Access to oral health care is becoming an increasingly serious problem for many people in the United States, particularly for children. The tragic death of 12-year-old Deamonte Driver in 2007 from complications of untreated tooth decay gave the nation a sobering reminder of the grim consequences that can result from a lack of dental care availability. The National Academy for State Health Policy and the Pew Center on the States, with funding from the W.K. Kellogg Foundation, conducted a comprehensive literature review and interviewed leading experts in several states to learn about options for expanding available care.

Limited provider supply and increased demand for care are combining to create the growing national problem. Shortages of private dentists—especially in low-income, inner-city, and rural communities—and limited availability of government-supported dental care restrict patient access. The supply of private dentists who participate in public health insurance programs and who serve young children, the elderly, people with disabilities and immigrants is also acutely constrained. Dentists are also poorly distributed, with too few in many communities that need them and too many in others. At the same time, Americans are living longer and doing so with more of their natural teeth than past generations, putting additional strain on an already taxed system of care.

It is not surprising that dental problems disproportionately affect low-income families, children, and racial and ethnic minorities. Nearly 80 percent of dental caries occur among 25 percent of children, many of whom are from lower income families. While states are required to provide dental care to Medicaid-enrolled

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1 Deamonte Driver, a 12-year-old Maryland boy, died from a tooth abscess that spread to his brain. He spent six weeks in the hospital prior to his death, accumulating bills totaling over $250,000. See “For Want of a Dentist,” The Washington Post, February 28, 2007. Available at: http://www.washingtonpost.com/wp-dyn/content/article/2007/02/27/AR200702270216.html


low-income children, only one in three of these children received services in 2006. Racial and ethnic minorities, independent of income, have more serious problems accessing dental care than whites and have poorer oral health as a result.

The current economic crisis likely will further limit access to dental health services but, at the same time, the crisis gives states an opportunity to explore new, cost-effective models that can safely provide the care patients need. As a result, many states are considering adding new types of dental providers such as community dental health coordinators, dental therapists and advanced dental hygiene practitioners to the existing oral health care team.

Recognition is growing in the United States that such alternative providers can competently and safely deliver basic dental care. These additional providers can supply urgently needed oral health services, especially essential preventive care in areas and settings where dentists are scarce. By improving access to primary care for all patients, not only those in underserved communities, these new providers can potentially reduce the overall demand for care, actually making it easier for patients needing more complex treatment to get in to see a dentist.

Many other countries, including Canada, Great Britain, Australia and New Zealand, have had alternative dental providers for decades who function similarly to nurse practitioners and physician assistants. A substantial body of research exists that establishes the quality of care, cost effectiveness and health outcomes associated with the use of alternative providers, and this extensive research can guide the United States in looking at similar models.

This guide is intended to provide policy makers with objective information and the tools they need as they consider developing new providers. It reviews three proposed providers—dental therapist, community dental health coordinator and advanced dental hygiene practitioner—along with implementation steps policy makers can consider.

Why Develop New Providers?

A number of factors have spurred interest in developing new dental providers.

- **Shortages of private dentists persist.** By the year 2014, the number of dentists reaching retirement age will outpace new dentists entering the workforce, and the ratio of dentists to population (a common measure of supply) will begin to decline.

- **People who cannot afford private dentists have limited options.** Community health centers and clinics operated by dental and hygiene schools, hospitals and public schools comprise the dental safety net for individuals who cannot afford private care. Community centers and clinics, however, have the capacity to serve only about 10 percent of the 82 million low-income people who need them. Hospital emergency rooms—often a last resort for uninsured patients—can treat only for pain and infection, not underlying dental problems.

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Expanding public dental coverage alone will not sufficiently increase access. In fact, coverage expansions might lead to growing waiting lists for providers who participate in Medicaid and Children’s Health Insurance Program (CHIP).\textsuperscript{9} Public insurance programs rely primarily on private practitioners to deliver care. The majority of dentists, however, do not participate in Medicaid and the CHIP.\textsuperscript{10} Extending public dental coverage under the current inadequate Medicaid financing structure will not address the core problem of limited provider supply and could exacerbate access problems, putting additional pressure on the delivery system.

Proposals for New Providers

In the United States, most dental care is delivered in private practices by a dental team that consists of dentists, dental hygienists and dental assistants. Recognizing the successes of other models throughout the world, innovative proposals for new providers have emerged that would expand the dental team and increase access to care. Currently, three principal proposals for new dental care providers are being discussed by policy makers, dental professionals and other stakeholders: the dental therapist, community dental health coordinator and the advanced dental hygiene practitioner. Key characteristics of these three providers are highlighted below.

Dental Therapist

Dental therapists deliver basic educational, preventive and restorative services. For cases that require more extensive care, dental therapists refer patients to a dentist.

In other countries, dental therapists focus on care for children in schools and public health settings. Many, however, also work in private practices with dentists.

The dental therapist model has not been adopted in the United States, with the exception of the Alaska Native Tribal Health Consortium, which introduced what the Consortium called dental health aide therapists (DHATs) as a way to deliver care to some of the most isolated tribal regions.

In the Alaska model, dentists who supervise DHATs are not usually on-site. DHATs practice under standing orders issued by their supervising dentist that spell out what treatment DHATs can provide and when they must refer

As of 2007, 10 dental therapists have provided care to thousands of residents in 20 Alaskan villages, many of whom might never have received care otherwise. Since dental therapists are not under the direct supervision of dentists, they are able to practice in remote areas not often visited by dentists. Two initial studies found that the care provided by dental therapists in Alaska is of high quality.\textsuperscript{11}

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\textsuperscript{10} P. Cunningham and J. May, “Medicaid Patients Increasingly Concentrated Among Physicians,” Center for Studying Health System Change, Tracking Report no. 16, August 2006.

\textsuperscript{11} K. Bolin, “Assessment of Treatment Provided by Dental Health Aide Therapists in Alaska: A Pilot Study,” JADA 2008: 139, no. 11, 1530-1535; L. Fiset, “A Report on Quality Assessment of Primary Care Provided by Dental Therapists to Alaska Natives,” University of Washington School of Dentistry (September, 2005).
patients elsewhere. These orders can vary depending on the dentist and dental therapist. Typically, the dentist practices in a “hub clinic” while providing supervision to dental therapists at satellite clinics in remote areas.

Dental therapists undergo training that is designed to resemble the last two years of dental school but includes more hours of education and experience treating children than dentists receive.¹²

### Table 1: New Dental Providers — How Do They Compare?

<table>
<thead>
<tr>
<th>PROPOSED COMMUNITY DENTAL HEALTH COORDINATOR</th>
<th>DENTAL THERAPIST</th>
<th>PROPOSED ADVANCED DENTAL HYGIENE PRACTITIONER</th>
</tr>
</thead>
</table>
| History | First proposed by the American Dental Association in 2006  
First 12 CDHC candidates began training in 2009 | Introduced in 1921 in New Zealand  
Now used in 53 countries and Alaska. | Developed by the American Dental Hygienists’ Association to be a new licensed dental provider |
| Post-secondary education | Twelve months of training program followed by a six-month internship | Two years of training followed by clinical training in practice sites  
(Other countries are moving toward a three-year program that combines dental therapy and dental hygiene) | A 2-year master’s degree for people with a 4-year degree in dental hygiene |
| Regulation | Certification | Certification  
Recertification required every two years | Licensure |
| Supervision | Direct supervision by a dentist for clinical services; general supervision for education | General supervision under standing orders by a dentist | General supervision under standing orders by a dentist or collaborative agreement with a dentist |
| Practice settings | Private practices, WIC offices, Head Start programs, community clinics, schools, churches, nursing homes, federally qualified health centers | Private practices, community-based clinics, rural settings, Indian Health Service (IHS) clinics in Alaska, schools, nursing homes | Private practices, community-based clinics, rural settings, IHS, schools, nursing homes |
| Scope of services | Assist patients in locating providers who accept the patients’ insurance, perform education, preventive services, and limited restorations | Perform basic preventive, diagnostic and restorative services | Perform basic preventive, diagnostic and restorative services |

http://www.ajph.org/cgi/reprint/AJPH.2005.061796v1
Community Dental Health Coordinator (CDHC)

Following the model of community health workers, the community dental health coordinator position (CDHC) is designed to supplement the services already provided by dentists, dental hygienists and dental assistants. CDHCs will act most often as a facilitator in communities by helping patients navigate the health care system and obtain access to oral health care, but CDHCs may also perform preventive and restorative services, such as applying fluoride varnish. Direct supervision by a dentist would be required when performing clinical procedures, while general supervision would be necessary for community and educational support.

CDHC candidates must have a high school education. The first group of CDHC candidates is in training at press time, so a fully implemented model is not yet available for evaluation. CDHCs may undergo voluntary certification but are not required to be licensed under the current proposal. This is controversial considering the proposed CDHC model includes performing temporary restorations. All other providers who perform restorations are licensed, which is a stricter process.

Advanced Dental Hygiene Practitioner (ADHP)

The advanced dental hygiene practitioner would be able to perform basic preventive, diagnostic and restorative services. This model is comparable to a nurse practitioner in the ADHP’s function and relationship to dentists. Under the proposed model, the ADHP would work under general supervision with standing orders from a dentist. This would allow ADHPs to provide basic services and case management with a high degree of autonomy while still reserving the more complex procedures for the expertise of the dentist.

The American Dental Hygienists’ Association has developed a master’s degree curriculum for training these new providers. The program is intended to recruit existing dental hygienists who would like to further their education and qualify as an ADHP. Upon completion of the program, ADHPs will be licensed by states. While no ADHP program is currently in place, training programs are being planned by hygiene education programs at community colleges in several states.

Developing a New Type of Dental Provider

Mid-level providers such as nurse practitioners and physician assistants have existed in the medical community for years and have been successfully integrated into the health care workforce. State policy makers looking to introduce similar providers in dentistry to their states require thorough data to determine what types of professionals would best integrate with the existing dental workforce. Policy makers need to:

- Collect baseline data to document the extent to which people have untreated oral health problems or difficulty accessing routine dental care and to determine which populations, institutions or communities the new provider could serve. Data sources include: State Dental Directors,13 State Oral Health Coalitions, State Health Policy Institutes,14 and the U.S. Department of Health and Human Services, Health Resources and Services Administration.15

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13 An overview of information provided to the Centers for the Disease Control and Prevention (CDC) by state dental directors is available at http://apps.nccd.cdc.gov/synopsis/index.asp.
### TABLE 2
**KEY CHARACTERISTICS OF PROPOSED AND CURRENT PROVIDER MODELS**

<table>
<thead>
<tr>
<th>Unique features</th>
<th>Propose Community Dental Health Coordinator</th>
<th>Dental Therapist</th>
<th>Proposed Advanced Dental Hygiene Practitioner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educators, community health workers focused on supporting the proper use of dental services by low-income populations.</td>
<td>Primary care providers focused on delivering basic preventive and restorative care to isolated and underserved populations.</td>
<td>Case managers and primary care providers who could assess risk, educate, provide preventive services and basic restorations.</td>
<td></td>
</tr>
</tbody>
</table>

- **Potential political/implementation challenges**
  - Training to do temporary restorations with a hand instrument is controversial for an unlicensed practitioner.
  - Although the CDHC model is designed to increase access to care by helping patients find dental providers, it does not address the fact that most dentists do not accept Medicaid patients.

- **Potential limitations of the scope of service**
  - Includes a mix of skills and services that may not be realistic.
  - Very limited clinical services would make them difficult to support through reimbursements and of limited use in most practice settings.
  - To perform clinical procedures, CDHCs must be under a dentist’s supervision and so could not help in the many areas where there are no dentists.

- **Advantages**
  - Could be useful in prevention programs.
  - Supported by the American Dental Association.
  - Candidates would be drawn from the communities they will serve, increasing their ability to provide culturally competent care and overcome barriers.

- **Proven model, with a solid research base on quality of care from Alaska and other countries.**
- **Ability to practice under general supervision makes them useful in many areas without dentists.**
- **Two-year education makes them cheaper to train, reimburse, and employ.**
- **Can mirror, and be sensitive to, the population served.**

- **Recruiting from current pool of hygienists would limit cultural competence since most are white women.**

- **Trained to perform restorative procedures under general supervision, which is controversial among some members of organized dentistry.**
- **Training may be excessive and expensive, given the limited expansions gained in scope of practice.**
- **Salaries would be higher than that of dental therapists for a similar scope of practice.**
- **It may be difficult to persuade dentists to collaborate with and accept referrals from ADHPs.**

- **The public is familiar with dental hygienists and might feel comfortable receiving care from them.**
- **A higher education level may help gain the confidence of dentists that they can perform restorative functions.**
- **ADHPs could perform case management for underserved patients and help staff safety net clinics, which lack sufficient dentists.**
• **Assess the current dental workforce and educational infrastructure** to determine: which dental providers currently work in the state; where provider shortages exist; how many providers are enrolled in Medicaid; how many providers serve patients with special needs; and whether existing educational institutions can be expanded to train new providers or if new institutions need to be created. Data sources include: state Medicaid agencies, state dental associations, and dental schools.

• **Identify potential funding streams**, such as Medicaid and CHIP, to ensure that the new provider model will be sustainable and supported by reimbursement policies linked to the populations and settings to be served. State Medicaid and CHIP agencies are good places to obtain information regarding financing questions. Also, comprehensive information on each state’s economic, budget, demographic and uninsured rate can be found at Kaiser State Health Facts.  

• **Appraise the political landscape and identify who is likely to support and oppose the plan and why**—and include both sides in stakeholder discussions. The political landscape may present opportunities to advance a new model. For instance, tight state budgets or state health goals promoting dental homes for all children may give policy makers the opportunity to take a fresh look at potentially less costly and more accessible dental provider options. Policy makers will also need to determine if any statutory or regulatory changes are needed to establish a new dental provider.

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16 See http://www.statehealthfacts.org/

17 Many lessons about consensus-building, particularly adhering to the group objective, were evident in North Carolina’s experience with physician assistants. See E. Harey Estes, Jr. and Reginald D. Carter, “Accommodating a New Medical Profession: The History of Physician Assistant Regulatory Legislation in North Carolina,” North Carolina Medical Journal 66, no. 2 (March/April 2005), 103-107

18 For discussion about the importance of support among dentists for new dental workforce models see L. Nolan et al., The Effects of State Dental Practice Laws Allowing Alternative Models of Preventive Oral Health Care Delivery to Low-Income Children (Washington, DC: Center for Health Services Research and Policy, School of Public Health and Health Services, The George Washington University, January 17, 2003).

19 Ibid. Although the authors discuss the option to “reinterpret” law, it is unclear whether any states have done it.
allow for the new provider or enact legislation to establish the new provider scope of practice and supervision level.

- **Handle regulatory issues.** After legislation has been passed, state regulatory agencies (e.g., health professions’ boards) write and enforce the regulations that implement the law.20 Regulations are needed for credentialing or licensing new provider types, licensing exams and renewal and continuing education requirements. States must determine whether an existing board will be responsible for regulating the new provider or if a new committee must be established. Most states regulate dental practice through a dental board; a few states have separate dental hygiene committees that make recommendations to the dental board.21 Consensus stakeholder group involvement will help ensure that regulations are not designed to block competition.

- **Develop an appropriate educational framework** so that students can obtain the licensing or credentialing required for the new provider type. A curriculum must be developed and faculty must be hired or trained. Funding may be required for program courses, faculty and equipment. Consideration should be given to joint education and training with dentists to foster constructive working relationships. An educational institution within the state (or region) will need to create a program that incorporates the curriculum, and the program will need to be accredited by the Council on Dental Accreditation, which provides accreditation to dental and hygiene education programs.22 If the Council declines, it is the state’s responsibility to provide accreditation. This process takes time, but it can be undertaken concurrently with consensus building and legislative initiatives.

- **Identify and make necessary systemic modifications.** Consider whether the ways oral health care is delivered and providers are supervised and/or reimbursed will need to be changed for the new provider type to be successful. States must determine where new providers will work and what types of assistance they may need. For specific settings, such as nursing homes or schools, leaders of those systems need to be involved in the planning. Clinical rotations to those sites can be built into the curriculum and funding and reimbursement plans can be made. New providers may require help marketing their services to patients, dentists and institutions; negotiating contracts; or developing collaborative agreements with dentists. States may consider adding case review or consulting fees to reimbursement rates to compensate dentists for their time providing supervision.

### Tools for Developing New Providers

States’ experiences, such as those in California, Colorado, Iowa and Minnesota, also show that several tools can facilitate progress in implementing new types of dental providers. To help policy makers assess needs and make informed decisions related to workforce changes, states can:

- create a department or unit that enables new workforce models to be piloted;
- develop regulations and review processes to ensure that workforce changes are based on evidence and in the best interests of the public; and/or
- carry out workforce planning either across all health professions or specific to oral health professions.

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21 Ibid, 14.
22 The Council is technically independent of the American Dental Association, but organized dentistry does exert some indirect influence over the Council’s functions.
Piloting New Approaches: California
The California legislature established the Health Workforce Pilot Projects Program (HWPP) in 1972 to allow organizations to demonstrate and evaluate new provider models before requesting changes in professional practice laws. Pilot projects are intended to help the state avoid spending the money and time on legislative battles over untested models. Through the HWPP, the Registered Dental Hygienist in Alternative Practice (RDHAP) model—specially trained hygienists working in underserved communities—was tested in 1980. And, after a protracted process that highlights the need to include all stakeholders throughout the planning stages, legislation to create these providers was passed in 1997. Approximately 230 licensed RDHAPs now practice in California.

Independent, Evidence-Based Review Policies: Colorado
To mitigate the impact of lobbyists and interest groups in the process, several states have established independent mechanisms to review proposals for changing scopes of practice for the health professions and then summarize that evidence for legislators or other policy makers. The governor of Colorado issued an executive order in 2008 commissioning the study of the evidence for and value of expanding the scopes of practice of advanced practice nurses, physician assistants and dental hygienists. The Colorado Health Institute (CHI) systematically reviewed regulatory policies and relevant research in the state and produced an evidence-based study of the scopes of practice of the three health care professionals, their practice settings and the quality of care they provide. The report concluded that unsupervised dental hygienists can “competently” provide oral health care preventive services “within their scope of training, education and licensure in Colorado” and can do so with quality of care “at least comparable” to that of dentists. The report also found that, as in other states, current Colorado statute prevents dental hygienists from making a diagnosis that falls within the full scope of their license and that some payers in Colorado do not directly reimburse dental hygienists for services authorized under their current scope of practice. The report calls for an evaluation of and recommendations for reimbursement policy options to “enhance the use of dental hygienists in areas where oral health access is lacking.”

Health Care Workforce Planning: Iowa
Iowa has designated a single state entity to address overall health care workforce planning across the state: the Bureau of Health Care Access within the Iowa Department of Public Health (IDPH). Bureau programs have provided grants to communities and educational institutions for tuition reimbursement, loan repayment, training and recruitment, and mentoring programs for...
health professionals. Programs also have funded online training and curriculum for health education programs and supported improvements to a state worker registry. Legislation in 2007 built on these efforts and directed IDPH to project future workforce needs, coordinate efforts, make recommendations and develop new strategies. After participating in a multi-agency workgroup, conducting a literature review and convening a summit, IDPH issued a final report with workforce recommendations for health professions, including dental providers. Short-term recommendations include establishing an Iowa Health Workforce Center to provide state-level coordination of recruitment and retention of health professionals. Iowa passed legislation in 2008, which directs IDPH to take additional steps in workforce planning and development, such as seeing that relevant data is continuously collected and biennially delivering a strategic plan to the governor and legislature.

### Oral Workforce Planning: Minnesota

In May 2008, Minnesota enacted the Omnibus Higher Education Policy Bill, which established the position of an oral health practitioner, a provider similar to an ADHP. The legislation instructed the Commissioner of Health and the Board of Dentistry to convene an Oral Health Practitioner Work Group to make recommendations and propose legislation regarding the education, training, scope of practice, licensure and regulation of oral health practitioners. The work group's co-conveners served important roles: The Department of Health provided logistical and project support, while the Board of Dentistry offered technical expertise. The work group met several times throughout the fall of 2008. These facilitated meetings were open to the public, and information, materials and public feedback are available online. The work group issued its report to the legislature in January 2009. The report from the work group was used to develop legislation for a new provider that was amended, enacted and signed into law in May 2009.

### Conclusion

New thinking and action is needed to respond to the serious dental access problems facing states. Demographic shifts are reducing the number and availability of dentists even as demand increases. As the most highly trained and educated dental providers, dentists will remain the leaders and experts in the field and the only providers who can perform the most complex and clinically difficult procedures. However, new dental providers offer a way for states to help ensure that vital primary dental care is accessible to constituents regardless of age, race, ethnicity, income, geographic location and/or insurance status. State examples and studies from around the world confirm that providers with a smaller scope of practice than dentists can efficiently and safely perform many components of dental care. States are working hard to gather data, build consensus, develop systems of care, and train and educate new types of providers who can join the dental team, supply basic primary dental care to underserved populations and expand the safety net.

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ACKNOWLEDGEMENTS

We would like to thank those who gave comments that helped shape this issue brief: Dr. Bill Maas, senior advisor to the Centers for Disease Control and Prevention and policy advisor to Pew’s Advancing Children’s Dental Health Initiative; Andy Snyder, senior associate and Molly Lyons, administrative assistant at Pew’s Advancing Children’s Dental Health Initiative; Alan Weil, executive director of NASHP; and Neva Kaye, senior program director at NASHP.

The authors are grateful to a number of external reviewers who provided information and reviewed drafts of this paper: Dr. Allan Formicola, professor of dentistry, College of Dental Medicine and the Center for Family and Community Medicine at Columbia University; Dr. Jay Friedman, Los Angeles, California; Beth Mertz, program director, Center for the Health Professions, UCSF; former Washington state Senator Pat Thibaudeau; Dr. Ron Nagel, dental consultant, Alaska Native Tribal Health Consortium; Dr. David Nash, professor of pediatric dentistry at the University of Kentucky; and Dr. Mary Williard, clinical site director, Alaska Native Tribal Health Consortium.

We are also indebted to the W.K. Kellogg Foundation and Dr. Al Yee, program director, for support and guidance in producing this paper.

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The Advancing Children’s Dental Health Initiative works to promote policies that will help millions of kids maintain healthy mouths, get the care they need and come to school ready to learn.

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