



AGENCY FOR HEALTHCARE RESEARCH AND QUALITY



STATISTICAL BRIEF #541

March 2022

Any Use and "Frequent Use" of Opioids among Elderly Adults in 2018–2019, by Socioeconomic Characteristics

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Highlights

- In 2018–2019, 15.8 percent of elderly adults, on average, filled at least one outpatient opioid prescription, and 4.9 percent obtained five or more prescription fills during the year.
- Elderly adults who were poor (7.2 percent), low income (6.8 percent), or middle income (5.1 percent) were more likely than high-income elderly adults (3.4 percent) to obtain five or more opioid prescription fills during the year.
- Elderly adults with Medicare and other public insurance coverage were more likely to have five or more opioid prescription fills (8.0 percent) than those with Medicare only (4.7 percent) and those with Medicare and private insurance coverage (4.3 percent).
- In 2018–2019, the average annual rates of any outpatient opioid use and frequent use were higher for elderly adults with fair perceived health (23.4 percent and 9.7 percent) or poor perceived health (26.1 percent and 11.6 percent) than those with excellent perceived health (8.5 percent and 1.9 percent) or very good perceived health (12.6 percent and 2.6 percent).

Introduction

Prescription opioids have commonly been used to treat both chronic and acute pain in the United States despite the fact that they are not recommended as the first-line treatment for most types of pain due to

serious risks of opioid use disorders (OUDs) and overdose.¹ As OUDs and opioid overdose deaths continue to be major public health concerns,² examining the patterns and trends of the use of prescribed opioids can contribute to efforts to promote safer and more effective pain management.

This Statistical Brief presents estimates of fills of prescriptions for opioid medications that are commonly used to treat pain obtained from the 2018–2019 Medical Expenditure Panel Survey Household Component (MEPS-HC). These estimates are an update of the 2015–2016 estimates presented in the previous Agency for Healthcare Research and Quality (AHRQ) Statistical Brief #515. 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 elderly adults (ages 65 and older) in the U.S. civilian noninstitutionalized population. (Statistical Brief 542 presents estimates of opioid use for non-elderly adults ages 18 to 64). We examine the average annual percentages of elderly adults in 2018–2019 with any opioid use (one or more prescription fills during the year) and with frequent opioid use, which we define as having five or more prescription fills or refills during the year.³ We present overall estimates for the full population of elderly adults 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 statistically significant at the .05 level or better.

Because of methodological and definitional differences, readers should use caution when comparing Medical Expenditure Panel Survey (MEPS) data with data from other sources. Details on the MEPS methodology and differences with other sources are included in the Definitions section of this Statistical Brief.

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

² Mattson, C. L., Tanz, L. J., Quinn, K., Kariisa, M., Patel, P., and Davis, N. L. (2021). Trends and geographic patterns in drug and synthetic opioid overdose deaths — United States, 2013–2019. *Morbidity and Mortality Weekly Report (MMWR)*, 70(6), 202–207. <https://doi.org/10.15585/mmwr.mm7006a4>

³ Acquisition of five fills or refills represents the 75th percentile of the distribution of prescription fills among all adults (elderly and non-elderly) with any fills during the year in 2018–2019.

Findings

Overall and sex (figure 1)

In 2018–2019, an average annual total of 8.6 million elderly adults, or 15.8 percent of the 54.7 million elderly adults in the U.S. civilian noninstitutionalized population, filled at least one opioid prescription, and 2.7 million or 4.9 percent of elderly adults had five or more opioid prescription fills or refills during the year (figure 1). Elderly women were more likely to fill at least one opioid prescription (17.8 percent) and to have five or more opioid prescription fills (5.8 percent) than elderly men (13.4 percent and 3.8 percent).

Race/ethnicity (figure 2)

In 2018–2019, non-Hispanic White elderly adults (16.7 percent) were more likely, on average, than Hispanic elderly adults (12.3 percent) and non-Hispanic elderly adults of other races (10.1 percent) to fill an opioid prescription at least once during the year (figure 2). Also, non-Hispanic Black elderly adults (15.6 percent) were more likely than non-Hispanic elderly adults of other races (10.1 percent) to fill any opioid prescriptions. The average annual percentage of elderly adults with five or more opioid prescription fills did not vary by race/ethnicity.

Poverty status (figure 3)

In 2018–2019, the average annual percentage of elderly adults with any opioid prescription fills was higher for those in families with low incomes (18.2 percent) than for those in families with high incomes (14.3 percent; figure 3). Elderly adults whose families were poor (7.2 percent), low income (6.8 percent), or middle income (5.1 percent) were, on average, more likely to have five or more opioid prescription fills than those with high family incomes (3.4 percent). Elderly adults whose families were poor were also more likely to have five or more opioid prescription fills than those in middle-income families.

Insurance coverage (figure 4)

In 2018–2019, elderly adults with Medicare and other public insurance (18.3 percent) were, on average, more likely to have at least one opioid prescription filled than those with Medicare coverage only (15.5 percent) or Medicare and private coverage (15.6 percent, $p < 0.1$, figure 4). The average annual percentage of those who had five or more outpatient opioid prescription fills was also higher for elderly adults with Medicare and other public insurance (8.0 percent) than elderly adults with Medicare only (4.7 percent) or Medicare and private insurance (4.3 percent).

Perceived health status (figure 5)

Any use and frequent use of outpatient prescription opioids tended to be higher for those with worse perceived health status (figure 5). In 2018–2019, elderly adults whose perceived health was fair or poor were more likely to fill any opioid prescriptions (23.4 and 26.1 percent, respectively) or to have five or more opioid prescription fills (9.7 and 11.6 percent, respectively) compared to those who reported better perceived health. On the other hand, elderly adults whose perceived health was excellent or very good were less likely, on average, to fill any opioid prescriptions (8.5 and 12.6 percent, respectively) or to have five or more opioid prescription fills (1.9 and 2.6 percent, respectively) than those who reported worse perceived health.

Census region (figure 6)

In 2018–2019, elderly adults in the Northeast Census region were less likely, on average, to fill any opioid prescriptions (10.1 percent) or to have five or more opioid prescription fills (2.5 percent) than those in other Census regions (16.9 percent and 4.5 percent in the Midwest, 17.8 percent and 6.6 percent in the South, and 15.9 percent and 4.4 percent in the West). The average annual rate of frequent opioid use was higher in the South than in other Census regions (figure 6).

MSA status (figure 7)

Elderly adults living in MSAs were less likely than those living in non-MSAs to fill any outpatient opioid prescriptions (15.1 vs. 19.2 percent) and to obtain five or more opioid prescription fills during the year (4.4 vs. 7.3 percent, figure 7).

Data Source

This Statistical Brief uses data from the 2018–2019 MEPS Full Year Consolidated Data Files (HC-209 and HC-216) and non-public versions of the 2018–2019 Prescribed Medicines Files (HC-207A and HC-213A).

Definitions

Opioids

In this Statistical Brief, we examine outpatient prescription fills of opioids that are commonly used to treat pain. These opioids are identified using generic drug names for narcotic analgesics and narcotic analgesic combinations in the Multum Lexicon database from Cerner Multum, Inc. We identify slightly more opioids commonly used for pain than one would find in the MEPS public use files due to 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 elderly adults with any outpatient opioid prescription fills during the year ("any use") and the percentage with five or more fills or refills ("frequent use"). Acquisition of five fills or refills represents the 75th percentile of the distribution of prescription fills among all adults (elderly and non-elderly) with any fills during the year in 2018–2019.

MEPS estimates of opioid use may differ from estimates based on other data sources for several reasons. For example, MEPS and the Substance Abuse and Mental Health Services Administration's National Survey on Drug Use and Health (NSDUH) have substantial differences in methodologies and objectives. The NSDUH any-use estimates comprise both prescribed use and misuse. Misuse includes taking medications for the feeling and in any way a doctor did not prescribe. NSDUH respondents report use in inpatient settings, as well outpatient. Moreover, NSDUH includes targeted questions with show cards for specific drugs, is self-reported using audio computer-assisted self-interviewing, surveys persons 12 and older, and asks questions based on a 12-month recall period.

In contrast, MEPS includes only prescribed drugs 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, and questions are asked using a recall period of 3–6 months. Finally, this Statistical Brief examines opioid use among adults ages 65 and older.

Elderly adults

This category consists of individuals ages 65 and older. The age variable used to identify elderly adults is based on the sample person's age as of 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 his or her family. Possible sources of income included annual earnings from wages, salaries, bonuses, tips, and commissions; business and farm gains and losses; unemployment and workers' compensation; interest and dividends; alimony, child support, and other private cash transfers; private pensions, individual retirement account withdrawals, Social Security, and U.S. Department of Veterans Affairs payments; Supplemental Security Income and cash welfare payments from public assistance, and Temporary Assistance for Needy Families; 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 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

- Medicare only: Individual is covered by Medicare only during the year.
- Medicare and private: Individuals are classified as having Medicare and any private health insurance coverage if they were covered by Medicare and had private insurance that provided coverage for hospital and physician care (including Medigap coverage and TRICARE) at some point during the year.
- Medicare and public only: Individuals are classified as having Medicare and public only insurance if they were covered by Medicare, they were not covered by private insurance or TRICARE at any point during the year, and they were covered by Medicaid or other public hospital and physician coverage at some point during the year.
- No Medicare: Elderly adults who reported no Medicare coverage during the year; this coverage group comprised less than 2 percent of the sample, and so individuals in this group were excluded from the analysis.

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 (less than 1 percent) had a missing response for perceived health status.

Census region

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

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

Metropolitan statistical area

The MSA variable is 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.

About MEPS

The Medical Expenditure Panel Survey Household Component (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 the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics (NCHS). 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:

Centers for Disease Control and Prevention (CDC). *CDC Guideline for Prescribing Opioids for Chronic Pain*. U.S. Department of Health and Human

Services, CDC. https://www.cdc.gov/drugoverdose/pdf/guidelines_at-a-glance-a.pdf

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

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. July 1997. Agency for Health Care Policy and Research, Rockville, MD.

https://www.meps.ahrq.gov/data_files/publications/mr2/mr2.pdf

Mattson, C. L., Tanz, L. J., Quinn, K., Kariisa, M., Patel, P., and Davis, N. L. (2021). Trends and geographic patterns in drug and synthetic opioid overdose deaths — United States, 2013–2019. *Morbidity and Mortality Weekly Report (MMWR)*, 70(6), 202–207.

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Suggested Citation

Moriya, A. S., and Fang, Z. *Any Use and "Frequent Use" of Opioids among Elderly Adults in 2018–2019, by Socioeconomic Characteristics*. Statistical Brief #541. March 2022. Agency for Healthcare Research and Quality, Rockville, MD.

https://meps.ahrq.gov/data_files/publications/st541/stat541.pdf

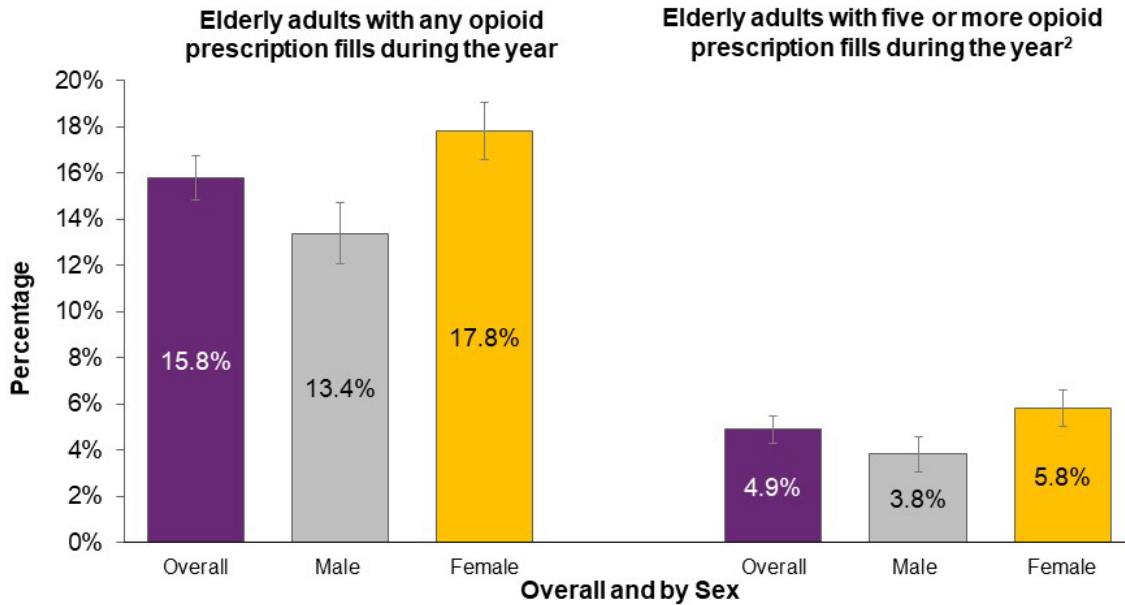
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AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of healthcare in the United States. We also invite you to tell us how you are using 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:

Joel W. Cohen, PhD, Director
Center for Financing, Access and Cost Trends
Agency for Healthcare Research and Quality
5600 Fishers Lane, Mailstop 07W41A
Rockville, MD 20857

Figure 1. Average annual percentages of elderly adults who filled outpatient opioid¹ prescriptions in 2018–2019, overall and by sex



Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018-2019.

¹ Comprising all opioids commonly used to treat pain.

² Acquisition of five fills or refills represents the 75th percentile of the distribution of prescription fills among all adults (elderly and non-elderly) with any fills during the year.

Note: The vertical lines in the chart indicate the 95% confidence intervals for the estimates.

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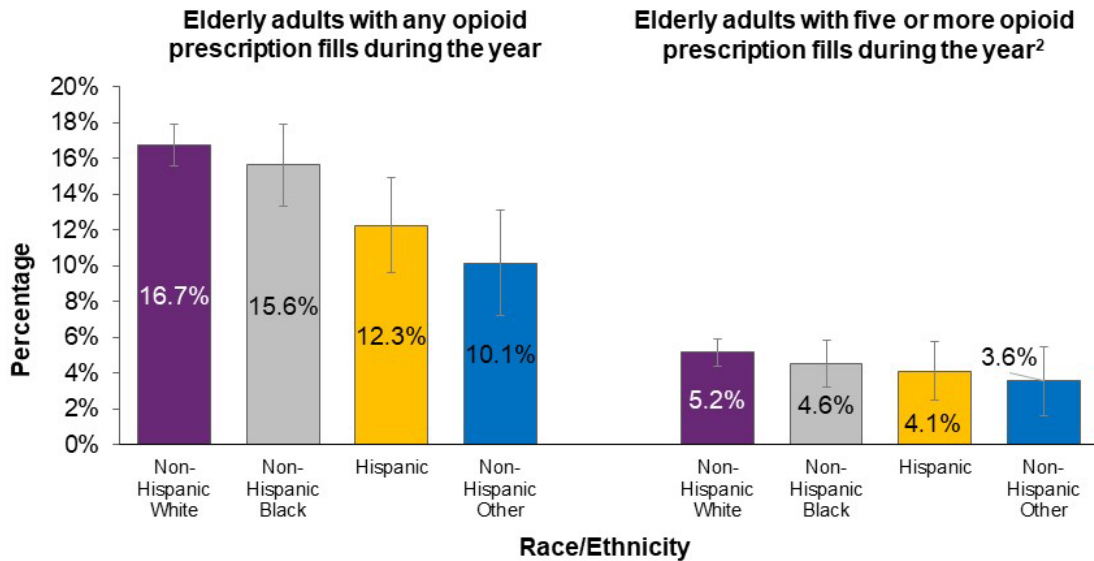
Sex	Percentages of elderly adults with any fills	Percentages of elderly adults with five or more fills ²
Overall	15.8%	4.9%
Male	13.4%	3.8%
Female	17.8%	5.8%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018–2019.

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Figure 2. Average annual percentages of elderly adults who filled outpatient opioid¹ prescriptions in 2018–2019, by race/ethnicity



Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018-2019.

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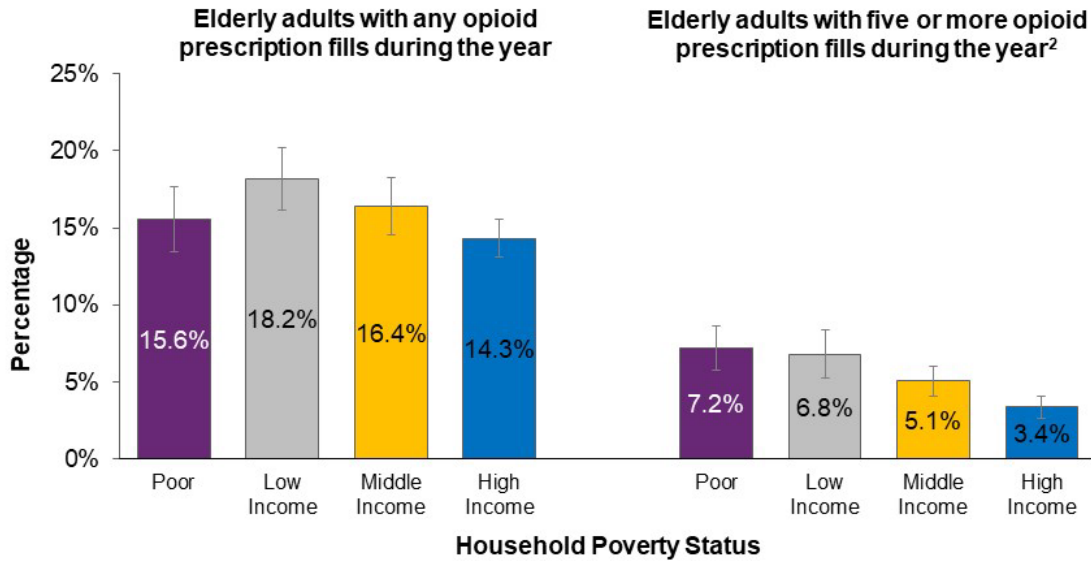
Race/ethnicity	Percentages of elderly adults with any fills	Percentages of elderly adults with five or more fills ²
Non-Hispanic White	16.7%	5.2%
Non-Hispanic Black	15.6%	4.6%
Hispanic	12.3%	4.1%
Non-Hispanic Other	10.1%	3.6%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018–2019.

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Figure 3. Average annual percentages of elderly adults who filled outpatient opioid¹ prescriptions in 2018–2019, by household poverty status



Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018-2019.

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Figure 3. Average annual percentages of elderly adults who filled outpatient opioid¹ prescriptions in 2018–2019, by household poverty status

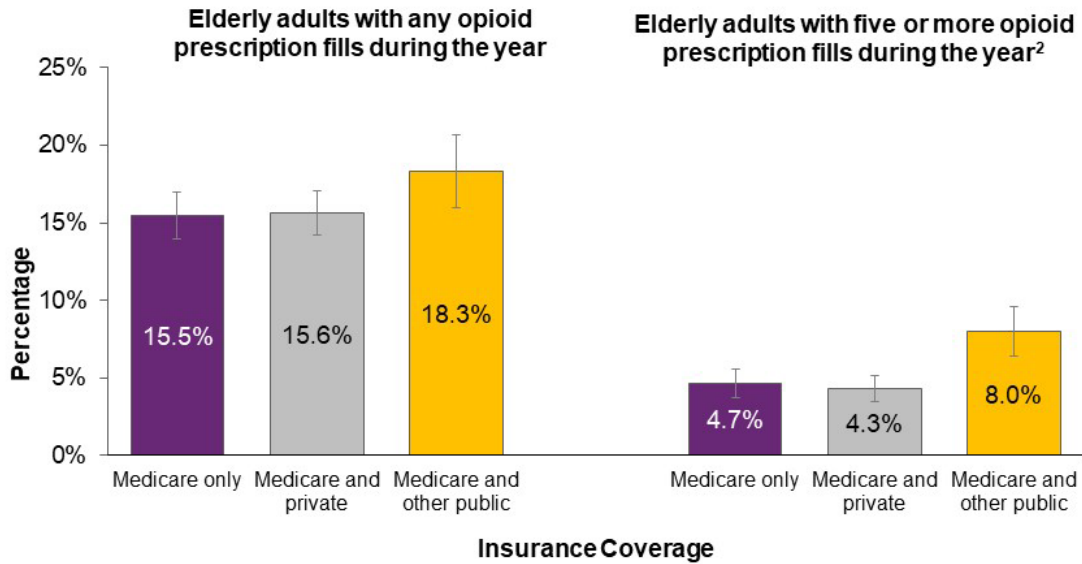
Household Poverty Status	Percentages of elderly adults with any fills	Percentages of elderly adults with five or more fills ²
Poor	15.6%	7.2%
Low income	18.2%	6.8%
Middle Income	16.4%	5.1%
High Income	14.3%	3.4%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018–2019.

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Figure 4. Average annual percentages of elderly adults who filled outpatient opioid¹ prescriptions in 2018–2019, by insurance coverage



Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018-2019.

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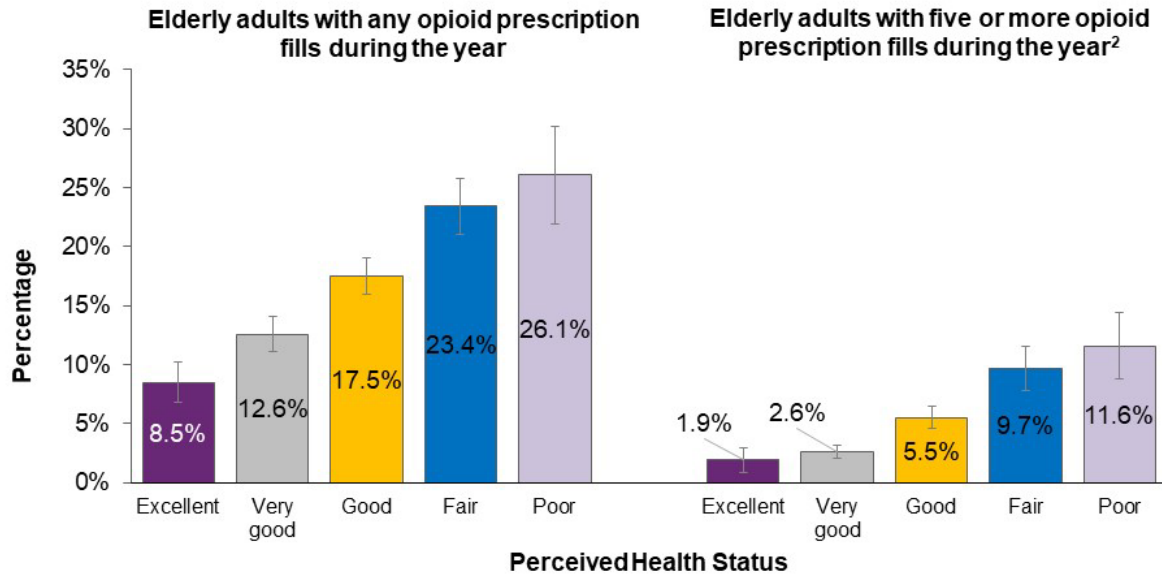
Insurance Coverage	Percentages of elderly adults with any fills	Percentages of elderly adults with five or more fills ²
Medicare only	15.5%	4.7%
Medicare and private	15.6%	4.3%
Medicare and other public	18.3%	8.0%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018–2019.

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Figure 5. Average annual percentages of elderly adults who filled outpatient opioid¹ prescriptions in 2018–2019, by perceived health status



Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018-2019.

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Figure 5. Average annual percentages of elderly adults who filled outpatient opioid¹ prescriptions in 2018–2019, by perceived health status

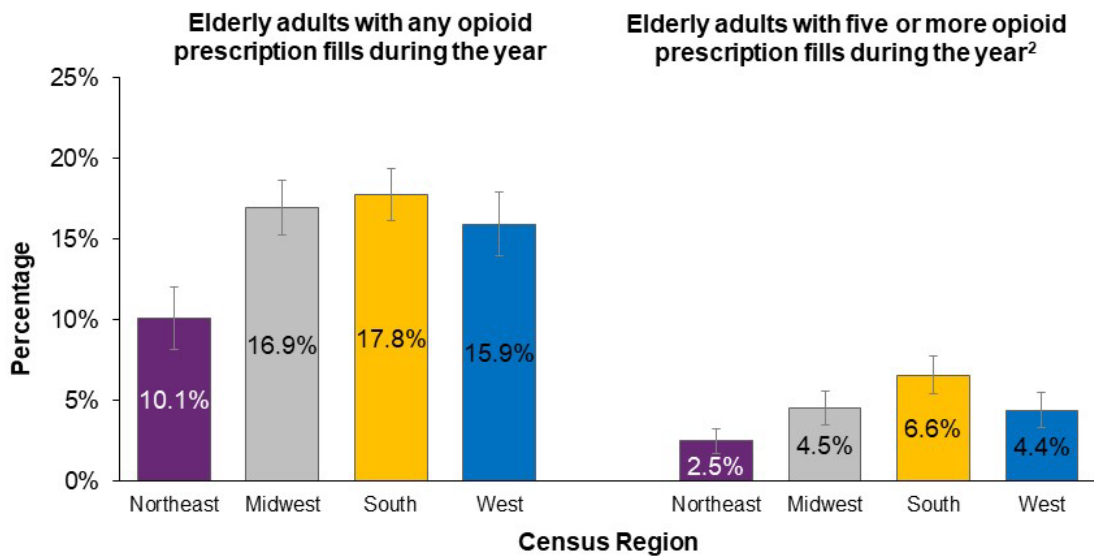
Perceived Health Status	Percentages of elderly adults with any fills	Percentages of elderly adults with five or more fills ²
Excellent	8.5%	1.9%
Very good	12.6%	2.6%
Good	17.5%	5.5%
Fair	23.4%	9.7%
Poor	26.1%	11.6%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018–2019.

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Figure 6. Average annual percentages of elderly adults who filled outpatient opioid¹ prescriptions in 2018–2019, by Census region



Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018–2019.

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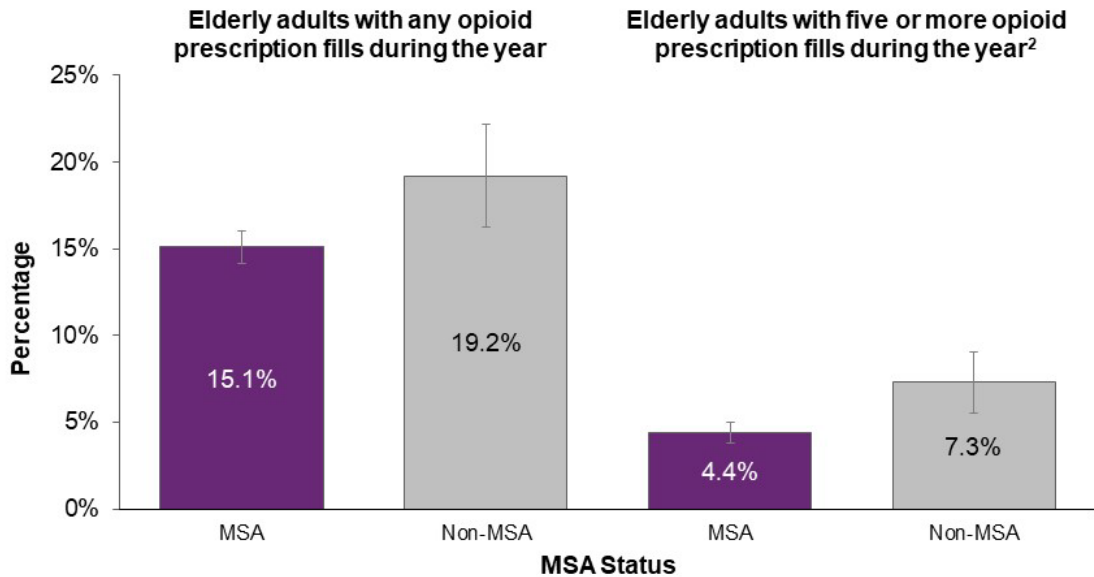
Census Region	Percentages of elderly adults with any fills	Percentages of elderly adults with five or more fills ²
Northeast	10.1%	2.5%
Midwest	16.9%	4.5%
South	17.8%	6.6%
West	15.9%	4.4%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018–2019.

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Figure 7. Average annual percentages of elderly adults who filled outpatient opioid¹ prescriptions in 2018–2019, by metropolitan statistical area (MSA) status



Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018–2019.

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² Acquisition of five fills or refills represents the 75th percentile of the distribution of prescription fills among all adults (elderly and non-elderly) with any fills during the year.

Note: The vertical lines in the chart indicate the 95% confidence intervals for the estimates.

Figure 7: Average annual percentages of elderly adults who filled outpatient opioid¹ prescriptions in 2018–2019, by metropolitan statistical area (MSA) status

MSA Status	Percentages of elderly adults with any fills	Percentages of elderly adults with five or more fills ²
MSA	15.1%	4.4%
non-MSA	19.2%	7.3%

Source: Agency for Healthcare Research and Quality, Center for Financing, Access and Cost Trends, Household Component of the Medical Expenditure Panel Survey, 2018–2019.

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