Medical Expenditure Panel Survey

Agency for Healthcare Research and Quality

STATISTICAL BRIEF #387

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Expenditures for Trauma-Related Disorders, 2009: Estimates for the U.S. Civilian Noninstitutionalized Population

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Introduction

In 2009, trauma-related disorders ranked among the top 5 most costly medical conditions in terms of health care expenditures, with a total of $80.8 billion for the U.S. civilian noninstitutionalized population. The average expenditures for a person with any expense for trauma-related disorders totaled $2,426. The top 5 most costly trauma-related disorders accounted for $58.6 billion in expenditures. 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 medical care (see definition for expenditures) related to trauma disorders among the U.S. civilian noninstitutionalized population. Annual estimates for 2009 are shown by type of service. All differences between estimates noted in the text are statistically significant at the 0.05 level or better.

Findings

In 2009, trauma-related disorders ranked among the top 5 most costly medical conditions in terms of health care expenditures with a total of $80.8 billion. The 5 most costly trauma-related disorders accounted for $58.6 billion in expenditures or 72.5 percent of the trauma total (figure 1). Medical expenditures related to sprains and strains totaled $17.9 billion in 2009, while other injuries due to external causes ranked second with $16.3 billion. Fractures of the lower and upper limbs totaled $12.0 billion and $7.0 billion, respectively. Other fractures accounted for $5.4 billion in expenses.

Treatment for trauma-related disorders, by selected demographic characteristics

In 2009, 33.3 million individuals or 11 percent of the population had treatment for trauma-related disorders (figure 2). Persons age 65 and older had the highest likelihood of treatment for trauma-related disorders (13.4 percent). The likelihood of treatment for trauma-related disorders for individuals under 18, 18 to 44, and 45 to 64 years old was 10.7, 10.2, and 11.7 percent, respectively. Approximately 13 percent of non-Hispanic whites received treatment for trauma-related disorders. This was higher than for non-Hispanic blacks (8.9 percent), non-Hispanic Asians (5.8 percent), and Hispanics (6.2 percent).

Treatment for trauma-related disorders, by income

Individuals with incomes greater than 400 percent of FPL had the highest percent of persons receiving treatment for trauma-related disorders at 12.1 percent (figure 2). In comparison, persons with incomes less than 200 percent of FPL had lower incidences of treatment for trauma-related disorders—9.5 percent for those with incomes less than 100 percent of FPL and 9.8 percent for those with incomes between 100 to 200 percent of FPL.

Treatment for trauma-related disorders, by geography

In 2009, 12.6 percent of persons residing in the Midwest received treatment for trauma-related disorders (figure 3). People in other regions of the country had lower rates of treatment for trauma-related disorders—the Northeast at 10.6 percent, the South at 10.4 percent, and the West at 10.9 percent. Compared to individuals living in an MSA, persons living in non-MSA areas were more likely to receive of treatment for trauma-related disorders (10.7 versus 12.7 percent).

Distribution of health care expenditures for trauma-related disorders, by type of service

In 2009, a total of $80.8 billion was spent on trauma-related disorders across all services (figure 4). Thirty-six percent ($28.9 billion) of those expenditures were for in-patient care, followed by 29 percent ($23.3 billion) for office-based services. Emergency room and out-patient expenditures accounted for $12.0 billion and $11.6 billion, respectively.

The average annual expenditure per person with an expense for trauma-related disorders was $2,426 in 2009 (figure 5). On average, expenditures were $867 for in-patient care, $701 for office-based services, $361 for emergency-room visits, and $348 for out-patient hospital services.

Highlights

- In 2009, 33.3 million individuals (11.0 percent of the community population) reported treatment for trauma-related disorders.
- Health care expenditures associated with trauma-related disorders totaled $80.8 billion with an annual mean expenditure of $2,426 per person with an expense.
- Individuals age 65 and older had the highest likelihood of having treatment (13.4 percent) for trauma-related disorders compared to all other age groups.
- Among all racial groups, non-Hispanic whites had the highest proportion (12.9 percent) of individuals who reported treatment for trauma-related disorders.
- Persons residing in the Midwest and in non-MSA areas reported higher incidences of treatment for trauma-related disorders.

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

Trauma-related events

This Brief analyzes the noninstitutionalized U.S. civilian population with trauma-related disorders 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 225–236, 239, 240, and 244 (trauma-related disorders) 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 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.

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 trauma-related disorders if a visit, stay, or medication purchase was cited as being related to a trauma-related disorder. An event may be associated with two or more trauma-related disorders and therefore expenditures related to one event may be counted more than one time (figure 1). There are some events that have no associated expenditures; these are not included in the calculations of the mean annual expenditure (figure 5).

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, Asian non-Hispanic single race (Asian non-Hispanic single race and Hawaiian/Pacific Islander), and other non-Hispanic (American Indian/Alaska Native non-Hispanic and multiple races non-Hispanic).

Poverty status

We define income groups based on the percentage of the poverty line for total family income, adjusted for family size and composition. Income is a family-level variable where all sources of income across all earners in the family are summed to form a total income value. This total income value is then divided by the appropriate poverty line income value adjusted for family size and composition.

Metropolitan statistical area (MSA)

Areas designated by the U.S. Office of Management and Budget that are composed of a large population nucleus combined with adjacent communities that have a high degree of economic and social integration with the nucleus. Each MSA has one or more central counties containing the area's main population concentration.

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

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://meps.ahrq.gov/mepsweb/data_files/publications/mr1/mr1.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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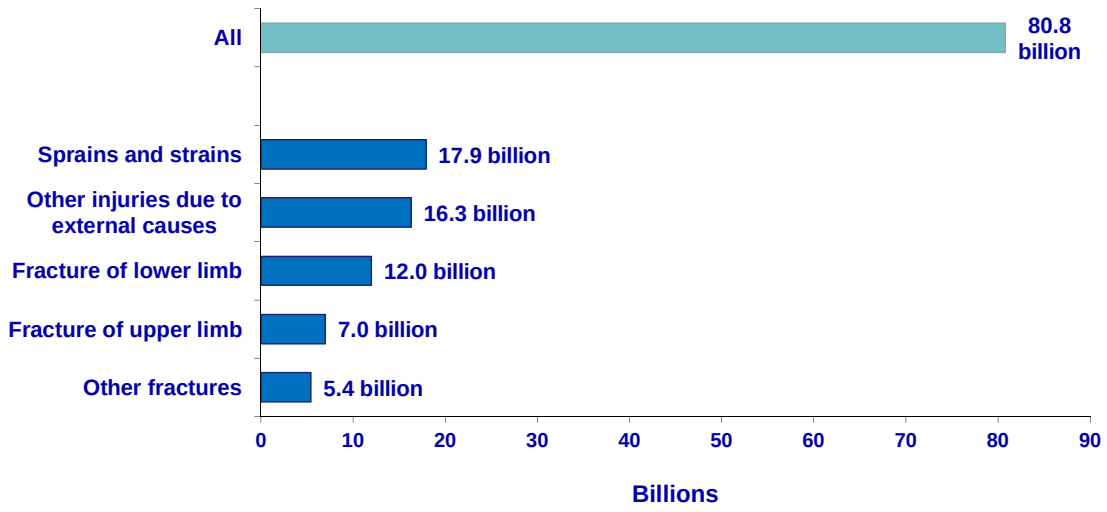
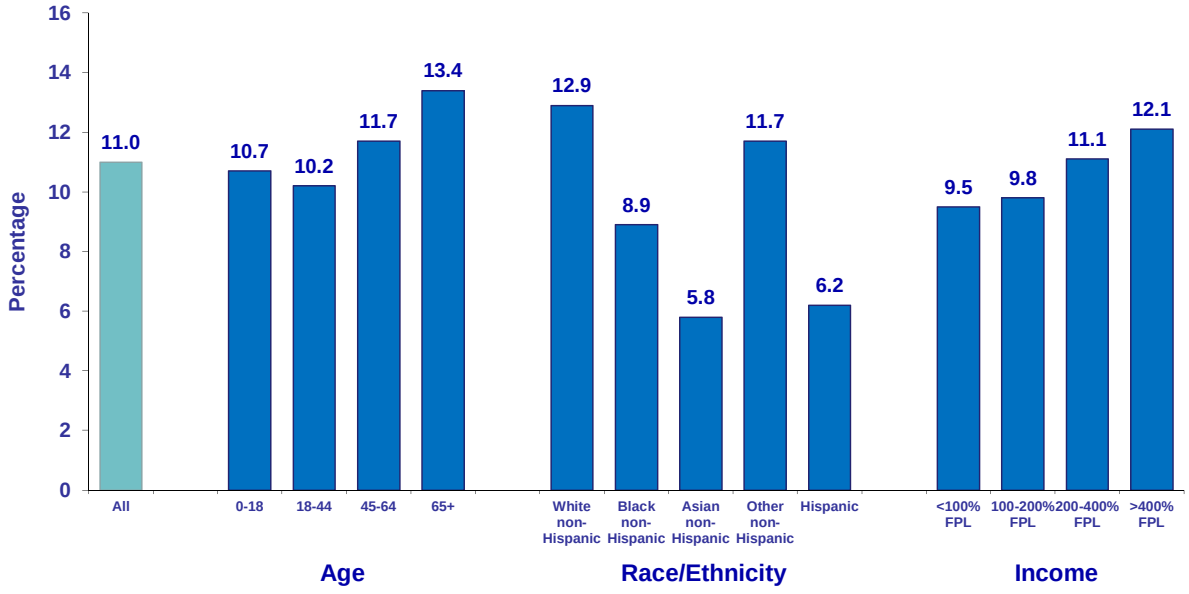
Figure 1. Total medical expenditures for the top 5 trauma-related disorders



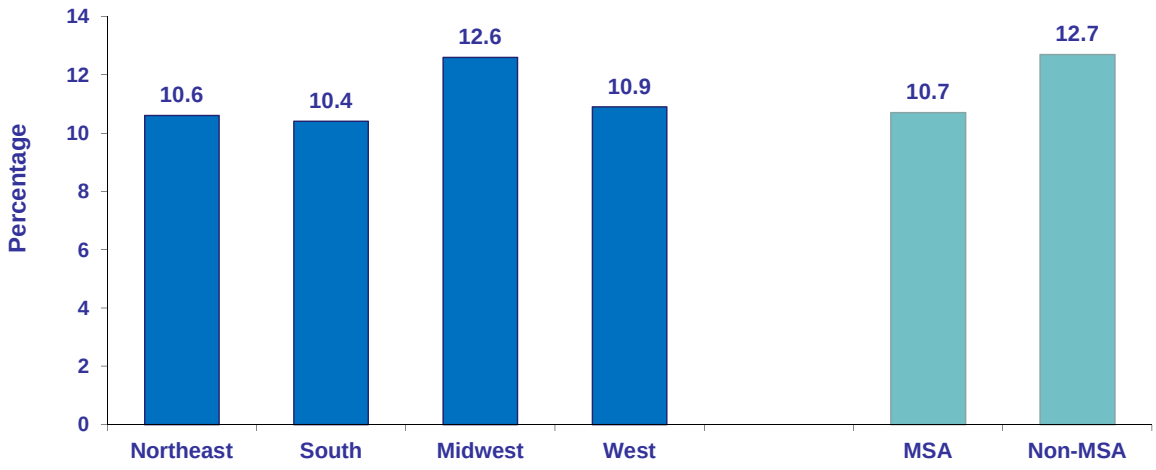
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2009

Figure 2. Percentage receiving treatment for trauma-related disorders by demographic characteristics



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

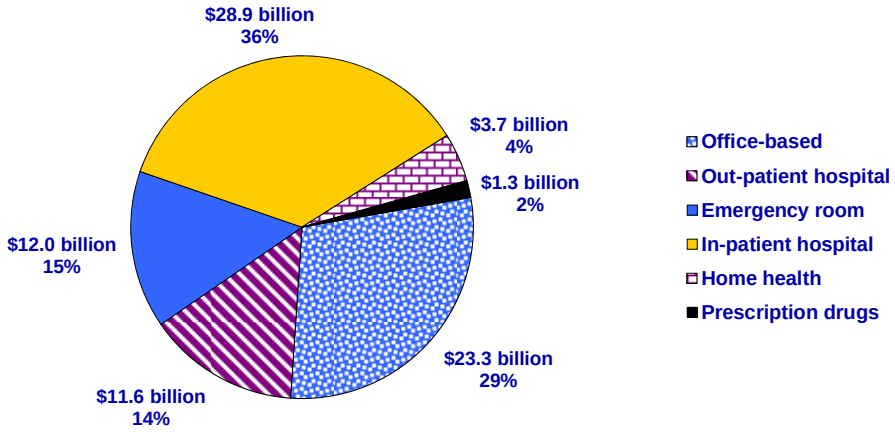
Figure 3. Percentage receiving treatment for trauma-related disorders by geography



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

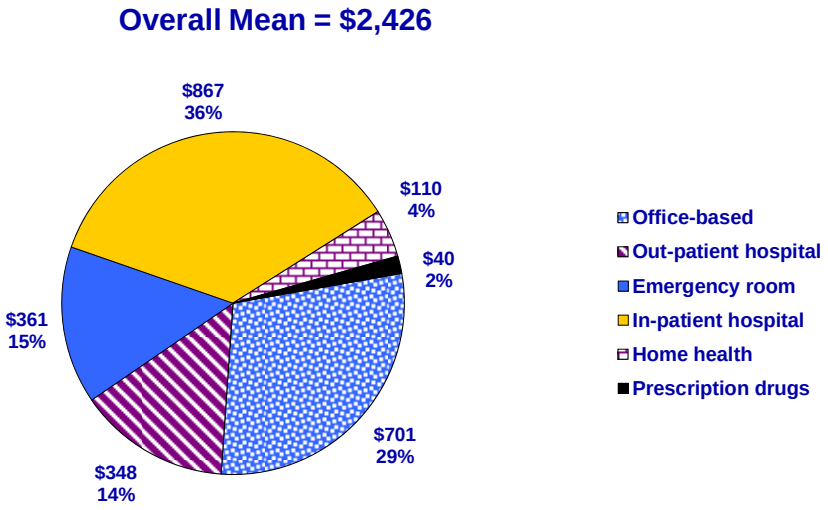
Figure 4. Total medical expenditures for trauma-related disorders, by type of service

Total = $80.8 billion



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

Figure 5. Mean expenditures per person for trauma-related disorders among those with expenses for trauma-related disorders, by type of service



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