Medical Expenditure Panel Survey

Agency for Healthcare Research and Quality

STATISTICAL BRIEF #404

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Expenditures for Hypertension among Adults Age 18 and Older, 2010: Estimates for the U.S. Civilian Noninstitutionalized Population

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Introduction

Hypertension, commonly known as high blood pressure, increases the risk of cardiovascular disease. It is the leading cause of stroke and kidney failure, and a major cause of heart attacks.

This Statistical Brief presents estimates based on the Household Component of the Medical Expenditure Panel Survey (MEPS-HC) on the use of and expenditures for all medical care (see definition for expenditures), ambulatory care (office-based provider and hospital outpatient visits), and prescribed medicines to treat hypertension among the U.S. civilian noninstitutionalized adult population. Annual estimates for 2010 are shown by type of service and source of payment. All differences between estimates noted in the text are statistically significant at the 0.05 level or better.

Findings

In 2010, 58.6 million adults or 25.1 percent of the U.S. community population age 18 and older received treatment for hypertension (figure 1). The percentage with reported treatment for hypertension was higher for adults age 65 years and older (61.7 percent) than those in younger age groups, 45–64 years (32.4 percent) and 18–44 years (6.1 percent). A higher percentage of non-Hispanic blacks were treated for hypertension (30.4 percent) than those who were non-Hispanic white (26.7 percent), non-Hispanic other (20.1 percent), or Hispanic (15.4 percent). A slightly higher proportion of women received treatment for hypertension (25.6 percent) than men (24.5 percent).

Regionally, both the South and Midwest (26.7 percent) had higher percentages of adults who received treatment for hypertension, while the West (20.3 percent) had a lower percentage than the U.S. national average (figure 2).

Mean health care expenditures for hypertension, by selected demographic characteristics

In 2010, the mean expenditure per person for the treatment of hypertension was higher for adults age 65 and older ($778) than for adults ages 45–64 ($715) or ages 18–44 ($636) (figure 3).

The mean expenditure per person for the treatment of hypertension was higher for Hispanics and non-Hispanic blacks ($981 and $887, respectively), than for non-Hispanic whites ($679) and non-Hispanic others ($661).

Highlights

- In 2010, about 58.6 million persons or 25.1 percent of adults age 18 and older were treated for hypertension.
- Direct medical spending to treat hypertension totaled $42.9 billion in 2010, with almost half ($20.4 billion) in the form of prescription medications.
- Annual expenditures for those treated for hypertension averaged $733 per adult in 2010.
- The mean expenditure per person for the treatment of hypertension was higher for Hispanics and non-Hispanic blacks ($981 and $887, respectively), than for non-Hispanic whites ($679) and non-Hispanic others ($661).

The mean expenditure per person for treatment for hypertension was slightly higher for women ($751) than for men ($713).

The mean expenditure per person for the treatment of hypertension was lower than the national average for adults in the Midwest ($615) (figure 4).

Distribution of health care expenditures for hypertension, by type of service
In 2010, a total of $42.9 billion was spent on treatment of hypertension for adults for all medical services. About 48 percent of expenditures for hypertension were spent on prescription medicines ($20.4 billion) compared to 30 percent on ambulatory visits ($13.0 billion) and 22 percent ($9.5 billion) on other services (figure 5).

For adults age 18 and older, the mean expenditure per person for the treatment of hypertension among those with an expense for hypertension was $733 in 2010. The mean expense per adult for ambulatory visits was $442, and $368 for prescription medications (figure 6).

Distribution of health care expenditures for hypertension, by source of payment
About 30 percent of the total amount spent for the treatment of hypertension for adults in 2010 was paid by Medicare, with private insurance paying 29.1 percent, out-of-pocket payments accounting for about one-fifth (21 percent), and Medicaid accounting for 9.6 percent (figure 7).

Among adults ages 18–64, 42.1 percent of the expenditures for the treatment of hypertension were paid by private insurance, with out-of-pocket payments accounting for 21.8 percent. Medicaid and Medicare accounted for 14.1 percent and 10.0 percent, respectively.

Medicare paid 52.8 percent of the expenditures for the treatment of hypertension for adults age 65 and older, with out-of-pocket payments accounting for 20.1 percent, and private insurance paying 14 percent. Medicaid accounted for 4.4 percent of hypertension expenses among the elderly.

Data Source

The estimates shown in this Statistical Brief are based on data from the MEPS 2010 Full Year Consolidated Data File (HC-138); 2010 Medical Conditions File (HC-137); 2010 Prescribed Medicines File (HC-135A); 2010 Hospital Inpatient Stays File (HC-135D); 2010 Emergency Room Visits File (HC-135E); 2010 Outpatient Visits File (HC-135F); 2010 Office-Based Medical Provider Visits File (HC-135G); and 2010 Home Health File (HC-135H).

Definitions

Hypertension
This Brief analyzes adults age 18 and older with hypertension in connection with health care utilization. The conditions reported by respondents were recorded by interviewers as verbatim text which was then coded by professional coders to fully specified ICD-9-CM codes. These codes were regrouped in clinically homogenous categories known as CCS codes. Conditions with CCS codes 98 and 99 (hypertension) were used for this Brief. A crosswalk of ICD-9 codes and CCS codes is available in the documentation file of the Medical Conditions File for 2010 (HC-137). For additional information on the crosswalk between ICD-9 codes and CCS codes, please visit: http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp.

Ambulatory
Any visit to a hospital outpatient department, private doctor's office, group practice, health clinic, walk-in surgi-clinic/center, walk-in urgi-care center, company or school clinic, infirmary, neighborhood health clinic, family planning center, or mental health facility.

Expenditures
Expenditures in MEPS are defined as payments from all sources for hospital inpatient care, ambulatory care provided in offices and hospital outpatient departments, care provided in emergency departments, paid care provided in the patient's home (home health), and the purchase of prescribed medications. Sources include direct payments from individuals, private insurance, Medicare, Medicaid, Workers' Compensation, and miscellaneous other sources. Payments for over-the-counter drugs are not included in MEPS total expenditures. Indirect payments not related to specific medical events, such as Medicaid Disproportionate Share and Medicare Direct Medical Education subsidies, are also excluded.

Expenditures were classified as being associated with hypertension if a visit, stay, or medication purchase was cited as being related to hypertension. Expenditures may be associated with more than one condition

and therefore may include some for conditions other than hypertension. Total spending does not include amounts for other medical expenses, such as durable and nondurable supplies, medical equipment, eyeglasses, ambulance services, and dental expenses, because these items are not linked to specific conditions in MEPS.

Racial and ethnic classifications
Classification by race and ethnicity was based on information reported for each family member. Respondents were asked if each family member's race was best described as American Indian, Alaska Native, Asian or Pacific Islander, black, white, or other. They also were asked if each family member's main national origin or ancestry was Puerto Rican; Cuban; Mexican, Mexicano, Mexican American, or Chicano; other Latin American; or other Spanish. All persons whose main national origin or ancestry was reported in one of these Hispanic groups, regardless of racial background, were classified as Hispanic. Since the Hispanic grouping can include black Hispanic, white Hispanic, Asian and Pacific Islanders Hispanic, and other Hispanic, the race categories of black, white, Asian and Pacific Islanders, and other only include non-Hispanics for the race/ethnicity classifications. MEPS respondents who reported other single or multiple races and were non-Hispanic were included in the other category. For this analysis, the following classification by race and ethnicity was used: Hispanic (of any race), non-Hispanic blacks single race, non-Hispanic whites single race, and non-Hispanic others.

Sources of payment

- *Private insurance:* This category includes payments made by insurance plans covering hospital and other medical care (excluding payments from Medicare, Medicaid, and other public sources), Medigap plans, and TRICARE (Armed Forces-related coverage).
- *Medicare:* Medicare is a federally financed health insurance plan for the elderly, persons receiving Social Security disability payments, and persons with end-stage renal disease. Medicare Part A, which provides hospital insurance, is automatically given to those who are eligible for Social Security. Medicare Part B provides supplementary medical insurance that pays for medical expenses and can be purchased for a monthly premium. Medicare Part D, which started in 2006, covers prescription drug expenses.
- *Medicaid/CHIP:* This category includes payments made by the Medicaid and CHIP programs which are means-tested government programs financed jointly 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 additional low income children not eligible for Medicaid. Eligibility criteria for both programs vary significantly by state.
- *Out of pocket:* This category includes expenses paid by the user or other family member.
- *Other sources:* This category includes payments from other federal sources such as 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); various unclassified sources (e.g., automobile, homeowner's, or other liability insurance, and other miscellaneous or unknown sources); Medicaid/CHIP payments reported for persons who were not reported as enrolled in the Medicaid or CHIP programs at any time during the year; and private insurance payments reported for persons without any reported private health insurance coverage during the year.

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.

For more information about MEPS, call the MEPS information coordinator at AHRQ (301-427-1406) or visit the MEPS Web site at http://www.meps.ahrq.gov/.

References

For a detailed description of the MEPS survey design, sample design, and methods used to minimize sources of nonsampling errors, see the following publications:

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 Health Care Policy and Research, 1997. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr1/mr1.pdf.

Cohen, S. *Sample Design of the 1996 Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 2. AHCPR Pub. No. 97-0027. Rockville, MD. Agency for Health Care Policy and Research, 1997. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr2/mr2.pdf

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

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 2009. Agency for Healthcare Research and Quality, Rockville, MD. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr22/mr22.pdf.

For more information about hypertension, see the following:

American Society of Hypertension: http://www.ash-us.org

Hypertension Fact Sheet: http://www.cdc.gov/nchs/fastats/hyprtens.htm

Suggested Citation

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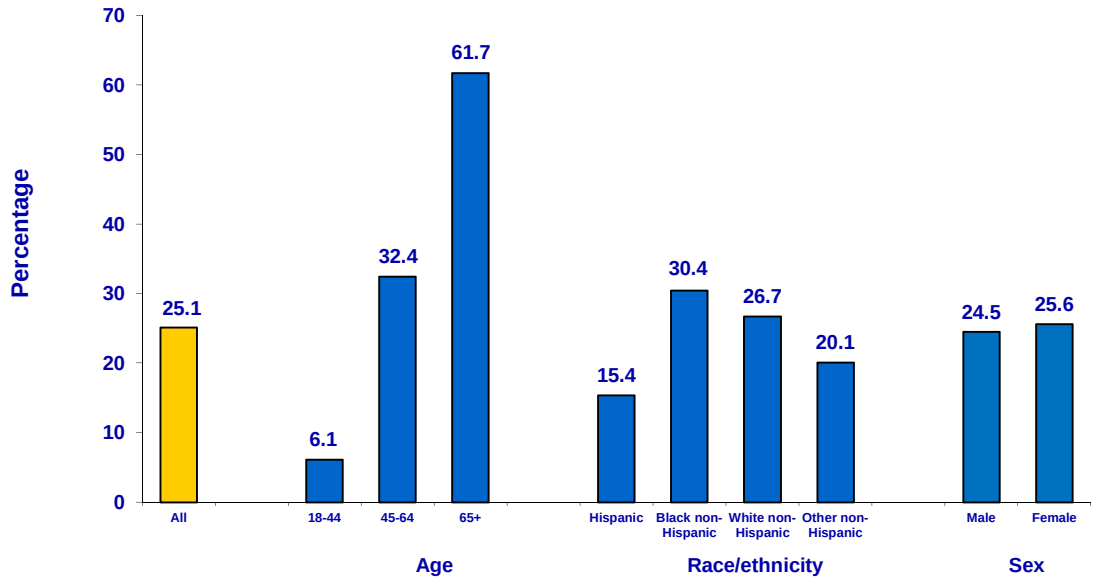
AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using this Statistical Brief and other MEPS data and tools and to share suggestions on how MEPS products might be enhanced to further meet your needs. Please e-mail us at MEPSProjectDirector@ahrq.hhs.gov or send a letter to the address below:

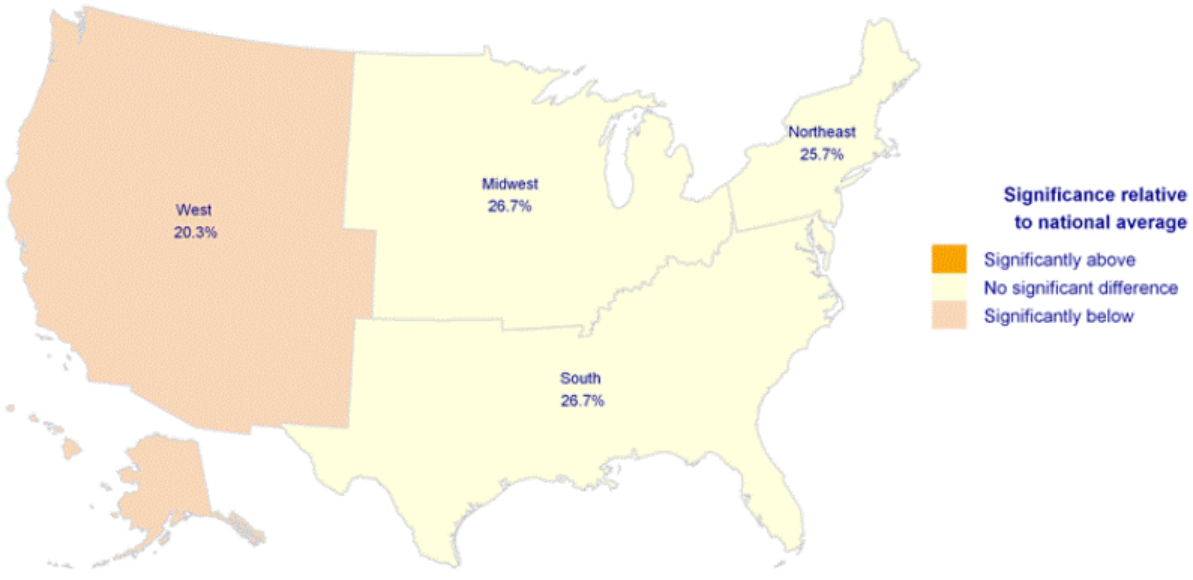
Steve B. Cohen, PhD, Director
Center for Financing, Access, and Cost Trends
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850

Figure 1. Percentage with reported treatment for hypertension by demographic characteristics: adults age 18 and older, 2010



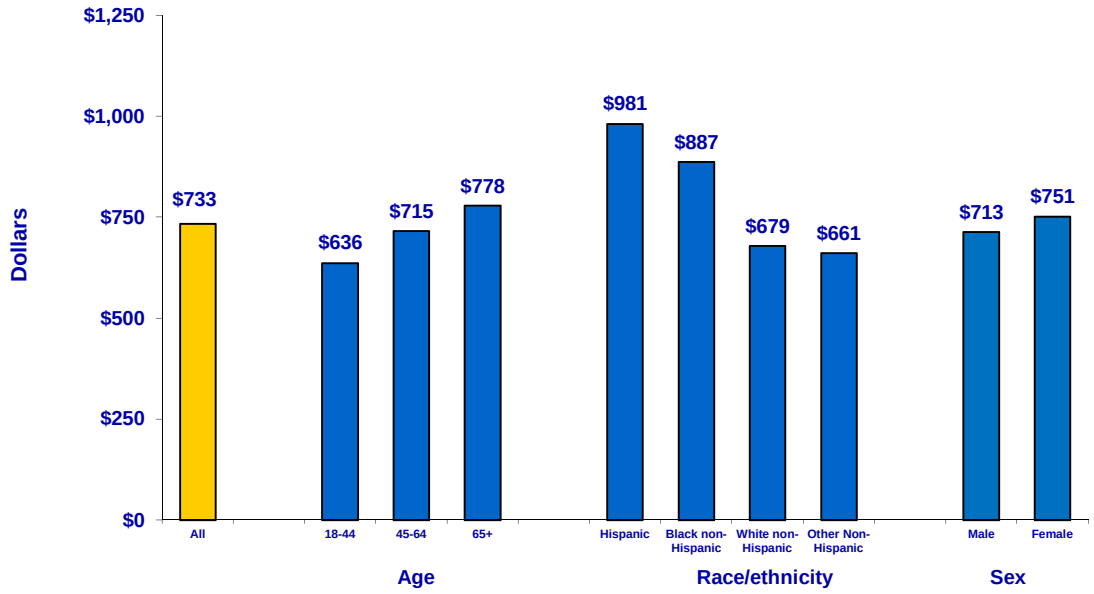
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2010

Figure 2. Percentage with reported treatment for hypertension by region: adults age 18 and older, 2010



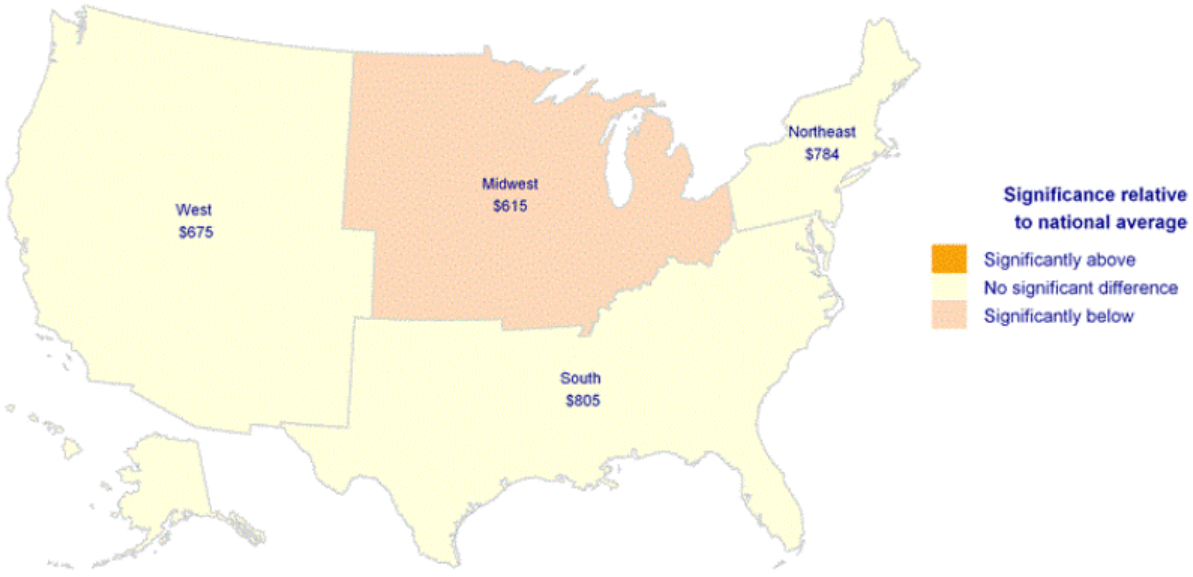
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2010

Figure 3. Mean expenditures per adult for hypertension among those with care for hypertension, by demographic characteristics: adults age 18 and older, 2010



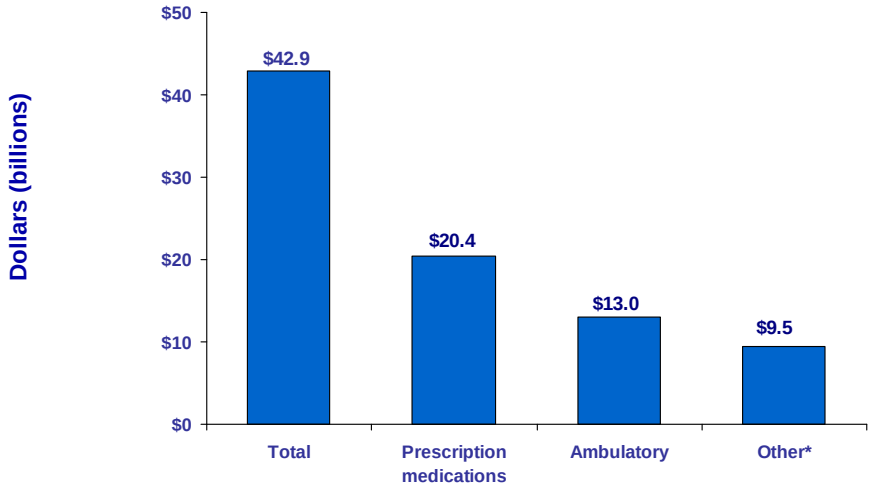
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2010

Figure 4. Mean expenditure per person for the treatment of hypertension by region: adults age 18 and older, 2010



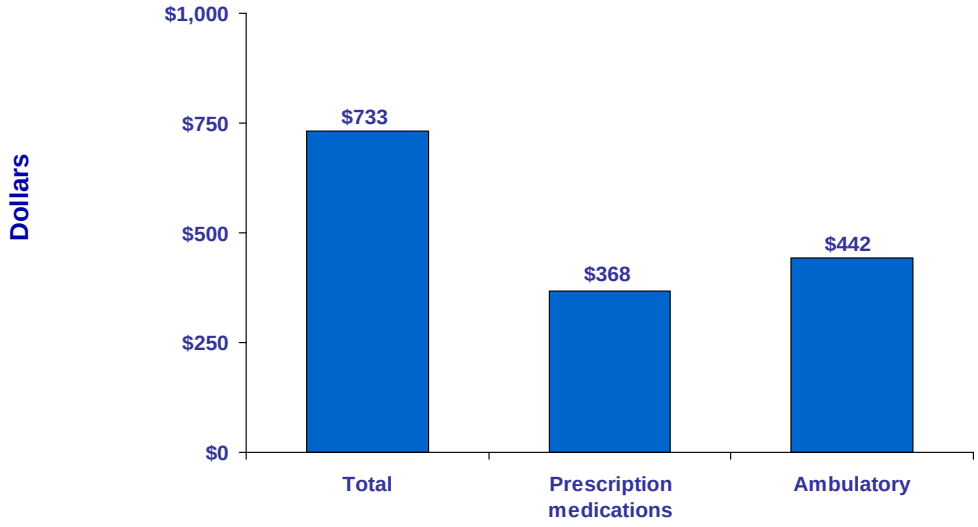
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2010

Figure 5. Total medical expenditures for hypertension, by type of service: adults age 18 and older, 2010



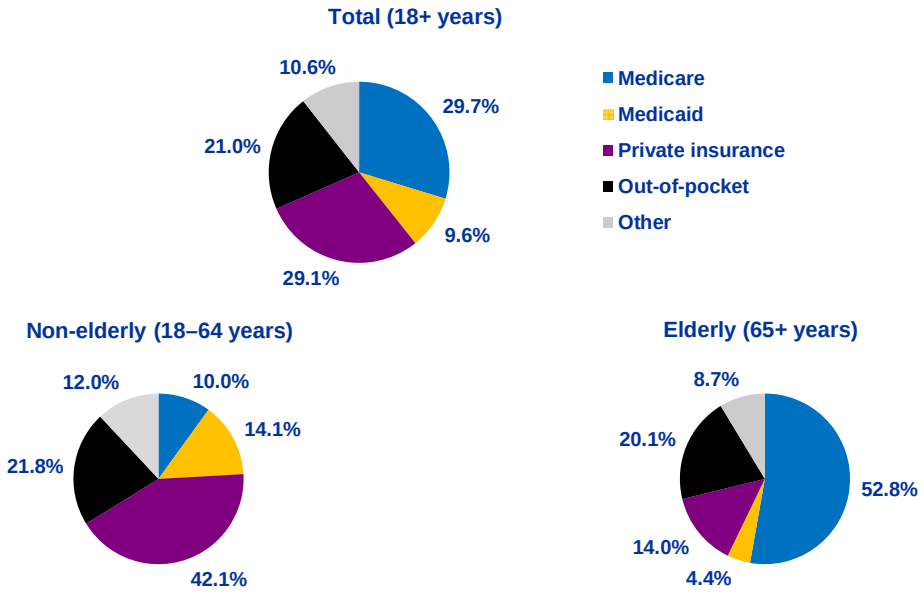
*Other services include hospital inpatient stays, emergency room visits, and home health
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2010

Figure 6. Mean expenditures per adult for hypertension among those with care for hypertension, by type of service: adults age 18 and older, 2010



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2010

Figure 7. Percentage distribution of total expenditures for hypertension, by source of payment and age: adults age 18 and older, 2010



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2010