Agency for Healthcare Research and Quality

MEPS Medical Expenditure Panel Survey

Statistical Brief #521

February 2019

Concentration of Health Expenditures and Selected Characteristics of Persons with High Expenses, U.S. Civilian Noninstitutionalized Population, 2016

Emily M. Mitchell, PhD

Introduction

In 2016, spending on health care accounted for 17.9 percent of the United States GDP,[1] yet the majority of this spending was concentrated in a relatively small percentage of the population. In fact, about 15 percent of the U.S. civilian noninstitutionalized population had no health care expenditures in 2016, and only 5 percent of the population accounted for half of health care spending. This includes all sources of payment for medical care, including private insurance payments, Medicare, Medicaid, out-of-pocket spending, and other sources.

In this Statistical Brief, data from the Household Component of the Agency for Healthcare Research and Quality's (AHRQ) Medical Expenditure Panel Survey (MEPS-HC) are used to describe the overall concentration of health care expenses across the U.S. civilian noninstitutionalized population in 2016. In addition, different spending tiers are compared on selected dimensions including age, race/ethnicity, type of medical service, and aggregate spending distributions by source of payment. All differences discussed in the text are statistically significant at the 0.05 level.

Highlights

- In 2016, the top 1 percent of persons ranked by their health care expenditures accounted for about 22 percent of total health care expenditures, while the bottom 50 percent accounted for only about 3 percent.
- Persons ages 65 and older, and whites, were disproportionately represented in the top spending tiers.
- Inpatient hospital care accounted for 40 percent of spending for persons in the top 5 percent of the spending distribution.
- About three-quarters of aggregate expenses for persons in the top 5 percent of spenders were paid for by private insurance and Medicare, with about equal proportions paid by each of the two insurance types.

Findings

Overall (figures 1 and 2, table 1)

In 2016, the top 1 percent of persons ranked by their health care expenditures accounted for 21.9 (100 minus 78.1) percent of total health care expenditures (figure 1), with an annual mean expenditure of $110,003 (figure 2). This group is defined as persons who spent $62,188 or more during the year. Cut-points for additional percentile groups are shown in table 1. The top 5 percent of the population accounted for 50.0 percent of total expenditures, with an annual mean expenditure of $50,077. The bottom 50 percent accounted for only 2.8 percent of total health care expenditures. Persons in this group spent less than $971 during the year (table 1), with an average annual expenditure of $276.

Table 1. Percentile of population ranked by spending and amount spent during the year

Percentile of population	2016 Expenditure
Top 1%	$62,188 or more
Top 5%	$21,682 or more
Top 10%	$12,024 or more
Top 30%	$2,950 or more
Bottom 50%	Less than $971

Age (figure 3)

Older persons were disproportionately represented in the higher health care spending tiers (figure 3). Among the entire U.S. civilian noninstitutionalized population in 2016, 15.9 percent were ages 65 and older, while 22.9 percent were under age 18. Among the top 5 percent of spenders, however, 43.1 percent were ages 65 and older, while only 5.1 percent were children under age 18. In contrast, among the bottom 50 percent of spenders, 30.9 percent were children, while only 5.1 percent were ages 65 and older.

Race/Ethnicity (figure 4)

Whites were disproportionately represented among the top 50 percent of spenders, while Hispanics were underrepresented in this higher spending group. Whites comprised 60.2 percent of the U.S. civilian noninstitutionalized population in 2016, but accounted for 70.4 percent of the top half of spenders. Hispanics, on the other hand, comprised 18.0 percent of the population but only 12.1 percent of the top half of spenders.

Type of service (figure 5)

Compared to the overall population, expenses for persons in the bottom 50 percent of spenders were less likely to go toward inpatient stays or home health expenses (0.1 percent for each), and more likely to go toward ambulatory events (53.8 percent).

[1] Cuckler, G, et al. National Health Expenditure Projections, 2017-26: Despite Uncertainty, Fundamentals Primarily Drive Spending Growth. *Health Affairs*, March 2018.

In the top 5 percent of spenders, on the other hand, 40.3 percent of expenses were for inpatient stays. This comparatively high proportion of expenditures is a combination of the fact that persons in the top spending percentiles are much more likely to have at least one inpatient stay during the year, and those stays tend to cost more relative to other types of service.

Source of payment (figure 6)

Nearly half of aggregate expenses for the bottom 50 percent of spenders were paid for by private insurance (46.5 percent), while out-of-pocket payments accounted for around a quarter of the expenditures for this group (26.3 percent). Medicare payments comprised only 3.6 percent of payments for this low spending group.

For persons among the top 5 percent of spenders, Medicare and private insurance paid for nearly three-quarters of their medical expenses (36.3 and 36.9, respectively). Out-of-pocket payments for this group comprised only 5.5 percent of total expenses, much less than the 26.3 percent paid out-of-pocket for the bottom half of spenders.

Data Source

The estimates shown in this Statistical Brief are based on data from the MEPS 2016 Full Year Consolidated Data File (HC-192).

Definitions

Age

Age was defined as age at the end of the year 2016 (or on the last date of MEPS eligibility if the person was out of scope at the end of the year).

Concentration curve

A concentration curve is a graphical representation of the distribution of a variable of interest, such as expenditures, across percentages of the population. The cumulative percentage of the population is represented along the X-axis and the cumulative percentage of expenditures is represented on the Y-axis. A point at the X-axis value of 50 percent and the Y-axis value of 10 percent, for instance, indicates that the bottom 50 percent of the population accounts for 10 percent of total spending, and subsequently, the top 50 percent accounts for 90 percent of total spending. Similarly, a point at the X-axis value of 99 percent and the Y-axis value of 82 percent indicates that the bottom 99 percent of the population accounts for 82 percent of spending, and conversely, that the top 1 percent of the population accounts for 18 percent of expenditures.

Expenditures

MEPS-HC defines total expenditures as the sum of payments from all sources to hospitals, physicians, other health care providers (including dental care), and pharmacies for services reported by respondents in the MEPS-HC.

Percentiles

Percentiles of spending were formed by ordering sampled persons by their total expenditures from highest to lowest, then allocating persons to groups based on weighted percentage of the population. Near the cut point of each percentile, a person was included in the top percentile group if their added weight did not surpass the specified percentile. In the case of ties, where two or more people had the same expenditures close to a percentile cut point, the person with the lower weight was included in the higher percentile group. In this brief, the Bottom 50 and Top 50 percentiles are mutually exclusive, while the Top 50, Top 30, Top 10, Top 5, and Top 1 percentiles are not.

Race/Ethnicity

MEPS respondents were asked if each family member was Hispanic or Latino and about each member's race. Based on this information, categories of race and Hispanic origin were constructed as follows:

- Hispanic
- White non-Hispanic (no other races reported)
- Black non-Hispanic (no other races reported)
- Asian non-Hispanic (no other races reported) and other/multiple races (non-Hispanic)

Sources of payment

- Out-of-pocket: Expenses paid by the user or other family member.
- Private insurance: Payments made by insurance plans covering hospital and medical care (excluding payments from Medicare, Medicaid, and other public sources). Payments from Medigap plans or TRICARE (Armed Forces-related coverage) are included.
- Medicare: Payments by Medicare, which is a federally financed health insurance plan for persons ages 65 and older, persons receiving Social Security disability payments, and persons with end-stage renal disease.
- Medicaid/CHIP: Payments by Medicaid and CHIP, which are means-tested government programs jointly financed by federal and state funds that provide health care to those who are eligible. Medicaid is designed to provide health coverage to families and individuals who are unable to afford necessary medical care, while CHIP provides coverage to low-income children not eligible for Medicaid. Eligibility criteria for both programs vary significantly by state.
- Other sources: Payments from the Department of Veterans Affairs (except TRICARE); other federal sources (Indian Health Service, military treatment facilities, and other care provided by the federal government); various state and local sources (community and neighborhood clinics, state and local health departments, and state programs other than Medicaid/CHIP); Workers' Compensation; and various unclassified sources (e.g., automobile, homeowner's, or other liability insurance, and other miscellaneous or unknown sources).

Type of service

- Ambulatory: Includes office-based visits (visits to medical providers seen in office settings), hospital outpatient visits, and emergency room visits. Expenses for outpatient and emergency room visits include payments for services covered under the basic facility charge and those for separately billed physician services. Emergency room payments exclude expenses for emergency room services that are included in a hospital inpatient admission.

- Hospital inpatient: Includes room and board and all hospital diagnostic and laboratory expenses associated with the basic facility charge, payments for separately billed physician inpatient services, and some emergency room expenses incurred immediately prior to inpatient stays.
- Prescribed medicines: Includes expenses for all prescribed medications that were initially purchased or refilled during the year.
- Home health: Includes expenses for home care provided by agencies and independent providers.
- Dental and other: Includes payments for services to any type of dental care provider as well as expenses for care in all categories not specified as a separate category (e.g., medical equipment and supplies).

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 https://meps.ahrq.gov/.

References

The following Methodology Reports contain information on the survey and sample designs for the MEPS Household and Medical Provider Components (HC and MPC, respectively). Data collected in these two components are jointly used to derive MEPS health care expenditure data.

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 Healthcare Policy and Research, 1997. https://meps.ahrq.gov/data_files/publications/mr1/mr1.pdf

Ezzati-Rice, T.M., Rohde, F., Greenblatt, J. *Sample Design of the Medical Expenditure Panel Survey Household Component, 1998–2007*. Methodology Report #22. March 2008. Agency for Healthcare Research and Quality, Rockville, MD. https://meps.ahrq.gov/data_files/publications/mr22/mr22.pdf

Machlin, S.R., Chowdhury, S.R., Ezzati-Rice, T., DiGaetano, R., Goksel, H., Wun, L.-M., Yu, W., Kashihara, D. *Estimation Procedures for the Medical Expenditure Panel Survey Household Component*. Methodology Report #24. September 2010. Agency for Healthcare Research and Quality, Rockville, MD. https://meps.ahrq.gov/data_files/publications/mr24/mr24.pdf

Stagnitti, M.N., Beauregard, K., and Solis, A. *Design, Methods, and Field Results of the Medical Expenditure Panel Survey Medical Provider Component (MEPS MPC)—2006 Calendar Year Data*. Methodology Report #23. November 2008. Agency for Healthcare Research and Quality, Rockville, MD. https://meps.ahrq.gov/data_files/publications/mr23/mr23.pdf

Suggested Citation

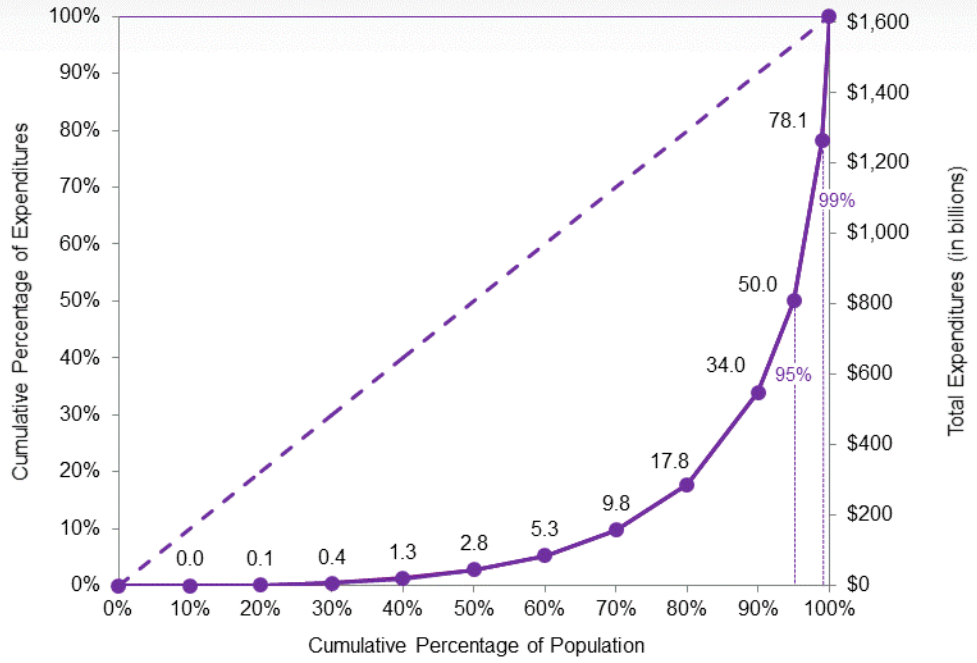
Mitchell, E. *Concentration of Health Expenditures and Selected Characteristics of Persons with High Expenses, U.S. Civilian Noninstitutionalized Population, 2016*. Statistical Brief #521. February 2019. Agency for Healthcare Research and Quality, Rockville, MD. https://meps.ahrq.gov/data_files/publications/st521/stat521.pdf

* * *

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:

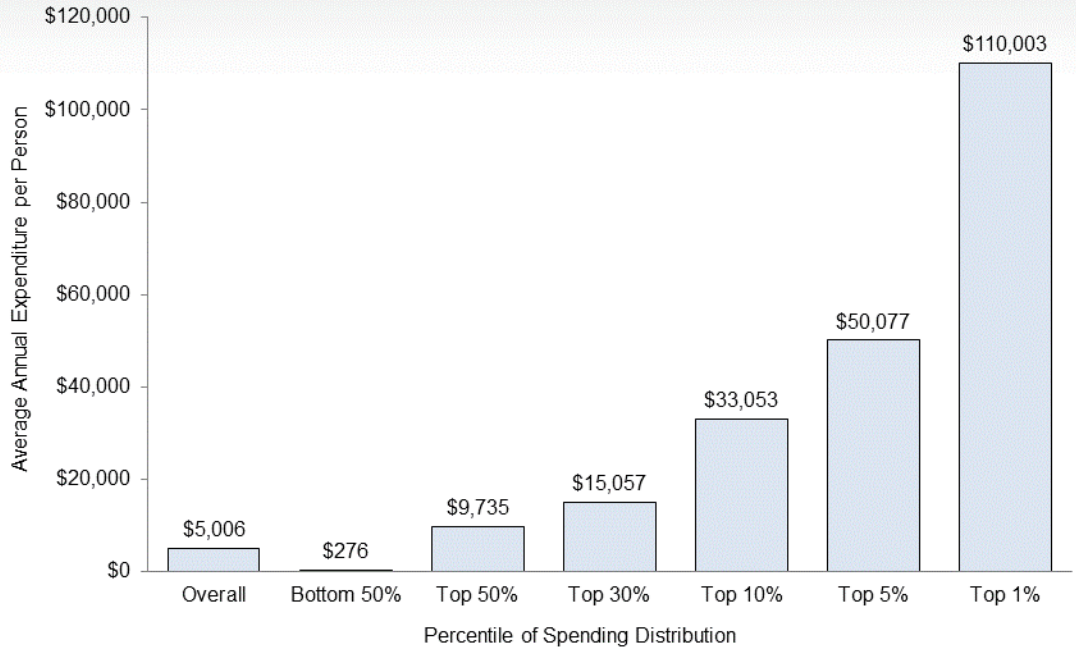
Joel W. Cohen, PhD, Director
Center for Financing, Access, and Cost Trends
Agency for Healthcare Research and Quality
5600 Fishers Lane, Mailstop 07W41A
Rockville, MD 20857

Figure 1. Concentration curve of health care expenditures, U.S. civilian noninstitutionalized population, 2016



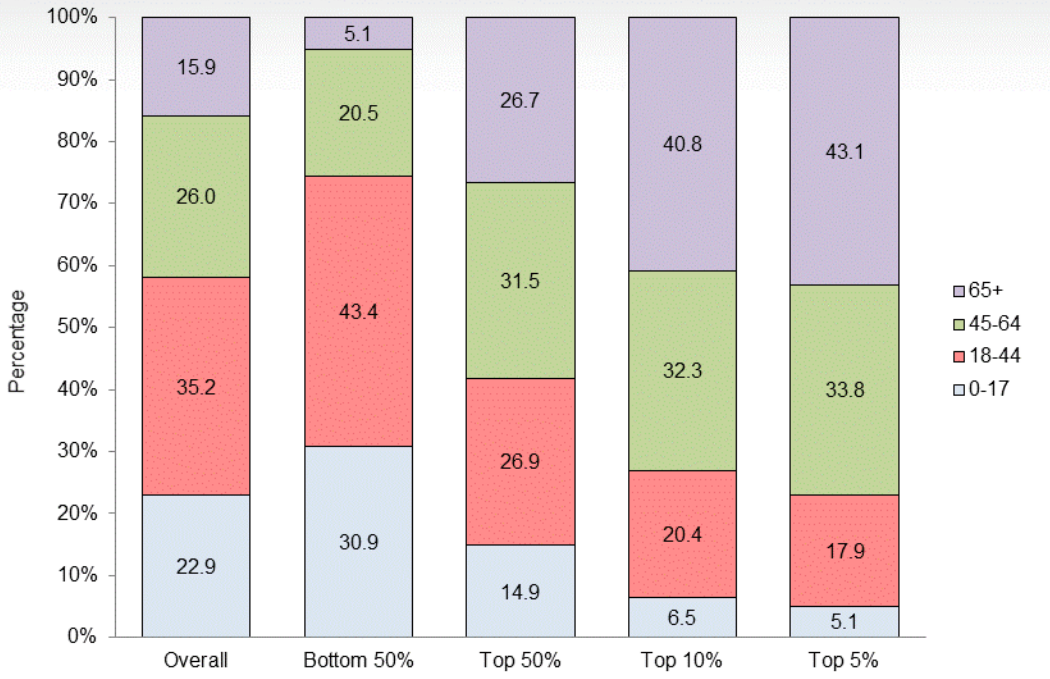
Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2016

Figure 2. Mean total expenditure per person by percentile of spending, 2016



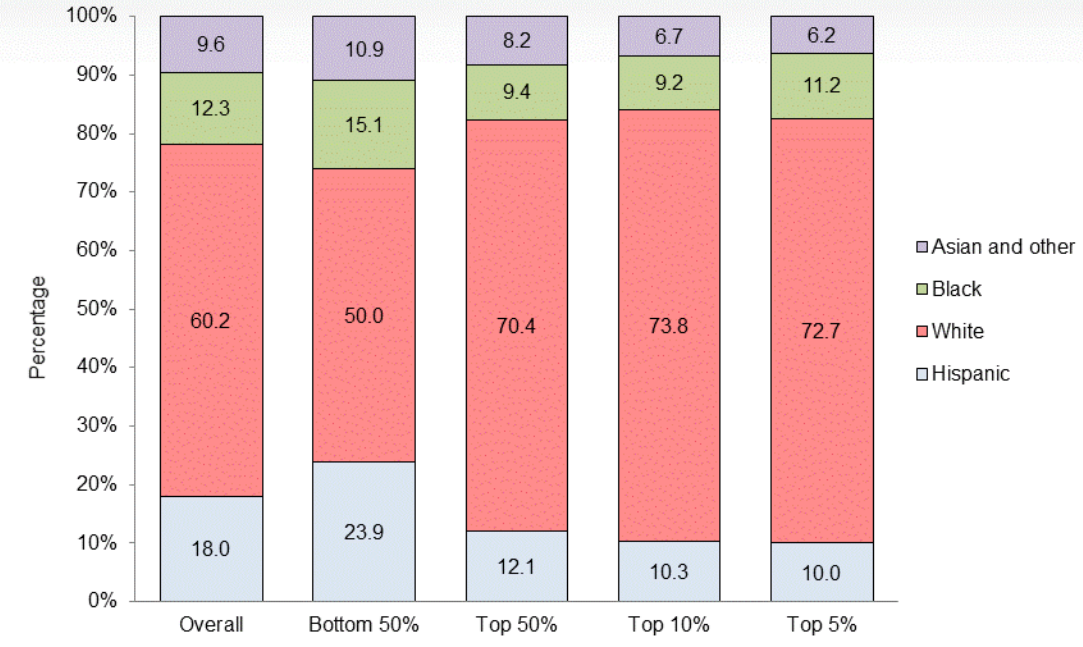
Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2016

Figure 3. Age distribution by percentile of spending, 2016



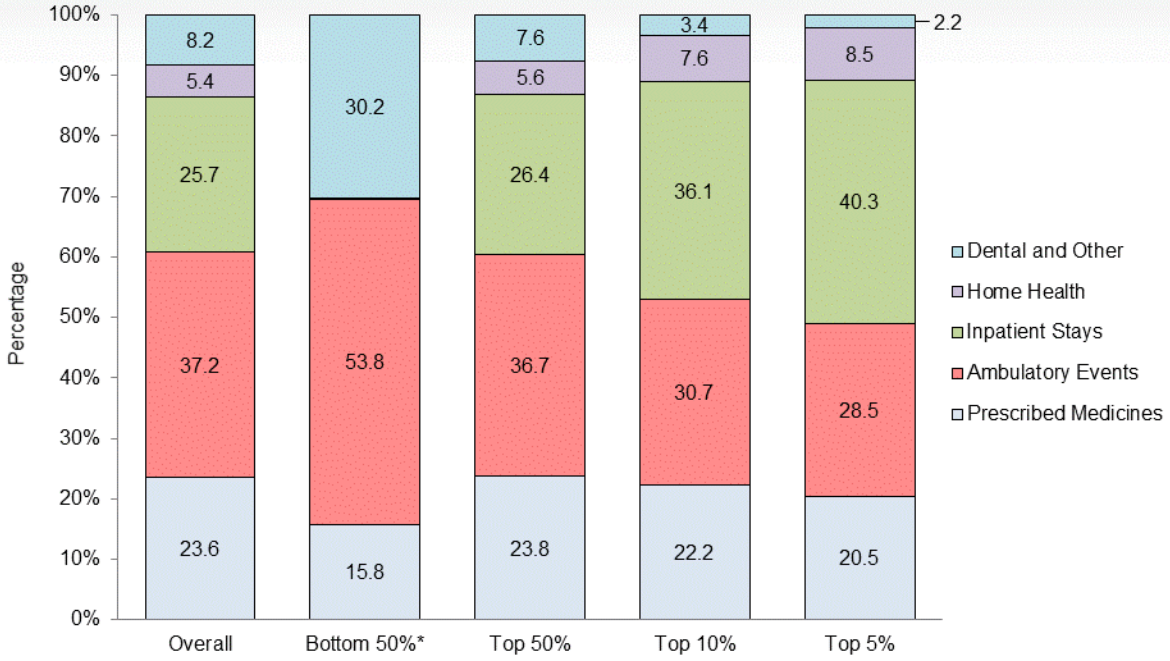
Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2016

Figure 4. Race/ethnicity distribution by percentile of spending, 2016



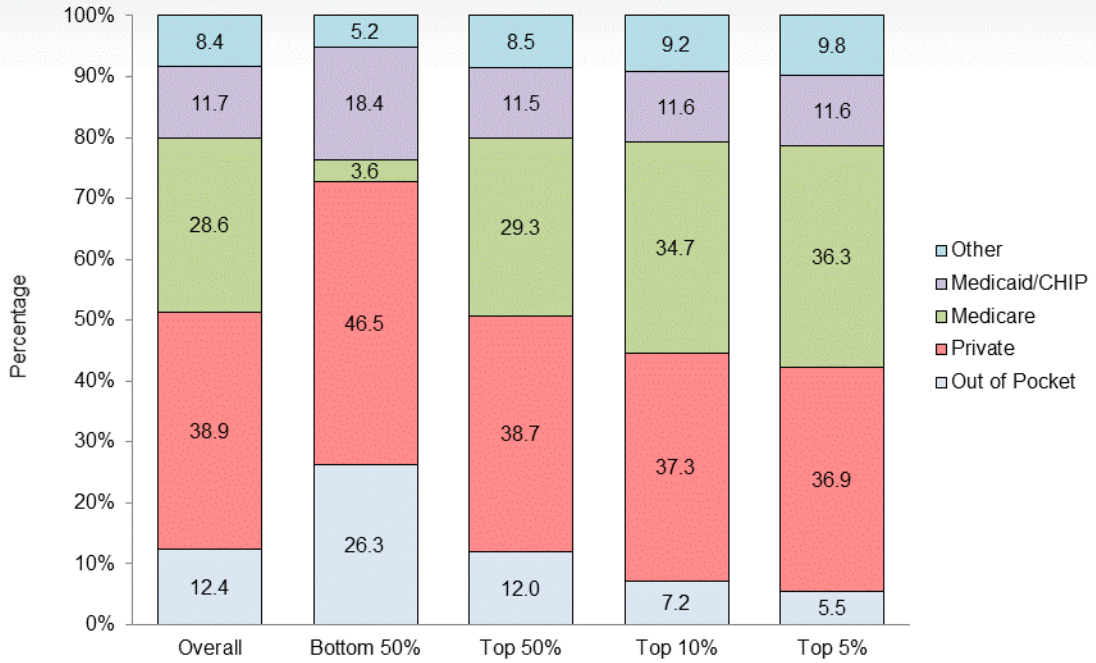
Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2016

Figure 5. Type of service distribution by percentile of spending, 2016



* Home health and inpatient stays each comprise 0.1% of the Bottom 50%.
Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2016

Figure 6. Source of payment distribution by percentile of spending, 2016



Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2016