

## STATISTICAL BRIEF #496

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### Characteristics of Persons with High Health Care Expenditures in the U.S. Civilian Noninstitutionalized Population, 2014

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#### Introduction

Health care expenditures in the United States are highly concentrated in a small percentage of the population. For example, in 2014 the top 10 percent of persons ranked by their total health care expenditures accounted for nearly two-thirds of all expenditures while the bottom 50 percent accounted for only 2.8 percent of total health care expenditures. Identification of the demographic and health status characteristics and the types of spending associated with high health care expenditures provides insight for researchers and policymakers trying to address the challenge of controlling costs in the U.S. health care system while maintaining the quality of care delivered.

Using data from the Agency for Healthcare Research and Quality's 2014 Medical Expenditure Panel Survey (MEPS), this Statistical Brief compares characteristics of the U.S. civilian noninstitutionalized (community) population for four health care spending tiers: no expenditures, low, middle, and high levels of spending (see Definitions). The characteristics examined include age, insurance coverage, and number of select medical conditions (see Definitions). In addition, the Brief compares spending distributions across service settings for three spending tiers.

#### Findings

##### Age

Advancing age is generally associated with increased use of health care services and higher health care expenditures. This is reflected in figure 1 which illustrates that younger people (i.e., age groups 0–17 years and 18–44 years) are proportionally less and older people (i.e., age groups 45–64 and 65+) are proportionally more represented in each of the tiers when ordered from lower to higher levels of spending. More specifically, among both the no expenditures group and the low spending tier approximately 75 percent of the persons were under 45 years of age. In contrast, about 75 percent of persons in the high tier of health care spending were 45 years of age or older. The elderly (age 65 years and older) comprised only 3.7 percent and 5.6 percent of persons in the no expenditures group and the low spending tier respectively, but about 40 percent of the high spending tier. The proportion of persons aged 18–44 years decreased with increased levels of health expenditures. The low spending tier had the largest proportion of children (i.e., aged 0–17 years) (35.3 percent) while the high tier had the lowest proportion of children (5.0 percent) among the four spending groups.

##### Insurance status

Children in the high and middle spending tiers were more likely to be covered by private insurance compared with children in the low spending tier or among those with no expenditures: 65.8 percent and 68.1 percent versus 53.0 percent and 42.6 percent respectively (figure 2a). Children with no health care expenditures and those in the low spending tier are more likely to be covered by public insurance (primarily Medicaid/SCHIP) compared to those in the middle and high spending tiers: 44.8 percent and 44.1 percent versus 30.2 percent and 32.5 percent respectively. The proportion of children uninsured is significantly larger among those with no health care expenses compared with those comprising each of the other spending tiers: 12.6 percent versus 2.9 percent (low tier), 1.7 percent (middle tier), and 1.7 percent (high tier).

The proportion of persons 18–64 years of age who were covered by private insurance was smallest among those with no health care spending compared with the other spending tiers: 50.8 percent versus 69.4 percent (high tier), 73.6 percent (low tier), and 79.5 percent (middle tier) (figure 2b). For the same age group, the proportion with public coverage was approximately two times or larger in the high spending tier (27.1 percent) compared with the other spending tiers (11.2 percent–14.3 percent). In addition, the proportion uninsured was substantially larger among those with no health care expenditures (38.0 percent) compared with each of the three remaining tiers, with the proportions declining with increased spending: 13.9 percent (low tiers), 6.2 percent (middle tier), and 3.5 percent (high tier).

The proportion of people 65 years of age and older who had only Medicare coverage became smaller when observing the tiers ordered from lower to higher levels of spending: no expenditures (52.4 percent), low tier (41.1 percent), middle tier (34.6 percent), high tier (30.0 percent) (figure 2c). Medicare plus private coverage was more prevalent among the middle and high tiers compared with the low spending group: 56.6 percent and 54.8 percent versus 48.3 percent. The no expenditures group had the smallest proportion of persons with Medicare and private coverage (35.0 percent). The largest proportion of persons 65 years and older with Medicare plus some other public coverage was observed among the high group of spenders: 15.1 percent versus 8.7 percent (middle tier) and 10.7 percent (low tier).

##### Number of medical conditions

As would be expected, adults with multiple chronic conditions were disproportionately represented in the higher spending groups. Among adults (i.e., 18 years of age and older) about three-quarters of those in the high health care spending tier (74.1 percent) and approximately half in the middle tier (51.5 percent) had two or more select chronic conditions (see Definitions). In contrast, the low spending group comprised primarily adults with none of the select medical conditions (52.5 percent) and had relatively few with two or more of these conditions (21.3 percent) (figure 3). The group with no health care spending had the smallest proportion with two or more chronic conditions (7.5 percent) and predominately comprised persons with none of the select conditions (74.3 percent).

#### Highlights

- Nearly three quarters of the high spending group was composed of persons 45 years of age or older compared with only about a quarter in each of the two lowest spending groups (i.e. no and low spending groups).
- About three-quarters of adults in the high spending tier ranked by their health care expenditures had two or more select chronic conditions while 60.0 percent of the adults in the bottom 50 percent of spending had none of the selected conditions.
- Expenditures for hospital inpatient services were extremely rare among persons in the bottom 50 percent of spending, but were the single largest expenditure component for the high spending tier, accounting for more than one-third of total expenditures.
- Approximately 13 percent of persons in the high spending tier did not have any of a number of select chronic conditions.

### Distribution of health care expenditures

Figure 4 presents the distribution of expenditures across various health care service settings for each of the three non-zero spending tiers (i.e., low, middle, high). Expenditures for hospital inpatient services were extremely rare (0.10 percent) in the low tier of spending, but were the single largest expenditure component for the high spending tier, accounting for 35.9 percent of total expenditures. While 49.6 percent of the total expenditures for the low spending tier were attributable to ambulatory services (i.e., office-based and outpatient visits) such services accounted for only 29.2 percent of total expenditures for the high spending tier. The proportion of total expenditures attributable to dental services dropped considerably when considering the tiers ordered from lower to higher levels of spending: low tier (24.0 percent), middle tier (13.2 percent), and high tier (2.1 percent). The proportion of total expenditures attributable to prescribed medicines is greatest for the middle tier compared to the low and high tiers: 27.2 percent versus 15.1 percent and 21.9 percent respectively.

### Data Source

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

### Definitions

#### Health care spending tiers

Four spending tiers were specified based on the distribution of total expenditures for the full MEPS population as follows:

Spending tier	Health care expenditure range	Percentage of U.S. civilian noninstitutionalized population based on ranked health care spending <sup>1</sup>
No expenditures	\$0	15%
Low	\$1–912	35%
Middle	\$913–11,109	40%
High	\$11,110 or more	Top 10%

<sup>1</sup> Together, the no expenditures and low spending groups constitute the bottom 50 percent of the community population ranked by total health expenditures.

#### Age

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

#### Health insurance coverage

Health insurance coverage is based on the household responses to the health insurance status questions, individuals less than 65 years of age were classified into the following three insurance categories:

- 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.

Individuals aged 65 years and older were classified into the following three insurance categories:

- Medicare and private insurance: This category includes persons covered by Medicare and a supplementary private policy.
- Medicare and other public insurance: This category includes persons classified as Medicare beneficiaries who were not covered by private insurance at any point during the year but were covered by Medicaid or other public hospital/physician coverage at some point during the year.
- Medicare only: Persons classified as Medicare beneficiaries but not classified in either of the two categories above.

A small proportion of persons age 65 and over (about 1 percent) were not classified into one of these categories for various reasons (e.g., uninsured, private insurance only).

#### Medical conditions

The MEPS household survey respondents were asked whether or not each adult in the household was ever told by a health professional that they had any of fourteen select medical conditions. These conditions included high blood pressure, coronary heart disease, angina, myocardial infarction, other unspecified heart disease, stroke, emphysema, chronic bronchitis, high cholesterol, cancer, diabetes, joint pain, arthritis, asthma. These conditions were selected because of their relatively high prevalence, and because generally accepted standards for appropriate clinical care have been developed.

#### Expenditures

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.

#### 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 zero expenditures group as well as the low, middle, and high spending tiers are mutually exclusive categories of persons.

#### Estimates and statistical comparisons

All point estimates are weighted to be nationally representative and standard errors have been estimated using the Stata software package ([www.stata.org](http://www.stata.org)) which accounts for the complex sample design of the survey. All differences discussed in the text are significant at the 0.05 level or better.

## 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 National Institute for Health Care Management (NIHCM). The Concentration of Health Care Spending. NIHCM Data Brief. July, 2012.

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.  
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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.  
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Stagnitti, Marie N., Beauregard, Karen, and Solis, Amy. *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](http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr23/mr23.pdf)

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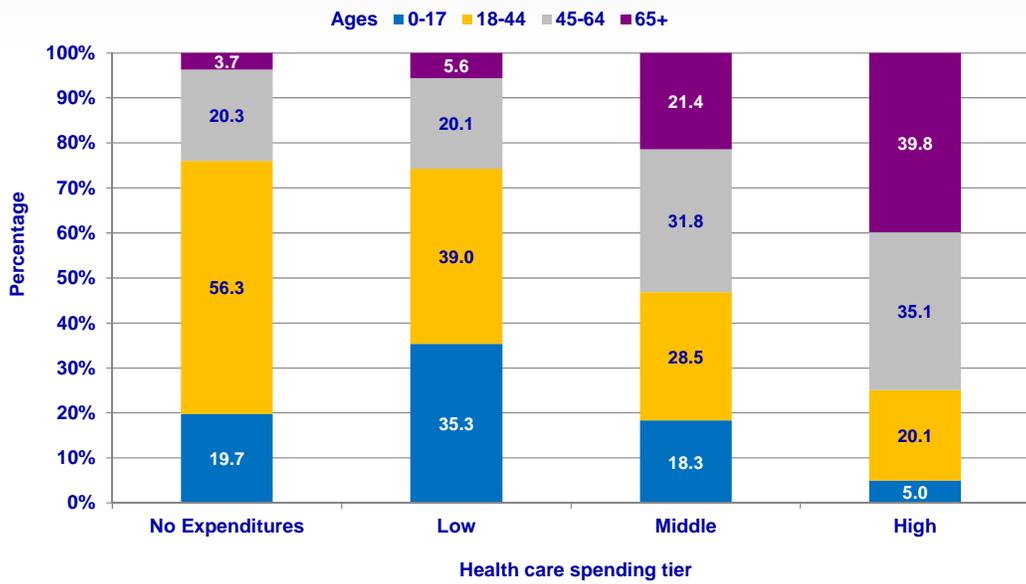
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AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using 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](mailto:MEPSProjectDirector@ahrq.hhs.gov) or send a letter to the address below:

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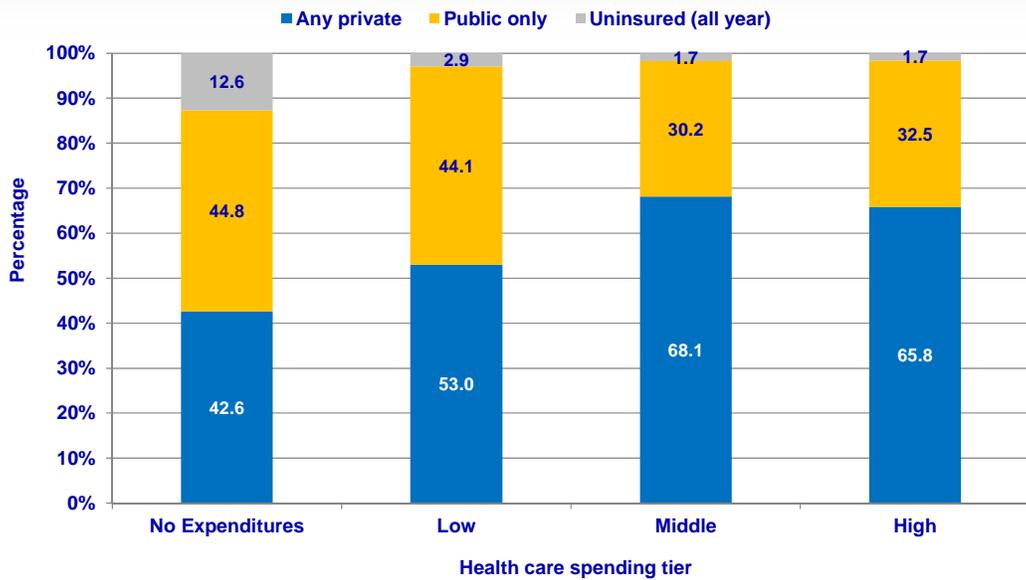
Figure 1. Age distribution by health care spending tier, 2014



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



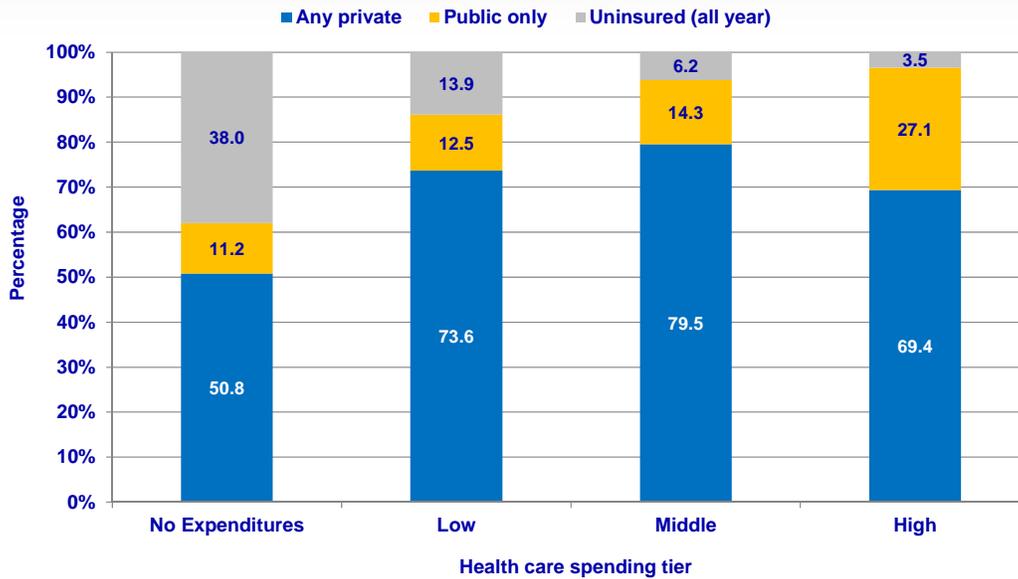
Figure 2a. Insurance coverage distribution by health care spending tier for persons aged 0-17 years, 2014



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



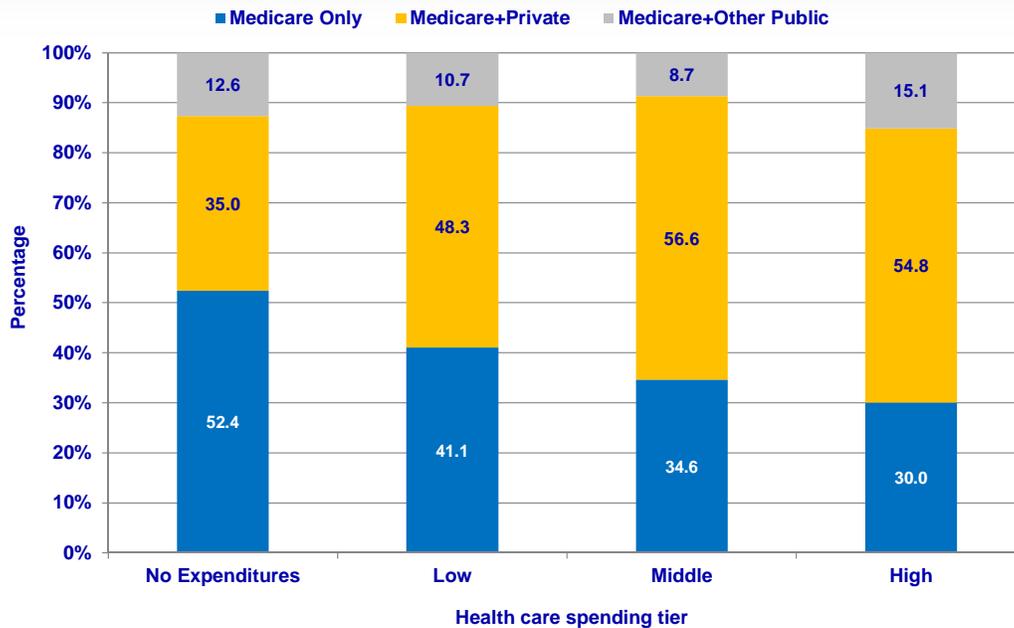
Figure 2b. Insurance coverage distribution by health care spending tier for persons aged 18-64 years, 2014



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



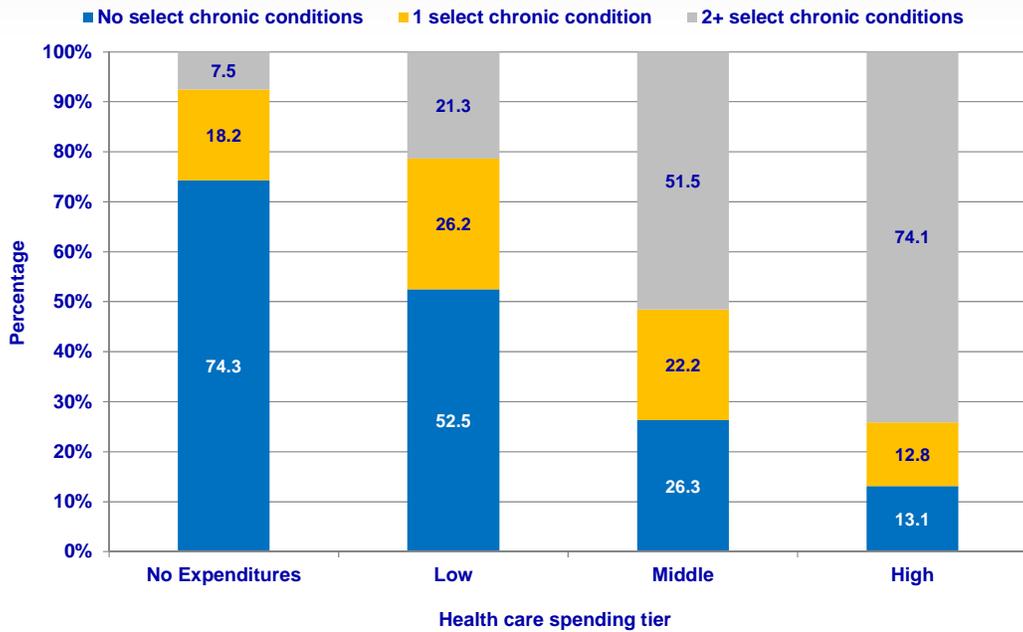
Figure 2c. Insurance coverage distribution by health care spending tier for persons aged 65 years and older, 2014



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



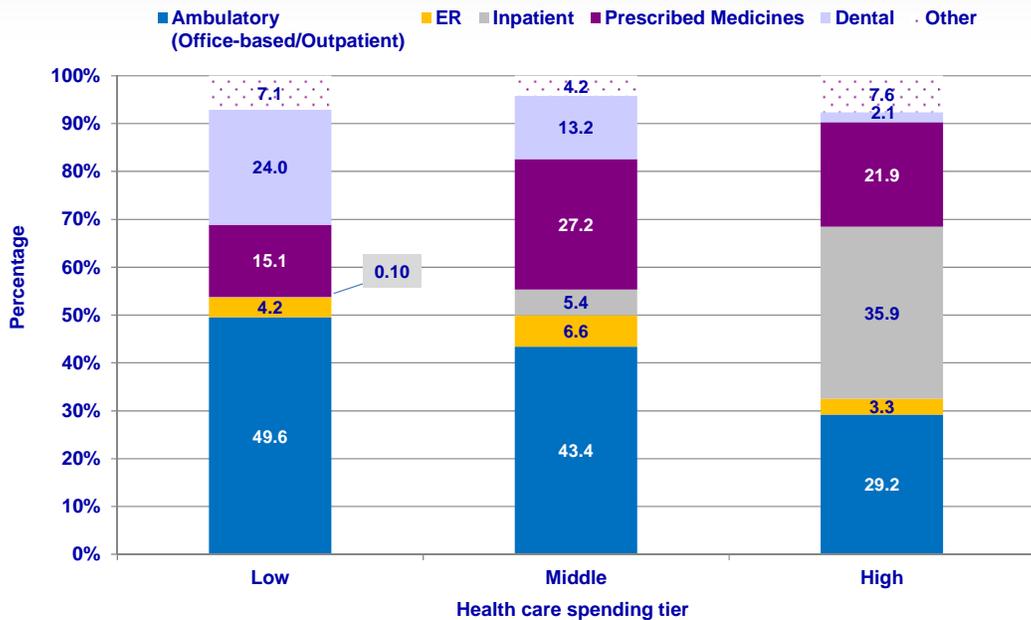
**Figure 3. Distribution of number of select chronic conditions by health care spending tier for persons aged 18 years and older, 2014**



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



**Figure 4. Distribution of total health care expenditures across service categories by health care spending tier, 2014**



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