Section 7

DELIVERY OF DENTAL SERVICES

Regular dental visits allow for early diagnosis, prevention, and treatment of oral diseases, as well as assessment of self-care practices. People who do not receive regular professional dental care are at greater risk for oral diseases and for dental problems requiring complex and more costly restorative treatment (US DHHS, 2000).

Use of dental services is typically defined as having at least one dental visit during the past year. Children under age 18 are more likely to have had a dental visit during the past year than any other age group (Krauss et al., 1999; Woolfolk et al., 1999).

As people grow older they are at increased risk of oral and pharyngeal cancer (US DHHS, 2000). People who have lost all their natural teeth are less likely to seek periodic dental care than those with teeth, which decreases their chances for early detection of oral cancer (NCHS, NHANES III, unpublished data).

The use of dental services in the United States is consistently associated with higher educational levels, higher income, nonminority status, and dental insurance coverage. Even when controlling for poverty status and dental insurance coverage, non-Hispanic blacks and Hispanics are significantly less likely than non-Hispanic whites to visit a dentist (Manski & Magder, 1998).

Access to basic dental services continues to be a problem, particularly among those who are economically disadvantaged. School- and community-based health centers are seen as a potentially effective means to improve access to dental services for vulnerable populations (US DHHS, 2000).

This section examines the following: use of the oral health care system in general; use of the oral health care system among residents of long-term care facilities; dental services among low-income children; school-based and community-based health centers with an oral health component; state dental programs with full-time dental directors; usual source of dental care; annual use of preventive, orthodontic, periodontic, and endodontic services; and unmet dental needs.

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U.S. Department of Health and Human Services. *Healthy People 2010*. Conference ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, 2000.

Woolfolk MW, Lang WP, Borgnakke WS, et al. Determining dental check-up frequency. J Am Dent Assoc 1999;130(5):715-23.

7.1 Use of the oral health care system on an annual basis

Education, income, and minority status were correlated with use of the oral health care system. Low-income and minority Americans may lack dental insurance, making oral health care more difficult to obtain. After controlling for a number of variables including poverty status and dental insurance coverage, non-Hispanic blacks and Hispanics were significantly less likely than non-Hispanic whites to have visited a dentist within the past year, suggesting the existence of other barriers to care (Manski & Magder, 1998).

Estimates of dental care usage vary among national surveys (Manski et al., 2001). For example, the 1993 National Health Interview Survey reported that 64% of the U.S. population visited a dentist during the past year, the Third National Health and Nutrition Examination Survey (1988-1994) reported 52% had used the oral health care system, and the 1996 Medical Expenditure Panel Survey reported 45%. Differences in the estimates may be due to differences in the survey methodologies.

SOURCE OF DATA

Analyses reported here are based on the Third National Health and Nutrition Examination Survey (NHANES III) 1988-1994, National Center for Health Statistics, Centers for Disease Control and Prevention.

Demographic differences

- The percentage of people visiting a dentist within the past year was lowest among children aged 2 to 4 years. Among adults the percentage was lower for those aged 75 and older (Figure 7.1.1).
- Non-Hispanic whites were more likely than non-Hispanic blacks and Mexican Americans to have visited a dentist during the previous year.
- Females were more likely than males to have visited a dentist during the past year (Figure 7.1.2).
- A greater percentage of persons living at or above the federal poverty level visited a dentist during the past year compared to those living below the federal poverty level (Figure 7.1.2).
- The percentage of persons with a dental visit during the past year increased with each successive level of education (Figure 7.1.2).

Bullets reference data that can be found in Table 7.1.1.

REFERENCES

Manski RJ, Magder LS. Demographic and socioeconomic predictors of dental care utilization. J Am Dent Assoc 1998;129:195-200.

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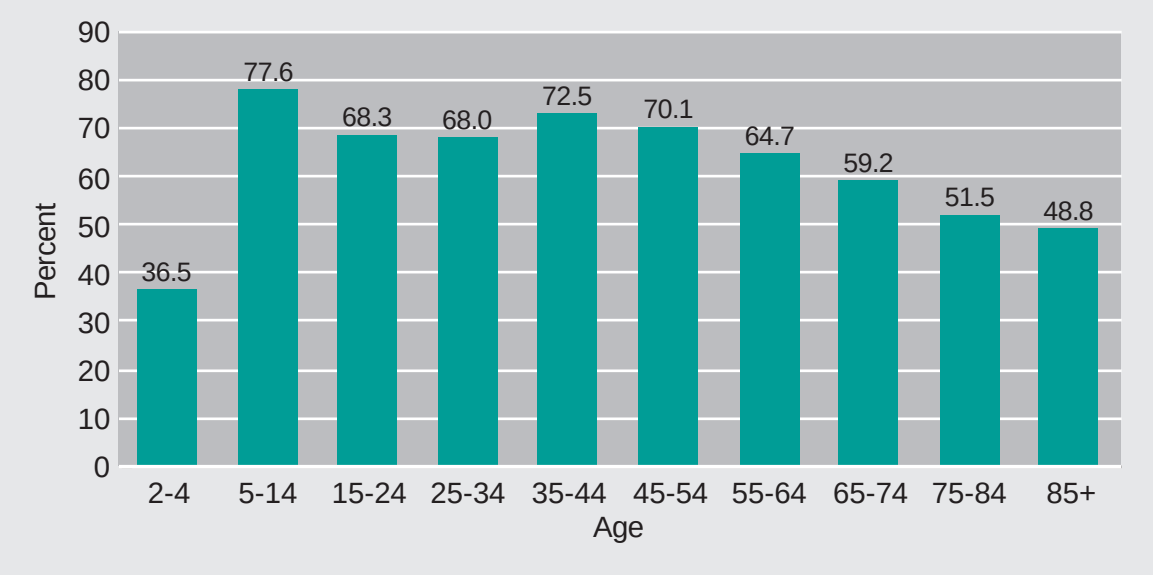
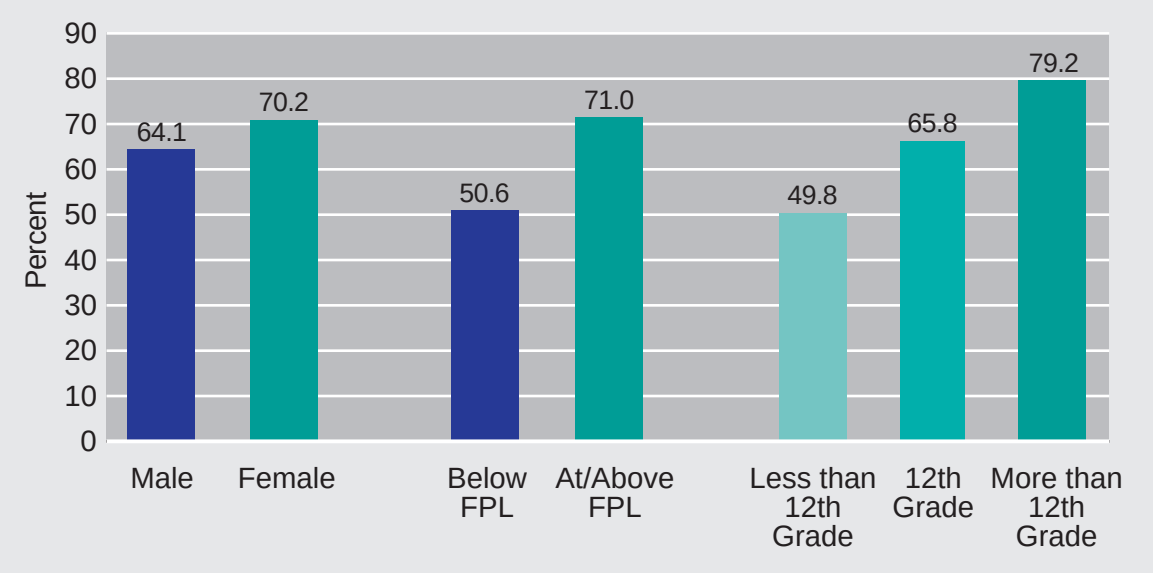
Figure 7.1.1. Percentage of the U.S. population that visited a dentist within the past year by age group



Data source: The Third National Health and Nutrition Examination Survey (NHANES III) 1988-1994, National Center for Health Statistics, Centers for Disease Control and Prevention.

Figure 7.1.2. Percentage of the U.S. population that visited a dentist within the past year by selected demographics



Note: Education represents the education of the head of household for persons under 18; otherwise, it represents the education of the individual person.

Data source: The Third National Health and Nutrition Examination Survey (NHANES III) 1988-1994, National Center for Health Statistics, Centers for Disease Control and Prevention.

7.2 Use of the oral health care system by residents of long-term care facilities (LTCFs)

Over the next 50 years, the number of U.S. residents aged 65 years and older is projected to increase by 126%, with about 4% residing in nursing homes (Strahan, 1997). A greater percentage of these individuals will have retained their teeth than in previous generations (US DHHS, 2000). Consequently, the oral health needs of LTCF residents are expected to increase substantially.

Treatment needs among residents of LTCFs are often great. One study of dentate nursing home residents found that 59% had untreated coronal decay, and 46% had untreated root decay (Hawkins, 1999). In addition, research with residents of LTCFs has indicated that excessive dental plaque, combined with chronic obstructive pulmonary disease, may actually be life-threatening (Russell et al., 1999).

It is recommended that residents of LTCFs receive periodic dental examinations and preventive care (Kambhu et al., 1998). Based on data from the 1997 National Nursing Home Survey, 19% of nursing home residents received dental care within the last 30 days (Gabrel & Jones, 2000). However, access to dental care may be reduced by serious medical conditions, lack of ability to pay for services, and anxiety on the part of residents (Gift et al., 1995).

SOURCE OF DATA

Analyses reported here are based on the Vital Health Statistics document, the National Nursing Home Survey: 1997 Summary (Gabrel & Jones. Vital Health Stat 2000;13(47)), which uses data from the 1997 National Nursing Home Survey, National Center for Health Statistics, Centers for Disease Control and Prevention.

Demographic differences (Table 7.2.1)

- A greater percentage of younger residents compared to older residents received dental care during the past 30 days.
- Slightly more males compared to females and black compared to white nursing home residents received dental care.

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Gabrel C, Jones A. The National Nursing Home Survey: 1997 Summary. National Center for Health Statistics. Vital Health Stat 2000;13(47).

Gift HC, Cherry-Peppers G, Oldakowski RJ. Oral health status and related behaviours of U.S. nursing home residents, 1995. Gerodontology 1994;14(2):89-99.

Hawkins RJ. Functional status and untreated dental caries among nursing home residents aged 65 and over. SCD Special Care in Dentistry;19(4):158-63.

Kambhu PP, Warren JJ, Hand JS, Levy SL, Cowen HJ. Dental treatment outcomes among dentate nursing facility residents: an initial study. SCD Special Care in Dentistry 1998;18(3):128-32.

Russell SL, Boylan RJ, Kaslick RS, Scannapieco FA, Katz RV. Respiratory pathogen colonization of the dental plaque of institutionalized elders. SCD Special Care in Dentistry 1999;19(3):128-34.

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U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.

Table 7.2.1. Percentage of nursing home residents who received dental care during the last 30 days: United States, 1997

Characteristic	1997 NNHS
Total	19.0
Age	
<65	26.3
65-74	18.4
75-84	17.8
85 and older	18.5
Gender	
Male	21.0
Female	18.2
Race	
White	18.6
Black	21.6

Source: Gabrel C, Jones A. The National Nursing Home Survey: 1997 Summary. National Center for Health Statistics. Vital Health Stat 2000;13(147):1-121.

7.3 Preventive dental services for low-income children

Children living in poverty receive fewer preventive dental services than children from families with more income. Among children living below the federal poverty level, only 25.2% received any preventive dental services compared to 43.8% of children living at or above the federal poverty level.

Coverage for pediatric dental services has been required under Medicaid for over two decades and is permitted, but not required, under the new State Children's Health Insurance Program (CHIP) (US DHHS, 2000). Despite the potential for improved oral health care, only about 19.0% of children eligible for Medicaid's Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) program received preventive dental services in 1998 (CMS, 2001; Mouradian, 2000; GAO, 2000).

SOURCE OF DATA

Data on preventive dental services were collected in the 1997 Medical Expenditure Panel Survey (MEPS) conducted by the Agency for Healthcare Research and Quality (AHRQ).

Demographic differences (Figures 7.3.1 and 7.3.2)

- Children living below the federal poverty level were less likely to receive preventive dental services compared to children living at or above the poverty level.
- Non-Hispanic white/other children[1] living at or above the federal poverty level were more likely to receive any preventive dental services than non-Hispanic white/other children living below the federal poverty level and non-Hispanic black or Hispanic children living either below or above the federal poverty level.

Differences by insurance status (Figure 7.3.3)

- Children living at or above the federal poverty level who have private health insurance were more likely to receive any preventive dental services than those who have either public health insurance or were uninsured, or than children living below the federal poverty level even if they have private insurance.

Bullets reference data that can be found in Tables 7.3.1, 7.3.2A, and 7.3.2B.

REFERENCES

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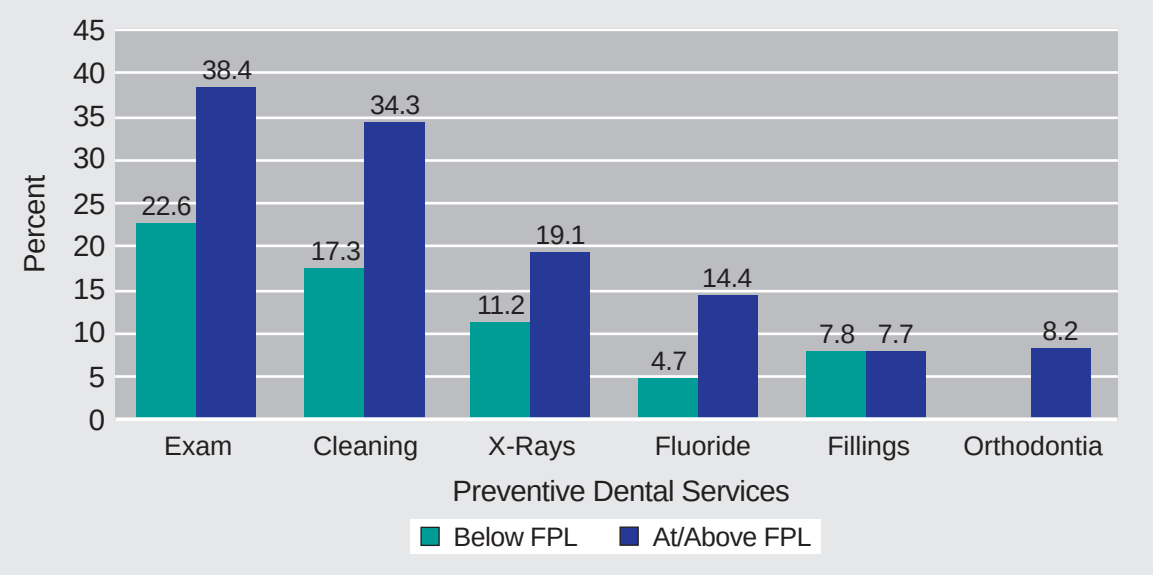
Mouradian WE, Wehr E, Crall JJ. Disparities in children's oral health and access to dental care. JAMA 2000; 284(20):2625-31.

U.S. Department of Health and Human Services. *Healthy People 2010*. Conference ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, 2000.

[1] MEPS reports race/ethnicity as Hispanic, black-not Hispanic, and other (including non-Hispanic whites).

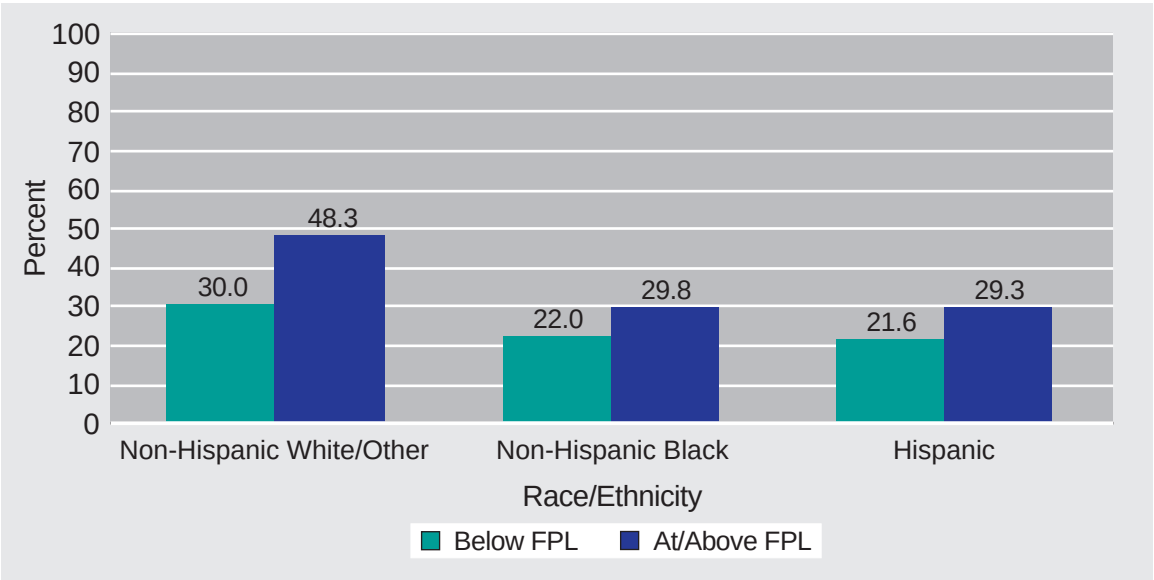
Figure 7.3.1. Percentage of children aged 18 years and younger who received preventive dental services during 1997 by type of service and federal poverty level (FPL)



Note: Sample size of children living below the federal poverty level receiving orthodontia is too small to produce reliable estimates.

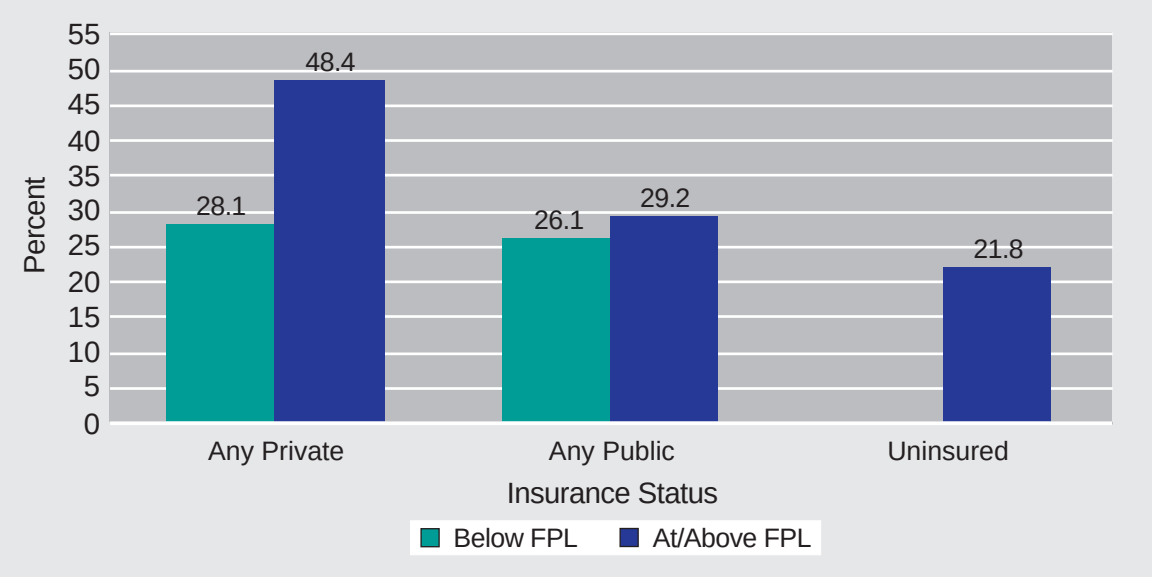
Data source: 1997 Medical Expenditure Panel Survey Household Component, Agency for Healthcare Research and Quality.

Figure 7.3.2. Percentage of children aged 18 years and younger who received any preventive dental services during 1997 by race/ethnicity and federal poverty level (FPL)



Data source: 1997 Medical Expenditure Panel Survey Household Component, Agency for Healthcare Research and Quality.

Figure 7.3.3. Percentage of children aged 18 years and younger who received any preventive dental services during 1997 by insurance status and federal poverty level (FPL)



Note: Sample size of uninsured children living below the federal poverty level is too small to produce reliable estimates.
Data source: 1997 Medical Expenditure Panel Survey Household Component, Agency for Healthcare Research and Quality.

7.4 School-based health centers with an oral health component

The purpose of school-based health centers (SBHCs) is to provide health promotion and disease prevention services for children who would not otherwise receive them. There were an estimated 1,380 SBHCs in 1999-2000, representing 38% of elementary schools, 17% of middle schools, 34% of high schools, and 11% of other types of schools (CHHCS, 2001). A small proportion of SBHCs are thought to include a dental component (GWU, 1999).

SOURCE OF DATA

Analyses reported here are derived from an article published in the Journal of School Health on the School Health Policies and Programs Study (SHPPS) (Brener ND, Burstein GR, DuShaw ML, Vernon ME, Wheeler L, Robinson J. Health services: results from the School of Health Policies and Programs Study 2000. J School Health 2001;71(7):294-303). The state-level response came from a representative of the State Education Agency. District and school-level responses came from representatives of the respective unit. The survey response rate was 100% at the state level, 70% at the district level, and 71% at the school level.

State-level requirements

- Among the 50 states and the District of Columbia, 17.6% require oral health screening. Of these, 87.5% require parental notification if an oral health problem is found, but none of them require the teachers to be notified. Identification and referral of dental problems are required by 28% of those states.

District-level requirements

- Oral health screening is required by 31.1% of responding school districts. Of these, 98.3% require parental notification and 68.1% require teacher notification. Identification of or referral for dental problems is required by 43.7% of these school districts.

School-level requirements (Figure 7.4.1)

- Oral health screening is required by 29.4% of responding elementary schools, 16.7% of responding middle schools, and 6.8% of responding high schools. Of these, 98% require parental notification and 57.3% require teacher notification. Identification of or referral for dental problems is required by 54.5% of these schools.

Bullets reference data that can be found in Table 7.4.1.

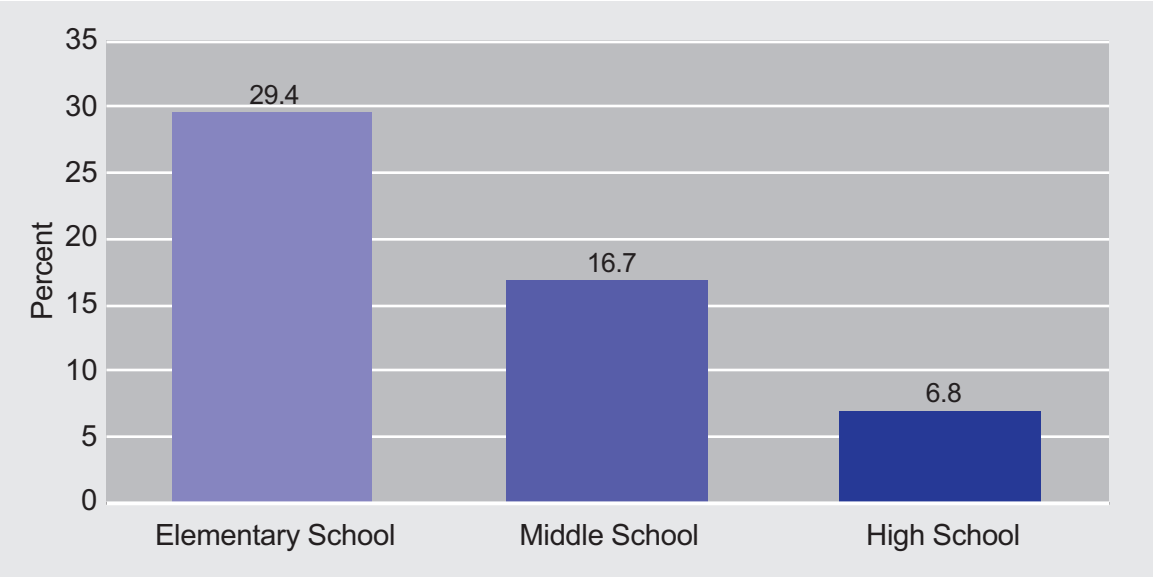
REFERENCE

Brener ND, Burstein GR, DuShaw ML, Vernon ME, Wheeler L, Robinson J. Health services: results from the School Health Policies and Programs Study 2000. J School Health 2001;71(7):294-304.

The Center for Health and Health Care in Schools (CHHCS). School-Based Health Centers: Results from a 50-State Survey School Year 1999-2000. Retrieved November 30, 2001 <http://www.healthinschools.org/sbhcs/survey2000.htm>.

The George Washington University (GWU), School of Public Health and Health Services. Making the Grade: National Survey of State School-based Health Centers Initiatives School Year 1997-1998. Washington, DC: George Washington University. Retrieved January 29, 1999 <http://www.gwu.edu/~mtg/sbhc/98summ.html>.

Figure 7.4.1. Percentage of schools that provided oral health screening



Source: Brener ND, Burstein GR, DuShaw ML, Vernon ME, Wheeler L, Robinson J. Health services: results from the School of Health Policies and Programs Study 2000. J School Health 2001;71(7):294-304. Materials used with the permission of the American School Health Association.

7.5 Community-based health centers with an oral health component

Although dentists donate more services than do physicians to individuals who cannot afford care (Manski et al., 1999), access to care for basic dental services continues to be a problem for many, particularly the poor.

Less than 20% of local health departments promote community-based preventive services and provide dental services to children and some adults. Other sources of health care are community, migrant, homeless health, and public housing centers. By the late 1990s, nearly 60% of these centers had a dental component (Lockwood, 1997). Community-based health centers extend dental care to groups that traditionally have limited access to culturally competent and linguistically appropriate dental services (Brown & Lazar, 1999).

SOURCE OF DATA

Analyses reported here are based on the 2001 Uniform Data System (UDS), Bureau of Primary Health Care, Health Resources and Services Administration. The UDS is an integrated reporting system used by all grantees of the following primary care system development programs administered by the Bureau of Primary Health Care (BPHC): Community Health Center Program, Migrant Health Center Program, Health Care for the Homeless Program, Outreach and Primary Health Services for Homeless Children Program, and the Public Housing Primary Care Program. The BPHC collects data annually from its grantees to monitor and evaluate their performance and to ensure compliance with legislative mandates. Information collected includes data on services, staffing, and financing. For oral health, the services include preventive, restorative, and emergency services. Seven hundred forty-eight grantees were included in the system for 2001.

- Of the health center grantees in the UDS system, 71% indicated they offer at least one of three oral health components (preventive, restorative, and emergency dentistry) on-site, while 79% offer at least one of the three services either on-site or by referral with the grantee paying for the service.
- The percentages of grantees offering the three oral health services were as follows: 70% offered preventive dental care, 61% offered restorative services, 63% offered emergency dental services, and 58% offered all three services (Figure 7.5.1). The percentages offering the oral health components either on-site or by referral were as follows: 79% offered preventive services, 77% offered restorative services, 75% offered emergency services, and 68% offered all three services.
- Of the grantees that offer on-site dental services, 66% of the grantees have at least 1 full-time dentist, 26% have at least 1 full-time dental hygienist, and 74% have at least 1 full-time dental support staff. In addition, some grantees have dental staff working less than full-time as follows: 22% have less than 1 full-time dentist, 28% have less than 1 full-time dental hygienist, and 9% have less than 1 full-time dental support staff (Figure 7.5.2).

REFERENCES

Brown LJ, Lazar V. Minority dentists: why do we need them? Closing the Gap. U.S. Government Printing Office No. 1999-721-913/94337. Washington, DC: Office of Minority Health, 1999.

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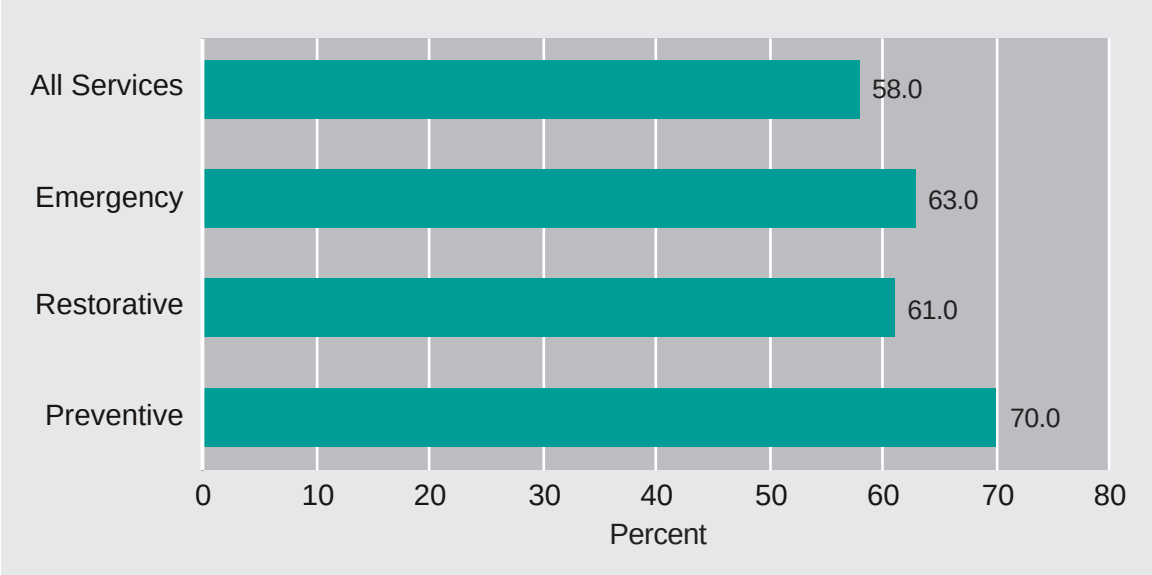
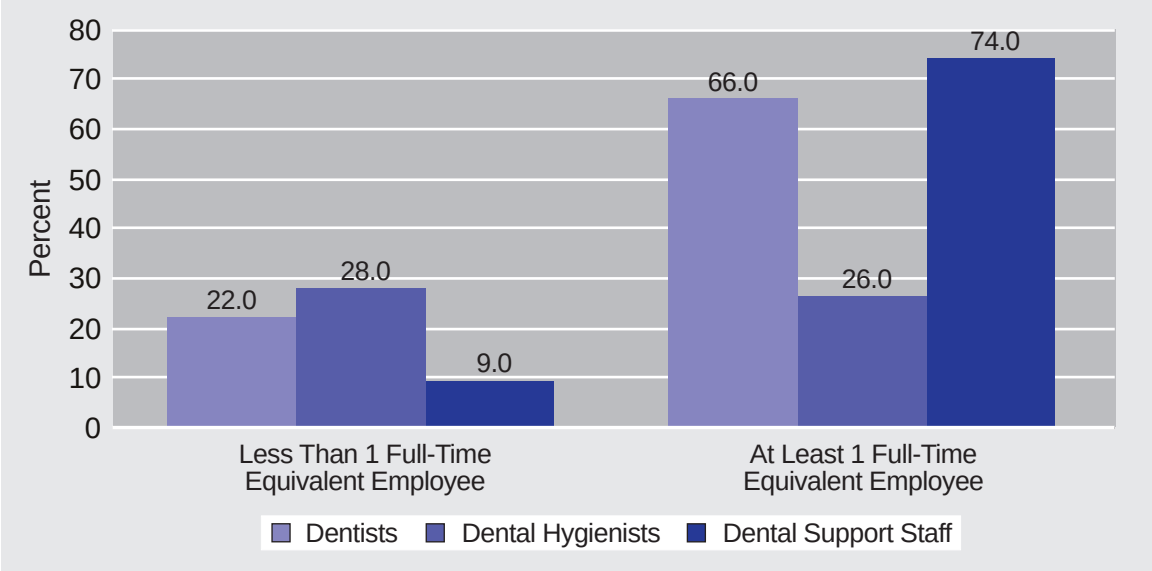
Manski RJ, Moeller JF, Maas WR. Health expenditures: A comparison between dental expenditures and office-based medical expenditures, 1987. J Am Dent Assoc 1999;5:659-66.

Figure 7.5.1. Percentage of community-based health centers offering various types of dental care services on-site, 2001



Data source: 2001 Uniform Data System, Bureau of Primary Health Care, Health Resources and Services Administration.

Figure 7.5.2. Employment status of dental employees at community-based health centers



Data source: 2001 Uniform Data System, Bureau of Primary Health Care, Health Resources and Services Administration.

7.6 State dental programs with full-time dental directors and other full-time employees

In 1999, only 29 states had full-time dental directors, 14 states had part-time directors, and 8 states had no director. Additionally, in 1995, it was found that two-thirds of 243 local health departments responding to a survey had dental programs (US DHHS, 2000). The percentage of dental directors with public health training has not been determined.

SOURCE OF DATA

The following data are derived from the Centers for Disease Control and Prevention's Oral Health Resources website (http://www2.cdc.gov/nccdphp/doh/synopses/index.asp).

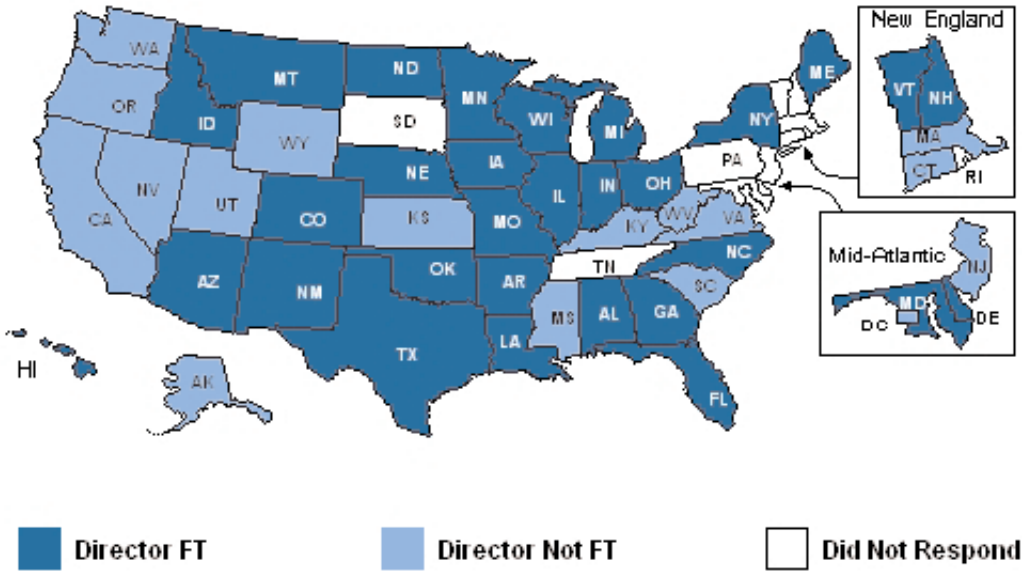
- Sixteen states do not have a full-time dental director. The states are Alaska, California, Connecticut, Kansas, Kentucky, Massachusetts, Mississippi, Nevada, New Jersey, Oregon, South Carolina, Utah, Virginia, Washington, West Virginia, and Wyoming (Figure 7.6.1).
- North Carolina and Texas had the highest number of full-time equivalent employees (80 and 73, respectively) involved in dental programs.
- Kansas, South Carolina, and Virginia did not have any full-time equivalent employees involved in dental programs.
- Data were not available for the District of Columbia, Pennsylvania, Rhode Island, South Dakota, and Tennessee.

Bullets reference data that can be found in Table 7.6.1.

REFERENCE

U.S. Department of Health and Human Services. *Healthy People 2010*. Conference ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, 2000.

Figure 7.6.1. Map of states with full-time dental directors, 2000



Source: CDC's Division of Oral Health and the Association of State and Territorial Dental Directors, April 29, 2001.

7.7 Usual source of dental care

In the 1970s, 68.4% of persons aged 25-74 years reported having a dentist they usually go to for dental care. In 1997, 67.9% of children aged 2-17 years reported visiting a dentist in the past year (Woolfolk et al., 1999). In 1995, 65.9% of adults in California reported visiting a dentist in the preceding 12 months (Tomar et al., 1998).

In the 1994 National Health Interview Survey, it was shown that uninsured children (75.9%) were less likely to have a usual source of care compared to insured children (96.2%) (Newacheck et al., 1998). In the 1995 National Health Interview Survey, uninsured adolescents were five times as likely to lack a usual source of care, four times as likely to have unmet health needs, and twice as likely to not have physician contact during a year compared to insured adolescents (Newacheck et al., 1999).

Although no comprehensive national data on usual source of dental care have been compiled since 1971-1975 (NHANES I), it was evident 30 years ago that an insufficient percentage of persons had access to care. Data pertinent to assessing "usual source of dental care" are now being collected as part of NHANES IV.

SOURCE OF DATA

Analyses reported here are based on the First National Health and Nutrition Examination Survey (NHANES I) 1971-1975, National Center for Health Statistics, Centers for Disease Control and Prevention.

- **The percentage of persons reporting having a dentist they usually go to for dental care**
  - was relatively stable for adults until age 55 years, after which the percentage was lower for each of the successively older age groups (Figure 7.7.1).
  - was greater for whites than blacks (Figure 7.7.2).
  - was greater for females compared to males (Figure 7.7.2).
  - increased with increasing levels of education (Figure 7.7.2).
  - was greater for persons living at/above the federal poverty level than for those living below the federal poverty level (Figure 7.7.2).
  - was greater for persons who had a dental visit in the past year than for those who did not.

Bullets reference data that can be found in Table 7.7.1.

REFERENCES

Newacheck PW, Stoddard JJ, Hughes DC, Pearl M. Health insurance and access to primary care for children. N Engl J Med 1998;338(8):513-9.

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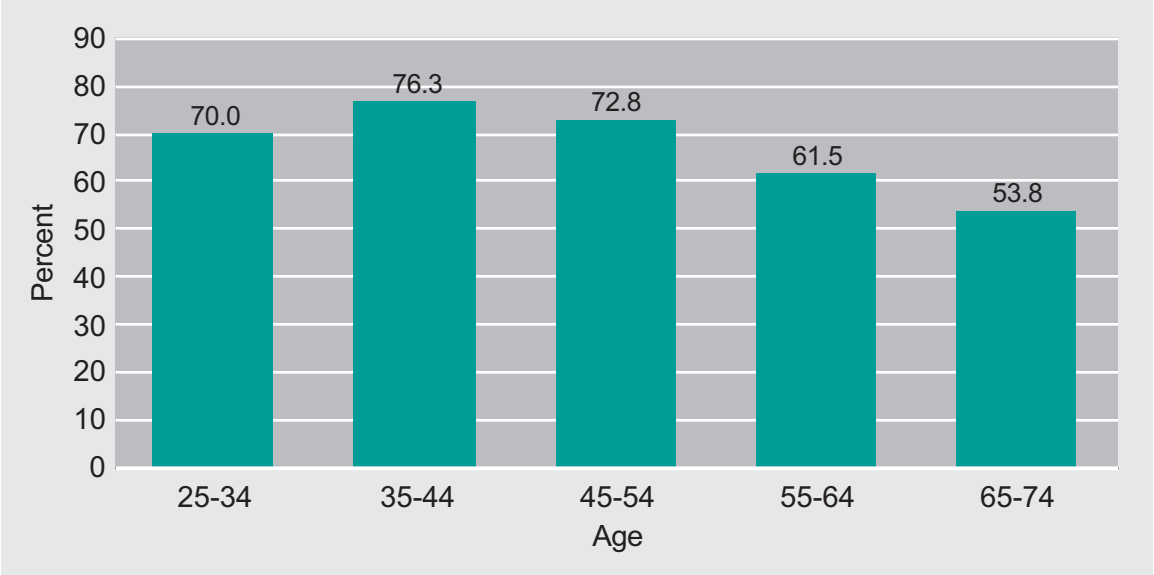
Tomar SL, Azevedo AB, Lawson R. Adult dental visits in California: successes and challenges. J Public Health Dent 1998;58(4):275-80.

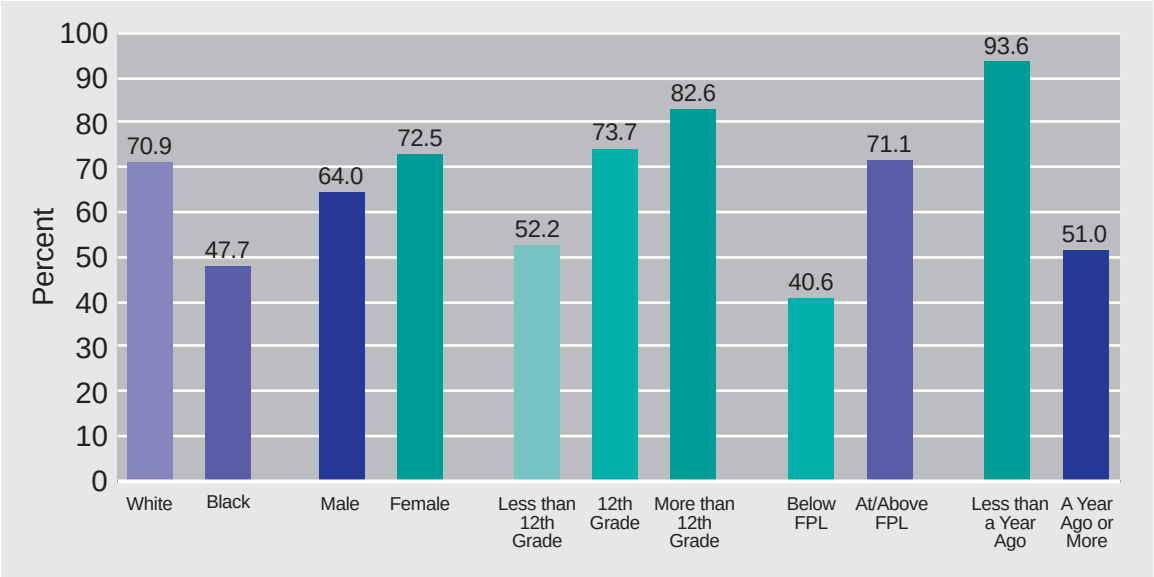
Woolfolk MW, Lang WP, Borgnakke WS, Taylor GW, et al. Determining dental check-up frequency. J Am Dent Assoc 1999;130(5):715-23.

Figure 7.7.1. Percentage of adults with a usual source of dental care by age, 1971-1975



Data source: The First National Health and Nutrition Examination Survey (NHANES I) 1971-1975, National Center for Health Statistics, Centers for Disease Control and Prevention.

Figure 7.7.2. Percentage of adults with a usual source of dental care by selected demographics, 1971–1975



Data source: The First National Health and Nutrition Examination Survey (NHANES I) 1971-1975, National Center for Health Statistics, Centers for Disease Control and Prevention.

7.8 Annual use of preventive, orthodontic, periodontic, and endodontic services

During 1997, 39.6% of the American population saw a general dentist, dental hygienist, or dental technician for dental services.

Although over 50% of the U.S. adult population has some degree of periodontal disease, severe periodontal pockets (> or = 6 mm) are found in less than 5% of the adult population. Among adults with extensive periodontitis, only 41% had seen a dentist in the past year and only 1% of visits were specifically for periodontal services (Oliver et al., 1998).

Approximately 20% of the overall population need orthodontic treatment (Proffit et al., 1998). Orthodontic visits were reported by approximately 3% of the population within a 1-year time frame during both 1987 and 1996 (Manski et al., 2000).

Few data are available on the prevalence of endodontic therapy among the U.S. population. Root canal restorations were identified in 5.5% of 5,272 teeth examined from 208 randomly chosen full-mouth radiographic series. European studies suggest that the prevalence of root canal therapy ranges from 3% to 6% among younger adults to 18% to 20% among adults aged 60 and over (Buckley et al., 1995).

SOURCE OF DATA

Analyses reported here are based on data collected in the 1997 Medical Expenditure Panel Survey (MEPS) by the Agency for Healthcare Research and Quality (AHRQ). Specific preventive dental services reported include general exam or consultation; cleaning, prophylaxis, or polishing; x-rays, radiographs, or bitewings; fluoride treatment; restorations; and sealants. Separate analyses were conducted of orthodontic, periodontic, and endodontic services.

- Preventive dental services received during 1997 included general exam or consultation (33.3%); cleaning, prophylaxis, or polishing (30.7%); x-rays, radiographs, or bitewings (19.3%); fluoride treatment (5.4%); restorations (9.6%); and sealants (1.3%). During 1997, 2.9% of the U.S. population saw an orthodontist, 1.0% saw a periodontist, 1.2% had periodontal surgery, 0.6% saw an endodontist, and 2.0% had root canal therapy.

- **Differences by race/ethnicity (Figure 7.8.1)**
  - A higher percentage of non-Hispanic whites/other used each of the preventive dental services than did Hispanics or non-Hispanic blacks.

- **Differences by federal poverty level (Figure 7.8.2)**
  - A greater percentage of people living at or above the federal poverty level used each of the preventive dental services compared to those living below the federal poverty level.

- **Differences by insurance status (Figure 7.8.3)**
  - A higher percentage of people with any private insurance used each of the preventive dental services compared to those who had any public insurance or were uninsured.

Bullets reference data that can be found in Table 7.8.1.

REFERENCES

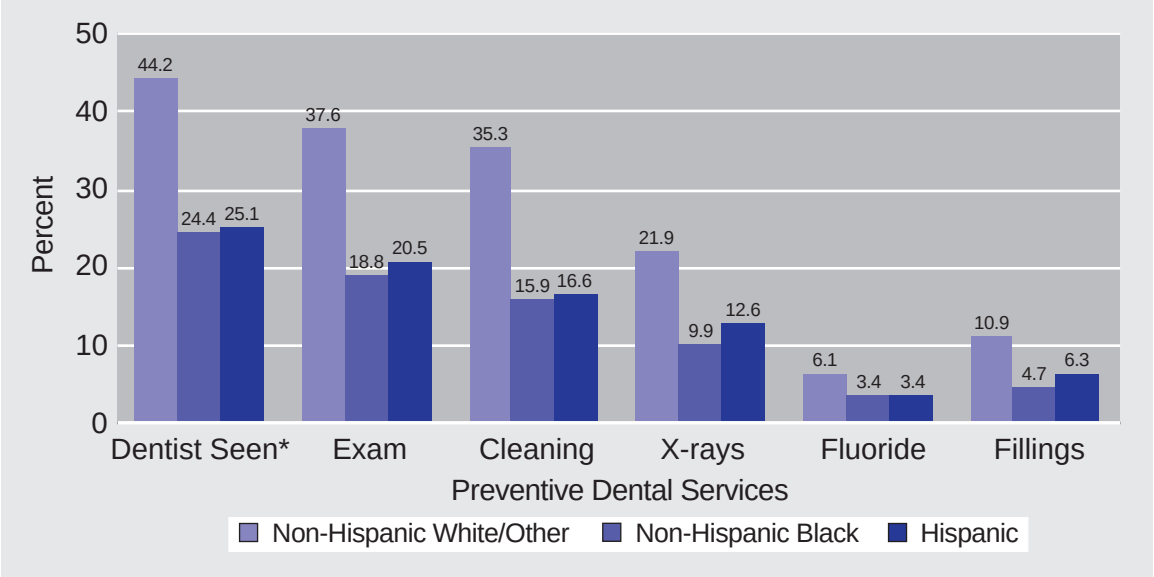
Buckley M, Spangberg LSW. The prevalence and technical quality of endodontic treatment in an American subpopulation. Oral Surg Oral Med Oral Pathol 1995;92-100.

Manski RJ, Davidson WM, Moeller JF. Orthodontic dental visits during 1987 and 1996. Am J Orthodont Dentofac Orthoped 2000;118(1):10-3.

Oliver RC, Brown LJ, Löe H. Periodontal diseases in the United States population. J Periodontol 1998:269-78.

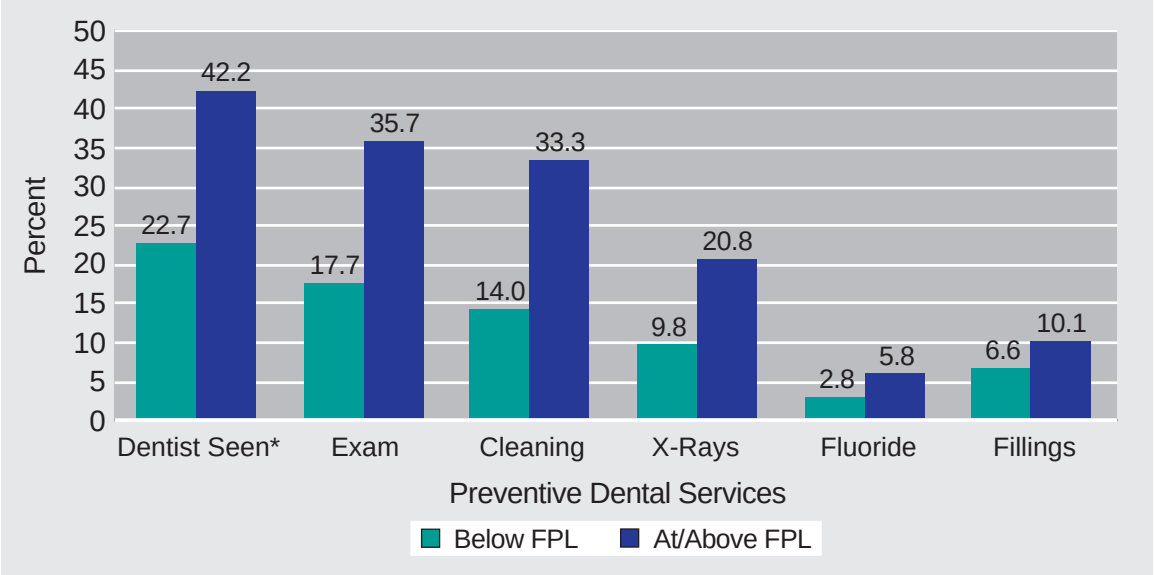
Proffit WR, Fields HW Jr, Moray LJ. Prevalence of malocclusion and orthodontic treatment need in the United States: estimates from the NHANES III survey. Int J Adult Orthodon Orthognath Surg 1998;13(2):97-106.

Figure 7.8.1. Percentage of the population who received preventive dental services during 1997 by type of service and race/ethnicity



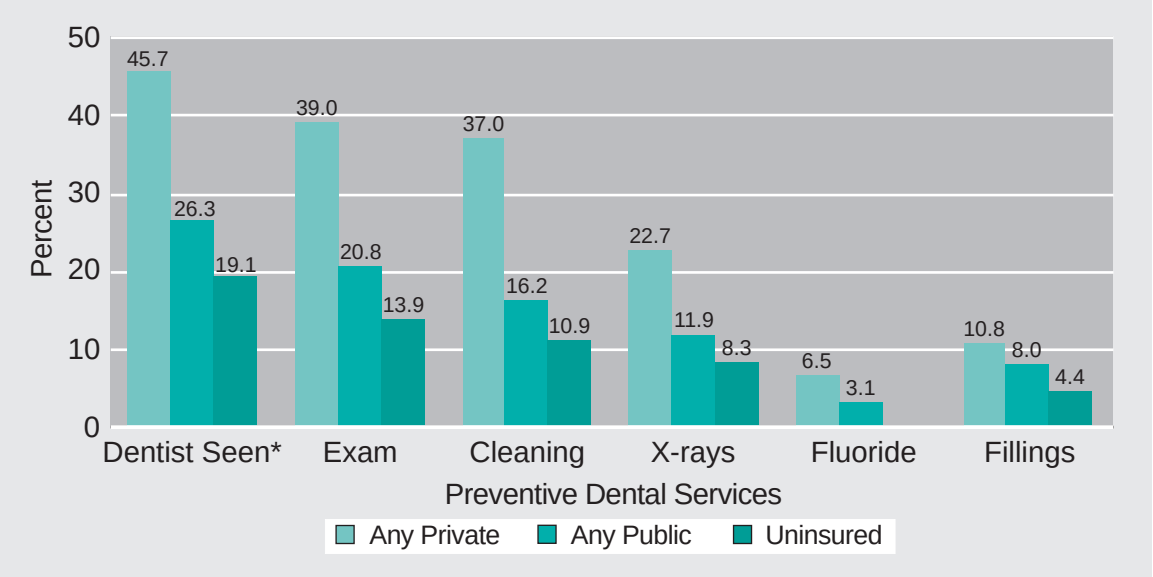
Notes: MEPS reports race/ethnicity as Hispanic, non-Hispanic blacks, and other (including non-Hispanic whites).
* Includes seeing general dentist, dental hygienist, or dental technician.
Data source: 1997 Medical Expenditure Panel Survey Household Component, Agency for Healthcare Research and Quality.

Figure 7.8.2. Percentage of the population who received preventive dental services during 1997 by type of service and federal poverty level (FPL)



* Includes seeing general dentist, dental hygienist, or dental technician.
Data source: 1997 Medical Expenditure Panel Survey Household Component, Agency for Healthcare Research and Quality.

Figure 7.8.3. Percentage of the population who received preventive dental services during 1997 by type of service and insurance status



Note: Sample size for uninsured receiving fluoride services was insufficient to produce reliable national estimates.
* Includes seeing general dentist, dental hygienist, or dental technician.
Data source: 1997 Medical Expenditure Panel Survey Household Component, Agency for Healthcare Research and Quality.

7.9 Proportion of the population that could not obtain dental care due to cost

Data from the 1994 Robert Wood Johnson Foundation National Access to Care Survey indicated that 8.5% of the U.S. population wanted, but did not readily obtain, dental care in 1994 (Mueller et al., 1998). The prevalence of unmet dental needs was greater among African Americans, people in fair or poor health, poor people, and people who were uninsured.

In 1971-1975, 34.1% of the adult U.S. population who had a dental problem did not visit a dentist within the past 12 months due to cost (data from NHANES I). In 1997, 24.3% of the adult U.S. population did not visit a dentist within the past year due to cost (data from 1997 BRFSS).

SOURCES OF DATA

Analyses reported here are based on data from the First National Health and Nutrition Examination Survey (NHANES I), 1971-1975, National Center for Health Statistics, Centers for Disease Control and Prevention, and the 1997 Behavioral Risk Factor Surveillance System (BRFSS), Centers for Disease Control and Prevention.

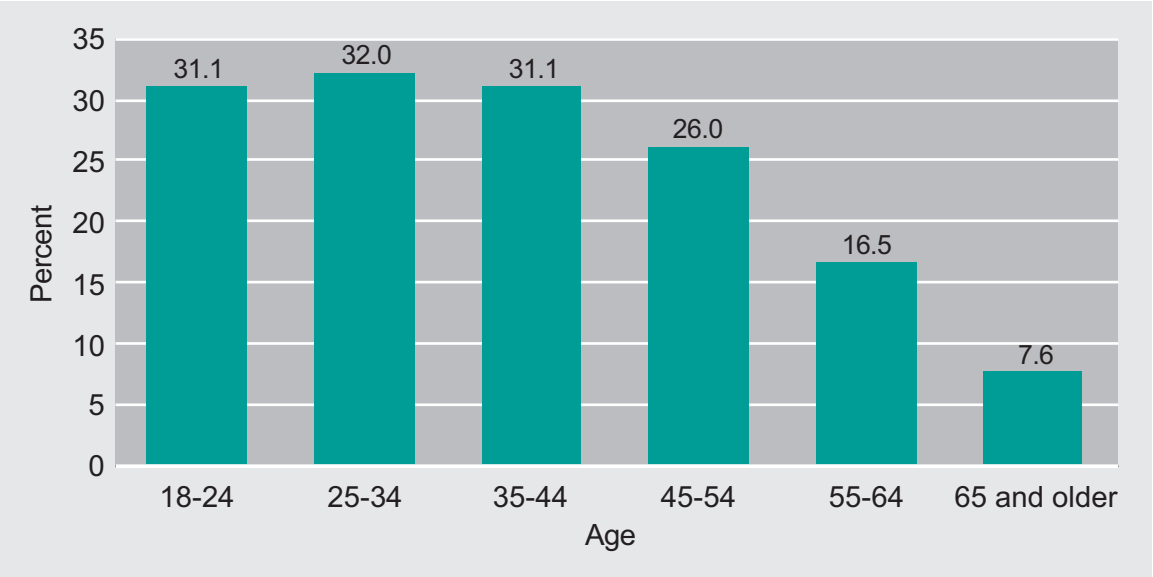
- **The percentage of persons who did not visit a dentist within the past year due to cost**
  - was greater among younger adults (Figure 7.9.1).
  - was greater among Hispanics compared to non-Hispanic whites and non-Hispanic blacks (1997 BRFSS).
  - was greater among females compared to males (Figure 7.9.2).
  - was lower among those with higher incomes (Figure 7.9.3).

Bullets reference data that can be found in Table 7.9.1.

REFERENCE

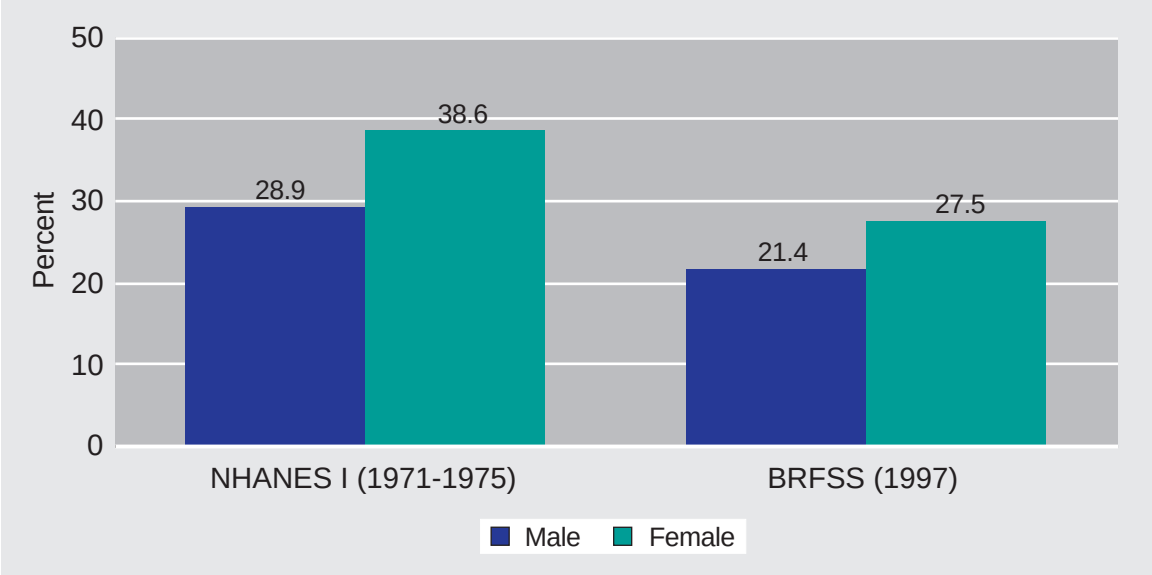
Mueller CD, Schur CL, Paramore, LC. Access to dental care in the United States: estimates from a 1994 survey. J Am Dent Assoc 1998;129:429-37.

Figure 7.9.1. Percentage of adults who did not visit a dentist within the past 12 months due to cost by age



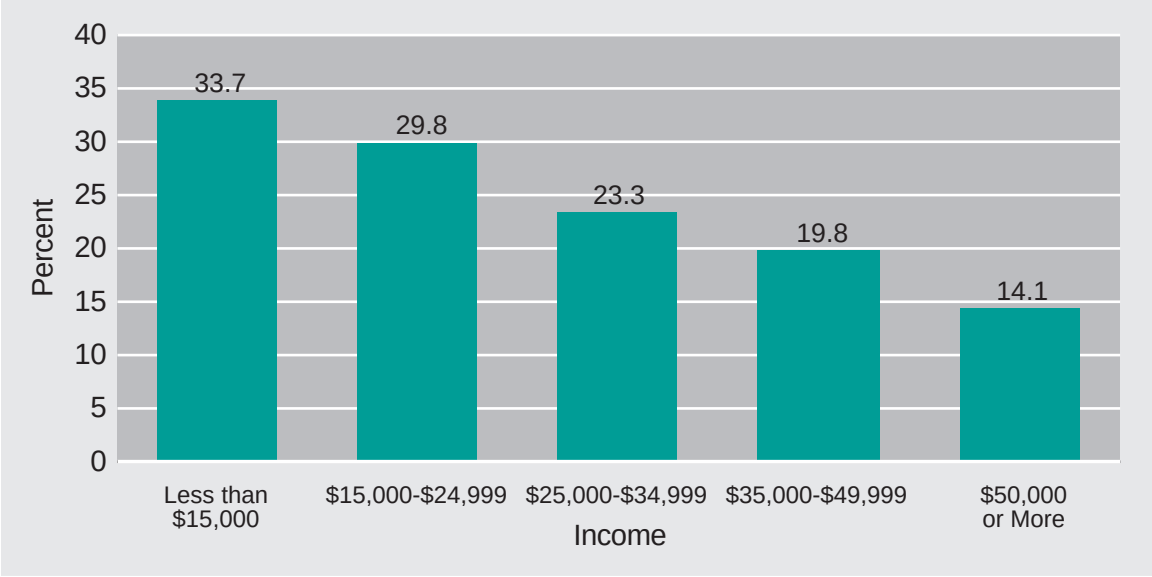
Data source: 1997 Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention.

Figure 7.9.2. Percentage of adults who did not visit a dentist within the past 12 months due to cost by gender



Data sources: The First National Health and Nutrition Examination Survey (NHANES I) 1971-1975, National Center for Health Statistics, Centers for Disease Control and Prevention and 1997 Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention.

Figure 7.9.3. Percentage of adults who did not visit a dentist within the past 12 months due to cost by income



Data source: 1997 Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention.