Strengthening Children’s Oral Health: Views From the Field

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Ten years after a US Surgeon General’s report described the oral health crisis in the United States¹ and four years after an 12-year old boy in Maryland, Diamonte Driver, “died from a toothache²,” poor children and adolescents in the US continue to experience a heavy burden of untreated pain and complications from dental disease. As noted by the Kaiser Commission on Medicaid and the Uninsured, poor children experience more cavities than non-poor children and their cavities are likely to be more serious.³ While the Surgeon General's report called this “a silent epidemic,” 10 years and many studies later⁴, the epidemic is no longer silent or hidden, but continues unchecked among poor children and children of color.

The facts speak for themselves: Tooth decay is the single most common chronic disease among US children.⁵ Access to preventive dental care rises with income. According to data from the National Survey of Children's Health, only 58.1% of children in families with incomes below 100% of the federal poverty level (FPL) had received preventive care in the preceding year while 82.4% of children in families with income of 400 percent FPL received care.⁶ This high-risk, high severity, high prevalence group represents about 20 million children who are largely low-income children from African American and Hispanic communities.⁷

To explore factors that may have contributed to a decade of inaction and identify strategies with potential for galvanizing efforts to improve the oral health of poor and minority children, the authors sought the views of a diverse group of two dozen individuals in the U.S. who participated in the past decade of efforts to follow up on the Surgeon General's report. This paper summarizes what we learned.

Methodology

Between November 2010 and March 2011, with support from the Robert Wood Johnson Foundation, the Center for Health and Health Care in Schools conducted a series of key informant interviews with national experts and stakeholders who are working to reduce oral health problems among children. We spoke with state and federal policymakers, workforce experts, foundation officials, university-based educators, researchers in children's oral health and leaders in school-based health care. Interviewees were promised confidentiality to encourage candor and discussion of sensitive topics. Our goal was to learn firsthand the experts’ views on barriers to preventive services, access to treatment, workforce development and listen for 'bright spots' or successful models for service delivery.

Our informants pointed to promising directions in inter-professional training, described the state of oral health promotion and demand development, and offered their
perspectives on school-connected oral health programs. Center researchers conducted 25 in-depth telephone interviews. Each discussion used a semi-structured interview tool to guide a conversation that lasted approximately one hour.²

**Findings**

The essential message from these interviews is that improving children's oral health will require changes in both demand and supply factors associated with the provision of oral health promotion and care. Relevant demand factors include the current under-valuation of preventive and treatment services by consumers; the isolation of policymakers from affected communities with resulting lower interest in addressing the problem, and a near-absence of effective models for local, state and federal policies. On the supply side, factors contributing to inadequate oral health resources include state practice acts and the impact of professional education costs on the numbers of dental health professionals and the location of their practices.

**Why don’t consumers and their representatives demand better access to oral health care for children?**

Consumers do not place a high value on oral health. Essentially the most common explanation for the persistent, intractable barriers to children's access to oral health care is that oral health is not a priority for consumers. Informants noted that oral health, mental health, and vision have all been isolated from the delivery of primary health care. Insurance policies, if they cover these services, often include them as add-ons rather than as part of basic coverage. When cost-cutting occurs, these are the benefits that are dropped from the coverage packages, either by the employer or the employee.

Policymakers are isolated from affected communities. Access problems are mostly a problem for the poor. Political and community leaders typically do not suffer poor health outcomes due to untreated oral disease. And because dental disease does not cause many deaths, oral health problems do not generate an intense public response.

The federal voice in oral health policy development is diffuse, and therefore muted. Many interviewed believe there is a lack of “ownership” of oral health at the federal level and this precludes the issue from becoming a priority at the federal level. While various federal offices are responsible for various pieces of oral health policy and programs, no single agency is designated as the coordinating voice of the federal government nor does it appear that any of these offices has been authorized to champion the oral health cause.⁹

“While it's easy to point to the supply side of the equation to explain the problems low income families have securing care, the demand side cannot be ignored. Too many people feel that oral health is not a priority. It's something people put aside unless they're in pain.” Joanna Douglass

“Unfortunately, in our country too many people accept losing teeth as inevitable. And this is because oral health has not been made enough of a health priority. When dental insurance is offered to consumers, it is often less comprehensive than medical care, indicating this lack of priority.” Kate Keller
With unmet demand, why hasn’t supply grown?

State practice acts have constrained competition. Our key informants agree that the state dental practice acts present a significant barrier to better access to oral health care. While the original intent of practice acts was to protect patients from bad care, most of those interviewed commented that the acts have tended to protect the status quo for dental providers and have constrained practice competition. The practice acts are widely viewed as major impediments to resolving some of the big issues around oral health access. A number of those interviewed felt strongly that the dental practice acts need to be standardized across the states using a model regulatory format rather than being negotiated state by state. Many described the dental practice acts as establishing monopolistic and turf-protecting bodies that control dental practice within each state. A frequent consequence, according to a number of our interviews, is an unreasonably constrained scope of practice for hygienists and high barriers to practice for new provider-types such as dental therapists.

The supply of dental professionals is limited by the cost of professional education and the impact of that on practice locations. US oral health services are provided primarily by dentists who locate in or near communities that have sufficient numbers of private-pay patients to support a dental practice. As pointed out earlier, these arrangements meet the needs of about 75 - 80% of the population. When asked how we should respond to the remaining underserved 20 - 25%, most of those interviewed indicate that the answer lies either in expanding the role of registered dental hygienists (RDH) or developing a new mid-level provider type such as a dental therapist. Some suggest that not only is the current work force unable to meet the dental care needs of the total U.S. population, but the aging of this work force will reduce its capacity to continue serving its existing patient mix. Others questioned the lack of cultural and ethnic diversity in the dental workforce and suggested that demographic trends in the US will contribute to growing access issues.

Possible Solutions

There was broad agreement that discussions about how best to address the oral health needs of the underserved have been driven by dental professionals rather than by potential dental patients. Many voiced concern that access discussions continue to revolve around the dental chair and how to get clients into the dental office rather than a more creative
discussion about how to promote prevention, achieve a reduction in need, and develop new approaches to getting care to people where they are.

**Responses to access barriers.** Our key informants suggest a number of strategies for reducing barriers to care, including a national oral health literacy campaign targeting populations most at risk. Additional strategies for improving oral health access include developing registries to track children’s service use and conducting studies on the impact of prevention efforts such as sealants and fluoride applications. Other suggestions include requiring proof of oral health examinations prior to school entry and securing dental parity with medical-insured services.

**School-connected oral health care.** Key informants supported the idea of school-based oral health services. However, there were disparate views as to what those services should be. Some felt strongly that screening and perhaps some limited prevention services were the most appropriate services while others supported a full continuum of care, including classroom education, screenings and clinics providing comprehensive care in a dental operatory at school.

Several informants expressed concern about locating a dental operatory in a school building. Issues of space, cost of equipment and an adequate patient base to fully utilize the service were raised. Others suggested a “hub and spoke” approach, locating a dental operatory within a school that served as a dental care “hub” for other schools in a geographic vicinity. All recommended that any school-based program be part of a larger community-based dental service delivery system and that oral health care needs be viewed not as sporadic or occasional services but as the provision of consistent, reliable and longitudinal access to oral health care.

A substantial number of interviewees viewed comprehensive school-based oral health care as an ideal vehicle for providing both prevention and treatment services. They commented that school-based screening and sealant programs are insufficient to address unmet oral health needs. Screening and referral services only work when there are sufficient community referral sites and when families are able to make and keep appointments. Dental health professionals who had participated in school screenings reported frustration when they returned to school 6 months or a year later and, on rescreen, saw the same untreated dental disease.

School nurses were frequently mentioned as untapped resources. A number of respondents urged that school nurses participate in oral health screening and education. Several suggested that nurses also be trained to do pen-light exams while screening for vision and hearing, with restorative care referred to community-based dental programs. Still others commented that the use of school nurses for oral health screening would not be helpful because that service would not address the lack of community dental treatment.

“Targeted schools are where there are populations of underserved children in locations with inadequate supplies of dental care. Using that school base, there needs to be a comprehensive and integrated intervention that goes from classroom to clinic. For children in these schools, we need everything from group education to surgical intervention.” Burt Edelstein
resources. These respondents argued that until the supply side of oral health care is addressed, school-based screenings would not be helpful.

Locating mobile dental units or vans at schools was also suggested. A mobile unit does not require space within the school or require that the school population be large enough to sustain a permanent practice. Others noted problems associated with dental vans, including schools with too small parking lots or schools located on narrow side streets that cannot accommodate large vans, weather issues that preclude children lining up outside, equipment reliability, and the high, often unanticipated cost of operating mobile units (driver, fuel, waste disposal, etc.). While many of those interviewed believed that mobile dental vans offer a viable alternative to a fixed operatory, they also suggested that portable equipment is a better investment. This equipment can be moved from school to school without concern for parking space or accessibility for students.

Whatever the range of services offered in the school building, there was consensus that within all schools, children need access to healthy snacks and foods, access to tooth brushing and fluoridated water as well as information on good oral health practices in the health education curricula. One informant suggested handing out toothbrushes and toothpaste to all family members who come to back to school night as a way of promoting understanding of oral health.

Workforce strategies. Proposed solutions to addressing children’s unmet oral health needs included recommendations for both an expanded role for dental hygienists and utilization of new mid-level providers. These proposals generated questions about where this new workforce would practice and what policies could create incentives for these professionals to practice in under-served areas. One interviewee pointed out that if the time and expense involved in training a mid-level provider were not reasonable, education-related debt would force new providers to locate in the same areas as the current dental workforce. This person also felt the best way to serve unmet community need would be to recruit from underserved communities with the agreement that those selected would return after training to provide dental care. The consensus was that without careful thought and incentives, providers would continue to locate in the same higher socioeconomic areas.

Some cautioned that introducing expanded-practice dental hygienists or other mid-level providers would not provide a “magic bullet”. This group predicted that 10-to-15 years will be required before any real impact on oral health access occurs. Developing training and certification processes, putting people through the training, and placing them in underserved areas will all require time.

Many felt that some type of care coordinator, case manager, community health worker, health navigator and/or oral health educator was an essential component of any provider-focused solution to overcome barriers to oral health care.
Among suggestions for strengthening the capacity of the dental workforce to care for under-served populations, were recommendations that universities recruit a more culturally and ethnically diverse group of dental students. Once admitted, stronger loan forgiveness programs should be used to reduce the impact of student loans on practice choices. It was also argued strongly that dental programs should expose dental students to practice options other than the private practices model.

Another strategy for increasing service availability involved organizing care such that all practitioners were enabled to work to the “full extent of their license.” This line of thinking suggests that prevention and early intervention services are best delivered by dental hygienists or dental therapists, with the “high end” surgical care reserved for the dentists. Many advocated for a team approach in oral health, with different provider types delivering oral health care, from school nurses performing penlight oral health exams to pediatricians and nurse practitioners performing oral health assessments and simple prevention interventions (fluoride varnish and temporary fillings if needed). Mid-level providers or advance practice registered dental hygienist could be trained to do “routine” restorative work, with the dentist treating the most significant diseases.

Many pointed to the number of times a person will see a family physician or pediatrician compared to a dentist and argued for an expanded oral health role for these providers. Additional coordination between dentistry and medicine was supported by many. Suggestions included a shared medical and dental patient record created through an integrated Electronic Health Record and a greater focus on interprofessional training in dentistry, medical and nursing schools. The underlying belief is that oral health should not be an afterthought in medical care provision nor medical health issues an afterthought for the dental provider community.

Finally, a number of interviewees suggested that the ideal model for providing oral health care was embodied in the original vision of an integrated medical and oral health care delivery system associated with the Federally Qualified Health Centers (FQHC). This model of integrated services, supported by a continuum of case management and support services, was viewed as the ideal realization of carefully linked dental and medical care.

**Related Issues.**

*Financing.* A widely shared perspective among those interviewed is that dentistry has taken note of the role of public and private insurers in shaping the practice of medical care and is not inclined to travel down that road. Many dental providers view medicine as being controlled by government and insurance providers. Dentists do not see where this has had a positive effect on medicine and the dental organizations are committed to
avoiding what they see as the pitfalls of today’s medical practice. And although private insurance parity was spoken of often in the interviews, dental organizations have resisted developing closer ties to the insurance industry.

For dental practices, the low level of reimbursement from public insurers continues to be an issue. Among those interviewed, it was agreed that insurance reimbursement especially through Medicaid was inadequate and to solve the access issues for low income children and families, rates must be increased. The newly enacted Affordable Care Act has no new money for dentistry. However, by expanding Medicaid and CHIP programs and requiring the insurance products offered through the proposed Health Exchange programs to include dental coverage the number of people with access to dental coverage is likely to increase. While this change is in progress, however, dentistry will continue to struggle with the tension between more individuals with dental coverage and the dentists’ willingness to accede to insurance industry demands for a higher level of accountability and more outside oversight of dental practice.

**Outcome Measures and Accountability:** Our key informants agreed it is time to institute some system of accountability and quality measures in dentistry. A place to start, they suggested is with a definition of good oral health care that includes a defined core set of services, the linkage of reimbursement to completion of a treatment plan rather than utilization of procedure-based payments. Currently, the dental profession is not required to use diagnostic codes and mainly uses procedural codes to bill for services. Many noted that the time has come for instituting diagnostic codes in order to better track disease, treatment and outcomes of treatment. Such changes would facilitate development of research-based best practices — filling a void in research on prevention practices and the long-term impact of oral health on overall health and well-being.

A common perspective among those interviewed is that dentistry, in contrast to medicine, has remained impervious to developing a quality focus. Depending on the speaker, the perception is that there are few or no benchmarks for quality services and outcomes in dentistry. Not until late fall 2010 did the Dental Quality Alliance of the American Dental Association begin to form an advisory committee on Research and Development of Performance Measures. This initiative was undertaken at the request of the Centers for Medicare & Medicaid Services.

**In summary**

The comments of our key informants reverberated with frustration over the on-going talk but limited action on recommendations from the Surgeon General’s Oral Health Report, now a decade old. Despite the diversity in professional employment and training among the key informants, there was a strong consensus on the problems and the solutions among those interviewed. The frustration centered on the lack of movement within the field and persistent failure to address the unmet needs of a significant percentage of both children and adults in this country. There was, however, cautious optimism among a
number of interviewees as they discussed the potential for strategies that would focus on building demand for and supply of more and better prevention and treatment services. Over the past decade, in public health arenas such as healthy eating and second-hand smoke reduction, progress has been made utilizing both regulatory and social marketing strategies that target and promote demand shifts. The potential of these strategies for addressing oral health are viewed as opportunities worth exploring. There has also been modest but measurable progress on the supply front, with dental therapists introduced successfully in Alaska and under discussion in several other states. Interprofessional training and integrated practice have also made steps forward. Within the school setting, recent funding for oral health initiatives in school-based health centers provides modest encouragement for tracking the impact of integrated medical-dental practices. The expansion of dental insurance coverage for children, through CHIPRA in 2009 and the Affordable Care Act, will reduce uninsurance among low-income children. More time will be required to determine whether these activities mark the beginning of a significant shift of access to oral health care for underserved children and youth.


5 US Government Accountability Office. Medicaid: Extent of dental disease in children has not decreased, and millions are estimated to have untreated tooth decay. September 2008.


8 See Appendix 1, Key Informant Interview Guide.

9 Federal agencies with responsibilities related to children’s oral health include CDC Division of Oral Health (OralHealth@cdc.gov), HHS/HRSA Bureau of Maternal and Child Health, Division of Child, Adolescent and Family Health, Dental Health Officer (mnehring@hrsa.gov), HHS/HRSA Bureau of Primary Health Care, Dental Health Director (no contact information provided), Centers for Medicare and Medicaid Services (CMS) (Dr. Conan Davis at conan.davis@cms.hhs.gov), Indian Health Service (Dr. Chris Halliday at Christopher.halliday@ihs.gov), National Institutes of Health: Clinical and Translational...
Appendix 1 Key Informant Interview Guide

CENTER FOR HEALTH AND HEALTH CARE IN SCHOOLS
CHILDREN’S ORAL HEALTH ACCESS: INTERVIEW QUESTIONS

Background

With support from the Robert Wood Johnson Foundation, the Center for Health and Health Care in Schools is conducting interviews with national experts and stakeholder who are involved with oral health access. Our goal is to better understand the current policy issues around delivery of oral health services, identify the essential elements of successful school-based oral health programs, and fully understand the challenges associated with establishing effective programs.

The current safety net for oral health care in the United States is inadequate to meet the needs of many low-income, underserved and special needs populations. Increasingly school-based health centers (SBHCs) that include oral health services are seen as an optimal way to make oral health care more accessible and to provide a much needed focus on prevention and early intervention. Oral health care in school-based health centers also has the potential to serve both the immediate school population and surrounding communities. School-based oral health programs have been effective in reducing barriers to access by overcoming social, educational and cultural barriers while providing cost effective services.

The following are questions to guide our interview and discussion about oral health delivery and school based oral health care.

Access to Oral Health Care

In your opinion, what are some of the factors that have contributed to current access to oral health care problems?

What solutions and/or oral health models would address the critical need for oral health services in populations and areas with large unmet oral health need?

Are there workforce/provider issues that are having an impact on the problem with access to oral health care?

Expanded scope of practice for some oral health providers, i.e. dental hygienists, has been suggested as a possible means of reducing access to care issues. Would you agree this would be a useful approach to increasing access to dental care for children?

Are you familiar with the mid-level dental workforce models such as Dental Therapists, Dental Health Aide Therapist, Community Dental Health Coordinator (ADA model of case coordinator/manager), and
Oral Health Practitioner as means of expanding oral health care access? If you are familiar with these models, do you see them as viable in the U.S.?

In your opinion what are the policy issues that have helped or hindered the expansion of oral health care models in the U.S.?

What is your opinion on the integration of medical and oral health care? What do you view as the best role for medical providers in oral health delivery?

Are there policy barriers to advancing an integrated model?

What policy support(s) might be needed to increase integrated provision of oral health care?

**School Based Oral Health Programs:**

What is your opinion about the provision of oral health services in schools?

What is your opinion on provision of oral health in school based health centers?

In your opinion, what is the ideal model of school based health center oral health services?

What is your opinion on mobile vans to deliver oral health services?

**Finance**


**Data Collection/Quality Measures**

To your knowledge, what oral health outcomes are currently being considered, adopted, or used at the national/state/program level?

Should there be a set of minimum evaluation/outcome measures or metrics adopted nationally? Locally? Or at the program level? Which of these should be included:

- Patient safety
- Lower disease incidence
- Lower prevalence of untreated disease
- Increased utilization of preventive services
- Decreased utilization of emergency services
- Enhanced access to needed services
- Improved patient satisfaction
- Improved oral health quality of life
- Reduction in oral health disparities
- Others

**APPENDIX 2. List of Key Informants**

Our key informants covered a broad spectrum. Their health professional training was diverse and included 9 dentists, 3 dental hygienists, 5 other health care professionals, and 10 program and policy analysts and administrators. With respect to places of employment, 3 worked for the federal government and 2 were employed by state agencies. The remaining 19 were employed at universities, school-based and oral health membership organizations, and foundations.
Linda Anderson, MPH, West Virginia Technical Assistance and Evaluation Center at Marshall University

Jay Anderson, DMD, MHSA, Former Chief Dental Officer, Bureau of Primary Care, DHHS now Director Practice Improvement at DentaQuest Institute

William Bailey, DDS, MPH, Assistant Surgeon General, Chief Dental Officer, DHHS

Pat Baker, President and CEO, Connecticut Health Foundation

Diane Brunson, BS, MPH, Director of Public Health, University of Colorado

Joanna Douglas, DDS, Associate Professor, U Conn School of Dental Medicine and Oral Health Consultant, Connecticut Health Foundation

Burt Edelstein, DDS, MPH, President, Children’s Oral Health Project and Professor, Columbia University College of Dental Medicine

Ralph Fuccillo, Executive Director, DentaQuest Foundation

Tracy Garland, MUP, Tracy Garland Consulting and Consultant to DentaQuest Foundation on the National Interprofessional Initiative on Oral Health

Shelly Gehshan, MPP, Project Director, Pew Children’s Dental Campaign, and Andrew Snyder, MPA, formerly Manager, Pew Children’s Dental Campaign currently National Academy for State Health Policy

Harry Goodman, DMD, MPH, Director, Office of Oral Health, Maryland Department of Health and Mental Hygiene

Linda Juszczak, DNSc, MPH, MS, CPNP, President, National Assembly on School-Based Health Care

Kate Keller, MPA, Program Officer, The Greater Cincinnati Health Care Foundation

David Krol, MD, MPH, FAAP, Senior Program Officer, The Robert Wood Johnson Foundation

Kelly Dunkin, MPA, Vice President – Philanthropy, and Amy Latham, MPA, Senior Program Officer, The Colorado Health Foundation

Stephen Marshall, DDS, MPH, Associate Dean, Oral Health Program Administrator, Columbia University College of Dental Medicine

Bobbi Jo Muto, RDH, BS, Community Oral Health Coordinator, Marshall University School of Medicine

Kyu Rhee, MD, MPH, Former Chief Public Health Officer, DHHS

Scott Tomar, DMD, DrPH, Professor, Department of Community Dentistry and Behavioral Science, University of Florida College of Dentistry

Jesse White-Frese, Executive Director, Connecticut School-Based Health Center Association

Scott Wolpin, DMD, Dental Director, Choptank Community Health System, Inc.

Christine Wood, RDH, BS, Executive Director, Association for State and Territorial Dental Directors
The twenty-five key informants who participated in this project were promised confidentiality at the time of the interview. Twenty-four of the key informants have subsequently agreed to being named in this report.