

Chapter 8. Workforce Models and Opportunities

Chapter Description

This chapter covers four types of strategies to assure that an adequate workforce exists to maintain the oral health of young children:

1. Expand traditional delivery systems
2. Develop community-based collaborations and integrated systems of care
3. Increase workforce numbers, diversity and skills
4. Create methods for workforce retention and sustainability of systems.

Models take into consideration workforce size, composition, characteristics and distribution. Current initiatives, examples and resources are provided.

Chapter Overview

"The public health infrastructure for oral health is insufficient to address the needs of disadvantaged groups, and the integration of oral and general health is lacking."

[Oral Health in America: A Report of the Surgeon General \(2000\)](#)

Oral Health in America and numerous other reports and papers referenced at the end of this chapter discuss the factors that create this workforce crisis, especially in rural areas. Some of the factors were covered in Chapter 1. Insufficient numbers of dental professionals and public health professionals, underutilization of professionals' skills to the fullest extent, and fragmented systems of care contribute to problems accessing preventive services and clinical treatment.

The American Dental Association's Future of Dentistry report notes declining numbers of dental graduates and a large number of dentists retiring from active practice or reducing the hours they practice. Nationally, about 35% of all practicing dentists are older than age 55. By 2014, the number of dentists retiring is estimated to exceed the number of students graduating from dental school. About 2.5% of all dentists specialize in pediatric dentistry. Dentists who self-identify as public health dentists represent just 1-3% of all practicing dentists. A 2002 study of 845 California dentists who practice in rural areas revealed the following demographics (WWAMI, 2003):

- 38% are over age 55
- 43% grew up in a rural community
- 88% are male and 82% are white
- 72% graduated from California dental schools
- 50% participate in Denti-Cal or Healthy Families
- 11% are specialists, but none of these practice in small isolated communities; orthodontists and pediatric dentists comprise 58% of the specialists
- 68% employ at least one dental hygienist; there is a vacancy rate of 17.7%.

The American Dental Hygienists' Association reports that the profession of dental hygiene is expected to rise by over 35 % between 2000 and 2010. Nationally, while 57.5% of dental hygienists are between the ages of 35 and 55, only 9% are above 55 years of age.

In the Surgeon General's A National Call to Action to Promote Oral Health, Goal 4 addresses workforce issues. A number of [strategies](#) are listed for this goal. Healthy People 2010 objectives also address workforce issues.

Healthy People 2010 Oral Health Objectives

- [21.17: increase the number of state and local dental programs with public health trained directors](#)

- [21.14: expansion of community health centers and local health departments with an oral health component](#)
- [1.8: increase racial and ethnic representation in health professions](#)
- [Chapter 23: a number of infrastructure objectives relate to a well-trained and competent public health workforce.](#)

Rural communities often experience great difficulties recruiting and keeping certain types or levels of dental professionals. Professional reasons mainly involve lifestyle and economic issues, including feeling isolated or not being able to find jobs for spouses. Community clinics may not be able to meet the salary needs of dentists or dental hygienists who still have unpaid professional education debts or who have a great deal of experience and can make a significantly higher salary working in a private practice or in an urban area. A recent study showed that local health departments report recruitment difficulties for dentists and dental hygienists due to budget constraints, shortages, and salary differentials (Mertz, NOHC, 2004.) Most dentists in the study provided direct clinical care rather than public health-oriented functions such as needs assessments, program planning/evaluation, or management. Although some of these dentists were salaried, others were contractual or volunteers. Small or isolated communities also lack a sufficient population base to support dental specialists such as pediatric dentists or oral surgeons, so patients must travel great distances to receive specialty care. Yet lifestyle and family issues also are a primary motivation for those who choose to practice in a rural community, e.g., small town sense of community, feeling safer, closer to nature. Rural communities increasingly must be creative in marketing and creating incentives that will attract potential practitioners.

Self-Assessment

In Chapter 6 you discovered what dental care resources exist in your community and where there are gaps. What workforce issues did you identify in Chapter 1 that act as barriers to assuring that all pregnant women and children ages 0-5 receive an oral health assessment, preventive oral health services and counseling, as well as dental treatment? What roles do health professionals such as physicians, nurse midwives, physician assistants, public health nurses and nurse practitioners currently play in oral health promotion, prevention, and referral for oral care in your community? Complete the Self-Assessment on Workforce to identify assets and gaps that you can use to later develop an action plan to address workforce issues.

Strategies to Manage Dental Workforce Problems

Expand traditional delivery systems

There are numerous ways to expand services using traditional dental providers or systems:

- Dental teams or individual providers provide care in community-based settings such as Head Start, schools and community centers; simple examinations and preventive services do not require much, if any, dental equipment per se, only some instruments and supplies. Other procedures may require portable equipment. Many communities in California are doing this with First 5 funding.
- Create special license status or subsidize license renewal or malpractice insurance for inactive practitioners to volunteer in community-based programs. Idaho's legislature passed a bill that allows the Board of Dentistry to grant a "volunteers license" to retired dentists, establishing immunity from liability for performing volunteer services in community health clinics. States such as Georgia, Maine, Oregon and South Carolina have used the subsidy approach. A new federal program called the Free Clinics Federal Tort Claims Act Medical Malpractice Program provides malpractice liability coverage to volunteers through the federal government. For an application, go to <http://www.bphc.hrsa.gov/freeclinicsftca/application.htm>
- Use mobile vans (self-contained clinics) to travel to community-based sites, using dental staff or volunteers (see Chapter 6).
- The HRSA Bureau of Primary Care is increasing the number of Federally Qualified Community/Migrant/Homeless Health Centers across the country, and making an effort to require an oral health component. <http://www.hrsa.gov/grants/preview/primary.htm#hrsa05103>.

- Engage practitioners in volunteer service to provide care in their own offices or in community sites. An excellent resource for doing this is a manual on Volunteer Retention and Recruitment by Volunteers in Health Care. <http://www.volunteersinhealthcare.org/Manuals/ddsrecruit.pdf>.
- Use teledentistry technology to deal with supervision issues for hygienists providing community-based care or for consultations with specialists at other locales (see Chapter 6).
- Contract with an itinerant dentist or team that works out of multiple offices for selected periods of time or visits an area to provide specialty care for an agreed upon number of hours per week or month. This works especially well for pediatric dentists, orthodontists, oral surgeons, or specialists who work with children who have special needs. The Alaska State Oral Health Program contracts with a pediatric dentist to provide itinerant services for children enrolled in Medicaid on the Kenai Peninsula.
- Also in Alaska, there is a Medicaid continuing care agreement to assist with transportation and lodging expenses for dentists in areas where public health nurses have provided information that the area is "underserved". This is a stipulation in part of their Medicaid state plan.
- Offices/programs share a dental hygienist who primarily sees young children, especially those who are on public assistance or who have no dental insurance.
- Expand office/clinic hours and make use of part-time personnel, volunteers, or staff who rotate.
- Expand hospital services to include a dental outpatient clinic, mobile services, new mother/infant oral care programs, or operating room services with general anesthesia (see Chapter 6).
- A few states have expanded the roles of dental hygienists or relaxed supervision requirements in public health settings. See information on California's RDHAP program (sections 1774 and 1775 of the Business and Professions Code) at <http://www.dbc.ca.gov/index.html> under "licensing".
- Alaska has created a new provider category, Dental Health Aide, under the Alaska tribal health programs' Community Health Aide/Practitioner program. There are three levels based on type of training. See <http://www.astdd.org/bestpractices/pdf/DES02002AKdentalaide.pdf> for a description of this program.

Develop community-based collaborations and integrated systems of care

This category expands on the previous one to add more coordination and to develop systems of care for various levels of need. Many recent federal grant programs such as [HRSA's Healthy Tomorrows](#) or the [State Oral Health Collaborative Systems \(SOHCS\)](#) grants require such a focus.

- Use outreach workers or promotoras--members of the community who can speak the languages of the various subcultures (or use interpreters) and are hired to help enroll families for health and other benefits, provide some health education and other information, and refer for services.
- Use case managers. Usually they are hired by programs to help patients complete paperwork, make and keep appointments, follow up on recommendations, pursue continuing care or specialty care. They act as an interface between patients and providers. Dentists perceive these services as valuable; one of their biggest complaints is broken appointments, so they may be more inclined to see families who keep their appointments and follow through on recommendations (see Chapter 5).
- Community health centers generally provide multi-disciplinary services, including medical and dental care. They may use common record systems and share common reception/waiting rooms and certain staff such as receptionists or billers. They also may serve as excellent community placements for students, interns or residents to learn community-oriented primary care and public health approaches.
- Various MCH and early childhood-oriented programs such as WIC, Head Start, childcare centers, or Family Resource Centers can collaborate to share educational materials, consultants, outreach workers and other resources to promote cross-referrals and to make sure families don't fall through the cracks.
- The Colorado Technical Assistance Program supports travel expenses for consultants to travel to rural areas to provide technical assistance on challenging situations or issues. They also have a rural-to-rural mentoring program that provides peer consultation on specific issues.
- Nebraska developed a Midwest consortium to fund the education of dental students who would practice in rural areas of Nebraska, South Dakota, Kansas and Wyoming after graduation.
- Some states or local communities have subsidized capital costs for building practices for dentists who will agree to serve the area for a number of years.

- High schools may have vocational dental assisting programs. For example, in Akron, Ohio a dental clinic is available to all students in financial need who have no dental coverage. The Board of Education pays a dentist to provide 180 hours per year. School staff handle the application process and scheduling. The program allows onsite clinical training for the dental assisting students as well.
- Lake County, California has used AmeriCorps members to assist with dental van visits and follow-up, and to teach preschool lessons on oral health. They also use resources from Healthy Start and Migrant Education to provide translation and transportation services.

Increase workforce numbers, diversity and skills

This category includes strategies for working with dental professionals and other health professionals.

- Recently, California approved licensure by credential for dental and dental hygiene practitioners who have a license in another state. See <http://www.dbc.ca.gov/licbycred.htm> for a list of requirements. The impact this may have on the dental workforce is still unknown as it just took effect in 2004, but it may prove a boon for rural areas in California that border another rural state such as Nevada or Oregon. Previously the difficult California licensing exam was a major deterrent for practitioners who didn't want to go through another grueling clinical board exam.
- Hawaii recently enacted a law that authorizes out-of-state dentists and hygienists to practice in FOHCs and comparable facilities without obtaining a Hawaii license.
- The National Rural Recruitment and Retention Network (3R Net) includes organizations such as State Offices of Rural Health, Area Health Education Centers and State Primary Care Associations. These organizations help health professionals locate practice sites in rural areas throughout the country. In California, contact Kerri Muraki, California Rural Health Policy Council, 1600 Ninth Street, Room 440, Sacramento, CA 95814, Tel: 916- 651-7872, Fax: 916- 651-7875, kmuraki@oshpd.state.ca.us. Website is <http://www.ruralhealth.ca.gov/ruraljob/jobsearch.htm>.
- Mentoring programs are important for pairing students at any level with a practitioner who is willing to serve as a mentor; this can significantly influence their practice choices. This may be particularly effective for recruiting people from diverse ethnic groups into dental professions and, subsequently, into rural practice.
- Utah and Alabama have used National Guard dental units to provide services during active duty exercises. Given the current situation with active war deployments, however, units may not be available for this activity.
- Clinics are beginning to provide training and experiences to increase staff and practitioner skills in cultural competency and health literacy. Good resources for this include: Toward Culturally Competent Care: A Toolbox for Teaching Communication Strategies, <http://futurehealth.ucsf.edu/cnetwork/index.html>; the DHHS Office of Minority Health devoted an issue of their newsletter to standards for cultural and linguistic competency: <http://www.omhrc.gov/ctg/ctg-April.pdf>.
- Many organizations are promoting and providing leadership training opportunities to prepare people for leadership or policy positions. For example, UCSF Center for the Health Professions administers the California Health Care Foundation (CHCF) Health Care Leadership Program, a two-year program that is open to dental and other health professionals; <http://futurehealth.ucsf.edu/futureleaders/>. The American Dental Association also sponsors a Leadership program. The California Endowment sponsors a one-year Scholars Program in Health Policy at Harvard University. "This full-time program is designed to create a network of health professional leaders who are capable of advancing the multicultural health interests of California's public, nonprofit and academic sectors. Three scholarships are awarded each year to underrepresented minority physicians, dentists and mental health professionals who receive advanced training in leadership and cultural competence, leading to a Master's degree in Public Health or Public Administration." http://www.calendow.org/program_areas/work_force_diversity_endow_response.stm
- Teach other health professionals such as physicians, nurse practitioners, physician assistants, certified nurse midwives, public health nurses, some skills in oral health promotion, oral inspection, simple preventive measures, anticipatory guidance and active referrals to dental professionals. Communities in many states are now using this approach. National and state organizations have developed a number of training programs to accomplish this. California's First 5 Oral Health Initiative is one example. Others are listed in the Resources section.
- Increase practitioners' knowledge and skills in specific areas such as advanced behavioral management and hospital care, special patient care, and public health. A variety of such courses are being offered through health professions schools or organizations. A note of

caution: increased knowledge alone doesn't necessarily translate into practice changes. Interactive courses with additional practice incentives are more effective in this regard.

Create methods for workforce retention and sustainability of systems.

This category addresses the problem of recruiting professionals to practice in rural areas, enticing them to stay, and motivating them to stay in the profession rather than pursuing other careers.

- Student scholarships and loan repayment programs have become popular ways to recruit students, especially ethnic minorities, to work in rural or underserved areas or at least part-time with specific underserved populations, e.g. Medicaid recipients or children with special health care needs. In one "grow your own" model, students from a local community are supported to attend some type of health profession school, with the stipulation that they return to the community to provide services after graduation for a specified period of time. Other programs are more general and allow graduates to practice in various underserved areas or clinical sites, but not necessarily their home communities. The Public Health Service, including the Indian Health Service and the National Health Service Corps, uses this approach. Information is at <ftp://ftp.hrsa.gov/nhsc/faq/FAQ-LRP-04-ver01.pdf>. Unfortunately, the number of requests from communities or dental clinics far exceeds the number of dental students in this program. Most slots go to other health professions. NHSC also grants matching funds to states to operate loan repayment programs; for California sites, view <http://www.oshpd.cahwnet.gov/pcrcd/stateloan/DentalSiteList.pdf>. The Indian Health Service sponsors the Indian Health Professions Pregraduate Scholarship Program to encourage American Indians and Alaska Natives to enroll in pre-medicine and pre-dentistry undergraduate programs, and also Indian Health Professions Scholarships for enrollment in health professions programs.

Many states have instituted loan repayment programs. Vermont has worked with their Area Health Education Center to create 1 statewide and 3 regional loan programs where practitioners sign contracts for patient visits, up to a maximum of \$20,000 in loan credit per year. Vermont also provides \$10,000 scholarships for dental hygienists.

- Create enhanced reimbursement rates for practitioners in rural areas. Utah and California have used this approach.
- Some dental schools such as the University of Colorado and Loma Linda University traditionally have incorporated community-based faculty or community-based experiences into their curricula to bridge the "idealized ivory tower approach" criticism. Many graduates have gone on to practice in rural areas or to serve disenfranchised populations. Through a recent \$19 million initiative from the Robert Wood Johnson Foundation's Pipeline Project (http://dentalpipeline.columbia.edu/pipeline_projects_content.html) and a 4 1/2 year \$6.3 million initiative through the California Endowment's Pipeline Project (http://www.calendow.org/program_areas/work_force_diversity_endow_response.stm), there is increasing emphasis on placing dental and dental hygiene students in community settings for portions of their education, especially through clinical rotations and community-based prevention projects. The goals of the Pipeline Projects are to: "1) recruit and retain an increased number of underrepresented minority students; 2) reform the dental school curricula to integrate community-based practice experience and courses in cultural competence, public health and social and behavioral sciences; 3) change a portion of dental school clinical programs to patient-centered and community-based sources of care for disadvantaged populations; and 4) create a state and national policy agenda that will increase the number of underrepresented minorities in the dental work force." \$1 million from the W.K. Kellogg Foundation will award an additional \$100,000 for financial aid to underrepresented minority and low-income students.
- Arizona's new School of Dentistry and Oral Health uses advanced information technology systems so that students can spend more time in community settings, which are integral to their whole education process. Recruitment is targeted to individuals who have demonstrated a commitment to community service, with a strong focus on selecting a diverse student body from rural areas.
- Community service awards: Colorado has instituted an annual Rural Health Excellence Award for a person who has made a significant contribution to health, health care, or the healthcare delivery system in Colorado.
- Communities can apply for dental health professional shortage area designations.

Evaluating Workforce Strategies

Tracking the numbers and movement of health professionals is important when trying to address workforce shortages or maldistribution. The American Dental Association regularly conducts workforce surveys, and the American Dental Hygienists' Association is beginning to do so. The ADA Council on Dental Education and Licensure will conduct a comprehensive allied dental workforce study in 2005. Clinical license renewals also are a good way to track new, established, retiring or inactive practitioners. Delta Dental and the Managed Risk Medical Insurance Board track data on the amount and type of services that dental practitioners provided to Denti-Cal and Healthy Families beneficiaries. Research oriented organizations such as the UCSF Center for the Health Professions or Rand Corporation conduct workforce studies.

A useful technique that may be available to some communities is GIS mapping technology, where it is possible to overlay maps of populations in highest need with maps of dental care providers to document shortages or maldistribution.

Summary

In this chapter you have learned about many strategies to improve the workforce to assure the oral health of young children and their families. Some involve traditional dental team members and settings, while others focus on coordinated systems of care and making use of the skills of other health professionals and community members. Links to numerous resources have been offered. After you have reviewed some of the resources, work with other community members to develop an [action plan to address workforce problems](#) in your community.

Resources and References

ASTDD Best Practices Approach. Access to Oral Health Care Services: Workforce Development. <http://www.astdd.org/docs/BPAAccessWorkforce.pdf>

ASTHO. Issue Report. State Public Health Approaches to the Oral Health Workforce Shortage. Feb 2004. <http://www.astho.org/pubs/ISSUEREPORTOralHealth2004.pdf>

California Primary Care Association, Oral Health Initiative. <http://www.cpcpa.org/govaffairs/ohac.cfm>

Center for California Health Workforce Studies, UCSF. <http://www.futurehealth.ucsf.edu/cchws.html>: one of five regional workforce centers funded by a cooperative agreement with the National Center for Health Workforce Information and Analysis within the HRSA Bureau of Health Professions.

Crall JJ and Edelstein BL. Examples of state efforts to improve oral health and access. Appendix from Elements of effective action to improve oral health and access to dental care for Connecticut's children and families. 2001. <http://www.cthealth.org>. Look under publications.

Fos P and Hutchison L. The State of Rural Oral Health. <http://www.srph.tamushsc.edu/rhp2010/litreview/10Volume1oralhealth.htm>.

Henderson Tim. Challenges and Opportunities Facing the Dental and Dental Public Health Workforce: A Synthesis for Discussion. NCSL, ASTDD, 2004. <http://www.astdd.org/docs/EnhancingtheDPHworkforcebackgroundpaper-revised.doc>.

Henderson, Tim. Improving Oral Health Services in Rural Areas: The Roles for States. NCSL. 2003. <http://www.ncsl.org/programs/health/oralheaserv.htm>

Increasing Dental Care Through Public/Private Partnerships: Contracting Between Private Dentists and FQHCs. Available at <http://www.cdhp.org>.

Mertz E, et al. Physicians, Nurses and Dentists in the Public Health Workforce: Recruitment, Retention and Training Needs. San Francisco, Center for California Health Workforce Studies, Center for the Health Professions. (2004, in press)

Mertz B. Public health dentists: Recruitment, retention and training needs. Presentation at National Oral Health Conference, Los Angeles, 2004. Manuscript in preparation.

Mertz E, Anderson G, Grumbach K, & O'Neil E. Evaluation of Strategies to Recruit Oral Health Care

Providers to Underserved Areas of California. San Francisco, CA: Center for California Health Workforce Studies, UCSF Center for the Health Professions, 2004.
<http://www.futurehealth.ucsf.edu/cchws/publications.html#Dentists>.

Manuel-Barkin C, Mertz E, Grumbach K. Distribution of Medicaid Dental Services in California. San Francisco, CA: UCSF Center for California Health Workforce Studies, 2000.
<http://www.futurehealth.ucsf.edu/cchws/publications.html#Dentists>.

Mertz E, Grumbach K, MacIntosh L, Coffman J. Geographic Distribution of Dentists in California: Dental Shortage Areas, 1998. San Francisco: UCSF Center for California Health Workforce Studies, 2000. <http://www.futurehealth.ucsf.edu/cchws/publications.html#Dentists>.

Mertz E, Manuel-Barkin C, Isman B, O'Neil, E. Improving Oral Health Care Systems in California. San Francisco, CA: San Francisco, Center for the Health Professions, 2000.
<http://www.futurehealth.ucsf.edu/cchws/publications.html#Dentists>.

Mertz E, Grumbach K. Community Characteristics that Predict the Low Supply of Dentists in California, Journal of Public Health Dentistry. 61(3) 172-177, 2001.
<http://www.futurehealth.ucsf.edu/cchws/publications.html#Dentists>.

National Rural Health Association. National Rural Health Association Calls for Solution to the Crisis in Oral Health Care Services in Rural America. New England Rural Health Roundtable. December 9, 2002. http://www.newenglandruralhealth.org/news/nrha_calls_for_oral_health_policy.asp.

National Rural Health Association. Policy Brief. Oral Health In Rural America.
<http://www.nrharural.org/dc/policybriefs/oralhealthbrief.pdf>.

NCSL. Rural Health Brief. Where Have All the Dentists Gone?
<http://www.ncsl.org/programs/health/ruraldent.htm>.

NGA Center for Best Practices. Issue Brief. State Efforts to Improve Children's Oral Health. 2002.
<http://www.nga.org/cda/files/1102CHILDORALHEALTH.pdf>

Orlans, Josh, Mertz, E, and Grumbach, K. Dental Health Professional Shortage Area Methodology: A Critical Review. San Francisco, CA: Center for the Health Professions, UCSF, 2002.
<http://www.futurehealth.ucsf.edu/cchws/publications.html#Dentists>.

Rural Assistance Center. Information Guide on Dental Health.
http://www.raonline.org/info_guides/dental/. Contains many resources: frequently asked questions, tools, funding opportunities, journals, organizations, terms and acronyms.

USDHHS. A National Call to Action to Promote Oral Health. Rockville, MD: USDHHS, PHS, CDC and NIH. NIH Publication No. 03-5303, 2003. <http://www.nidcr.nih.gov/sgr.htm>

USDHHS. Oral Health I America: A Report of the Surgeon General. Rockville, MD: USSDHHS, NIDCR, NIH, 2000. <http://www.nidcr.nih.gov/sgr.htm>.

["Using Volunteer Dental Professionals to Provide Services to the Underserved: Types and Characteristics of Model Programs"](#) Powerpoint Presented by Sarah Hanson and Gayle Goldin, MA at the 130th APHA Annual Meeting and Exposition, November 11, 2002, Philadelphia, PA.

Volunteers in Health Care. Volunteer Retention and Recruitment. Dental Providers. Manual that can be downloaded from <http://www.volunteersinhealthcare.org/Manuals/ddsrecruit.pdf>.

Woosung S, Ismail AI, Tellez M. Efficacy of educational interventions targeting primary care providers' practice behaviors: An overview of published systematic reviews. Journal of Public Health Dentistry. 64(3): 164-72, 2004.

WWAMI Rural Health Research Center. California Rural Dentist Survey 2003.
http://www.fammed.washington.edu/wwamirhrc/Dental_snaps/California%20Snapshot.pdf. Reports are also available from the same website on Alabama, Maine and Missouri.

Evaluation

What did you learn or accomplish as a result of reading this chapter? Did it help you to organize your thoughts about strategies to address workforce issues in your community? Were the resources and examples helpful? Complete the [feedback form](#) and tell us what was useful and not useful for you.