Editorial

The need for competency-based training in dental urgent care

Linda Rasubala Yanfang Ren

The primary goal of dental education is to train dental professionals who can competently address a wide range of issues in oral health care and independently practice evidence-based comprehensive dentistry aimed at improving the health of society.[1] Competency-based education as a philosophy has widely been adopted by dental schools worldwide for both undergraduate and postgraduate dental programs.[2-4] However, careful examinations of dental school curricula reveal significant shortfalls in important aspects of competencies required for an independent general practitioner, especially for those related to diagnosis and management of dental diseases and conditions that require urgent and immediate care.

Competency in the context of dental education entails foundation knowledge, foundation skills, and professional attitudes and values necessary for delivering oral health care to populations of different ages, gender, and socioeconomic status. Much of the required competencies can only be acquired in a dental urgent care setting, for example diagnosis and management of acute dental pain, acute pulpal and periapical infections, dental trauma, and acute periodontal and pericoronal infections. Competencies associated with professionalism, ethical values, and social responsibilities are often best demonstrated when dental practitioners face patients who need urgent dental care but lack the financial means to adequately compensate the provider.

Competency-based training in dental urgent care is especially important for dental educational programs in the United States or in other countries that lack universal healthcare coverage for treating dental diseases. Dental pain has consistently been found to be the most prevalent type of bodily pain and affects 12% to 15% of the population worldwide.[5-7] The incidence of orofacial pain is especially high in persons with low socioeconomic status as many of them do not attend scheduled dental services but rather rely on dental urgent care when acute pain occurs.[8] We found that about 70% of the patients visiting our dental emergency clinic had not attended any preventive and maintenance dental care in the past 2 years, and 93% of these patients had pain associated with dental and periodontal infections.[9] Walk-in dental emergencies represented 9.25% to 11.7% of all visits to a dentist in a private general practice as reported by the American Dental Association.[10] The rate of dental emergency visits to public dental institutions, including dental school and postgraduate dental training centers, is generally much higher owing to the sociodemographic characteristics of this patient population.

High frequencies of dental emergency visits to dental clinics dictate that diagnosis and management of dental diseases associated with acute dental pain should be an important component of a competency-based curriculum in dental education, especially in postdoctoral general dentistry residency programs. Of the competency requirements for general dentistry residents, the following are best addressed in dental urgent care rotations:

- diagnose and manage acute dental and orofacial infections
- recognize and manage acute endodontic situations and emergencies
- manage acute dento-alveolar trauma/injuries

- provide initial treatment and then manage patients with complex orofacial emergencies and infections
- use pharmacologic agents in the treatment of dental patients
- promote oral and systemic health prevention strategies
- recognize moral uncertainty and dilemmas in dental practice and apply ethical and legal standards in the provision of dental care.

Though these competencies are widely recognized in dental educational programs as necessary for training competent dental practitioners, there is no structured curriculum at present that specifically addresses the training needs in the context of urgent dental care delivery. Neither do we know if the dental school or residency program graduates could achieve these competencies, as there are no available assessment tools that can be readily applied in the urgent dental care setting.

Competencies identified above could largely be achieved through instructions during clinical practices involving urgent dental care, complemented with didactic courses, seminars, group discussions, and case presentations. Foundation knowledge required by these competencies can be measured with standard tests, and foundation skills and professional attitudes and values can be assessed and observed in the process of urgent care delivery. As urgent dental care visits to a comprehensive dental clinic could be sporadic and isolated, a mandatory rotation in a dedicated urgent care clinic is best suited for serving these training needs. A dedicated urgent care center with a reasonable volume of patient visits is feasible in any dental institution situated in a medium-sized city in the USA and ideal for providing competency-based training in urgent dental care required by dental educational programs. This training model is especially applicable in developing countries where problem-oriented dental care is prevalent and preventive care is not readily available for all.

Linda Rasubala, DDS, PhD
Assistant Professor, Howitt Urgent Dental Care Center, University of Rochester Eastman Institute for Oral Health, Rochester, New York 14620, USA.

Yanfang Ren, DDS, PhD, MPH
Professor, Howitt Urgent Dental Care Center, University of Rochester Eastman Institute for Oral Health, Rochester, New York 14620, USA.

1. Albino JEN, Young SK, Neumann LM, et al. Assessing dental students' competence: best practice recommendations in the performance assessment literature and investigation of current practices in predoctoral dental education. J Dent Educ 2008;72:1405–1435.
2. Hendricson WD. Changes in educational methodologies in predoctoral dental education: finding the perfect intersection. J Dent Educ 2012;76:118–141.
3. Manogue M, McLoughlin J, Christersson C, et al. Curriculum structure, content, learning and assessment in European undergraduate dental education: update 2010. Eur J Dent Educ 2011;15:133–141.
4. Haden NK, Hendricson WD, Kassebaum DK, et al. Curriculum change in dental education, 2003–09. J Dent Educ 2010;74:539–557.
5. Ravaghi V, Quinonez C, Allison PJ. Oral pain and its covariates: findings of a Canadian population-based study. J Can Dent Assoc (Tor) 2013;79:d3.
6. Constante HM, Bastos JL, Peres KG, Peres MA. Socio-demographic and behavioural inequalities in the impact of dental pain among adults: a population-based study. Community Dent Oral Epidemiol 2012;40:498–506.
7. Lipton JA, Ship JA, Larach-Robinson D. Estimated prevalence and distribution of reported orofacial pain in the United States. J Am Dent Assoc 1993;124:115–121.
8. Vargas CM, Macek MD, Marcus SE. Sociodemographic correlates of tooth pain among adults: United States, 1989. Pain 2000;85:87–92.
9. Bajars S, Ren YF, Huerta R, Handelman S, Moss ME, Malmstrom HS. Patient characteristics and treatment decisions in dental emergency clinic. J Dent Res 2002;81(Spec Issue A):A-182.
10. Bentley J. A look at emergency, walk-in care. J Am Dent Assoc 1991;122:77–78.