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Concentration of Healthcare Expenditures and Selected Characteristics of Persons With High Expenses, U.S. Civilian Noninstitutionalized Population, 2020

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Highlights

- In 2020, the top 1% of persons ranked by their healthcare expenditures accounted for about 24% of total healthcare expenditures, while the bottom 50% accounted for less than 3%.
- Persons with the top 1% of expenses had an average of \$151,839 in healthcare expenditures in 2020, an increase of more than \$20,000 from previous years.
- Persons ages 65 and older and Whites were disproportionately represented in the top expenditure tiers.
- Inpatient hospital stays and ambulatory events each accounted for about one third of expenditures for persons with the top 5% of expenses.
- More than three quarters of aggregate expenses for persons with the top 5% of expenses were paid for by private insurance or Medicare.
- Hypertension was the most commonly treated condition among persons with the top 5% of expenses.

Introduction

The spread of the COVID-19 pandemic in 2020 considerably disrupted the way people seek out and utilize medical care in the United States and across much of the world. Data from the Medical Expenditure Panel Survey (MEPS)

indicate that healthcare expenditures among the U.S. civilian noninstitutionalized population remained highly concentrated in 2020, meaning that a small proportion of persons accounted for a large part of total healthcare expenditures. In fact, about 15% of the U.S. population had no personal healthcare expenses in 2020, while 5% accounted for over half of healthcare expenses during the year. These expenditures include all sources of payment for medical care, including payments by private insurance, Medicare, Medicaid, out-of-pocket expenses, and other sources.

In this Statistical Brief, data from the Agency for Healthcare Research and Quality's (AHRQ's) Medical Expenditure Panel Survey Household Component (MEPS-HC) are used to describe the overall concentration of healthcare expenditures across the U.S. civilian noninstitutionalized population in 2020 compared with previous years. The most commonly treated conditions among persons in the top expenditure groups are identified, and the shares of expenses by age groups, race/ethnicity, type of medical service, and source of payment are illustrated for 2020. All differences discussed in the text are statistically significant at the 0.05 level.

Findings

Overall Expenditures, 2018–2020 (table 1, figures 1 and 2)

In 2020, the top 1% of persons ranked by their healthcare expenditures accounted for 24.2% of total healthcare expenditures among the U.S. civilian noninstitutionalized population (figure 1). Persons in the top 5% expenditure percentile accounted for over half (52.9%) of healthcare expenses in 2020, an increase of over 4 percentage points compared with 2019 and 2018 (48.8 and 48.3, respectively). Persons with the bottom 50% of expenses in 2020 accounted for only 2.6% (100 minus 97.4) of total healthcare expenses.

Average costs for persons in the top expenditure tier were significantly higher in 2020 than in previous years. After adjusting for inflation,ⁱ persons with the top 1% of expenses in 2020 had an average of \$151,839 in healthcare costs during the year, more than \$20,000 higher than in 2019 or 2018 (figure 2).

Persons with the top 1% of healthcare expenses are defined as those with healthcare costs of \$83,006 or more in 2020. Healthcare costs for persons with the bottom 50% of expenses were less than \$1,150 during 2020. Cut points for additional percentile groups are shown in table 1.

ⁱ Dollars were inflated to 2020 levels using the Gross Domestic Product price index (see https://meps.ahrq.gov/about_meps/Price_Index.shtm for more details).

Table 1. Percentile of population ranked by healthcare expenses during the year

Percentile of population	Annual expenditures (inflated to 2020 dollars)		
	2020	2019	2018
Top 1	\$83,006 or more	\$79,142 or more	\$74,447 or more
Top 5	\$27,380 or more	\$27,919 or more	\$27,171 or more
Top 10	\$14,449 or more	\$15,370 or more	\$15,104 or more
Bottom 50	Less than \$1,150	Less than \$1,330	Less than \$1,358

Age (figure 3)

Older persons were disproportionately represented in the higher expenditure tiers. In 2020, persons 65 and older constituted 17.7% of the U.S. civilian noninstitutionalized population, while 22.1% were under age 18. Among persons with the top 5% of expenses, however, 40.2% were 65 and older, while only 5.0% were under age 18. In contrast, among persons in the bottom 50 expenditure percentile, 30.9% were under age 18 while only 6.9% were 65 years and older.

Race/Ethnicity (figure 4)

Whites were disproportionately represented among persons with the top 50% of expenses, while Hispanics were underrepresented in this higher expenditure group. Whites composed 59.2% of the U.S. civilian noninstitutionalized population in 2020 but accounted for 70.3% of persons with the top half of expenses. Hispanics, in contrast, composed 18.8% of the total population but only 12.5% of persons with the top half of expenses.

Type of Service (figure 5)

For persons with the bottom 50% of expenses, more than half of their medical expenses were for ambulatory events (58.3%), while the percentage of expenses for inpatient stays and home health expenses in this group was negligible (less than 0.3% of expenditures).

Among persons in the top 5 expenditure percentile, nearly one third (32.3%) of their expenses were for inpatient stays. This comparatively high percentage of expenditures is a combination of the fact that persons in the top expenditure percentiles are much more likely to have at least one inpatient stay during the year, and inpatient stays tend to cost much more than other types of service.

Source of Payment (figure 6)

Medicare and private insurance paid for over three quarters of expenses for persons in the top 5% expenditure tier (Medicare: 34.3%; private insurance: 42.8%), while out-of-pocket payments comprised only 7.2% of expenses.

For persons with the bottom 50% of expenses, out-of-pocket payments accounted for just over a quarter of their expenditures (25.7%), while Medicare payments comprised only 5.6% of payments for this group.

Health Conditions (figure 7)

The most commonly treated condition among persons with the top 5% of expenses in 2020 was hypertension (44.0%), followed by nervous system disorders (38.1%), osteoarthritis/other non-traumatic joint disorders (37.8%), and mental disorders (37.3%). In the overall population, the percentages of persons who received treatment for these conditions were 18.8%, 11.1%, 13.3%, and 16.4%, respectively. Other commonly treated conditions for persons with the top 5% of expenses include hyperlipidemia; chronic obstructive pulmonary disease (COPD), asthma, and other respiratory conditions; diabetes mellitus; heart disease; and injuries. Note that while these conditions are the most common among persons with high expenses, they are not necessarily the most expensive conditions to treat. Rather, the top expenditure groups are more likely to include persons with multiple chronic conditions or costly treatments (e.g., surgeries, hospitalizations) related to these conditions.

Data Source

The estimates shown in this Statistical Brief are based on data from the MEPS 2018-2020 Full Year Consolidated Files (HC-209, HC-216, and HC-224) and the MEPS 2020 Medical Conditions file (HC-222).

Definitions

Age

Age was defined as age at the end of the year 2020 (or on last date of MEPS eligibility if person was out of scope at the end of the year).

Expenditures

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

Expenditure Percentiles

Expenditure percentiles 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%" are mutually exclusive, while the "Top 50%," "Top 10%," "Top 5%," and "Top 1%" are not.

Health Conditions

The health conditions reported in this statistical brief were the most commonly treated conditions among persons with high expenses and are not mutually exclusive. Persons were classified as treated for a particular condition if they had one or more healthcare events (i.e., office-based, hospital outpatient or emergency room visits, hospital inpatient stays, prescribed medicine purchases, or home healthcare) where the condition was reported as leading to or having been discovered during the event. Conditions reported by the household were coded into ICD-10 codes, which were then collapsed to Clinical Classification Software Refined (CCSR) codes (see https://www.hcup-us.ahrq.gov/toolssoftware/ccsr/ccs_refined.jsp for details). Similar CCSR codes were further grouped into broader condition categories. The conditions discussed in this brief are defined as follows:

Collapsed condition category	CCSRs
Hypertension	CIR007, CIR008
Nervous system disorders	EAR000, EAR003, EAR004, EAR006, NVS000, NVS001–NVS008, NVS013–NVS020, NVS022, SYM010, SYM015
Osteoarthritis and other non-traumatic joint disorders	MUS001–MUS010, MUS032
Mental disorders	FAC002, FAC007, MBD000, MBD001–MBD034, NVS011, SYM008, SYM009
Hyperlipidemia	END010
COPD, asthma, and other respiratory conditions	RSP000, RSP007–RSP009, RSP011–RSP014, RSP016, SYM013
Diabetes mellitus	END002–END006
Heart disease	CIR001–CIR006, CIR009–CIR019
Injuries	INJ000, INJ001–INJ021, INJ024–INJ027, INJ032, INJ038–INJ058, INJ061–INJ064, INJ068, INJ073, INJ074, MUS031

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 age 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 healthcare to those who are eligible. Medicaid is designed to provide health coverage to families and individuals who are unable to afford necessary medical care. CHIP provides coverage to additional low-income children not eligible for Medicaid. Eligibility criteria for both programs vary significantly by state.
- Other sources: Includes 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

The MEPS-HC collects nationally representative survey that collects detailed information on healthcare utilization, 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 <http://www.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 healthcare 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. 1997. Agency for Healthcare Policy and Research, Rockville, MD. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr1/mr1.pdf

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Machlin, S.R., Chowdhury, S.R., Ezzati-Rice, T., DiGaetano, R., Goksel, H., Wun, L.-M., Yu, W., and Kashihara, D. *Estimation Procedures for the Medical Expenditure Panel Survey Household Component*. Methodology Report No. 24. 2010. Agency for Healthcare Research and Quality, Rockville, MD. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr24/mr24.shtml

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 No. 23. 2008. Agency for Healthcare Research and Quality, Rockville, MD.
http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr23/mr23.pdf

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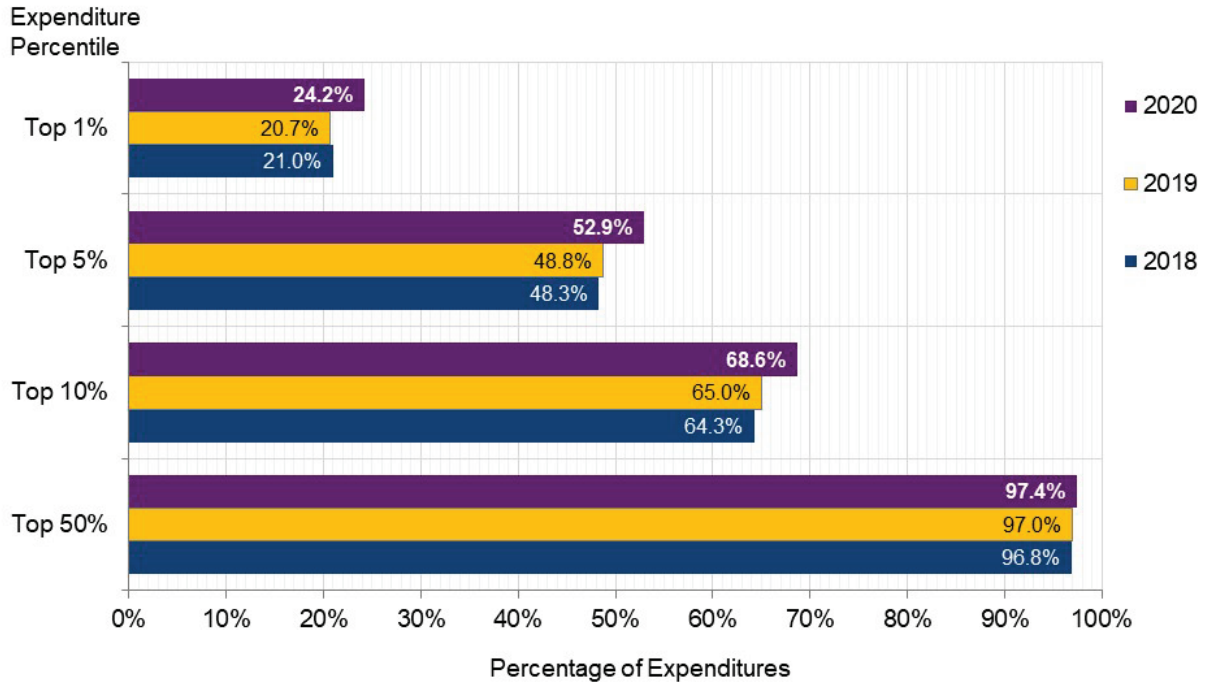
Mitchell, E. M. *Concentration of Healthcare Expenditures and Selected Characteristics of Persons With High Expenses, U.S. Civilian noninstitutionalized population, 2020*. Statistical Brief #546. January 2023. Agency for Healthcare Research and Quality, Rockville, MD.
http://www.meps.ahrq.gov/mepsweb/data_files/publications/st546/stat546.pdf

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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. Concentration of healthcare expenditures by expenditure percentile, 2018-2020

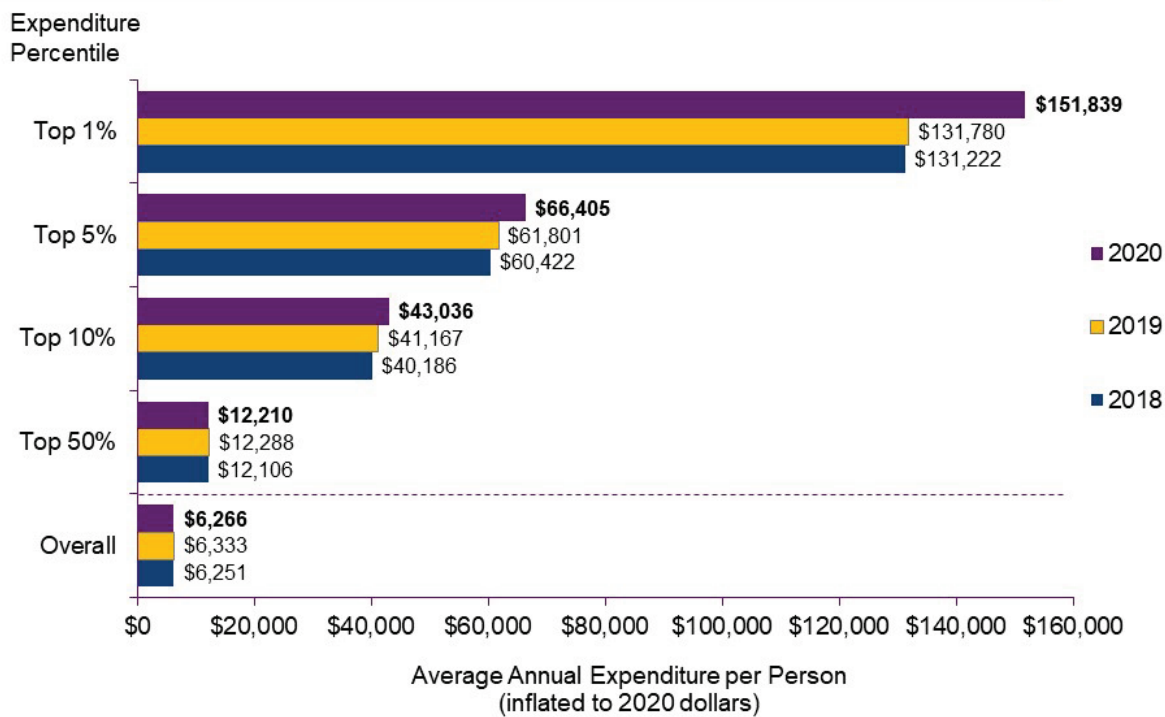


Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2018-2020.

Figure 1. Concentration of healthcare expenditures by expenditure percentile, 2018-2020

Year	Top 1%	Top 5%	Top 10%	Top 50%
2020	24.2	52.9	68.6	97.4
2019	20.7	48.8	65.0	97.0
2018	21.0	48.3	64.3	96.8

Figure 2. Average expenditure per person by expenditure percentile, 2018-2020

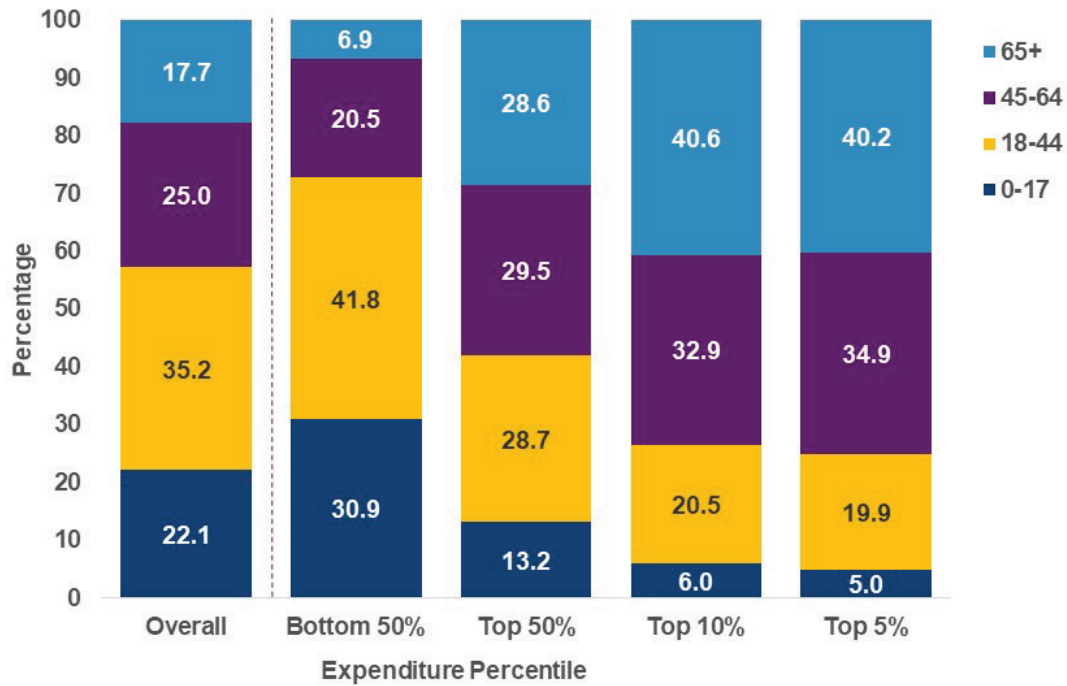


Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2018-2020.

Figure 2. Average expenditure per person by expenditure percentile, 2018-2020

Year	Top 1%	Top 5%	Top 10%	Top 50%	Overall
2020	\$151,839	\$66,405	\$43,036	\$12,210	\$6,266
2019	\$131,780	\$61,801	\$41,167	\$12,288	\$6,333
2018	\$131,222	\$60,422	\$40,186	\$12,106	\$6,251

Figure 3. Percentage of persons by age group and expenditure percentile, 2020

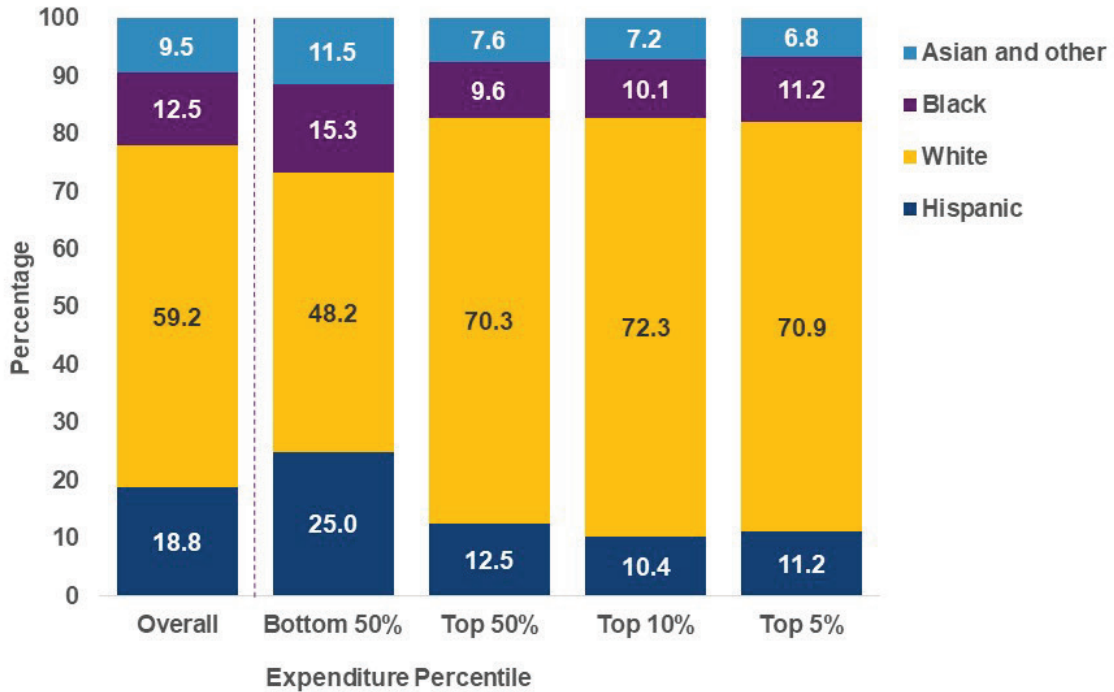


Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2020.

Figure 3. Percentage of persons by age group and expenditure percentile, 2020

Group	Overall	Bottom 50%	Top 50%	Top 10%	Top 5%
65+	17.7	6.9	28.6	40.6	40.2
45-64	25.0	20.5	29.5	32.9	34.9
18-44	35.2	41.8	28.7	20.5	19.9
0-17	22.1	30.9	13.2	6.0	5.0

Figure 4. Percentage of persons by race/ethnicity and expenditure percentile, 2020

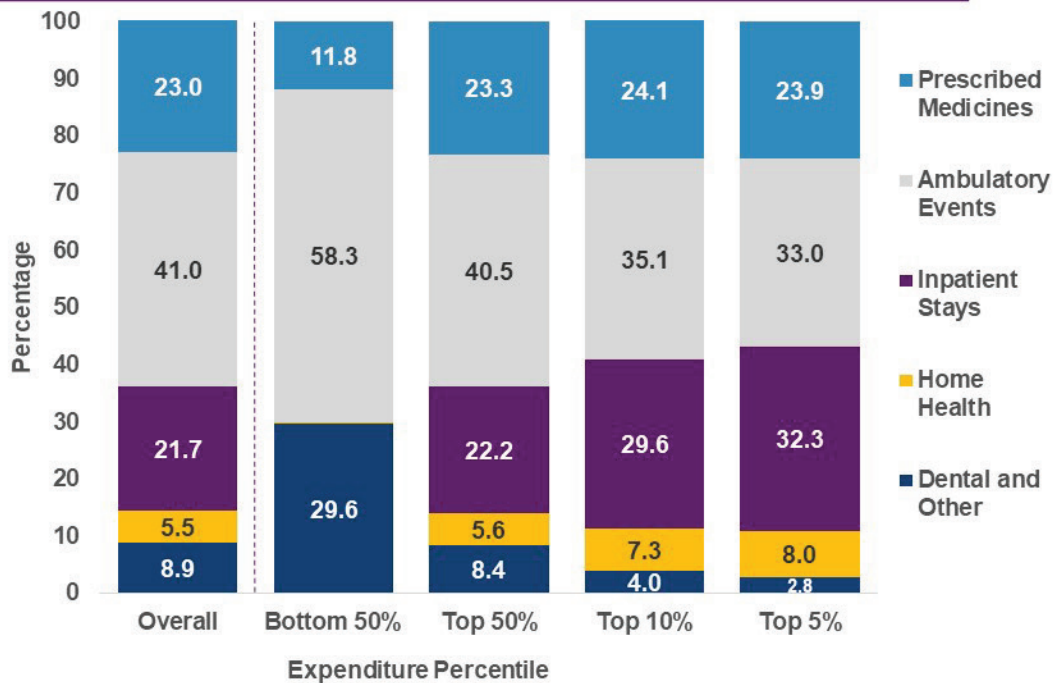


Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2020.

Figure 4. Percentage of persons by race/ethnicity and expenditure percentile, 2020

Group	Overall	Bottom 50%	Top 50%	Top 10%	Top 5%
Asian and other	9.5	11.5	7.6	7.2	6.8
Black	12.5	15.3	9.6	10.1	11.2
White	59.2	48.2	70.3	72.3	70.9
Hispanic	18.8	25.0	12.5	10.4	11.2

Figure 5. Percentage of expenditures by type of service and expenditure percentile, 2020



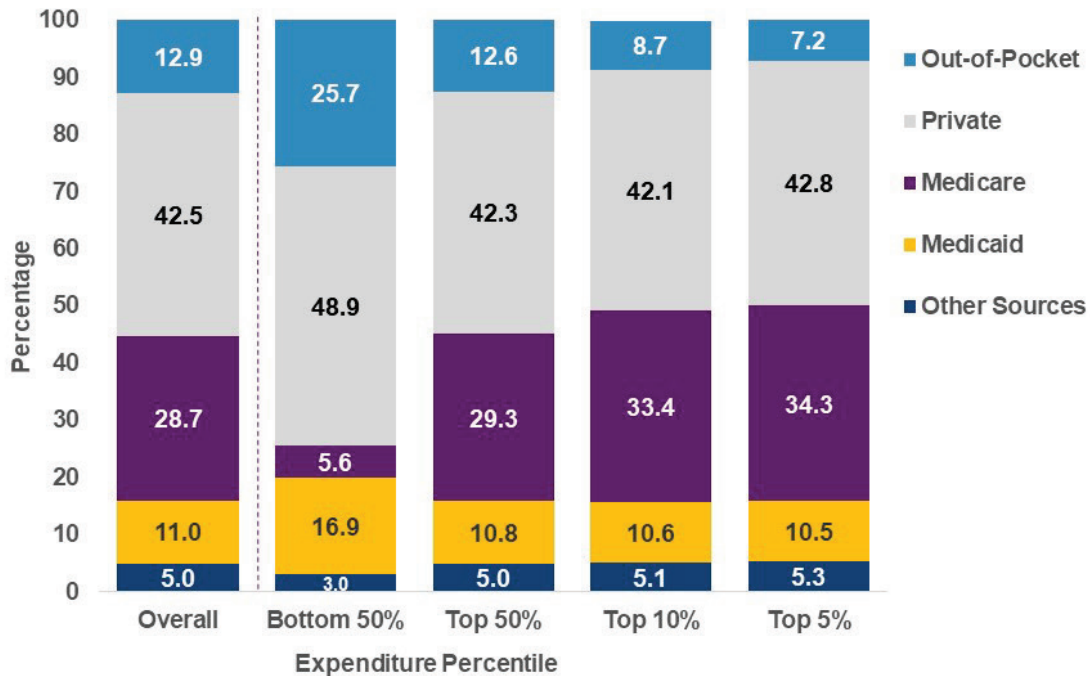
* Home health and inpatient stays each comprise less than 0.3% of the Bottom 50%

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2020

Figure 5. Percentage of expenditures by type of service and expenditure percentile, 2020

Group	Overall	Bottom 50%	Top 50%	Top 10%	Top 5%
Prescribed Medicines	23.0	11.8	23.3	24.1	23.9
Ambulatory Events	41.0	58.3	40.5	35.1	33.0
Inpatient Stays	21.7	0.0	22.2	29.6	32.3
Home Health	5.5	0.2	5.6	7.3	8.0
Dental and Other	8.9	29.6	8.4	4.0	2.8

Figure 6. Percentage of expenditures by source of payment and expenditure percentile, 2020

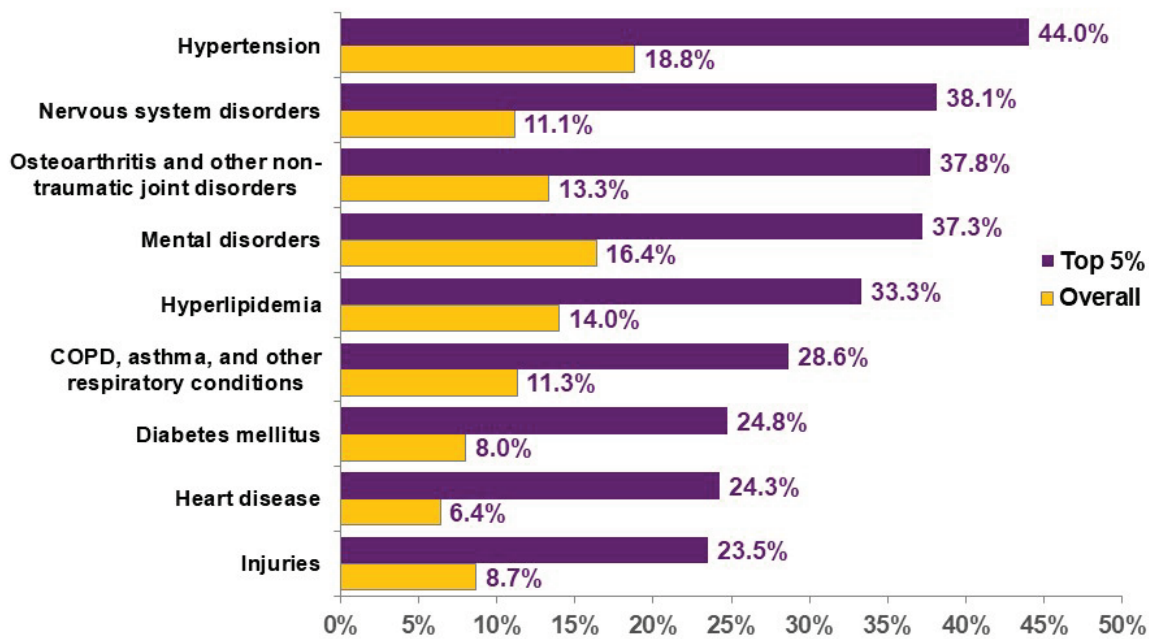


Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2020.

Figure 6. Percentage of expenditures by source of payment and expenditure profile, 2020

Group	Overall	Bottom 50%	Top 50%	Top 10%	Top 5%
Out-of-Pocket	12.9	25.7	12.6	8.7	7.2
Private	42.5	48.9	42.3	42.1	42.8
Medicare	28.7	5.6	29.3	33.4	34.3
Medicaid	11.0	16.9	10.8	10.6	10.5
Other Sources	5.0	3.0	5.0	5.1	5.3

Figure 7. Most commonly treated conditions among persons with top 5% of expenses: Percentage of persons treated, 2020



Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2020.

Figure 7. Most commonly treated conditions among persons with top 5% of expenses: Percentage of persons treated, 2020

Condition	Overall	Top 5%
Hypertension	18.8%	44.0%
Nervous system disorders	11.1%	38.1%
Osteoarthritis and other non-traumatic joint disorders	13.3%	37.8%
Mental disorders	16.4%	37.3%
Hyperlipidemia	14.0%	33.3%
COPD, asthma, and other respiratory conditions	11.3%	28.6%
Diabetes mellitus	8.0%	24.8%
Heart disease	6.4%	24.3%
Injuries	8.7%	23.5%