties (65.0%) were more likely than those living in large central metropolitan (54.5%), medium and small metropolitan (52.0%), and nonmetropolitan (49.0%) counties to have private coverage. Children living in large fringe metropolitan counties (31.5%) were the least likely to have public coverage compared with those living in large central metropolitan (42.1%), medium and small metropolitan (44.8%), and nonmetropolitan (46.6%) counties.

Health insurance coverage by state Medicaid expansion status

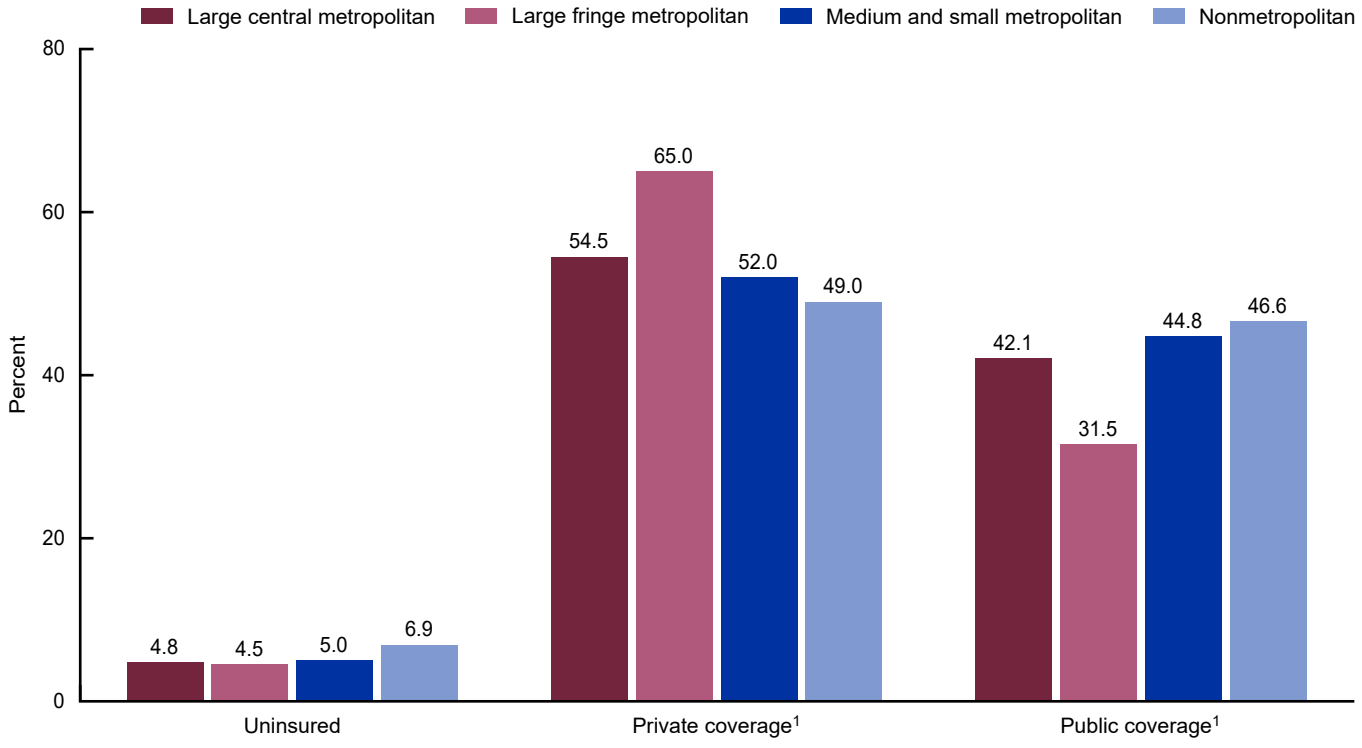
As of January 1, 2019, 33 states and the District of Columbia had expanded Medicaid. Among adults aged 18−64, those living in Medicaid expansion states were less likely to be uninsured (10.9%) and more likely to have private insurance (68.4%) and public coverage (23.2%) than those living in nonexpansion states (20.8%, 66.1%, and 15.4%, respectively) (Figure 4). Children living in Medicaid expansion states were less likely than those in nonexpansion states to be uninsured (3.8% compared with 7.1%) and more likely to have private insurance (57.9% compared with 51.9%) (Figure 5). The difference in public coverage for children between Medicaid expansion states (39.9%) and nonexpansion states (42.6%) was not statistically significant.

Figure 2. Percentage of adults aged 18–64 who were uninsured, had private coverage, or had public coverage, by urbanization level: United States, 2019



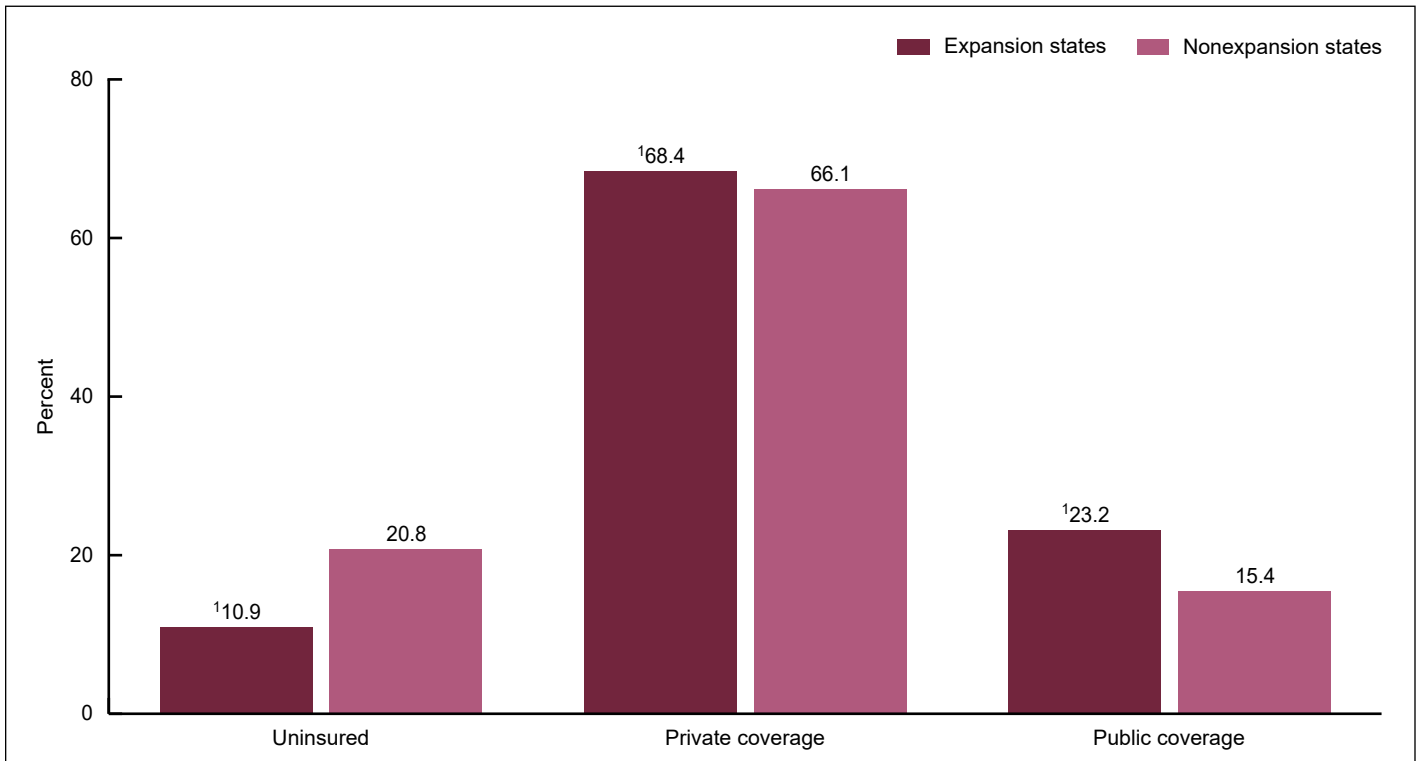
[1]Significant quadratic trend with decreasing urbanization level ($p < 0.05$).
[2]Significant increasing linear trend with decreasing urbanization level ($p < 0.05$).
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

Figure 3. Percentage of children aged 0–17 years who were uninsured, had private coverage, or had public coverage, by urbanization level: United States, 2019



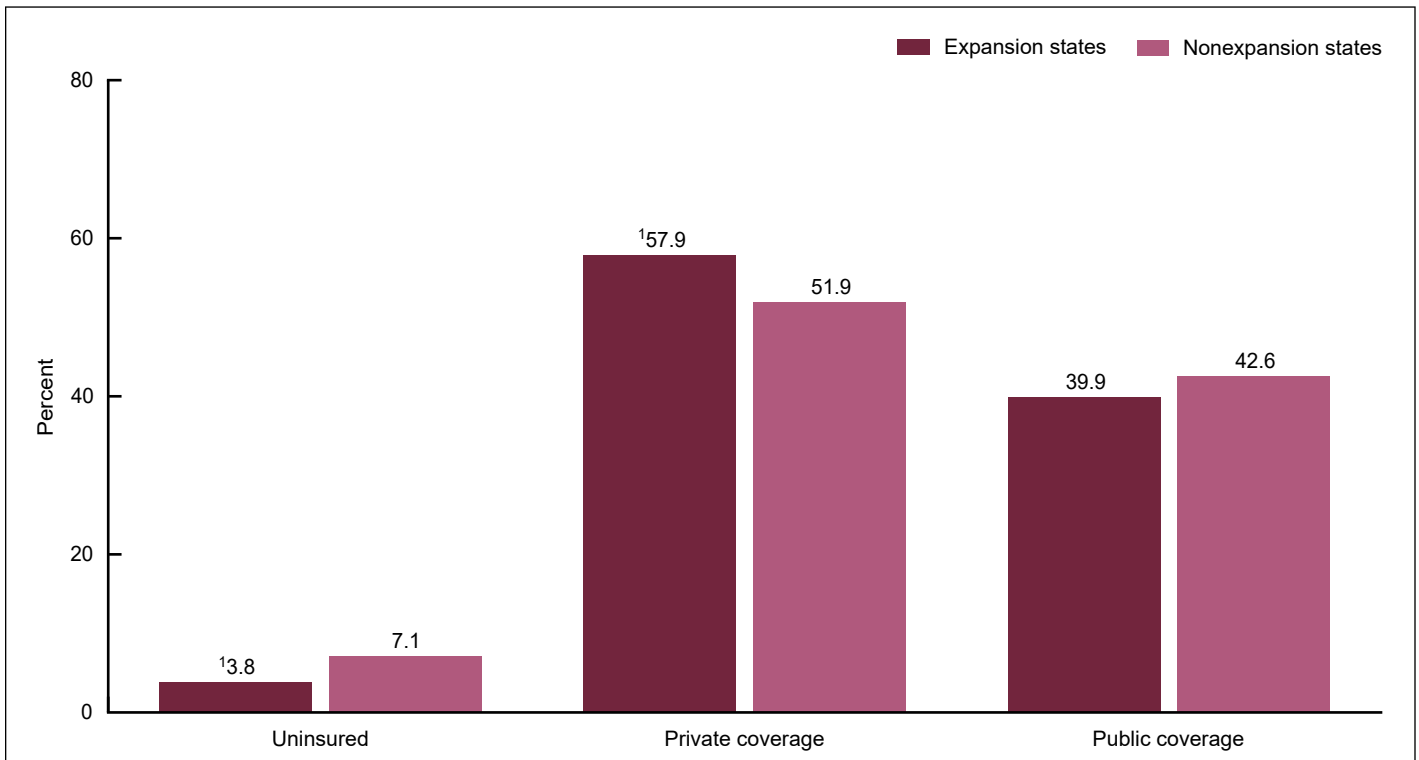
[1]Significant quadratic trend with decreasing urbanization level ($p < 0.05$).
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

Figure 4. Percentage of adults aged 18–64 who were uninsured, had private coverage, or had public coverage, by state Medicaid expansion status: United States, 2019



[1]Significantly different from nonexpansion states ($p < 0.05$).
NOTE: As of January 1, 2019, 33 states and the District of Columbia had expanded Medicaid and 17 states had not.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

Figure 5. Percentage of children aged 0–17 years who were uninsured, had private coverage, or had public coverage, by state Medicaid expansion status: United States, 2019



[1]Significantly different from nonexpansion states ($p < 0.05$).
NOTE: As of January 1, 2019, 33 states and the District of Columbia had expanded Medicaid and 17 states had not.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

Regional estimates of health insurance coverage

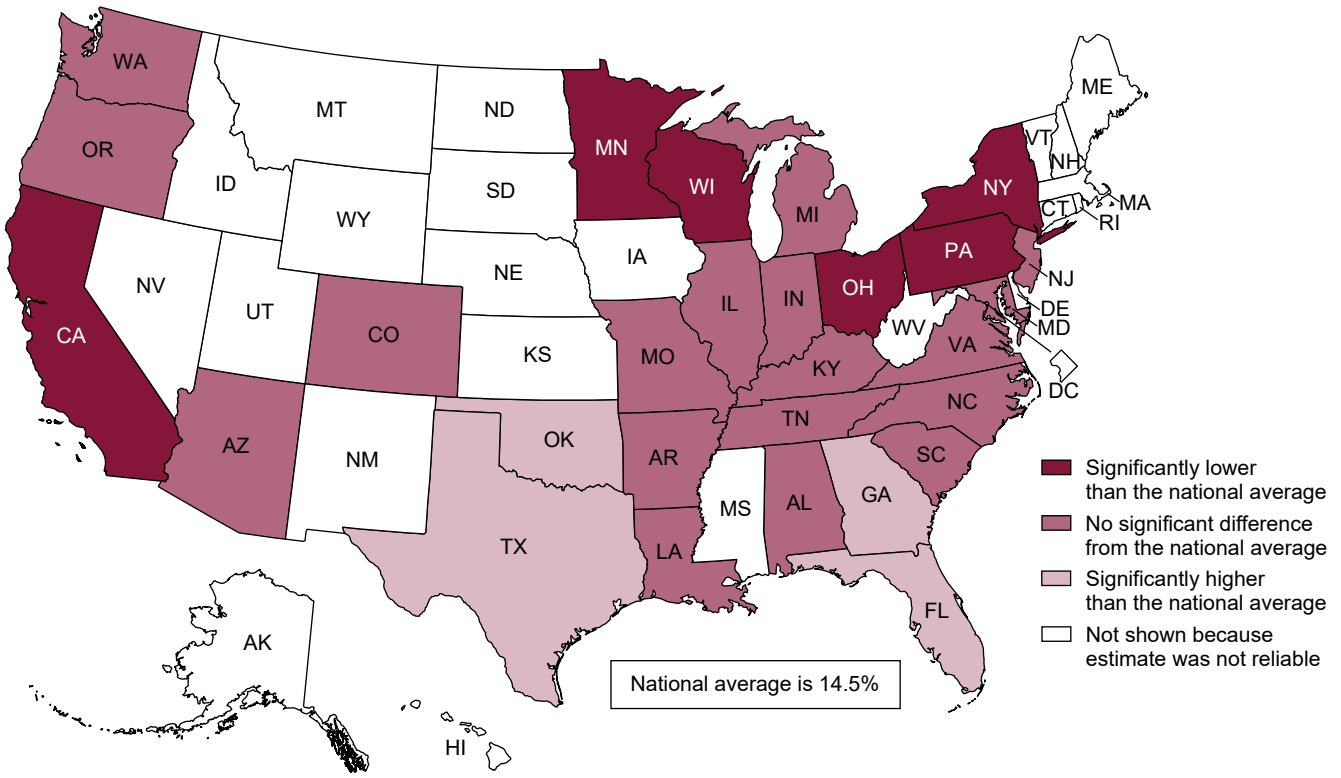
In 2019, for persons under age 65, percentages of uninsured persons in the South Atlantic (15.0%) and West South Central (22.1%) were significantly higher than the national average (12.0%), and percentages in the New England (4.6%), Middle Atlantic (7.8%), East North Central (9.2%), West North Central (9.5%), and Pacific (9.2%) regions were significantly lower than the national average (Table 1). Percentages for public coverage were significantly higher in the Middle Atlantic (28.4%), East South Central (31.8%), and Pacific (29.4%) regions than the national average (25.9%), and percentages in the East North Central (23.2%) and West North Central (18.7%) regions were significantly lower than the national average. Percentages of private coverage were significantly higher in the New England (74.3%), East North Central (70.1%), and West North Central (73.8%) regions than the national average (64.3%), and percentages were significantly lower in the East South Central (58.0%) and West South Central (54.6%) regions than the national average.

State estimates of health insurance coverage

State-level estimates are shown for 32 states and the District of Columbia. Among adults aged 18–64, the percentage who were uninsured was significantly higher than the national average (14.5%) in Florida (20.6%), Georgia (22.3%), Oklahoma (25.6%), and Texas (30.5%), and significantly lower than the national average in California (11.5%), Minnesota (6.9%), New York (7.4%), Ohio (10.8%), Pennsylvania (9.8%), and Wisconsin (7.7%) (Figure 6, Table 2). Among adults aged 18–64, the percentage who had public coverage was significantly higher than the national average (20.4%) in California (24.1%), Kentucky (35.5%), Louisiana (37.2%), and New York (30.0%), and significantly lower than the national average in Florida (15.7%), Georgia (14.3%), Illinois (15.2%), Minnesota (10.3%), Texas (13.1%), and Virginia (16.3%) (Figure 7, Table 2). Among adults aged 18–64, the percentages with private insurance were significantly higher than the national average (67.5%) in Illinois (73.4%), Minnesota (84.9%), and Wisconsin (79.2%), and significantly lower than the national average in Kentucky (53.4%), Louisiana (52.7%), and Texas (58.4%) (Figure 8, Table 2).

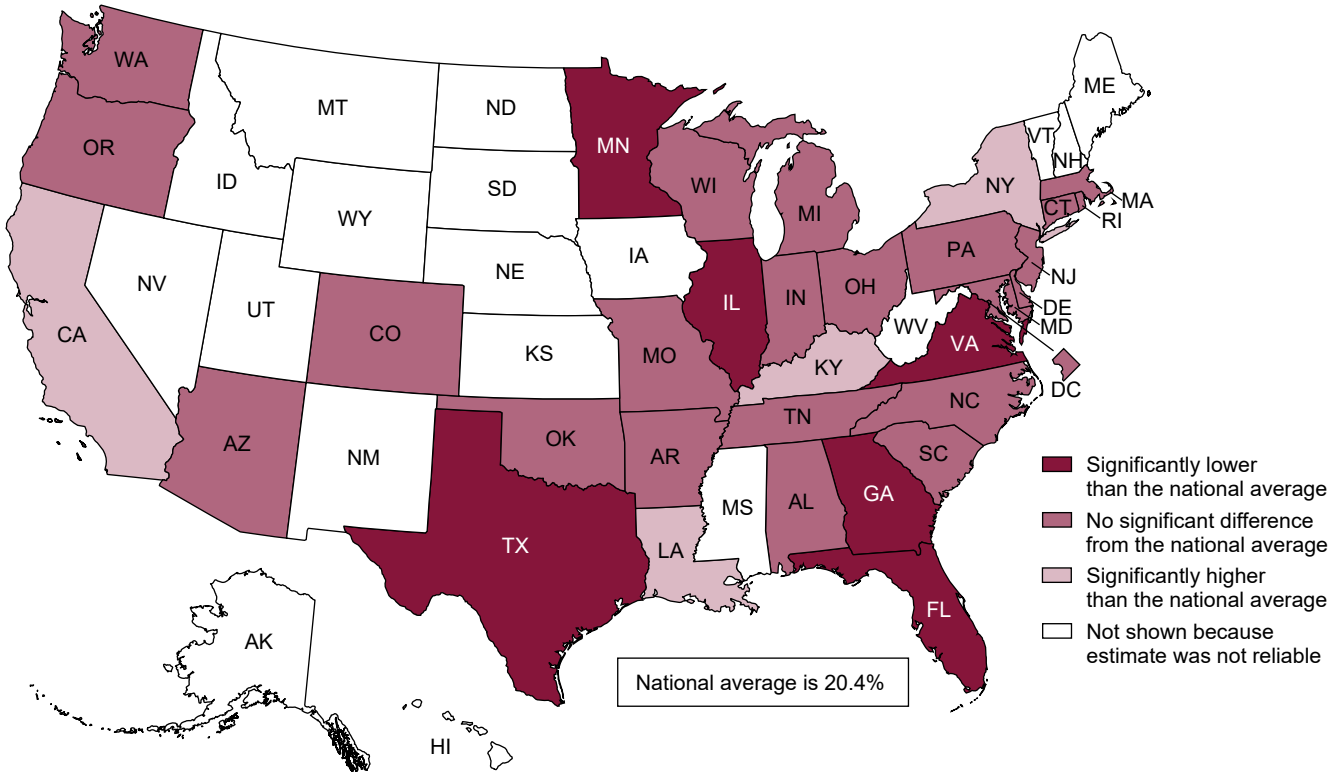
Among children aged 0–17, state-level estimates for the percentage of uninsured children are shown for seven states (Table 3). The percentage of children without health insurance coverage was significantly higher than the national average (5.1%) in Texas (11.2%), and significantly lower than the national average in California (2.8%), Illinois (2.5%), New York (1.8%), and Virginia (2.5%). Among children, state-level estimates of public coverage are shown for 29 states and for private coverage, 28 states are shown. The percentage of children with public coverage was significantly higher than the national average (40.9%) in

Figure 6. Adults aged 18–64 who were uninsured at the time of interview: United States, 2019



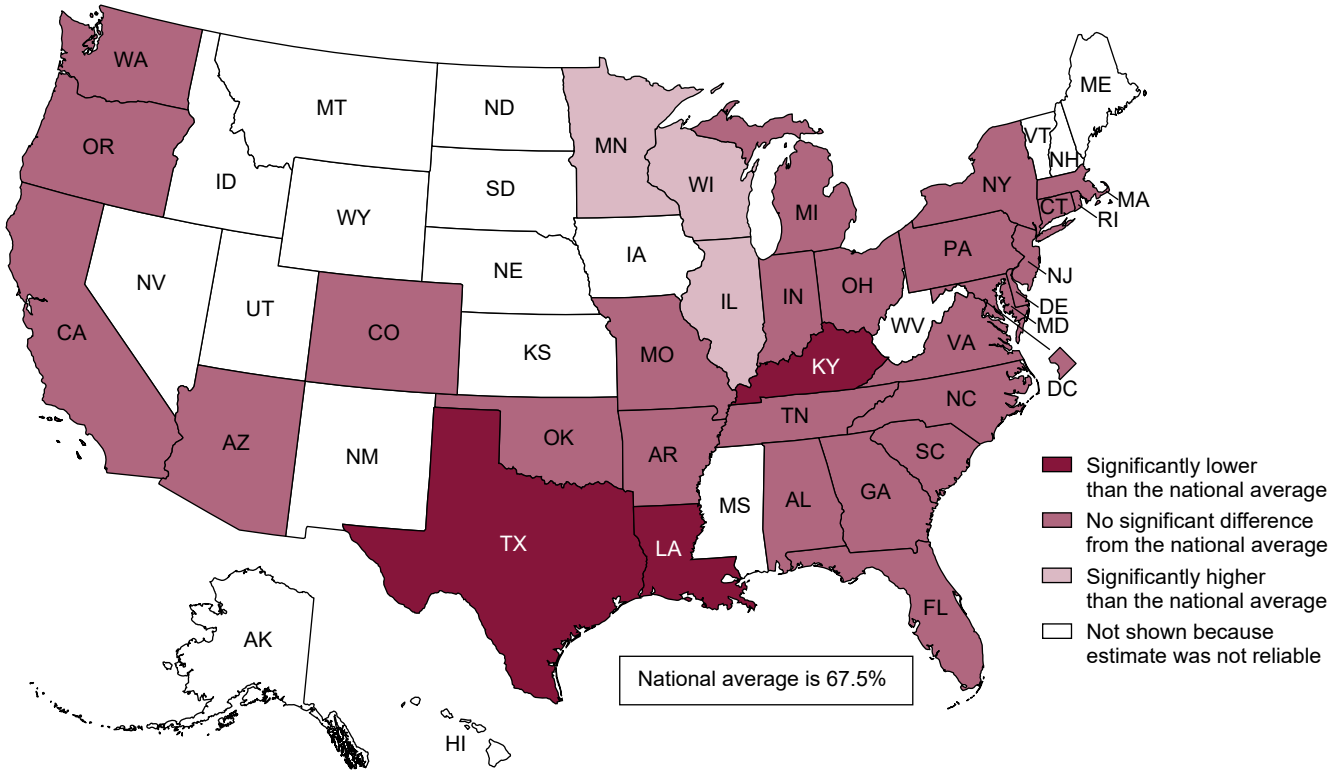
NOTE: Data are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

Figure 7. Adults aged 18–64 who had public coverage at the time of interview: United States, 2019



NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

Figure 8. Adults aged 18–64 who had private coverage at the time of interview: United States, 2019



NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

California (45.8%) and Florida (48.3%), and significantly lower than the national average in Illinois (30.6%), Minnesota (17.9%), and Wisconsin (25.6%). The percentage of children with private coverage was significantly higher than the national average (55.6%) in Illinois (67.1%), Massachusetts (72.3%), Minnesota (77.9%), and Wisconsin (71.6%), and significantly lower than the national average in Florida (45.9%) and Texas (46.9%).

Summary

This report provides an overall picture of health insurance coverage in the United States by selected geographic subdivisions. In 2019, variation in health insurance coverage was found by urbanization level, state Medicaid expansion status, expanded regions, and selected states and the District of Columbia. Generally, persons living in Medicaid-expansion states, large fringe (suburban) metropolitan counties, and the New England and Middle Atlantic regions were the least likely to be uninsured. Variation in the percentage of uninsured persons was also observed among the selected states shown in this report.

Note that this report is not without some limitations. NHIS responses are self-reported, so they may be subject to recall bias. In addition, due to current design constraints of the 2019 NHIS, the report was only able to provide state-level estimates for up to 32 states and the District of Columbia (See Technical Notes). For selected age groups and measures of coverage, fewer than 32 states and the District of Columbia are provided. For example, for the measure of uninsured among children, estimates are only shown for seven states.

One strength of NHIS is that it has a very low nonresponse rate to questions about the type of health insurance coverage (about 0.5%). Additionally, a feature that distinguishes NHIS estimates of health insurance coverage from other survey-based estimates is the use of responses to follow-up questions to evaluate the reliability of the reported health insurance coverage and resolve conflicting information (see National Health Interview Survey, Health Insurance Information: https://www.cdc.gov/nchs/nhis/insurance.htm).

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Table 1. Percentages (and 95% confidence intervals) of persons under age 65 who had private coverage, public health coverage, or were uninsured at the time of the interview, by urbanization level, state Medicaid expansion status, expanded regions, and selected states: United States, 2019

Selected geographic characteristics and Medicaid expansion status	Private[1]	Public[2]	Uninsured[3]
Total[4]	64.3 (63.3–65.3)	25.9 (25.1–26.7)	12.0 (11.4–12.6)
Urbanization level[5]			
Large central metropolitan[6]	64.3 (62.8–65.8)	24.6 (23.3–25.9)	12.7 (11.7–13.7)
Large fringe metropolitan[7]	71.1 (69.3–72.9)	20.9 (19.5–22.4)	10.2 (9.2–11.3)
Medium and small metropolitan[8]	61.7 (59.6–63.7)	29.2 (27.5–31.1)	11.6 (10.6–12.6)
Nonmetropolitan[9]	57.7 (54.1–61.3)	30.6 (27.8–33.6)	14.6 (12.4–17.0)
State Medicaid expansion status[10]			
Medicaid expansion states[11]	65.6 (64.4–66.8)	27.6 (26.5–28.7)	9.0 (8.5–9.7)
Non-Medicaid expansion states[12]	62.1 (60.3–63.8)	23.0 (21.8–24.3)	17.0 (15.9–18.1)
Expanded regions[13]			
New England	74.3 (70.6–77.8)	23.7 (20.4–27.2)	4.6 (3.5–5.8)
Middle Atlantic	66.1 (63.7–68.5)	28.4 (26.4–30.6)	7.8 (6.5–9.2)
East North Central	70.1 (67.7–72.5)	23.2 (20.9–25.6)	9.2 (7.9–10.6)
West North Central	73.8 (71.1–76.4)	18.7 (16.5–21.1)	9.5 (7.8–11.4)
South Atlantic	62.2 (59.3–65.0)	25.1 (23.0–27.2)	15.0 (13.5–16.6)
East South Central	58.0 (54.4–61.6)	31.8 (28.8–34.9)	12.7 (10.5–15.3)
West South Central	54.6 (51.9–57.4)	25.0 (22.9–27.2)	22.1 (20.1–24.3)
Mountain	64.2 (60.0–68.3)	24.9 (21.9–28.1)	14.0 (11.7–16.5)
Pacific	63.0 (60.5–65.5)	29.4 (27.2–31.6)	9.2 (8.2–10.2)
Selected states[14]			
Alabama	62.9 (53.2–71.9)	30.1 (22.4–38.7)	10.8 (6.5–16.6)
Arizona	56.7 (48.1–65.1)	32.5 (25.4–40.2)	14.1 (9.6–19.6)
Arkansas	54.1 (41.5–66.4)	31.8 (21.8–43.3)	16.0 (9.4–24.7)
California	62.4 (59.3–65.4)	29.8 (27.1–32.6)	9.2 (8.0–10.5)
Colorado	70.4 (62.6–77.4)	22.0 (16.2–28.6)	10.2 (6.7–14.9)
Connecticut	73.6 (64.1–81.7)	23.4 (16.3–31.8)	*
Delaware	69.6 (56.4–80.8)	22.0 (13.1–33.4)	*
District of Columbia	67.3 (53.3–79.3)	32.4 (21.3–45.2)	*
Florida	60.9 (56.4–65.3)	23.9 (20.9–27.2)	16.9 (13.9–20.3)
Georgia	60.0 (53.2–66.6)	23.5 (18.9–28.6)	18.3 (15.1–21.8)
Illinois	71.8 (67.6–75.7)	19.0 (15.7–22.6)	10.9 (8.5–13.6)
Indiana	70.4 (63.3–76.9)	22.3 (17.0–28.5)	9.5 (6.3–13.6)
Kentucky	49.7 (41.2–58.3)	40.6 (33.0–48.5)	11.1 (7.2–16.2)
Louisiana	51.4 (42.7–59.9)	40.6 (33.0–48.5)	9.6 (6.0–14.5)
Maryland	69.3 (59.8–77.8)	27.8 (20.3–36.3)	7.0 (3.6–12.0)
Massachusetts	73.3 (66.4–79.4)	27.1 (21.5–33.4)	2.8 (1.2–5.5)
Michigan	65.9 (60.1–71.3)	28.8 (23.7–34.4)	8.9 (6.3–12.2)
Minnesota	83.0 (76.3–88.5)	12.3 (8.0–17.9)	6.2 (3.5–10.1)
Missouri	69.5 (61.9–76.3)	19.9 (14.6–26.1)	12.0 (8.3–16.7)
New Jersey	67.1 (61.7–72.2)	23.9 (19.6–28.7)	10.5 (7.4–14.2)
New York	62.3 (58.1–66.4)	33.8 (30.4–37.4)	6.0 (4.2–8.4)
North Carolina	63.6 (55.4–71.2)	25.4 (19.8–31.7)	14.1 (10.8–18.0)
Ohio	67.1 (61.4–72.5)	26.7 (21.1–32.9)	9.3 (7.0–12.0)
Oklahoma	56.2 (46.9–65.3)	24.8 (17.9–32.7)	21.4 (15.6–28.1)
Oregon	61.5 (52.7–69.7)	31.9 (24.8–39.8)	9.3 (5.6–14.2)
Pennsylvania	68.6 (64.4–72.6)	25.1 (21.4–29.2)	8.6 (6.0–11.9)
Rhode Island	77.1 (63.8–87.3)	22.2 (12.9–34.2)	*
South Carolina	58.0 (48.8–66.9)	33.3 (25.7–41.5)	11.8 (7.5–17.4)
Tennessee	64.9 (57.7–71.6)	24.9 (19.4–31.1)	12.7 (9.0–17.1)
Texas	55.0 (51.6–58.3)	22.0 (19.9–24.2)	24.8 (22.4–27.2)
Virginia	68.6 (63.3–73.5)	22.3 (18.1–27.0)	11.0 (8.1–14.4)
Washington	68.2 (61.3–74.6)	24.3 (19.0–30.3)	9.3 (6.2–13.2)
Wisconsin	77.1 (71.3–82.3)	17.7 (13.4–22.6)	6.7 (4.3–9.8)

See footnotes at end of table.

Table 1. Percentages (and 95% confidence intervals) of persons under age 65 who had private coverage, public health coverage, or were uninsured at the time of the interview, by urbanization level, state Medicaid expansion status, expanded regions, and selected states: United States, 2019—Con.

*Estimate is not shown because it does not meet National Center for Health Statistics standards of reliability.
[1]Private health insurance coverage includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as dental, vision, or prescription drugs. Persons with private coverage may also have public coverage.
[2]Public health plan coverage includes Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plans, Medicare, and military (TRICARE, Veterans Administration [VA], and CHAMP–VA) plans. Persons with public coverage may also have private coverage.
[3]Persons were considered uninsured if they did not have coverage through private health insurance, Medicare, Medicaid, CHIP, military (TRICARE, VA, and CHAMP–VA), other state-sponsored health plans, or other government programs. Persons also were defined as uninsured if they only had Indian Health Service coverage or only had a private plan that paid for one type of service, such as dental, vision, or prescription drugs.
[4]Includes all 50 states and the District of Columbia.
[5]Urbanization level is measured using metropolitan statistical area (MSA) status. The Office of Management and Budget defines MSAs according to published standards that are applied to U.S. Census Bureau data. Generally, an MSA consists of a county or group of counties containing at least one urbanized area with a population of 50,000 or more (see reference 14 in this report). See the Methods section in this report for more detail.
[6]Living within a large central MSA with a population of 1 million or more (similar to inner cities).
[7]Living within a large fringe MSA with a population of 1 million or more (similar to suburbs).
[8]Living within a medium and small MSA with a population of less than 1 million.
[9]Not living in an MSA.
[10]Under provisions of the Affordable Care Act of 2010 (Pub L No 111–148, Pub L No 111–152), states have the option to expand Medicaid eligibility to cover adults who have incomes up to and including 138% of the federal poverty level. There is no deadline for states to choose to implement the Medicaid expansion, and they may do so at any time. As of January 1, 2019, 33 states and the District of Columbia moved forward with Medicaid expansion.
[11]For 2019, states moving forward with Medicaid expansion included: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and West Virginia. The District of Columbia also moved forward with Medicaid expansion.
[12]For 2019, states not moving forward with Medicaid expansion included: Alabama, Florida, Georgia, Idaho, Kansas, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Wisconsin, and Wyoming.
[13]The New England region includes: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The Middle Atlantic region includes: Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania. The East North Central region includes: Illinois, Indiana, Michigan, Ohio, and Wisconsin. The West North Central region includes: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. The South Atlantic region includes: Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia. The East South Central region includes: Alabama, Kentucky, Mississippi, and Tennessee. The West South Central region includes: Arkansas, Louisiana, Oklahoma, and Texas. The Mountain region includes: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. The Pacific region includes: Alaska, California, Hawaii, Oregon, and Washington.
[14]Estimates are not shown for Alaska, Hawaii, Idaho, Iowa, Kansas, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, South Dakota, Utah, Vermont, West Virginia, and Wyoming.

NOTES: Estimates may not add up to 100% because a person may have both private and public coverage. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

Table 2. Percentages (and 95% confidence intervals) of adults aged 18–64 who had private coverage, public health coverage, or were uninsured at the time of the interview, by urbanization level, state Medicaid expansion status, expanded regions, and selected states: United States, 2019

Selected geographic characteristics and Medicaid expansion status	Private[1]	Public[2]	Uninsured[3]
Total[4]	67.5 (66.6–68.5)	20.4 (19.6–21.1)	14.5 (13.9–15.2)
Urbanization level[5]			
Large central metropolitan[6]	67.6 (66.1–69.1)	18.7 (17.5–19.9)	15.4 (14.2–16.6)
Large fringe metropolitan[7]	73.4 (71.6–75.1)	17.0 (15.6–18.4)	12.4 (11.1–13.7)
Medium and small metropolitan[8]	65.5 (63.5–67.4)	23.1 (21.5–24.9)	14.1 (12.9–15.4)
Nonmetropolitan[9]	61.1 (57.7–64.4)	24.5 (21.7–27.4)	17.5 (15.1–20.2)
State Medicaid expansion status[10]			
Medicaid expansion states[11]	68.4 (67.2–69.5)	23.2 (22.2–24.2)	10.9 (10.2–11.6)
Non-Medicaid expansion states[12]	66.1 (64.4–67.7)	15.4 (14.3–16.6)	20.8 (19.5–22.2)
Expanded regions[13]			
New England	75.5 (71.7–79.0)	21.3 (18.2–24.7)	5.7 (4.4–7.3)
Middle Atlantic	68.6 (66.1–71.0)	24.7 (22.6–26.8)	9.2 (7.8–10.9)
East North Central	72.0 (69.6–74.3)	19.6 (17.5–21.8)	11.0 (9.6–12.6)
West North Central	77.1 (74.6–79.5)	13.7 (11.9–15.7)	11.3 (9.3–13.6)
South Atlantic	66.8 (64.0–69.4)	17.2 (15.4–19.2)	18.5 (16.8–20.4)
East South Central	62.7 (59.1–66.2)	24.5 (21.3–27.9)	15.7 (13.0–18.7)
West South Central	58.0 (55.6–60.4)	16.9 (15.1–18.9)	27.1 (24.7–29.6)
Mountain	65.9 (61.8–69.9)	20.8 (17.9–23.9)	16.7 (14.1–19.4)
Pacific	66.9 (64.4–69.2)	23.6 (21.5–25.8)	11.4 (10.1–12.7)
Selected states[14]			
Alabama	66.9 (57.5–75.3)	23.6 (16.5–31.9)	14.7 (9.3–21.7)
Arizona	61.8 (53.0–70.1)	25.8 (19.0–33.7)	15.4 (10.2–21.9)
Arkansas	59.2 (46.6–71.0)	24.3 (15.2–35.6)	17.8 (10.2–27.8)
California	65.9 (62.9–68.8)	24.1 (21.5–26.9)	11.5 (10.0–13.1)
Colorado	71.9 (64.3–78.7)	18.4 (13.0–25.0)	12.8 (8.5–18.4)
Connecticut	77.9 (68.8–85.4)	17.2 (10.8–25.3)	*
Delaware	73.7 (61.0–84.0)	17.5 (9.4–28.5)	*
District of Columbia	66.4 (53.5–77.8)	33.0 (22.2–45.2)	*
Florida	66.0 (61.5–70.3)	15.7 (13.0–18.7)	20.6 (17.1–24.4)
Georgia	65.1 (58.4–71.4)	14.3 (10.3–19.1)	22.3 (18.3–26.8)
Illinois	73.4 (68.9–77.5)	15.2 (12.3–18.4)	13.7 (10.6–17.2)
Indiana	72.7 (65.7–79.0)	18.6 (13.5–24.5)	10.6 (6.9–15.4)
Kentucky	53.4 (45.0–61.8)	35.5 (28.1–43.5)	12.9 (8.3–18.8)
Louisiana	52.7 (44.4–60.9)	37.2 (29.8–45.0)	12.2 (7.8–17.9)
Maryland	71.4 (62.1–79.6)	24.9 (17.6–33.5)	8.6 (4.4–14.6)
Massachusetts	73.6 (66.9–79.6)	26.3 (20.6–32.6)	*
Michigan	67.7 (62.1–73.0)	24.5 (20.1–29.4)	11.1 (7.7–15.3)
Minnesota	84.9 (78.6–90.0)	10.3 (6.3–15.6)	6.9 (3.8–11.4)
Missouri	72.8 (65.5–79.3)	14.0 (9.4–19.8)	14.6 (10.1–20.1)
New Jersey	69.4 (63.5–74.9)	19.6 (15.0–24.8)	13.0 (9.4–17.4)
New York	65.0 (60.8–69.1)	30.0 (26.5–33.6)	7.4 (4.9–10.5)
North Carolina	67.8 (60.1–74.8)	18.0 (12.9–24.2)	17.8 (14.0–22.2)
Ohio	68.9 (63.7–73.8)	23.7 (18.5–29.6)	10.8 (8.3–13.8)
Oklahoma	60.8 (51.5–69.6)	15.2 (9.5–22.5)	25.6 (18.7–33.6)
Oregon	64.5 (56.0–72.5)	27.2 (20.3–35.0)	11.2 (6.9–17.0)
Pennsylvania	71.3 (66.8–75.5)	21.1 (17.6–24.9)	9.8 (7.1–13.0)
Rhode Island	78.2 (65.7–87.8)	20.7 (11.7–32.5)	*
South Carolina	63.4 (54.5–71.6)	25.0 (18.2–32.9)	14.9 (9.7–21.4)
Tennessee	68.6 (61.6–75.0)	18.9 (13.9–24.7)	15.6 (11.2–20.8)
Texas	58.4 (55.4–61.4)	13.1 (11.4–15.1)	30.5 (27.7–33.4)
Virginia	72.0 (67.0–76.7)	16.3 (12.8–20.3)	13.9 (10.4–18.1)
Washington	73.8 (67.3–79.6)	17.3 (12.6–22.8)	11.6 (7.9–16.2)
Wisconsin	79.2 (73.6–84.1)	14.7 (10.7–19.5)	7.7 (4.9–11.3)

See footnotes at end of table.

Table 2. Percentages (and 95% confidence intervals) of adults aged 18–64 who had private coverage, public health coverage, or were uninsured at the time of the interview, by urbanization level, state Medicaid expansion status, expanded regions, and selected states: United States, 2019—Con.

*Estimate is not shown because it does not meet National Center for Health Statistics standards of reliability.
[1]Private health insurance coverage includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as dental, vision, or prescription drugs. Persons with private coverage may also have public coverage.
[2]Public health plan coverage includes Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plans, Medicare, and military (TRICARE, Veterans Administration [VA], and CHAMP–VA) plans. Persons with public coverage may also have private coverage.
[3]Persons were considered uninsured if they did not have coverage through private health insurance, Medicare, Medicaid, CHIP, military (TRICARE, VA, and CHAMP–VA), other state-sponsored health plans, or other government programs. Persons also were defined as uninsured if they only had Indian Health Service coverage or only had a private plan that paid for one type of service, such as dental, vision, or prescription drugs.
[4]Includes all 50 states and the District of Columbia.
[5]Urbanization level is measured using metropolitan statistical area (MSA) status. The Office of Management and Budget defines MSAs according to published standards that are applied to U.S. Census Bureau data. Generally, an MSA consists of a county or group of counties containing at least one urbanized area with a population of 50,000 or more (see reference 14 in this report). See the Methods section in this report for more detail.
[6]Living within a large central MSA with a population of 1 million or more (similar to inner cities).
[7]Living within a large fringe MSA with a population of 1 million or more (similar to suburbs).
[8]Living within a medium and small MSA with a population of less than 1 million.
[9]Not living in an MSA.
[10]Under provisions of the Affordable Care Act of 2010 (Pub L No 111–148, Pub L No 111–152), states have the option to expand Medicaid eligibility to cover adults who have incomes up to and including 138% of the federal poverty level. There is no deadline for states to choose to implement the Medicaid expansion, and they may do so at any time. As of January 1, 2019, 33 states and the District of Columbia moved forward with Medicaid expansion.
[11]For 2019, states moving forward with Medicaid expansion included: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and West Virginia. The District of Columbia also moved forward with Medicaid expansion.
[12]For 2019, states not moving forward with Medicaid expansion included: Alabama, Florida, Georgia, Idaho, Kansas, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Wisconsin, and Wyoming.
[13]The New England region includes: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The Middle Atlantic region includes: Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania. The East North Central region includes: Illinois, Indiana, Michigan, Ohio, and Wisconsin. The West North Central region includes: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. The South Atlantic region includes: Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia. The East South Central region includes: Alabama, Kentucky, Mississippi, and Tennessee. The West South Central region includes: Arkansas, Louisiana, Oklahoma, and Texas. The Mountain region includes: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. The Pacific region includes: Alaska, California, Hawaii, Oregon, and Washington.
[14]Estimates are not shown for Alaska, Hawaii, Idaho, Iowa, Kansas, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, South Dakota, Utah, Vermont, West Virginia, and Wyoming.

NOTES: Estimates may not add up to 100% because a person may have both private and public coverage. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

Table 3. Percentages (and 95% confidence intervals) of children aged 0–17 years who had private coverage, public health coverage, or were uninsured at the time of the interview, by urbanization level, state Medicaid expansion status, expanded regions, and selected states: United States, 2019

Selected geographic characteristics and Medicaid expansion status	Private[1]	Public[2]	Uninsured[3]
Total[4]	55.6 (54.0–57.2)	40.9 (39.5–42.4)	5.1 (4.5–5.8)
Urbanization level[5]			
Large central metropolitan[6]	54.5 (52.0–57.0)	42.1 (39.7–44.6)	4.8 (3.7–6.0)
Large fringe metropolitan[7]	65.0 (62.0–67.9)	31.5 (28.8–34.4)	4.5 (3.4–5.8)
Medium and small metropolitan[8]	52.0 (49.0–55.0)	44.8 (42.0–47.7)	5.0 (4.1–6.1)
Nonmetropolitan[9]	49.0 (43.8–54.2)	46.6 (41.7–51.5)	6.9 (4.8–9.7)
State Medicaid expansion status[10]			
Medicaid expansion states[11]	57.9 (56.0–59.9)	39.9 (38.0–41.8)	3.8 (3.1–4.6)
Non-Medicaid expansion states[12]	51.9 (49.3–54.5)	42.6 (40.2–45.0)	7.1 (5.9–8.3)
Expanded regions[13]			
New England	70.6 (64.3–76.4)	30.9 (24.9–37.4)	0.9 (0.2–2.5)
Middle Atlantic	58.8 (54.9–62.7)	39.3 (35.3–43.4)	3.5 (2.2–5.3)
East North Central	65.0 (61.1–68.7)	33.0 (29.2–37.0)	4.1 (2.5–6.2)
West North Central	65.6 (60.8–70.2)	31.4 (26.4–36.6)	4.8 (3.1–7.1)
South Atlantic	49.2 (44.9–53.5)	47.2 (43.3–51.0)	5.1 (3.5–7.0)
East South Central	45.7 (40.1–51.4)	50.9 (46.2–55.6)	4.9 (3.0–7.5)
West South Central	46.5 (41.8–51.3)	44.4 (39.9–48.9)	10.3 (8.2–12.9)
Mountain	60.0 (54.2–65.6)	35.2 (31.1–39.5)	7.3 (4.6–10.9)
Pacific	52.4 (48.7–56.2)	45.6 (41.9–49.3)	3.0 (2.1–4.2)
Selected states[14]			
Alabama	*	46.7 (32.1–61.7)	*
Arizona	46.3 (34.3–58.6)	46.3 (34.5–58.5)	11.4 (5.8–19.5)
Arkansas	*	*	*
California	52.4 (48.2–56.6)	45.8 (41.8–49.8)	2.8 (1.9–3.9)
Colorado	66.4 (54.5–77.0)	31.2 (21.0–42.9)	*
Connecticut	63.3 (48.4–76.4)	38.1 (24.9–52.7)	*
Delaware	*	*	*
District of Columbia	*	*	*
Florida	45.9 (38.9–53.0)	48.3 (42.2–54.5)	*
Georgia	46.5 (35.8–57.4)	48.5 (38.0–59.0)	7.4 (4.1–12.3)
Illinois	67.1 (60.0–73.8)	30.6 (23.8–38.1)	2.5 (0.9–5.1)
Indiana	64.8 (53.5–75.0)	31.7 (22.0–42.7)	*
Kentucky	39.3 (26.9–52.7)	54.8 (41.7–67.5)	*
Louisiana	47.4 (33.6–61.5)	50.6 (36.8–64.3)	*
Maryland	63.2 (48.2–76.5)	35.9 (22.9–50.6)	*
Massachusetts	72.3 (61.3–81.6)	29.9 (20.4–40.9)	*
Michigan	61.0 (51.6–69.7)	40.4 (30.5–50.9)	*
Minnesota	77.9 (66.0–87.2)	17.9 (9.6–29.1)	*
Missouri	60.0 (48.3–70.9)	36.7 (26.2–48.2)	*
New Jersey	60.9 (52.3–69.0)	35.6 (27.7–44.1)	*
New York	53.5 (46.6–60.4)	46.4 (39.3–53.6)	1.8 (0.6–4.0)
North Carolina	52.0 (41.8–62.2)	45.6 (37.8–53.6)	*
Ohio	62.0 (52.7–70.7)	35.0 (26.1–44.8)	*
Oklahoma	46.0 (32.7–59.7)	46.2 (33.1–59.7)	*
Oregon	53.5 (40.0–66.7)	44.3 (31.5–57.7)	*
Pennsylvania	61.5 (55.0–67.6)	35.9 (28.8–43.3)	*
Rhode Island	*	*	*
South Carolina	42.9 (28.9–57.7)	56.7 (42.0–70.5)	*
Tennessee	54.2 (42.9–65.2)	42.5 (31.8–53.6)	*
Texas	46.9 (41.7–52.1)	42.8 (37.7–47.9)	11.2 (8.8–13.9)
Virginia	58.6 (48.6–68.2)	39.9 (31.1–49.3)	2.5 (0.9–5.7)
Washington	54.0 (42.9–64.9)	42.5 (32.0–53.5)	*
Wisconsin	71.6 (61.9–80.0)	25.6 (17.6–34.9)	*

See footnotes at end of table.

Table 3. Percentages (and 95% confidence intervals) of children aged 0–17 years who had private coverage, public health coverage, or were uninsured at the time of the interview, by urbanization level, state Medicaid expansion status, expanded regions, and selected states: United States, 2019—Con.

*Estimate is not shown because it does not meet National Center for Health Statistics standards of reliability.
[1]Private health insurance coverage includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as dental, vision, or prescription drugs. Persons with private coverage may also have public coverage.
[2]Public health plan coverage includes Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plans, Medicare, and military (TRICARE, Veterans Administration [VA], and CHAMP–VA) plans. Persons with public coverage may also have private coverage.
[3]Persons were considered uninsured if they did not have coverage through private health insurance, Medicare, Medicaid, CHIP, military (TRICARE, VA, and CHAMP–VA), other state-sponsored health plans, or other government programs. Persons also were defined as uninsured if they only had Indian Health Service coverage or only had a private plan that paid for one type of service, such as dental, vision, or prescription drugs.
[4]Includes all 50 states and the District of Columbia.
[5]Urbanization level is measured using metropolitan statistical area (MSA) status. The Office of Management and Budget defines MSAs according to published standards that are applied to U.S. Census Bureau data. Generally, an MSA consists of a county or group of counties containing at least one urbanized area with a population of 50,000 or more (see reference 14 in this report). See the Methods section in this report for more detail.
[6]Living within a large central MSA with a population of 1 million or more (similar to inner cities).
[7]Living within a large fringe MSA with a population of 1 million or more (similar to suburbs).
[8]Living within a medium and small MSA with a population of less than 1 million.
[9]Not living in an MSA.
[10]Under provisions of the Affordable Care Act of 2010 (Pub L No 111–148, Pub L No 111–152), states have the option to expand Medicaid eligibility to cover adults who have incomes up to and including 138% of the federal poverty level. There is no deadline for states to choose to implement the Medicaid expansion, and they may do so at any time. As of January 1, 2019, 33 states and the District of Columbia moved forward with Medicaid expansion.
[11]For 2019, states moving forward with Medicaid expansion included: Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and West Virginia. The District of Columbia also moved forward with Medicaid expansion.
[12]For 2019, states not moving forward with Medicaid expansion included: Alabama, Florida, Georgia, Idaho, Kansas, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Wisconsin, and Wyoming.
[13]The New England region includes: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The Middle Atlantic region includes: Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania. The East North Central region includes: Illinois, Indiana, Michigan, Ohio, and Wisconsin. The West North Central region includes: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. The South Atlantic region includes: Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia. The East South Central region includes: Alabama, Kentucky, Mississippi, and Tennessee. The West South Central region includes: Arkansas, Louisiana, Oklahoma, and Texas. The Mountain region includes: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. The Pacific region includes: Alaska, California, Hawaii, Oregon, and Washington.
[14]Estimates are not shown for Alaska, Hawaii, Idaho, Iowa, Kansas, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, South Dakota, Utah, Vermont, West Virginia, and Wyoming.

NOTES: Estimates may not add up to 100% because a person may have both private and public coverage. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

Technical Notes

Procedures for direct state-level estimates from the National Health Interview Survey

General strategy

The National Center for Health Statistics (NCHS) only publishes a direct state-level estimate if the estimate meets NCHS acceptance criteria for measures of estimate uncertainty, for example, standard errors, relative standard errors, and confidence internal length. Depending on the state sample size, the measure being studied, and possible subdomain of interest, a state may have many publishable estimates, few, or none. The National Health Interview Survey (NHIS) is designed for estimation at the national level, and available statistical software packages (SAS Survey Procedures [SAS, Cary, N.C.] or SUDAAN [RTI International, Research Triangle Park, N.C.]), can be used directly to obtain point estimates along with standard errors. These software packages account for the complex sampling design of NHIS. However, with direct state-level estimation, more attention must be given to the state sampling procedure that produces the data. Historical experience with producing direct state-level estimates from NHIS has led to states being loosely categorized into three general classes, where each class has a strategy for the release of state estimates.

Historically, a strong relationship has existed between the order of states ranked by population size and the order of states ranked by sample size. Because estimator reliability tends to increase with sample size, a somewhat robust partition of states defined by grouped population size can be created. This population-based partition will assist in grouping states with similar design features and assigning strategies for state-level estimation.

State estimation classes and their general publication strategies are as follows.

State estimation class 1—Includes states with the largest populations and can be treated like the NHIS design, but with a smaller sample size. Publication criteria for the state will be the same as for the country.

State estimation class 2—Includes midsize populated states that often have design features and sample sizes that lead to estimated standard errors that are noticeably more variable than those corresponding to the larger populated states. The random nature of the standard error becomes a major consideration in evaluating a state's point estimate. For these midsize states, smoothed estimates of standard errors and other reliability-based calculations can be developed. With a smoothed component, publication criteria for the midsize states become the same as for the country.

State estimation class 3—Includes small-sized populated states that tend to be the lesser populated states or states that have small sample sizes or design features, for example, few clusters, highly nonuniform cluster sizes within strata, and large between-cluster variation within strata that are not directly amenable to producing reliable state estimates. These states may have many state-level estimates suppressed.

The three state classes will provide class-specific strategies for state reliability assessment, but special situations exist where the class strategies, if strictly followed, may indicate a publication suppression for a specific variable whose estimates may appear disproportionate compared with the totality of the state estimates. In these situations, subject-matter experts assess the issue and determine if the estimates can be published.

NHIS state estimation and adherence to NCHS standards for publication

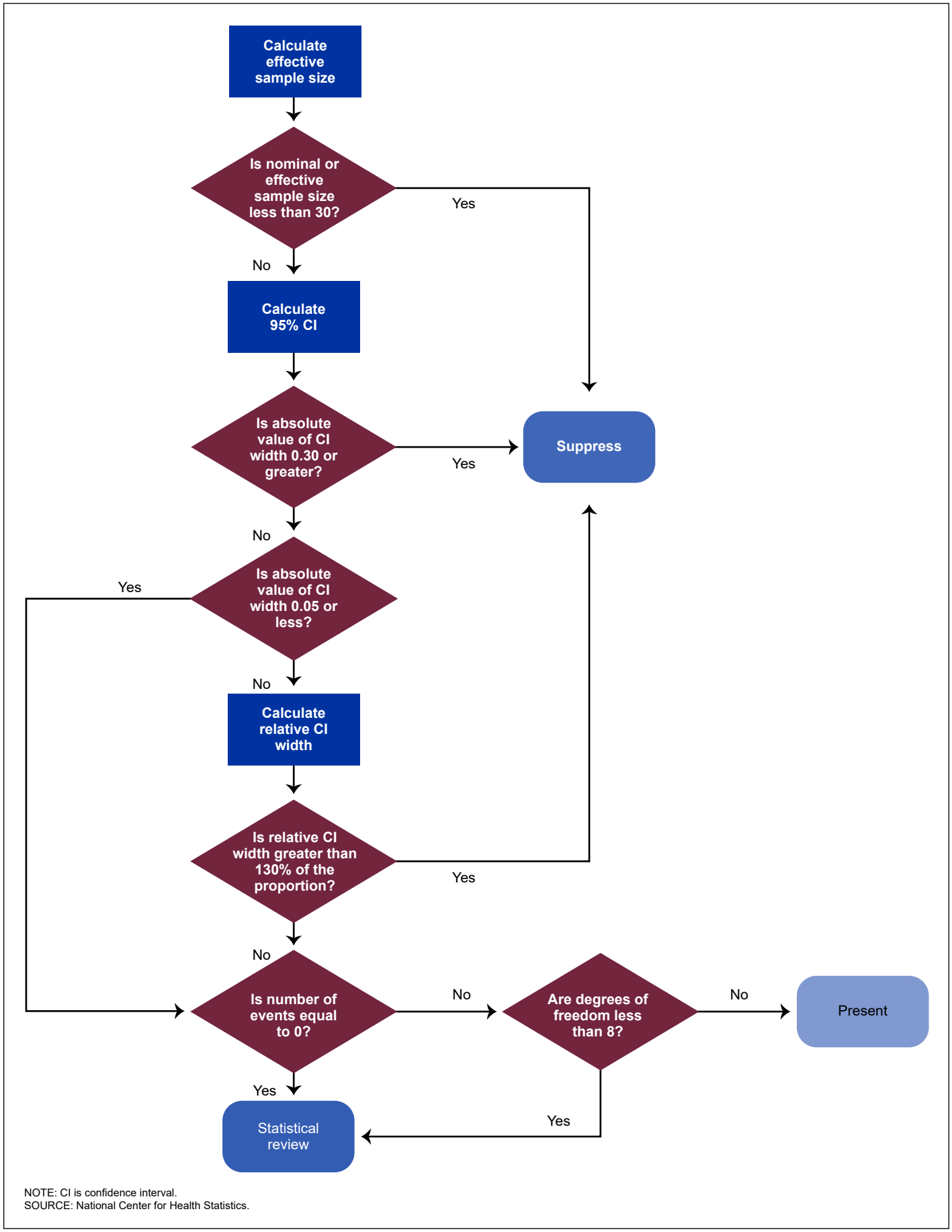
The three state classes listed above are somewhat generic. For NHIS state estimation, the state categories listed above are refined to comply with the NCHS data presentation standards for proportions (22), (referred to as Standards). The Standards provide guidance in establishing the baseline criteria for reliability for NCHS-produced estimates of proportions. Each of the 50 states and the District of Columbia has its own sampling characteristics, and each must be assessed separately by the Standards. The Figure shows the steps that the estimates of each state and the District of Columbia must complete to meet publication standards.

- Among the main Standards criteria is that the effective sample size of any domain of study should be at least 30. An effective sample size is a survey sample size adjusted downward due to sampling inefficiencies resulting from survey design clustering and survey weighting. A related measure is the design effect, *deff*, typically assumed to be greater than one for NHIS. This parameter defines the effective sample size,

$$n_{effective} = \frac{n}{deff},$$

  where n is the number of unweighted survey observations upon which the estimate of interest is based. The state domains featured by NHIS almost always meet the "30" criteria.
- The degrees of freedom, *df*, is a design parameter that plays a key role in the Standards criteria. The *df* of a state is typically calculated by a rule-of-thumb measure: number of state primary sampling units minus the number of state strata. This parameter is a measure of stability of the estimated standard error. State-level inference using a state with $df < 8$ often leads to problematic statistical inference, especially when looking at state comparisons. For the NHIS state-level estimates, the policy has been to suppress estimates from these states. Note that this policy varies for different NCHS data systems. The estimates in small states in state estimation class 3 frequently have associated $df < 8$ and are subject to suppression.
- The assessment of a confidence interval is a central criterion of the Standards. The Standards now suggest using a design-adjusted confidence interval approach, the Korn–Graubard (K–G) version of the Clopper–Pearson confidence interval. The most commonly used "pass-or-fail" state-level criterion is the requirement that for a given estimated proportion, $\hat{p}$, the relative

Figure. Process for accessing statistical reliability of state-level estimates from the National Health Interview Survey



NOTE: CI is confidence interval.
SOURCE: National Center for Health Statistics.

width of its K–G confidence interval is less than or equal to 1.30 (subject to the $df < 8$ criterion mentioned previously). Whether a state estimate in state estimation class 2 may be published is often decided by this criterion.

State estimation methods

The NHIS state-level procedure developed to determine whether an estimate may be published is motivated by the Standards criteria and by variations in state sampling design structures encountered with the 50 states and the District of Columbia within the general state classes described previously. Although the population size boundaries of states—large, medium, and small—can have somewhat subjective definitions, for NHIS, the break boundaries are defined by the procedure proposed for state Standards assessment. Generally, the 12 largest populated states—California, Florida, Georgia, Illinois, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Texas, and Virginia—have survey sample sizes of 500 or more and at least 25 degrees of freedom. Note that because NHIS is designed for a 10-year data collection, possible irregularities from the planned design can occur over this period, and sample size variations can occur. Internal empirical and simulation studies have demonstrated that these 12 individual states pass the Standards, and the simulations of the sampling properties of estimated proportions, for example, relative confidence interval widths, do not cause concerns for a wide range of statistical inference.

Although the remaining 38 states and the District of Columbia could be evaluated as having self-contained domains, internal empirical and simulation studies have suggested that some minor smoothing procedures may help overcome some issues resulting from smaller samples and lower levels of degrees of freedom.

The K–G confidence interval requires an effective sample size, $n_{effective}$, for a confidence interval to be computed. In its basic form,

$$n_{effective} = \frac{n}{\hat{deff}},$$

where the measure $\hat{deff}$ is an estimate of efficiency of the complex survey as measured by the complex design variance estimate compared with a simple random sample variance estimate of size n. This parameter is estimated by

$$\hat{deff} = \frac{\hat{SE}(\hat{p})^2}{[\hat{p}(1-\hat{p})/n]}.$$

The smoothed NHIS state method

Rather than using all raw forms for the 51 $\hat{deff}_{state}$'s the following smoothed forms are used:

- The raw $\hat{deff}_{state}$ for the 12 largest states.
- For the other states and the District of Columbia let $\hat{deff}_{state}$ = unweighted average of the 12 largest $\hat{deff}_{state}$'s.

When using this method, if $\hat{deff}^s_{state}$ represents a smoothed design effect, then $\hat{deff}^s_{state}$ will have less sampling variability than the original $\hat{deff}_{state}$, and so at the state level,

$$n^s_{effective} = \frac{n}{\hat{deff}^s_{state}}$$

will have less sampling variability than the original

$$n_{effective} = \frac{n}{\hat{deff}_{state}}.$$

These results have been demonstrated in state simulations. Because the effective sample size is a required input to the K–G confidence interval procedure, using $n^s_{effective}$ increases the underlying reliability of the input measures. Although the Standards rule of possible suppression for states with fewer than 8 original degrees of freedom could be relaxed by using the smoothing technique, NCHS has decided to be conservative and suppress all states with the originally computed 7 or fewer degrees of freedom.

For this report, direct state-level point estimates and their standard errors and confidence intervals were calculated using SUDAAN software. The Taylor series linearization method was chosen for estimation of standard errors for the 12 states with the largest sample sizes. State-specific estimates are not presented for Alaska, Hawaii, Idaho, Iowa, Kansas, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, South Dakota, Utah, Vermont, West Virginia, and Wyoming, because they did not have at least 8 degrees of freedom. For the remaining 20 states and the District of Columbia, an estimated design effect was used to calculate standard errors. Massachusetts was considered a special situation. This state had some small estimated proportions relative to the other states, which led to the state failing the relative confidence interval width criterion occasionally. Because the sample sizes and degrees of freedom appeared supportive of state estimation, a subject-matter specialist reviewed the issue and determined that this state's estimates could be published. For a listing of the average design effects used in the standard error calculation in this report, see Table II.

A version of this direct state-level estimate methodology was used in previous reports (23), so allows for some continuity with previous reports on state estimates. This methodology for producing state-level estimates may be utilized for other measures available on NHIS.

Table I. Percentages (and 95% confidence intervals) of persons of all ages who had private coverage, public health coverage, or were uninsured at the time of the interview, by urbanization level, state Medicaid expansion status, expanded regions, and selected states: United States, 2019

Selected geographic characteristics and Medicaid expansion status	Private[1]	Public[2]	Uninsured[3]
Total[4]	62.0 (61.1–62.9)	37.3 (36.6–38.1)	10.2 (9.7–10.7)
Urbanization level[5]			
Large central metropolitan[6]	60.9 (59.5–62.3)	34.1 (32.9–35.4)	11.2 (10.4–12.1)
Large fringe metropolitan[7]	68.5 (66.9–70.1)	33.0 (31.6–34.3)	8.6 (7.8–9.6)
Medium and small metropolitan[8]	60.0 (58.2–61.8)	40.6 (39.0–42.1)	9.7 (8.9–10.6)
Nonmetropolitan[9]	57.1 (53.8–60.3)	44.8 (42.3–47.3)	11.6 (9.9–13.6)
State Medicaid expansion status[10]			
Medicaid expansion states[11]	63.5 (62.4–64.5)	39.1 (38.2–40.1)	7.7 (7.2–8.2)
Non-Medicaid expansion states[12]	59.4 (57.8–61.0)	34.2 (33.0–35.4)	14.6 (13.6–15.6)
Expanded regions[13]			
New England	71.1 (67.6–74.4)	36.0 (32.9–39.2)	3.8 (2.9–4.8)
Middle Atlantic	64.0 (61.8–66.1)	40.6 (38.8–42.4)	6.5 (5.4–7.6)
East North Central	68.9 (66.8–70.9)	35.1 (33.0–37.3)	7.8 (6.7–9.0)
West North Central	71.4 (68.7–74.0)	32.3 (29.5–35.2)	7.9 (6.5–9.5)
South Atlantic	59.2 (56.7–61.6)	37.4 (35.5–39.4)	12.6 (11.3–13.9)
East South Central	55.4 (52.2–58.5)	43.3 (40.2–46.3)	10.6 (8.7–12.8)
West South Central	53.0 (50.5–55.5)	34.7 (32.7–36.8)	19.3 (17.5–21.2)
Mountain	60.8 (56.9–64.6)	36.4 (33.7–39.2)	11.8 (9.9–14.0)
Pacific	60.2 (58.1–62.4)	38.9 (36.9–40.9)	8.1 (7.2–9.0)
Selected states[14]			
Alabama	57.0 (48.7–65.0)	43.8 (37.1–50.7)	8.8 (5.3–13.4)
Arizona	52.2 (44.7–59.6)	44.6 (38.5–50.9)	11.6 (8.0–16.1)
Arkansas	50.7 (40.5–60.9)	47.5 (39.1–56.0)	12.2 (7.3–18.7)
California	59.0 (56.3–61.6)	38.9 (36.5–41.3)	8.2 (7.2–9.4)
Colorado	67.4 (60.5–73.8)	34.2 (28.8–40.0)	8.4 (5.5–12.3)
Connecticut	67.9 (59.3–75.6)	34.3 (27.7–41.4)	4.2 (1.8–8.0)
Delaware	68.2 (56.7–78.3)	34.1 (25.4–43.7)	8.0 (3.7–14.7)
District of Columbia	64.6 (52.1–75.8)	38.9 (29.2–49.3)	3.0 (0.6–8.7)
Florida	55.5 (52.0–59.0)	38.6 (35.9–41.4)	13.8 (11.4–16.4)
Georgia	58.1 (51.9–64.2)	32.6 (28.0–37.5)	16.0 (13.3–19.1)
Illinois	69.7 (66.2–73.1)	32.5 (29.4–35.7)	9.1 (7.1–11.4)
Indiana	69.5 (63.1–75.4)	33.2 (28.1–38.6)	8.1 (5.4–11.6)
Kentucky	49.8 (42.2–57.3)	50.1 (43.9–56.4)	9.3 (6.1–13.6)
Louisiana	50.0 (42.5–57.5)	49.6 (43.4–55.9)	8.0 (5.0–12.1)
Maryland	68.9 (60.5–76.5)	37.6 (30.9–44.8)	6.0 (3.1–10.3)
Massachusetts	72.2 (66.2–77.6)	37.6 (32.6–42.9)	2.4 (1.1–4.6)
Michigan	66.4 (61.5–71.1)	40.5 (35.8–45.4)	7.4 (5.2–10.2)
Minnesota	82.1 (76.3–87.0)	28.3 (23.4–33.7)	5.0 (2.8–8.1)
Missouri	65.5 (58.9–71.7)	33.3 (28.1–38.7)	10.0 (6.9–13.8)
New Jersey	65.1 (60.2–69.8)	36.0 (31.9–40.3)	8.8 (6.3–11.9)
New York	60.4 (56.7–64.0)	45.8 (42.9–48.7)	5.0 (3.5–7.0)
North Carolina	61.2 (53.8–68.3)	35.8 (31.1–40.7)	12.3 (9.4–15.6)
Ohio	65.6 (60.6–70.4)	38.3 (33.3–43.5)	8.1 (6.2–10.3)
Oklahoma	54.5 (46.2–62.6)	36.3 (29.9–43.1)	18.2 (13.3–24.1)
Oregon	62.1 (54.6–69.2)	43.2 (37.0–49.5)	7.8 (4.8–11.9)
Pennsylvania	65.6 (61.8–69.4)	38.4 (35.1–41.8)	7.0 (4.9–9.7)
Rhode Island	73.5 (62.2–82.9)	37.1 (28.1–46.8)	5.3 (1.9–11.4)
South Carolina	57.8 (49.9–65.4)	46.2 (39.8–52.8)	9.6 (6.2–14.1)
Tennessee	61.5 (55.2–67.5)	37.7 (32.7–43.0)	10.5 (7.5–14.1)
Texas	53.5 (50.3–56.7)	30.8 (28.7–32.9)	22.1 (20.0–24.3)
Virginia	66.1 (61.5–70.4)	36.5 (32.7–40.4)	8.9 (6.6–11.6)
Washington	66.4 (60.2–72.2)	34.5 (29.6–39.6)	8.0 (5.4–11.3)
Wisconsin	75.4 (70.1–80.1)	28.9 (24.6–33.4)	5.7 (3.7–8.4)

See footnotes at end of table.

Table I. Percentages (and 95% confidence intervals) of persons of all ages who had private coverage, public health coverage, or were uninsured at the time of the interview, by urbanization level, state Medicaid expansion status, expanded regions, and selected states: United States, 2019—Con.

[1]Private health insurance coverage includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as dental, vision, or prescription drugs. Persons with private coverage may also have public coverage.
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[3]Persons were considered uninsured if they did not have coverage through private health insurance, Medicare, Medicaid, CHIP, military (TRICARE, VA, and CHAMP–VA), other state-sponsored health plans, or other government programs. Persons also were defined as uninsured if they only had Indian Health Service coverage or only had a private plan that paid for one type of service, such as dental, vision, or prescription drugs.
[4]Includes all 50 states and the District of Columbia.
[5]Urbanization level is measured using metropolitan statistical area (MSA) status. The Office of Management and Budget defines MSAs according to published standards that are applied to U.S. Census Bureau data. Generally, an MSA consists of a county or group of counties containing at least one urbanized area with a population of 50,000 or more (see reference 14 in this report). See the Methods section in this report for more detail.
[6]Living within a large central MSA with a population of 1 million or more (similar to inner cities).
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[8]Living within a medium and small MSA with a population of less than 1 million.
[9]Not living in an MSA.
[10]Under provisions of the Affordable Care Act of 2010 (Pub L No 111–148, Pub L No 111–152), states have the option to expand Medicaid eligibility to cover adults who have incomes up to and including 138% of the federal poverty level. There is no deadline for states to choose to implement the Medicaid expansion, and they may do so at any time. As of January 1, 2019, 33 states and the District of Columbia moved forward with Medicaid expansion.
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[12]For 2019, states not moving forward with Medicaid expansion included: Alabama, Florida, Georgia, Idaho, Kansas, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Wisconsin, and Wyoming.
[13]The New England region includes: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The Middle Atlantic region includes: Delaware, District of Columbia, Maryland, New Jersey, New York, and Pennsylvania. The East North Central region includes: Illinois, Indiana, Michigan, Ohio, and Wisconsin. The West North Central region includes: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. The South Atlantic region includes: Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia. The East South Central region includes: Alabama, Kentucky, Mississippi, and Tennessee. The West South Central region includes: Arkansas, Louisiana, Oklahoma, and Texas. The Mountain region includes: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. The Pacific region includes: Alaska, California, Hawaii, Oregon, and Washington.
[14]Estimates are not shown for Alaska, Hawaii, Idaho, Iowa, Kansas, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, South Dakota, Utah, Vermont, West Virginia, and Wyoming.

NOTES: Estimates may not add up to 100% because a person may have both private and public coverage. Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

Table II. Design effects used for standard error calculations of state estimates in Tables 1–3 and I, except for the 12 states with the largest populations

Table	Percentage estimate by age group	Average design effect based on 12 states with the largest populations[1]
1	Persons under age 65 with private coverage	3.46
1	Persons under age 65 with public coverage	2.92
1	Persons under age 65 who are uninsured	2.33
2	Adults aged 18–64 with private coverage	2.41
2	Adults aged 18–64 with public coverage	2.19
2	Adults aged 18–64 who are uninsured	1.99
3	Children aged 0–17 years with private coverage	2.22
3	Children aged 0–17 years with public coverage	2.16
3	Children aged 0–17 years who are uninsured	1.63
I	Persons of all ages with private coverage	3.46
I	Persons of all ages with public coverage	2.42
I	Persons of all ages who are uninsured	2.45

[1]The states are California, Florida, Georgia, Illinois, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Texas, and Virginia. The design effect was defined as the ratio of the true standard error, accounting for the complex survey design, to the standard error for a simple random sample of the same size.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2019.

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