Interprofessional Collaborative Practice: How Could Dentistry Participate?

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Abstract: There is a remarkable phenomenon occurring among health professionals: the development of ongoing, routine collaboration, both in educating the next generation of providers and in delivering care. These new approaches, commonly referred to as interprofessional education and interprofessional collaborative practice, have been introduced into academic health settings and delivery systems throughout the U.S. and the rest of the world; however, the full integration of dentistry in health care teams remains unrealized. In academic settings, dentistry has found ways to collaborate with the other health professions, but most practicing dentists still find themselves on the margins of new models of care delivery. This article provides a perspective on the history and context of the evolution of collaborative approaches to health care and proposes ways in which dentistry can participate more fully in the future.

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Less than two decades into the 21st century, it is already hard to imagine a time when collaboration was not a universally valued strategy for enhancing human endeavor; yet when it comes to health care delivery, deliberate collaboration across the professions is still far from the norm. With few exceptions, even in those settings where collaborative practice is firmly established, dental professionals are rarely present. Whether this situation arises through oversight or by design, dentistry's absence in many otherwise collaborative health delivery settings remains a challenge—both for the profession and for the delivery of effective, integrated care. This article provides a perspective on the history and context of the evolution of collaborative approaches to health care and proposes ways in which dentistry can participate more fully in the future.

Development of IPCP

The history of interprofessional collaborative practice (IPCP) can be traced to three Institute of Medicine (IOM) reports that set the direction for health care transformation in the 21st century. The first report, *To Err Is Human: Building a Safer Health System*, was published in 2000 and cast a glaring light on the high number of U.S. deaths rooted in medical errors caused by poor communication and uncoordinated care.[1] The second, *Crossing the Quality Chasm: A New Health System for the 21st Century*, proposed a framework for addressing these deficiencies, and the third, *Health Professions Education: A Bridge to Quality*, established the essential role education has to play in building a safer health system.[2,3]

Notably, dentistry played no role in the creation of these reports, underlining the profession's

historical isolation from medicine—a phenomenon that continues to shape dental practice to this day.[4] Yet dental education was alert to the need for greater collaboration in health care delivery as early as 1995. That year, the IOM published *Dental Education at the Crossroads: Challenges and Change*.[5] Among the proposals put forth by the report's authors was that "Dentistry will and should become more closely integrated with medicine and the health care system on all levels: research, education, and patient care."

As recently as 2006, some leaders of academic health centers saw dental schools as "somewhat isolated" from interprofessional education (IPE),[6] but no one can make that claim today. The American Dental Education Association (ADEA) was influential in promoting a predoctoral dental program accreditation standard stating that dental graduates "must be competent in communicating and collaborating with other members of the health care team to facilitate the provision of health care" (p. 28).[7] The adoption of this Commission on Dental Accreditation (CODA) standard (2-19) propelled significant movement at dental schools. By 2014, 90% of dental schools offered IPE experiences for their students, and 69% of those activities were mandatory.[4]

At the same time, external pressures have underscored the wisdom of preparing health professions students through IPE to function in an interprofessional practice environment (Table 1). A 2010 World Health Organization (WHO) framework report called preparing students to work in collaborative practice teams "a key step" in integrating and strengthening health systems (p. 10).[8] "Interprofessional health care teams understand how to optimize the skills of their members, share case management, and provide better health services to patients and the community," that report stated, asserting that "The resulting strengthened health system leads to improved health outcomes" (p. 10).

Table 1. Definitions of interprofessional education and collaborative practice

Definitions
"Interprofessional education occurs when two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes" (p. 7).
"Collaborative practice in health care occurs when multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, [caregivers,] and communities to deliver the highest quality of care across settings" (p. 13).

Source: Health Professions Networks Nursing and Midwifery Office, Department of Human Resources for Health, World Health Organization. Framework for action on interprofessional education and collaborative practice. Geneva: World Health Organization, 2010.

Benefits and Challenges of IPCP

The promise inherent in IPCP is consonant with a series of policy changes and related developments that have begun to reshape health care delivery over the course of the last decade:

- The Institute for Healthcare Improvement (IHI)'s 2008 launch of the IHI Triple Aim, a concept for restructuring U.S. health care, has produced widespread agreement that reforms should improve patient care, improve population health, and reduce health care costs—three goals supported by IPCP.[9]
- The Affordable Care Act has accelerated the transition from fee-for-service to value-based provider compensation and encouraged interprofessional collaboration to more affordably manage care.[10,11]
- Accountable care organizations (large integrated systems that assume responsibility for all aspects of a patient's health care) provide examples of how team-based care produces efficiencies and could lead to improvements in long-term health.[12]
- Scientific evidence links proper oral health care for individuals with chronic diseases to improved outcomes.[13] This evidence suggests value in placing dental care and medical care into a coordinated system.

Patients who receive care in IPCP settings stand to benefit in other ways: added convenience, more timely access to care, a unified health record that improves communication among the health care team, and the specific advantages that come from integrating dental providers within an IPCP team. Regular dental care is key to ensuring that inflammation associated with the oral cavity is controlled. When dental care is isolated from the rest of health care, this component of care may be underutilized. IPCP that includes dentistry should provide patients with easier access to care for acute dental problems as well as provide better management of chronic oral conditions.[14]

IPCP should also have distinct advantages for participating health professionals. Those advantages include access to a shared electronic health record, increased referrals, and proximity to colleagues for support and feedback. Millennial dental school graduates, typically tech-savvy, ambitious, family-oriented, productive, and confident team players,[15] should be especially well suited to IPCP environments. This generation's repeated exposure to IPE during their predoctoral years is also likely to spur the evolution of traditional dental practice environments. As more dentists accustomed to collaborating with colleagues across the health professions enter the workforce, they will likely reshape care delivery in accordance with this new educational norm.

Despite these potential gains, both patients and providers may find the shift toward IPCP challenging. Integrated health systems typically limit patient choice of providers, and participation in any group can constrain provider treatment decisions as a matter of policy, culture, or the preferences of peers. Collaboration also opens providers to additional scrutiny from colleagues and supervisors. For providers accustomed to complete professional autonomy, such interactions may be uncomfortable and result in a perceived loss of control.

These challenges may be especially acute for dentists, who have long functioned at arm's length from other health professionals. Veteran dentists may see little to gain and much to lose from giving up some of their independence. Even recently graduated dentists, if drawn to the profession by its entrepreneurial opportunities, may balk at subordinating their autonomy and embracing a more collaborative model of care.

At the same time, other health care providers may lack a full understanding of dentistry's capacity to enhance the overall health of their patients. If dentists are seen merely as surgeons who restore or remove diseased teeth, engaging dental colleagues in the management of a patient's diabetes or cardiac disease may require a leap of faith. The absence of universally accepted metrics to gauge the effectiveness of IPCP-based oral health care further compounds the problem of demonstrating its value to dentists and their potential collaborators alike.

Of equal concern is the question of how dentists working as part of a health care team will be compensated for services. Value-based payment systems that reward providers for keeping patients healthy and out of the hospital are in the ascendance.[16] Dentistry, which generally relies on payments for procedures, is out of sync with this trend. It will take considerable work to ascertain where dentistry fits in the evolving health care delivery economy. Doing so is imperative if dentists are to participate.

Moving Dentistry Toward IPCP

One thing appears certain: as IPCP becomes more established, it will influence the practice of dentistry. If the dental profession wants to play an active rather than passive role in that evolution, dentists need to give serious consideration to the questions posed by this trend. We, as members of the Western Group, have been meeting biannually for 13 years to discuss issues of common concern, including the role of dentistry in the health care system of our country. Following are our preliminary thoughts on how dentistry might participate in IPCP.

In keeping with the current diversity of U.S. health care delivery systems, the IPCP models of the future will almost certainly take many forms, but the first organizations to incorporate dentistry successfully will likely be those that already offer integrated care. These include community health centers, Department of Veterans Affairs health facilities, and military health systems that rely on public dollars to provide care, as well as private entities such as Kaiser Permanente and HealthPartners that have embraced the integrated care model.

Kaiser Permanente and HealthPartners currently incorporate dental, vision, mental health, and other benefits in some or all of their insurance plans and are beginning to provide medical and dental services in one facility.[17] These organizations have one big advantage over other delivery systems: they insure their members as well as provide care, which allows them to manage all clinical care and financial transactions within the IPCP framework. To effectively incorporate oral health into other health care settings will require a similar alignment of economic interests. At a minimum, payment for dental and medical services needs to occur through a common reimbursement system that values all professional services. This goal is easily achieved in IPCP practices that employ providers with a salary. Combining an adequate base salary with incentive-based compensation packages, appropriately designed to induce therapy decisions that improve a patient's oral health and reduce health care costs, may be an approach

that proves effective. Indeed, new dentists entering practice are increasingly likely to choose employment under this model.[18,19] Meanwhile, those dentists who continue to practice independently could work interprofessionally by developing agreements to provide a specified set of services to patients at nearby medical, nursing, or other health care practices.

IPCP with effective care coordination that bridges the current divide between dentistry and the rest of the health care team will also require the ability to share data. Anthem Blue Cross and Blue Shield began sharing data across its dental, vision, life, disability, and medical plans in 2015, so that providers could get a comprehensive picture of their patients' health status and address gaps in care.[20] As a result, the insurer is investing more in prevention through its Anthem Whole Health Connection initiative. Pregnant plan members and those with diabetes, for example, now receive a third dental cleaning and periodontal maintenance visit each year at no cost.[21]

Efforts to link dental and medical care at Kaiser Permanente, UnitedHealth, Anthem Blue Cross and Blue Shield, and others are lowering the costs of care to employers,[22,23] providing a powerful incentive for other insurers to follow suit. Meanwhile, many individuals involved in health care delivery remain unaware of the synergies that can occur when members of the health care team practice in coordination with one another. Primary care providers and payers need to be educated about the ways in which dentists can contribute to managing care—not just related to pregnancy and diabetes, but for conditions ranging from cancer to the need for a transplant. In 2008, the U.S. population made about 500 million visits to the dentist, and an estimated $102 billion was spent on dental services, with most occurring when patients were not demonstrating acute symptoms of systemic disease.[24] This situation positions dentists and allied dental providers to support the work of primary care providers through screening, surveillance, and the management of chronic conditions.

From a professional standpoint, working in an IPCP environment has the potential to provide substantial satisfaction, as dentists become part of a team providing care for the whole person. Shared practice management should also allow dentists to spend more time on care and enjoy greater flexibility because practice responsibilities would be shared with colleagues. Employed dentists would also avoid the financial risk, regulatory responsibilities, and stress associated with owning and operating a practice.

These advantages may be accompanied by a decline in earning potential, which some dentists will find unacceptable. They may choose to remain independent and to offer aesthetic and other elective care paid for by the patient. Whether these services will also have a place in IPCP settings is difficult to predict.

Meanwhile, it seems likely that the majority of dental practitioners will choose to stay in the mainstream of the evolving health system as it moves toward greater care integration. As payer, consumer, and provider awareness of the value of integrated care grows, dentists will almost certainly find themselves drawn into the mix. Dentistry's value in that environment must be clearly articulated by everyone who cares about the profession's future.

REFERENCES

1. To err is human: building a safer health system. An Institute of Medicine Report. Washington, DC: National Academies Press, 2000.
2. Crossing the quality chasm: a new health system for the 21st century. An Institute of Medicine Report. Washington, DC: National Academies Press. 2001.
3. Health professions education: a bridge to quality. An Institute of Medicine Report. Washington, DC: National Academies Press, 2003.
4. Palatta A, Cook BJ, Anderson EL, Valachovic RW. 20 years beyond the crossroads: the path to interprofessional education at U.S. dental schools. J Dent Educ 2015;19(8):982-96.
5. Feld MJ, ed. Dental education at the crossroads: challenges and change. An Institute of Medicine Report. Washington, DC: National Academies Press, 1995.
6. Rafter ME, Pesun IJ, Herren M, et al. A preliminary survey of interprofessional education. J Dent Educ 2006; 70(4):417-27.
7. Commission on Dental Accreditation. Accreditation standards for dental education programs. Chicago: American Dental Association, 2016.
8. World Health Organization. Framework for action on interprofessional education and collaborative practice. 2010. At: www.who.int/hrh/resources/framework_action/en/. Accessed 15 Dec. 2017.
9. Berwick DM, Nolan TW, Whittington J. The triple aim: care, health, and cost. Health Aff 2008;27(3):759-69.
10. Steaban RL. Health care reform, care coordination, and transformational leadership. Nurs Admin Q 2016;40 (2):153-63.
11. Driessen J, Bellon JE, Stevans J, et al. Innovative approaches to interprofessional care at the University of Pittsburgh Medical Center. J Interprof Care 2015;29 (5):520-1.
12. Shields MC, Patel PH, Manning M, Sacks L. A model for integrating independent physicians into accountable care organizations. Health Aff 2011;30(1):161-72.
13. Engebretson SP, Hyman LG, Michalowicz BS, et al. The effect of nonsurgical periodontal therapy on hemo-

globin A1c levels in persons with type 2 diabetes and chronic periodontitis: a randomized clinical trial. JAMA 2013;310(23):2523-32.
14. Miller CS, Epstein JB, Hall EH, Sirois D. Changing oral care needs in the United States: the continuing need for oral medicine. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2001;91:34-44.
15. West Midland Family Center. Generational differences chart. At: www.wmfc.org/uploads/GenerationalDifferences Chart.pdf. Accessed 15 Dec. 2017.
16. Health Care Incentives. Value-based payment-metric for transition. At: www.hci3.org/tools-resources/metrics-tracking-transformation-us-health-care/value-based-payment-metrics-transformation. Accessed 15 Dec. 2017.
17. Kaiser Permanente. Kaiser Permanente Northwest opens new Cedar Hills dental and medical office. 19 Jan. 2017. At: share.kaiserpermanente.org/article/kaiser-permanente-northwest-opens-new-cedar-hills-dental-medical-office-making-care-convenient-members-west-side/. Accessed 15 Dec. 2017.
18. Vujicic M, Israelson H, Antoon J, et al. A profession in transition. J Am Dent Assoc 2011;145(2):118-21.
19. Vujicic M. Practice ownership is declining. J Am Dent Assoc 2014;148(9):690-2.
20. Anthem 2015 annual report. At: www.corporate-ir.net/media_files/irol/13/130104/anthem-ar-15/empowering-consumers.html. Accessed 15 Dec. 2017.
21. Anthem Blue Cross Blue Shield. Press release. 12 Jan. 2015. At: www.specialtybenefits.info/va/#play-landing_clinical_awhc. Accessed 9 Nov. 2017.
22. American Dental Association, Health Policy Institute. Dental care in accountable care organizations: insights from five case studies. 2015. At: www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_0615_1.ashx. Accessed 15 Dec. 2017.
23. Atchison KA, Weintraub JA. Integrating oral health and primary care in the changing health care landscape. North Carolina Med J 2017;78(6):406-9.
24. Centers for Disease Control and Prevention. Oral health: preventing cavities, gum disease, tooth loss, and oral cancers, at a glance. 2011. At: stacks.cdc.gov/view/cdc/11862. Accessed 15 Dec. 2017.