Critical Issues in Dental Education

Addressing Health Disparities Through Dental-Medical Collaborations, Part III: Leadership for the Public Good

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Abstract: This is the third in a series of articles featuring dental-medical collaborations to reduce oral health disparities. Previous articles have targeted disparities among children, the elderly, and those with mental retardation and developmental disabilities and the importance of cultural factors in health disparities. Articles in this third group describe projects that originated in the public health sector or utilize public health approaches. They include training of non-dental providers and Head Start/Early Head Start workers in children’s oral health promotion; case management to ensure early preventive medical, dental, and developmental services for children; and a dental school-led outreach, training, and research effort to address oral cancer disparities. In this introductory article, we review lessons learned from the entire series of projects reported in these articles. The primary take-home message is that educational changes are needed in dental and medical training to better address oral health disparities. Other important lessons include the value of local or state-specific data, the need for partnerships with key stakeholders, and the role of financial incentives in leveraging change. We recommend more attention to outcome assessments in educational initiatives, greater partnering with families and patients, and utilization of change-management methodologies with systems, providers, and patients. We also advocate increased collaboration with the public health sector and bold leadership in dental education.

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This is the third set of articles in a series highlighting dental-medical educational collaborations to address oral health disparities. In this final set of articles we consider another perspective on these collaborations, namely that of public health. Two articles describe projects that originated within the public health sector itself: first, an oral health curriculum developed primarily for non-dental providers by the Connecticut State Department of Health; and second, a case-management approach to ensure the provision of dental and medical services for children, developed within the King County Department of Health in Washington State. The final article describes a public health-oriented program undertaken by an academic dental center (New York University College of Dentistry) to address disparities in oral cancer.

All efforts presented in this series demonstrate leadership in challenging times and stimulate us to think about new ways to address oral health disparities and develop bold leadership for this purpose. It is clear that oral health disparities cannot be addressed
without collaborative efforts between dentistry and medicine and other health professions. Many goals and recommendations from this series can be accomplished by collaborating with the public health sector and academic public health resources, which share the mandate to address health disparities. Leadership at many levels is needed to develop creative partnerships to reduce disparities.

**Public Health-Oriented Projects**

After this introduction to the series, the first article describes a curriculum developed under the guidance of Stanton Wolfe and others within the State of Connecticut Department of Public Health. “OPENWIDE” is a comprehensive multimedia oral health curriculum intended for non-dental providers. The target audience included medical providers and early educators and especially Head Start and Early Head Start* (HS/EHS) staff centers. OPENWIDE is an impressive effort that has brought national attention and well-deserved praise for its comprehensive scope, materials, and flexible training formats. However, the experience in Connecticut points to the difficulty of putting these materials into use in busy settings. Despite strong satisfaction with OPENWIDE training, results of follow-up with staff have not demonstrated consistent use of OPENWIDE activities or materials at program sites. This is surprising considering that access to oral health services and oral health promotion are integral parts of the HS/EHS programs as reflected in the national performance standards and that HS/EHS funds can be used for necessary dental services when no other source of payment is available. Further exploration of the reasons behind this are needed, and the authors present a thoughtful list of recommendations.

Changing knowledge and changing practice are different processes. Implementation involves changes in professional and staff behaviors and possibly attitudes, as well as attention to logistical and system barriers. Although not set up as a research project (a common thread among many educational collaborations), efforts to evaluate the impact of the OPENWIDE curriculum have been initiated and may provide answers to some of these questions.

The second article, by Wysen et al., describes a case management project (“Kids Get Care”) with a “services first” approach that links children with identified dental disease to a source of dental care. A case manager first ensures access to needed services and then confirms eligibility and participation in Medicaid and other publicly funded insurance programs. Initially developed in community health clinic settings with co-located dental and medical services, the project has expanded to include a private physicians’ group and community dental practitioners through an ABCD program.** Kids Get Care also provides oral health education for non-dental professionals who screen for oral disease, provide health counseling, and apply fluoride varnishes. It includes outreach to staff and parents served by community-based sites such as WIC, Head Start, and other programs. Unique to this project is the training of dentists to screen for a child’s medical home and immunization needs, a role in health assurance that could well be expanded. By embedding oral health in a larger project to improve access to medical and developmental services, this program operationalizes the fact that oral health is a part of overall health and must be considered whenever health services for vulnerable populations are targeted. This program also integrates oral health into a mechanism familiar to most providers working with Medicaid: the EPSDT benefit.*** Outcome evaluations are in an early phase: increase in services delivered has been demonstrated at some sites, and the authors provide

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*Early Head Start (0-3 years) and Head Start (3-5 years) are preschool programs with services for low-income children and families, including pregnant women. For more on Head Start/Early Head Start programs, see www.acf.hhs.gov/programs/hsb/about/index.htm. Accessed: February 5, 2004.


***Early and Periodic Screening, Diagnostic, and Treatment benefit (EPSDT). The Social Security Act. Section 1905 (r). By federal statute, the EPSDT benefit includes medical and oral health screening and referrals for needed medical and dental care, all follow-up care, health education and anticipatory guidance for parents and older children, and assistance for families in scheduling and getting to appointments. Despite the comprehensiveness of these standards, compliance with these components of EPSDT varies widely across the states.
a rough estimate of cost savings that might be accrued by early intervention including application of fluoride varnishes.

The third article, by Kerr et al., illustrates the impact of federally sponsored research programs and the possibilities of creative leadership. New York University College of Dentistry has developed a major outreach program for oral cancer prevention and screening that includes community outreach, public and professional education, policy initiatives, the development of a regional coalition, and a large federally sponsored research agenda. The review of the epidemiology of oral cancer illuminates for us the complexity of disparities. This article highlights the importance of behavioral and cultural determinants of oral cancer, as well as the need for effective public health monitoring in response to rapidly changing ethnic subpopulations in the United States. An impressive aspect of this effort is the partnership between professions, across training institutions and health sectors, and with professional associations, community practitioners, and the media, and even extending through the state and region. One outcome is that the New York State Dental Association now mandates oral cancer training for all dentists. Research outcomes from the projects within this program will be forthcoming and will contribute to our knowledge and ability to address oral cancer disparities.

The Series in Review: Lessons Learned

What have we learned through this series of eleven articles on dental-medical educational collaborations to address health disparities? The series was prompted by national reports and calls to action,3,4 the conviction that dental educators should take a leadership role in addressing disparities,5 and the firm belief that such efforts would require collaborations among dentistry, medicine, and the other health professions.6 Earlier articles in the series targeted disparities in the oral health of low-income and minority children,7,8 the elderly,9 and individuals with mental retardation and other disabilities and special health needs10 and highlighted the role of cultural differences in the evolution of health disparities.11 The three articles that appear in this issue emphasize public health functions of health assessment, assurance, and policy development.

There are many other dental-medical collaborations under development or in practice across the United States; it has not been the goal of this series to provide an exhaustive review of these. Rather, the intent has been to present representative collaborations, to highlight the issues relevant to particular populations with disparities, and to cull some of the lessons learned from these projects that might be relevant to dental education. These key themes and strategies are summarized here.

Dentistry and medicine can form effective partnerships. The opportunity to communicate and work across the two professions historically divided can be a rewarding experience, as one dentist affirms in the article by Wysen et al. Either profession can initiate the partnership, through academic, private, or public health channels, as the different projects confirm, but both are needed to develop models that provided integrated, comprehensive care to patients. Oral health must be seen in the context of overall health. Strategies developed must respond to the unique challenges and opportunities of each population. In the case of children, for example, the desire to prevent disease early led to the training of physicians and other primary care medical providers. About 95 percent of infants and young children have a medical provider,12 but few are seen by dentists at such an early age. The Head Start/Early Head Start focus in Connecticut is another example of going where the children are; it also makes sense because oral and medical health exams are a mandated part of the Head Start intake process. On the other hand, because children are dependent upon others for access to dental and medical services, the Kids Get Care model uses a case management and “services first” approach to overcome barriers to care that parents may experience. Head Start and Early Head Start can also provide case management services to help parents access dental services. These strategies may work best when children are young. When they are beyond the reach of frequent medical supervision or availability of case management services, new settings and new solutions will be needed.

In the case of the elderly and individuals with mental retardation and other disabilities or special health needs, the myriad of oral-systemic health interactions and the complexity of care for such individuals call for collaborative efforts involving dentistry, medicine, nursing, social work, physical/occupational therapy, speech/language therapy, and other professions. The interdisciplinary team pro-
vides an opportunity to improve health outcomes since there are many professionals who interact with these individuals and who can help to reinforce oral health messages. In addition, partnering with residential facilities and community and advocacy groups could help to create services in communities where they are needed. Innovative examples of such partnerships are discussed.10

Training of the dental workforce is a crucial step. We may not be training future dentists adequately to care for the elderly, children, poor/minority populations, and those with disabilities and special needs. To address health disparities, it will be necessary to provide undergraduate and postgraduate educational opportunities for dental students in the areas of pediatric and geriatric dentistry and care of special needs patients, cultural competency, and the nature of health disparities. Dental students also need interprofessional experiences to develop skills for partnership across professions and within communities and the chance to work with culturally diverse groups during their training. Change could be leveraged by accrediting and certifying bodies, but ultimately it falls upon dental school deans and faculty to initiate such changes.

Optimal use of the workforce also includes training physicians, other non-dental providers, and allied health professionals. Given the magnitude of disparities and potential dental workforce shortages, it is important to make the best use of the entire health workforce, including non-dentists and allied dental professionals. Educational implications include oral training for non-dental providers, as highlighted in these series, as well as potential training of allied dental professionals for expanded duties. In each case, training efforts must reflect the needs of the target audience of practitioners. Several programs indicated that they built on pilot efforts, conducted focus groups to identify barriers and opportunities for target audience participation in oral health promotion, and tailored curricula appropriately. Leadership within the medical and other professions is needed to advance this training, as well as effective collaboration with dentistry.

Prevention should be prioritized. This holds true for educational interventions provided by non-dental practitioners, but dental education must also place greater emphasis on oral health promotion and disease prevention. There are both pragmatic and moral reasons for making optimal use of our resources to implement prevention programs that will reverse the tide of health disparities in our increasingly diverse society. Prevention is the underpinning of public health-oriented projects.

Local or regional data can be powerful in driving program development. Although available data should always be utilized in designing health projects, local data is often the strongest leveraging tool. Projects from Washington, North Carolina, Connecticut, and New York utilized state-specific data on oral health disparities to leverage involvement of public, private, and professional constituencies in working toward change. Data on access gaps and dentist participation in Medicaid was also a powerful motivator for several of the projects. Partnership with epidemiologists and health services experts can facilitate use of existing data; in some cases, data must be developed to answer key local or regional questions.

Successful projects include broad representation of stakeholders and build constituencies around issues of importance to the community. Most of the projects reported in this series have involved collaborations beyond the dental-medical academic communities and have included community practitioners and other important stakeholders including dental and medical societies, Medicaid and other public health agencies/clinics, parent and advocacy organizations (e.g., Special Olympics, Inc.), and other community entities. Several projects were able to gain consensus among a broad constituency by focusing only on young children. The oral cancer projects at New York University were built upon a community sense of the importance of this underdetected and life-threatening cancer, especially for minorities. In this case, the academic dental center has played a central role in bringing together key constituencies.

Financial incentives and grant programs can leverage change. States that train medical practitioners to provide oral health counseling and apply fluoride varnishes provide varying levels of reimbursement. These include Washington, North Carolina, Idaho, Minnesota, and possibly other states. In the case of Kids Get Care, potential cost savings from case management and prevention-focused efforts, compared with costs of finding new Medicaid enrollees and/or treatment of dental disease, were additional motivators for this project. The Bureau of Health Professions’ Division of Medicine and Dentistry Oral Health and Primary Care Program funded the University of Washington family medicine residency training effort7 and seven other similar programs involving pediatric and/or family medicine.
residents and faculty. Funding for other projects in these series have included federal grant programs, Medicaid, state and local public health agencies, and a variety of private foundations.

**Professional associations can play a key role.** In most of these projects, partnership with dental and medical professional associations played a key role in development of innovative projects (North Carolina) and leveraging community dentist participation (New York and Washington). The new AAP oral health policy is an example of a professional association creating a national impetus for change.13 Recently a group of dental and medical professionals have formed a combined professional association—the American Academy of Developmental Medicine and Dentistry—to move forward agendas for improving the health of individuals with mental retardation and developmental disabilities. The New York State Dental Association now mandates oral cancer training for dentist members. Professional associations can and have lent their support to innovative efforts to address the public good.

Beyond these strategies, the experience reported by the authors of these articles suggests additional ways to strengthen efforts to address health disparities. Clearly, there are many data gaps, such as in the oral health status and disease processes in individuals with special needs and ethnic subgroups, in optimal ways to promote behavioral change among providers and families, and in the best educational strategies to accomplish curricular change. Many of these efforts require changing the culture of health professional education, such as including behavioral counseling, cultural competency, or interprofessional collaboration in dental education; training medical providers in oral health promotion; or adding oral health education to early childhood health curricula. Many projects start without adequate resources (time, money, or personnel) to plan outcome assessment carefully. Although it is a requirement within dental schools to evaluate curriculum, the formal infrastructure for educational evaluation and scholarship within many schools is often weak. Moreover, educational evaluations themselves are always several steps removed from the desired outcomes, which are changes in practitioners’ behaviors and ultimately improvements in patients’ health. However, ensuring efficacy of the educational intervention is a first and important step in this cascade.

**Recommendations for Future Educational Collaborations**

Much can be learned from these pioneering efforts, and when funding opportunities arise, these lessons can be applied in the development of more extensive and rigorous projects. With this in mind, we propose key areas for emphasis in future collaborations to address oral health disparities.

1. **Ensure data collection and program evaluation of educational programs.** This component of program planning can occur if partnerships are developed with researchers in education, public health, or biobehavioral sciences who have expertise in the relevant areas of data collection and outcome evaluation. Another solution involves offering faculty development or even advanced degrees in education to dental faculty wishing to pursue educational scholarship (University of the Pacific). Another strategy is to encourage efforts through professional organizations, such as the American Association for Dental Research’s group on educational research. A unique approach to educational evaluation is suggested by the North Carolina effort; the National Institute of Dental and Craniofacial Research (NIDCR) has funded an evaluation study of this project. In this case, the training of physicians is considered the intervention, and the oral health status of children treated by these physicians will be the outcomes. Planning for evaluation should be a part of every project from the outset.

2. **Apply systems and behavioral change theory to these efforts.** Clearly, training and buy-in are necessary but not sufficient to ensure change in practice. Many issues must be considered, as a recent article on dissemination of innovation reminds us.14 There is a literature on system change, as well as lessons learned from the business world and others about effective organizational change. Dental-medical collaborative efforts are seeking to change systemic culture and behavior, and there is a body of knowledge that academic and public health leaders can bring to bear on such efforts to hasten change.

3. **Apply methods for behavioral change to patient care, and consider training providers in such approaches.** Even if change in systems and provider behavior is accomplished, tools are rarely provided to busy practitioners or staff (medical, dental, Head Start, etc.) to help them encourage change in patient
or client behaviors. Motivational interviewing and similar techniques have been applied in smoking cessation programs and can be adapted to oral health behavioral change. For instance, a recent study demonstrated that application of an intervention based on readiness for behavioral change resulted in better oral health outcomes for children compared with control groups. It is important to provide professionals with skills and tools: without these, professional and staff frustration can all too easily lead to “parent-blaming,” which will create additional barriers to parent and patient change. There is also room for developing and testing other approaches to behavioral change, such as peer counseling for parents.

4. Include family and consumer perspectives in program planning. Beyond concerns for families as recipients of oral education and interventions, it is important to recognize them as partners in the development of programs and educational materials. Patient partnership is often preached but rarely practiced. Few educational programs explicitly describe family input into development of training materials. This has several implications. For one, when readability or cultural or linguistic competence of the materials is inappropriate for the intended audience, the message may not be communicated. While translating oral health materials for non-dental professionals and staff may seem onerous enough, it must be remembered that many practitioners and staff have higher levels of education than the majority of their patients and clients. Professional training does not typically provide guidance to trainees about the translation of information into patient-friendly terms. Re-evaluating patient education materials for literary level and linguistic and cultural competency is one component of this; explicitly raising professional awareness of this potential communication gap is another. Moreover, patient and family experiences that may function as barriers to behavior change are rarely considered by health care providers and addressed in patient education activities. Finally, patient- and family-generated solutions are likely to be met with increased buy-in and support by those served.

5. Continue to provide incentives through funding streams for system and practitioner behavioral change. Funding entities can play one of the most important roles in leveraging change. Physician reimbursement for provision of preventive oral health services and enhanced fees for dentists providing care to Medicaid-eligible patients are just two strategies. Although rigorous cost-effectiveness studies are difficult to carry out, reasonably derived estimates can speak loudly when costs of public health programs are reviewed. Cost-effectiveness estimates could also include days lost from school for children and from work for parents. An estimated 52 million days of school are lost each year due to dental disease, for example. Incentives could be utilized at the health system level, where publicly funded programs could prioritize providers and clinics delivering higher rates of oral health prevention services or demonstrating improved health outcomes. Change can also be leveraged through federal and other grant mechanisms. This can be an effective strategy, but programs must develop sustainable mechanisms beyond the period of the grant.

6. Expand use of dentists to screen for medical concerns. If there is an increasing awareness of the importance of oral health for overall health, then there must be a re-emphasis within dental education on the importance of general health. New partnerships with medical providers who detect oral disease or risk factors will be strengthened by a mutual respect and increased awareness of each other’s expertise and the needs of patients in the other’s arena. Both medical and dental professionals and patients will benefit from such collaboration. If oral health is to be integrated into overall health concerns, dental professionals must have a stake and input into larger health issues as well.

7. Collaborate with the public health sector. Partnering with the public health sector and academic public health resources is one way to build capacity to accomplish some of the above changes. Within such systems, there is often expertise in epidemiology, health services, policy development/analyses, program planning and evaluation, and cost-effectiveness methodologies. The public health framework includes a focus on prevention, recognition of multiple determinants of health and illness, and a population approach to health improvement. Consequently, the public health system is a natural partner in dental and medical efforts to address disparities in oral health.

There are more than 700 federally qualified community and migrant centers nationwide, many including dental as well as medical components that could be sites for future educational interventions and community-based research. Recent increases in federal support for primary care clinics should serve to strengthen such public health infrastructure.
Furthermore, the culture of public health supports nonjudgmental emphasis upon behavior change. Finally, the public health sector has an ethic of social responsibility that can support leaders within dentistry and medicine seeking to make systemic change.

8. Leadership for the public good—an academic institution’s mandate. In fact, the continued existence of profound oral health disparities can be seen as a failure to mount leadership within dental and medical academic institutions and to regain public trust by serving the needs of the public.19 Because of the public funding of research and professional education, the public trust placed in health professionals and educators, and their concentration of learning resources, academic institutions are a public good. Reclaiming the public confidence must include finding new ways to serve the public and take leadership roles in such efforts. A university—or dental school within it—can lead only when it understands that its role in society is to create leadership. Educational programs in universities must embrace a mission to train to the ideals of the professions: educational, research, and service programs should become beacons of social responsibility. Often dental institutions and dentistry as a whole have failed to embrace shared goals that reflect a larger vision of the public good and a sense of professional citizenship committed to the larger community.

What makes a good leader for the common good? Leaders who are easily identified include those who are visionary, can take risks, are creative, and have passion. They build constituencies and collaborate, articulate shared goals, and lead with a moral purpose. Implicit in this type of leadership is the ability to identify gaps in a field and propose change. And while it is often easy to identify leaders who occupy large public roles, the projects presented in these series should illustrate that it takes many levels of leadership to initiate change. It is the dental and medical schools’ role to collaborate with, encourage, and support leaders from community-led efforts, as well as develop leadership from within.

Conclusions

While we have trained dentists to meet needs of the majority of patients, we have not trained them to meet the majority of the need—which is where the disparities lie, hidden in vulnerable and underserved groups. At the same time we have not made optimal use of other potential oral health providers or collaborated fully with medical and public health sectors to address disparities. Finally, at many points we have failed to include patients and families in planning efforts or considered their health as the ultimate outcome and justification for all professional education. Disparities are complex and relate not just to knowledge gaps of providers, but attitudinal and system level issues, research gaps, patient behaviors, and biological factors.

In this series we call for specific changes in dental and medical education; increased rigor in evaluation of educational efforts, including the development of a greater dental education research infrastructure; and continued leveraging of dental-medical collaboration to address disparities by funding agencies and groups. All these efforts involve changes, either behavioral changes on the part of health care providers, support staff, and patients or shifts within health systems and structures. Such transformation requires carefully thought-out change strategies to ensure success. Many barriers exist to effective change in dental education. We call for bold leadership to challenge internal “culture” and address disparities through effective collaborations with medicine, public health, and other health sectors.5,19,20 Eliminating health disparities will rest, in part, on our ability to work together at academic, community, and public health levels.

REFERENCES


