



AGENCY FOR HEALTHCARE RESEARCH AND QUALITY



STATISTICAL BRIEF #552

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Any Use and "Frequent Use" of Opioids among Adults Aged 18–64 in 2020–2021, by Socioeconomic Characteristics

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Highlights

- In 2020–2021, 6.4 percent of adults aged 18–64, on average, filled at least one outpatient opioid prescription, and 1.8 percent had four or more prescription fills during the year.
- Non-Hispanic White and non-Hispanic Black people aged 18–64 (7.5 percent and 7.3 percent, respectively) were more likely to have at least one opioid prescription filled than Hispanic 18- to 64-year-olds and non-Hispanic 18- to 64-year-olds of other races (3.5 percent and 4.4 percent, respectively).
- Adults aged 18–64 who had family incomes below the federal poverty line (10.2 percent), were covered by public insurance due to a disability (25.0 percent), or lived in rural areas (non-metropolitan statistical areas) (8.1 percent) were more likely than others to have at least one opioid prescription filled during the year.
- In 2020–2021, the average annual percentages of adults aged 18–64 who had any use and frequent use of prescription opioids during the year were lowest for those in excellent health (2.4 percent and 0.1 percent, respectively) and highest for those in poor health (30.8 percent and 18.1 percent, respectively).

Introduction

Prescription opioids are commonly used to treat both chronic and acute pain in the United States. However, they are not recommended as first-line treatment for most types of pain due to the serious risk of opioid use disorder (OUD) and overdose.¹ As OUD and opioid overdose deaths continue to be major public health concerns,^{2,3} examining the patterns and trends in the use of prescribed opioids can contribute to efforts to promote safer and more effective treatments for pain management.

This Statistical Brief presents estimates of prescription fills for opioid medicines that are commonly used to treat pain. These data were obtained from the Agency for Healthcare Research and Quality (AHRQ) 2020–2021 Medical Expenditure Panel Survey Household Component (MEPS-HC). These estimates are an update to the 2018–2019 estimates presented in the previous AHRQ Statistical Brief #542. The estimates only include prescriptions purchased or obtained in an outpatient setting. Prescription medicines administered in an inpatient setting or in a clinic or physician’s office are not included.

The sample includes all adults aged 18–64 in the U.S. civilian noninstitutionalized population. Statistical Brief 551 presents estimates of opioid use for adults aged 65 and older. We examine the average annual percentages of adults aged 18–64 in 2020–2021 with (1) any opioid use (defined as one or more prescription fills during the year) and (2) frequent opioid use (defined as having four or more prescription fills or refills during the year).⁴ We present overall estimates for the full population of adults aged 18–64 and for subgroups defined by sex, race/ethnicity, poverty status, insurance coverage, perceived health status, census region, and metropolitan statistical area (MSA) status. All differences mentioned in the text are significant at the $p < 0.05$ level or better.

¹ Centers for Disease Control and Prevention. *CDC Guidelines for Prescribing Opioids for Chronic Pain*. U.S. Department of Health and Human Services. https://www.cdc.gov/drugoverdose/pdf/guidelines_at-a-glance-a.pdf. Accessed September 20, 2023.

² Mattson CL, Tanz LJ, Quinn K, Kariisa M, Patel P, Davis NL. Trends and geographic patterns in drug and synthetic opioid overdose deaths—United States, 2013–2019. *MMWR Morb Mortal Wkly Rep* 2021 Feb 12;70(6):202–207. <http://dx.doi.org/10.15585/mmwr.mm7006a4>. Accessed September 20, 2023.

³ Hedegaard H, Miniño AM, Spencer MR, Warner M. *Drug Overdose Deaths in the United States, 1999–2020*. National Center for Health Statistics Data Brief, no 428. Hyattsville, MD: National Center for Health Statistics; 2021. <https://www.cdc.gov/nchs/data/databriefs/db428.pdf>. Accessed September 20, 2023.

⁴ The acquisition of four fills or refills represents the 75th percentile of the distribution of prescription fills among all adults aged 18 and older with any fills during the year in 2020–2021.

Because of differences in methodology and in the definitions of opioid prescription fills, readers should use caution when comparing MEPS data with data from other sources. See the “Definitions” section of this Statistical Brief for details.

Findings

Overall and sex (figure 1)

In 2020–2021, an average annual total of 12.7 million adults aged 18–64, or 6.4 percent of the 198.5 million adults aged 18–64 in the U.S. civilian noninstitutionalized population, filled at least one opioid prescription. During the same period, 3.6 million or 1.8 percent obtained four or more opioid prescription fills or refills annually. Women were more likely to fill at least one opioid prescription (7.7 percent) and to have four or more opioid prescription fills (2.2 percent) than men (5.0 percent and 1.4 percent).

Race/ethnicity (figure 2)

In 2020–2021, non-Hispanic White (7.5 percent) and non-Hispanic Black (7.3 percent) adults aged 18–64 were more likely, on average, to fill any opioid prescriptions than Hispanic adults (3.5 percent) and non-Hispanic adults of other races (4.4 percent). Non-Hispanic White (2.2 percent) and non-Hispanic Black (2.3 percent) adults aged 18–64 were more likely to fill four or more opioid prescriptions than Hispanic adults (0.6 percent).

Poverty status (figure 3)

Adults aged 18–64 with lower incomes were more likely than those with higher incomes to have any use and frequent use of opioids during the year. The percentage of adults aged 18–64 with at least one opioid prescription fill was highest for those with family incomes below the federal poverty line (10.2 percent), and adults aged 18–64 with low incomes (8.4 percent) were more likely to fill at least one opioid prescription than those with middle and high incomes (5.9 percent and 5.3 percent, respectively). The rate of frequent use was highest among adults aged 18–64 with family incomes below the federal poverty line (5.0 percent), followed by those whose family incomes are low (2.8 percent), middle (1.7 percent), and high (0.9 percent).

Insurance coverage (figure 4)

This Statistical Brief uses four mutually exclusive categories of insurance for adults aged 18–64: any private insurance, public coverage due to a disability (“public disability related”), public coverage based on other factors (“public other”), and uninsured. In 2020–2021, adults aged 18–64 with public disability-related coverage were substantially more likely to fill at least one opioid prescription (25.0 percent) and to fill four or more opioid prescriptions (15.7 percent) compared with those in other insurance categories. Among the other three insurance categories,

adults aged 18–64 with public other coverage had the highest rates of any use (7.8 percent) and frequent use (2.6 percent) of opioids, and adults aged 18–64 with any private insurance were more likely than the uninsured to have at least one opioid prescription fill (5.6 percent vs. 2.2 percent) and to have four or more opioid prescriptions fills (1.1 percent vs. 0.2 percent) during the year.

Perceived health status (figure 5)

Any use and frequent use of outpatient prescription opioids tended to be higher for those with worse perceived health. In 2020–2021, adults aged 18–64 whose perceived health was fair or poor were more likely to fill any opioid prescriptions (15.5 percent and 30.8 percent, respectively) or to have four or more opioid prescription fills (7.7 percent and 18.1 percent, respectively) compared with those who reported better perceived health. In comparison, adults aged 18–64 whose perceived health was excellent or very good were less likely, on average, to fill any opioid prescriptions (2.4 percent and 4.7 percent, respectively) or to have four or more opioid prescription fills (0.1 percent and 0.5 percent, respectively) than those who reported worse perceived health.

Census region (figure 6)

In 2020–2021, the percentage of adults aged 18–64 with at least one opioid prescription fill was lowest for those in the Northeast census region (4.4 percent), and adults aged 18–64 in the West census region (5.8 percent) were less likely to fill at least one opioid prescription than those in the Midwest and South census regions (7.9 percent and 6.9 percent, respectively). Adults aged 18–64 in the Northeast (0.9 percent) and West (1.2 percent) census regions were less likely, on average, to fill four or more opioid prescriptions than those in the Midwest (2.3 percent) and South (2.4 percent) census regions.

Metropolitan Statistical Area Status (figure 7)

Adults aged 18–64 living in MSAs were less likely than those living in non-MSAs to fill any outpatient opioid prescriptions (6.1 percent vs. 8.1 percent) and to obtain four or more opioid prescriptions (1.6 percent vs. 3.2 percent) during the year.

Data Source

This Statistical Brief uses data from the 2020–2021 MEPS Full-Year Consolidated Data Files (HC-224 and HC-233) and non-public versions of the 2020–2021 Prescribed Medicines Files (HC-220A and HC-229A). The MSA variables are from 2020 and 2021 MEPS internal data files.

Definitions

Opioids

In this Statistical Brief, we examine outpatient prescription fills of opioids that are

commonly used to treat pain. These opioids are identified by generic drug names for narcotic analgesics and narcotic analgesic combinations in the Multum Lexicon database from Cerner Multum, Inc. We identify slightly more of the opioids that are commonly used for pain than one would find in the MEPS public use files due to the methods used to preserve the confidentiality of sample members. Opioids that are excluded from our analysis include respiratory agents, antitussives, and drugs commonly used in medication-assisted treatment.

Opioid prescription fills

We examine the percentage of adults aged 18–64 with any outpatient opioid prescription fills during the year (“any use”) and the percentage with four or more fills or refills (“frequent use”). The acquisition of four fills or refills represents the 75th percentile of the distribution of prescription fills among all adults aged 18 and older with any fills during the year in 2020–2021.

MEPS estimates of opioid use may differ from estimates based on other data sources. For example, MEPS and the Substance Abuse and Mental Health Services Administration National Survey on Drug Use and Health (NSDUH) have substantially different methodologies and objectives. The NSDUH estimates on any use of opioids include both prescribed use and misuse. Misuse includes taking medications for the resulting feeling and in any way that a doctor did not prescribe. NSDUH respondents report use in both inpatient and outpatient settings. In addition, the NSDUH includes targeted questions with show cards for specific drugs, is self-reported using audio-computer assisted self-interviews (ACASI), surveys people 12 years of age and older, and has questions that are based on a 12-month recall period.

In contrast, MEPS includes only prescribed drugs that are purchased or obtained in outpatient settings. Prescription medicines administered in an inpatient setting or in a clinic or physician's office are not included. MEPS data are household reported, and one respondent reports for the entire household. MEPS uses computer-assisted personal interviewing (CAPI), and questions are asked using a recall period of 3–6 months. Finally, this Statistical Brief examines opioid use among adults aged 18–64.

Adults aged 18–64

The age variable used to identify adults aged 18–64 was based on the sample person's age at the end of the year. If data were not collected during a round because the sample person was out of scope (e.g., deceased or institutionalized), then age at the time of the previous round was used.

Race/ethnicity

Classification by race/ethnicity was based on information reported for each family member. First, respondents were asked if the person's main national origin or ancestry was Puerto Rican; Cuban; Mexican, Mexican American, or Chicano; other Latin American; or other Spanish. All persons whose main national origin or

ancestry was reported in one of these Hispanic groups, regardless of racial background, were classified as Hispanic. All other persons were classified according to their reported race. For this analysis, the following classification by race and ethnicity was used: Hispanic, non-Hispanic Black, non-Hispanic White, and non-Hispanic other. The "other" category includes American Indian, Alaska Native, Asian or Pacific Islander, other race, and multiple races.

Poverty status

Each sample person was classified according to the total annual income of their family. Possible sources of income included annual earnings from wages, salaries, bonuses, tips, and commissions; business and farm gains and losses; unemployment and Worker's Compensation; interest and dividends; alimony, child support, and other private cash transfers; private pensions, individual retirement account withdrawals, Social Security benefits, and Department of Veterans Affairs payments; Supplemental Security Income and cash welfare payments from public assistance, and Aid to Families with Dependent Children; gains or losses from estates, trusts, partnerships, S corporations, rent, and royalties; and a small amount of "other" income. Poverty status is the ratio of family income to the corresponding federal poverty thresholds, which control for family size and the age of the head of the family. Categories are defined as follows:

- Poor: Household income below the federal poverty line
- Low income: Household income greater than or equal to the poverty line and less than 200 percent of the poverty line
- Middle income: 200 percent to less than 400 percent of the poverty line
- High income: Greater than or equal to 400 percent of the poverty line

Insurance coverage

- Any private: A person was classified as having any private health insurance coverage had private insurance that provided coverage for hospital and physician care (including Medigap coverage and TRICARE, an Armed Forces-related coverage) at some point during the year.
- Public disability related: A person was classified as having public disability-related health insurance coverage if they were not covered by private insurance or TRICARE and they were covered by Medicare at some point during the year or if they received Supplemental Security Income and were covered by Medicaid or other public hospital and physician coverage at some point during the year. Most individuals with Medicare coverage were dually eligible for Medicaid or other public coverage.
- Public other: A person was classified as having public other health insurance coverage if they were not covered by private insurance, TRICARE, or Medicare; did not receive Supplemental Security Income; and were covered by Medicaid or other public hospital and physician coverage at some point during the year.

- **Uninsured:** A person was classified as uninsured if they did not have health insurance coverage for the entire calendar year were classified as uninsured. The uninsured were defined as people not covered by Medicaid, Medicare, TRICARE, other public hospital/physician programs, private hospital/physician insurance (including Medigap coverage), or insurance purchased through health insurance marketplaces. People covered only by noncomprehensive State-specific programs, such as Maryland Kidney Disease Program, private single service plans, such as coverage for dental or vision care only, or coverage for accidents or specific diseases were considered uninsured.

Perceived health status

The MEPS respondent was asked to rate the health of each person in the family at the time of the interview according to the following categories: excellent, very good, good, fair, and poor. For persons with missing health status in a round, the response for health status at the previous round was used, if available. A small percentage of persons (<1 percent) had a missing response for perceived health status.

Census region

The census region variable was based on the location of the household at the end of the year. If missing, the most recent location available was used.

- **Northeast:** Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont
- **Midwest:** Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin
- **South:** Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia
- **West:** Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming

Metropolitan Statistical Area

The MSA variable was based on the location of the household at the end of the year and reflects the most recent delineations of MSAs established by the Office of Management and Budget (OMB). An MSA contains a core urban area with a population of 50,000 or more. All counties that are not part of an MSA are considered rural.

About MEPS

The MEPS-HC collects nationally representative data on healthcare use, expenditures, sources of payment, and insurance coverage for the U.S. civilian noninstitutionalized population. The MEPS-HC is cosponsored by AHRQ and the

National Center for Health Statistics. More information about the MEPS-HC can be found on the MEPS website at <https://www.meps.ahrq.gov/>.

References

For a detailed description of the MEPS-HC survey design, sample design, and methods used to minimize sources of nonsampling error, see the following publications:

Cohen J. *Design and Methods of the Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 1. Agency for Health Care Policy Research Pub. No. 97-0026. Rockville, MD: Agency for Health Care Policy and Research; 1997.

https://www.meps.ahrq.gov/data_files/publications/mr1/mr1.pdf.

Cohen S. *Sample Design of the 1996 Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 2. Agency for Health Care Policy and Research Pub. No. 97-0027. Rockville, MD: Agency for Healthcare Research and Quality, 1997. https://www.meps.ahrq.gov/data_files/publications/mr2/mr2.pdf

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https://meps.ahrq.gov/data_files/publications/st552/stat552.pdf

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AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of healthcare in the United States. We also invite you to tell us how you are using this Statistical Brief and other MEPS data and tools and to share suggestions on how MEPS products might be enhanced to further meet your needs. Please email us at MEPSProjectDirector@ahrq.hhs.gov or send a letter to the address below:

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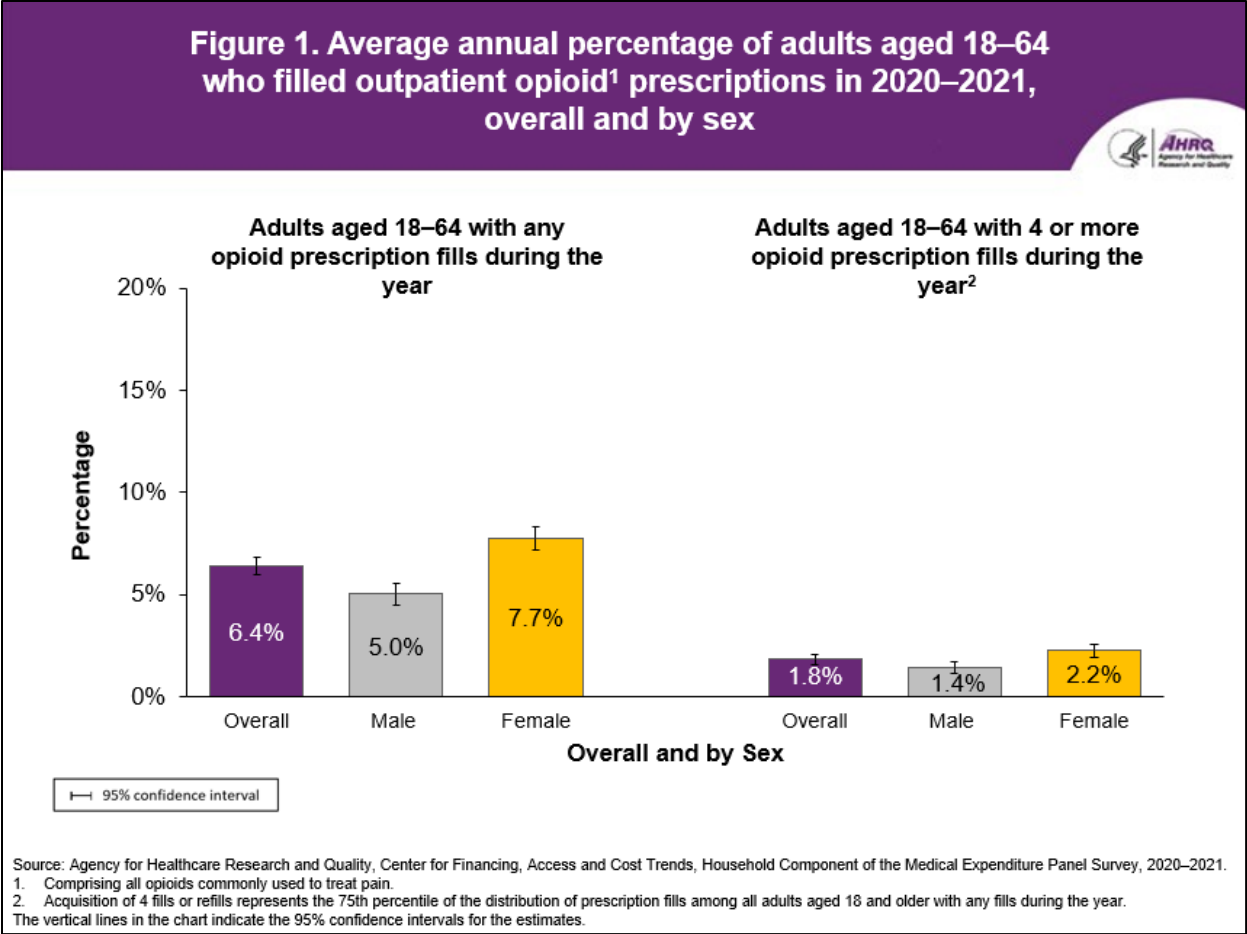


Figure 1. Average annual percentage of adults aged 18–64 who filled outpatient opioid¹ prescriptions in 2020–2021, overall and by sex

Sex	Percentage of adults aged 18–64 with any opioid prescription fills during the year	Percentage of adults aged 18–64 with 4 or more opioid prescription fills during the year ²
Overall	6.4%	1.8%
Male	5.0%	1.4%
Female	7.7%	2.2%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2020–2021.
¹ Comprising all opioids commonly used to treat pain.
² Acquisition of 4 fills or refills represents the 75th percentile of the distribution of prescription fills among all adults aged 18 and older with any fills during the year.
 The vertical lines in the chart indicate the 95% confidence intervals for the estimates.

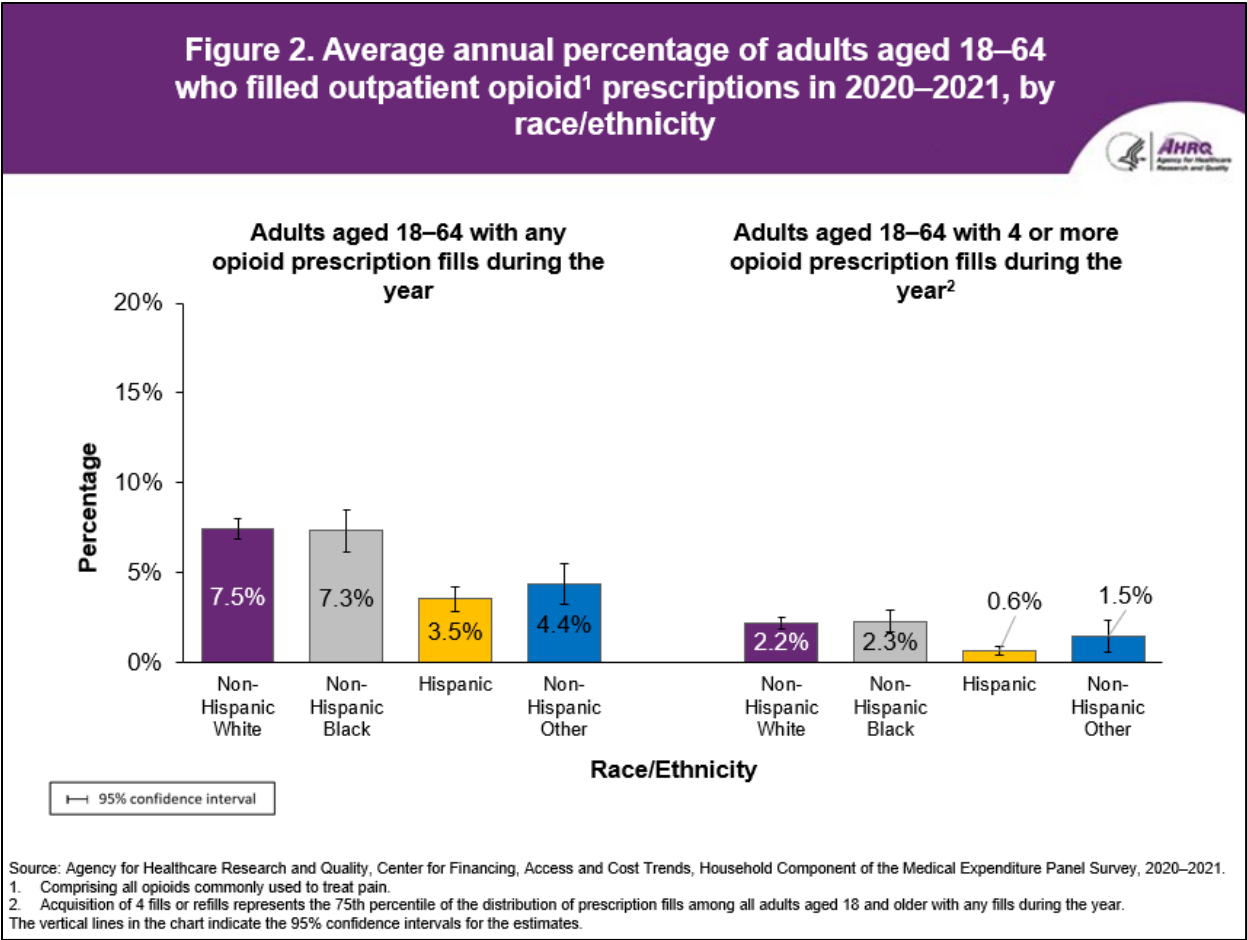


Figure 2. Average annual percentage of adults aged 18–64 who filled outpatient opioid¹ prescriptions in 2020–2021, by race/ethnicity

Race/ethnicity	Percentage of adults aged 18–64 with any opioid prescription fills during the year	Percentage of adults aged 18–64 with 4 or more opioid prescription fills during the year ²
Non-Hispanic White	7.5%	2.2%
Non-Hispanic Black	7.3%	2.3%
Hispanic	3.5%	0.6%
Non-Hispanic Other	4.4%	1.5%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2020–2021.

¹ Comprising all opioids commonly used to treat pain.

² Acquisition of 4 fills or refills represents the 75th percentile of the distribution of prescription fills among all adults aged 18 and older with any fills during the year.

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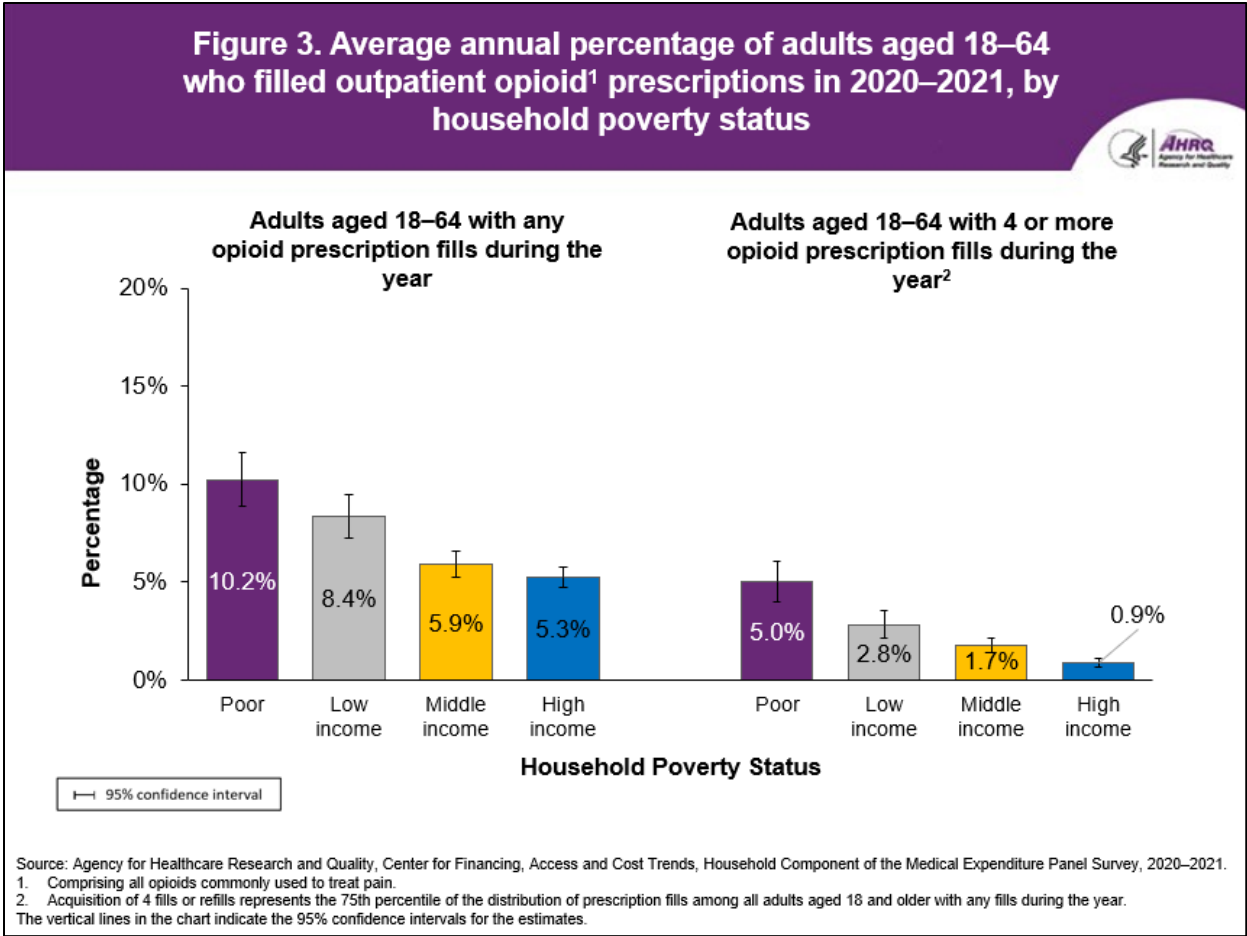


Figure 3. Average annual percentage of adults aged 18–64 who filled outpatient opioid¹ prescriptions in 2020–2021, by household poverty status

Household poverty status	Percentage of adults aged 18–64 with any opioid prescription fills during the year	Percentage of adults aged 18–64 with 4 or more opioid prescription fills during the year ²
Poor	10.2%	5.0%
Low income	8.4%	2.8%
Middle income	5.9%	1.7%
High income	5.3%	0.9%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2020–2021.

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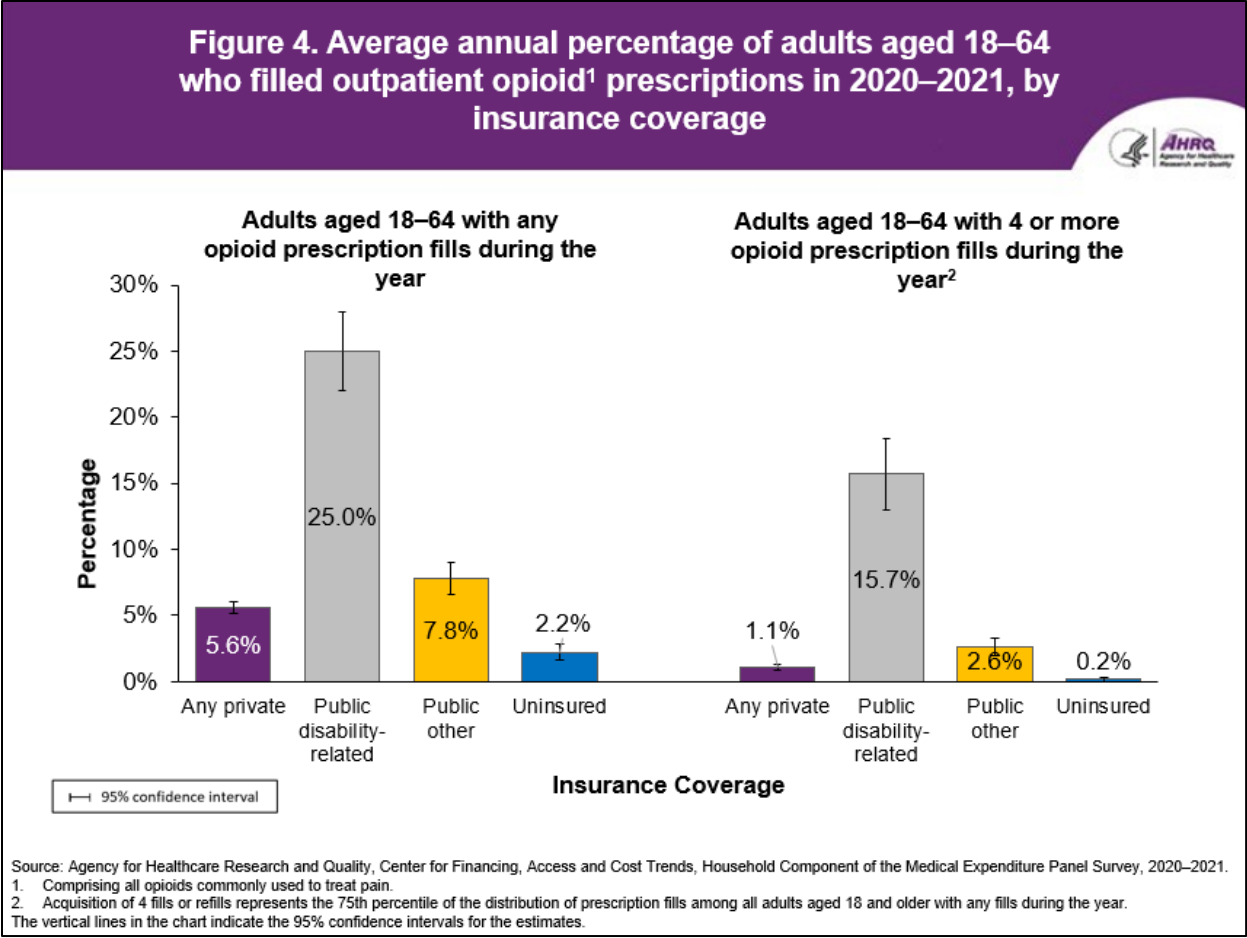


Figure 4. Average annual percentage of adults aged 18–64 who filled outpatient opioid¹ prescriptions in 2020–2021, by insurance coverage

Insurance coverage	Percentage of adults aged 18–64 with any opioid prescription fills during the year	Percentage of adults aged 18–64 with 4 or more opioid prescription fills during the year ²
Any private	5.6%	1.1%
Public disability related	25.0%	15.7%
Public other	7.8%	2.6%
Uninsured	2.2%	0.2%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2020–2021.

¹ Comprising all opioids commonly used to treat pain.

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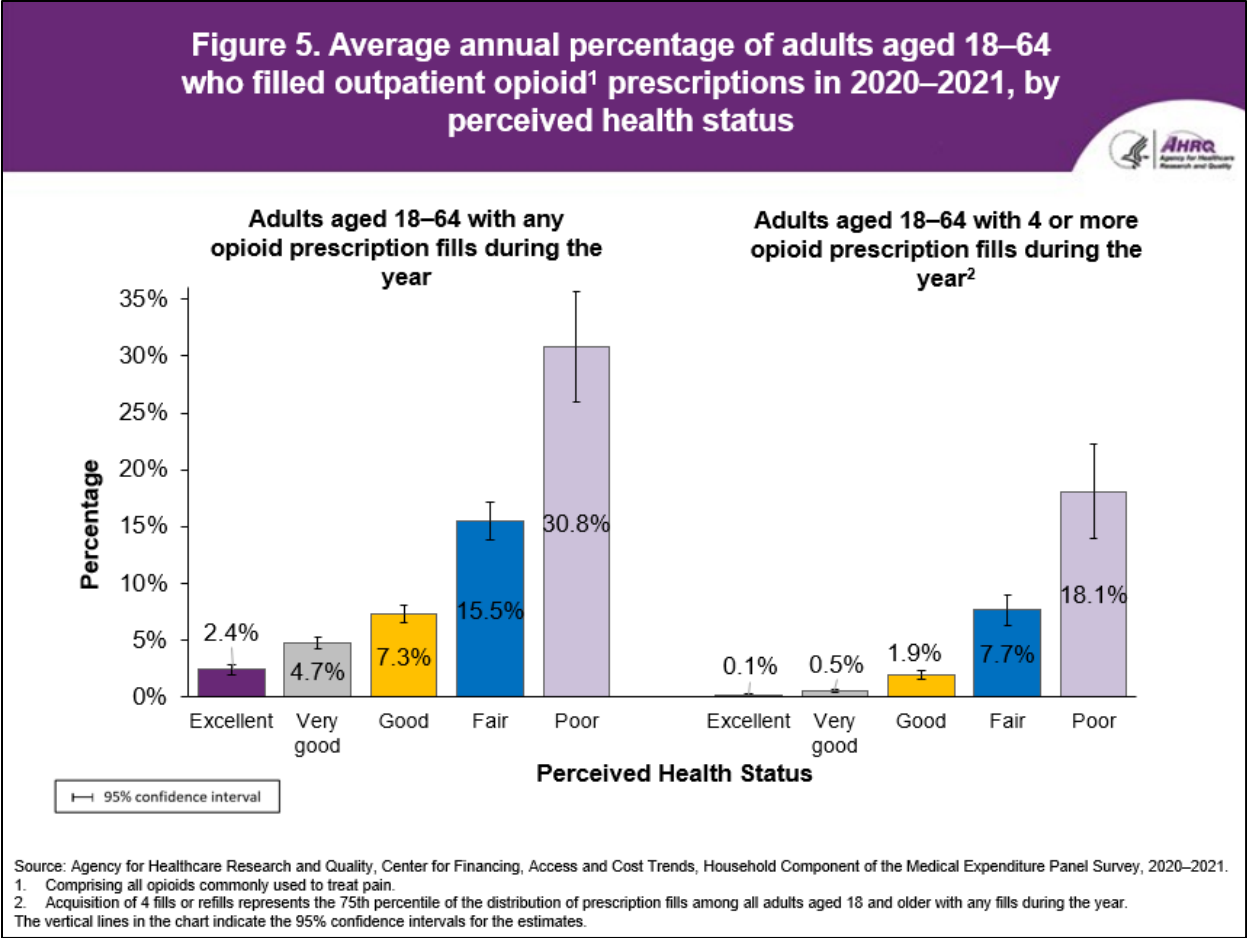


Figure 5. Average annual percentage of adults aged 18–64 who filled outpatient opioid¹ prescriptions in 2020–2021, by perceived health status

Perceived health status	Percentage of adults aged 18–64 with any opioid prescription fills during the year	Percentage of adults aged 18–64 with 4 or more opioid prescription fills during the year ²
Excellent	2.4%	0.1%
Very good	4.7%	0.5%
Good	7.3%	1.9%
Fair	15.5%	7.7%
Poor	30.8%	18.1%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2020–2021.

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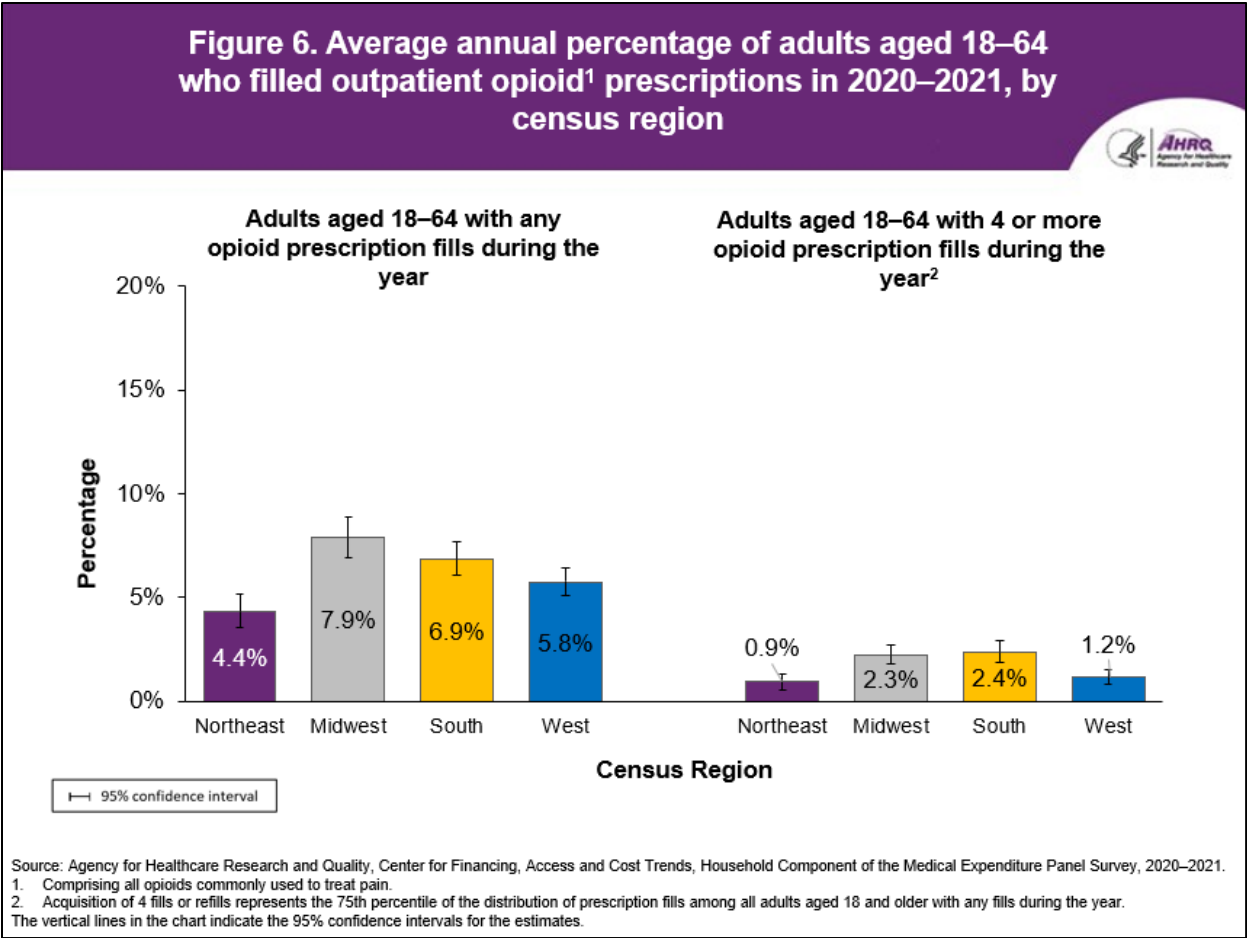


Figure 6. Average annual percentage of adults aged 18–64 who filled outpatient opioid¹ prescriptions in 2020–2021, by census region

Census region	Percentage of adults aged 18–64 with any opioid prescription fills during the year	Percentage of adults aged 18–64 with 4 or more opioid prescription fills during the year ²
Northeast	4.4%	0.9%
Midwest	7.9%	2.3%
South	6.9%	2.4%
West	5.8%	1.2%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2020–2021.
¹ Comprising all opioids commonly used to treat pain.
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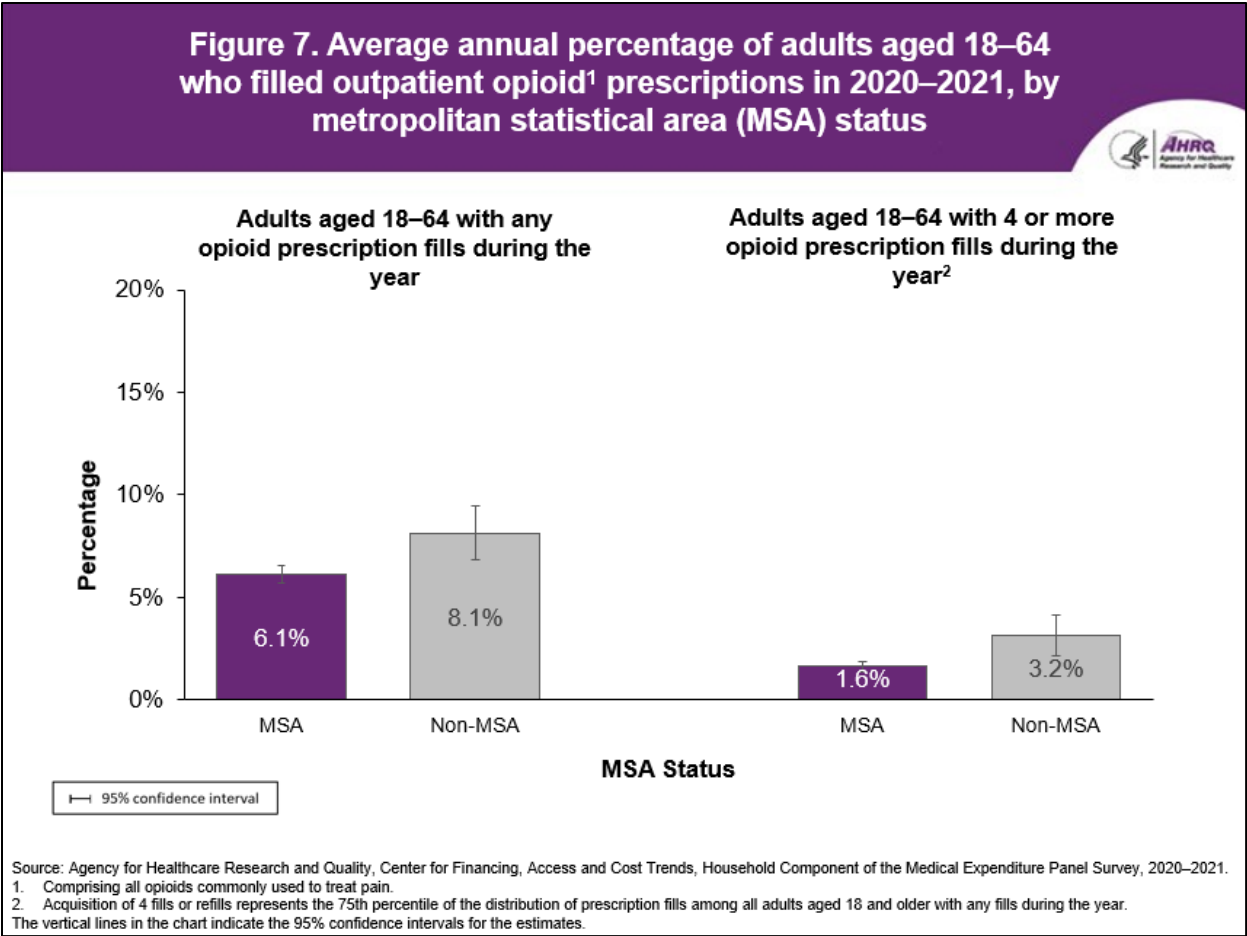


Figure 7. Average annual percentage of adults aged 18–64 who filled outpatient opioid¹ prescriptions in 2020–2021, by MSA status

MSA status	Percentage of adults aged 18–64 with any opioid prescription fills during the year	Percentage of adults aged 18–64 with 4 or more opioid prescription fills during the year ²
MSA	6.1%	1.6%
Non-MSA	8.1%	3.2%

Note: MSA = metropolitan statistical area.
 Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2020–2021.
¹ Comprising all opioids commonly used to treat pain.
² Acquisition of 4 fills or refills represents the 75th percentile of the distribution of prescription fills among all adults aged 18 and older with any fills during the year.
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