

Dental Care and Environmental Impact: Supporting SDG 15 Through Sustainable Oral Health Practices

Shoocongdej Carlhoff*

Department of Dentistry, Oxford University, Oxford, UK

DESCRIPTION

Biodiversity, the variety of life on Earth, underpins the health of ecosystems, human well-being, and the resilience of the planet. As we face a global biodiversity crisis, with species extinction rates accelerating and ecosystems being degraded, the need for sustainable practices across all sectors is more pressing than ever. Dentistry, an essential branch of healthcare, is no exception. By aligning with the United Nations' Sustainable Development Goal (SDG) 15, which aims to protect, restore, and promote the sustainable use of terrestrial ecosystems, sustainable dentistry can play a pivotal role in preserving biodiversity while delivering effective oral healthcare.

The connection between dentistry and biodiversity

Traditionally, dentistry has been viewed through the lens of human health, with little emphasis on its environmental impact. However, like many other industries, dental practices contribute to environmental degradation in various ways, some of which can negatively impact biodiversity. The materials used in dental procedures, the waste generated, and the energy consumed can all affect ecosystems, deplete resources, and contribute to pollution [1]. For example, many dental products, such as plastic instruments, amalgam fillings, and chemicals, have adverse effects on the environment when disposed of improperly [2].

In this context, sustainable dentistry offers a practical solution to reduce these impacts, aligning the dental profession with SDG 15 and supporting biodiversity preservation [3]. By focusing on reducing waste, using eco-friendly materials, and adopting energy-efficient practices, dental professionals can help mitigate the environmental damage caused by their work and promote healthier ecosystems [4].

Awareness on SDG 15 and its relevance to dentistry

SDG 15, "Life on Land," emphasizes the need to halt biodiversity loss, combat desertification, and sustainably manage natural resources. While SDG 15 is often discussed in the context of

agriculture, forestry, and conservation, its principles can be extended to sectors like healthcare, including dentistry [5]. The impact of dental practices on the environment and biodiversity has, until recently, been overlooked. However, a closer examination reveals that the materials used in dental procedures, the waste generated, and the energy consumed by dental practices can all have significant effects on ecosystems [6].

The role of education and advocacy

Sustainable dentistry is not just about adopting new technologies and practices; it also involves educating patients and the wider community about the importance of environmental sustainability. Dental professionals can advocate for the protection of biodiversity by raising awareness about the environmental impacts of traditional dental practices and encouraging patients to make sustainable choices, such as choosing eco-friendly oral care products [7].

Additionally, dental schools and professional associations have an important role to play in integrating sustainability into dental education and policy. By training the next generation of dental professionals in sustainable practices and advocating for policies that promote environmental responsibility, the dental community can contribute to the global effort to protect biodiversity [8].

Dentistry's contribution to biodiversity

The environmental impact of dental care is often overlooked, yet traditional dental practices contribute significantly to waste, resource depletion, and pollution, all of which can harm biodiversity and ecosystems. Sustainable oral health practices, however, offer a pathway to reduce these adverse effects and align the dental profession with the United Nations' Sustainable Development Goal 15 (SDG 15), which aims to protect, restore, and promote the sustainable use of terrestrial ecosystems [9]. By adopting eco-friendly materials, such as biocompatible fillings and biodegradable products, minimizing plastic waste through reusable instruments, and focusing on energy-efficient practices,

Correspondence to: Shoocongdej Carlhoff, Department of Dentistry, Oxford University, Oxford, UK, E-mail: carlhoffs@gmail.com

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dental professionals can significantly reduce their carbon footprint and environmental impact. Moreover, by prioritizing preventive care, such as fluoride treatments and oral hygiene education, dentists can help reduce the need for resource-intensive procedures, further lowering the environmental burden [10]. Through these sustainable practices, the dental community can contribute to both improved oral health and the preservation of biodiversity, fostering a healthier planet and more sustainable future for all.

CONCLUSION

Sustainable dentistry is a powerful tool for aligning oral healthcare with the broader goals of biodiversity preservation and environmental sustainability. By reducing waste, using eco-friendly materials, adopting energy-efficient practices, and promoting preventive care, dental professionals can make meaningful contributions to the preservation of life on land and the achievement of SDG 15. As the global community works toward a more sustainable future, dentistry has an important role to play in supporting both human health and the health of the planet.

REFERENCES

1. Manski RJ, Moeller JF, Chen H, Schimmel J, St. Clair PA, Pepper JV. Dental usage under changing economic conditions. *J. Public Health Dent.* 2014;74(1):1–12.
2. Peres MA, Macpherson LMD, Weyant RJ, Daly B, Venturelli R, Mathur MR et al. Oral diseases: A global public health challenge. *Lancet.* 2019;394:249–260.
3. Zemaitienė M, Grigalaušienė R, Vasiliauskienė I, Saldūnaitė K, Razmienė J, Slabšinskienė E. Prevalence and severity of dental caries among 18-year-old Lithuanian adolescents. *Medicina (Kaunas).* 2016;52(1):54–60.
4. Huang YK, Chang YC. Challenge and action of improving oral health inequities in the time of COVID-19 pandemic. *J Formos Med Assoc.* 2022; 121:1024–1026.
5. Sabbah W, Folyan MO, El Tantawi M. The Link between Oral and General Health. *Int J Dent.* 2019; 2019:7862923.
6. Crean S, Batchelor P. Oral health and the Millennium and Sustainable Development Goals. *Fac Dent J* 2019; 10: 58–60.
7. Lee J, Tan E, Barrow J, Bocala C, Seymour B. Crossing the Innovation Chasm: Identifying Facilitators and Barriers to Early Adoption of the Global Health Starter Kit Curriculum. *Ann Glob Health.* 2021;87:113.
8. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473.
9. Northridge ME, Kumar A, Kaur R. Disparities in Access to Oral Health Care. *Annu Rev Public Health.* 2020;41:513–535.
10. Wamala S, Merlo J, Boström G. Inequity in access to dental care services explains current socioeconomic disparities in oral health: The Swedish National Surveys of Public Health 2004–2005. *J Epidemiol Community Health.* 2006; 60:1027–1033.