Medical Expenditure Panel Survey

Agency for Healthcare Research and Quality

STATISTICAL BRIEF #393

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Expenditures for Heart Disease among Adults Age 18 and Older: Estimates for the U.S. Civilian Noninstitutionalized Population, 2009

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Introduction

Chronic conditions are an important factor driving high levels of growth in health care expenditures in the United States According to data from the Medical Expenditure Panel Survey Household Component (MEPS-HC) for the years 1996–2009, heart disease is typically the top condition in terms of annual expenditures among the U.S. adult civilian noninstitutionalized population. This Statistical Brief provides descriptive statistics on the use of medical care services and expenditures for the treatment of heart disease, excluding hypertension, based on the 2009 MEPS-HC. Annual estimates are shown by characteristics of the population and by type of service. All differences between estimates noted in the text are statistically significant at the 0.05 level or better.

Highlights

- In 2009, almost 10 percent of adults age 18 and older incurred health care expenditures related to heart disease.
- Direct medical spending on heart disease totaled $95.5 billion in 2009, the majority ($52.9 billion) for in-patient care.
- Annual expenditures on heart disease among those with expenses for care associated with that condition averaged $4,279 per adult in 2009.

Findings

Expenditures for heart disease, by selected demographic characteristics (figures 1–2)

In 2009, 22.3 million persons, or 9.7 percent of adults age 18 and older, had some health care expenditures related to heart disease (figure 1). The percentage with expenses was lower for adults ages 18 to 44 (2.2 percent) compared with adults ages 45 to 64 (9.1 percent) and adults age 65 and older (31.5 percent).

Approximately 11 percent of non-Hispanic white adults had expenditures for the treatment of heart disease. Compared to non-Hispanic white adults, a lower percentage of non-Hispanic blacks (8.0 percent), non-Hispanic Asians (4.7 percent), and Hispanics (4.4 percent) had heart disease related expenses (figure 1). There was no significant difference by gender.

Adults in families with low and middle incomes had higher percentages of persons with expenses for heart disease (12.1 and 9.7 percent, respectively) than those in families with high incomes (8.5 percent) (figure 2).

At least 10 percent of adults had expenses for treatment of heart disease in each geographic region except the West, where only 7.3 percent had expenses for treatment of the condition (figure 2).

Distribution of health care expenditures for heart disease, by type of service (figures 3–5)

Among adults with heart disease expenses, 74.8 percent reported

prescription drug expenses related to that condition (figure 3). Approximately 65 percent of adults with heart disease expenses had related office-based care expenses. Thirteen percent of adults had expenses for heart disease in both the emergency room and inpatient hospital.

In 2009, a total of $95.5 billion was spent for the treatment of heart disease in adults across all types of services (figure 4). A majority of this spending ($52.9 billion) was for in-patient care. Office-based, hospital out-patient, and prescription drug expenditures totaled $12.0 billion, $9.1 billion, and $8.5 billion, respectively.

Average total expenditures per adult for the treatment of heart disease (among those with expenditures for the condition) were $4,279 in 2009 (figure 5). Expenditures per adult for in-patient care averaged $2,371, office-based care averaged $537, and outpatient care averaged $411. Average emergency room and prescription drug expenditures on heart disease were $248 and $381 per adult, respectively.

Average medical expenditures by chronic condition status (figures 6–7)
Of the 194.7 million adults with expenditures for treatment of chronic conditions in 2009, more than 22 million (about 12 percent of the total) had expenditures on medical care services for the treatment of heart disease (figure 6). Most of those individuals had treatment for at least one chronic condition in addition to heart disease (20.6 million). About two-thirds of the adult community population with expenses for care of any kind had expenses for the care of at least one chronic condition (127 million), in most cases for conditions other than heart disease (104.6 million).

Individuals with no expenditures for chronic conditions had lower average total medical expenditures ($1,884) than persons with expenses for heart disease but no other chronic conditions ($7,026) and persons with expenses for chronic conditions excluding heart disease ($6,448) (figure 7). Average expenses for adults with expenses for heart disease and other chronic conditions ($14,627) were about twice as high as those with expenses for heart disease as their only chronic condition.

Data Source

The estimates shown in this Statistical Brief are based on data from the MEPS 2009 Full Year Consolidated Data File (HC-129); 2009 Medical Conditions File (HC-128); 2009 Prescribed Medicines File (HC-126A); 2009 Hospital Inpatient Stays File (HC-126D); 2009 Emergency Room Visits File (HC-126E); 2009 Outpatient Visits File (HC-126F); 2009 Office-Based Medical Provider Visits File (HC-126G); and 2009 Home Health File (HC-126H).

Definitions

Heart disease
This Brief analyzes adults age 18 and older with heart disease 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 homogeneous categories known as Clinical Classification Software (CCS) codes. Conditions with CCS codes 96, 97, and 100–108 (heart disease) were used for this Brief. This definition excludes hypertension. A crosswalk of ICD-9 codes and CCS codes is available in the documentation file of the Medical Conditions File for 2009 (HC-128). 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.

Chronic conditions
The identification of sample persons with chronic conditions was based on application of the AHRQ Healthcare Utilization Project Chronic Condition Indicator (CCI) (http://www.hcup-us.ahrq.gov/toolssoftware/chronic/chronic.jsp#overview) and Clinical Classification Software (http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp) tools to the MEPS medical condition files. These files contain coded information on conditions reported by MEPS respondents as being associated with medical events http://meps.ahrq.gov/mepsweb/data_stats/download_data_files_detail.jsp?cboPufNumber=HC-128.

The CCI categorizes all ICD-9-CM diagnosis codes as chronic or not chronic, with chronic conditions defined as those lasting 12 months or longer that also place limitations on self-care, independent living, and social interactions or result in the need for ongoing intervention with medical products, services, and special equipment (Perrin et al., 1993). The CCI algorithm originated with work by a physician panel that reviewed diagnosis codes appearing in MEPS data (Hwang et al., 2001).

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. Figure 7 includes the aforementioned expenditures plus dental and other medical expenses. 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 heart disease if a visit, stay, or medication purchase was reported as being for a heart disease related condition. Expenditures for a medical event or prescription purchase may be associated with more than one condition in MEPS. Therefore, heart disease related events or purchases can include expenses associated with other conditions as well.

Age
Persons age 18 and over were categorized into age groups based on their age on December 31, 2009, or their age at a point earlier in the year when they were last considered in scope for the survey.

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 was Hispanic or Latino. Respondents were also asked which race or races best described each family member. Race categories included white, black/African American, American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, and other. Based on these questions, sample persons were classified into the following race/ethnicity categories: Hispanic, black non-Hispanic single race, white non-Hispanic single race, and Asian non-Hispanic single race (Asian non-Hispanic single race and Hawaiian/Pacific Islander). Due to sample size, other non-Hispanic (American Indian/Alaska Native non-Hispanic and multiple races non-Hispanic) were excluded.

Income
In MEPS, personal income from all household members is summed to create family income. Potential sources of income include annual earnings from wages, salaries, bonuses, tips, and commissions; business and farm gains and losses; unemployment and Workers' Compensation payments; interest and dividends; alimony, child support, and other private cash transfers; private pensions; individual retirement account (IRA) withdrawals; Social Security and Department of Veterans Affairs payments; Supplemental Security Income and cash welfare payments from public assistance, TANF (Temporary Assistance for Needy Families; formerly known as Aid to Families with Dependent Children, or AFDC); gains or losses from estates, trusts, partnerships, S corporations, rent, and royalties; and a small amount of "other" income. Individuals were classified according to their family's income in terms of poverty status. Poverty status is the ratio of the family's income to the Federal poverty thresholds, which control for the size of the family and the age of the head of the family. The following classification of poverty status was used:

- Poor: Persons in families with incomes less than 100 percent of the poverty line, including those who reported negative income.
- Low income: Persons in families with incomes greater than or equal to 100 percent but less than 200 percent of the poverty line.
- Middle income: Persons in families with incomes greater than or equal to 200 percent but less than 400 percent of the poverty line.
- High income: Persons in families with incomes greater than or equal to 400 percent of the poverty line.

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/.

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http://meps.ahrq.gov/mepsweb/data_files/publications/st393/stat393.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 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:

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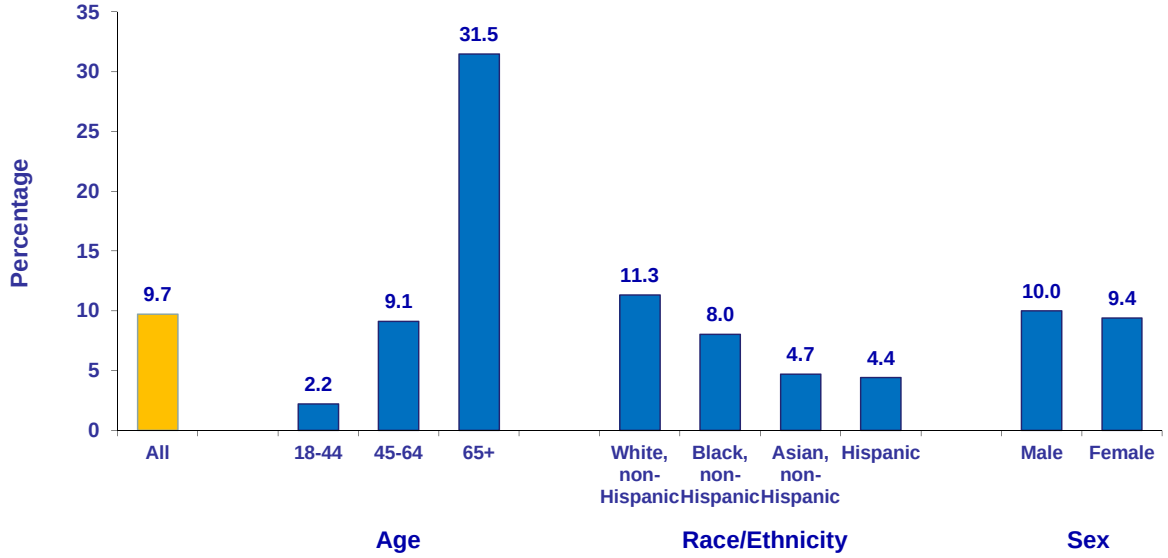
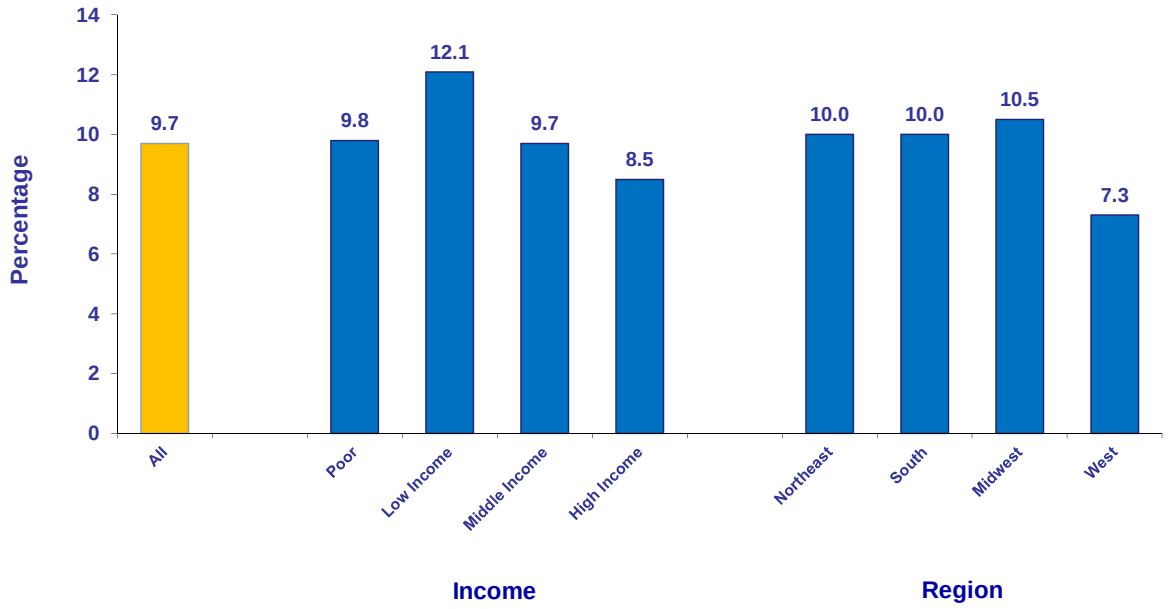
Figure 1. Percentage with reported treatment for heart disease by demographic characteristics: adults 18 and older, 2009



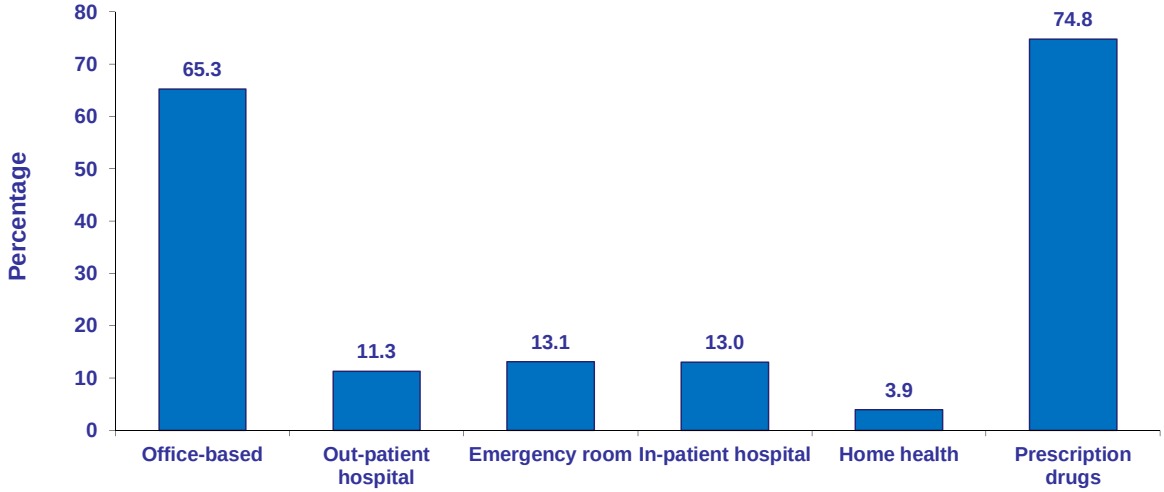
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2009

Figure 2. Percentage with reported treatment for heart disease by income and region: adults 18 and older, 2009



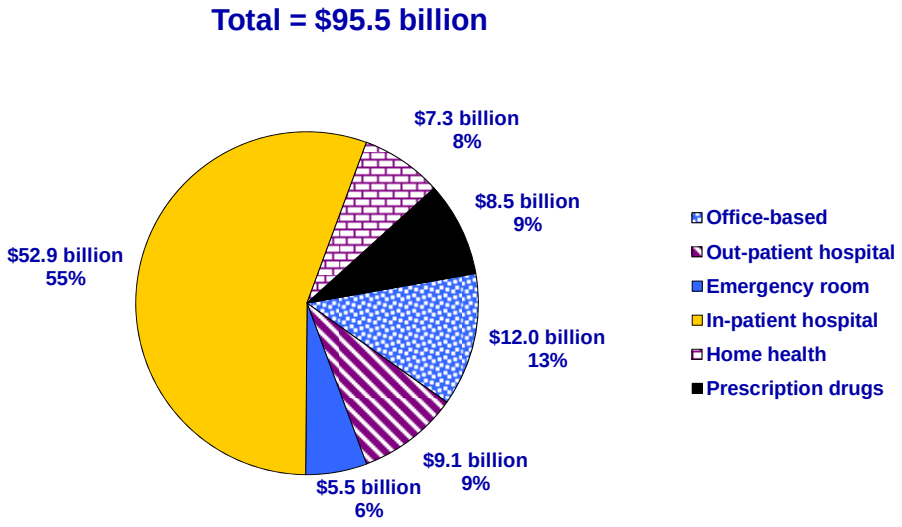
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2009

Figure 3. Percentage with reported expenses for heart disease by type of service: adults 18 and older, 2009



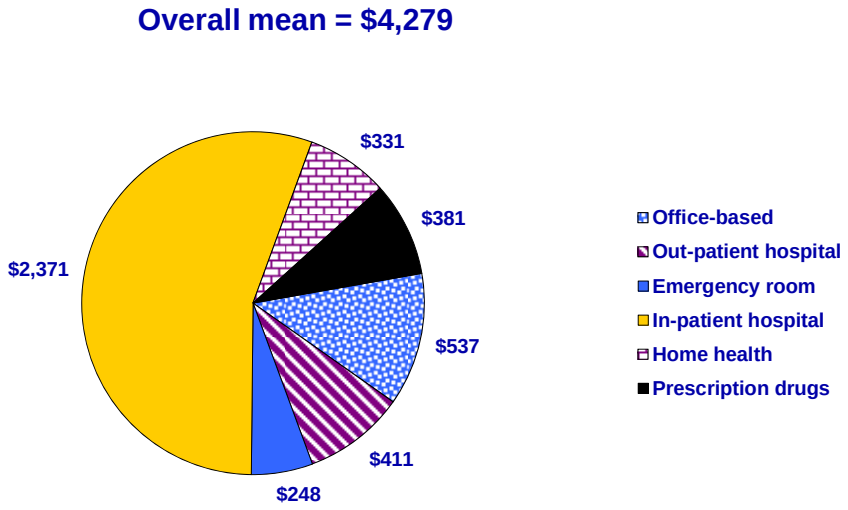
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2009

Figure 4. Total medical expenditures for heart disease, by type of service: adults age 18 and older, 2009



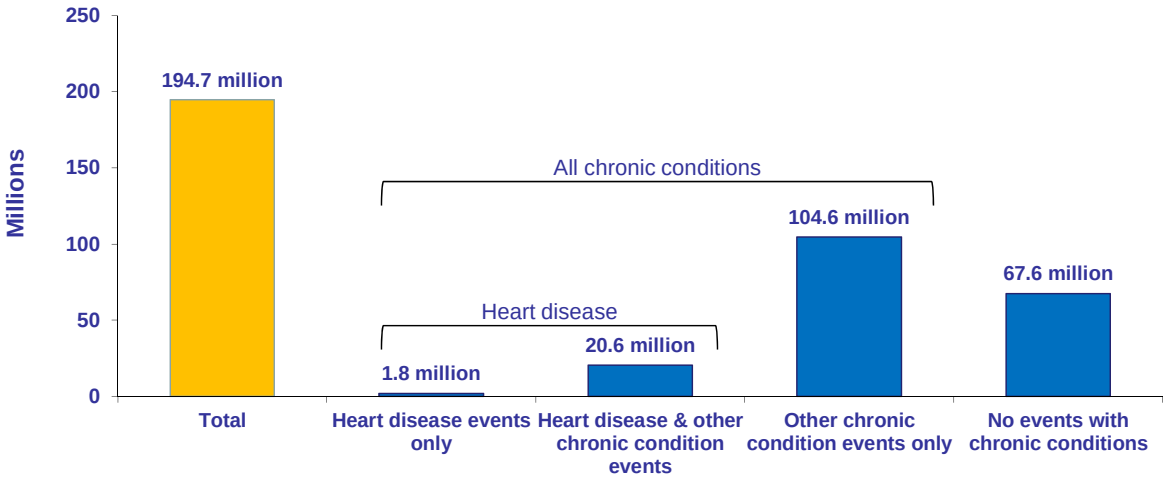
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2009

Figure 5. Mean expenditures per adult for heart disease among those with heart disease expenditures, by type of service: adults age 18 and older, 2009



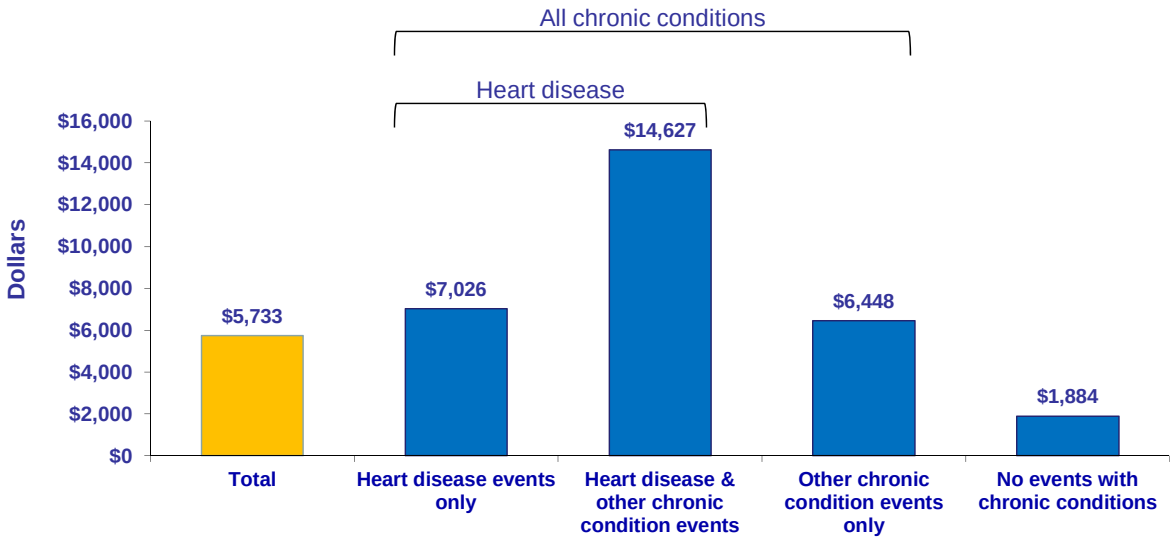
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2009

Figure 6. Number of individuals with events related to chronic conditions among those with expenditures: adults 18 and older, 2009



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2009

Figure 7. Mean medical expenditures per adult among those with expenditures by chronic conditions: adults 18 and older, 2009



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2009