# Access to dental care

## Solving the problem for underserved populations

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## ABSTRACT

**Background.** Americans are enjoying an increasing level of oral health. However, oral health improvements are not being experienced evenly across the population. The poor, some minorities, institutionalized elderly people and other groups do not have adequate access to dental care.


**Overview.** The author discusses the need to understand clearly the barriers to care affecting underserved populations and presents a framework for designing access-to-care programs.

**Conclusions.** The author concludes that access-to-care problems are complex and will not be solved easily or quickly. A complete understanding of the barriers to care being experienced by any group under consideration must be achieved, and an improvement plan must be designed to address those specific barriers considering the demand for care, the dental work force and the economic environment.

**Practice Implications.** Failure to understand the barriers to care and address them adequately will result in limited success in enhancing access to dental care for underserved populations.


The problem of inadequate access to dental care for some segments of the population is complex and cannot be solved simply. The current literature on this subject is abundant and generally approaches the issue from a single perspective—problem enumeration or solution proposal—without consideration of the complexity of the situation. As with most complex problems, a single, simple solution will not be effective and, generally, the "one size fits all" concept will generate inadequate solutions.

**When speaking of access to dental care today, we must consider both the availability of care and the willingness of the patient to seek care.**

The first step in problem resolution is to understand the circumstances as well as possible. In access to dental care problems this involves many factors beyond those that were traditionally considered to be access-related. This discussion aims to describe some of the factors that should be considered in enumerating the problem, describe some of the inappropriate solutions that have been advanced and establish a framework upon which a rational solution can be developed.

### WHAT DO WE MEAN BY 'ACCESS'?

The current concept of "access to dental care" reaches far beyond its traditional meaning. This new concept may be responsible for some of the misunderstandings that occur and some of the difficulties experienced in developing solutions that effectively address the problem. In the past, when one considered the concept of access to dental care, the frame of reference was almost exclusively related to a patient's ability to obtain or make use of dental care. Factors external to the patient—for example, adequacy of the dental work force and ability to pay for care—were the primary determinants of access. Collectively, these factors were related mostly to the supply side of the dental care system and were primarily economically based.

Now, discussions of access take into account factors internal to the patient: the perceived need for care, cultural preferences, language and so forth. These factors relate directly to the demand for dental care and may operate independent of the availability of that care. They are patient-based.

Therefore, when speaking of access to dental care today, we must consider both the availability of dental care and the willingness of the patient to seek that care. In essence, it is a supply-demand consideration. Of course, there

**TABLE**

**PERCENTAGE DISTRIBUTION OF NATIONAL HEALTH INTERVIEW SURVEY PARTICIPANTS 2 YEARS OF AGE AND OLDER WHO HAD VISITED THE DENTIST WITHIN THE YEAR PRECEDING THE SURVEY.**

| CHARACTERISTIC | PERCENTAGE OF PEOPLE IN NATIONAL HEALTH INTERVIEW SURVEY, BY YEAR* | | |
|---|---|---|---|
| | 1983 | 1997 | 2002 |
| **Age (Years)** | | | |
| 2-4 | 28.4 | 44.1 | 40.1 |
| 5-17 | 67.0 | 78.3 | 80.9 |
| 18-34 | 57.0 | 60.2 | 59.8 |
| 35-54 | 57.4 | 66.8 | 60.4 |
| 55-64 | 51.3 | 60.8 | 64.6 |
| 65 and older | 38.6 | 54.1 | 54.0 |
| **Sex** | | | |
| Male | 53.0 | 62.2 | 61.1 |
| Female | 56.9 | 66.4 | 66.1 |
| **Race** | | | |
| White | 57.0 | 65.8 | 65.5 |
| African-American | 41.8 | 57.7 | 55.0 |
| Other | N/A† | 58.3 | 58.0 |
| **Ethnicity** | | | |
| Hispanic | N/A | 53.3 | 52.8 |
| Non-Hispanic | N/A | 65.7 | 65.2 |
| **Poverty Status (% Of Poverty Level‡)** | | | |
| < 100 | N/A | 50.0 | 47.8 |
| 100-199 | N/A | 49.2 | 50.8 |
| 200-299 | N/A | 61.3 | 59.5 |
| ≥ 300 | N/A | 76.4 | 74.4 |
| Below poverty level | N/A | 50.0 | 47.8 |
| At or above poverty level | N/A | 67.0 | 66.5 |

* Source: National Center for Health Statistics.[1,2,7]
† N/A: Data not available.
‡ Poverty level: An income threshold below which a family or individual in considered to be living in poverty. This threshold is updated annually by the U.S. Bureau of the Census to reflect changes in the Consumer Price Index for all urban consumers and varies by family size and composition.

are many details to each side of this equation that must be examined in each instance and must be addressed in any proposed solution.

## ACCESS CONCERNS

The majority of Americans have adequate access to dental care and seek regular care in growing numbers.[1-3] Between 1983 and 1998, the number of Americans who had at least one dental visit increased 10.5 percent to 65.5 percent.[1,3] Regular dental care combined with successful efforts to prevent oral disease have enhanced the oral health of Americans significantly. The number of children who never have experienced dental caries is increasing; the number of decayed and/or filled teeth in adults is decreasing; and the number of people who have lost all of their teeth has been reduced dramatically.[4] Unfortunately, these advances have not been enjoyed uniformly across our population. Specific groups—defined by such characteristics as income, geography, age or race or ethnicity—have not participated in this advance in oral health.[5] Their exclusion generally has been attributed to inadequate access to dental care—access taken in the new, broad sense of that term.

Of the 22 oral health objectives enumerated in the U.S. Department of Health and Human Services document Healthy People 2010, the great majority are directly related to enhancing access to dental care or require enhanced access to be successfully accomplished.[6]

The so-called dental "safety net"—composed of federally qualified health centers, other health centers, hospital outpatient dental clinics and training programs, and dental school clinics—serve to supplement the private practice dental care system that provides most of the dental care

in the United States (H. Bailit, D.M.D., Ph.D., and R. Weaver, D.D.S., unpublished data, 2004). The capacity of the safety net settings to treat underserved groups is limited, and they are forced in many instances to rely on revenues from groups that are not underserved for their financial survival.

Measuring access to dental care is difficult because of the many factors involved. Nevertheless, it would be helpful if some relatively objective means were available to monitor the status of access to care and to identify trends or changes in access. Since the result of all of the factors that determine access to care is an actual dental appointment, the percentage of any population group that has had a dental appointment in any given period may be the best indicator of the access to dental care experienced by that group, with the understanding that there are different kinds of dental appointments, some of which are not optimal for improving oral health (for example, emergency visits)[1,2,7] (Table).

The data in the table demonstrate the differences in dental visits according to age, sex, race, ethnicity and family income. In addition to these data, the 1999 National Health Interview Survey indicates a difference in the percentage of people who had a dental appointment according to their dental insurance status; 75.2 percent of those with dental insurance and 58.1 percent of those without dental insurance had a dental appointment.[8]

A study of the reports filed by the state Medicaid agencies conducted by the American Dental Association revealed that less than 20 percent of Medicaid dental beneficiaries had at least one dental appointment in 2002[9,10] (Figure 1).

Although Figure 1 concerns visits for medical care, the conclusions that can be drawn from these data probably are applicable to dental care as well. It demonstrates relatively little effect on access to care by language, in this case Spanish, but a striking effect on access by citizenship status. A combined effect may be operating in these groups, however, since the noncitizen group also was most likely to be predominantly Spanish-speaking.

The effect of limited English proficiency among native speakers of languages other than Spanish may be more significant, given the large number of Spanish speakers in the United States and the length of time Spanish has been commonly spoken here.

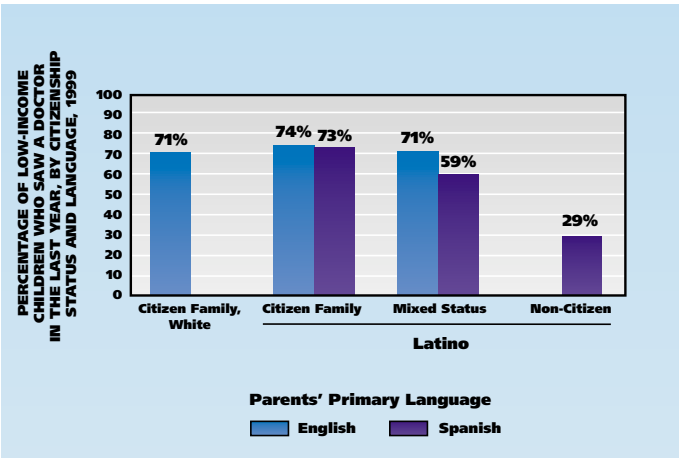


**Figure 1. Percentage of low-income children with a medical visit, by citizenship and parents' primary language, 1999. Reproduced with permission of the publisher from Henry J. Kaiser Family Foundation, Kaiser Commission on Medicaid and the Uninsured.[10] (Notes: "Low income" means an income of less than 200 percent of the federal poverty level, which is $30,520 for a family of three. "Mixed status" describes the situation in which a child is a citizen and one or both parents are not. There was an inadequate number of noncitizen Latino children from English-speaking families.)**

These average data do not tell the entire story for any one person or subgroup of people. Some may share the access characteristics of several categories, compounding the effect of each on access to dental care.

## GROUPS WITH ACCESS CHALLENGES

Some groups in our population come to mind immediately when considering encumbered access to dental care. Below is a discussion of each of those groups.

**The poor and the working poor.** These individuals or families do not have adequate financial resources to avail themselves of appropriate dental care. Even though the actual fee for dental treatment may be paid through an assistance program, the opportunity costs to obtain that care may be such that they cannot afford the "free" care.[11]

**Poor inner-city residents.** When poor families concentrate in inner-city neighborhoods, particularly when they are beneficiaries of inadequately funded public assistance programs, it often is difficult for them to find a dentist who is available to provide care.

**Rural area residents.** In very rural areas, it often is not economically feasible to establish and maintain a private dental practice. Therefore, people who live in these areas must travel to the nearest jurisdiction where dental care is avail-

able. These "hub" dental practices require a large geographical catchment area to generate a sufficient number of patients to sustain that practice.

**Mobility-restricted people.** People who cannot travel to a dental treatment facility because they are homebound or are residents of nursing homes or other assisted-living settings must have dental personnel provide dental care to them where they reside. There are a variety of barriers to access for this group, including lack of facilities, insufficient reimbursement, complicated administration, poor daily support from caregivers and lack of experience among dental personnel.

**Culturally isolated groups.** Various ethnic groups, particularly newcomers to the United States, often find that their language, political status and/or cultural values may be barriers to receiving dental care. People in these groups usually attain integration into the health care system eventually, but during the integration period, access to all health care may be compromised.

**Unemployed.** Families that have limited income and have lost dental benefits because of unemployment may find that their access to dental care is interrupted. Similar effects may be experienced during periods of underemployment while families await the return to full employment at accustomed wages.

**Uninsured.** Lack of dental insurance can be a barrier to seeking dental care for some, particularly those in the lower socioeconomic classes. The aforementioned differential of almost 20 percent in the percentage of people who had a dental appointment between insured and uninsured people is significant. However, unlike medical insurance, approximately one-half of the American population does not ordinarily have dental benefits and pays for dental care out of pocket.[12] The effects of not having dental insurance are not uniform across the socioeconomic spectrum, being more of a burden on the lower end. People with limited financial resources may give dental care a lower priority than other expenses that they perceive to be more pressing.

**People with special needs.** Because of a number of factors—the required specialized treatment needs that often are beyond the skills of the average dental practitioner, difficult patient management, the need for integrated multispecialty care and a limited number of dentists with skills and training in this area—people with special needs may find access to dental care problematic, especially if they do not reside near a medical center.

**Native Americans and Alaska natives.** These groups of Americans encounter reduced access to dental care for a combination of reasons, including economic, cultural and geographical limitations. In some instances, the geographical barriers are formidable.[13]

Of course, there are subgroups in each of these categories, such as children, elderly people and minorities. In addition, some individuals or groups may be burdened with the difficulties characteristic of several categories of the underserved; for example, a person may be poor, live in a rural area, be a member of a minority and be unemployed or uninsured.

It should be concluded from the discussion of categories of people who have reduced access to dental care that the problems related to that diminished access are many and varied. Efforts to improve access, necessarily, must be designed to ameliorate specific disadvantages. Failure to incorporate solutions to each of the specific problems experienced by each group when developing programs to enhance access to care will lead to only limited success.

## THE TRIAD OF ESSENTIAL FACTORS

Regardless of the group that is targeted for promoting increased access to dental care or the specific problems being experienced by that group, any program developed to enhance access to care must address adequately three essential elements—the demand for dental care, the dental work force and the economic environment[11] (Figure 2). These factors act interdependently, and none can be ignored if successful programs are to be designed.

**The demand for dental care.** There is an important difference between the need for dental care among and the demand for dental care exhibited by any group. There is not a one-to-one relationship between dental needs and dental demand. Programs to enhance access should contain elements designed to narrow the gap between the need for care and the amount of care sought. Understanding the barriers that prevent people from seeking appropriate and timely dental care is important when designing outreach activities to overcome those barriers. A survey in 2000 confirmed what earlier studies had shown among specific population groups: that nonusers perceived no need for dental care.[14]

Access enhancement programs will fail unless this type of perception is corrected.

Although there are some external economic factors involved in the demand for dental care, major factors generally are internal to the person or to the group and often are ignored in access-enhancement programs. Culturally sensitive educational activities can be an effective tool in increasing the demand for dental care where dental needs exist.

**The dental work force.** The dental work force should be adequate to address the demand for dental care. Dental work force projections based on the need for dental care, absent an effective demand for care, will result in inefficiencies in the dental system and economic dislocations, with no significant improvement in access. Work force deficiencies can occur as a result of an insufficient absolute number of dentists or an asynchronous needs-demand distribution of dentists. An essentially market-based distribution of dentists, which is characteristic of the dental care system in the United States, can result in gaps in dental personnel in areas in which there is insufficient market strength to support a dental practice. Although this situation may appear to be a dental work force maldistribution relative to dental needs, it is normal market distribution related to the demand for dental care.

**The economic environment.** Low reimbursement to dentists for treatment provided and high costs (other than professional fees) associated with obtaining dental care for patients create circumstances that discourage access to care. An economic environment must be created that provides the proper incentives or economic support for both patients and dentists to participate in the system. Payments that dentists receive for providing services must be appropriate in relation to their costs for providing those services. Also, the acquisition costs (such as lost wages and transportation costs) for patients receiving care should be reasonable and not be perceived as outweighing the benefits to be received from that care.

## 'IF YOU'D ONLY JUST ... '

Many of the solutions proffered to improve or solve problems of access to care address single factors in the complex access problem, disregarding the interdependence of the three aforementioned essential factors that must be addressed in access enhancement programs.

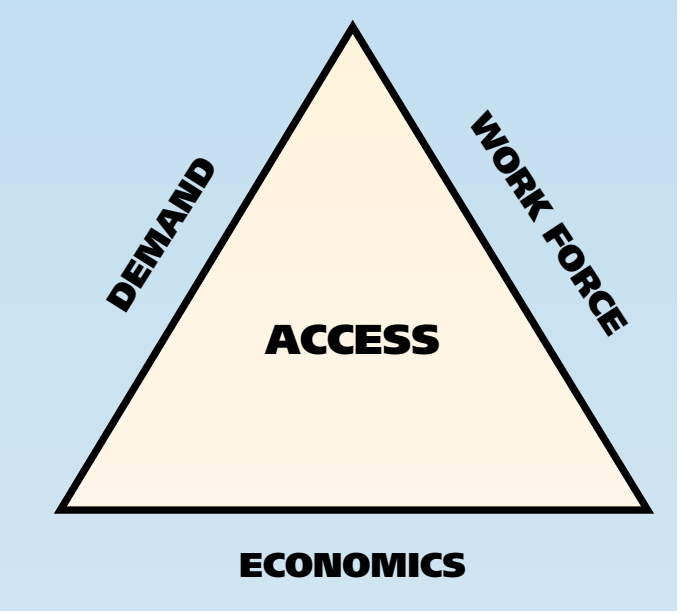


**Figure 2. The access triangle. Reproduced with permission of the publisher from Guay.[1]**

**" ... increase the number of dentists."** Some posit that because there are underserved populations and places in which it is difficult to get an appointment with a dentist, there must be a shortage of dentists. Therefore, the solution to the problem is simply to educate more dentists. This solution ignores the free marketplace. No matter how many dentists are available, none will establish and maintain a dental practice where there is inadequate market support. They will migrate to areas that are economically viable.

**" ... increase Medicaid fees."** Although increasing reimbursement to dentists who participate in Medicaid programs may be an essential step in increasing access to care for Medicaid beneficiaries, that alone will not always increase access to care. Access to care can be significantly increased with an increase in the reimbursement to participating dentists if, concomitantly, the administrative workload for a practice is reduced; there is an adequate, responsive work force; and there are both an adequate demand for care and reasonable acquisition costs for patients receiving care.

**" ... expand the scope of practice of auxiliary personnel."** Because of the difficulties experienced in providing dental care in sites remote from dental offices, some have argued that expanding the services some dental

auxiliary personnel are allowed to provide and/or relaxing the supervisory requirements under which they must work will enhance access to dental care.[15] Although these changes potentially could improve access to limited dental care, they would have little impact on the comprehensive care that mobility-restricted people require. Many elderly residents of nursing homes, for example, have complex medical problems that complicate the provision of dental care. They require the skills and experience that dentists possess to provide dental care effectively and safely, not those of a lesser-trained dental auxiliary.

**" ... include dental benefits in Medicare."** Not all persons eligible for Medicare have financial barriers to seeking dental care. Since Medicare eligibility is not means-tested, global eligibility would divert scarce resources to some who have no difficulty in acquiring adequate dental care. People who have inadequate personal resources could receive assistance through the Medicaid program. However, dental care that is a component of the treatment of a medical condition should be covered by private health insurance or by Medicare.

**" ... reorganize the dental 'cottage industry.' "** Approximately 75 percent of dentists practice in solo rather than in group settings, leading to a description of dentistry as a "cottage industry."[15] This decentralization of dental care places dentists where the patients are, for the most part. Changing the structure of dental practice according to the concentration of providers will exacerbate the difficulties in locating a dentist in areas already underserved. Prohibitions against ownership of dental practices by people other than dentists may hinder the development of large group practices, which most likely would not be located in underserved areas for the reasons discussed above and are mainly directed at ensuring the quality of dental care provided and maintaining the patient's welfare as their primary focus.

These suggestions for solving access problems when they occur are single-factor solutions for generally complex problems. In addition, some of the solutions recommended by various groups are attempts to solve other political issues using access as a vehicle for advancing their parochial political positions. A clear understanding of the specific issues related to access for each group and the design of programs aimed at addressing those issues when they are identified is essential for success.

## DENTAL HEALTH PERSONNEL SHORTAGE AREAS

For more than 50 years, the federal government has shown an active interest in the number and distribution of dentists with the goal of ensuring that all segments of the population have access to dental care.[16] The government's activities included legislation and programs that have culminated in the establishment of the National Health Service Corps, or NHSC, to address specific areas identified as having insufficient numbers of dentists and to develop a methodology to identify those areas, designated as dental health personnel shortage areas, or DHPSAs.

Being designated as a DHPSA qualifies those areas for a myriad of federal assistance programs, including the allocation of NHSC dentists to work in those areas, and various financial incentives to new dentists to encourage them to establish dental practices in underserved areas.

As the DHPSA designation suggests, the early emphasis of the program was based on the supply of dentists available in any given area in relation to the population in that area. The use of dentist-to-population ratios compared with a threshold value derived from the national dentist-to-population ratio was the prime criterion for being granted the DHPSA designation.[16] Over time, it became apparent that solely considering the supply of dentists in an area was an inefficient indicator of the ability of the population of that area to gain access to dental care, because of both the heterogeneous nature of dentists' productivity and the needs of people in any area.

The basic approaches to estimating the number of dental providers necessary to deliver adequate dental care in an area are based on the projected supply of dentists that will be needed, on the number of dentists that will be required to satisfy the anticipated demand for dental care, or the number of dentists that will be required to treat the identified dental needs in the area.[16] This is a difficult task. Each of these approaches has strengths and weaknesses and, more than likely, an estimation methodology that is a combination of all three considerations will come closest to an accurate projection.

The final goal of all of these efforts is to identify dentally underserved areas or populations. The current DHPSA designation process has moved beyond the simplistic approach of merely measuring the number of dentists in an area com-

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pared with the population in that area to a system that includes several factors related to the level of care received in an area or by subgroups in that area. This evolution from consideration of a single factor—the dental work force—in a complex system to an evaluation of the level of service received—shortage area to underserved area—is an important and logical advancement.

In light of the significant advances in the scope of factors considered and the goals of the entire enterprise, retention of the DHPSA terminology is not logical. Beyond that, it also can serve to distract those seeking to improve dental care in an underserved area by pointing them to a symptom rather than to the problem and suggesting a solution that will not be successful. A designation reflecting the true situation would be more useful, such as a "dentally underserved area," a "limited dental access area," or something similar that identifies the real problem.

As of December 2002, 1,625 of the 3,141 counties in the United States were wholly or partially designated as DHPSAs.[17] One county in Wyoming is so designated and a few in Nebraska, while the entire states of Alabama, Connecticut, Maine, Nevada and Utah are designated. This does not appear to be logical or to accurately reflect the status of the dental health care system across the country.

## CONCLUSIONS

Providing access to appropriate dental care to the underserved segments of the population is a complex problem that will not be solved easily or quickly. It is imperative that the specific barriers to care for each group are identified and understood. Programs designed to promote improved access must adequately address the problems that are identified if success is to be achieved. Even though government-financed dental care accounts for only 4 percent of the total amount spent for dental care,[4(p58)] in many cases, the solution will involve a private-governmental cooperative effort.

Three essential elements—demand for dental care, the dental work force and the economic environment—must be adequately addressed if success is to be achieved. ■

The views and opinions expressed in this article are not necessarily those of the American Dental Association or its subsidiaries.

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