

STATISTICAL BRIEF #368

April 2012

Dental Procedures, United States, 1999 and 2009

Richard J. Manski, DDS, MBA, PhD and Erwin Brown, Jr., BS

Introduction

Dental care is an important component of overall health care. Maintaining oral health is important not only to support healthy teeth and gums, but is an integral part of one's overall health and prevention of disease and disability. Dental care includes diagnostic, preventive, restorative, prosthetic, endodontic, and orthodontic care.

This Statistical Brief uses data from the Household Component of the 1999 and 2009 Medical Expenditure Panel Survey (MEPS-HC) to examine changes in the receipt of dental care over that decade. Estimates are presented on overall use of dental services as well as estimates of the distribution of visits for particular dental services. All estimates are for the United States civilian noninstitutionalized (community) population. Only differences that are statistically significant at the 0.05 level are discussed in the text. In this Brief, procedures refer to at least one procedure type per visit. Multiple procedures of the same type at the same visit are not counted. Service types not identified by respondents are not included. In calculating the distribution of visits with particular services, visits for which the respondent reported more than one type of procedure (an examination and a cleaning, for instance) are counted twice—once in each category. These estimates update information previously published in Chartbook #17, *Dental Use, Expenses, Dental Coverage, and Changes, 1996 and 2004*.

Findings

Overall, the percentage of the population receiving dental care remained unchanged between 1999 and 2009 (43.1 percent in 1999 and 42.2 percent in 2009). However, during that same time period the total number of dental procedures increased from about 516 million in 1999 to about 548 million in 2009 (figure 1). Overall, as a percentage of all procedures, diagnostic and preventive procedures increased while restorative, prosthetic, endodontic, and orthodontic procedures decreased from 1999 to 2009 (figure 1).

Together, approximately 76 percent of all procedures were diagnostic (43.4 percent) or preventive (32.5 percent) during 2009 (figure 1).

In 2009, approximately 6 percent of all procedures were restorative, 6 percent were prosthetic, 3 percent were surgical, and 5 percent were orthodontic during 2009 (figure 1).

Among children ages 0–20 with at least one visit, approximately 41 percent of all procedures were diagnostic, 36 percent were preventive, 14 percent were orthodontic, and 2 percent were surgical during 2009 (figure 2).

Among adults ages 21–64 with at least one visit, approximately 45 percent of all procedures were diagnostic, 31 percent were preventive, 7 percent were restorative, 7 percent were prosthetic, and 4 percent were surgical during 2009 (figure 2).

Among older adults age 65 and older with at least one visit, approximately 42 percent of all procedures were diagnostic, 31 percent were preventive, 13 percent were prosthetic, 7 percent were restorative, and 4 percent were surgical during 2009 (figure 2).

Overall, people were more likely to have at least one preventive procedure and less likely to have one restorative procedure in 2009 than in 1999 (figure 3).

Approximately 86 percent of the population with at least one dental visit had at least one diagnostic procedure, and about 80 percent of the population had at least one preventive procedure during 2009 (figure 3).

Approximately 20 percent of the population with at least one dental visit had at least one restorative procedure, 13 percent had at least one prosthetic procedure, 10 percent had at least one surgical procedure, and about 6 percent of the population had at least one orthodontic procedure during 2009 (figure 3).

Approximately 88 percent of children receiving at least one dental visit had at least one diagnostic procedure, and about 83 percent of children had at least one preventive procedure during 2009 (figure 4). About 17 percent

Highlights

- Overall, 42.2 percent of the population had at least one visit to a dentist or dental professional during 2009. This compares to 43.1 percent with at least one dental visit in 1999.
- The total number of dental procedures increased from about 516 million in 1999 to about 548 million in 2009.
- Overall, as a percentage of all procedures, diagnostic and preventive procedures increased while restorative, prosthetic, endodontic, and orthodontic procedures decreased from 1999 to 2009.
- Overall people were more likely to have at least one preventive procedure and less likely to have one restorative procedure in 2009 than in 1999.

of children had at least one restorative procedure and 15 percent had at least one orthodontic procedure during 2009 (figure 4).

Approximately 86 percent of adults receiving at least one dental visit had at least one diagnostic procedure, and about 79 percent of adults had at least one preventive procedure during 2009 (figure 4). About 20 percent of adults had at least one restorative procedure, 16 percent had at least one prosthetic procedure, and 10 percent had at least one surgical procedure during 2009 (figure 4).

Approximately 83 percent of older adults receiving at least one dental visit had at least one diagnostic procedure, and about 79 percent of adults had at least one preventive procedure during 2009 (figure 4). About 22 percent of older adults had at least one restorative procedure, 26 percent had at least one prosthetic procedure, and 11 percent had at least one surgical procedure during 2009 (figure 4).

Data Source

Estimates shown in this Statistical Brief are based on data from the following public use files: 1999 Dental Visits File (HC-033B); 1999 Full Year Consolidated Data File (HC-038); 2009 Dental Visits File (HC-126B); and 2009 Full Year Population Characteristics File (HC-123).

Definitions

Dental visit

Dental visit refers to care by or visits to any type of dental care provider, including general dentists, dental hygienists, dental technicians, dental surgeons, orthodontists, endodontists, and periodontists.

Dental procedures

Procedures refer to at least one procedure type per visit. Multiple procedures of the same type at the same visit are not counted. Service types not identified by respondents are not included. In calculating the distribution of visits with particular services, visits for which the respondent reported more than one type of procedure (an examination and a cleaning, for instance) are counted twice—once in each category:

Diagnostic: Includes examinations and X-rays

Preventive: Includes cleanings, fluoride, sealants, and recall visits

Restorative: Fillings and inlays

Prosthetic: Crowns, bridges, dentures, repairs, and implants

Periodontic: Periodontic services only

Endodontic: Endodontic services only

Oral Surgery: Oral Surgery services only

Orthodontic: Orthodontic services only

Other: Any other dental service not included above

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) 427-1656 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 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. 97-0026. Rockville, MD: Agency for Health Care Policy and Research, 1997. http://meps.ahrq.gov/mepsweb/data_files/publications/mr1/mr1.pdf.

Ezzati-Rice, T.M., Rhode, 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://meps.ahrq.gov/mepsweb/data_files/publications/mr22/mr22.pdf.

Manski, R.J. and Brown, E. *Dental Use, Expenses, Private Dental Coverage, and Changes, 1996 and 2004*. Chartbook #17. Agency for Healthcare Research and Quality, Rockville, MD. http://meps.ahrq.gov/mepsweb/data_files/publications/cb17/cb17.pdf.

Suggested Citation

Manski, R.J. and Brown, E. *Dental Procedures, United States, 1999 and 2009*. Statistical Brief #368. April 2012. Agency for Healthcare Research and Quality, Rockville, MD. http://meps.ahrq.gov/mepsweb/data_files/publications/st368/stat368.pdf

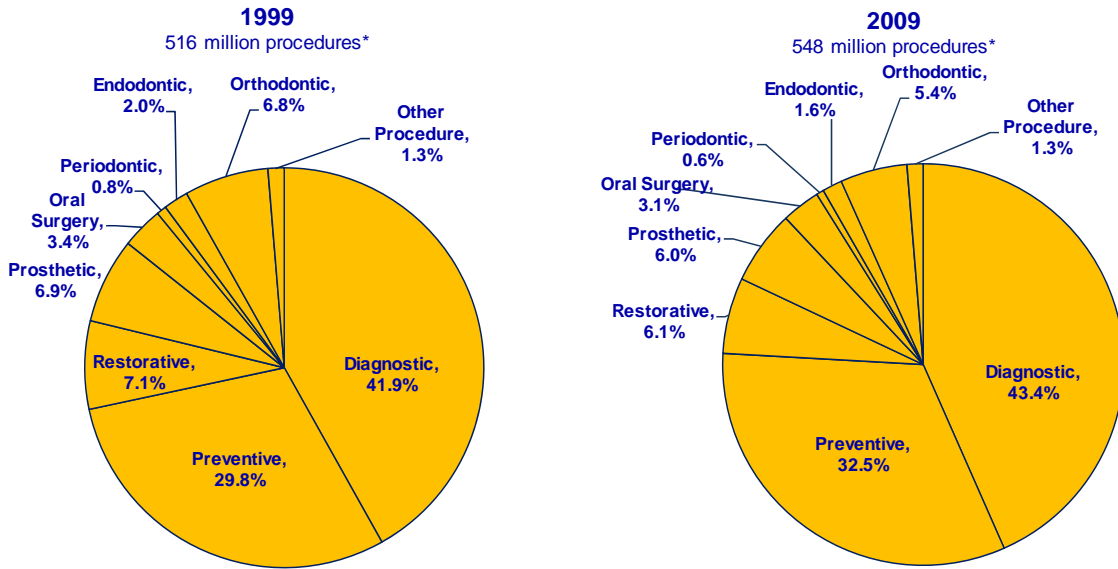
* * *

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. Distribution of procedures,⁺ U.S. civilian noninstitutionalized population, 1999 and 2009



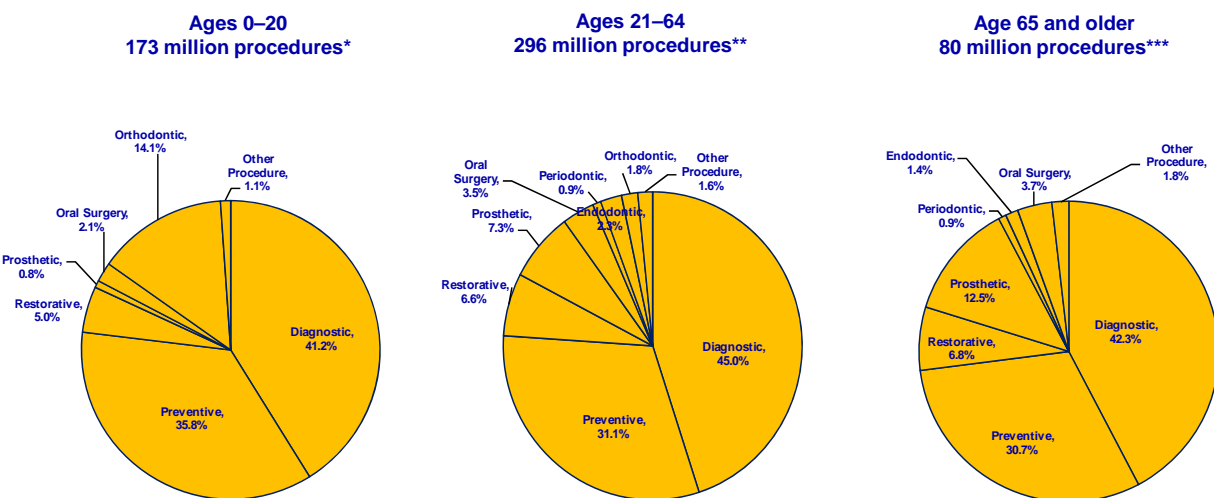
+ For persons with a visit.

* Other includes procedures not otherwise reported.

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey: 1999 Dental Visits HC-033B and Full Year Consolidated Data File HC-038; 2009 Dental Visits File HC-126B and Full Year Population Characteristics File HC-123



Figure 2. Distribution of procedures⁺ by age, U.S. civilian noninstitutionalized population, 2009



+ For persons with a visit.

* Other includes Periodontic, Endodontic, and other procedures not otherwise reported.

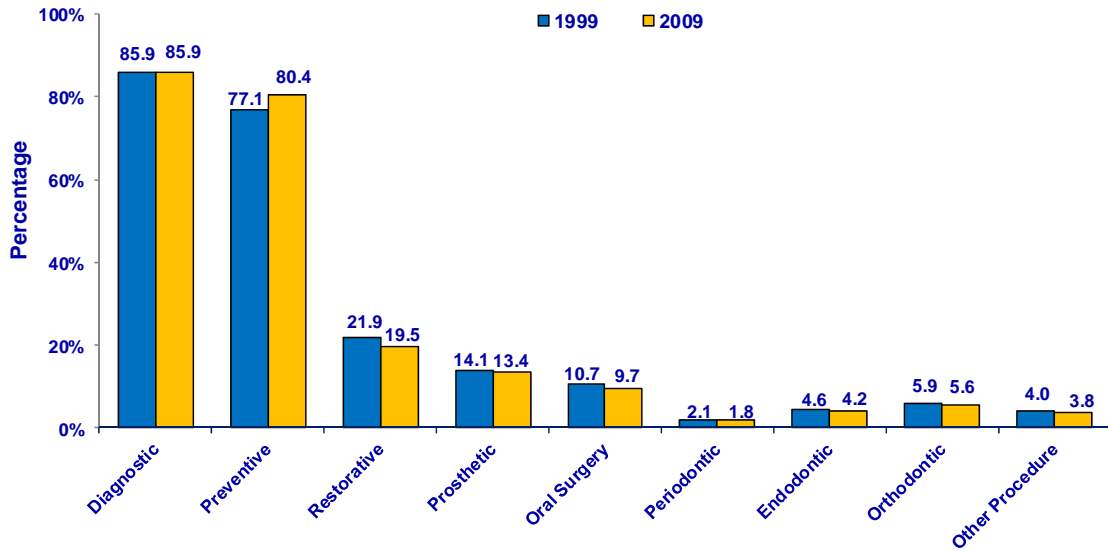
** Other includes other procedures not otherwise reported.

*** Other includes Orthodontic and other procedures not otherwise reported.

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey: 1999 Dental Visits HC-033B and Full Year Consolidated Data File HC-038; 2009 Dental Visits File HC-126B and Full Year Population Characteristics File HC-123



Figure 3. Percentage of persons with at least one procedure,⁺ U.S. civilian noninstitutionalized population, 1999 and 2009



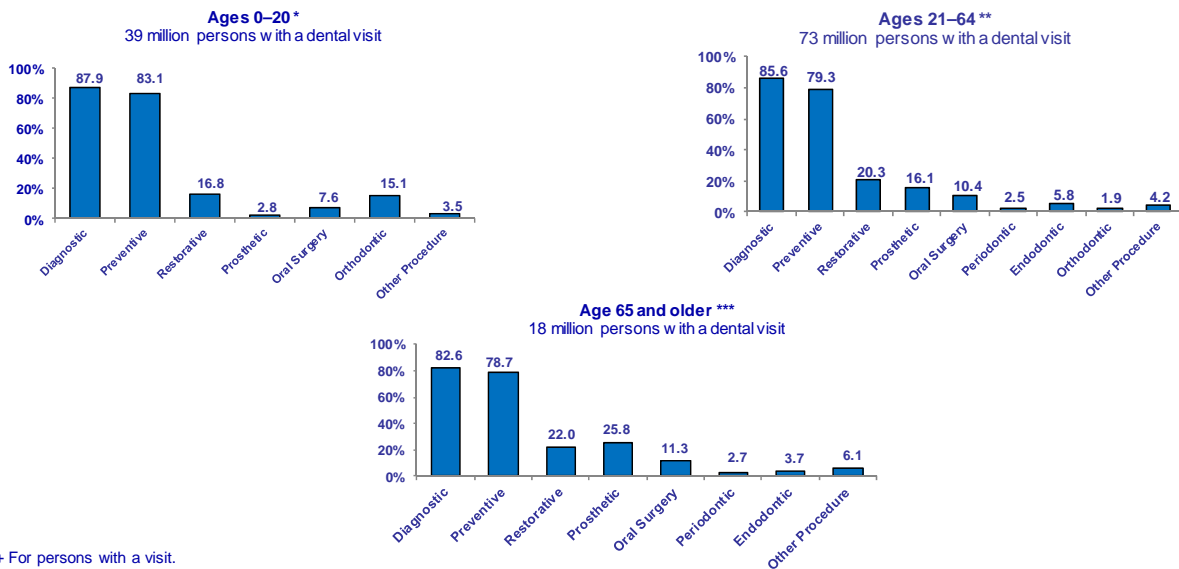
+ For persons with a visit.

Other includes other procedures not otherwise reported.

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey: 1999 Dental Visit HC-033B and Full Year Consolidated File HC-038; 2009 Dental Visit File HC-126B and Full Year Population Characteristics HC-123 File



Figure 4. Percentage of persons with at least one procedure⁺ by age, U.S. civilian noninstitutionalized population, 2009



+ For persons with a visit.

* Other includes Periodontic, Endodontic, and other procedures not otherwise reported.

** Other includes other procedures not otherwise reported.

*** Includes Orthodontic and other procedures not otherwise reported.

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey: 1999 Dental Visit HC-033B and Full Year Consolidated File HC-038; 2009 Dental Visit File HC-126B and Full Year Population Characteristics HC-123 File