

Renovating dental education: A public health issue

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KEY WORDS: dental education, oral health, teaching strategies

1 | INTRODUCTION

Oral health is a very real concern in Europe, particularly for the most vulnerable people, and accessibility to dental care is increasingly coming under discussion. Oral health inequalities are present from childhood.¹ At all ages, untreated dental diseases and impaired oral health impact on people's overall health with functional, but also psychological and social consequences, which are often underestimated.²

Within this context, the question of dental education is central. The way health professionals are trained has a public health impact because it partly determines the appropriateness, quality and efficiency of the treatment and preventive services available to the population.³ Dental faculties thus have a social responsibility, and need to prioritise educational and research activities relating to the current and future health needs of society.⁴

With the mutual recognition of qualifications, the promotion of excellence in dental education at a European level makes sense. In this field, the Association for Dental Education in Europe (ADEE) has always worked in developing student-centred learning environments, innovative and effective teaching methods and quality assurance methods, as well as in defending curricula based on a competency-based approach.

This article aimed to explore the situation and perspectives for dental education in Europe by comparing them with current oral health issues. The objective was to propose a strategy for dental training that would help improve connections between the services offered by health professionals and the oral health needs of the patients or populations.

2 | THE CURRENT SITUATION OF DENTAL EDUCATION

2.1 | Classic curricula with successive periods of learning

In many places, dentists' training classically involves academic teaching followed by periods of clinical traineeship in hospitals, dental clinics or professional settings. The pre-clinical stage includes academic courses associated with practical exercises on phantom heads. During the clinical phase, students first assist more experienced practitioners, then carry out dental treatment on patients, in the presence of senior professionals. A 2016 ADEE (Association for Dental Education in Europe) survey found that, within a 5-year curriculum, students generally start treating patients in their 3rd year. Only a quarter of dental programmes seem to organise early contact with patients in the first or second year of study.⁵ Dental training is also carried out mainly with a single-discipline approach. Only 15% of European dental faculties have a fully integrated curriculum.⁵ The European directives that define the framework of dental studies are based on this classic approach.^{6,7} The major issues of acquiring clinical skills or even professional competencies are not covered, and there are great variations in the schools' clinical training conditions.

2.2 | Dental education is evolving

However, dental education has evolved greatly in the last 20 years. Interprofessional education (IPE) is developing, helping students form a broader view of health and diseases and favouring a holistic healthcare approach centred on a patient's needs.^{8,9} Similarly,

the profile of competences of the graduating European dentist has been updated recently by the ADEE, and it now promotes the use of modern, validated and well-suited pedagogical approaches or evaluation tools, and the development of quality assurance processes. The profile of competences is organised into 5 domains, highlighting the concepts of professionalism, safe and effective clinical practice, a patient-centred approach and the place of dentistry in society.¹⁰ Similarly, many measures are intended to even out the historical gap between the pre-clinical and clinical stages, to promote early clinical experience, vertically integrated curricula, and to develop self-reflection and reflective practices.¹¹⁻¹³

2.3 | Public health issues that need consideration

Today's health issues are mainly related to health inequalities, with a significant gap between what health services offer and the populations' needs.¹ Approximately 40% of adults in countries like Spain or France do not visit a dentist annually, with potentially major health consequences.^{14,15} This proportion is higher for medically and/or socially vulnerable populations who face major difficulties in accessing dental care.^{16,17} Qualitative studies have revealed complex processes of exclusion of vulnerable patients from dental offices.¹⁷ Multiple reasons could be cited: the organisation of health systems, legal and financial frameworks of dental care, cultural and anthropological causes, and professional practices. It is known that a dental practitioner's knowledge and personal experience strongly influences their attitudes in terms of managing health needs.¹⁸ Thus, dental education plays a major role in the future capability of dentists to manage the health needs of all patients.¹⁹

3 | A VISION OF DENTAL EDUCATION

In order to develop a global vision of dental education, it is necessary to consider all dimensions of the current activities of oral health professionals. Whether dentists are considered either as health professionals or as dental practitioners changes the view of their work, status, needed knowledge and skills, and thus training methods.

3.1 | A training focused on professionalisation

The challenge of professionalisation, recognised as crucial, can be seen in different ways: as a virtue, as a set of behaviours, or more broadly as a process of the formation of a professional identity.²⁰ The work of a health professional is not limited to implementing defined protocols developed beforehand by experts. A professional must also be able to solve complex problems, while functioning within a global framework and following defined health objectives and ethical rules. This does not mean that dentists do not require any background training. On the contrary, professional practice is only possible by mastering a wide range of knowledge and competences based on evidence-based data from research and expert practices.

Therefore, the approach of professionalisation goes beyond the simple ability to deliver dental care and consists of being able to adopt a reflexive approach and to build a professional identity. This starts early during initial training when the professional identity of the students is progressively shaped.^{21,22} Planning the training of dentists means choosing to train autonomous professionals with a high level of competence, as well as promoting the development of a professional identity and the adoption of the social values, missions and roles of the profession.^{23,24}

3.2 | A training that integrates a reflexive approach

Health professionals work with people on an individual level. Each patient has its own culture, background and personal relationship with health care. The dentist responds to the patient's needs by constantly inventing original, instantly tested, solutions that generate a new understanding of the patient's case. In addition, working with individuals impinges on the dentists' own emotions and cultural identity, causing them to think about their own history. Dentists then need to manage their personal emotions, beliefs and preconceptions to find the right emotional distance and to be culturally competent.²⁵

The goal of a reflexive approach is to help students learn how to self-regulate while being active using a coherent set of values while integrating oral health issues. That involves constant feedback between doing and thinking. Experiential learning is a process by which students reflect on their experience and draw meaning from their actions. In the end, students improve their understanding of the environment where they practice, and develop critical thinking and problem-solving skills.²⁶ In this process, theory and practice have an interactive relationship, with each nourishing the other.²⁷ Reflexivity allows for competences to be built up through questioning professional practices, especially important given the changes of public health needs.

3.3 | The determinants for a dental practitioner: a basis for dental training

The analysis of oral health professionals' activities provides a reading grid for professional practice in which the foundations of dentists' actions are made explicit. Professionals' activities usually involve four aspects relating to carrying out physical manipulations, the management of information and communication, the regulation of interactions between health system actors, and the thought processes managing the previous activities.²⁸ The determinants of these activities relate to institutional parameters or to conditions in a dentist's workplace but also to personal factors and population characteristics. These determinants explain the inherent contradiction in the dental profession between the requirement for high-quality dental care, the populations' needs and the work conditions. Dental care activities are oriented towards the treatment of patients, but they also continuously interact with other actors of the healthcare system. In the same way, professional activity affects the dentists' quality of life and personal health. Professional practice is built around all

these constraints, determinants and goals, and this should be used as the basis for defining a truly adapted dental training.

3.4 | A vision of dental education intended to deal with public health issues

Nowadays, effective management of the populations' oral health requires the training of professionals who are "oral health strategists," able to reinvent their practices according to changing health needs and care techniques and the evolving healthcare system. Dental educators must have other aspirations than training dentists only on the technical aspects of their work.

The dentists' missions and activities first need to be considered within a broad vision of oral health. The definition of oral health covers several issues; symptoms and dysfunctions caused by oral disease may result in oral and psychosocial disabilities.^{29,30} Oral health cannot be considered in isolation from general health. Throughout life, oral health is part of a continuum that is shaped by individuals and socio-environmental determinants.

Oral health professionals must then have a long-term vision of health, with the ability to manage the prevention and treatment of chronic diseases (non-communicable diseases: NCDs), such as dental caries and periodontal disease.³¹ Oral diseases have the same determinants as other chronic diseases such as cardiovascular disease or cancer. This so-called common risk factor approach means an integrated management of NCDs and their determinants, within the practice of dentists and that of other health professionals.

Access to high-value dental and medical care also means access to preventive, educational and environmental interventions. In this field, implementing effective oral health promotion requires expanding the dental profession's normal mission and activity.³² For example, dentists' activity in the field of health education could be developed both in the dental office and in the community.

This multifaceted, integrated and dynamic vision of oral health care is the basis for a holistic approach for the training of health professionals who are able to carry out these tasks as real public health actors.³³⁻³⁵ The goal is to achieve a shift towards placing public health at the heart of dental education in order to build a true identity for oral health professionals.

4 | CONCLUSION

Meeting the populations' oral health needs involves clear planning of the educational training. The aim is to educate European oral health professionals to become public health actors. The roadmap associates a previously developed vision, defining strategic priorities in order to use the available resources appropriately, with values that define the ethical framework for these evolutions. The issues are related to the development of oral health promotion and the reduction in oral health inequalities, as well as the integration of oral health as a component of general health and quality of life. The framework

refers to structuring dental education based on a broader and evolving vision of oral health professionals' work, their professional development and the construction of a professional identity, and the paradigm of the "reflective practitioner". This implies placing public health issues at the heart of dental education curricula to generate oral health strategists.

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How to cite this article: Tubert-Jeannin S, Jourdan D. Renovating dental education: A public health issue. *Eur J Dent Educ*. 2018;00:1-4. <https://doi.org/10.1111/eje.12347>