

## STATISTICAL BRIEF #146

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# Proportion and Medical Expenditures of Adults Being Treated for Diabetes, 1996 and 2003

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### Introduction

Using data from the Household Component of the Medical Expenditure Panel Survey (MEPS-HC), this Statistical Brief provides estimates on the changes between 1996 and 2003 in the proportion and medical expenditures of adults in the U.S. civilian noninstitutionalized population who had at least one medical event for the treatment of diabetes. The 1996 expenditures have been inflated to 2003 dollars for comparisons of the average quantity of health care services delivered to adults being treated for diabetes during these years. Only differences between estimates for the selected years that are statistically significant at the 0.05 level are discussed in the text.

### Findings

#### *Distribution and expenditure shares of diabetic adults*

Table 1 shows the percentage of adults in the U.S. civilian noninstitutionalized population with at least one medical event for the treatment of diabetes and its share of medical expenditures by all adults in the years 1996 and 2003. Between 1996 and 2003, the proportion of adults who were treated for diabetes increased 1.3 percentage points (from 5.0 percent to 6.3 percent of all adults). The increase reflects change between the two years in the proportion of adults receiving treatment for diabetes in the 45 to 64 age group (from 7.0 percent to 9.0 percent) and the 65 or older age group (from 13.1 percent to 15.8 percent). During this period, no significant change was noted in the share of total expenditures attributable to adults being treated for diabetes. Undiagnosed and untreated cases of diabetes are not reflected in these estimates.

#### *Medical expenditures of adults receiving care for diabetes*

Table 2 shows 1996 and 2003 average expenditures (in constant 2003 dollars) for selected types of care among adults who had at least one medical event for the treatment of diabetes. The constant dollar estimates of per capita expenditures on health care capture change in the average quantity of services delivered to diabetics for the treatment of diabetes, comorbidities of diabetes, and unrelated conditions. Between the years 1996 and 2003, the average constant dollar expenditure on prescription medicines for all types of medical

### Highlights

- Between 1996 and 2003, the proportion of adults with at least one medical event for the treatment of diabetes increased from 7.0 percent to 9.0 percent in the 45 to 64 age group and from 13.1 percent to 15.8 percent in the 65 or older age group.
- Between 1996 and 2003, the average constant dollar expenditure on all types of prescription medicines by adults with at least one medical event for the treatment of diabetes increased 87.3 percent in the 18 to 44 age group, 114.9 percent in the 45 to 64 age group, and 61.4 percent in the 65 or older age group. The average constant dollar expenditure for all types of office-based medical provider care increased 46.3 percent in the 45 to 64 age group and 45.2 percent in the age 65 or older age group.
- The average constant dollar expenditure for prescription medicines to treat diabetes increased in all age groups between 1996 and 2003—70.7 percent in the 18 to 44 age group, 99.6 percent in the 45 to 64 age group, and 74.2 percent in the 65 or older age group. In addition, the average constant dollar expenditure for hospital and physician care and prescription medicines to treat diabetes increased 73.0 percent in the 65 or older age group.

problems increased 87.3 percent for adults age 18 to 44, 114.9 percent for adults age 45 to 64, and 61.4 percent for adults age 65 or older. The average constant dollar expenditure for problems treated by office-based medical providers increased 46.3 percent for adults age 45 to 64 and 45.2 percent for adults age 65 or older.

#### *Medical expenditures for diabetes*

Table 3 shows 1996 and 2003 average expenditures (in constant 2003 dollars) of adults being treated for diabetes when the care was restricted to events where diabetes was identified as the reason or one of the reasons for the care. The average constant dollar expenditure for prescription medicines to treat diabetes increased 70.7 percent in the 18 to 44 age group, 99.6 percent in the 45 to 64 age group, and 74.2 percent in the 65 or older age group between 1996 and 2003. In addition, the average constant dollar expenditure for hospital and physician care and prescription medicines to treat diabetes increased 73.0 percent in the 65 or older age group.

### **Data Source**

This Statistical Brief uses data from the 1996 and 2003 Full Year Consolidated Data Files (HC-012 and HC-079) and the 1996 and 2003 event files for prescription medicines (HC-010A and HC-077A), inpatient hospital stays (HC-010D and HC-077D), emergency room visits (HC-010E and HC-077E), outpatient department visits (HC-010F and HC-077F), and office-based medical provider visits (HC-010G and HC-077G). These files are available on the MEPS Web site at [http://www.meps.ahrq.gov/mepsweb/data\\_stats/download\\_data\\_files.jsp](http://www.meps.ahrq.gov/mepsweb/data_stats/download_data_files.jsp).

### **Definitions/Methodology**

#### *Population*

The estimates provided in this Statistical Brief are for adults age 18 or older who lived in the community for all or part of the year. Anyone who reported having a medical event—hospital stay, outpatient department visit, emergency room visit, office visit, or prescription medicine purchase—for the treatment of diabetes mellitus (ICD-9 code 250) in 1996 or 2003 was counted as being treated for diabetes. Persons in the military and those residing in nursing homes or other institutions for the entire year are not included in the comparisons.

#### *Age*

Age is that of the sample person as of December 31st of the reported year.

#### *Expenditures*

The MEPS includes expenditures for eight types of medical events: hospital stays, emergency room visits, outpatient department visits, office-based medical provider visits, dental visits, home health care, other medical expenses, and prescription medicines. Expenditures for these events include all direct payments by individuals, private insurance (including TRICARE), Medicare, Medicaid, and other sources such as the Veterans' Administration, Workers' Compensation, and miscellaneous public sources to providers of the services.

The 1996 per capita expenditures for all medical events were inflated to 2003 dollars using the Personal Health Care Expenditure (PHCE) price index published by the National Health Accounts, Office of the Actuary, Centers for Medicare and Medicaid Services (<http://www.cms.hhs.gov/NationalHealthExpendData/downloads/dsm-04.pdf>). The 1996 per capita expenditures for selected categories of medical events (such as hospital care, office-based medical provider care, and prescription medicines) were inflated to 2003 dollars using the corresponding components of the PHCE price index.

### **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 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 (301-427-1656) 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 error, see the following publications:

Cohen, J. *Design and Methods of the Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 1. HCPR Pub. No. 97-0026. Rockville, Md.: Agency for Health Care Policy and Research, 1997.

Cohen, S. *Sample Design of the 1996 Medical Expenditure Panel Survey Household Component*. MEPS Methodology Report No. 2. HCPR Pub. No. 97-0027. Rockville, Md.: Agency for Health Care Policy and Research, 1997.

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

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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 [mepsdpd@ahrq.gov](mailto:mepsdpd@ahrq.gov) or send a letter to the address below:

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**Table 1. Percentage of U.S. civilian noninstitutionalized adults being treated for diabetes and its share of medical expenditures by all adults, by age group, 1996 and 2003**

Age group	Adults receiving care for diabetes:			
	Percent of population		Percent of total expenditures	
	1996	2003	1996	2003
All adults	5.0	6.3	14.8	17.0
18 to 44	1.5	1.5	3.5	4.5
45 to 64	7.0	9.0	16.6	19.4
65 or older	13.1	15.8	22.7	24.4

Source: Center for Financing, Access, and Cost Trends, Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 1996 and 2003.

**Table 2. Average constant dollar expenditures of adults in the U.S. civilian noninstitutionalized population with at least one medical event for diabetes, by age group and type of expenditure, 1996 and 2003**

Age and type of expenditure	Average expenditure (in 2003 dollars)		Percent change 1996 to 2003
	1996	2003	
All adults			
All medical care <sup>1</sup>	\$8,942	\$10,092	12.9
All hospital care <sup>2</sup>	\$4,910	\$4,804	(2.2)
All office care <sup>3</sup>	\$1,027	\$1,506	46.6
All prescription medicines <sup>4</sup>	\$1,508	\$2,798	85.5
18-44 years old			
All medical care <sup>1</sup>	\$3,990	\$6,128	53.6
All hospital care <sup>2</sup>	\$1,876	\$2,507	33.6
All office care <sup>3</sup>	\$ 806	\$1,171	45.3
All prescription medicines <sup>4</sup>	\$1,120	\$2,098	87.3
45-64 years old			
All medical care <sup>1</sup>	\$8,122	\$9,169	12.9
All hospital care <sup>2</sup>	\$5,036	\$4,165	(17.3)
All office care <sup>3</sup>	\$1,017	\$1,488	46.3
All prescription medicines <sup>4</sup>	\$1,355	\$2,912	114.9
65 or older			
All medical care <sup>1</sup>	\$11,486	\$12,238	6.6
All hospital care <sup>2</sup>	\$ 5,934	\$ 6,160	3.8
All office care <sup>3</sup>	\$ 1,118	\$ 1,623	45.2
All prescription medicines <sup>4</sup>	\$ 1,782	\$ 2,876	61.4

<sup>1</sup>Expenditures are for all types of care.

<sup>2</sup>Expenditures are for all inpatient, outpatient, and emergency room care.

<sup>3</sup>Expenditures are for all office-based medical provider care.

<sup>4</sup>Expenditures are for all prescription medicine purchases.

( ) indicates a negative change.

Source: Center for Financing, Access, and Cost Trends, Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 1996 and 2003.

**Table 3. Average constant dollar expenditures of adults in the U.S. civilian noninstitutionalized population for the treatment of diabetes, by age group and type of expenditure, 1996 and 2003**

Age and type of expenditure	Average expenditure (in 2003 dollars)		Percent change 1996 to 2003
	1996	2003	
All adults			
All diabetes care <sup>1</sup>	\$1,299	\$1,714	32.0
Prescription medicines <sup>2</sup>	\$ 476	\$ 883	85.5
18-44 years old			
All diabetes care <sup>1</sup>	\$1,155	\$1,525	32.0
Prescription medicines <sup>2</sup>	\$533	\$ 910	70.7
45-64 years old			
All diabetes care <sup>1</sup>	\$1,568	\$1,552	(1.0)
Prescription medicines <sup>2</sup>	\$ 488	\$ 974	99.6
65 or older			
All diabetes care <sup>1</sup>	\$1,124	\$1,945	73.0
Prescription medicines <sup>2</sup>	\$ 445	\$ 775	74.2

<sup>1</sup>Expenditures are for all hospital and office-based medical provider events and prescription medicines to treat diabetes.

<sup>2</sup>Expenditures are for all prescription medicines to treat diabetes.

( ) indicates a negative change.

Source: Center for Financing, Access, and Cost Trends, Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 1996 and 2003.