Medical Expenditure Panel Survey

Agency for Healthcare Research and Quality

STATISTICAL BRIEF #349

December 2011

Health Care Expenditures for the Five Most Common Children's Conditions, 2008: Estimates for U.S. Civilian Noninstitutionalized Children, Ages 0-17

Marc Roemer, MS

Highlights

- For those under 18 years of age, the five medical conditions that ranked highest in terms of the number of individuals with expenses for care in 2008 included acute bronchitis, asthma, trauma-related disorders, otitis media, and mental disorders.
- In 2008, 11.9 million children received treatment for bronchitis and 11.7 million for asthma.
- The total expenditures for treating children's mental disorders were $12.2 billion, with an average of $2,483 spent per child with expenses.
- The types of medical services utilized by children varied greatly by condition.
- The largest share of total expenditures for bronchitis, trauma, and otitis media was paid by private insurance.

Introduction

Health care expenditures for the treatment of children's ailments have been on the rise in the U.S. Typically, medical expenditures are concentrated in the treatment of certain types of highly prevalent conditions or for which treatment entails frequent or high cost services.

This Statistical Brief presents data from MEPS-HC regarding the five conditions affecting the most children ages 0–17 in 2008. The five most common conditions (acute bronchitis*, asthma*, trauma-related disorders, otitis media, and mental disorders) were determined by totaling the number of children who had expenses for care associated with each condition in 2008 and ranking them. Only differences between estimates that are statistically significant at the 0.05 level are discussed in the text.

Findings

The top five most commonly treated conditions among children in 2008 included acute bronchitis, asthma, trauma-related disorders, otitis media (middle ear infection), and mental disorders. Among the 74.3 million noninstitutionalized children in the U.S., 40.5 percent were treated for at least one of these conditions in 2008. These conditions accounted for 60.4 percent of all children's ambulatory visits (office-based or hospital outpatient).

The most widely reported children's conditions associated with expenses were bronchitis (11.9 million) and asthma (11.7 million) (figure 1). Trauma-related disorders and otitis media were the next most common conditions with 6.7 million and 6.3 million children incurring expenses, respectively. About 4.9 million children were treated for mental disorders, the fifth most common condition.

Although it was the least common among the top five treated conditions, the average expenditure on mental disorders per child with expenses was highest at $2,483 (figure 2). Of the top five conditions, bronchitis had the lowest average expenditures per child at $226.

In 2008, a total of $114.5 billion was spent on all conditions for children, of which $32.9 billion was spent on the five most commonly treated conditions (data not shown). Of these top five, total expenditures were highest for mental disorders at $12.2 billion, followed by asthma at $9.3 billion and trauma-related disorders at $6.9 billion (figure 3). Total expenditures were lowest among the top five for bronchitis ($2.7 billion) and otitis media ($2.3 billion).

Treatment for the top five children's conditions involved different types of medical service such as ambulatory visits, inpatient, emergency care, prescription medications, and home health care visits. The expenditures for treating bronchitis and otitis media were concentrated in ambulatory visits (65.9 percent and 80.0 percent, respectively) (figure 4). The cost of treating asthma was mostly accounted for by hospital stays and prescription medications (36.1 percent and 37.9 percent, respectively). For trauma, most of the expenditures were for ambulatory visits (46.7 percent) and the emergency department (33.8 percent). About one-third of the expenses for treatment of mental disorders was for prescription medications (33.6 percent) followed by 30.2 percent for ambulatory visits and 22.1 percent for home health visits.

Private insurance paid the largest share of expenditures for bronchitis (54.8 percent), trauma (61.7 percent), and otitis media (64.3 percent) (figure 5). In contrast, Medicaid paid the largest share of expenditures for treating asthma (50.6 percent) and mental disorders (45.6 percent). The share of costs paid out of pocket did not vary significantly by condition (amounting to between 12.5 percent and 17.5 percent).

Data Source

The estimates in this Brief were derived from the MEPS 2008 Full Year Consolidated Data and Medical Conditions files.

Definitions

*All references to asthma in this Statistical Brief include chronic obstructive pulmonary disorder (COPD). All references to acute bronchitis include upper respiratory infections (URI).

Medical conditions
Condition data were collected from household respondents during each round as verbatim text and coded by professional coders using the International Classification of Diseases, Ninth Revision (ICD-9). ICD-9-CM condition codes were then aggregated into clinically meaningful categories that group similar conditions using the Clinical Classification System (CCS) software. Categories were collapsed when appropriate. Note that the reported ICD-9-CM condition code values were mapped to the appropriate clinical classification category prior to being collapsed to 3-digit ICD-9-CM condition codes. The result is that every record which has an ICD-9-CM diagnosis code also has a clinical classification code. For this Statistical Brief, the following CCS codes were used: otitis media 092; acute bronchitis and URI 125, 126; chronic obstructive pulmonary disease (COPD), asthma 127−134; trauma-related disorders 225−236, 239, 240, 244; and mental disorders 650−663, 670.

Expenditures
Expenditures refer to what is paid for health care services. More specifically, expenditures in MEPS are defined as the sum of direct payments for care provided during the year, including out-of-pocket payments and payments by private insurance, Medicaid, Medicare, and 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 may be associated with more than one condition and are not unduplicated in the condition totals. Summing over conditions would double-count some expenses. 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 could not be linked to specific conditions.

MEPS expenditure data are derived from both the Medical Provider Component (MPC) and Household Component (HC). MPC data are generally used for hospital-based events (e.g., inpatient stays, emergency room visits, and outpatient department visits), prescribed medicine purchases, and home health agency care. Office-based physician care estimates use a mix of HC and MPC data while estimates for non-physician office visits, dental and vision services, other medical equipment and services, and independent provider home health care services are based on HC provided data. Details on the estimation process can be found in:

Machlin, S. R. and Dougherty, D. D. *Overview of Methodology for Imputing Missing Expenditure Data in the Medical Expenditure Panel Survey*. Methodology Report No. 19. March 2007. Agency for Healthcare Research and Quality, Rockville, MD. http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr19/mr19.pdf

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 of the U.S. civilian noninstitutionalized population. It is co-sponsored by the Agency for Healthcare Research and Quality and the National Center for Health Statistics.

References

For a detailed description of the MEPS-HC 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. 970026. 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. 970027. 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 2008. Agency *for Healthcare Research and Quality, Rockville, MD.* http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr22/mr22.pdf

Suggested Citation

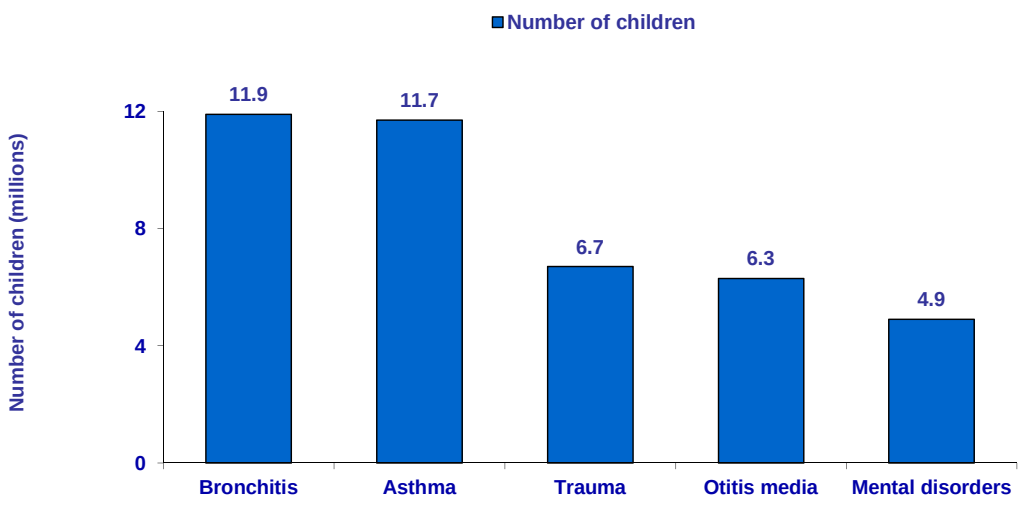
Roemer, M. *Health Care Expenditures for the Five Most Common Children's Conditions, 2008: Estimates for U.S. Civilian Noninstitutionalized Children, Ages 0–17*. Statistical Brief #349. December 2011. Agency for Healthcare Research and Quality, Rockville, MD. http://www.meps.ahrq.gov/mepsweb/data_files/publications/st349/stat349.pdf

* * *

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:

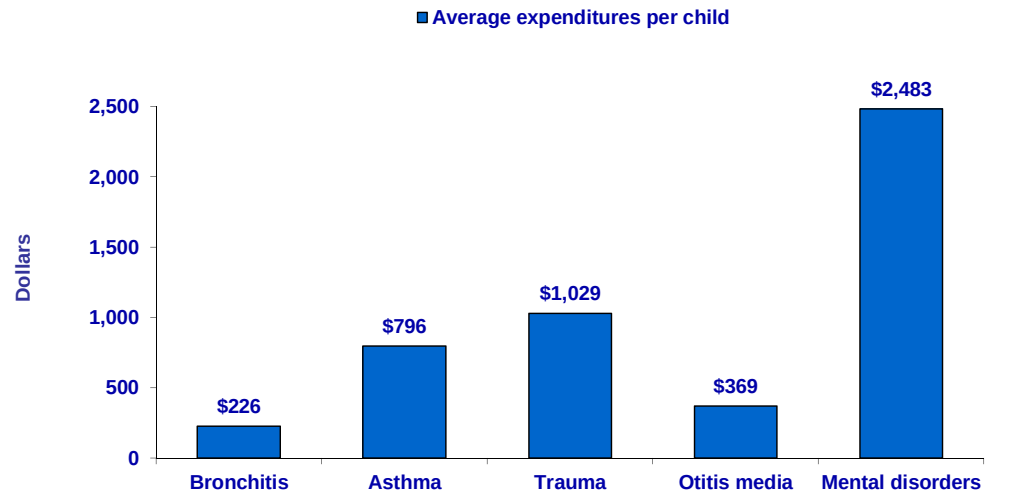
Steven B. Cohen, PhD, Director
Center for Financing, Access, and Cost Trends
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850

Figure 1. Number of children with expenses for the top five most common conditions, age 17 and younger, 2008



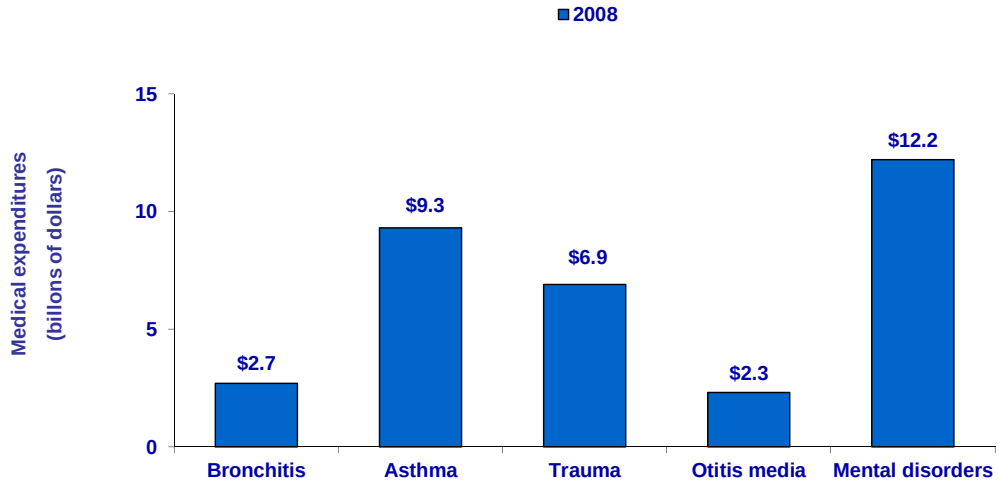
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2008

Figure 2. Average expenditures per child with expenses for the top five most common conditions, age 17 and younger, 2008



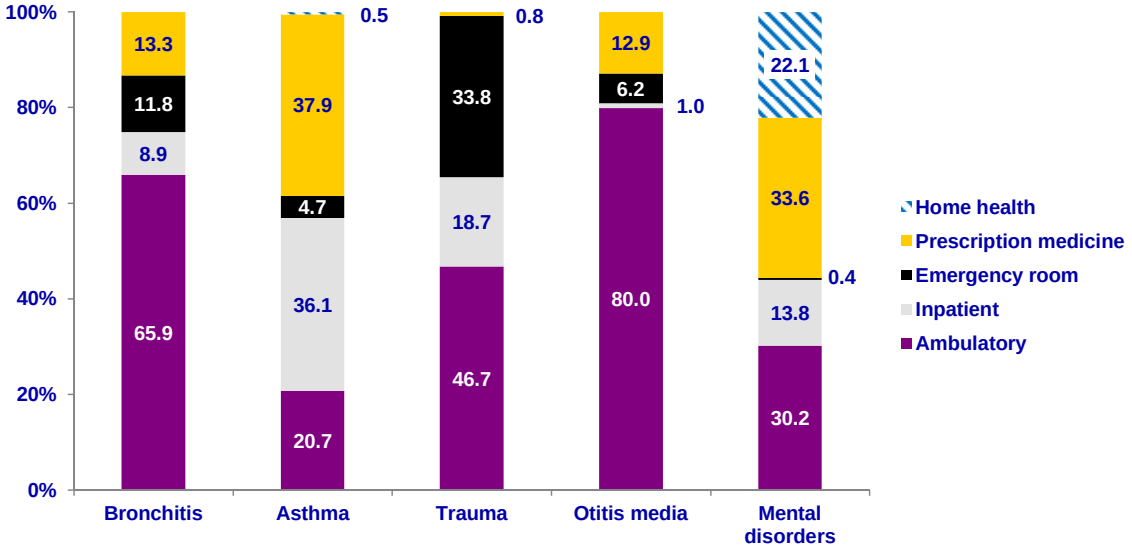
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2008

Figure 3. Expenditures for the five most prevalent conditions in children, age 17 and younger, 2008



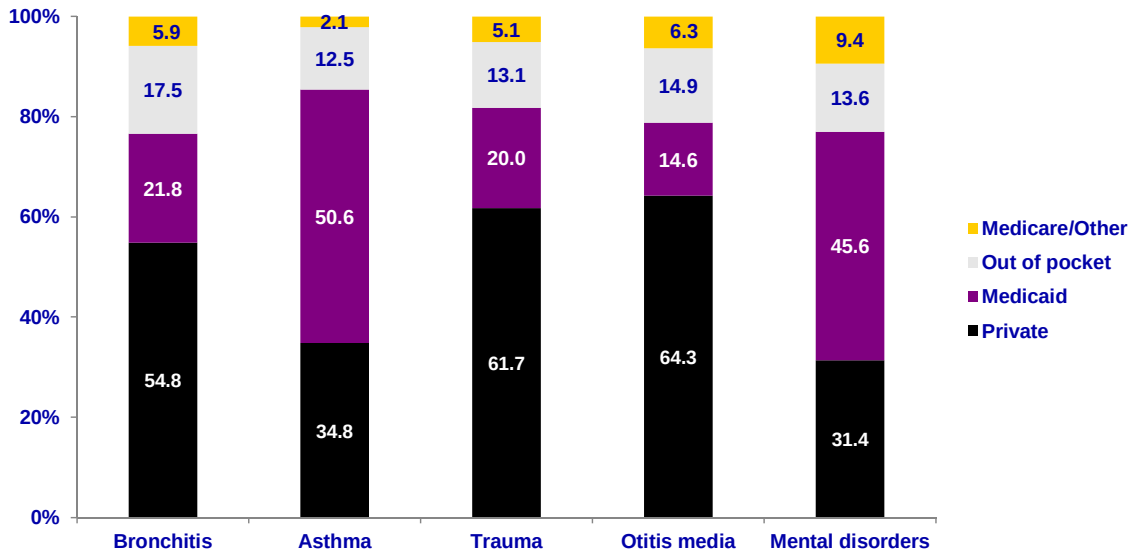
Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2008

Figure 4. Percentage distribution of annual expenditures for five most common conditions in children, by type of service, 2008



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2008

Figure 5. Percentage distribution of annual expenditures for five most common conditions in children, by source of payment, 2008



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2008