

Giving Policy Some Teeth: Routes To Reducing Disparities In Oral Health

Policymakers must view oral health as essential for the health of the whole body and for quality of life.

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ABSTRACT: Despite improvements in oral health status and clear links between oral and systemic health, oral health is not accorded the same importance in health care policy as is general health. This review of oral health disparities over the life span documents the results of this inequity. Dental concerns and unmet dental treatment needs, especially among vulnerable populations, are not well addressed in oral health policies. We offer examples of discrepancies between policy and needs and examples of successful interventions that integrate oral health care with informed policy. [*Health Affairs* 27, no. 2 (2008): 404–412; 10.1377/hlthaff.27.2.404]

DESPITE IMPROVEMENTS IN ORAL HEALTH and publicized links with systemic health, oral health is not accorded similar status to systemic health in health care policy. In 2004, U.S. health spending was about \$963.9 billion, with dental care accounting for 7.5 percent.¹ And although 47 million Americans lack health insurance, 108 million lack dental insurance.²

Oral health not only is integral to systemic health but also affects people's productivity and quality of life.³ The gastrointestinal tract, the entryway for nutrients, begins in the mouth. The mouth and teeth are sources of communication, pleasure, social interaction, and cultural facial and dental aesthetics. The mouth also is an infection or inflammation portal. Oral conditions (particularly periodontal diseases) affect other aspects of health (for example, heart disease, stroke, diabetes, and respiratory disease), and systemic conditions affect oral health (for

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example, HIV and diabetes).⁴ Oral symptoms and salivary diagnostics can identify systemic problems (such as HIV). Oral and systemic diseases share common risk factors, including poor diet, substance use, poor hygiene, and stress; oral and systemic health disparities are often associated with race/ethnicity, sex, income, education, geographic location, insurance coverage, chronic conditions, age, and health literacy.⁵ U.S. systemic and oral health care financing, policy, and delivery systems are disconnected and unequal, generally treating the mouth as separate from and independent of the body.

Lifetime oral health status is affected by environmental and public health resources, plus biologic, social, cultural, economic, and access issues.⁶ The past century has seen progress in the U.S. physical environment, sanitation, nutrition, and water fluoridation, with resulting oral health improvements.⁷ However, large disparities persist for underserved or vulnerable populations, including racial/ethnic minority groups, people in rural areas and Health Professional Shortage Areas, immigrants, homeless people, elderly people, and people with developmental disabilities and chronic conditions. These groups benefited less from recent prevention and treatment innovations, experiencing greater oral disease burden and inadequate access to dental care.

In this paper we give examples of oral health disparities across the life span.⁸ We also provide context regarding existing health policies, finance, workforce and delivery systems, and cultural beliefs affecting disparities.

Oral Health Disparities Across The Life Span

■ **Pregnancy.** Pregnant women have particularly high gingivitis risk (60–75 percent) but low use of dental care.⁹ Among pregnant women perceiving an oral health need in 1998, Medicaid enrollees were 24–53 percent less likely than their privately insured peers to seek oral health care.¹⁰ This discrepancy is additionally important because mothers can transmit caries-causing bacteria to their offspring.¹¹

■ **Children and adolescents.** Dental care is children's most prevalent unmet health need.¹² The prevalence of caries in early childhood continues to increase despite improvement among other groups, which is troubling given the potentially long-term negative impact of tooth decay on speech, nutrition, and future dentition.¹³ Dental caries affects almost half of second graders and nearly 80 percent of adolescents, affecting some groups disproportionately.¹⁴ Roughly 75 percent of caries experienced by children age six or older occurs in only 33 percent of children, concentrating in black, Mexican American, American Indian/Alaska Native, and low-income groups.¹⁵ Children and adolescents with special health care needs have a particularly high risk of dental caries, yet even higher unmet needs.¹⁶

Preventive dental care, including annual dental visits, is necessary for optimal oral health. During 1999–2004, Mexican American and black children ages 2–11 were 16 percent and 4 percent, respectively, less likely than white non-Hispanic children to have had a prior-year dental visit; for adolescents, 30 percent and 17

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percent, respectively, were less likely. Children in low-income families (below 200 percent of the federal poverty level) were 20 percent less likely to have had a prior-year dental visit than those from higher-income families; adolescents were 25 percent less likely.¹⁷

Large disparities also exist in receipt of preventive dental sealants. Rates for black and Mexican American children are 33 percent lower than those for white children; children with family incomes near the poverty level are 50 percent as likely to receive sealants as those with family incomes of more than 200 percent of poverty.¹⁸

■ **Adults.** Adults surveyed in 2003, especially those with chronic conditions, often cited oral health as their top unmet health need.¹⁹ Lower-income, less-educated, and racial/ethnic minority populations have higher prevalence of caries, periodontal diseases, and oral cancer than other adults have. In 1994–2004, 60 percent of adults had prior-year dental visits, with fewer visits from racial/ethnic minorities (43–50 percent), populations below the poverty level (44 percent), and those with less than a high school education (38 percent).²⁰ National Guard reservists also suffer from poor oral health; 25 percent in California have oral health problems severe enough to prevent their deployment.²¹

Dental caries, gingivitis, and periodontal diseases are among the top ten secondary conditions among adults with developmental disabilities, yet in 2001 they were twice as likely as others to have lacked a dentist visit within five years or to have ever had their teeth cleaned.²² Uninsured adults with chronic conditions are doubly disadvantaged, with more lacking a prior-year dental visit (61 percent) than those with insurance (30 percent).²³

■ **Older adults.** The elderly, too, have seen oral health improvements, yet gradients by race/ethnicity, income, and education persist for tooth loss, caries, periodontal diseases, and dental service access. Overall, 27 percent of elderly people are edentulous (toothless), but this figure varies tremendously according to geographic area of residence: 13 percent in California or Hawaii versus 42 percent in Kentucky or West Virginia.²⁴ On average, seniors have nineteen remaining teeth; black seniors average fifteen.²⁵ Tooth loss leads to poorer nutrition and related consequences.²⁶ Untreated caries and periodontal diseases differentially affect older Hispanics (41 percent and 17 percent, respectively) and blacks (37 percent and 24 percent, respectively), compared to whites (16 percent and 9 percent, respectively).²⁷ The prevalence of caries among seniors equals that among children yet is more likely to remain untreated. Dental public health interventions are not available for seniors as they are for children.²⁸

Seniors are less likely to have had a prior-year dental visit (54 percent) than are

younger adults (62 percent); the situation is worse for older blacks and Mexican Americans (38 percent).²⁹ In 1986, even fewer nursing home residents (22 percent) had a prior-year dental visit, even though 70 percent have unacceptable oral hygiene levels.³⁰ Older adults residing in long-term care facilities have greater risk than community residents have for tooth decay and loss, periodontal diseases, soft-tissue lesions, ill-fitting or missing dentures, and poor oral hygiene.³¹

■ **Other influences.** Oral health knowledge and practices differ by ethnicity and culture. Groups vary in beliefs about the usefulness of treating the primary teeth; caries etiologies; the meaning of oral pain, dental discolorations, or loss; home remedies; dental hygiene and preventive efficacy; and trusted dental information sources.³² Current data are insufficient to isolate the interactions of biologic, genetic, and cultural differences with community, environmental, and delivery system processes, particularly regarding disparities.³³

Public Policies: Recommendations And Examples

■ **Public perceptions.** The American public views oral health as a priority. In the latest Research!America poll, 97 percent responded that oral health was somewhat or very important to overall health, yet oral health is a top unmet need for many.³⁴ Despite this, dental concerns are not well addressed in public health policy (evidenced by poor funding for oral health services), leaving multiple opportunities for improving policy in various areas (workforce, disparities, financing, and research), and in different geographic locations and jurisdictions.

■ **Workforce issues.** Lack of diverse and available (including geographically and in terms of Medicaid participation—fewer than 10 percent of all dentists participate at all) dental providers contributes to access issues.³⁵ Dentistry is the least diverse health care profession.³⁶ In the late 1990s, 13 percent of dentists were nonwhite, compared with 22 percent of physicians and 29 percent of the population; dental school enrollees remain relatively homogeneous.³⁷ Dentists from minority populations are more likely than whites to practice in underserved, minority communities.³⁸ Programs such as the Robert Wood Johnson Foundation's (RWJF's) Pipeline, Profession, and Practice program have promoted outreach efforts to increase the diversity of dental school applicants and given dental students experience practicing in underserved areas.³⁹ However, most dentists work in private practice, not less remunerative public service settings. Practitioners could be offered incentives to work in dental professional shortage areas, with low-interest loans and tuition repayment (now offered in only half of the states). The National Health Service Corps (NHSC) could increase its investment in dentists. Alternatively, given high overhead costs, government-sponsored loans could support capital investment into practices in under-served communities.

Infrastructure shortcomings include relatively few board-certified public health dentists nationally; inadequately trained state or local dental directors; and a national infrastructure with splintered responsibilities among many federal

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agencies without a lead agency.⁴⁰ Policies should support dental public health residency training and positions. All states should have a dental director who has had dental and public health training. The chief dental officer should be akin to the U.S. surgeon general, with jurisdiction over both federal and nonfederal dental activities.

Although some people debate whether there is an overall shortage of dentists, most acknowledge shortages in underserved areas. This calls for increasing the number and scope of practice of nondentist providers. Dental hygienists' scope of practice could be expanded, especially in screening and prevention, and possibly through either permission to practice without direct dentist supervision or under nondentist (such as physician) supervision. The RWJF has funded a Pennsylvania program to promote expanded-function dental assistants; California has had registered dental hygienists in alternative practice (RDH-APs) since 1998.

No mid-level dental provider extender exists, comparable to a physician assistant (PA) or nurse practitioner (NP). The closest U.S. examples are pediatric dental therapists, serving Alaskan tribal populations in remote villages, under a general dentist's supervision.⁴¹ Provider training could be developed for a public health disparity dental health provider with practice scope for preventive needs in underserved communities or programs serving them, much like the Head Start or Women, Infants, and Children (WIC) programs.

North Carolina's program, Into the Mouths of Babes, increased the workforce providing dental screenings and preventive services to young children by training physicians and other medical personnel and by providing increased Medicaid reimbursement for their dental services. This markedly improved access to preventive dental services for young children.⁴²

■ **Programs addressing inequalities in dental services.** Several states recently introduced programs requiring a dental professional to assess children's oral health prior to school entry. Although these programs increase awareness, not all states require follow-up treatment. Funding for preschool- and school-based dental disease prevention programs should be continued and expanded.

State or federal regulations are needed to continue to reduce tobacco use; prevent craniofacial injuries; promote healthier preschool and school nutrition; and extend scope-of-practice acts to allow trained, lower-cost health providers to deliver noninvasive preventive services in community settings.

Nationally, dental services should be included with medical services in community and federally qualified health centers (FQHCs), to reduce geographic barriers and expand the safety net. Moreover, FQHCs should be able to contract with private dentists to provide services. Eligibility for Medicaid enrollment or renewal

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now requires applicants to prove citizenship, which could estrange millions who fear harassment; this requirement should be repealed.⁴³ Other populations deserving increased dental care protection include those with low incomes, military members/veterans, and prisoners. The Centers for Disease Control and Prevention (CDC) can lead the effort to reduce inequalities as it develops guidelines for community preventive programs by including oral health in the discussion.

Water fluoridation, dentistry’s most effective preventive tool, still does not reach 33 percent of Americans, ranging from less than 2.1 percent of a state’s population to nearly 100 percent.⁴⁴ Now a local decision, this is a health issue that should be federally mandated for communities with public water systems that serve sizable populations.

■ **Financing/reimbursement policy.** Achieving all of these policy changes will require changes in how dental services are financed and delivered. A critical step toward reducing inequities in dental care is to fund public insurance well enough to deliver the standard of care for all people, not just the privately insured.

The State Children’s Health Insurance Program (SCHIP) should be improved in at least three ways. First, dental benefits should be mandated. Second, administrative expense limitations (under which public health efforts fall) should be raised to above 10 percent so that public health prevention programs are not limited. Last, required copayments for restorative dental services should be eliminated.

Dental benefits should also be a uniform part of Medicaid and Medicare. Dental coverage is optional for adults under state Medicaid programs; it must be required. Medicare covers almost no dental expenses, compared to 54.5 percent of medical expenses for those age sixty-five and older; thus, about three-fourths of the elderly’s dental expenses are paid for out of pocket.⁴⁵ Dental coverage is not even universally offered to National Guard soldiers: 40 percent lack dental insurance.⁴⁶

Successful examples of policy-driven improvements in access include Medical, California’s Medicaid program, which reimburses both medical and dental providers for fluoride varnish applications for childhood caries prevention. The Healthy Kids Dental program in Michigan addressed workforce supply restrictions on dental care provision, improving reimbursement and reducing administrative burdens, by changing to a private managed care dental program. Washington State’s Access to Baby and Child Dentistry (ABCD) program has training components for the oral health workforce, improved Medicaid reimbursement, and expanded dental benefits.

Universal medical coverage should include dental coverage. San Francisco’s Healthy Kids and Young Adults program provides dental, vision, and health insur-

ance to children and young adults under age twenty-five who are low income but ineligible for Medicaid or SCHIP, regardless of immigration status. Shy of that, pregnant women's coverage should include preventive and restorative dental care, both for the woman herself and to emphasize from the outset the importance of her child's oral health.

■ **Research.** More funding for prevention research and population-based approaches to oral health care is needed to identify and reduce risk factors, especially among populations experiencing oral health disparities. An expanded research agenda should be supported by the National Institute of Dental and Craniofacial Research (NIDCR), the CDC, and the Agency for Healthcare Research and Quality (AHRQ) and should further involve foundations and other nongovernmental organizations in oral health care research and action. Moreover, there should be increased funding for monitoring and surveillance of the nation's oral health and mandated inclusion of oral health questions in national surveys, such as the National Children's Survey (currently without a dental component).

Most oral health research is guided by NIDCR funding priorities, although this generally does not include health policy research or currently much funding for monitoring and surveillance of the nation's oral health. Commendably, it includes centers for research to reduce oral health disparities and initiatives described by the NIDCR's Plan to Eliminate Craniofacial, Oral, and Dental Health Disparities.⁴⁷

LARGE DISPARITIES IN ORAL HEALTH STATUS and use of dental services exist throughout the life span, as this paper highlights, for selected conditions. Because the underlying reasons for these and other health disparities are complex and caused by many factors, oral health must be more fully integrated with other policies to reduce all disparities. Despite the public's perception of a great need for dental care, public policies lag in addressing those needs. Policymakers must view oral health as essential for systemic health and quality of life. We echo the surgeon general's call to transform oral health care.⁴⁸ To improve oral health and reduce disparities, policies must better integrate oral health and health care, and increase access to preventive and treatment services and health promotion activities, while reducing financial and other access barriers.

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NOTES

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