

Academic and Community Partnerships: Increasing Access Through Collaborative Care

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Abstract: Access to quality dental care for many adults and children remains a serious concern. Many communities throughout the U.S. are at great disadvantage for preventive care and treatment due to payment concerns, location and types of providers, and poor communication between dental providers and primary care professionals. Voids in shared technology and information also persist. Integrating primary care with oral health can boost both preventive care and interventions focused on increasing efficacy and efficiency between dental and primary care professionals in addressing the onset and duration of disease. Academic and community partnerships can help increase access to care and bring together the dental and medical communities for better integration and care coordination. Academic and community partnerships promote the sharing of information, facilitate provision of basic diagnostic services, and bring the bidirectional flow of knowledge, training, and skills to one another in a systematic and sustained manner.

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Oral health and overall health are wholly linked together. Dental caries and periodontal diseases cause significant morbidity and, when left untreated, may cause death.¹ Acute and chronic conditions flourish in the oral cavity, including inherited, infectious, neoplastic, and neuromuscular diseases and disorders. Children and adults are both vulnerable. Dental caries is the single most common chronic childhood disease in the U.S. and can remain a chronic condition well into adulthood, exacerbating heart disease, diabetes, and in some cases mental health through low self-esteem, depression, and neurological influences.^{2,3} Economic status, literacy, geography, transportation, community violence, and food availability are unequally distributed across populations and are associated with patterns of infrequent preventive dental care and high rates of dental disease.^{4,5}

A lack of access to dental care as a result of payment concerns, insurance coverage limitations, location of dental office, willingness of providers to serve minority, immigrant, or disabled populations, or other barriers remains a serious concern.^{6,7} In recent years, the Patient Protection and Affordable Care Act (ACA), efforts by the Centers for Medicare and Medicaid Services (CMS), and the states' expansion of Medicaid and strengthening the Children's Health

Insurance Program (CHIP) have helped lower the burden of income- and insurance-related disparities in children's utilization of dental services.^{8,9} However, because historically, Medicaid eligibility for non-elderly adults has been very restrictive, adult dental benefits lag far behind.

Moreover, bringing multiple health providers from different professions together to provide comprehensive collaborative care models is a continued priority. The best collaborative care practices integrate clinical and non-clinical services, including diagnosis, treatment, surveillance, health education, medication management, and support services.^{10,11} Aligning primary care, preventive medicine, and dentistry to deliver the highest quality of care across people, communities, and settings can improve oral health outcomes. Academic and community partnerships can help bridge service provision and access gaps by allowing partners to negotiate roles and responsibilities, enhancing communication, sharing resources, and facilitating the bidirectional flow of knowledge, training, and skills.^{12,13}

Access to Care

While the majority of the U.S. population routinely obtains oral health care in traditional dental

practice settings, oral health care eludes many vulnerable and underserved communities. Lack of access to oral health care contributes to profound and enduring oral health disparities in the U.S.¹⁴ Access to and utilization of oral health care are often determined by knowledge and availability of dental coverage. Publicly funded programs, such as Medicaid and CHIP, are the primary sources of coverage for vulnerable and underserved populations. Racial and ethnic minorities, people with special health care needs, older adults, populations below the poverty threshold, and many rural populations go without any oral health care coverage. Poor children face persistent and systemic barriers to accessing oral health care. Currently, all states are required to provide dental coverage for children enrolled in Medicaid and CHIP, but these same benefits are not required for adults on Medicaid.¹⁵ Some states with limited adult dental benefits have taken steps to provide more expansive access to services for selected groups. Other states provide a more robust dental benefit package for pregnant women, while a few Medicaid programs have examined caps on covered services such as dentures, crowns, and endodontic and periodontal care for pregnant women as well as for adults with serious chronic or other conditions.¹⁶ The inability to pay for preventive care and some advanced treatment is one barrier; location and placement of dental services in networks of providers used most by vulnerable populations can be another hurdle.

Common types of safety net providers such as Federally Qualified Health Centers (FQHCs), non-FQHC community health centers, dental schools, school-based clinics, state and local health departments, and community hospitals exist to provide care to indigent children and adults. Each type of provider offers some type of oral health care. However, challenges often arise in the types of services provided, availability of dentists and dental hygienists, number of patients who can be served, and scheduling.¹⁷ Other concerns these providers encounter can include the weight of the variety of need from patients, language issues, rapidly changing demographics, and community safety issues. Facilities and providers have sought to overcome many of these issues by combining logistics to remove financial and capacity barriers to better facilitate accessing diagnostic, preventive, and early intervention dental care. Many have partnered with other social service and community programs such as Women, Infants, and Children (WIC) clinics, long-term care facilities, public housing authorities, and safety net hospitals.^{10,18}

The oral health care system is built on independent and group practice business models in which over 90% of dentists work in private dental practices.¹⁹ Many of these locations are in neighborhoods, towns, or areas that can be difficult for travel or seem unfriendly to low-income patients. Dental locations where patients require access to public transportation and hours flexible with work schedules, child care, or even other medical needs (e.g., dialysis, physical therapy) can prove difficult. Also, the gap in regular dental visits and effective utilization of oral health providers persists in lower income communities and cultures where routine oral health care is not the norm or practiced with any consistency. Knowledge and prioritization of preventive oral care are strongly associated with social, cultural, and geographic factors that influence individual attitudes and behaviors.²⁰ Grants for school-based health centers to connect to proper billing systems for sustainability, enhance preventive care, and strengthen public education programs build a strong knowledge base in children and adults.

Workforce grants supporting the development of mid-level practitioners and Title VII grants for dental resident and dental hygiene programs can help expand access. Expanding the oral health workforce to include more professionals who treat low-income individuals and disparate populations can eliminate barriers to care. Continued efforts to increase the number of dentists, mid-level dental providers, allied dental providers, or dental therapists from diverse populations can create a groundswell. Training and enabling dental teams, including dental assistants, dental hygienists, and dentist specialists, to serve vulnerable populations is yet another strategy.^{21,22}

In addition, we have observed that many states reimburse primary care medical providers for performing preventive oral health services. Collaborative care that begins in primary care or even some emergency or urgent care settings can lead to new payment and oral health coverage models that also can address access issues.

Advancing Collaborative Care

Collaborative care is integrated and comprehensive services delivered by several health providers from different professions working with people, their families, caregivers, and communities. The aim is to deliver the highest quality of care across settings, to

eliminate redundant costs, and to improve efficiencies in systems of care.²³ Collaborative care models include both clinical and non-clinical health-related efforts, such as diagnosis, treatment, health communications, surveillance, management, and support services. Improving chronic disease management and prevention begins with dental and medical providers working in collaboration. Bringing together health providers from dentistry, medicine, and public health to enhance promotion, prevention, and health management can close health equity gaps.^{24,25} Technology, social media platforms, and mobile applications allow for stronger connections and collaboration.

Integrated medical and dental care requires providers at every level of care to take advantage of advancements in technology that allow for ease of electronic medical records exchange. Interoperability is the capacity for different information technology systems and software applications to communicate, exchange data, and use the information that has been disclosed. Tested data sharing agreements and patient summary standards permitting data to be shared across clinician, lab, hospital, pharmacy, and patient regardless of the application or application vendor strengthen interoperable requirements.^{26,27} Caregivers and authorized parties can connect disparate electronic health record (EHR) systems and other systems to improve quality, safety, efficiency, and efficacy of health care delivery. Better use of technology also elevates efforts to eliminate health inequities. Technological innovations in data capture, epidemiologic profiling, and clinical translation can be scaled and deployed in ways directly benefitting poor communities, uninsured, children, elderly, and disadvantaged. Collaborative care can be advanced in vulnerable populations through patient-centered interventions and care coordination using mobile and wireless devices, such as smartphones, Bluetooth-enabled patient monitoring devices, tablets, and cloud-based software applications.²⁸

Integrated patient health records and clinical decision-support tools can improve patient care. These tools can prompt dental providers when their patients are due for a routine medical check, cardiovascular screen, or generating oral health messages to physicians for their patients with diabetes. For example, dentists and hygienists can receive text alerts, push notifications, and reminders in electronic charts to screen for hypertension. Physicians could receive similar messages to screen for history or risks for oral disease. Both providers would appropriately

connect the information, making it readily available for clinical decision making.²⁹

Another potential means for advancing collaborative care could be teledentistry. Teledentistry refers to the use of telehealth systems and mobile platforms to deliver patient care through live video, remote patient monitoring, and store-and-forward modalities.³⁰ Care models such as virtual dental homes create community-based oral health delivery in which patients receive preventive and modest therapeutic services in community settings. Teledentistry sites are often set up in schools, churches, community centers, hospitals, or community clinics. Services provided in these settings include health promotion and prevention education, dental disease risk assessment, and preventive procedures such as application of fluoride varnish, dental sealants, and, for dental hygienists, dental prophylaxis and periodontal scaling.³¹ Utilizing the latest technology to link medical practitioners in the community with dentists and dental hygienists at remote office sites can significantly reduce the risk due to miscommunication, a common problem in health care.

Value of Academic and Community Partnerships

Interprofessional education in health occurs when academics, medical professionals, or students from two or more professions or disciplines learn about, from, and with one another, enabling effective collaboration that improves health outcomes. Academic and community partnerships build on these relationships, specifically when universities, professional academic associations, and community-based organizations come together in a formal manner to address unique health concerns. Academic and community partnerships open opportunities for cross-profession collaboration through preventive care initiatives and treatment services to underserved areas, grants, and research affiliations. Often such collaborations start with negotiations of roles and responsibilities, delineation of expertise, and establishing goals and motivation of each participant.³² Accomplishment between academic and community partners is determined by time constraints, financial resources, human and social capital, and trust. The bidirectional flow of information, consistent data sharing, and transfer of skills are also essential to success or failure of these partnerships.³³

The implicit promise of collaboration between academic and community partners is that each group has the opportunity and authority to exercise agency. Agreements and the procedures that follow lead to each participant's opportunity to provide input regarding the course of the project, predetermined weight given to each agency, and how decisions will be made. Although the partners' primary interests may not be completely congruent, they are compatible in that specific goals for individual participants and the collaborative as a whole have been clearly defined (e.g., improving oral health in low-income and rural children).^{34,35} Service-learning programs, for example, extend institutional commitments to engage with the local community to improve quality of life and represent viable and sustainable models. Some solutions may increase access to oral health care, while others connect providers through technology and innovative strategies. Service-learning programs provide students and faculty with a framework to develop, plan, and implement community-based initiatives that may be required components of academic coursework, independent research, or a culminating learning experience.^{36,37}

Academic and community partnerships can help address fundamental deficiencies and service gaps in the health care system that lead to limited access to care. Shortages in the primary care workforce, poor training, and lack of committed care facilities spur health inequality and widen disparities. For example, community health centers are frequently underused preventive care resources where people in the communities served often opt for emergency room care instead of primary care.³⁸ These choices are driven by individual concerns regarding wait time and treatment. Partnerships between community health centers and teaching hospitals can bring much-needed resources and capabilities to areas threatened by seeping holes in the health care safety net. School and community linked programs and facilities broaden dental service delivery sites and expand interprofessional learning, greatly benefitting vulnerable and low-income populations in need of oral health services.³⁹

Dentistry is the first line of defense for prevention, diagnosis, and treatment of diseases and disorders of the oral cavity and related systems. Eliminating barriers that contribute to oral health disparities will require connected teams and sustainable models. Extending learning opportunities and communication among dentists, dental hygienists, primary care providers, school nurses, mental health

specialists, social workers, community-based care coordinators, and academic centers, for example, sets a foundation towards this aim.^{40,41}

Conclusion

Oral health care in neglected populations can be improved by increasing the utilization of dental professionals for prevention and health promotion. Building stronger collaborative care will require medical providers across the health care system to take greater advantage of technology and innovative care models. Interprofessional education and strong partnerships with community entities foster learning, skill building, and resource sharing. These approaches together provide oral health services in a variety of settings, increase outreach and education, and can lead to better health outcomes.

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