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To cite this article: Maria C. Dolce, Jessica L. Holloman & Nicole Fauteux (2016) Oral health: A vehicle to drive interprofessional education, *Journal of Interprofessional Care*, 30:1, 4-6, DOI: [10.3109/13561820.2015.1070135](https://doi.org/10.3109/13561820.2015.1070135)

To link to this article: <http://dx.doi.org/10.3109/13561820.2015.1070135>



Published online: 01 Feb 2016.



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GUEST EDITORIAL

Oral health: A vehicle to drive interprofessional education

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Introduction

Health professions educators who want to advance interprofessional education (IPE) need look no further than the mouth. This gateway to the body offers students from across the health professions an overlooked vehicle for learning how to provide interprofessional collaborative care and, in the process, for improving oral and overall health. In this editorial, we will outline how oral health competencies can be used by educators across all health professions to advance IPE.

Why oral health?

On many levels, integrating oral health competencies in the curricula of all the health professions makes sense. Oral health is frequently absent from the curricula outside of dentistry and the allied dental professions (Hein, Schönwetter, & Iacopino, 2011). Although this is changing in some quarters, in most health professions programmes, the introduction of oral health competencies would fill a sizable gap.

Oral health competencies would also introduce a clinical component to the IPE curricula at those schools where activities that explore ethics, professionalism, communication skills, and similar topics have dominated IPE. The introduction of a topic that lends itself to hands-on, clinical activities would significantly enrich these curricula.

Acquainting all health professionals with basic oral health competencies would also promote health equity by alerting everyone within the healthcare community that oral health concerns disproportionately affect vulnerable and underserved communities. Even though tooth decay is largely preventable, it is the most prevalent chronic disease in both U.S. children and adults (National Institute of Dental and Craniofacial Research, 2014), and it is significantly more likely to go untreated in African-American, Native American, Alaskan Native, and Mexican-American populations (Institute of Medicine, 2011a).

The consequences of this insufficient care extend far beyond the mouth. A growing body of scientific evidence is shedding light on the connections between oral health and overall or systemic health. Oral health affects digestion, speech, and appearance, which can have consequences for individuals' economic, social, and mental health in addition to their physical

well-being. Research suggests that poor oral health may also be associated with everything from cardiovascular disease, respiratory disease, and diabetes to adverse pregnancy outcomes (Institute of Medicine, 2011b; U.S. Department of Health and Human Services, 2000) and behavioural health (Iacopino, 2009).

A promising interprofessional strategy for advancing oral health equity

Achieving oral health equity will likely require a range of remedies—increased community engagement, public health initiatives, changes to healthcare financing, and a larger, more diverse dental workforce. Likewise, IPE alone will not bring about a world in which all healthcare is safe, appropriate, effective, equitable, and patient-centred. Yet academic health programmes have a vital role to play in ensuring that health professionals are knowledgeable of and committed to reaching both of these goals. By preparing their students with basic oral health and interprofessional competencies and by instilling future providers with respect for collaboration and their peers, health professions programmes can make a major contribution to paving the way for a healthier tomorrow.

One promising strategy for addressing oral health disparities tackles head-on the traditional separation of oral and overall healthcare by enlisting the existing primary care workforce to screen for oral health conditions, engage in preventive and educational activities, and refer patients to dental professionals for ongoing oral healthcare. In 2011, the Institute of Medicine released two reports calling for the training of non-dental professionals to engage in interprofessional, team-based approaches to the prevention and treatment of oral diseases (Institute of Medicine, 2011a, 2011b).

Just as some providers in the academic dental community have argued for routinely screening patients for such systemic conditions as hypertension (Herman, Konzelman, & Prisant, 2004) and diabetes (Genco et al., 2014; Lalla, Kunzel, Burkett, Cheng, & Lamster, 2011; Strauss et al., 2015) in dental practices, in the coming era of collaborative care, non-dental providers will be expected to look inside the mouth. Today, in the United States almost all state Medicaid programmes, which finance healthcare for low-income Americans, will reimburse primary care

clinicians for performing oral health risk assessments and applying fluoride varnish to young children's teeth (Society of Teachers of Family Medicine Group on Oral Health, 2015). Providing all health professionals with preventive oral health competencies could make these activities routine in U.S. safety-net settings, fuelling an all-hands-on-deck effort to reduce oral health disparities.

Support for interprofessional oral health education

In recent years, a significant body of high-quality IPE and oral health resources has emerged to support the integration of interprofessional and oral health competencies throughout the health professions. These resources include:

- The Interprofessional Educational Collaborative (IPEC) *Core Competencies for Collaborative Practice*
- Core competencies for integrating oral health and primary care released in 2014 by the Health Resources and Services Administration (HRSA)
- The free, online *Smiles for Life: A National Oral Health Care Curriculum*, designed for primary care clinicians and educators in non-dental fields
- The Association of American Medical Colleges' MedEdPORTAL®, an online repository of peer-reviewed, free curricular modules
- Online resources assembled by the National Center for Interprofessional Practice and Education, a public-private partnership dedicated to advancing collaborative, team-based health professions education and patient care.

Additional resources are also emerging, including a series of free, online accredited courses in oral-systemic health currently in development at the International Centre for Oral-Systemic Health (ICPSH) in the Faculty of Dentistry at the University of Manitoba (Hein, 2009).

Two U.S. educational institutions have employed these and other materials to create programmes that can serve as exemplars for educators wishing to use oral health to advance IPE. At New York University (NYU), the College of Nursing leveraged its unique situation as an academic unit within the NYU College of Dentistry to develop an initiative aimed at advancing nursing's contribution to reducing oral health disparities across the lifespan. The *Oral Health Nursing Education and Practice* programme is helping to prepare a "collaborative practice-ready" (WHO, 2010, p. 7) nursing workforce by training nursing faculty to integrate oral health in nursing education and prepare students to partner with oral health professionals on oral health promotion and disease prevention (Dolce, Haber, & Shelley, 2012). At Northeastern University, faculty in the Bouvé College of Health Sciences launched *Innovations in Oral Health* to integrate oral health competencies into team-based health education across multiple academic programmes. In collaboration with its academic and practice partners, this programme offers didactic and experiential learning opportunities to help students acquire the interprofessional competencies they will need to meet the oral and systemic health needs of vulnerable and underserved

populations (Dolce, Aghazadeh-Sanai, Mohammed & Fulmer, 2014). Individual educators have also taken the initiative to pioneer novel interprofessional experiences that are raising awareness among students of the importance of oral health to overall health (Fauteux, 2013; Lossius, 2014)

Addressing barriers to oral health integration

Despite the existence of these resources and exemplars, several obstacles must be surmounted before the integration of oral health competencies in IPE can become universal. We frequently hear that many faculty members lack the interprofessional competencies they are being asked to teach; that the administrative support needed to remedy this situation is inadequate; and that the absence of a dental school on campus has deterred some programmes from introducing oral health. Above all, health professions educators complain that their curricula are already overloaded with more knowledge and competencies than learners can fully acquire within the time frames allotted for earning degrees.

Under these circumstances, why should the non-dental health professions integrate oral health competencies in their professional programmes? We would argue that this is one of the best routes to achieving two urgent goals that all health professions programmes have set for themselves: preparing students to provide interprofessional collaborative care and preparing them to provide care to underserved populations.

Since the turn of the century, a consensus has formed in North America that in order to provide safe and effective care, healthcare providers must know how to work in teams and communicate across the professions (Frenk et al., 2010; Institute of Medicine, 2003, 2009; World Health Organization, 2010). In the United States, this belief has been enshrined in the academic accreditation standards of most health professions. Integrating oral health in IPE can help schools and programmes meet these requirements and fill a troubling curricular gap. Given what is now known about the connections between oral and overall health, the absence of basic oral health education for many health professionals demands to be remedied.

Concluding comments

Academic health programmes charged with preparing their students to provide interprofessional collaborative care and care to underserved populations will find that integrating oral health in their programmes can be a powerful vehicle for advancing IPE. Historically, the hospital served as the primary setting for clinical education in the health professions, while most dentists and related dental professionals received their clinical training in outpatient settings. Interprofessional oral health activities give educators a way to bridge this divide and build their IPE programmes. Many health professions have traditionally neglected the mouth, and because interprofessional oral health activities lend themselves to hands-on, community-based experiences, oral health competencies fill a curricular gap. Oral health also provides a conduit for learning to treat vulnerable and underserved populations, who disproportionately suffer from dental diseases. All health

professionals also benefit from learning about the systemic consequences of poor oral health and its impact on the health conditions they see in their patients.

Underlying the proposed shift to more integrated professional education and healthcare delivery is a growing awareness that the mouth is part of the body. It is time that all health professionals acknowledge this fundamental truth, and join in efforts to prepare tomorrow's workforce to contribute to oral health equity and improve the quality of care for all. Interprofessional educational initiatives that integrate preventive oral health competencies can bring us closer to achieving these goals.

Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the writing and content of this article.

Funding

This work was funded by a grant from the DentaQuest Foundation.

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