

STATISTICAL BRIEF #497

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Concentration of Health Expenditures in the U.S. Civilian Noninstitutionalized Population, 2014

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Introduction

In 2014, spending on health care accounted for 17.5 percent of the United States GDP¹, 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 2014, and only five percent of the population accounted for over half of health care spending. An individual's annual health care spending is a combination of multiple factors, including their need for and access to health care. While predictors of higher health care expenditures such as old age and multiple chronic conditions partially explain the uneven distribution, spending can be highly skewed even within groups predicted to have high expenditures.

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 estimate and illustrate the overall concentration of health care expenses across the U.S. civilian noninstitutionalized population. The distribution of spending is further described among sub-populations of interest based on age and insurance status, which are two key factors that jointly affect the likelihood that a person needs and receives care, subsequently impacting the magnitude of their health care expenditures. Characterizing the distribution of health care spending across these dimensions can help guide policy-makers toward effective interventions in high-cost groups with disparate spending distributions. All differences discussed in the text are statistically significant at the 0.05 level.

Findings

In 2014, the top 1 percent of persons ranked by their health care expenditures accounted for 22.8 (100 minus 77.2) percent of total health care expenditures (figure 1), with an annual mean expenditure of \$107,208 (figure 2). The top 5 percent of the population accounted for 50.4 (100 minus 49.6) percent of total expenditures with an annual mean expenditure of \$47,498, while the bottom 50 percent accounted for only 2.8 percent of total health care expenditures. Average annual spending in this bottom half of the population was \$264.

Age

Children under age 18 comprised 23.2 percent of the U.S. civilian noninstitutionalized population in 2014, but accounted for only 10.2 percent of total health care expenditures (figure 3). Young adults (ages 18–44) comprised 35.5 percent of the population and accounted for only 20.3 percent of total health care expenditures, while middle-aged adults (45–64) represented 26.3 percent of the population and were associated with 35.9 percent of total health care spending. Adults age 65 and older comprised the smallest percentage (15.1) of the U.S. civilian noninstitutionalized population, but accounted for 33.6 percent of total health care spending.

Average expenditures were higher among older age groups (ages 45–64 and 65 and older). Separated by age group, annual expenditures among the top 5 percent of spenders averaged \$23,855 among children ages 0–17, \$28,275 among adults ages 18–44, \$62,472 for adults ages 45–64, and \$68,819 for adults age 65 and older (figure 4). The distribution of spending was least concentrated among adults age 65 and older, where the top 5 percent of spenders accounted for 32.6 percent of the total expenditures for this age group (data not shown). In contrast, the top 5 percent of spenders among the age groups under 65 years of age accounted for more than 48.4 percent of expenditures in their respective categories (data not shown).

Insurance status

More than two-thirds of adults ages 18–64 had at least some private insurance coverage in 2014, and total expenditures among this group comprised a similar proportion of total health care expenditures (figure 5). Adults with public insurance comprised 14.3 percent of this population but accounted for 23.7 percent of health care spending. In contrast, uninsured adults comprised 14.4 percent of the population aged 18–64, but only 5.7 percent of the spending.

More than half (56.7 percent) of children ages 0–17 had some private insurance during 2014, and this group accounted for 72.4 percent of total expenditures among children under 18. Public insurance only was held by 39.5 percent of children and accounted for 26.3 percent of expenditures.

Among adults ages 18–64 with private insurance, the top 5 percent spent \$41,907 and the bottom 50 percent spent \$315 on average in 2014 (figure 6). The top 5 percent of children with private insurance spent \$31,066 on average, while the bottom 50 percent spent \$257. For those with only public coverage, the top 5 percent of adults averaged \$63,681, while the top 5 percent of children averaged \$14,969 in annual expenditures. Adults without insurance had the lowest average mean expenditures and the most concentrated spending, with persons in the top 5 percent spending \$25,722. Nearly all persons in the bottom 50 percent of this group had no health care expenditures in 2014.

Nearly all persons age 65 and older had Medicare coverage during 2014, about two-thirds of which had supplemental private or public insurance in addition to Medicare. The concentration of spending within each of these groups was similar (data not shown).

Highlights

- In 2014, the top 1 percent of persons ranked by their health care expenditures accounted for 22.8 percent of total health care expenditures, while the bottom 50 percent accounted for only 2.8.
- Persons age 65 and older comprised 15.1 percent of the U.S. civilian noninstitutionalized population and accounted for 33.6 percent of total health care expenditures. In contrast, children under age 18 comprised 23.2 percent of the population and 10.2 percent of expenditures.
- While 14.4 percent of adults under age 65 were uninsured during 2014, this group accounted for only 5.7 percent of health care expenditures.

¹Keehan, S, et al. *National Health Expenditure Projections, 2015–25: Economy, Prices, and Aging Expected to Shape Spending and Enrollment*. Health Affairs, August 2016.

Data Source

The estimates shown in this Statistical Brief are based on data from the MEPS 2014 Full Year Consolidated File (HC-171).

Definitions

Age

Age was defined as age at the end of the year 2014.

Concentration curve

A concentration curve is a graphical representation of the distribution of a variable of interest, such as income or expenditures, across the percentage 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.

Expenditure

MEPS-HC defines total expense 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.

Health insurance status

Individuals were classified into the following three insurance categories based on household responses to the health insurance status questions:

- Any private health insurance: Individuals who, at any time during the year had insurance that provided coverage for hospital and physician care (other than Medicare, Medicaid, or other public hospital/physician coverage), were classified as having private insurance. Coverage by TRICARE (Armed Forces-related coverage) was also included as private health insurance. Insurance that provided coverage for a single service only, such as dental or vision coverage, was not included.
- Public coverage only: Individuals were considered to have public coverage only if they met both of the following criteria: 1) they were not covered by private insurance at any time during the year, and 2) they were covered by one of the following public programs at some point during the year: Medicare, Medicaid, or other public hospital/physician coverage.
- Uninsured: The uninsured were defined as people not covered by private hospital/physician insurance, Medicare, TRICARE, Medicaid, or other public hospital/physician programs at any time during the entire year or their period of eligibility for the survey.

Percentiles

Percentiles of spending were formed by ordering sampled persons by their total expenditures, 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 percent' and 'Top 50 percent' are mutually exclusive, while the 'Top 50 percent', 'Top 30 percent', 'Top 10 percent', 'Top 5 percent' and 'Top 1 percent' are not.

About MEPS-HC

MEPS-HC is a nationally representative longitudinal survey that collects detailed information on health care utilization and expenditures, health insurance, and health status, as well as a wide variety of social, demographic, and economic characteristics for the U.S. civilian noninstitutionalized population. It is cosponsored by the Agency for Healthcare Research and Quality and the National Center for Health Statistics.

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.
http://www.meps.ahrq.gov/mepsweb/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 No. 22. March 2008. Agency for Healthcare Research and Quality, Rockville, MD.
http://www.meps.ahrq.gov/mepsweb/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. http://www.meps.ahrq.gov/mepsweb/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 No. 23. November 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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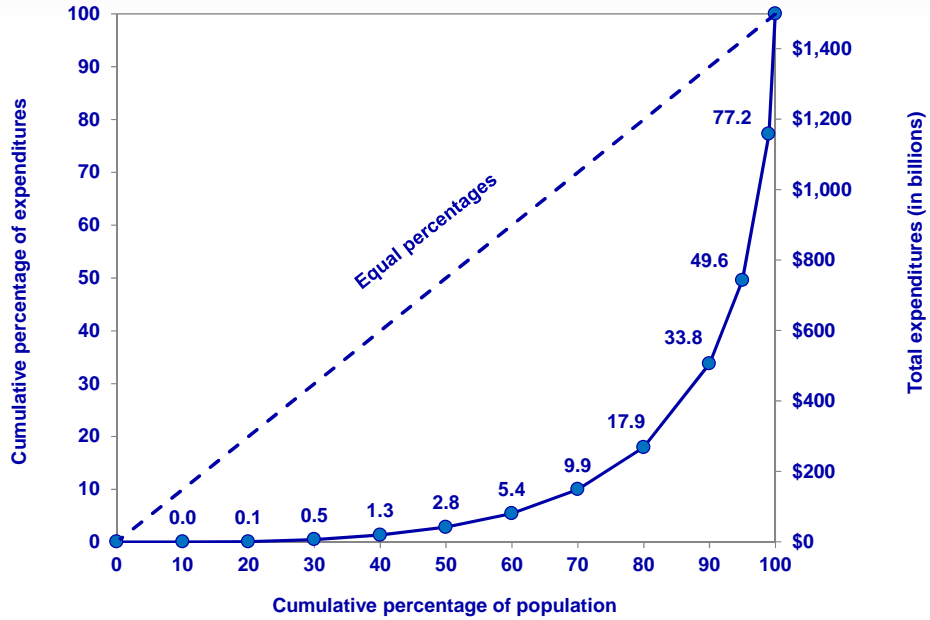
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AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using 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 W. Cohen, PhD, Director
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Rockville, MD 20857



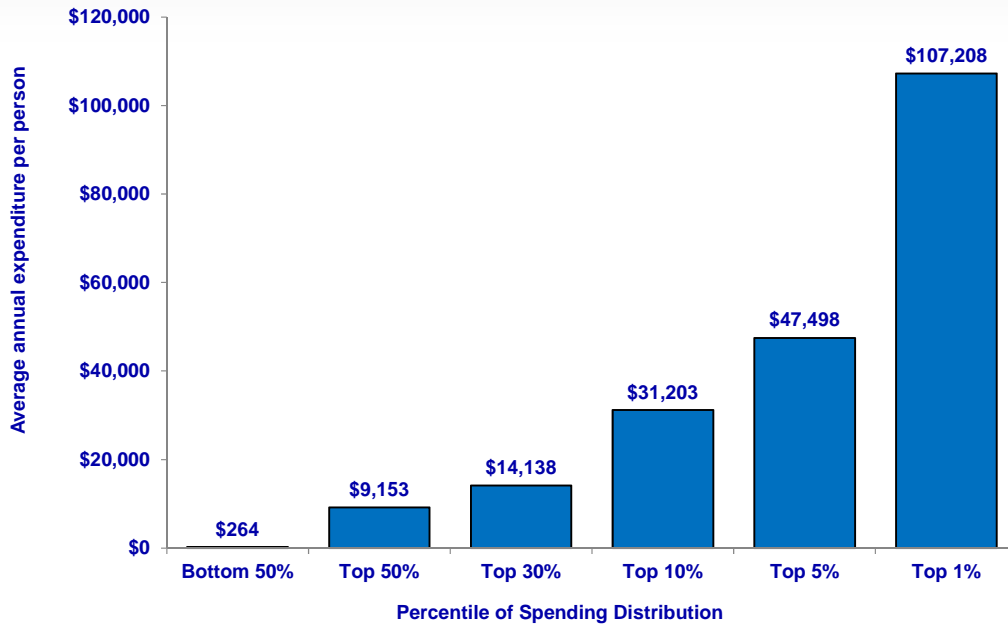
Figure 1. Concentration curve of health care expenditures, U.S. civilian noninstitutionalized population, 2014



Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2014



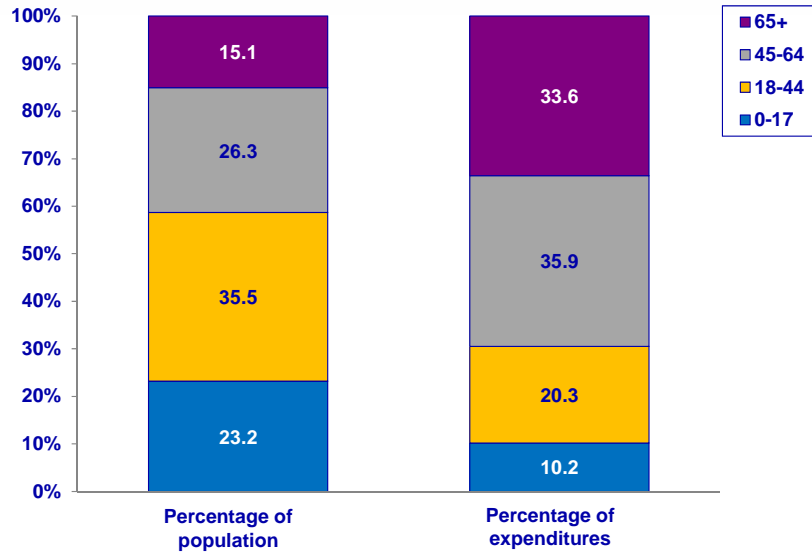
Figure 2. Mean expenditure per person by percentile of spending, 2014



Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2014



Figure 3. Distribution of population and expenditures by age group, 2014

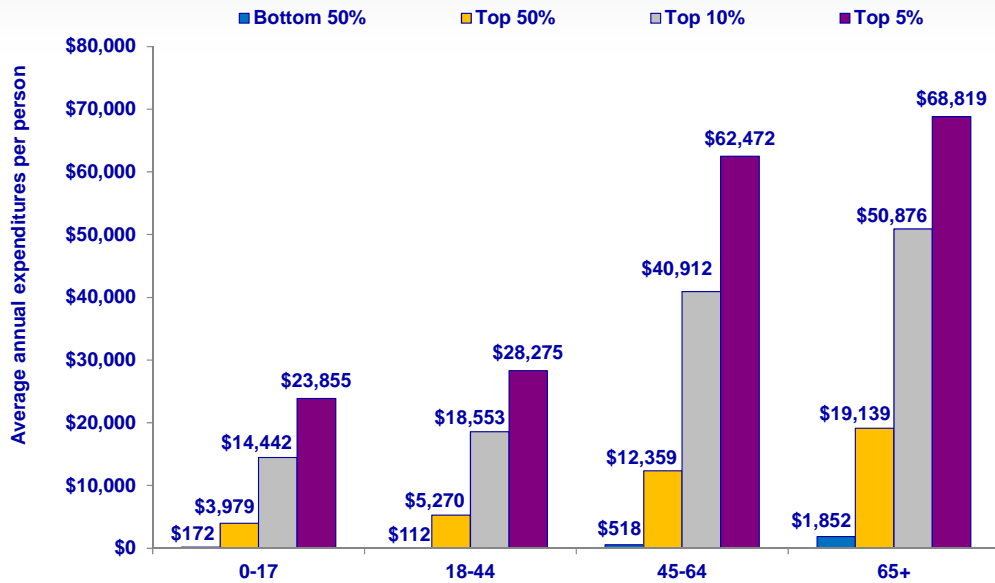


Note: Percentages may not add to 100 because of rounding.

Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2014



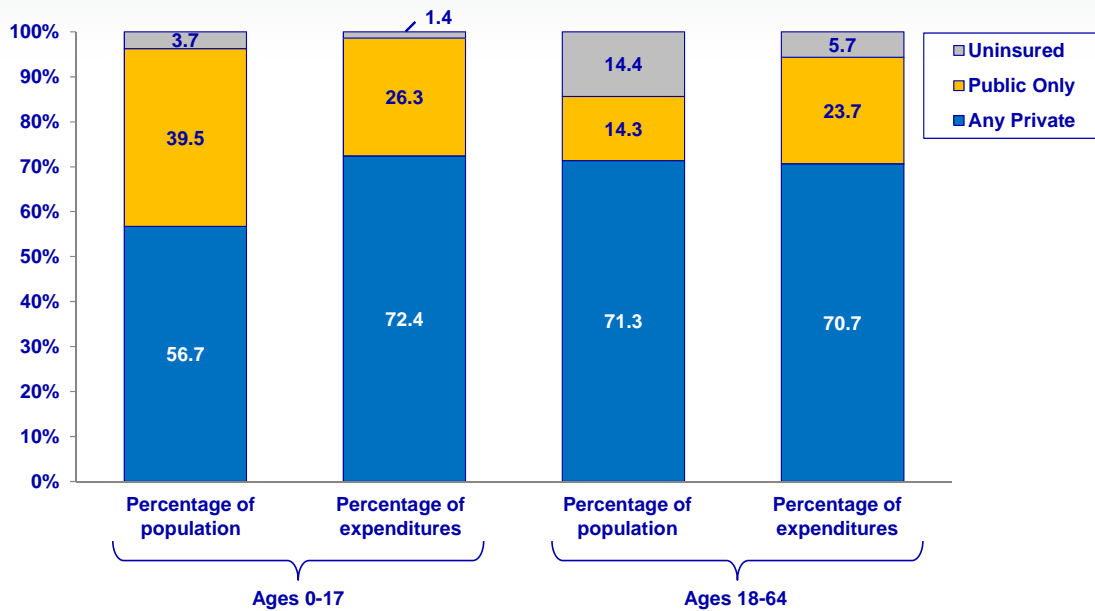
Figure 4. Average expenditures by percentile of spending and age group, 2014



Source: Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, Household Component, 2014



Figure 5. Distribution of population and expenditures by insurance coverage and age group, persons under age 65, 2014

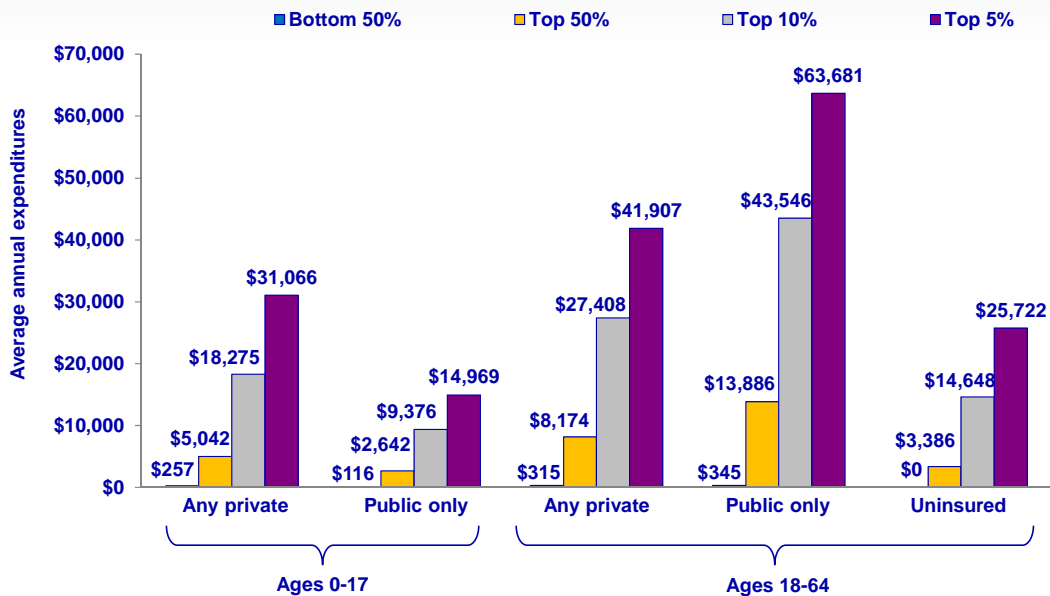


Note: Percentages may not add to 100 because of rounding.

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2014



Figure 6. Average expenditures by percentile of spending, insurance coverage, and age group, persons under age 65, 2014



Note: Data for uninsured persons ages 0-17 is not shown due to insufficient sample size.

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2014