

## STATISTICAL BRIEF #271

December 2009

### **Trends in Outpatient Prescription Thyroid Drugs Purchases and Expenditures for Adults Age 18 and Older in the U.S. Civilian Noninstitutionalized Population, 1996 and 2007**

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#### **Introduction**

This Statistical Brief presents trends in purchases and expenditures for outpatient prescription thyroid drugs for the years 1996 and 2007. The estimates are for the U.S. civilian noninstitutionalized population and are derived from the 1996 and 2007 Household Component of the Medical Expenditure Panel Survey (MEPS-HC). For prescription thyroid drugs, the Brief compares 1996 and 2007 total expenditures, purchases, and persons purchasing, as well as average total, out of pocket, and third party expenditure per person and per purchase for adults age 18 and older. The Multum Lexicon therapeutic classification system produced by Cerner Multum was used to determine which drugs were included in the therapeutic subclass thyroid drugs.

Only prescribed medicine purchases in an outpatient setting are included in the estimates presented in this Brief. Prescription medicines administered in an inpatient setting or in a clinic or physicians office are excluded from these estimates. Expenditures are in real dollars; estimates for 1996 were adjusted to 2007 dollars based on the Gross Domestic Product (GDP) Price Index ([http://www.meps.ahrq.gov/mepsweb/about\\_meps/Price\\_Index.shtml](http://www.meps.ahrq.gov/mepsweb/about_meps/Price_Index.shtml)). All differences discussed in the text are statistically significant at the 0.05 level.

#### **Findings**

When comparing 1996 and 2007, MEPS estimates showed an increase of approximately 150 percent, rising from \$0.7 billion in 1996 to \$1.8 billion in 2007, for total outpatient prescription expenditures for thyroid drugs for adults age 18 and older (figure 1).

Total prescribed medicine purchases of prescription thyroid drugs by adults rose from 45.3 million prescription purchases in 1996 to 98.6 million prescription purchases in 2007, an increase of over 115 percent (figure 2).

In 1996, 8.3 million persons in the U.S. noninstitutionalized civilian adult population purchased one or more prescription thyroid drugs in an outpatient setting. In 2007, this number rose to 14.0 million adults (figure 3). Moreover, from 1996 to 2007, the proportion of the adult population in the U.S noninstitutionalized civilian population purchasing one or more thyroid drugs increased as well (4.2 percent versus 6.2 percent, respectively).

When comparing 1996 and 2007, for those adults with one or more prescription thyroid drug purchases in an outpatient setting, the per adult average annual expenditure increased from \$82 to \$132; the average out of pocket annual expenditure per adult increased from \$58 to \$91; and the average third party payer expenditure per adult increased from \$24 to \$40 (figure 4).

#### **Highlights**

- From 1996 to 2007, total expenditures for prescription thyroid drugs purchased in an outpatient setting more than doubled for adults age 18 and older, rising from \$0.7 billion to \$1.8 billion.
- When comparing 1996 and 2007, the total number of prescription purchases of thyroid drugs for adults age 18 and older increased from 45.3 million prescription purchases in 1996 to 98.6 million prescription purchases in 2007.
- The average annual expenditure per adult with at least one prescription medicine purchase of a thyroid drug increased from \$82 to \$132 when comparing 1996 to 2007.
- From 1996 to 2007, the average expenditure per drug purchase of a prescription thyroid drug for adults age 18 and older rose from \$15 to \$19.
- When comparing the years 1996 and 2007, the total number of adults, as well as the proportion of the adult population, purchasing one or more thyroid drugs increased from 8.3 million people (4.2 percent) to 14.0 million people (6.2 percent)

When comparing the years 1996 and 2007, the average annual number of purchases for adults with one or more thyroid drug purchases increased 27 percent, rising from 5.5 prescription purchases to 7.0 prescription purchases, respectively (figure 5).

When comparing 1996 and 2007, the average total expenditure per thyroid drug purchase for adults increased from \$15 to \$19. Although there was no significant increase in the average amount paid out of pocket per thyroid drug purchase, there was an increase in the average amount paid by a third party payer, rising from \$4 in 1996 to \$6 in 2007 (figure 6).

## Data Source

The estimates shown in this Statistical Brief are based on data from MEPS HC-068: Multum Lexicon Addendum Files, MEPS HC-012: 1996 Full Year Consolidated Data File, MEPS HC-010A: 1996 Prescribed Medicines File, MEPS HC-113: 2007 Full Year Consolidated Data File, and MEPS HC-110A: 2007 Prescribed Medicines File.

## Definitions/Methodology

### *Purchases and expenditures*

Purchases were defined as thyroid drugs prescribed and purchased in the year of interest. Refills as well as original prescriptions are included in expenditure and purchase estimates. Individuals were classified as purchasing a prescribed thyroid drug if they reported one or more such purchases during the year of interest. Expenditures include the total direct payments from all sources to pharmacies for prescriptions reported by respondents in the MEPS-HC. Expenditures are in real dollars; estimates for 1996 were adjusted to 2007 dollars based on the GDP Price Index ([http://www.meps.ahrq.gov/mepsweb/about\\_meps/Price\\_Index.shtml](http://www.meps.ahrq.gov/mepsweb/about_meps/Price_Index.shtml)).

### *Age*

Age is the last available age for the sampled person. For most persons, this was their age at the end of the year.

### *Therapeutic classifications*

Therapeutic class and subclass were assigned to MEPS prescribed medicines using Multum Lexicon variables from Cerner Multum, Inc. MEPS prescribed medicines files were linked to the Multum Lexicon database to obtain therapeutic class and subclass variables. For both 1996 and 2007 data, the thyroid drugs subclass was included in the hormones therapeutic class of drugs. For additional information on these and other Multum Lexicon variables, as well as the Multum Lexicon database itself, please refer to Multum's Web site.

### *Sources of Payment*

- Out of pocket: This category includes payments by the person or other family members.
- Third party payer: This category includes payments by Medicare, Medicaid, private insurance, Veterans Affairs, CHAMPVA, TRICARE, Other Federal Sources, Other State and Local Sources, Workers Compensation, and Other Unclassified Sources.

## About MEPS

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) 427-1656 or visit the MEPS Web site at <http://www.meps.ahrq.gov/>.

## References

For a detailed description of the MEPS-HC 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. 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](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](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, TM, 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](http://www.meps.ahrq.gov/mepsweb/data_files/publications/mr22/mr22.pdf)

## Suggested Citation

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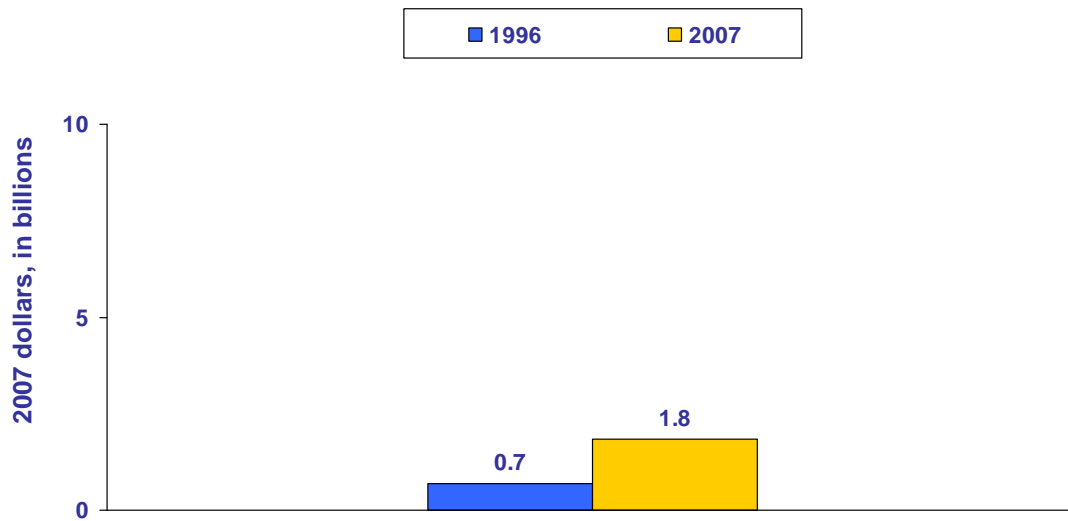
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AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using 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 [mepsd@ahrq.gov](mailto:mepsd@ahrq.gov) or send a letter to the address below:

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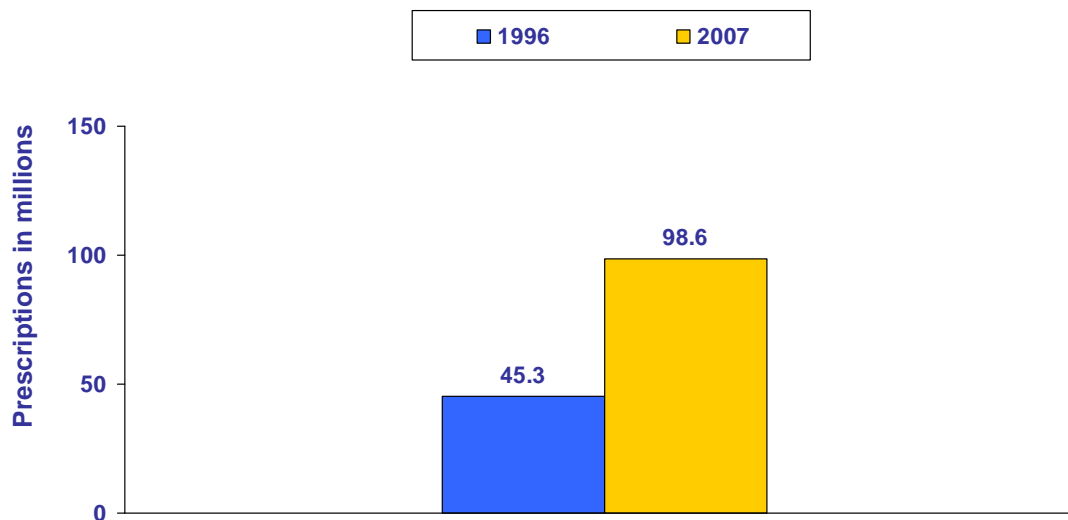
**Figure 1. Total outpatient expenditures for thyroid drugs for adults age 18 and older, 1996 (adjusted to 2007 dollars) and 2007**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1996 and 2007



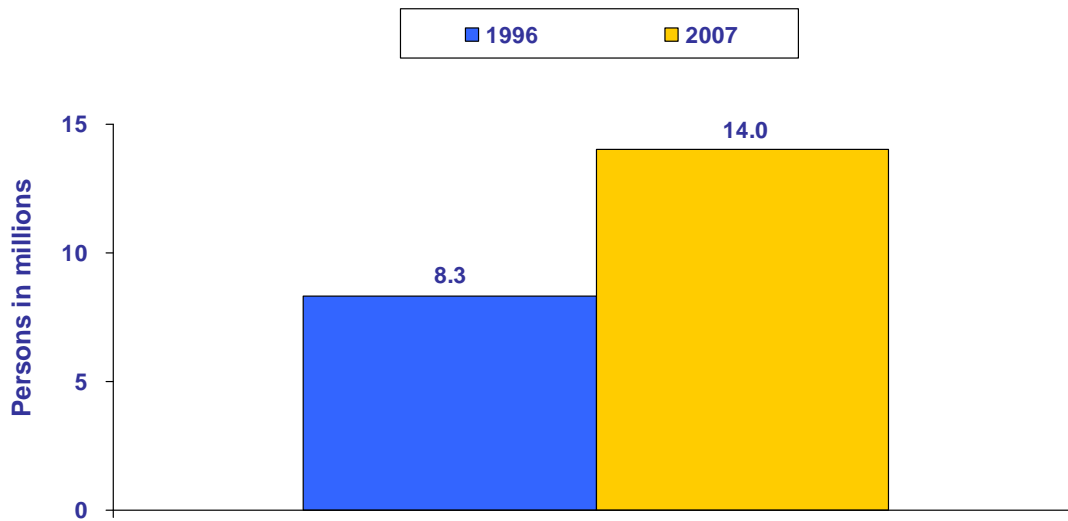
**Figure 2. Total number of purchases for thyroid drugs for adults age 18 and older, 1996 and 2007**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1996 and 2007



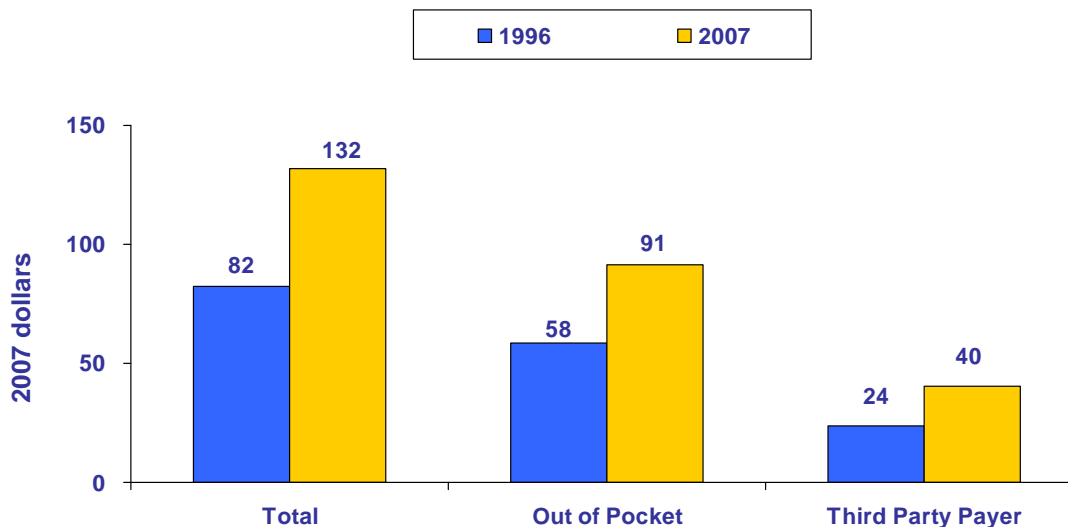
**Figure 3. Total number of adults age 18 and older purchasing one or more thyroid drugs, 1996 and 2007**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1996 and 2007



**Figure 4. Average total, out of pocket, and third party payer expenditure per adult age 18 and older for thyroid drugs, 1996 (adjusted to 2007 dollars) and 2007**

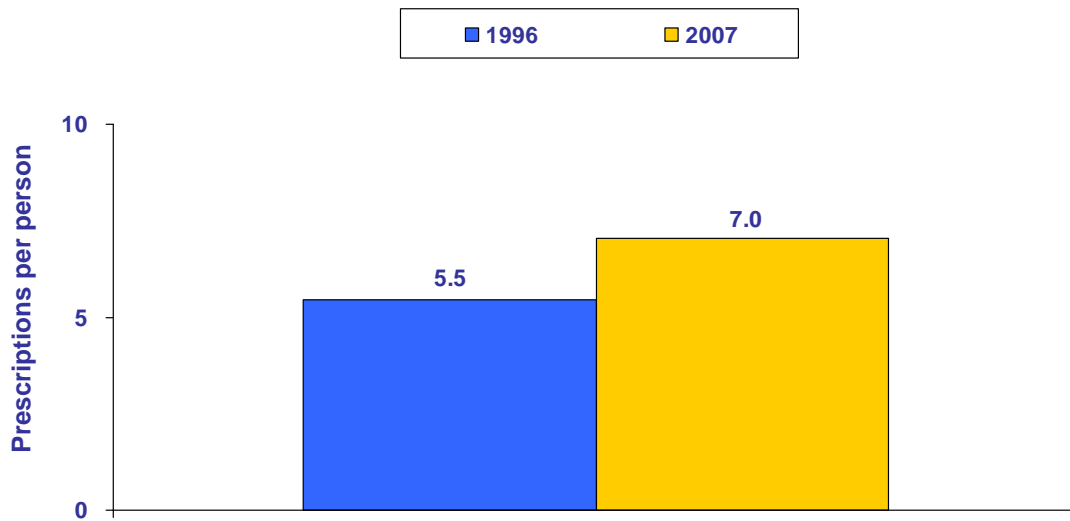


Note: Detail may not sum to total due to rounding.

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1996 and 2007



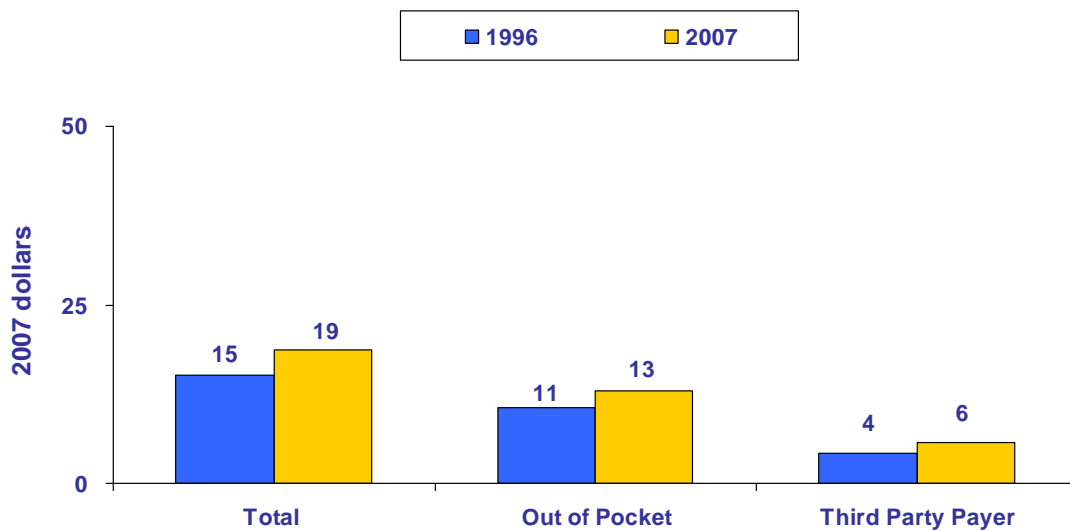
**Figure 5. Average number of purchases for thyroid drugs for adults age 18 and older with a purchase, 1996 and 2007**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1996 and 2007



**Figure 6. Average total, out of pocket, and third party payment per drug purchase for adults age 18 and older for thyroid drugs, 1996 (adjusted to 2007 dollars) and 2007**



Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 1996 and 2007