



AGENCY FOR HEALTHCARE RESEARCH AND QUALITY



## STATISTICAL BRIEF #532

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# Out-of-Pocket Spending for Retail Prescribed Drugs by Age and Type of Prescription Drug Coverage, 2009 to 2018

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## Highlights

- From 2009 to 2018, median annual out-of-pocket spending per user on retail drugs fell from \$93 to \$54. At the 95th percentile of the distribution, out-of-pocket spending fell from \$1,369 in 2009 to \$945 in 2018.
- Among non-elderly individuals, median annual out-of-pocket spending per user for retail drugs fell from 2009 to 2018 for the privately insured (\$90 to \$48) and the publicly insured (\$4 to \$1).
- At the 95th percentile of the distribution, annual out-of-pocket spending per user on retail drugs among uninsured non-elderly individuals was \$1,620 in 2018 and was not significantly different from 2009.
- Among elderly adults who obtained retail prescription drugs, median annual out-of-pocket spending fell from 2009 to 2018 for those covered by private drug insurance (\$361 to \$154), for those covered by Medicare Part D (\$341 to \$160), and for those with no drug coverage (\$318 to \$177).
- At the 95th percentile of the distribution, annual out-of-pocket spending per user for elderly adults with no drug coverage fell from \$3,051 in 2009 to \$1,624 in 2018.

## Introduction

Increasing use of new, expensive specialty drugs and sharp price increases for some existing drugs have led to concerns about high, and rising, out-of-pocket costs for prescription drugs. Two measures from nationally representative data, however, suggest that in recent years overall affordability of retail prescription drugs has not deteriorated, and may have

improved. The National Health Expenditure Accounts show that, adjusting for inflation, aggregate out-of-pocket spending on retail prescription drugs fell by 17.5 percent from 2009 to 2016.<sup>1</sup> Data from the Medical Expenditure Panel Survey show that over the same period, average per capita out-of-pocket spending, among individuals who used drugs, decreased by 27.0 percent.<sup>2</sup>

Aggregate spending and per user averages may mask diverging trends at different levels of spending. In this Statistical Brief, we move beyond averages and examine trends, from 2009 to 2018, in out-of-pocket spending per user for retail prescribed drugs at the 25th, 50th, 75th, 90th, and 95th percentiles of the spending distribution. Among those who used prescription drugs, we examine the distribution of out-of-pocket spending for drugs overall, for the non-elderly (ages 0 to 64) by insurance status (privately insured, publicly insured, uninsured), and for the elderly (ages 65 and over) by type of drug coverage (private drug coverage, Medicare Part D, no drug coverage). We find that from 2009 through 2018, the overall distribution of out-of-pocket spending for retail prescription drugs shifted to lower levels at all of the points in the distribution we examined. With a few exceptions, this pattern was repeated in all of the age-insurance status subgroups we examined.

Only expenditures for drugs 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 not recorded in the MEPS data. Estimates of out-of-pocket spending for drugs for the years 2009 to 2017 were adjusted to 2018 dollars using the all-item Consumer Price Index. All differences discussed in the text are statistically significant at the  $p < 0.05$  level, or better.

## **Findings**

*Distribution of out-of-pocket spending per user for retail prescribed drugs*

*Civilian noninstitutionalized population (figure 1)*

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<sup>1</sup> Centers for Medicare and Medicaid Services (CMS). National Health Expenditure Accounts [Internet]. 2018. CMS, Baltimore, MD. <https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nationalhealthaccountshistorical.html>

<sup>2</sup> Carroll, W. A., and Hill, S. C. *Trends in Prescribed Medication Expenditures by Age and Type of Prescription Drug Coverage, 2009 to 2016*. Statistical Brief #522. May 2019. Agency for Healthcare Research and Quality, Rockville, MD. [https://meps.ahrq.gov/data\\_files/publications/st522/stat522.shtml](https://meps.ahrq.gov/data_files/publications/st522/stat522.shtml)

In 2009, median out-of-pocket spending for drugs among all individuals who purchased at least one drug was \$93, and this fell to \$54 in 2018. The downward shift is also evident at the bottom quartile (25th percentile), which fell from \$17 to \$9, and the upper quartile (75th percentile), which fell from \$358 to \$206. At the upper end of the distribution, we find that from 2009 to 2018, spending at the 90th percentile fell from \$879 to \$562, and spending at the 95th percentile fell from \$1,369 to \$945.

*Non-elderly (ages 0 to 64) by insurance status (figure 2)*

For privately insured non-elderly individuals who obtained drugs, median out-of-pocket spending on drugs fell from \$90 in 2009 to \$48 in 2018; the 75th percentile fell from \$298 to \$168; the 90th percentile fell by \$286, from \$732 to \$446; and the 95th percentile fell by \$326, from \$1,124 to \$798.

Between 2009 and 2018, the distribution of out-of-pocket spending by non-elderly Medicaid beneficiaries and others with public insurance who obtained prescribed drugs also shifted toward lower out-of-pocket spending. The median was \$4 in 2009 and fell to \$1 in 2018; the 75th percentile fell from \$57 to \$36; the 90th percentile fell from \$310 to \$195; and the 95th percentile fell from \$665 to \$416.

For the non-elderly uninsured who obtained prescribed drugs, changes between 2009 and 2018 in the distribution of out-of-pocket spending were typically small or statistically insignificant. Only those at the 75th percentile had a statistically significant drop in spending, falling from \$293 in 2009 to \$202 in 2018. In 2018, half of uninsured people who obtained prescribed drugs spent \$55 or less annually on their drugs. However, the upper tail of the distribution was much higher. In 2018, the top 10 percent of uninsured people who obtained prescribed drugs spent \$634 or more per year, and the top 5 percent spent \$1,620 or more per year.

Across the three non-elderly groups, out-of-pocket spending by persons covered by public health insurance only was lowest, and out-of-pocket spending by the uninsured was highest, at all of the percentiles we examined in 2018.

*Elderly (ages 65 and over) by type of drug coverage (figure 3)*

For elderly Medicare Part D beneficiaries who obtained prescribed drugs, between 2009 and 2018 median out-of-pocket drug spending fell by \$181, from \$341 to \$160; the 75th percentile fell by \$314, from \$756 to \$442; the 90th percentile fell by \$542, from \$1,480 to \$938; and the 95th percentile fell by \$775, from \$2,265 to \$1,490.

Between 2009 and 2018, median out-of-pocket spending for elderly Medicare beneficiaries with private drug coverage fell by \$207, from \$361 to \$154; the 75th percentile fell by \$421, from \$794 to \$373; the 90th percentile fell by \$707, from \$1,373 to \$666; and the 95th percentile fell by \$1,142, from \$2,153 to \$1,011.

For elderly Medicare beneficiaries with no drug coverage, between 2009 and 2018 median out-of-pocket spending fell by \$141, from \$318 to \$177; the 75th percentile fell by \$314, from \$776 to \$462; the 90th percentile fell by \$639, from \$1,706 to \$1,067; and the 95th percentile fell by \$1,427, from \$3,051 to \$1,624.

Looking across these three elderly groups in 2018, those with Medicare plus private drug coverage had lower out-of-pocket spending than Medicare Part D beneficiaries at the 75th, 90th, and 95th percentiles. Medicare beneficiaries with no drug coverage were not significantly different from the other two groups except when compared to those with private drug coverage and in the top 10 percent of expenditures (\$666 for those with private drug coverage compared to \$1,067 for those with no drug coverage).

## **Data Source**

For this Statistical Brief 10 years of data were used, including the MEPS Full-Year Consolidated Data files and the MEPS Prescribed Medicines files for 2009 to 2018.

## **Definitions**

### *Prescribed drugs*

Only prescribed drugs obtained from retail pharmacies, including mail order pharmacies, by civilian noninstitutionalized persons, are included in this Statistical Brief.

Prescription drug coverage categories are defined as follows:

- **Non-elderly private:** Individuals under age 65 were classified as having any private health insurance coverage if they had private insurance that provided coverage for hospital and physician care (including TRICARE, which is Armed Forces-related coverage) at some point during the year. Because nearly all employer and non-group policies now cover prescription drugs, we made the simplifying assumption that all such policies include drug coverage.
- **Non-elderly public:** Individuals under age 65 were considered to have public health insurance coverage if they were not covered by private insurance or TRICARE, and were covered by Medicare,

Medicaid, or other public hospital and physician coverage at some point during the year.

- **Non-elderly uninsured:** Individuals under age 65 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, other public hospital/physician programs, private hospital/physician insurance, 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.
- **Elderly Medicare Part D:** Individuals age 65 or older were classified as having Medicare Part D if they were covered by Medicare Part D, Medicare Advantage, or Medicaid at some point during the year.
- **Elderly private drug coverage:** Individuals age 65 or older were considered to have private drug coverage if they were not covered by Medicare Part D, Medicare Advantage, or Medicaid, and were covered by private insurance that included drug coverage (including TRICARE) at some point during the year.
- **Elderly no drug coverage:** Individuals age 65 or older who did not have drug coverage for the entire calendar year were classified as lacking drug coverage. This category includes people not covered by Medicare Part D, Medicare Advantage, Medicaid, TRICARE, or private insurance with drug coverage at any time during the year.

Percentiles are defined as follows:

- **25th percentile:** The point at which 25 percent of the values fall below it, and 75 percent above it.
- **50th percentile:** The median is the midpoint of the data. The 50th percentile is the point at which 50 percent of the values fall below it, and 50 percent above it.
- **75th percentile:** The point at which 75 percent of the values fall below it, and 25 percent above it.
- **90th percentile:** The point at which 90 percent of the values fall below it, and 10 percent above it.
- **95th percentile:** The point at which 95 percent of the values fall below it, and 5 percent above it.

## 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/mepsweb>.

## 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:

Agency for Healthcare Research and Quality. *Using Appropriate Price Indices for Analyses of Health Care Expenditures or Income across Multiple Years*. 2018. Agency for Healthcare Research and Quality, Rockville, MD. [http://www.meps.ahrq.gov/mepsweb/about\\_meps/Price\\_Index.shtml](http://www.meps.ahrq.gov/mepsweb/about_meps/Price_Index.shtml)

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Cohen, J. *Design and Methods of the Medical Expenditure Panel Survey Household Component*. Medical Expenditure Panel Survey Methodology Report No. 1. Agency for Health Care Policy and Research, Pub. No. 97-0026. 1997. Agency for Health Care Policy and Research, Rockville, MD. [http://www.meps.ahrq.gov/mepsweb/data\\_files/publications/mr1/mr1.shtml](http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr1/mr1.shtml)

Cohen, S. B. Design Strategies and Innovations in the Medical Expenditure Panel Survey. July 2003. *Medical Care*, 41(7) Supplement, III-5–III-12.

Hill, S. C., Roemer, M., and Stagnitti, M. N. *Outpatient Prescription Drugs: Data Collection and Editing in the 2011 Medical Expenditure Panel Survey*. Medical Expenditure Panel Survey Methodology Report No. 29. March 2014. Agency for Healthcare Research and Quality, Rockville, MD. [http://www.meps.ahrq.gov/mepsweb/data\\_files/publications/mr29/mr29.shtml](http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr29/mr29.shtml)

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## Suggested Citation

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[https://meps.ahrq.gov/data\\_files/publications/st532/stat532.pdf](https://meps.ahrq.gov/data_files/publications/st532/stat532.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](mailto:MEPSProjectDirector@ahrq.hhs.gov) or send a letter to the address below:

Joel W. Cohen, PhD, Director

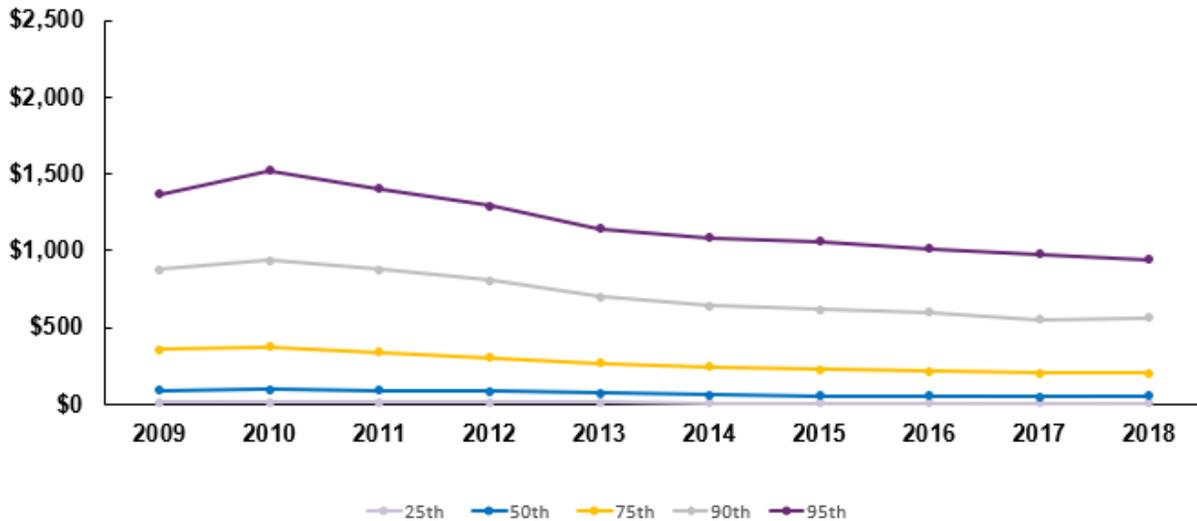
Center for Financing, Access, and Cost Trends

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**Figure 1: Distribution of out-of-pocket expenditures on retail prescribed drugs, civilian noninstitutionalized population, 2009–2018**



Source: Agency for Healthcare Research and Quality, Center for Financing, Access, and Cost Trends, Medical Expenditure Panel Survey, Household Component, 2009–2018.

Notes: This figure shows expenditures among people who obtained retail prescribed drugs. Out-of-pocket expenditures in each year were inflated to 2018 dollars using the all-item Consumer Price Index. All differences between 2009 and 2018 are statistically significant.

**Figure 1: Distribution of out-of-pocket expenditures on retail prescribed drugs, civilian noninstitutionalized population, 2009–2018**

Percentile	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>25th</b>	\$17	\$17	\$16	\$16	\$12	\$10	\$10	\$9	\$9	\$9
<b>50th</b>	\$93	\$96	\$92	\$82	\$71	\$62	\$55	\$54	\$52	\$54
<b>75th</b>	\$358	\$374	\$337	\$302	\$270	\$245	\$225	\$217	\$202	\$206
<b>90th</b>	\$879	\$940	\$879	\$807	\$699	\$639	\$620	\$599	\$551	\$562
<b>95th</b>	\$1,369	\$1,525	\$1,405	\$1,292	\$1,142	\$1,083	\$1,062	\$1,013	\$978	\$945

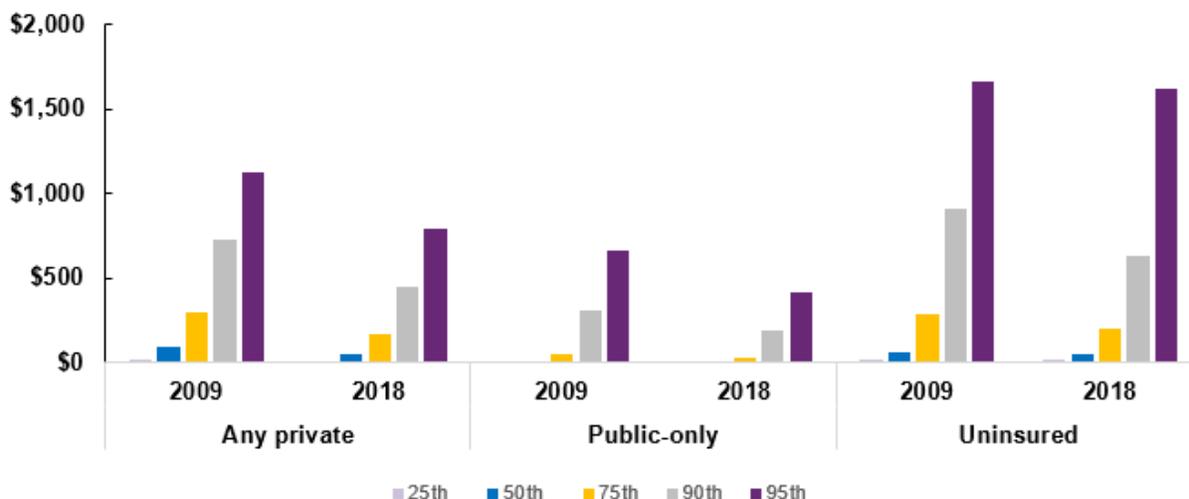
Source: Agency for Healthcare Research and Quality, Center for Financing, Access, and Cost Trends, Medical Expenditure Panel Survey, Household Component, 2009–2018.

Note: Among people who obtained retail prescribed drugs.

Note: Out-of-pocket expenditures in each year were inflated to 2018 dollars using the all-item Consumer Price Index.

Note: All differences between 2009 and 2018 are statistically significant.

**Figure 2: Distribution of out-of-pocket expenditures among the non-elderly on retail prescribed drugs, by insurance status, 2009 and 2018**



Source: Agency for Healthcare Research and Quality, Center for Financing, Access, and Cost Trends, Medical Expenditure Panel Survey, Household Component, 2009 and 2018.

Notes: This figure shows expenditures among non-elderly (ages 0–64) who obtained retail prescribed drugs. Out-of-pocket expenditures in each year were inflated to 2018 dollars using the all-item Consumer Price Index. Among individuals with any private insurance, all differences between 2009 and 2018 are statistically significant. Among individuals with public-only insurance, all differences between 2009 and 2018, except for the 25<sup>th</sup> percentile, are statistically significant. Among uninsured individuals, only the 75<sup>th</sup> percentile differs to a statistically significant extent between 2009 and 2018.

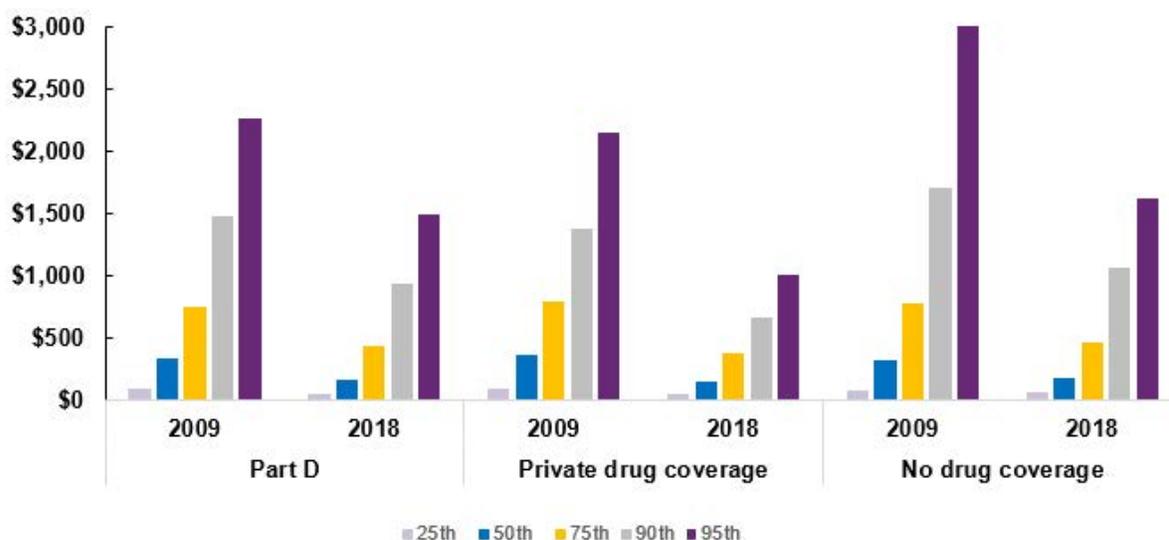
**Figure 2: Distribution of out-of-pocket expenditures among the non-elderly on retail prescribed drugs, by insurance status, 2009 and 2018**

Percentile	Any Private, 2009	Any Private, 2018	Public Only, 2009	Public Only, 2018	Uninsured, 2009	Uninsured, 2018
25 <sup>th</sup>	\$22	\$10	\$0	\$0	\$17	\$18
50 <sup>th</sup>	\$90	\$48	\$4	\$1	\$61	\$55
75 <sup>th</sup>	\$298	\$168	\$57	\$36	\$293	\$202
90 <sup>th</sup>	\$732	\$446	\$310	\$195	\$914	\$634
95 <sup>th</sup>	\$1,124	\$798	\$665	\$416	\$1,660	\$1,620

Source: Agency for Healthcare Research and Quality, Center for Financing, Access, and Cost Trends, Medical Expenditure Panel Survey, Household Component, 2009 and 2018.

Notes: This figure shows expenditures among non-elderly (ages 0–64) who obtained retail prescribed drugs. Out-of-pocket expenditures in each year were inflated to 2018 dollars using the all-item Consumer Price Index. Among individuals with any private insurance, all differences between 2009 and 2018 are statistically significant. Among individuals with public-only insurance, all differences between 2009 and 2018, except for the 25<sup>th</sup> percentile, are statistically significant. Among uninsured individuals, only the 75<sup>th</sup> percentile differs to a statistically significant extent between 2009 and 2018.

**Figure 3: Distribution of out-of-pocket expenditures among the elderly on retail prescribed drugs, by drug coverage, 2009 and 2018**



Source: Agency for Healthcare Research and Quality, Center for Financing, Access, and Cost Trends, Medical Expenditure Panel Survey, Household Component, 2009 and 2018.

Notes: This figure shows expenditures among elderly individuals (ages 65 and older) who obtained retail prescribed drugs. Out-of-pocket expenditures in each year were inflated to 2018 dollars using the all-item Consumer Price Index. All differences between 2009 and 2018 are statistically significant, except for the difference for those with no drug coverage at the 25th percentile.

**Figure 3: Distribution of out-of-pocket expenditures among the elderly on retail prescribed drugs, by drug coverage, 2009 and 2018**

Percentile	Part D, 2009	Part D, 2018	Private drug coverage, 2009	Private drug coverage, 2018	No drug coverage, 2009	No drug coverage, 2018
25th	\$96	\$49	\$95	\$48	\$72	\$59
50th	\$341	\$160	\$361	\$154	\$318	\$177
75th	\$756	\$442	\$794	\$373	\$776	\$462
90th	\$1,480	\$938	\$1,373	\$666	\$1,706	\$1,067
95th	\$2,265	\$1,490	\$2,153	\$1,011	\$3,051	\$1,624

Source: Agency for Healthcare Research and Quality, Center for Financing, Access, and Cost Trends, Medical Expenditure Panel Survey, Household Component, 2009 and 2018.

Notes: This figure shows expenditures among elderly individuals (ages 65 and older) who obtained retail prescribed drugs. Out-of-pocket expenditures in each year were inflated to 2018 dollars using the all-item Consumer Price Index. All differences between 2009 and

2018 are statistically significant, except for the difference for those with no drug coverage at the 25th percentile.