Letter

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Trends in Sustainable Dentistry

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Abstract

The advance of Dentistry must take into account national, European and global policies for sustainable development and green transition. This article illustrates possible scenarios in this context for the next decade.***Clin Ter 2021; 172 (6):523-524. doi: 10.7417/CT.2021.2370***

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Dentistry is a branch of Medicine in constant and continuous development. The profile of Dentistry for the next decade is shaped on the basis of a comparison with technological innovations, market expectations and policy guidelines in the European/World context.

The first goal is to bring Dentistry into a green transition. In fact, the World Dental Federation published in August 2017 a document called 'Sustainability in Dentistry', based on the United Nations 2030 Agenda for Sustainable Development. Transforming Our World: The 2030 Agenda for Sustainable Development (1). The document recommends that Dentistry takes into account the targets of sustainable development in its everyday practice and supports the transition to a green economy. Oral health professionals should reduce their impact on natural resources, while promoting best oral health for all people and safeguarding patient safety (1).

Reducing the impact of the dental profession can be achieved through the use of new technologies, that replace existing procedures and lead to a reduction in the carbon footprint. For example, the use of intraoral scanners has a lower environmental impact as it is no longer uses, and therefore no chemical impression materials such as pastes, and silicones have to be disposed of (2). Moreover, the use of intraoral devices for caries diagnostics has demonstrated high effectiveness in the diagnosis of early caries lesions both on the occlusal and interproximal surfaces of the posterolateral dental arches (3).

Also, the use of artificial intelligence techniques supports the development of diagnostics in Dentistry, both based on photographic images and radiological examinations (3).

Sustainability is also a very important issue when it comes to pharmacological protocols that support dental care. For example, the unnecessary use of antibiotics and the resulting rapid increase in antibiotic resistance is a widely recognized threat to health, development and sustainable development worldwide (4).

In this scenario, the study of the oral microbiome also makes an important contribution to understanding the dynamics of the oral ecosystem in health and disease, providing new perspectives in understanding the microbial etiology of oral diseases (5, 6). Taking into account the qualitative and quantitative oral microbiota diversity as a prognostic factor of health is the basis for the search for new agents that can be used in toothpaste and mouthwash formulations, such as *Camellia sinensis* extract or natural olive oils then ozonated. Probiotics also showed to be effective in promoting oral health (7, 8). The use of holistic techniques such as photobiomodulation and kinesiology showed promising results in various contexts such as dental traumatology, oral pathology and oral surgery (9, 10).

It can therefore be concluded that the advances in Dentistry in the next decade will bring undoubted benefits to the patient, operator and environmental sustainability.

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