United States Government Accountability Office

Report to the Ranking Member, Committee on Finance, U.S. Senate

September 2018

MEDICAID

Access to Health Care for Low-Income Adults in States with and without Expanded Eligibility

GAO-18-607

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GAO Highlights

Highlights of GAO-18-607, a report to the Ranking Member, Committee on Finance, U.S. Senate

Why GAO Did This Study

Under PPACA, states could choose to expand Medicaid coverage to certain uninsured, low-income adults. As of December 2017, 31 states and the District of Columbia chose to expand Medicaid to cover these adults, and 19 states did not.

GAO was asked to provide information about the demographic characteristics of and access to health care services for low-income adults—those with household incomes less than or equal to 138 percent of the federal poverty level—in expansion and non-expansion states. This report describes 2016 national survey estimates of (1) the number and demographic characteristics for low-income adults who were uninsured in expansion and non-expansion states, (2) unmet medical needs for low-income adults in expansion and non-expansion states and by insurance status, (3) barriers to health care for low-income adults in expansion and non-expansion states and by insurance status, and (4) having a usual place of care and receiving selected health care services for low-income adults in expansion and non-expansion states and by insurance status.

GAO obtained 2016 NHIS estimates from the National Center for Health Statistics (NCHS), the federal agency within the Department of Health and Human Services that maintains these survey data.

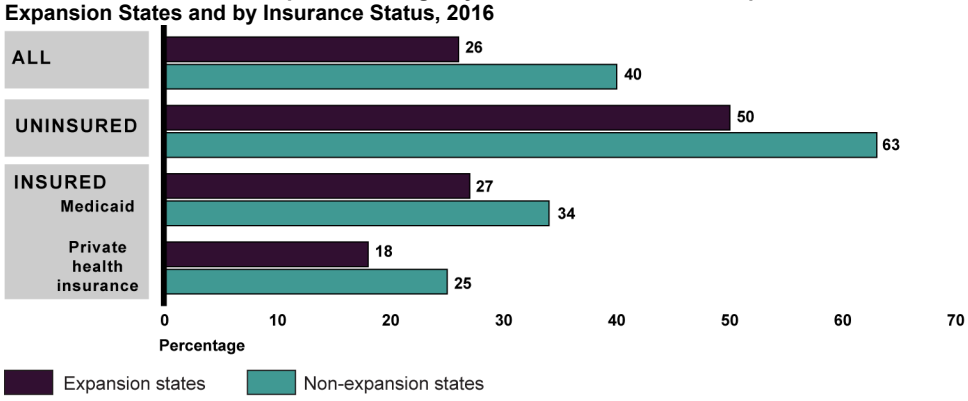
NHIS is a household interview survey designed to be a nationally representative sample of the civilian, non-institutionalized population residing in the United States. Estimates were calculated for demographic characteristics for uninsured, low-income adults. In addition, estimates were calculated for unmet medical needs, barriers to health care, and having a usual place

What GAO Found

According to the 2016 National Health Interview Survey (NHIS), an estimated 5.6 million uninsured, low-income adults—those ages 19 through 64—had incomes at or below the income threshold for expanded Medicaid eligibility as allowed under the Patient Protection and Affordable Care Act (PPACA). Estimates from this nationally representative survey showed that about 1.9 million of the 5.6 million uninsured, low-income adults lived in states that chose to expand Medicaid under PPACA, while the remaining 3.7 million lived in non-expansion states—those that did not choose to expand Medicaid. In 2016, over half of uninsured, low-income adults were male, over half were employed, and over half had incomes less than 100 percent of the federal poverty level in both expansion and non-expansion states.

The 2016 NHIS estimates showed that low-income adults in expansion states were less likely to report having any unmet medical needs compared with those in non-expansion states, and low-income adults who were insured were less likely to report having unmet medical needs compared with those who were uninsured. Among the low-income adults who were uninsured, those in expansion states were less likely to report having any unmet medical needs compared with those in non-expansion states.

Low-Income Adults Who Reported Having Any Unmet Medical Need in Expansion and Non-Expansion States and by Insurance Status, 2016



Source: GAO summary of the 2016 National Health Interview Survey estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: The difference between all low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$ (a common indictor that denotes statistical significance). The difference between low-income adults who were uninsured in expansion and non-expansion states was statistically significant at $p < 0.05$.

Differences between low-income adults who were uninsured in expansion or non-expansion states and low-income adults who were insured—Medicaid or private health insurance—in expansion or non-expansion states were statistically significant at $p < 0.05$.

The 2016 NHIS estimates also showed that low-income adults in expansion states were less likely to report financial barriers to needed medical care and other types of health care, such as specialty care, compared with those in non-expansion states, and low-income adults who were insured were less likely to report financial barriers to needed medical care compared with those who were uninsured.

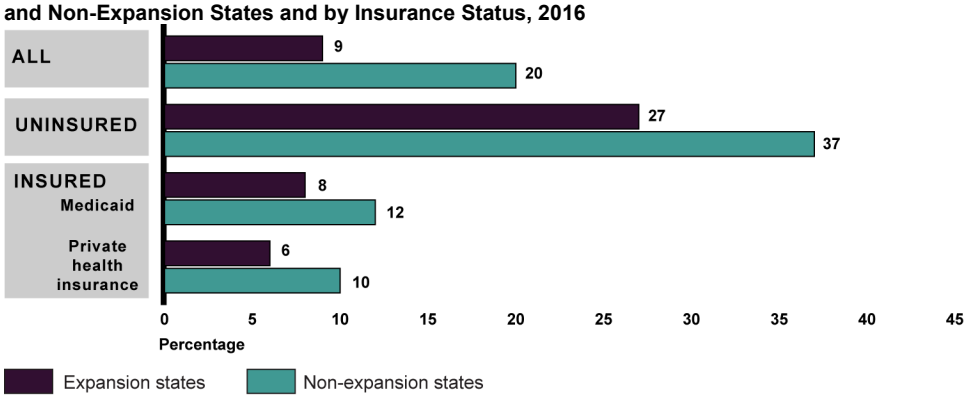
of care and receiving selected health services for low-income adults in expansion and non-expansion states and by insurance status The estimates were based on responses to selected survey questions. GAO selected these survey questions from the Family and Adult Access to Health Care and Utilization and another section of the 2016 NHIS.

GAO took steps to assess the reliability of the 2016 NHIS estimates, including interviewing NCHS officials and examining the data for logical errors. GAO determined that the data were sufficiently reliable for the purposes of its analyses.

The Department of Health and Human Services provided technical comments on a draft of this report, which GAO incorporated as appropriate.

Among low-income adults who were uninsured, those in expansion states were less likely to report financial barriers to needed medical care compared with those in non-expansion states.

Low-Income Adults Who Reported Financial Barriers to Needed Medical Care in Expansion and Non-Expansion States and by Insurance Status, 2016



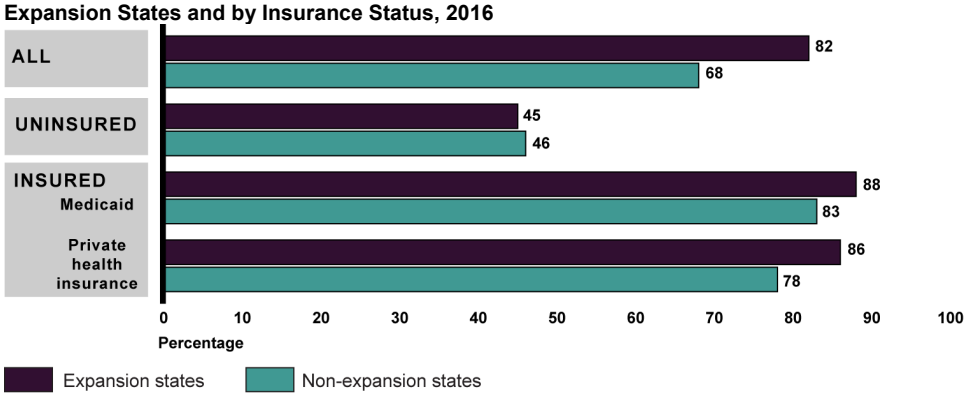
Source: GAO summary of the 2016 National Health Interview Survey estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: The difference between all low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$. The difference between low-income adults who were uninsured in expansion and non-expansion states was statistically significant at $p < 0.05$.

Differences between low-income adults who were uninsured in expansion or non-expansion states and low-income adults who were insured—Medicaid or private health insurance—in expansion or non-expansion states were statistically significant at $p < 0.05$.

Finally, the 2016 NHIS estimates showed that low-income adults in expansion states were more likely to report having a usual place of care to go when sick or needing advice about their health and receiving selected health care services compared with those in non-expansion states. The estimates also showed that low-income adults who were insured were generally more likely to report having a usual place of care and receiving selected health care services compared with those who were uninsured. Among the uninsured, relatively similar percentages of low-income adults in expansion and non-expansion states reported having a usual place of care. Similarly, estimates showed that relatively similar percentages of low-income adults who were uninsured in expansion and non-expansion states reported receiving selected health care services, such as receiving a flu vaccine or a blood pressure check.

Low-income Adults Who Reported Having a Usual Place of Care in Expansion and Non-Expansion States and by Insurance Status, 2016



Source: GAO summary of the 2016 National Health Interview Survey estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: The difference between all low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$.

Differences between low-income adults who were uninsured in expansion or non-expansion states and low-income adults who were insured—Medicaid or private health insurance—in expansion or non-expansion states were statistically significant at $p < 0.05$.

View GAO-18-607. For more information, contact Carolyn L. Yocom at (202) 512-7114 or yocomc@gao.gov.

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Abbreviations

CMS	Centers for Medicare & Medicaid Services
FPL	federal poverty level
HHS	Department of Health and Human Services
NCHS	National Center for Health Statistics
NHIS	National Health Interview Survey
PPACA	Patient Protection and Affordable Care Act

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
441 G St. N.W.
Washington, DC 20548

September 13, 2018

The Honorable Ron Wyden
Ranking Member
Committee on Finance
United States Senate

Dear Mr. Wyden:

Historically, eligibility for Medicaid—a federal-state health care financing program—has been limited to certain categories of low-income individuals, including children, parents, pregnant women, and individuals who have disabilities or who are aged 65 and older. Beginning in 2014, the Patient Protection and Affordable Care Act (PPACA) gave states the option of expanding Medicaid eligibility beyond these categories to include certain adults with incomes that do not exceed 138 percent of the federal poverty level (FPL).[1] As of December 2017, there were 31 "expansion states"—those states and the District of Columbia that chose to expand Medicaid eligibility—and 19 "non-expansion states"—those that had not expanded Medicaid eligibility to this additional adult population.

Several years have passed since PPACA gave states the option of expanding Medicaid eligibility. You asked us to provide the most recently available information on the demographic characteristics of uninsured, low-income adults, and the extent to which low-income adults are accessing health care services in two groups of states: expansion states

[1]Under PPACA, enacted on March 23, 2010, states may opt to expand their Medicaid programs to cover non-elderly, non-pregnant adults who are not eligible for Medicare, and whose income does not exceed 133 percent of the FPL beginning January 1, 2014. Pub. L. No. 111-148, 124 Stat. 119 (2010), as amended by the Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152, 124 Stat. 1029 (2010). PPACA also provides for a 5 percent disregard when calculating income for determining Medicaid eligibility, which effectively increases income eligibility from 133 percent of FPL to 138 percent of FPL. The FPL is based on household income and family size, using the U.S. Census Bureau's poverty thresholds. In 2016, 138 percent of FPL for an individual was $17,231 and for a family of four was $33,897. PPACA also permitted an early expansion option, whereby states could expand eligibility for this population, or a subset of this population, starting on April 1, 2010.

and non-expansion states.[2] This report describes what 2016 national survey estimates showed regarding:

1. the number and demographic characteristics for low-income adults who were uninsured in expansion and non-expansion states,
2. unmet medical needs for low-income adults in expansion and non-expansion states and by insurance status,
3. barriers to health care for low-income adults in expansion and non-expansion states and by insurance status, and
4. having a usual place of care and receiving selected health care services for low-income adults in expansion and non-expansion states and by insurance status.

To address our research objectives, we used data from the 2016 National Health Interview Survey (NHIS), from the Centers for Disease Control and Prevention, National Center for Health Statistics (NCHS).[3] These data were the most recent data available when we conducted our analyses.

To describe the number and demographic characteristics for low-income adults—individuals ages 19 to 64, with incomes that did not exceed 138 percent FPL—who were uninsured in expansion and non-expansion states, we requested that NCHS calculate estimates based on responses to survey questions on demographic characteristics.[4] Responses to survey questions were calculated as an estimated percentage of the total population for three groups of low-income adults: those in expansion

[2]In this report, we use the term "low-income adults" to refer to individuals, ages 19 to 64, with household incomes that do not exceed 138 percent of FPL.

[3]The NHIS is a cross-sectional, household interview survey designed to be a nationally representative sample that covers the civilian, noninstitutionalized population residing in the United States. Several segments of the population are not included in the NHIS. Examples of persons excluded from the survey are patients in long-term care facilities, persons on active duty with the Armed Forces (though their dependents are included), persons incarcerated in the prison system, and U.S. nationals living in foreign countries.

[4]We asked NCHS researchers to produce estimates from the NHIS data because state identifiers, which are not in the public use file, were required to conduct these analyses. For the purposes of these NHIS analyses, we excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

states, in non-expansion states, and for all states.[5] We also requested that NCHS test for statistically significant differences between expansion states and non-expansion states. Using these estimates, we summarized the uninsured, low-income adult population by expansion states, non-expansion states, and all states combined for demographic characteristics including race and ethnicity, gender, and employment status.

To describe unmet medical needs, barriers to health care, and having a usual place of care and receiving selected health care services for low-income adults in expansion and non-expansion states and by insurance status, we requested that NCHS also calculate estimates using the 2016 NHIS. Estimates were based on responses to selected survey questions and composite measures—NCHS-developed measures based on

[5]We classified the 30 states and the District of Columbia that expanded their Medicaid program prior to July 1, 2016, as expansion states. The states classified as expansion states were Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and West Virginia. The remaining 20 states were classified as non-expansion states, including Louisiana, which expanded Medicaid on July 1, 2016. The other non-expansion states were Alabama, Florida, Georgia, Idaho, Kansas, Maine, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin, and Wyoming. For 3 states, we included NHIS respondents for part of calendar year 2016. Two of the 3 states—Alaska and Montana—we excluded respondents who were surveyed during the first 6 months after the state expanded Medicaid to allow for the effect of expansion to take place. For Alaska, which expanded Medicaid on September 1, 2015, we excluded responses from those surveyed from January through February 2016. For Montana, which expanded Medicaid on January 1, 2016, we excluded responses from those surveyed from January through June 2016. Because Louisiana was classified as a non-expansion state, we included NHIS respondents interviewed from January through June 2016, when Louisiana was a non-expansion state. See R.A. Cohen and E.P. Zammitti, *Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016,* (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm; and R.A. Cohen and E.P. Zammitti, *Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016*, (Hyattsville, Md.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

responses to NHIS questions on related topics.[6] We selected survey questions and their related composite measures from the Access to Health Care and Utilization and Health Behaviors sections of the 2016 NHIS.[7] These survey questions and composite measures allowed us to summarize access to health care for low-income adults in terms of unmet medical needs, barriers to health care, and having a usual place of care and receiving selected health care services. Responses to survey questions and composite measures were calculated as an estimated percentage of the total population for eight groups of low-income adults: (1) those in expansion states, (2) those in non-expansion states, (3) those who had Medicaid in expansion states, (4) those who had Medicaid in non-expansion states, (5) those who had private health insurance in expansion states, (6) those who had private health insurance in non-expansion states, (7) those who were uninsured in expansion states, and (8) those who were uninsured in non-expansion states.[8] We also

[6]The analysis included two composite measures: (1) any unmet medical needs, which was based on six underlying survey questions that asked respondents about whether during the past 12 months they needed medical care but did not get it because they could not afford it; delayed seeking medical care because of worry about the cost; or did not get prescription medicines, mental health care or counseling, eyeglasses or dental care; and (2) any non-financial barriers to health care, which is based on five underlying survey questions that asked respondents whether they delayed care in the past 12 months for any of the following reasons; could not get through on the telephone; could not get an appointment soon enough; waited too long to see the doctor after arriving at the doctor's office; the clinic/doctor's office was not open when respondent could get there; and did not have transportation. Estimates of the composite measure on non-financial barriers to health care and the underlying survey question are in appendix V.

[7]NHIS data are organized into several data files. Files used to develop estimates for our study include the Person and Sample Adult files.

[8]Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy, and those with other coverage were excluded from these analyses. Low-income adults were classified as having private health insurance if they reported that they were covered by any comprehensive private health insurance plan, including health maintenance and preferred provider organization plans. Private health insurance excludes plans that pay for only one type of service, such as accidents or dental care. Low-income adults were classified as having Medicaid if they reported that they were covered by Medicaid or by state-sponsored health plans with no premiums or if it is not known if a premium is charged. Low-income adults were classified as uninsured if they did not have any private health insurance or were not enrolled in Medicare, Medicaid, the Children's Health Insurance Program, a state-sponsored or other government-sponsored health plan, or a military plan. An adult was also defined as uninsured if they had only a private plan that paid for one type of service, such as accidents or dental care.

requested that NCHS test for statistically significant differences between the groups of low-income adults, specifically:

- all low-income adults in expansion states compared with all low-income adults in non-expansion states;
- uninsured, low-income adults in expansion states compared with each of the four groups of insured, low-income adults—low-income adults who had Medicaid in expansion states, low-income adults who had Medicaid in non-expansion states, low-income adults who had private health insurance in expansion states, and low-income adults who had private health insurance in non-expansion states;
- uninsured, low-income adults in non-expansion states compared with each of the four groups of insured, low-income adults; and
- uninsured, low-income adults in expansion states compared with uninsured, low-income adults in non-expansion states.[9]

We took steps to assess the reliability of the 2016 NHIS estimates, including interviewing NCHS officials and checking frequency distributions for missing estimates, outliers, and obvious errors. Based on this work, we determined that the estimates were sufficiently reliable for the purposes of our reporting objectives. Appendix I provides additional information on our scope and methodology.

We conducted this performance audit from May 2017 through September 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[9]We also requested that NCHS test for statistically significant differences between low-income adults who had Medicaid in expansion states and those who had Medicaid in non-expansion states, and between low-income adults who had private health insurance in expansion states and those who had private health insurance in non-expansion states. We did not request that NCHS test for significant differences between low-income adults who had Medicaid in expansion or non-expansion states and low-income adults who had private health insurance in expansion or non-expansion states. Estimates of all survey questions and composite measures we reviewed and results of all tests for statistically significant differences are in appendixes IV through VI.

Background

In fiscal year 2016, Medicaid covered an estimated 72.2 million low-income and medically needy individuals in the United States, and Medicaid estimated expenditures totaled over $575.9 billion.[10] The federal government matches most state expenditures for Medicaid services on the basis of a statutory formula.[11] States receive higher federal matching rates for certain services or populations, including an enhanced matching rate for Medicaid expenditures for individuals who became eligible for Medicaid under PPACA.[12] Of the $575.9 billion in estimated expenditures for 2016, the federal share totaled over $363.4 billion and the states' share totaled $212.5 billion.[13]

The Centers for Medicare & Medicaid Services (CMS)—a federal agency within the Department of Health and Human Services (HHS)—and states jointly administer and fund the Medicaid program. States have flexibility within broad federal requirements to design and implement their Medicaid programs. States must submit a state Medicaid plan to CMS for review and approval. A state's approved Medicaid plan outlines the services provided and the groups of individuals covered. While states must cover certain mandatory populations and benefits, they have the option of covering other categories of individuals and benefits.[14]

PPACA permitted states to expand coverage to a new population—non-elderly, non-pregnant adults who are not eligible for Medicare and whose income does not exceed 138 percent of the FPL. This expansion

[10]In fiscal year 2016, the estimated Medicaid total enrollment included enrollees in all states, the District of Columbia, and five United States territories. See Department of Health & Human Services, Office of the Actuary, Centers for Medicare & Medicaid Services, *2016 Actuarial Report on the Financial Outlook for Medicaid*.

[11]Under this formula, known as the Federal Medical Assistance Percentage, the federal government pays a share of Medicaid expenditures based on each state's per capita income relative to the national average. Federal law specifies that the Federal Medical Assistance Percentage will be no lower than 50 percent and no higher than 83 percent.

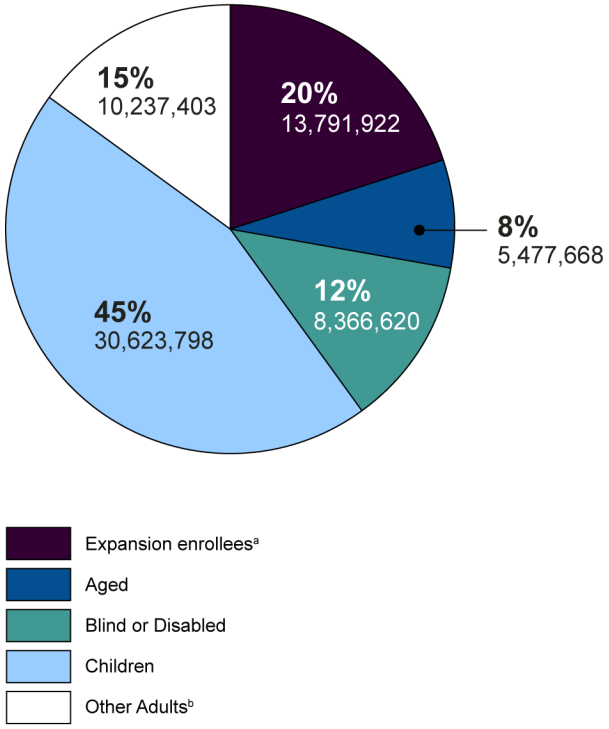
[12]States that chose to expand their Medicaid programs under PPACA receive a federal match of 100 percent beginning in 2014 for expenditures for newly eligible low-income adults, gradually diminishing to 90 percent by 2020. Certain states that expanded Medicaid coverage for low-income adults prior to the enactment of PPACA in 2010 may also receive an enhanced federal match for Medicaid expenditures for this expansion population.

[13]See Office of the Actuary, *2016 Actuarial Report*.

[14]Mandatory benefits include inpatient and outpatient hospital services, and laboratory and x-ray services, among others. Optional benefits include prescription drugs, physical therapy, and dental services, among others.

population comprised 20 percent of total Medicaid enrollment in 2017. (See fig. 1.)

Figure1: National Medicaid Enrollment by Eligible Population, December 2017



Source: GAO summary of Centers for Medicare & Medicaid Services' data. | GAO-18-607

Note: Medicaid enrollment numbers are from CMS-64 enrollment data and may differ from other data sources. Average monthly enrollment was tabulated from the CMS-64 enrollment report for fiscal year 2017, which was accessed on April 4, 2018.

[a]Expansion enrollees refers to individuals ages 19 to 64, without children, who are not disabled or pregnant, and have household incomes that did not exceed 138 percent of the federal poverty level. In 2017, 138 percent of the federal poverty level was $22,411 for a two-person household in the contiguous United States.

[b]Other adults refers to adults who are not aged and not disabled.

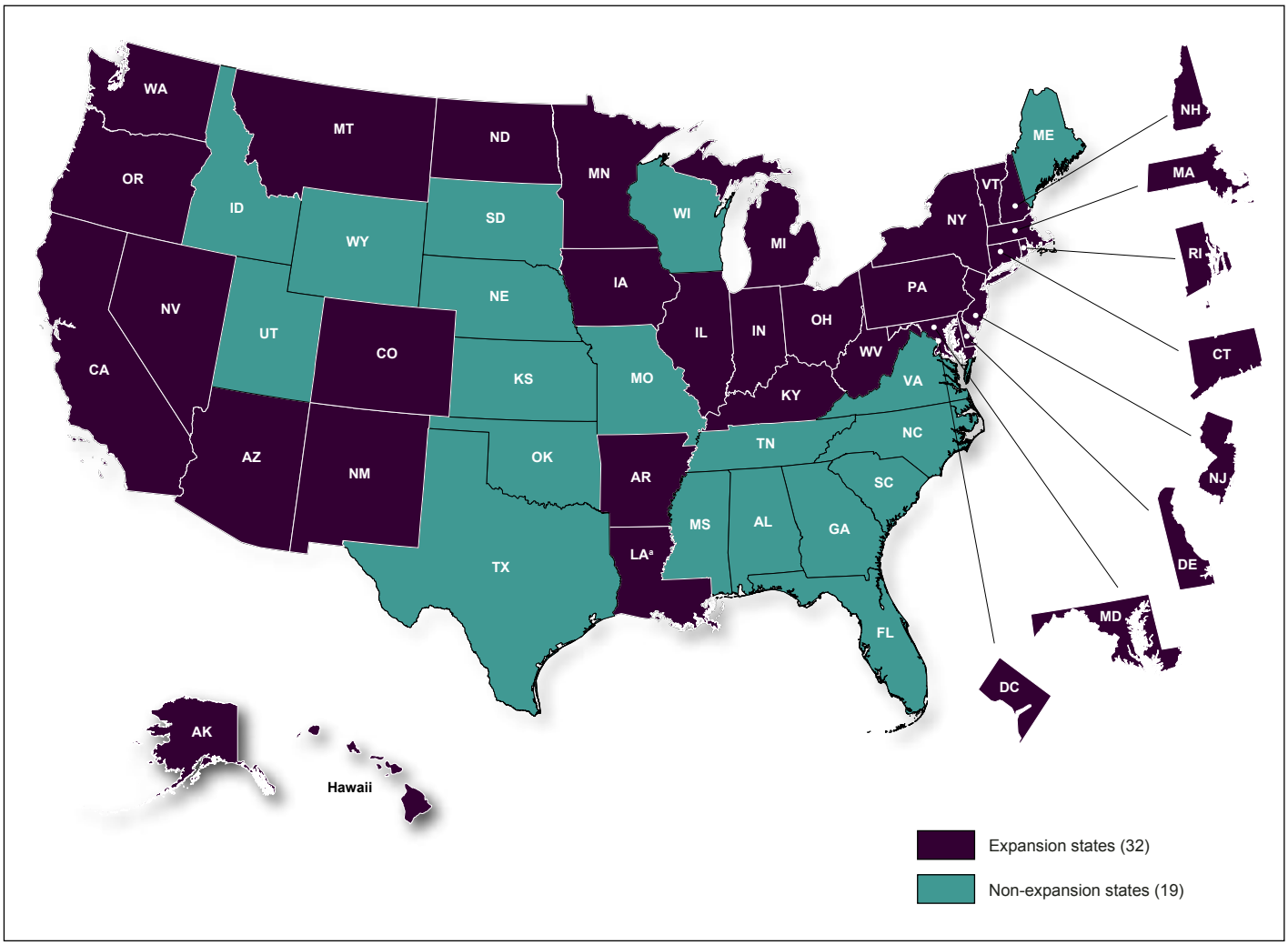
As of December 2017, 31 states and the District of Columbia had expanded Medicaid eligibility to the new coverage population allowed under PPACA and 19 states had not.[15] Figure 2, an interactive map,

[15]Louisiana expanded Medicaid eligibility on July 1, 2016. For the purposes of these NHIS analyses, Louisiana was classified as a non-expansion state and we included low-income adults interviewed from January through June 2016 when Louisiana was a non-expansion state.

illustrates states' Medicaid expansion status. See appendix II for additional information on figure 2.

Figure 2: Status of Medicaid Eligibility Expansion by State, as of 2017

Interactivity instructions: Roll over on each state to see population and Medicaid enrollment data for 2017.
See Appendix II for the non-interactive, printer-friendly version.



Sources: GAO summary of U.S. Census Bureau, Centers for Medicare & Medicaid Services, and Kaiser Family Foundation data (data); Map Resources (map). | GAO-18-607

Notes: Census population estimates are as of July 1, 2017. Medicaid enrollment numbers come from CMS-64 enrollment data and may differ from other data sources. Average monthly enrollment was tabulated from the CMS-64 enrollment report for calendar year 2017 that was accessed on April 4, 2018.

[a]Louisiana expanded Medicaid eligibility on July 1, 2016. For the purpose of the NHIS analysis, Louisiana was classified as a non-expansion state and we only included low-income adults interviewed from January through June 2016 when Louisiana was a non-expansion state.

Survey Estimates Showed 5.6 Million Uninsured, Low-Income Adults Had Qualifying Incomes for Expanded Medicaid Coverage

According to the NHIS estimates, 5.6 million low-income adults were uninsured in 2016. Of these 5.6 million, an estimated 1.9 million uninsured, low-income adults resided in expansion states, compared with an estimated 3.7 million in non-expansion states. Estimates of uninsured, low-income adults comprised less than 1 percent of the total population for all expansion states and 3 percent of the total population for all non-expansion states.[16]

NHIS estimates also showed that over half of uninsured, low-income adults were male, over half were employed, and over half had incomes less than 100 percent FPL. For some demographic characteristics, there were some statistically significant differences between uninsured, low-income adults in expansion states compared with these adults in non-expansion states. For example, expansion states had significantly larger percentages of uninsured, low-income males than non-expansion states. (See table 1.) See table 6 in appendix III for additional demographic characteristics of uninsured, low-income adults.

Table 1: Demographic Characteristics of Uninsured, Low-Income Adults in Expansion and Non-Expansion States, 2016

Demographic characteristics	Expansion states Percent (standard error) N = 1,915,000	Non-expansion states Percent (standard error) N = 3,721,000	All states Percent (standard error) N = 5,639,000
Poverty status[a]			
Less than 100% FPL	59 (3.28)[b]	69 (2.05)[b]	65 (1.81)
100% to less than or equal to 138% FPL	42 (3.28)[b]	32 (2.05)[b]	35 (1.81)
Sex			
Male	63 (2.33)[b]	51 (1.49)[b]	55 (1.31)
Female	37(2.33)[b]	49 (1.49)[b]	45 (1.31)
Race and ethnicity			
Hispanic	22 (2.64)	20 (3.26)	20 (2.30)
Non-Hispanic, white only	53 (3.40)	45 (2.70)	48 (2.14)
Non-Hispanic, black only	17 (2.47)[b]	30 (2.32)[b]	26 (1.73)
Non-Hispanic, Asian only	NA	1 (0.57)	2 (0.60)

[16]The 2016 total population for expansion and non-expansion states were derived from the U.S. Census Bureau, Annual Estimates of the Resident Population: April 1, 2010, to July 1, 2017. See https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=PEP_2017_PEPANNRES&src=pt, accessed on June 11, 2018.

Demographic characteristics	Expansion states Percent (standard error) N = 1,915,000	Non-expansion states Percent (standard error) N = 3,721,000	All states Percent (standard error) N = 5,639,000
Non-Hispanic, other	3 (1.02)	4 (0.98)	4 (0.73)
Employment status			
Employed	64 (2.43)	56 (1.60)	58 (1.37)
Unemployed	14 (1.85)	17 (1.35)	16 (1.10)
Not in workforce	22 (2.17)[b]	28 (1.60)[b]	26 (1.30)

Legend: NA = Not available because of estimates did not meet the NCHS standards for accuracy and precision.

Source: GAO summary of the 2016 NHIS estimates produced by NCHS. | GAO-18-607

Notes: Estimates reflect questions included in the Family Core component of the National Health Interview Survey (NHIS). Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. population. Estimates were not available when they did not meet the National Center for Health Statistics' (NCHS) standards for accuracy and precision. The percentages may not sum to 100 percent due to rounding.

For the purposes of these NHIS analyses, low-income adults are individuals ages 19 to 64, with family incomes that did not exceed 138 percent of the federal poverty level (FPL). These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. An individual was defined as uninsured if they did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program, state-sponsored or other government-sponsored health plan, or military plan. An individual was also defined as uninsured if they had only a private plan that paid for one type of service, such as accidents or dental care.

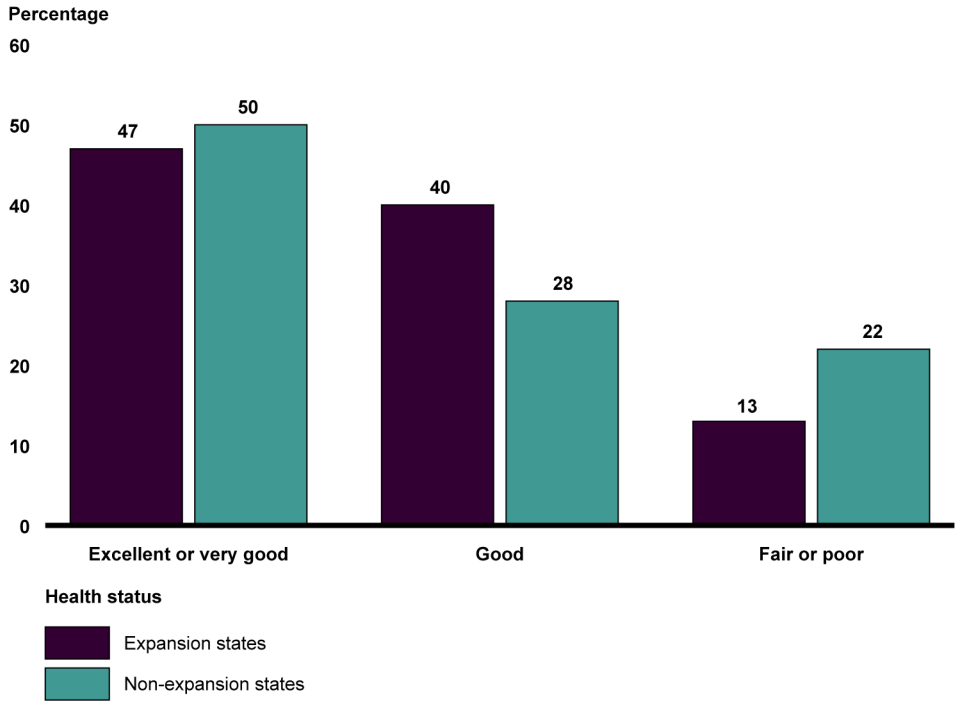
For the purposes of the NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

[a]The FPL is based on family income and family size, using the U.S. Census Bureau's poverty thresholds. The 2016 NHIS imputed income files were used to help create the poverty variable, and this variable is based on reported and imputed family information. See https://www.cdc.gov/nchs/nhis/nhis_2016_data_release.htm.

[b]Difference between expansion and non-expansion states was statistically significant at $p < 0.05$.

Estimates from the 2016 NHIS showed some statistically significant differences in the health status of uninsured, low-income adults in expansion and non-expansion states. In particular, expansion states had a larger percentage of these adults who reported that their health was "good" and a smaller percentage who reported their health as "fair or poor" than those in non-expansion states. However, the percentages of uninsured, low-income adults with responses of "excellent or very good" in both expansion and non-expansion states were large—47 percent or larger, and the differences between the two groups of states were not statistically significant. (See fig. 3.) See table 7 in appendix III for additional information about the health status for uninsured, low-income adults.

Figure 3: Health Status of Uninsured, Low-Income Adults in Expansion and Non-Expansion States, 2016



Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates reflect those included in the Family and Sample Adult Core components of the National Health Interview Survey (NHIS). Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. population.

For the purposes of these NHIS analyses, low-income adults are individuals ages 19 to 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. An individual was defined as uninsured if they did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program, state-sponsored or other government-sponsored health plan, or military plan. An individual was also defined as uninsured if they had only a private plan that paid for one type of service, such as accidents or dental care.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

For Good and for Fair or Poor, the difference between expansion and non-expansion states was statistically significant at $p < 0.05$.

Survey Estimates Showed Low-Income Adults in Expansion States and Those Who Were Insured Were Less Likely to Report Any Unmet Medical Needs

Access to Health Care: Measuring Any Unmet Medical Needs

The National Center for Health Statistics, the federal agency that conducts the National Health Interview Survey (NHIS), developed a composite measure on any unmet medical needs, which was based on six survey questions on respondents' ability to afford different types of needed health care services. These questions asked whether in the past 12 months respondents could not afford medical care at any time; delayed seeking medical care due to worries about costs; or could not afford needed prescription drugs, mental health or counseling, dental care, or eyeglasses.

Source: GAO summary of a selected NHIS composite measure. | GAO-18-607

The 2016 NHIS estimates showed that smaller percentages of low-income adults in expansion states reported having any unmet medical needs compared with those in non-expansion states; and smaller percentages of those who were insured reported having any unmet medical needs compared with those who were uninsured, regardless of where they lived, for example:

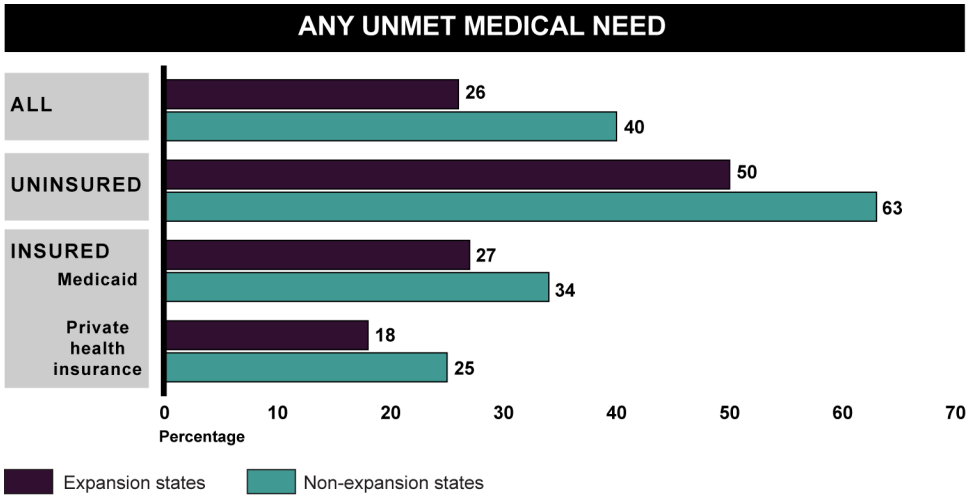
- **Low-income adults in expansion and non-expansion states.** Twenty-six percent of low-income adults in expansion states reported having any unmet medical needs, compared with 40 percent of those in non-expansion states.[17]
- **Low-income adults who were insured and uninsured.** Thirty-four percent or less of the low-income adults who had Medicaid or private health insurance in expansion or non-expansion states reported having any unmet medical needs, compared with 50 percent or more of those who were uninsured in expansion or non-expansion states.[18] Further, among the uninsured, 50 percent of low-income adults living in expansion states reported any unmet medical needs, compared with 63 percent of those in non-expansion states.[19] (See fig. 4.) See tables 8 and 9 in appendix IV for estimates of the composite measure we reviewed on any unmet medical needs.

[17]This difference was statistically significant at $p < 0.05$.

[18]These differences were statistically significant at $p < 0.05$.

[19]This difference was statistically significant at $p < 0.05$.

Figure 4: Percentage of Low-Income Adults in Expansion and Non-Expansion States and by Insurance Status Who Reported Any Unmet Medical Need, 2016



Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are for a composite measure, which was based on responses to questions from the Access to Health Care and Utilization sections of the Family and Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 to 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. Low-income adults had any unmet medical needs if they reported that in the past 12 months they did not get needed medical care because they could not afford it; delayed seeking medical care due to worries about costs; or needed but did not get because they could not afford prescription medicines, mental health care or counseling, dental care, or eyeglasses.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states. Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses.

The difference between all low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$. The difference between low-income adults who were uninsured in expansion and non-expansion states was statistically significant at $p < 0.05$.

Differences between low-income adults who were uninsured in expansion or non-expansion states and low-income adults who were insured—Medicaid or private health insurance—in expansion or non-expansion states were statistically significant at $p < 0.05$.

Survey Estimates Showed Low-Income Adults in Expansion States and Those Who Were Insured Were Less Likely to Report Financial Barriers to Health Care

Access to Health Care: Measuring Financial Barriers to Health Care

The 2016 National Health Interview Survey (NHIS) asked respondents whether they did not obtain different types of needed health care services in the past 12 months because they could not afford the service. Services included:

- medical care,
- specialty care,
- prescription medications,
- mental health care or counseling,
- dental care, and
- eyeglasses.

Source: GAO summary of selected NHIS questions. | GAO-18-607

The 2016 NHIS estimates showed that smaller percentages of low-income adults in expansion states reported financial barriers to needed health care compared with those in non-expansion states; and smaller percentages of those who were insured reported financial barriers to needed health care compared with those who were uninsured, regardless of where they lived, for example:

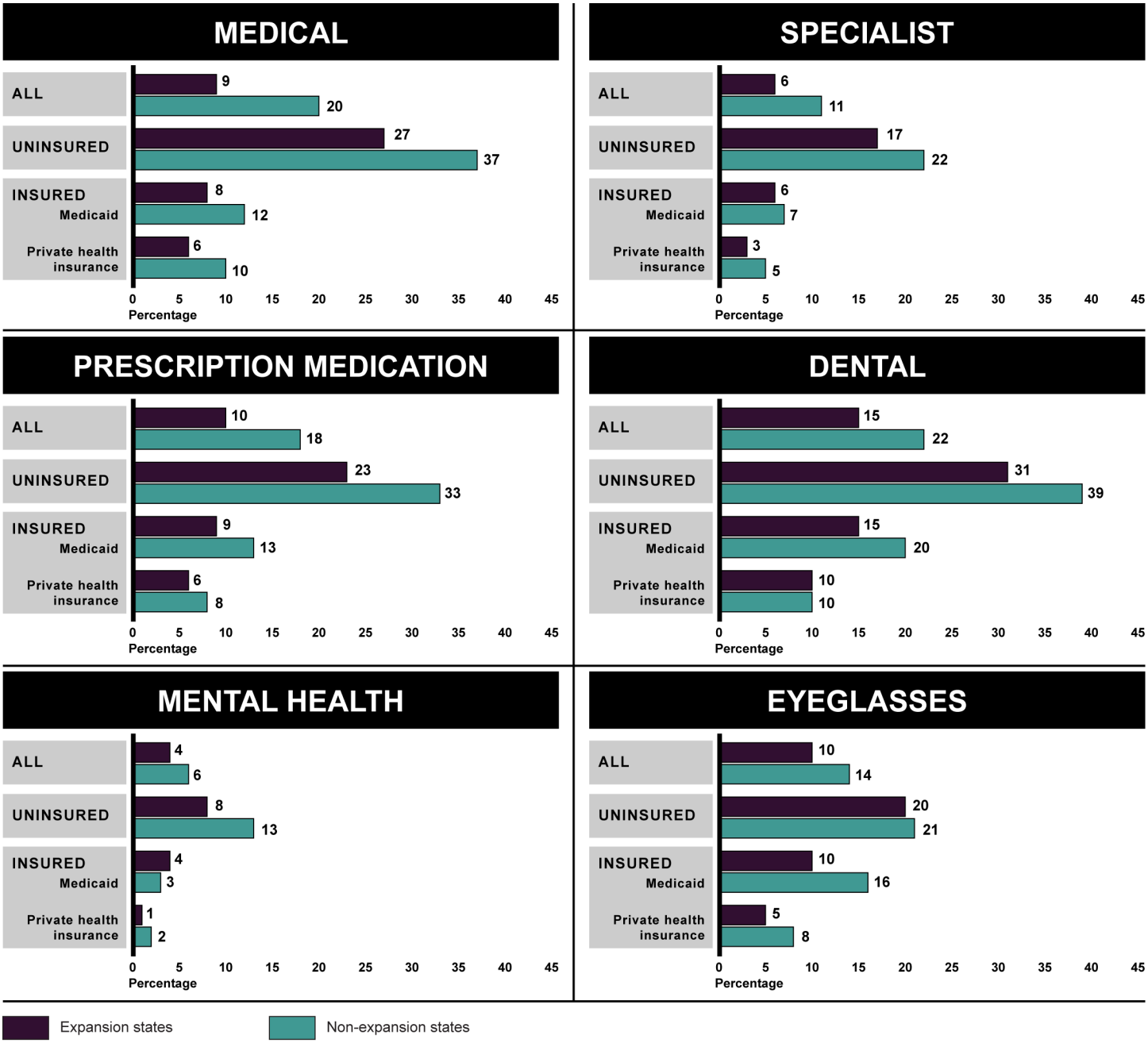
- **Low-income adults in expansion and non-expansion states.** Nine percent of low-income adults in expansion states reported that they could not afford needed medical care, compared with 20 percent of low-income adults in non-expansion states.[20]
- **Low-income adults who were insured and uninsured.** Twelve percent or less of low-income adults who had Medicaid or private health insurance in expansion or non-expansion states reported financial barriers to needed medical care, compared with 27 percent or more of those who were uninsured in expansion or non-expansion states.[21] In addition, among low- income adults who were uninsured, a smaller percentage of those who lived in expansion states reported financial barriers to two of the six needed health care services compared with those who lived in non-expansion states.[22] (See fig. 5.) See tables 10 through 13 in appendix V for estimates of all survey questions we reviewed on financial barriers to health care.

[20]This difference was statistically significant at $p < 0.05$.

[21]These differences were statistically significant at $p < 0.05$.

[22]For financial barriers to medical care and prescription drugs, differences were statistically significant at $p < 0.05$. For mental health care, dental care, specialty care, and eyeglasses, differences were not statistically significant at $p < 0.05$.

Figure 5: Percentage of Low-Income Adults in Expansion and Non-Expansion States and by Insurance Status Who Reported Financial Barriers to Different Types of Needed Health Care Services, 2016



Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are for selected questions, which were from the Access to Health Care and Utilization sections of the Family and Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 to 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses.

For all six service types, the difference between all low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$. For two of the six service types—medical care and prescription medications—the difference between low-income adults who were uninsured in expansion and non-expansion states was statistically significant at $p < 0.05$.

For all six service types, with four exceptions, differences between low-income adults who were uninsured in expansion or non-expansion states and low-income adults who were insured—Medicaid or private health insurance—in expansion or non-expansion states were statistically significant at $p < 0.05$. For mental health care, differences between low-income adults who were uninsured in expansion states and low-income adults who had Medicaid in expansion or non-expansion states were not statistically significant at $p < 0.05$. For eyeglasses, differences between low-income adults who were uninsured in expansion or non-expansion states and those who had Medicaid in non-expansion states were not statistically significant at $p < 0.05$.

The 2016 NHIS also collected information on non-financial barriers to health care. Specifically, the survey asked whether respondents had delayed health care due to non-financial reasons, such as they lacked transportation, were unable to get through on the phone, were unable to get a timely appointment, experienced long wait time at the doctor's office, or were not able to get to a clinic or doctor's office when it was open.[23] The 2016 NHIS showed that the same or similar percentages of low-income adults in expansion and non-expansion states reported delaying care due to a lack of transportation or other non-financial reasons.[24] Further, generally similar or larger percentages of low-income adults with insurance reported delaying care due to non-financial reasons, compared with those who were uninsured.[25] See tables 14 and 15 in

[23]NCHS developed a composite measure on any non-financial barriers to health care, which was based on these five survey questions.

[24]Any differences in the percentage of low-income adults in expansion and non-expansion states that reported delaying care due to a lack of transportation, long wait times at the doctor's office, or other non-financial reason were not statistically significant at $p < 0.05$.

[25]Estimates were not available for all insured and uninsured low-income adult populations for all survey questions on non-financial barriers we reviewed, because estimates did not meet NCHS's standards for accuracy and precision. See table 15 in appendix V.

appendix V for estimates of low-income adults in expansion and non-expansion states and by insurance status on non-financial barriers to health care.

Survey Estimates Showed Low-Income Adults in Expansion States and Those Who Were Insured Were Generally More Likely to Report Having a Usual Place of Care and Receiving Selected Health Care Services

Access to Health Care: Having a Usual Place of Care

The 2016 National Health Interview Survey (NHIS) asked respondents about whether they had a place they usually go when sick or need advice about their health.

Source: GAO summary of selected NHIS questions. | GAO-18-607

The 2016 NHIS estimates showed that a larger percentage of low-income adults in expansion states reported having a usual place of care compared with those in non-expansion states; and larger percentages of those who were insured reported having a usual place of care compared with those who were uninsured, regardless of where they lived, for example:[26]

- **Low-income adults in expansion and non-expansion states.** Eighty-two percent of the low-income adults in expansion states reported having a usual place of care when they were sick or needed advice about their health, compared with 68 percent of those in non-expansion states.[27]
- **Low-income adults who were insured and uninsured.** Seventy-eight percent or more of those who had Medicaid or private health insurance in expansion or non-expansion states reported having a usual place of care, compared with 46 percent or less of those who were uninsured in expansion or non-expansion states.[28] Among the uninsured, similar percentages of low-income adults in expansion and non-expansion states reported having a usual place of care.[29] (See fig. 6.) See tables 16 through 19 in appendix VI for estimates of all survey questions we reviewed on having a usual place of care.

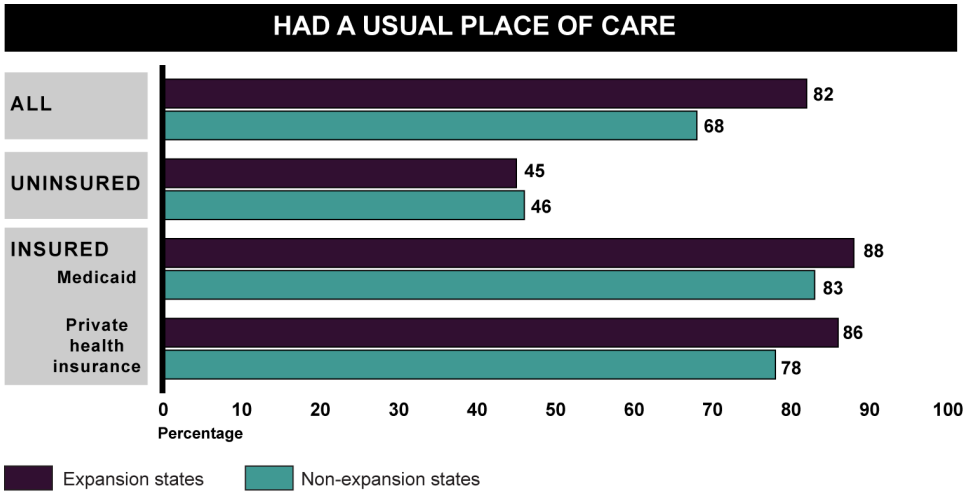
[26]Low-income adults who reported the emergency department as their usual place of care were considered to not have a usual place of care.

[27]This difference was statistically significant at $p < 0.05$.

[28]These differences were statistically significant at $p < 0.05$.

[29]This difference was not statistically significant at $p < 0.05$.

Figure 6: Percentage of Low-Income Adults in Expansion and Non-Expansion States and by Insurance Status Who Reported Having a Usual Place of Care, 2016



Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are for a selected survey question, which was from the Health Care Access and Utilization section of the Sample Adult Core component of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 to 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. Low-income adults who reported the emergency department as their usual place of care were considered to not have a usual place of care.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses.

The difference between all low-income adults in expansion and non-expansion states is statistically significant at $p < 0.05$.

Differences between low-income adults who were uninsured in expansion or non-expansion states and low-income adults who were insured—Medicaid or private health insurance—in expansion or non-expansion states were statistically significant at $p < 0.05$.

Survey Estimates Showed Low-Income Adults in Expansion States and Those Who Were Insured Were Generally More Likely to Report Receiving Selected Services

Access to Health Care: Measuring Receipt of Selected Health Care Services

The 2016 National Health Interview Survey (NHIS) asked respondents whether they had received certain health care services in the past 12 months, including:

- having their blood cholesterol checked by a doctor, nurse, or other health professional;
- having their blood pressure checked by a doctor, nurse, or other health professional;
- having a fasting test for high blood sugar or diabetes;
- getting a flu vaccine by both shot and nasal spray; and
- visiting a hospital emergency department.

Source: GAO summary of selected NHIS questions. | GAO-18-607

The 2016 estimates showed that larger percentages of low-income adults in expansion states reported receiving selected health care services, such as a flu vaccine, compared with those in non-expansion states; and larger percentages of those with insurance reported receiving selected health care services compared with those who were uninsured, regardless of where they lived, for example:

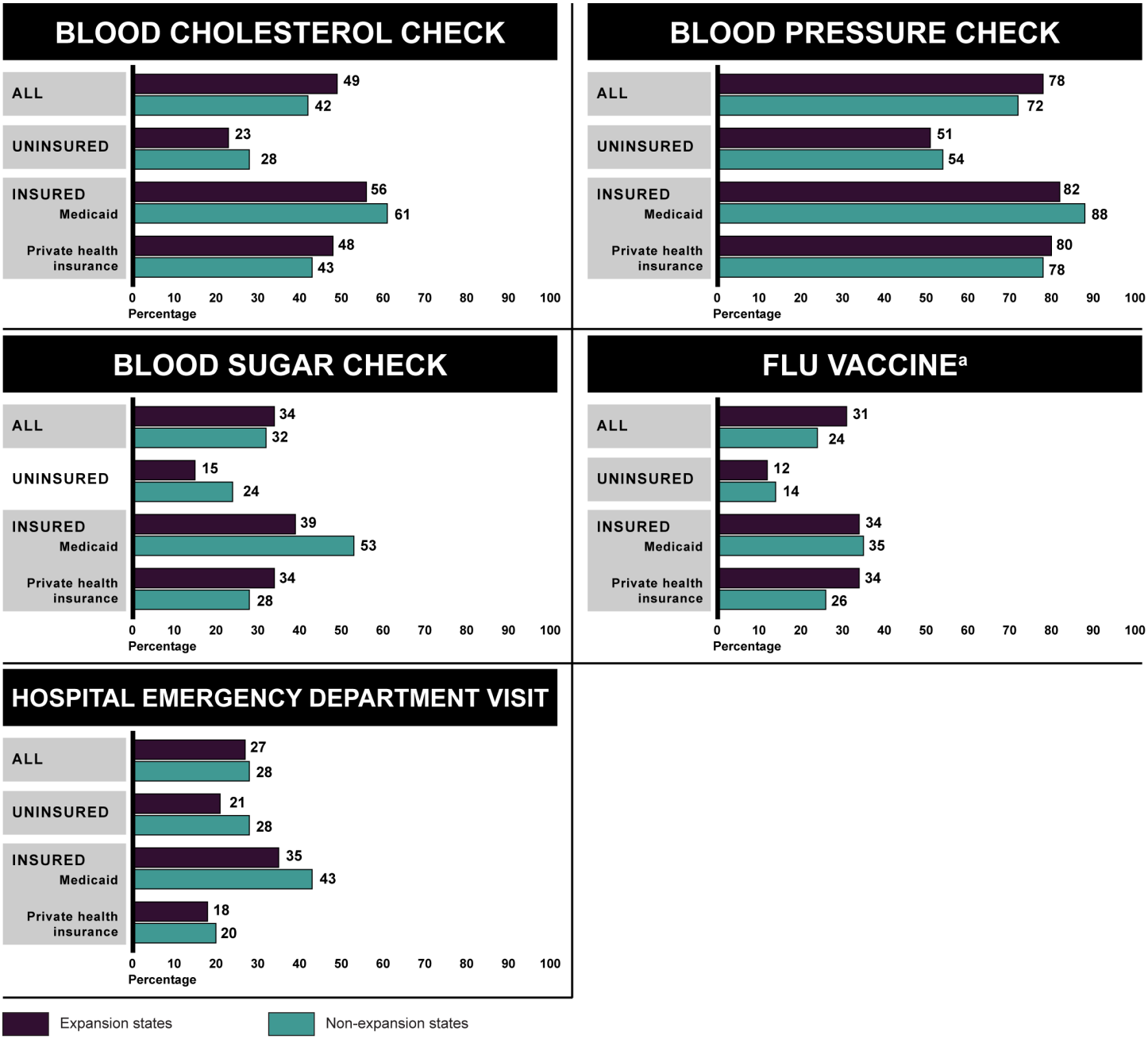
- **Low-income adults in expansion and non-expansion states.** Thirty-one percent of low-income adults in expansion states reported receiving flu vaccinations, compared with 24 percent of those in non-expansion states.[30]
- **Low-income adults who were insured and uninsured.** Forty-three percent or more of low-income adults who had Medicaid or private health insurance in expansion or non-expansion states reported receiving blood cholesterol checks, compared with 28 percent or less of low-income adults who were uninsured in expansion or non-expansion states.[31] Among the uninsured, generally similar percentages of low-income adults in expansion and non-expansion states reported blood cholesterol checks, flu vaccines, and other selected services.[32] (See fig. 7.) See tables 20 and 21 in appendix VI for estimates of all survey questions we reviewed on selected health care services.

[30]This difference was statistically significant at $p < 0.05$. Differences between percentages of low-income adults in expansion states and those in non-expansion states who reported receiving other selected services, such as having their blood sugar checked, were not statistically significant at $p < 0.05$.

[31]These differences were statistically significant at $p < 0.05$.

[32]Any differences between the percentages of low-income adults who were uninsured in expansion and non-expansion states who reported receiving selected health care services were not statistically significant at $p < 0.05$.

Figure 7: Percentage of Low-Income Adults in Expansion and Non-Expansion States and by Insurance Status Who Reported Using Selected Health Care Services, 2016



Source: GAO summary of the 2016 National Health Interview Survey estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are based on selected survey questions, which were from the Access to Health Care and Utilization sections of the Sample Adult Core component of the 2016 National Health

Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 to 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses.

For blood cholesterol check, blood pressure check, and flu vaccine, the differences between all low-income adults in expansion states and non-expansion states was statistically significant at $p < 0.05$.

For all five services with four exceptions, differences between low-income adults who were uninsured in expansion or non-expansion states and low-income adults who were insured—Medicaid or private health insurance—in expansion or non-expansion states were statistically significant at $p < 0.05$. For receiving a blood sugar check, the difference between low-income adults who were uninsured in non-expansion states and low-income adults who had private health insurance in non-expansion states was not statistically significant at $p < 0.05$. For visiting the hospital emergency department, the difference between low-income adults who were uninsured in non-expansion states and those who had Medicaid in expansion states was not statistically significant at $p < 0.05$, and the differences between the low-income adults who were uninsured in expansion states and those who had private health insurance in expansion or non-expansion states were not statistically significant at $p < 0.05$.

[a]Includes vaccines by both shot and nasal spray.

The 2016 NHIS also asked respondents whether they visited or had spoken to a health care professional about their health, including:

- a general doctor, such as a general practitioner, family doctor, and internist;
- a nurse practitioner, physician's assistant, or midwife; and
- a doctor who specializes in a particular disease, with the exception of obstetricians, gynecologists, psychiatrists, and ophthalmologists.

See tables 22 and 23 in appendix VI for estimates of low-income adults in expansion and non-expansion states and by insurance status on contacting health care professionals.

Agency Comments and Our Evaluation

We provided a draft of this report to HHS for comment. HHS provided technical comments, which we incorporated as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report to the Secretary of Health and Human Services, the appropriate congressional

committee, and other interested parties. In addition, this report is available at no charge on the GAO website at http://www.gao.gov.

If you are your staff members have any questions about this report, please contact me at (202) 512-7114 or yocomc@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Major contributors to this report are listed in appendix VII.

Sincerely yours,

Carolyn L. Yocom
Director, Health Care

Appendix I: Objectives, Scope, and Methodology

To describe national survey estimates of (1) the number and demographic characteristics of uninsured, low-income adults in expansion and non-expansion states; (2) unmet medical needs for low-income adults in expansion and non-expansion states and by insurance status; (3) barriers to health care for low-income adults in expansion and non-expansion states and by insurance status; and (4) having a usual place of care and receiving selected health care services for low-income adults in expansion and non-expansion states and by insurance status, we used data from the 2016 National Health Interview Survey (NHIS).[1] The 2016 NHIS were the most recent data available when we conducted our analyses. This appendix describes the data source, study population, analyses conducted, study limitations, and data reliability assessment.

Data Source

The NHIS collects demographic, health status, health insurance, health care access, and health care service use data for the civilian, noninstitutionalized U.S. population. It is an annual, nationally representative, cross-sectional household interview survey.[2] NHIS interviews are conducted continuously throughout the year for the National Center for Health Statistics (NCHS), which is a federal agency within the Department of Health and Human Services that compiles statistical information to help guide health policy decisions. Interviews are conducted in respondents' homes, and interviewers may conduct follow-up interviews over the telephone to complete an interview. Information about some NHIS respondents, such as information about their health status, may be obtained through an interview with another family member on behalf of the respondent.

[1]The estimates of demographic characteristics and access to health care from the 2016 NHIS for this study were produced by Robin A. Cohen, and Emily P. Zammitti of National Center for Health Statistics' Division of Health Interview Statistics based on the analysis plans we provided. See R.A. Cohen and E.P. Zammitti, *Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016,* (Hyattsville, MD.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm; and R.A. Cohen and E.P. Zammitti, *Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016*, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[2]Several segments of the U.S. population are not included in the NHIS. Examples of persons excluded from the survey are patients in long-term care facilities, persons on active duty with the Armed Forces (although their dependents are included), persons incarcerated in the prison system, and U.S. nationals living in foreign countries.

NHIS data are organized into several data files. Estimates used for our study are based on data with the 2016 Family and Sample Adult Core components of the 2016 NHIS. Sociodemographic, insurance, and select health care access and utilization variables were defined using data collected in the Family Core component of the survey, which includes data on every household member for the families participating in NHIS. Other measures of health care access and utilization examined in this study are based on data collected in the Sample Adult Core component. In this component, the respondent (i.e., the sample adult) is randomly selected from among all adults aged ≥18 years in the family. A proxy respondent might respond for the sample adult if, because of health reasons, the sample adult is physically or mentally unable to respond themselves. The 2016 imputed income files were used to define poverty thresholds, which is based on reported and imputed family income. The NHIS publicly released data files for 2016 include data for 40,220 households containing 97,169 persons, and the total household response rate was 67.9 percent.

Study Population

For this study we asked NCHS to provide estimates of low-income, non-elderly adults, which we defined as individuals ages 19 to 64, with family incomes that did not exceed 138 percent of the federal poverty level (FPL).[3] We also requested that estimates be provided separately for respondents based on whether they resided in an expansion or non-expansion state, and whether they were covered by private health insurance, Medicaid, or had no insurance. We gave NCHS specifications for the definition of low-income, non-elderly adults; the states that should be classified as expansion or non-expansion states in calendar year 2016; and the respondents who should be classified as having private health insurance, Medicaid, or no insurance.

[3]We chose this definition because under the Patient Protection and Affordable Care Act (PPACA), states may opt to expand their Medicaid programs to cover non-elderly, non-pregnant adults who are not eligible for Medicare, and whose income does not exceed 133 percent of the FPL beginning January 1, 2014. Pub. L. No. 111-148, 124 Stat. 119 (2010), as amended by the Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152, 124 Stat. 1029 (2010). PPACA also provides for a 5 percent disregard when calculating income for determining Medicaid eligibility, which effectively increases income eligibility from 133 percent of FPL to 138 percent of FPL. The FPL is based on family income and family size, using the U.S. Census Bureau's poverty thresholds. In 2016, 138 percent of FPL for an individual was $17,231 and for a family of four was $33,897. PPACA also permitted an early expansion option, whereby states could expand eligibility for this population, or a subset of this population, starting on April 1, 2010.

We asked NCHS to exclude respondents who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who responded they were pregnant at the time of the interview. In addition, we asked NCHS to exclude individuals for which information was missing—not recorded or not provided during the interview—on health insurance coverage (Medicaid, private health insurance, Indian Health Service, military health care, or no health insurance), receipt of Supplemental Social Security Income, and U.S. citizenship.

We classified individuals in our study population as residing in an expansion or non-expansion state based on their state of residence when they were interviewed for the 2016 NHIS. We classified the 30 states and the District of Columbia that expanded their Medicaid eligibility before July 1, 2016, as expansion states. The remaining 20 states were classified as non-expansion states. Louisiana expanded Medicaid coverage on July 1, 2016; therefore, we classified it as a non-expansion state. We decided not to classify Louisiana as an expansion state because we allowed a 6-month period for the effects of expansion to appear. Therefore, for Louisiana we only included NHIS respondents interviewed from January through June 2016 when Louisiana was a non-expansion state. Similarly, for two expansion states—Alaska and Montana—we only included individuals who were interviewed March through December 2016 and July through December 2016, respectively, after the state expanded Medicaid to allow for a 6-month time period for the effect of expansion to take place. (See table 2.)

Table 2: States Classified as Expansion States and Non-Expansion States for this Study

Expansion states (date of expansion)	Non-expansion states
Alaska (September 1, 2015)[a]	Alabama
Arizona (January 1, 2014)	Florida
Arkansas (January 1, 2014)	Georgia
California (January 1, 2014)	Idaho
Colorado (January 1, 2014)	Kansas
Connecticut (January 1, 2014)	Louisiana[b]
Delaware (January 1, 2014)	Maine
District of Columbia (January 1, 2014)	Mississippi
Hawaii (January 1, 2014)	Missouri
Illinois (January 1, 2014)	Nebraska

Expansion states (date of expansion)	Non-expansion states
Indiana (February 1, 2015)	North Carolina
Iowa (January 1, 2014)	Oklahoma
Kentucky (January 1, 2014)	South Carolina
Maryland (January 1, 2014)	South Dakota
Massachusetts (January 1, 2014)	Tennessee
Michigan (April 1, 2014)	Texas
Minnesota (January 1, 2014)	Utah
Montana (January 1, 2016)[c]	Virginia
Nevada (January 1, 2014)	Wisconsin
New Hampshire (August 15, 2014)	Wyoming
New Jersey (January 1, 2014)	
New Mexico (January 1, 2014)	
New York (January 1, 2014)	
North Dakota (January 1, 2014)	
Ohio (January 1, 2014)	
Oregon (January 1, 2014)	
Pennsylvania (January 1, 2015)	
Rhode Island (January 1, 2014)	
Vermont (January 1, 2014)	
Washington (January 1, 2014)	
West Virginia (January 1, 2014)	

Source: GAO summary of Kaiser Family Foundation's data | GAO-18-607

Note: For this study we classified the 30 states and the District of Columbia that expanded their Medicaid programs before July 1, 2016, as expansion states. We classified the remaining 20 states as non-expansion states.

[a]We excluded individuals interviewed in Alaska from January through February 2016 to allow for a 6-month time period for the effects of the expansion to take place.

[b]We only included individuals interviewed in Louisiana from January through June 2016 (the 6-month period before Louisiana expanded Medicaid on July 1, 2016), and classified Louisiana as a non-expansion state.

[c]We excluded individuals interviewed in Montana from January through June 2016 to allow for a 6-month time period for the effects of the expansion to take place.

Table 3 below illustrates the sample size and population estimates of low-income sample adults by expansion state, non-expansion state, and national total.

Table 3: Sample Sizes and Population Estimates of Low-Income Adults by State Expansion Status

	Expansion states		Non-expansion states		All states	
	Sample size	Population estimate (thousands)	Sample size	Population estimate (thousands)	Sample size	Population estimate (thousands)
Low-Income adults	2,027	14,564	1,476	9,459	3,503	24,023

Source: GAO summary of 2016 NHIS estimates produced by National Center for Health Statistics. | GAO-18-607

Notes: Estimates are from the Family Core and Sample Adult components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs before July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

We classified NHIS respondents as having private health insurance, Medicaid, or no insurance based on the health insurance classification approach used by NCHS for NHIS. NCHS assigned NHIS respondents' health insurance classification based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured.[4] Low-income adults with more than one coverage type were assigned to the first appropriate category in the hierarchy. Respondents were classified as having private health insurance if they reported that they were covered by any comprehensive private health insurance plan (including health maintenance and preferred provider organizations). Private coverage excluded plans that pay for one type of service, such as accidents or dental care. Respondents were classified as having Medicaid if they reported they were covered by Medicaid or by a state-sponsored health plan with no premiums or it was not known whether a premium was charged. Respondents were classified as being uninsured if they did not report having any private health insurance, Medicare, Medicaid, Children's Health Insurance Program, state-sponsored or other government-sponsored health plan, or military health plan. Respondents were also classified as being uninsured if they

[4]Our study excludes NHIS respondents classified in NCHS's health insurance hierarchy as having "other coverage." NCHS defines other coverage as insurance coverage with the Children's Health Insurance Program, government sponsored-health plans, Medicare, or other state sponsored health plans with a premium.

only had insurance coverage with a private plan that paid for one type of service, such as accidents or dental care.

Analyses Conducted

We gave NCHS officials specifications to calculate estimates from the 2016 NHIS for demographic characteristics, access to care, as well as composite measures of access to health care based on selected survey questions. Composite measures are NCHS-developed measures based on responses to NHIS questions covering related topics. The analysis included two composite measures:

1. any unmet medical needs, which is based on responses to six underlying survey questions that asked respondents about whether during the past 12 months they needed medical care but did not get it because they could not afford it; delayed seeking medical care because of worry about the cost; or did not get prescription medicines, mental health care or counseling, eyeglasses, or dental care due to cost; and
2. any non-financial barriers to health care, which is based on five underlying questions that asked respondents whether they delayed care in the past 12 months for any of the following reasons: could not get through on the telephone; could not get an appointment soon enough; waited too long to see the doctor after arriving at the doctor's office; the clinic/doctor's office was not open when respondent could get there; and did not have transportation.

NCHS officials calculated our requested estimates of groups within our study population based on whether respondents resided in an expansion or non-expansion state and whether they had private health insurance, Medicaid, or were uninsured at the time of the interview. For each comparison—such as comparisons of access to health care for respondents in expansion versus non-expansion states—we asked NCHS to test for statistically significant differences. We identified a statistically significant difference when the p-value from a t-test of the difference in the estimated proportions between two study subgroups had a value of less than 0.05.

To describe the number and demographic characteristics of uninsured, low-income adults, we compared estimates of selected demographic characteristics (race and ethnicity, gender, poverty status, and employment status) and reported health status for this group in expansion

and non-expansion states.[5] These and other estimates of demographic characteristics and reported health status from the 2016 NHIS for uninsured, low-income adults by expansion states, non-expansion states, and all states are provided in tables 6 and 7 in appendix III.

To describe unmet medical needs, barriers to health care, and having a usual place of care and receiving selected services for all low-income adults in expansion and non-expansion states and by insurance status, we asked NCHS to calculate estimates based on responses to selected NHIS questions and NCHS composite measures. We selected these survey questions and composite measures from the Family and Adult Access to Health Care and Utilization and Adult Health Behaviors sections of the 2016 NHIS. To summarize estimates of low-income adults in expansion and non-expansion states and by insurance status, responses to selected survey questions and composite measures were calculated as an estimated percentage of the relevant group's total population for eight groups of low-income adults: (1) those in expansion states, (2) those in non-expansion states, (3) those who had Medicaid in expansion states, (4) those who had Medicaid in non-expansion states, (5) those who had private health insurance in expansion states, (6) those who had private health insurance in non-expansion states, (7) those who were uninsured in expansion states, and (8) those who were uninsured in non-expansion states.

We asked NCHS to test for statistically significant differences for the estimates of access to care between selected groups of low-income adults. (See table 4.) The results of the tests for statistically significant differences for these comparison groups are in appendixes IV through VI.

Table 4: Comparison Groups of Low-Income Adults for Tests of Statistically Significant Differences in Selected Measures of Access to Care

Comparison Groups of Low-Income Adults		
All in expansion states	versus	All in non-expansion states
Uninsured in expansion states	versus	Uninsured in non-expansion states
Medicaid in expansion states	versus	Medicaid in non-expansion states
Private health insurance in expansion states	versus	Private health insurance in non-expansion states

[5]We tested for statistically significant differences between uninsured, low-income adults in expansion and non-expansion states.

Uninsured in expansion states	versus	Medicaid in expansion states
Uninsured in expansion states	versus	Medicaid in non-expansion states
Uninsured in expansion states	versus	Private health insurance in expansion states
Uninsured in expansion states	versus	Private health insurance in non-expansion states
Uninsured in non-expansion states	versus	Medicaid in expansion states
Uninsured in non-expansion states	versus	Medicaid in non-expansion states
Uninsured in non-expansion states	versus	Private health insurance in expansion states
Uninsured in non-expansion states	versus	Private health insurance in non-expansion states

Source: GAO. | GAO-18-607

Notes: Tests for statistically significant differences of estimates of access to care for selected subgroups of low-income adults were produced by the National Center for Health Statistics using data from the 2016 National Health Interview Survey (NHIS).

For the purposes of these NHIS analyses, low-income adults were individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs before July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Study Limitations and Data Reliability Assessment

Our study has some limitations. First, our study did not examine whether statistically significant differences in estimates of access to health care between respondents in expansion and non-expansion states were associated with the choice to expand Medicaid.[6] Second, NHIS data are based on respondent-reported data, which may be subject to potential biases and recall of participants' use of health services and may be less accurate than administrative data or clinical data. Third, we could not

[6]To examine whether differences in access to health care between respondents in expansion and non-expansion states were associated with Medicaid expansion, we would need to simultaneously examine multiple factors—such as demographics, health status, community characteristics, and other factors—that may differ between respondents in expansion and non-expansion states. Examining whether estimated differences in access to health care between respondents in expansion states and non-expansion states were associated with expansion would require other analysis methods—such as regression analysis. Regression analysis is a statistical technique in which the functional relationship between a dependent variable (such as whether a respondent had a usual place of care) and one or more independent variables (such as whether the respondent resided in an expansion state or the respondent's level of education) can be estimated. We did not conduct a regression analysis for this study.

report estimates of access to health care that did not meet NCHS's standards of reliability or precision.[7]

We assessed the reliability of NHIS data by reviewing NHIS data documentation; interviewing knowledgeable NCHS officials and academic researchers; and examining the data for logical errors, missing values, and values outside of expected ranges. We determined that the data were sufficiently reliable for the purposes of these analyses.

[7]For example, estimates for four survey questions about non-financial barriers to care for uninsured, low-income adults in expansion states did not meet NCHS standards. HHS officials suggest that for more information about NCHS's standards of reliability or precision, see Parker JD, Talih M, Malec DJ, Beresovsky V, Carroll M, Gonzalez JF, et al. National Center for Health Statistics Data Presentation Standards for Proportions. National Center for Health Statistics. Vital Health Stat 2(175). 2017. Available from: https://www.cdc.gov/nchs/data/series/sr_02/sr02_175.pdf.

Appendix II: Status of Medicaid Eligibility Expansion by States, as of 2017

Under the Patient Protection and Affordable Care Act (PPACA), states may opt to expand their Medicaid programs' eligibility to cover certain low-income adults beginning January 2014.[1] As of December 2017, 31 states and the District of Columbia had expanded their Medicaid programs as permitted under PPACA and 19 states had not.[2] Table 5 lists the states that expanded Medicaid eligibility and those that did not. It also includes state population and other Medicaid data, which is presented in the roll-over information in interactive figure 2.

Table 5: Status of Medicaid Eligibility Expansion, by State, as of 2017

State	Status of Medicaid expansion	Date of Medicaid expansion	State population (as of July 2017)	Medicaid enrollment (calendar year 2017)
Alabama	Non-expansion	None	4,874,747	1,018,770
Alaska	Expansion	September 1, 2015	739,795	187,461
Arizona	Expansion	January 1, 2014	7,016,270	1,936,263
Arkansas	Expansion	January 1, 2014	3,004,279	940,776
California	Expansion	January 1, 2014	39,536,653	11,517,800
Colorado	Expansion	January 1, 2014	5,607,154	1,347,895
Connecticut	Expansion	January 1, 2014	3,588,184	898,660
Delaware	Expansion	January 1, 2014	961,939	208,695
District of Columbia	Expansion	January 1, 2014	693,972	259,057
Florida	Non-expansion	None	20,984,400	4,030,767
Georgia	Non-expansion	None	10,429,379	1,865,535
Hawaii	Expansion	January 1, 2014	1,427,538	329,675
Idaho	Non-expansion	None	1,716,943	319,739
Illinois	Expansion	January 1, 2014	12,802,023	2,865,435
Indiana	Expansion	February 1, 2015	6,666,818	1,346,668
Iowa	Expansion	January 1, 2014	3,145,711	594,586

[1]Specifically, states may opt to expand their Medicaid programs to cover non-elderly, non-pregnant adults who are not eligible for Medicare and whose income does not exceed 133 percent of the federal poverty level (FPL). PPACA also provides for a 5 percent disregard when calculating income for determining Medicaid eligibility, which effectively increases income eligibility from 133 percent of FPL to 138 percent of FPL. PPACA also permitted an early expansion option, whereby states could expand eligibility for this population, or a subset of this population, starting on April 1, 2010.

[2]Louisiana expanded Medicaid eligibility on July 1, 2016. For the purposes of these NHIS analyses, Louisiana was classified as a non-expansion state and we only included low-income adults interviewed from January through June 2016 when Louisiana was a non-expansion state.

State	Status of Medicaid expansion	Date of Medicaid expansion	State population (as of July 2017)	Medicaid enrollment (calendar year 2017)
Kansas	Non-expansion	None	2,913,123	373,437
Kentucky	Expansion	January 1, 2014	4,454,189	1,340,826
Louisiana[a]	Expansion	July 1, 2016	4,684,333	1,637,972
Maine	Non-expansion	None	1,335,907	258,710
Maryland	Expansion	January 1, 2014	6,052,177	1,172,931
Massachusetts	Expansion	January 1, 2014	6,859,819	1,787,828
Michigan	Expansion	April 1, 2014	9,962,311	2,136,440
Minnesota	Expansion	January 1, 2014	5,576,606	1,116,804
Mississippi	Non-expansion	None	2,984,100	709,656
Missouri	Non-expansion	None	6,113,532	978,801
Montana	Expansion	January 1, 2016	1,050,493	238,793
Nebraska	Non-expansion	None	1,920,076	227,531
Nevada	Expansion	January 1, 2014	2,998,039	603,094
New Hampshire	Expansion	August 15, 2014	1,342,795	194,606
New Jersey	Expansion	January 1, 2014	9,005,644	1,694,461
New Mexico	Expansion	January 1, 2014	2,088,070	885,472
New York	Expansion	January 1, 2014	19,849,399	1,523,749
North Carolina	Non-expansion	None	10,273,419	1,678,020
North Dakota	Expansion	January 1, 2014	755,393	69,169
Ohio	Expansion	January 1, 2014	11,658,609	3,002,378
Oklahoma	Non-expansion	None	3,930,864	671,524
Oregon	Expansion	January 1, 2014	4,142,776	987,823
Pennsylvania	Expansion	January 1, 2015	12,805,537	2,795,591
Rhode Island	Expansion	January 1, 2014	1,059,639	308,038
South Carolina	Non-expansion	None	5,024,369	1,248,324
South Dakota	Non-expansion	None	869,666	101,921
Tennessee	Non-expansion	None	6,715,984	1,615,817
Texas	Non-expansion	None	28,304,596	4,331,612
Utah	Non-expansion	None	3,101,833	302,445
Vermont	Expansion	January 1, 2014	623,657	182,041
Virginia	Non-expansion	None	8,470,020	1,029,118
Washington	Expansion	January 1, 2014	7,405,743	1,822,796
West Virginia	Expansion	January 1, 2014	1,815,857	552,292
Wisconsin	Non-expansion	None	5,795,483	1,188,306
Wyoming	Non-expansion	None	579,315	61,303

Source: GAO summary of U.S. Census Bureau, Centers for Medicare & Medicaid Services, and Kaiser Family Foundation's data | GAO-18-607

Note: Census population estimates are as of July 1, 2017. Medicaid enrollment numbers come from CMS-64 enrollment data and may differ from other data sources. Average monthly enrollment was tabulated from the CMS-64 enrollment report for calendar year 2017 that was accessed April 4, 2018.

[a]Louisiana expanded Medicaid eligibility on July 1, 2016. For the purposes of these NHIS analyses, Louisiana was classified as a non-expansion state and we only included low-income adults interviewed from January through June 2016 when Louisiana was a non-expansion state.

Appendix III: Estimates of Demographic Characteristics and Health Status in Expansion and Non-Expansion States

This appendix provides additional 2016 National Health Interview Survey (NHIS) estimates we obtained from the National Center for Health Statistics (NCHS).[1] Table 6 presents estimates of selected demographic characteristics for low-income adults who were uninsured at the time of the survey interview.[2] The table provides estimates for these adults based on whether they resided in states that expanded Medicaid eligibility as permitted under the Patient Protection and Affordable Care Act (PPACA) (referred to as expansion states) or states that did not (referred to as non-expansion states).[3] We report statistically significant differences when comparing the responses of uninsured, low-income adults in expansion and non-expansion states.

[1]NCHS provides additional estimates on its website of reported demographic characteristics and selected health conditions for individuals ages 19 to 64 who were uninsured at the time of the interview and had family incomes less than or equal to 138 percent of the federal poverty level (FPL). See R.A. Cohen and E.P. Zammitti, *Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016*, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[2]In this report, low income adults are individuals ages 19 to 64, with family incomes that did not exceed 138 percent of FPL. FPL is based on family income and size, using the U.S. Census Bureau's poverty thresholds. In 2016, 138 percent of FPL for an individual was $17,231 and for a family of four was $33,897. These analyses excluded those who were covered by Medicare, had only military health care, had only Indian Health Service, were noncitizens, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. An individual is defined as uninsured if they did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program, state-sponsored or other government-sponsored health plan, or military plan. An individual is also defined as uninsured if they had only a private plan that paid for one type of service, such as accidents or dental care.

[3]Historically, Medicaid eligibility has been limited to certain categories of low-income individuals such as children, parents, pregnant women, persons with disabilities, and individuals ages 65 and older. Under PPACA, states may opt to expand their Medicaid programs to cover non-elderly, non-pregnant adults who are not eligible for Medicare and whose income does not exceed 133 percent of FPL. PPACA also provides for a 5 percent disregard when calculating income for determining Medicaid eligibility, which effectively increases income eligibility from 133 percent of FPL to 138 percent of FPL.

Table 6: Demographic Characteristics of Uninsured, Low-Income Adults in Expansion and Non-Expansion States, 2016

Demographic characteristics	Expansion states Percent (standard error) N = 1,915,000	Non-expansion states Percent (standard error) N = 3,721,000	All states Percent (standard error) N = 5,639,000
Age group			
19-34 years	53.7 (2.96)	47.7 (1.82)	49.8 (1.60)
35-49 years	23.3 (2.29)	28.2 (1.60)	26.5 (1.33)
50-64 years	23.0 (2.31)	24.1 (1.67)	23.7 (1.36)
Poverty status[a]			
Less than 100% FPL	58.5 (3.28)[b]	68.5 (2.05)[b]	65.1 (1.81)
100% to less than or equal to 138% FPL	41.5 (3.28)[b]	31.5 (2.05)[b]	34.9 (1.81)
Sex			
Male	62.7 (2.33)[b]	50.6 (1.49)[b]	54.7 (1.31)
Female	37.3 (2.33)[b]	49.4 (1.49)[b]	45.3 (1.31)
Race and ethnicity			
Hispanic	21.9 (2.64)	19.7 (3.26)	20.4 (2.30)
Non-Hispanic, white only	53.3 (3.40)	45.0 (2.70)	47.9 (2.14)
Non-Hispanic, black only	17.4 (2.47)[b]	29.8 (2.32)[b]	25.6 (1.73)
Non-Hispanic, Asian only	NA	1.3 (0.57)	2.2 (0.60)
Non-Hispanic, other	3.2 (1.02)	4.3 (0.98)	3.9 (0.73)
Marital status			
Married	26.3 (3.00)	28.3 (1.76)	27.6 (1.54)
Widowed	1.3 (0.48)	2.4 (0.56)	2.1 (0.40)
Divorced or separated	12.3 (1.79)	16.1 (1.21)	14.8 (1.02)
Living with a partner	16.9 (2.04)	14.4 (1.63)	15.2 (1.28)
Never married	43.2 (3.10)	38.8 (2.08)	40.3 (1.74)
Number of family members			
1	23.4 (2.30)	18.7 (1.63)	20.3 (1.34)
2-4	56.2 (2.88)	60.9 (2.08)	59.3 (1.68)
5 or more	20.4 (2.77)	20.4 (1.73)	20.4 (1.49)
Employment status			
Employed	63.8 (2.43)	55.7 (1.60)	58.4 (1.37)
Unemployed	14.3 (1.85)	16.8 (1.35)	15.9 (1.10)
Not in workforce	22.0 (2.17)[b]	27.5 (1.60)[b]	25.7 (1.30)
Education status			
Less than high school	29.5 (2.84)	29.1 (1.73)	29.3 (1.50)
High school diploma or GED[c]	34.6 (2.65)	40.7 (1.87)	38.7 (1.52)

Demographic characteristics	Expansion states Percent (standard error) N = 1,915,000	Non-expansion states Percent (standard error) N = 3,721,000	All states Percent (standard error) N = 5,639,000
Some college	28.1 (2.49)	25.8 (1.69)	26.5 (1.39)
Bachelor's degree or more	7.8 (1.71)	4.4 (0.78)	5.5 (0.79)

Legend: NA = Not available because of estimates did not meet the National Center for Health Statistics' (NCHS) standards for accuracy and precision.

Source: GAO summary of 2016 NHIS estimates produced by NCHS. | GAO-18-607

Notes: Estimates reflect questions included in the Family Core component of the National Health Interview Survey (NHIS). Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. population. Estimates were not available when they did not meet NCHS's standards for accuracy and precision.

For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. An individual was defined as uninsured if they did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program, state-sponsored or other government-sponsored health plan, or military plan. An individual was also defined as uninsured if they had only a private plan that paid for one type of service, such as accidents or dental care.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states. See R.A. Cohen and E.P. Zammitti, Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]The FPL is based on family income and family size, using the U.S. Census Bureau's poverty thresholds. The 2016 NHIS imputed income files were used to help create the poverty variable, and this variable is based on reported and imputed family information. See https://www.cdc.gov/nchs/nhis/nhis_2016_data_release.htm.

[b]Difference between expansion and non-expansion states was statistically significant at $p < 0.05$.

[c]General Educational Development (GED) is General Educational Development high school equivalency diploma.

Table 7 shows estimates of the reported health status of uninsured, low-income adults based on whether they resided in an expansion or non-expansion state. The table provides the number and percent of these adults who reported that at the time of the interview their health status was excellent or very good; good; or fair or poor. The table also shows the extent to which these adults reported whether their health status was different at the time of the interview compared to the previous year. We report statistically significant differences when comparing the responses of uninsured, low-income adults in expansion and non-expansion states.

Table 7: Health Status of Uninsured, Low-Income Adults in Expansion and Non-Expansion Status, 2016

Health status	Expansion states Percent (standard error) N = 1,834,000	Non-expansion states Percent (standard error) N = 3,382,000	All states Percent (standard error) N = 5,219,000
Health status			
Excellent or very good	47.1 (4.33)	49.9 (2.79)	49.0 (2.37)
Good	40.0 (4.52)[a]	28.0 (2.46)[a]	32.2 (2.30)
Fair or poor	12.9 (3.04)[a]	22.0 (2.29)[a]	18.8 (1.85)
Health status compared to previous year			
Better	15.7 (3.05)	17.0 (2.04)	16.5 (1.70)
Same	75.2 (4.03)	66.5 (2.49)	69.6 (2.15)
Worse	NA	16.5 (2.07)	13.9 (1.75)

Legend: NA = Not available because of estimates did not meet the National Center for Health Statistics' (NCHS) standards for accuracy and precision.

Source: GAO summary of 2016 NHIS estimates produced by NCHS. | GAO-18-607

Notes: Estimates reflect questions included in the Family Core and Sample Adult Core components of the National Health Interview Survey (NHIS). Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. population. Estimates were not available when they did not meet NCHS's standards for accuracy and precision.

For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. An individual was defined as uninsured if they did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program, state-sponsored or other government-sponsored health plan, or military plan. An individual was also defined as uninsured if they had only a private plan that paid for one type of service, such as accidents or dental care.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states. See R.A. Cohen and E.P. Zammitti, Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]For Good and for Fair or Poor, the difference between expansion and non-expansion states was statistically significant at $p < 0.05$.

Appendix IV: Estimates of Any Unmet Medical Needs in Expansion and Non-Expansion States and by Insurance Status

This appendix provides estimates of any unmet medical needs for low-income adults—individuals ages 19 to 64, with family incomes that did not exceed 138 percent of the federal poverty level (FPL)—from the 2016 National Health Interview Survey (NHIS), which were produced by the National Center for Health Statistics (NCHS).[1] Estimates are based on a composite measure of any unmet medical needs. Table 8 shows estimates of all low-income adults in expansion and non-expansion states.[2] We also report statistically significant differences between low-income adults in expansion and non-expansion states.

[1]Estimates are based on selected survey questions, which were from the Access to Health Care and Utilization and Health Behaviors sections of the Family and Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. NCHS provides additional estimates of access to care and utilization for low-income adults on its website. See R.A. Cohen and E.P. Zammitti, *Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016*, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm; and R.A. Cohen and E.P. Zammitti, *Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016,* (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[2]We classified the 30 states and the District of Columbia that expanded their Medicaid program prior to July 1, 2016 as expansions states, and the remaining 20 states were classified as non-expansion states. States classified as expansion states were Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and West Virginia. The 20 non-expansion states are Alabama, Florida, Georgia, Idaho, Kansas, Louisiana, Maine, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin, and Wyoming. For 3 states, we only included NHIS respondents for part of calendar year 2016. Specifically, we excluded respondents who were surveyed during the first 6 months after a state expanded Medicaid to allow for the effect of expansion to take place. Two of the 3 states—Alaska and Montana—were classified as expansion states and the third state, Louisiana, was classified as non-expansion. For Alaska, which expanded Medicaid on September 1, 2015, we excluded responses from those surveyed in January 2016 and February 2016. For Montana, which expanded Medicaid on January 1, 2016, we excluded responses from those surveyed from January through June 2016. Because we classified Louisiana as a non-expansion state, we excluded all responses from those surveyed after the state expanded Medicaid on July 1, 2016.

Table 8: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Any Unmet Medical Needs, 2016

	Expansion states (standard error) N = 14,913,000	Non-expansion states (standard error) N = 9,627,000
Any unmet medical needs	26.4 (1.40)[a]	40.1 (1.91)[a]

Source: GAO summary of 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are for a composite measure, which was based on responses to questions from the Access to Health Care and Utilization sections of the Family and Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. Low-income adults had any unmet medical needs if they reported that in the past 12 months they did not get needed medical care because they could not afford it; delayed seeking medical care due to worries about costs; or needed but did not get because they could not afford prescription medicines, mental health care or counseling, dental care, or eyeglasses.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states. See R.A. Cohen and E.P. Zammitti, Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$.

Table 9 shows estimates of six groups of low-income adults: (1) low-income adults who were uninsured in expansion states; (2) low-income adults who were uninsured in non-expansion states; (3) low-income adults who had Medicaid in expansion states; (4) low-income adults who had Medicaid in non-expansion states; (5) low-income adults who had private health insurance in expansion states; and (6) low-income adults

who had private health insurance in non-expansion states.[3] We also report any statistically significant differences when comparing the six groups of low-income adults, specifically:

- low-income adults who were uninsured in expansion states compared with each of the four groups of low-income adults who were insured—low-income adults who had Medicaid in expansion states, low-income adults who had Medicaid in non-expansion states, low-income adults who had private health insurance in expansion states, and low-income adults who had private insurance in non-expansion states;
- low-income adults who were uninsured in non-expansion states compared with each of the four groups of low-income adults who were insured;
- low-income adults who were uninsured in expansion states compared with low-income adults who were uninsured in non-expansion states;
- low-income adults who had Medicaid in expansion states compared with low-income adults who had Medicaid in non-expansion states; and
- low-income adults who had private health insurance in expansion states compared with low-income adults who had private health insurance in non-expansion states.[4]

[3]Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy, and those with other coverage were excluded from these analyses. Low-income adults were classified as having private health insurance if they reported that they were covered by any comprehensive private health insurance plan, including health maintenance and preferred provider organization plans. Private health insurance excludes plans that pay for only one type of service, such as accidents or dental care. Low-income adults were classified as having Medicaid if they reported that they were covered by Medicaid or by state-sponsored health plans with no premiums or if it is not known if a premium is charged. Low-income adults were classified as uninsured if they did not have any private health insurance or were not enrolled in Medicare, Medicaid, the Children's Health Insurance Program, a state-sponsored or other government-sponsored health plan, or a military plan. An adult was also defined as uninsured if they had only a private plan that paid for one type of service, such as accidents or dental care.

[4]We did not request that NCHS test for significant differences between low-income adults who had Medicaid in expansion or non-expansion states and low-income adults who had private health insurance in expansion or non-expansion states.

Table 9: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Any Unmet Medical Needs, by Insurance Status, 2016

	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)
	N = 1,834,000	N = 3,382,000	N = 7,671,000	N = 2,160,000	N = 5,408,000	N = 4,085,000
Any unmet medical needs	49.6 (4.53)[a, b]	62.7 (3.00)[a, c]	26.5 (1.85)[b, c]	34.4 (3.75)[b, c]	18.2 (1.85)[b, c, d]	24.5 (2.11)[b, c, d]

Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are for a composite measure, which was based on responses to questions from the Access to Health Care and Utilization and sections of the Family and Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. Adults had any unmet medical needs if they reported that in the past 12 months they did not get needed medical care because they could not afford it; delayed seeking medical care due to worries about costs; or needed but did not get because they could not afford prescription medicines, mental health care or counseling, dental care, or eyeglasses.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses. See R.A. Cohen and E.P. Zammitti, Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults who were uninsured in expansion and non-expansion states was statistically significant at $p < 0.05$.

[b]Difference between low-income adults who were uninsured in expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[c]Difference between low-income adults who were uninsured in non-expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[d]Difference between low-income adults who had private health insurance in expansion and non-expansion states was statistically significant at $p < 0.05$.

Appendix V: Estimates of Barriers to Health Care in Expansion and Non-Expansion States and by Insurance Status

This appendix provides estimates of barriers to health care for low-income adults—individuals ages 19 to 64, with family incomes that did not exceed 138 percent of the federal poverty level (FPL)—from the 2016 National Health Interview Survey (NHIS), which we obtained from the National Center for Health Statistics (NCHS).[1] Estimates of financial barriers to needed medical, specialty, and other types of health care and prescription drugs are based on selected survey questions. Estimates of non-financial barriers to health care are based on responses to selected survey questions and a composite measure.[2] Estimates are reported for:

[1]Estimates are based on selected survey questions and a composite measure, which was based on responses to some of these questions. These survey questions were from the Access to Health Care and Utilization section of the Sample Adult Core component of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of FPL. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. NCHS provides additional estimates of access to care and utilization for low-income adults on its website. See R.A. Cohen and E.P. Zammitti, *Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016*, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm; and R.A. Cohen and E.P. Zammitti, *Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016,* (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[2]NCHS developed a composite measure on any non-financial barrier to care based on responses to five survey questions that asked respondents whether they delayed care due to a lack of transportation, long wait times, or other non-financial reasons.

- All low-income adults in expansion and non-expansion states.[3] We also report statistically significant differences between low-income adults in expansion and non-expansion states.
- Six groups of low-income adults: (1) low-income adults who were uninsured in expansion states; (2) low-income adults who were uninsured in non-expansion states; (3) low-income adults who had Medicaid in expansion states; (4) low-income adults who had Medicaid in non-expansion states; (5) low-income adults who had private health insurance in expansion states; and (6) low-income adults who had private health insurance in non-expansion states.[4] We also report any statistically significant differences when comparing the six groups of low-income adults, specifically:

[3]We classified the 30 states and the District of Columbia that expanded their Medicaid program prior to July 1, 2016 as expansion states, and the remaining 20 states were classified as non-expansion states. States classified as expansion states were Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and West Virginia. The 20 non-expansion states are Alabama, Florida, Georgia, Idaho, Kansas, Louisiana, Maine, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin, and Wyoming. For 3 states, we only included NHIS respondents for part of calendar year 2016. Specifically, we excluded respondents who were surveyed during the first 6 months after a state expanded Medicaid to allow for the effect of expansion to take place. Two of the 3 states—Alaska and Montana—were classified as expansion states and the third state, Louisiana, was classified as non-expansion. For Alaska, which expanded Medicaid on September 1, 2015, we excluded responses from those surveyed in January 2016 and February 2016. For Montana, which expanded Medicaid on January 1, 2016, we excluded responses from those surveyed from January through June 2016. Because we classified Louisiana as a non-expansion state, we excluded all responses from those surveyed after the state expanded Medicaid on July 1, 2016.

[4]Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy, and those with other coverage were excluded from these analyses. Low-income adults were classified as having private health insurance if they reported that they were covered by any comprehensive private health insurance plan, including health maintenance and preferred provider organization plans. Private health insurance excludes plans that pay for only one type of service, such as accidents or dental care. Low-income adults were classified as having Medicaid if they reported that they were covered by Medicaid or by state-sponsored health plans with no premiums or if it is not known if a premium is charged. Low-income adults were classified as uninsured if they did not have any private health insurance or were not enrolled in Medicare, Medicaid, the Children's Health Insurance Program, a state-sponsored or other government-sponsored health plan, or a military plan. An adult was also defined as uninsured if they had only a private plan that paid for one type of service, such as accidents or dental care.

- low-income adults who were uninsured in expansion states compared with each of the four groups of low-income adults who were insured—low-income adults who had Medicaid in expansion states, low-income adults who had Medicaid in non-expansion states, low-income adults who had private health insurance in expansion states, and low-income adults who had private insurance in non-expansion states;
- low-income adults who were uninsured in non-expansion states compared with each of the four groups of low-income adults who were insured;
- low-income adults who were uninsured in expansion states compared with low-income adults who were uninsured in non-expansion states;
- low-income adults who had Medicaid in expansion states compared with low-income adults who had Medicaid in non-expansion states; and
- low-income adults who had private health insurance in expansion states compared with low-income adults who had private health insurance in non-expansion states.[5]

Financial barriers to medical, specialty, and other types of health care. Tables 10 and 11 present estimates and differences in estimates of responses to survey question that asked whether respondents did not obtain different types of needed health care services in the past 12 months because they could not afford it.

Table 10: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Financial Barriers to Different Types of Needed Health Care Services, 2016

Type of services low-income adults could not afford in the past 12 months	Expansion states (standard error) N = 14,913,000	Non-expansion states (standard error) N = 9,627,000
Did not get needed medical care due to costs	9.4 (0.87)[a]	19.9 (1.45)[a]
Delayed seeking medical care due to costs	10.6 (0.99)[a]	21.4 (1.61)[a]
Needed but could not afford prescription medication	9.7 (0.90)[a]	18.1 (1.42)[a]
Needed but could not afford mental health care	3.5 (0.50)[a]	5.8 (1.04)[a]

[5]We did not request that NCHS test for significant differences between low-income adults who had Medicaid in expansion or non-expansion states and low-income adults who had private health insurance in expansion or non-expansion states.

Type of services low-income adults could not afford in the past 12 months	Expansion states (standard error) N = 14,913,000	Non-expansion states (standard error) N = 9,627,000
Needed but could not afford dental care	15.1 (1.12)[a]	22.3 (1.56)[a]
Needed but could not afford eyeglasses	9.6 (0.90)[a]	14.3 (1.36)[a]
Needed but could not afford follow-up care	4.6 (0.66)[a]	8.5 (1.00)[a]
Needed but could not afford specialist care	6.1 (0.82)[a]	11.2 (1.27)[a]

Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are based on selected survey questions, which were from the Access to Health Care and Utilization sections of the Family and Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states. See R.A. Cohen and E.P. Zammitti, Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$.

Table 11: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Financial Barriers to Different Types of Needed Health Care Services, by Insurance Status, 2016

Type of service low-income adults could not afford in the past 12 months	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error) N = 1,834,000	Non-expansion states (standard error) N = 3,382,000	Expansion states (standard error) N = 7,671,000	Non-expansion states (standard error) N = 2,160,000	Expansion states (standard error) N = 5,408,000	Non-expansion states (standard error) N = 4,085,000
Did not get medical care due to costs	27.2 (3.63)[a, b]	37.3 (2.64)[a, c]	7.7 (1.21)[b, c]	12.0 (2.30)[b, c]	5.7 (1.01)[b, c, d]	9.7 (1.33)[b, c, d]
Delayed seeking medical care due to costs	30.6 (4.28)[b]	40.9 (3.09)[c]	7.2 (1.20)[b, c]	11.7 (2.28)[b, c]	8.7 (1.21)[b, c]	10.5 (1.38)[b, c]
Needed but could not afford prescription medication	23.0 (3.85)[a, b]	33.2 (3.11)[a, c]	8.8 (1.14)[b, c]	13.2 (2.07)[b, c]	6.3 (1.18)[b, c]	8.3 (1.34)[b, c]
Needed but could not afford mental health care	7.9 (2.31)[b]	12.8 (2.74)[c]	4.0 (0.75)[c]	3.0 (0.98)[c]	1.1 (0.33)[b, c]	1.6 (0.44)[b, c]

Type of service low-income adults could not afford in the past 12 months	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error) N = 1,834,000	Non-expansion states (standard error) N = 3,382,000	Expansion states (standard error) N = 7,671,000	Non-expansion states (standard error) N = 2,160,000	Expansion states (standard error) N = 5,408,000	Non-expansion states (standard error) N = 4,085,000
Needed but could not afford dental care	30.8 (4.27)[b]	38.6 (3.55)[c]	14.5 (1.41)[b, c]	19.8 (3.03)[b, c]	10.4 (1.46)[b, c]	10.4 (1.49)[b, c]
Needed but could not afford eyeglasses	20.2 (3.93)[b]	21.1 (2.94)[c]	10.2 (1.18)[b, c]	15.6 (2.85)	5.1 (0.98)[b, c]	8.2 (1.52)[b, c]
Needed but could not afford follow-up care	15.3 (3.27)[b]	17.8 (2.66)[c]	3.1 (0.77)[b, c]	2.4 (1.04)[b, c]	3.1 (0.76)[b, c]	4.0 (0.98)[b, c]
Needed but could not afford specialist care	16.8 (3.65)[b]	21.6 (3.03)[c]	5.7 (1.19)[b, c]	6.5 (1.87)[b, c]	3.1 (0.71)[b, c]	5.2 (1.25)[b, c]

Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are based on selected survey questions, which were from the Access to Health Care and Utilization sections of the Family and Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses. See R.A. Cohen and E.P. Zammitti, Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults who were uninsured in expansion and non-expansion states was statistically significant at $p < 0.05$.

[b]Difference between low-income adults who were uninsured in expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[c]Difference between low-income adults who were uninsured in non-expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[d]Difference between low-income adults who had private health insurance in expansion and non-expansion states was statistically significant at $p < 0.05$.

Financial barriers to prescription drugs. Tables 12 and 13 present estimates and differences in estimates of survey question that asked

respondents who had been prescribed medications whether they had taken actions during the past 12 months to save money on medications.

Table 12: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Taking Actions to Save Money on Prescriptions, 2016

Action taken to save money on prescriptions in the past 12 months	Expansion states (standard error) N = 14,913,000	Non-expansion states (standard error) N = 9,627,000
Skipped medication doses	5.1 (0.67)[a]	8.3 (1.08)[a]
Took less medication	5.4 (0.70)[a]	8.3 (1.07)[a]
Delayed filling a prescription	6.7 (0.85)[a]	11.9 (1.27)[a]
Asked for a lower cost medication	10.4 (0.94)[a]	14.2 (1.20)[a]

Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are based on selected survey questions, which were from the Access to Health Care and Utilization section of the Sample Adult Core component of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. Low-income adults who were not prescribed medication in the past 12 months were considered to have not taken any steps to save money on prescriptions.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states. See R.A. Cohen and E.P. Zammitti, Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$.

Table 13: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Taking Actions to Save Money on Medications, by Insurance Status, 2016

Action taken to save money on prescriptions in the past 12 months	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error) N = 1,834,000	Non-expansion states (standard error) N = 3,382,000	Expansion states (standard error) N = 7,671,000	Non-expansion states (standard error N = 2,160,000	Expansion states (standard error) N = 5,408,000	Non-expansion states (standard error) N = 4,085,000
Skipped medication doses	11.8 (3.31)[a]	13.8 (2.42)[b]	4.6 (0.84)[a, b]	NA	3.5 (0.86)[a, b]	4.6 (1.03)[a, b]
Took less medication	11.9 (3.31)[a]	13.5 (2.48)[b]	4.7 (0.86)[a, b]	7.5 (2.22)	4.1 (0.96)[a, b]	4.4 (0.88)[a, b]
Delayed filling a prescription	14.5 (3.61)[a]	17.3 (2.52)[b]	6.3 (1.17)[a, b]	9.3 (2.61)[b]	4.6 (0.95)[a, b, c]	8.8 (1.37)[b, c]

Action taken to save money on prescriptions in the past 12 months	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error	Expansion states (standard error)	Non-expansion states (standard error)
	N = 1,834,000	N = 3,382,000	N = 7,671,000	N = 2,160,000	N = 5,408,000	N = 4,085,000
Asked for a lower cost medication	15.7 (3.67)	19.6 (2.45)[b]	9.9 (1.24)[b]	9.8 (1.68)[b]	9.4 (1.44)[b]	12.1 (1.69)[b]

Legend: NA = Not available because of estimates did not meet the NCHS's standards for accuracy and precision.

Source: GAO summary of the 2016 NHIS estimates produced by NCHS. | GAO-18-607

Notes: Estimates are based on selected survey questions, which were from the Access to Health Care and Utilization section of the Sample Adult Core component of the 2016 National Health Interview Survey (NHIS). Estimates were not available when they did not meet the National Center for Health Statistics' (NCHS) standards for accuracy and precision. For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. Low-income adults who were not prescribed medication in the past 12 months were considered to have not taken any steps to save money on prescriptions.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses. See R.A. Cohen and E.P. Zammitti, Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults who were uninsured in expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[b]Difference between low-income adults who were uninsured in non-expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[c]Difference between low-income adults who had private health insurance in expansion and non-expansion states was statistically significant at $p < 0.05$.

Non-financial barriers to health care. Tables 14 and 15 present estimates and differences in estimates of the NCHS composite measure on any non-financial barriers to health care, which was based on responses to five survey questions on whether respondents delayed care in the past 12 months due to long wait times, a lack of transportation, and other non-financial reasons. Additionally, these tables present estimates and differences in estimates of responses to the composite measure's five underlying survey questions.

Table 14: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Non-Financial Barriers to Health Care, 2016

Non-financial barrier that delayed health care in the past 12 months	Expansion states (standard error) N = 14,913,000	Non-expansion states (standard error) N = 9,627,000
Any[a]	15.3 (1.24)	14.8 (1.40)
Unable to get through on telephone	3.6 (0.48)	2.5 (0.50)
Unable to get an appointment soon enough	8.0 (0.88)	6.2 (0.99)
Wait time at doctor's office was too long	6.4 (0.78)	6.4 (1.07)
Clinic or doctor's office was not open when able to go	3.3 (0.48)	2.4 (0.50)
No transportation	4.3 (0.66)	5.1 (0.84)

Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are based on selected survey questions and their related composite measure. These survey questions were from the Access to Health Care and Utilization section of Sample Adult Core component of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states. See R.A. Cohen and E.P. Zammitti, Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Low-income adults had any non-financial barrier to care if they reported delaying care in the past 12 months because they could not get through on the telephone, could not get an appointment soon enough, the wait time at the doctor's office was too long, the doctor's office or clinic was not open when they could get there, or did not have transportation.

Table 15: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Non-Financial Barriers to Health Care, by Insurance Status, 2016

Non-financial barrier that delayed healthcare in the past 12 months	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)
	N = 1,834,000	N = 3,382,000	N = 7,671,000	N = 2,160,000	N = 5,408,000	N = 4,085,000
Any[a]	8.6 (2.28)[b]	14.0 (2.46)	17.6 (1.83)[b]	19.5 (3.04)[b]	14.2 (1.61)[b]	12.9 (2.16)

Non-financial barrier that delayed healthcare in the past 12 months	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)
	N = 1,834,000	N = 3,382,000	N = 7,671,000	N = 2,160,000	N = 5,408,000	N = 4,085,000
Unable to get through on phone	NA	1.7 (0.68)[c]	4.1 (0.73)[c]	NA	3.1 (0.75)	2.2 (0.71)
Unable to get an appointment soon enough	NA	3.0 (0.80)[c]	9.2 (1.37)[c]	8.4 (2.02)[c]	7.5 (1.15)[c]	7.6 (1.74)[c]
Wait time at doctor's office was too long	NA	7.7 (2.13)	7.9 (1.27)	6.1 (1.42)	4.1 (0.93)	NA
Clinic or doctor's office was not open when able to go	NA	1.9 (0.63)[c]	2.5 (0.57)	3.0 (1.08)	4.8 (0.92)[c]	2.4 (0.85)
No transportation	1.0 (0.54)[b, d]	6.0 (1.58)[c, d]	6.2 (1.10)[b]	9.9 (2.39)[b]	2.8 (0.85)	1.8 (0.71)[c]

Legend: NA = Not available because of estimates did not meet the NCHS's standards for accuracy and precision.

Source: GAO summary of the 2016 NHIS estimates produced by NCHS. | GAO-18-607

Notes: Estimates are based on selected survey questions and their related composite measure. These survey questions were from the Access to Health Care and Utilization section of the Sample Adult Core component of the 2016 National Health Interview Survey (NHIS). Estimates were not available when they did not meet the National Center for Health Statistics' (NCHS) standards for accuracy and precision. For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses. See R.A. Cohen and E.P. Zammitti, Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Low-income adults were classified as facing any non-financial barriers to care if they reported delaying care in the past 12 months because they were unable to get through on the telephone, were unable to get an appointment soon enough, the wait time at the doctor's office was too long, the doctor's office or clinic was not open when they could get there, or did not have transportation.

[b]Difference between low-income adults who were uninsured in expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[c]Difference between low-income adults who were uninsured in non-expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[d]Difference between low-income adults who were uninsured in expansion and non-expansion states was statistically significant at $p < 0.05$.

Appendix VI: Estimates on Place of Care and Services in Expansion and Non-Expansion States and by Insurance Status

This appendix provides estimates on having a usual place of care and receiving selected health care services for adults—individuals ages 19 to 64, with family incomes that did not exceed 138 percent of the federal poverty level (FPL)—from the 2016 National Health Interview Survey (NHIS), which we obtained from the National Center for Health Statistics (NCHS).[1] Estimates are based on responses to selected survey questions on having a usual place of care, receiving selected health care services, and contacting health care professionals. Estimates are reported for:

[1]Estimates are based on selected survey questions, which were from the Access to Health Care and Utilization and Health Behavior sections of the Family and Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. NCHS provides additional estimates of access to care for low-income adults on its website. NCHS provides additional estimates of access to care and utilization for low-income adults on its website. See R.A. Cohen and E.P. Zammitti, *Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016*, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm; and R.A. Cohen and E.P. Zammitti, *Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016,* (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

- All low-income adults in expansion and non-expansion states.[2] We also report statistically significant differences between low-income adults in expansion and non-expansion states.
- Six groups of low-income adults: (1) low-income adults who were uninsured in expansion states; (2) low-income adults who were uninsured in non-expansion states; (3) low-income adults who had Medicaid in expansion states; (4) low-income adults who had Medicaid in non-expansion states; (5) low-income adults who had private health insurance in expansion states; and (6) low-income adults who had private health insurance in non-expansion states.[3] We also report any statistically significant differences when comparing the six groups of low-income adults, specifically:

[2]We classified the 30 states and the District of Columbia that expanded their Medicaid program prior to July 1, 2016 as expansion states, and the remaining 20 states were classified as non-expansion states. States classified as expansion states were Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and West Virginia. The 20 non-expansion states are Alabama, Florida, Georgia, Idaho, Kansas, Louisiana, Maine, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin, and Wyoming. For 3 states, we only included NHIS respondents for part of calendar year 2016. Specifically, we excluded respondents who were surveyed during the first 6 months after a state expanded Medicaid to allow for the effect of expansion to take place. Two of the 3 states—Alaska and Montana—were classified as expansion states and the third state, Louisiana, was classified as non-expansion. For Alaska, which expanded Medicaid on September 1, 2015, we excluded responses from those surveyed in January 2016 and February 2016. For Montana, which expanded Medicaid on January 1, 2016, we excluded responses from those surveyed from January through June 2016. Because we classified Louisiana as a non-expansion state, we excluded all responses from those surveyed after the state expanded Medicaid on July 1, 2016.

[3]Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy, and those with other coverage were excluded from this analysis. Low-income adults were classified as having private health insurance if they reported that they were covered by any comprehensive private health insurance plan, including health maintenance and preferred provider organization plans. Private health insurance excludes plans that pay for only one type of service, such as accidents or dental care. Low-income adults were classified as having Medicaid if they reported that they were covered by Medicaid or by state-sponsored health plans with no premiums or if it is not known if a premium is charged. Low-income adults were classified as uninsured if they did not have any private health insurance or were not enrolled in Medicare, Medicaid, the Children's Health Insurance Program, a state-sponsored or other government-sponsored health plan, or a military plan. An adult was also defined as uninsured if they had only a private plan that paid for one type of service, such as accidents or dental care.

- low-income adults who were uninsured in expansion states compared with each of the four groups of low-income adults who were insured—low-income adults who had Medicaid in expansion states, low-income adults who had Medicaid in non-expansion states, low-income adults who had private health insurance in expansion states, and low-income adults who had private insurance in non-expansion states;
- low-income adults who were uninsured in non-expansion states compared with each of the four groups of low-income adults who were insured;
- low-income adults who were uninsured in expansion states compared with low-income adults who were uninsured in non-expansion states;
- low-income adults who had Medicaid in expansion states compared with low-income adults who had Medicaid in non-expansion states; and
- low-income adults who had private health insurance in expansion states compared with low-income adults who had private health insurance in non-expansion states.[4]

Having a usual place of care. Tables 16 through 19 present estimates and differences in estimates of survey questions that asked respondents about the place of care they usually go to when sick or need advice about their health and the type of place that respondents most often went.

Table 16: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Having a Usual Place of Care, 2016

	Expansion states (standard error) N = 14,913,000	Non-expansion states (standard error) N = 9,627,000
Had a usual place of care	81.6 (1.24)[a]	68.1 (1.68)[a]

Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are based on a selected survey question, which was from the Health Care Access and Utilization section of the Sample Adult Core component of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had

[4]We did not request that NCHS test for significant differences between low-income adults who had Medicaid in expansion or non-expansion states and low-income adults who had private health insurance in expansion or non-expansion states.

Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. Low-income adults who reported that in the past 12 months the emergency department was their usual place of care were considered to not have a usual place of care.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states. See R.A. Cohen and E.P. Zammitti, Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$.

Table 17: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Having a Usual Place of Care, by Insurance Status, 2016

	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)
	N = 1,834,000	N = 3,382,000	N = 7,671,000	N = 2,160,000	N = 5,408,000	N = 4,085,000
Had a usual place of care	45.3 (4.20)[a]	46.0 (2.91)[b]	87.5 (1.54)[a, b]	83.2 (3.38)[a, b]	85.5 (1.69)[a, b, c]	78.2 (2.16)[a, b, c]

Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are based on a selected survey question, which was from the Health Behaviors section of the Sample Adult Core component of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. Low-income adults who reported that in the past 12 months the emergency department was their usual place of care were considered to not have a usual place of care.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses. See R.A. Cohen and E.P. Zammitti, Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults who were uninsured in expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[b]Difference between low-income adults who were uninsured in non-expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[c]Difference between low-income adults who had private health insurance in expansion and non-expansion states was statistically significant at $p < 0.05$.

Table 18: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Had a Usual Place of Care by the Type of Place They Usually Went for Care, 2016

Usual place of care	Expansion states (standard error) N = 12,164,000	Non-expansion states (standard error) N = 6,554,000
Clinic or health center	30.7 (1.58)[a]	42.7 (2.13)[a]
Doctor's office or health maintenance organization	64.9 (1.69)[a]	52.8 (2.21)[a]
Other	4.5 (0.84)	4.5 (0.88)

Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are based on a selected survey question, which was from the Access to Health Care and Utilization section of the Sample Adult Core component of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. Low-income adults who reported that in the past 12 months the emergency department was their usual place of care were considered to not have a usual place of care.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016 and were classified as expansion states. The remaining 20 states were classified as non-expansion states. See R.A. Cohen and E.P. Zammitti, Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$.

Table 19: Percentage of Low-Income Adults in Expansion and Non-Expansion States with a Usual Place of Care by the Type of Place They Usually Went for Care, by Insurance Status, 2016

Place that low-income adults reported going to most often for care in the past 12	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error) N = 831,000	Non-expansion states (standard error) N = 1,557,000	Expansion states (standard error) N = 6,709,000	Non-expansion states (standard error) N = 1,798,000	Expansion states (standard error) N = 4,626,000	Non-expansion states (standard error) N = 3,196,000
Clinic or health center	34.2 (5.86)[a]	59.6 (4.32)[a, b]	30.4 (2.16)[b, c]	41.2 (4.05)[b, c]	30.4 (2.55)[b]	35.4 (2.81)[b]
Doctor's office or health maintenance organization	52.1 (6.78)[a]	29.4 (3.99)[a, b]	65.6 (2.26)[b]	58.2 (4.05)[b]	66.1 (2.70)[b]	61.1 (2.96)[b]
Other	NA	11.0 (2.93)[b]	4.0 (1.08)[b, c]	0.6 (0.50)[b, c]	NA	3.6 (0.98)[b]

Legend: NA = Not available because of estimates did not meet the NCHS's standards for accuracy and precision.

Source: GAO summary of the 2016 NHIS estimates produced by NCHS. | GAO-18-607

Notes: Estimates are based on a selected survey question, which was from the Access to Health Care and Utilization section of the Sample Adult Core component of the 2016 National Health

Interview Survey (NHIS). Estimates were not available when they did not meet the National Center for Health Statistics' (NCHS) standards for accuracy and precision. For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant. Low-income adults who reported that in the past 12 months the emergency department was their usual place of care were considered to not have a usual place of care.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses. See R.A. Cohen and E.P. Zammitti, Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults who were uninsured in expansion and non-expansion states was statistically significant at $p < 0.05$.

[b]Difference between low-income adults who were uninsured in non-expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[c]Difference between low-income adults who had Medicaid in expansion and non-expansion states was statistically significant at $p < 0.05$.

Receiving selected health care services. Tables 20 and 21 present estimates and differences in estimates of survey questions that asked respondents whether they had received a blood cholesterol check, flu vaccine, or other selected services.

Table 20: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Receiving Selected Health Care Services, 2016

Health care service received in past 12 months	Expansion states (standard error) N = 14,913,000	Non-expansion states (standard error) N = 9,627,000
Blood cholesterol check	49.2 (1.72)[a]	41.7 (1.93)[a]
Blood pressure check	77.5 (1.51)[a]	71.8 (1.67)[a]
Blood sugar check	34.2 (1.68)	32.0 (1.81)
Flu vaccine[b]	30.9 (1.47)[a]	23.9 (1.43)[a]
Colon cancer test[c]	19.1 (2.54)	17.9 (2.74)
Mammogram[d]	46.3 (3.89)	40.6 (5.10)
Overnight hospitalization	8.9 (0.88)	8.8 (0.96)
Hospital emergency department visit	27.1 (1.35)	27.9 (1.66)

Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are based on selected survey questions, which were from the Access to Health Care and Utilization sections of the Family and Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states. See R.A. Cohen and E.P. Zammitti, Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$.

[b]Includes vaccines by both shot and nasal spray.

[c]Limited to adults ages 50 to 64 years.

[d]Limited to female adults ages 50 to 64 years.

Table 21: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Receiving Selected Health Care Services, by Insurance Status, 2016

Health care service received in past 12 months	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)
	N = 1,834,000	N = 3,382,000	N = 7,671,000	N = 2,160,000	N = 5,408,000	N = 4,085,000
Blood cholesterol check	23.3 (4.09)[a]	27.6 (2.84)[b]	56.0 (2.44)[a,b]	61.4 (4.07)[a, b]	47.9 (2.81)[a, b]	43.2 (2.91)[a, b]
Blood pressure check	51.2 (4.23)[a]	54.1 (3.25)[b]	82.0 (2.01)[a, b]	87.8 (2.25)[a, b]	80.1 (2.26)[a, b]	77.8 (2.13)[a, b]
Blood sugar check	15.3 (3.52)[a]	23.8 (3.00)[b]	39.2 (2.22)[a, b, c]	52.7 (4.04)[a, b, c]	33.8 (2.78)[a, b]	27.9 (2.37)[a]
Flu vaccine[d]	11.8 (2.74)[a]	14.0 (1.96)[b]	33.5 (2.19)[a, b]	35.3 (3.93)[a, b]	33.8 (2.37)[a, b, e]	25.9 (2.22)[a, b, e]
Colon cancer test[f]	NA	NA	24.3 (4.09)	NA	18.1 (4.40)	24.0 (5.06)
Mammogram[g]	NA	21.2 (6.12)[b]	45.5 (5.43)[b]	NA	60.2 (7.00)[b]	51.5 (6.67)[b]
Overnight hospitalization	NA	7.3 (1.41)[b]	11.6 (1.36)[b]	16.8 (2.58)[b]	7.2 (1.30)	5.9 (1.28)
Hospital emergency department visit	20.9 (3.65)[a]	28.2 (2.98)[b]	35.2 (2.14)[a]	43.4 (3.65)[a, b]	17.6 (1.77)[b]	19.6 (2.12)[b]

Legend: NA = Not available because of estimates did not meet the NCHS's standards for accuracy and precision.

Source: GAO summary of the 2016 NHIS estimates produced by NCHS. | GAO-18-607

Notes: Estimates are based on selected survey questions, which were from the Access to Health Care and Utilization sections of the Family and Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). Estimates were not available when they did not meet the National Center for Health Statistics' (NCHS) standards for accuracy and precision. For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did

not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses. See R.A. Cohen and E.P. Zammitti, Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults who were uninsured in expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[b]Difference between low-income adults who were uninsured in non-expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[c]Difference between low-income adults who had Medicaid in expansion and non-expansion states was statistically significant at $p < 0.05$.

[d]Includes vaccines by both shot and nasal spray.

[e]Difference between low-income adults who had private health insurance in expansion and non-expansion states was statistically significant at $p < 0.05$.

[f]Limited to adults ages 50 to 64 years.

[g]Limited to female adults ages 50 to 64 years.

Contacting health care professionals. Tables 22 and 23 present estimates and differences in estimates of survey questions that asked respondents whether they had visited or spoken to a general doctor, specialist, or other health care professionals about their health in the past 12 months.

Table 22: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Visiting or Speaking to a Health Care Professional about their Health, 2016

Type of health care professional visited or spoken to in past 12 months	Expansion states (standard error) N = 14,913,000	Non-expansion states (standard error) N = 9,627,000
Any	79.0 (1.43)[a]	73.0 (1.47)[a]
General doctor[b]	64.3 (1.66)[a]	50.9 (1.98)[a]
Nurse practitioner, physician assistant, or midwife	23.7 (1.35)[a]	17.9 (1.36)[a]
Medical specialist[c]	18.2 (1.11)[a]	13.2 (1.14)[a]

Source: GAO summary of the 2016 NHIS estimates produced by the National Center for Health Statistics. | GAO-18-607

Notes: Estimates are based on selected survey questions, which were from the Access to Health Care and Utilization section of the Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states; the remaining 20 states were classified as non-expansion states. See R.A. Cohen and E.P. Zammitti, Access and Utilization by Medicaid Expansion Status for Low-Income Adults Aged 19-64: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, MD.: National Center for Health Statistics, January 2018), accessed January 17, 2018, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults in expansion and non-expansion states was statistically significant at $p < 0.05$.

[b]General doctors are general practitioners, family doctors, and internists.

[c]Medical specialists exclude obstetricians, gynecologists, psychiatrists, and ophthalmologists.

Table 23: Percentage of Low-Income Adults in Expansion and Non-Expansion States Who Reported Seeing or Speaking to a Health Care Provider About their Health, by Insurance Status, 2016

Type of health care professional visited or spoken to in past 12 months	Uninsured		Medicaid		Private health insurance	
	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)	Expansion states (standard error)	Non-expansion states (standard error)
	N = 1,834,000	N = 3,382,000	N = 7,671,000	N = 2,160,000	N = 5,408,000	N = 4,085,000
Any	46.0 (4.69)[a]	53.9 (2.95)[b]	83.9 (1.90)[a, b, c]	90.8 (1.78)[a, b, c]	83.5 (2.06)[a, b]	79.3 (2.20)[a, b]
General doctor[d]	35.0 (4.46)[a]	33.0 (3.11)[b]	68.9 (2.27)[a, b]	62.2 (4.07)[a, b]	67.8 (2.43)[a, b, e]	59.7 (2.75)[a, b, e]
Nurse practitioner, physician assistant, or midwife	13.0 (3.32)[a]	10.8 (1.97)[b]	23.4 (1.90)[a, b]	25.5 (3.19)[a, b]	27.8 (2.22)[a, b, e]	19.7 (1.98)[b, e]
Medical specialist[f]	NA	6.1 (1.28)[b]	19.7(1.58)[b]	24.1(3.15)[b]	20.5 (1.98)[b, e]	13.1 (1.79)[b, e]

Legend: NA = Not available because of estimates did not meet the NCHS's standards for accuracy and precision.

Source: GAO summary of the 2016 NHIS estimates produced by NCHS. | GAO-18-607

Notes: Estimates are based on for selected survey questions, which were from the Access to Health Care and Utilization section of the Sample Adult Core components of the 2016 National Health Interview Survey (NHIS). Estimates were not available when they did not meet the National Center for Health Statistics' (NCHS) standards for accuracy and precision. For the purposes of these NHIS analyses, low-income adults are individuals ages 19 through 64, with family incomes that did not exceed 138 percent of the federal poverty level. These analyses excluded low-income adults who were noncitizens, were covered by Medicare, only received health care services through military health care or through the Indian Health Service, or had Supplemental Social Security Income. We also excluded adult females from the Sample Adult file who reported being pregnant.

For the purposes of these NHIS analyses, the 30 states and the District of Columbia that expanded their Medicaid programs prior to July 1, 2016, were classified as expansion states. The remaining 20 states were classified as non-expansion states.

Health insurance classification was based on a hierarchy of mutually exclusive categories in the following order: private health insurance, Medicaid, other coverage, and uninsured. Low-income adults with more than one coverage type were assigned the first appropriate category in the hierarchy and those with other coverage were excluded from these analyses. See R.A. Cohen and E.P. Zammitti, Coverage, Access, and Utilization by Medicaid Expansion Status: Estimates from the National Health Interview Survey, United States, 2016, (Hyattsville, Md.: National Center for Health Statistics, December 2017), accessed December 12, 2017, https://www.cdc.gov/nchs/health_policy/coverage_and_access.htm.

[a]Difference between low-income adults who were uninsured in expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[b]Difference between low-income adults who were uninsured in non-expansion states and low-income adults in expansion or non-expansion states who were insured—Medicaid or private health insurance—was statistically significant at $p < 0.05$.

[c]Difference between low-income adults who had Medicaid in expansion and non-expansion states was statistically significant at $p < 0.05$.

[d]General doctors are general practitioners, family doctors, and internists.

[e]Difference between low-income adults who had private health insurance in expansion and non-expansion states was statistically significant at $p < 0.05$.

[f]Medical specialists exclude obstetricians, gynecologists, psychiatrists, and ophthalmologists.

Appendix VII: GAO Contact and Staff Acknowledgments

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Staff Acknowledgments

In addition to the contact named above, Katherine M. Iritani (Director), Tim Bushfield (Assistant Director), Deitra H. Lee (Analyst-in-Charge), Kristin Ekelund, Laurie Pachter, Vikki Porter, Merrile Sing, and Emily Wilson made key contributions to this report.