Agency for Healthcare Research and Quality

MEPS Medical Expenditure Panel Survey

STATISTICAL BRIEF #516

September 2018

Any Use and Frequent Use of Opioids among Non-Elderly Adults in 2015-2016, by Socioeconomic Characteristics

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Highlights

- In 2015-2016, 13.0 percent of non-elderly adults, on average, filled at least 1 outpatient opioid prescription, and 3.1 percent had 4 or more prescription fills during the year.
- Women were more likely than men to have any opioid use during the year (14.8 versus 11.1 percent) and to have frequent opioid use (3.6 versus 2.6 percent).
- In 2015-2016, the average annual rates of any outpatient opioid use increased as health status declined, ranging from 6.1 percent for those in excellent health to 45.4 percent for those in poor health. Similarly, rates of frequent use increased from 0.2 percent to 26.4 percent as health status declined from excellent to poor.
- Non-elderly adults who had family incomes below the federal poverty line (18.5 percent), lived in rural areas (16.5 percent), or were covered by public insurance due to a disability (38.7 percent) were more likely than others to have at least one opioid prescription fill during the year.

Introduction

Currently in the United States, prescription opioids are commonly used to treat both chronic and acute pain. These drugs can help manage some types of pain, but due to serious risks of opioid use disorder and overdose—particularly with high dosages and long-term use—opioids are not recommended as the first-line treatment for most types of pain.[1] Examining patterns of use of prescribed opioids can contribute to efforts to make appropriate use of these drugs.

This Statistical Brief presents estimates from the 2015 and 2016 Medical Expenditure Panel Survey Household Component (MEPS-HC) of fills of prescriptions for opioid medications that are commonly used to treat pain. Only prescriptions purchased or obtained in an outpatient setting are included in these estimates. Prescription medicines administered in an inpatient setting or in a clinic or physician's office are excluded.

The sample includes all non-elderly adults (ages 18 to 64) in the U.S. civilian noninstitutionalized population. (Statistical Brief #515 presents estimates of opioid use for elderly adults ages 65 and older.) We examine the average annual percentages of non-elderly adults in 2015-2016 with any opioid use (1 or more prescription fills during year) and with frequent opioid use, which we define as having 4 or more prescription fills or refills during the year.[2] We present overall estimates for the full population of non-elderly adults and for subgroups defined by sex, race/ethnicity, poverty status, insurance coverage, perceived health status, Census region, and MSA status. All differences mentioned in the text are significant at the $p<0.05$ level, or better.

Because of methodological and definitional differences, readers should use caution when comparing 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.

Findings

Overall and by sex

In 2015-2016, an average annual total of 25.7 million non-elderly adults, or 13.0 percent of the 197.6 million non-elderly adults in the U.S. civilian noninstitutionalized population, filled at least 1 opioid prescription during the year, and 6.2 million (3.1 percent) obtained 4 or more prescription fills (figure 1). Women were more likely than men to have any opioid use during the year (14.8 versus 11.1 percent) and to have frequent opioid use (3.6 versus 2.6 percent).

Race/Ethnicity

In 2015-2016, the average annual percentage of non-elderly adults with at least 1 opioid prescription fill during the year was higher for non-Hispanic whites (14.8 percent) than for adults in any of the other race/ethnicity categories (figure 2). Non-Hispanic blacks (13.0 percent) were more likely to fill at least 1 opioid prescription than Hispanics (8.5 percent) and individuals of other races (9.9 percent). The average annual percentage of non-elderly adults who had at least 4 opioid prescription fills during the year was higher for non-Hispanic whites (3.7 percent) and non-Hispanic blacks (3.4 percent) than for Hispanics (1.5 percent) and individuals of other races (2.1 percent).

Poverty status

Lower-income non-elderly adults were more likely than those with higher incomes to have any use and frequent use of opioids during the year (figure 3). The percentage of non-elderly adults with at least 1 opioid prescription fill was highest for those with family incomes below the federal poverty line (18.5 percent), and low-income non-elderly adults (15.5 percent) were more likely to fill at least 1 opioid prescription than those with middle and high incomes (11.6 and 11.5 percent, respectively). Similarly, the rate of frequent use was highest among poor non-elderly adults (7.2 percent), and low-income non-elderly adults (4.9 percent) were more likely to have frequent opioid use than those with middle (2.8 percent) and high incomes (1.6 percent).

Insurance coverage

This statistical brief uses four mutually exclusive categories of insurance: any private insurance, public coverage due to a disability ("public disability-related"), public coverage based on other factors ("public other"), and uninsured. In 2015-2016, non-elderly adults with public disability-related coverage were substantially more likely to fill at least 1 opioid prescription (38.7 percent) and to fill 4 or more opioid prescriptions (21.9 percent) compared to those in other insurance categories (figure 4). Among the other three insurance categories, non-elderly adults with public other coverage had the highest rates of any use (16.7 percent) and frequent use (5.2 percent) of opioids, and non-elderly adults with any private insurance were more likely than the uninsured to have at least one opioid fill during the year (12.0 versus 6.8 percent).

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

[2] Acquisition of 4 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.

Perceived health status
The average annual rates of non-elderly adults with any use and frequent use of opioids during the year increased dramatically as perceived health status worsened (figure 5). In 2015-2016, the average annual percentage of non-elderly adults who filled at least 1 outpatient opioid prescription during the year increased as their level of perceived health declined from excellent (6.1 percent), to very good (10.6 percent), to good (15.1 percent), to fair (28.7 percent), and finally to poor (45.4 percent). Similarly, the percentages with frequent opioid prescription use increased as health status declined from excellent (0.2 percent), to very good (1.1 percent), to good (3.6 percent), to fair (12.5 percent), and finally to poor (26.4 percent).

Census region
In 2015-2016, non-elderly adults in the Northeast Census region were the least likely, on average, to fill any opioid prescriptions (10.4 percent) and to have 4 or more prescription fills (2.0 percent) than those in other Census regions (figure 6). Non-elderly adults in the West were less likely to fill any opioid prescriptions (12.2 percent) than those in the Midwest (14.6 percent) and South (13.8 percent).

Metropolitan Statistical Area (MSA) status
Non-elderly adults living in MSAs were less likely than those living in non-MSAs to fill any outpatient opioid prescriptions (12.4 versus 16.5 percent) and to obtain 4 or more opioid prescription fills during the year (2.7 versus 5.8 percent) (figure 7).

Data Source

This Statistical Brief uses data from the 2015 and 2016 MEPS Full-Year Consolidated Data Files (HC-181 and HC-192) and non-public versions of the 2015 and 2016 Prescribed Medicines Files (HC-178A and HC-188A).

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 average annual percentage of non-elderly adults with any outpatient opioid prescription fills during the year ("any use") and the percentage with 4 or more fills or refills ("frequent use"). Acquisition of 4 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.

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 (SAMSHA) 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 any way the doctor did not prescribe. NSDUH respondents report use in inpatient, as well as outpatient, settings. Moreover, NSDUH includes targeted questions with show cards for specific drugs, is self-reported using audio computer assisted self-interviewing (ACASI), surveys persons ages 12 and older, and questions are asked based on a 12-month recall period.

In contrast, MEPS includes only prescribed drugs purchased in outpatient settings. Prescription medicines administered in an inpatient setting or in a clinic or physician's office are excluded. 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 ages 18 to 64.

Non-elderly adults
For this Brief, non-elderly adults are individuals ages 18 to 64. The age variable used to identify non-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 Worker's Compensation; interest and dividends; alimony, child support, and other private cash transfers; private pensions, individual retirement account (IRA) withdrawals, Social Security, and Department of Veterans Affairs payments; Supplemental Security Income and cash welfare payments from public assistance, Aid to Families with Dependent Children, and Aid to 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 age of the head of family. Categories are defined as follows:

- *Poor*: Household income below the federal poverty line.
- *Low income*: Household income over the poverty line through 200 percent of the poverty line.
- *Middle income*: Household income over 200 percent to 400 percent of the poverty line.
- *High income*: Household income over 400 percent of the poverty line.

Insurance coverage

- *Any private*: Individuals classified as having any private health insurance coverage had private insurance that provided coverage for hospital and physician care (including Medigap coverage and TRICARE) at some point during the year.
- *Public disability-related*: Individuals are considered to have 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 they received Supplemental Security Income (SSI) and were covered by Medicaid or other public hospital and physician coverage at some point during the year. Most, but not all, individuals with Medicare coverage were dually eligible for Medicaid or other public coverage.
- *Public other*: Individuals are considered to have public other health insurance coverage if they were not covered by private insurance, TRICARE or Medicare, did not receive SSI, and were covered by Medicaid or other public hospital and physician coverage at some point during the year.
- *Uninsured*: Individuals who 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 (Armed Forces-related coverage), other public hospital/ physician programs, private hospital/physician insurance (including Medigap coverage), or insurance purchased through health insurance Marketplaces. People covered only by non-comprehensive state-specific programs (e.g., Maryland Kidney Disease Program) or 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 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 Metropolitan Statistical Area (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 Office of Management and Budget (OMB). An MSA contains a core urban area of 50,000 or more population. All counties that are not part of an MSA are considered rural.

About MEPS-HC

The Medical Expenditure Panel Survey Household Component (MEPS-HC) collects nationally representative data on health care 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 Web site at http://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. AHCPR Pub. No. 97-0026. Rockville, MD: Agency for Health Care Policy and Research, 1997. https://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. AHCPR Pub. No. 97-0027. Rockville, MD: Agency for Health Care Policy and Research, 1997. https://meps.ahrq.gov/data_files/publications/mr2/mr2.pdf

Suggested Citation

Miller, G. E. and Moriya, A. S. *Any Use and Frequent Use of Opioids among Non-Elderly Adults in 2015-2016, by Socioeconomic Characteristics* . September 2018. Statistical Brief #516. Agency for Healthcare Research and Quality, Rockville, MD. https://meps.ahrq.gov/mepsweb/data_files/publications/st516/stat516.pdf

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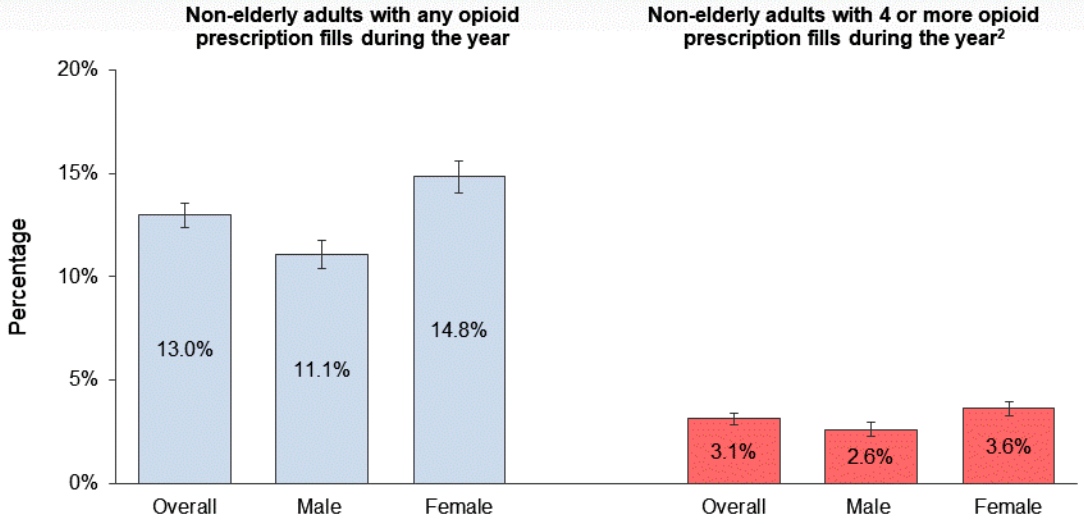
AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using this Statistical Brief and other MEPS data and tools 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 Cohen, PhD, Director
Center for Financing, Access, and Cost Trends
Agency for Healthcare Research and Quality
5600 Fishers Lane, Mailstop 07W41A
Rockville, MD 20857

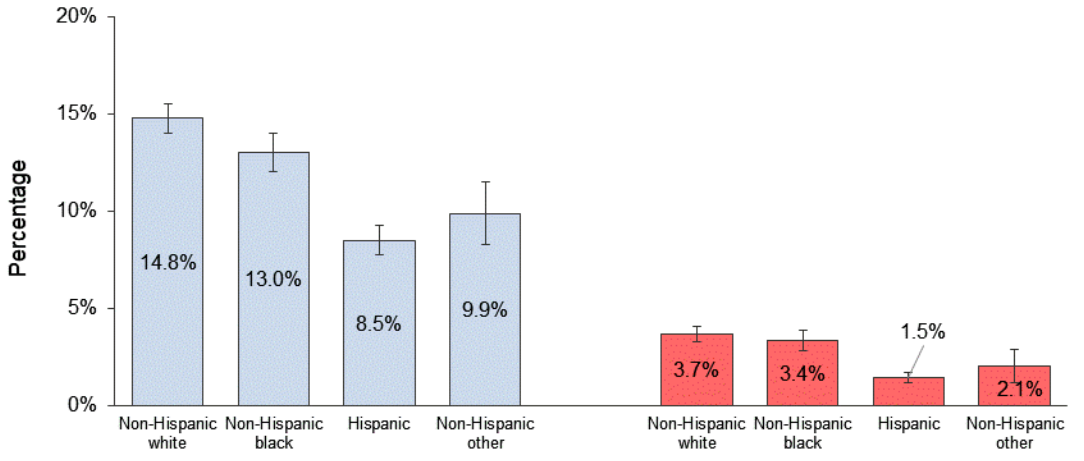
Figure 1: Average annual percentage of non-elderly adults who filled outpatient opioid[1] prescriptions in 2015-2016, overall and by sex



1. Comprised of 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 (elderly and non-elderly) with any fills during the year.

The vertical lines in the chart indicate the 95% confidence intervals for the estimates.
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2015-2016.

Figure 2: Average annual percentage of non-elderly adults who filled outpatient opioid[1] prescriptions in 2015-2016, by race/ethnicity



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Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2015-2016.

Figure 3: Average annual percentage of non-elderly adults who filled outpatient opioid[1] prescriptions in 2015-2016, by poverty status

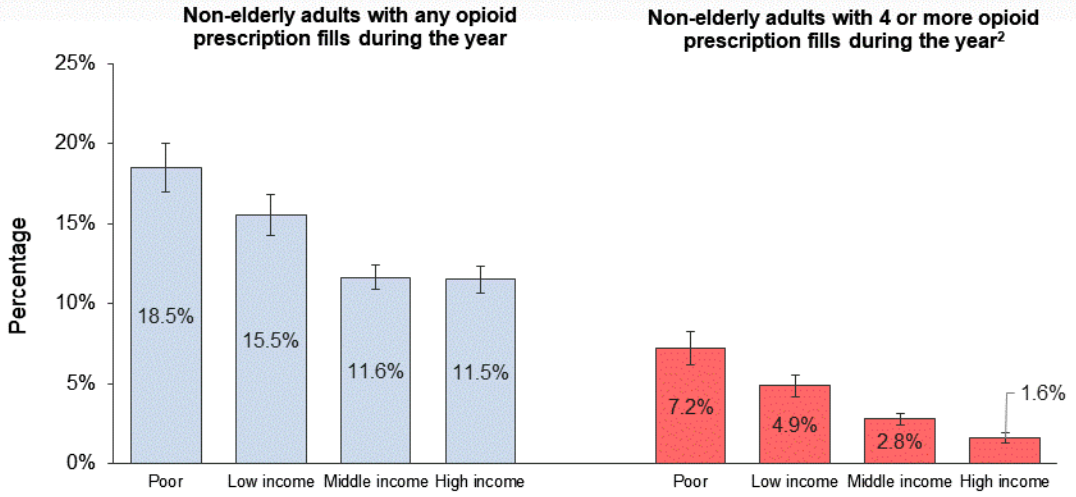

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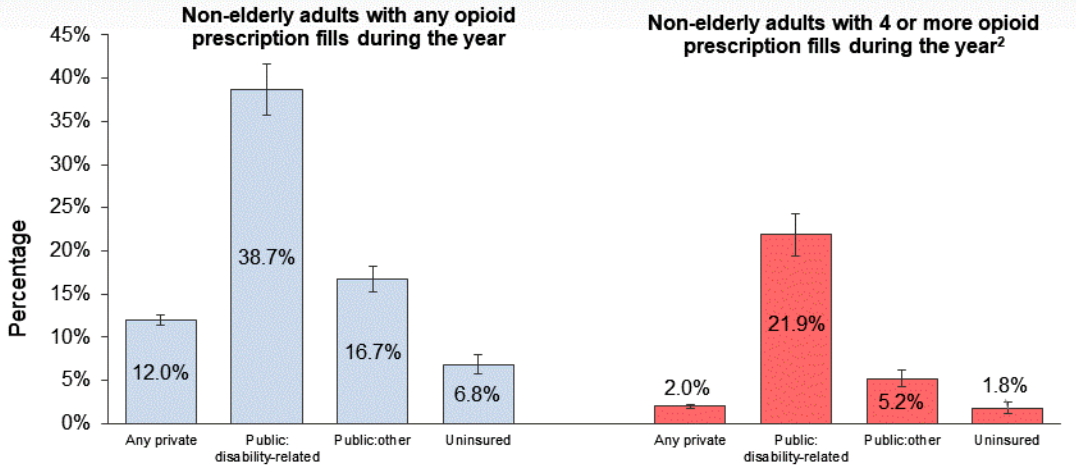
Figure 4: Average annual percentage of non-elderly adults who filled outpatient opioid[1] prescriptions in 2015-2016, by insurance coverage



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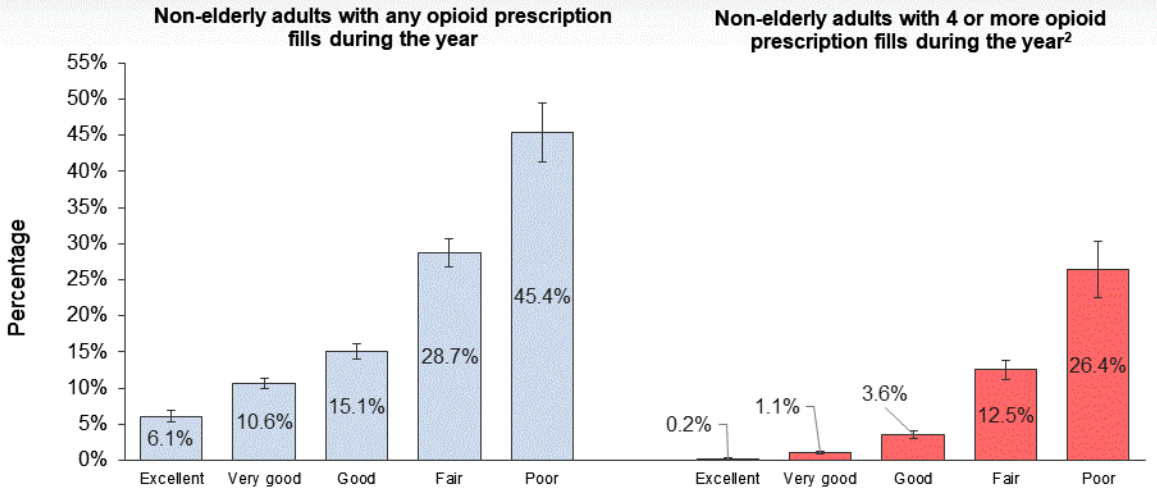
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2015-2016.

Figure 5: Average annual percent of non-elderly adults who filled outpatient opioid[1] prescriptions in 2015-2016, by perceived health status



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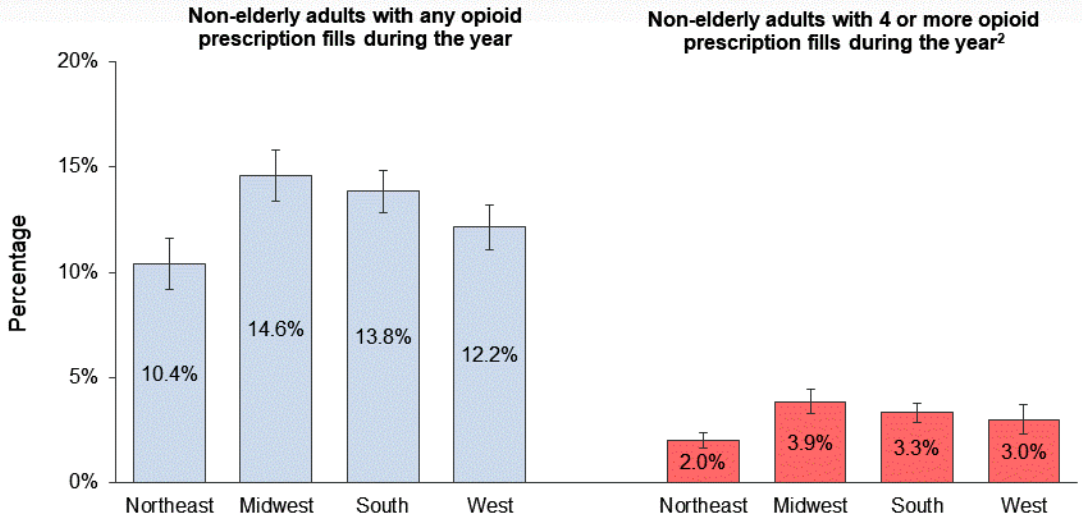
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2015-2016.

Figure 6: Average annual percent of non-elderly adults who filled outpatient opioid[1] prescriptions in 2015-2016, by Census region



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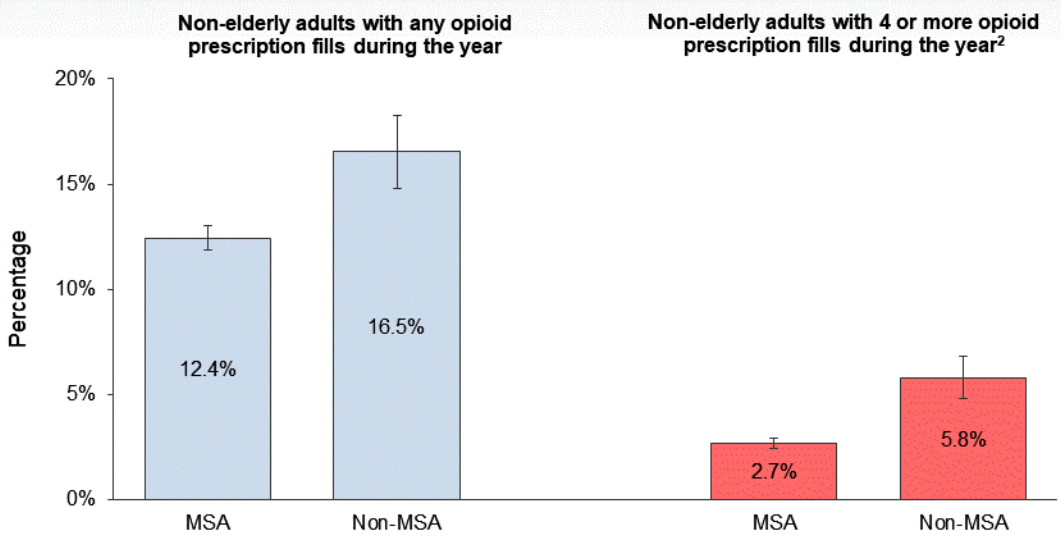
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2015-2016.

Figure 7: Average annual percentage of non-elderly adults who filled outpatient opioid[1] prescriptions in 2015-2016, by Metropolitan Statistical Area (MSA) status



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