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Perspective: Current status of Sustainability in the Dental Profession

"We are waging a war on nature. This is suicidal...Making peace with nature is the defining task of the 21st century. It must be the top, top priority for everyone, everywhere" That was a blunt and urgent call to arms from the UN Secretary General Antonio Guterres, in his 'The State of the Planet Address' (December, 2020).¹ Two years later, little has changed and the situation is even more desperate. Most of the British public are worried (or very worried) about climate change,² but because its consequences are not as tangible as our current economic crisis for example, this particular 'worry' is way down our priority action list. The same is true within the dental profession, with a prevailing attitude that the delivery of safe and effective oral healthcare is largely incompatible with environmental sustainability. The consequence of this is that we compartmentalise sustainability outwith of our professional sphere of practice. This attitude is further compounded by a dissociation between our environmental behaviours as private citizens (e.g., home recycling and renewable energy for home and transport) and our apparent inability to translate these behaviours into our dental practice settings. Encouraging signs of attitude and behaviour reversal by the 'worried' dental professionals around the world are emerging.

The rapidly growing sense of awareness and activity within the dental profession is evidenced through the recently ratified Stakeholder Consensus Statement by the FDI World Dental Federation.³ This level of awareness and engagement however, is not uniform across the world and sustainability in dentistry remains very UK and Euro-centric. As we seek to promote good practice across the diverse world regions, we must safeguard from misdirecting our well-intentioned messages. This could have the unfortunate consequence of our efforts being disregarded as irrelevant to the distinct and diverse regional socio-economic health settings.

There is strong agreement amongst all the different groups (e.g., Associations, academia, industry and legislative/regulatory organisations) for the key areas that must be addressed to achieve environmentally sustainable oral healthcare.³ Top of the list remains the need to raise awareness, of the impact of our activities and the need for action. Next, is a realisation that the single most impactful environmental activity that we can undertake as oral healthcare professionals is to promote and deliver the highest levels of quality preventive care.⁴ This core tenant of our professional activities results in reduced treatment needs for preventable diseases; which in turn brings about the benefits of a reduced carbon footprint and reduced waste. In this context, there is an urgent need for a synergistic alignment between dental practice business models and a preventive reductionist approach that promotes oral health, reduces inequality and achieves environmental sustainability.

'The problem is so big; how can it matter what I do?' This self-limiting attitude arises from a lack of ownership and direct responsibility for the problem, together with a perceived individual inability to drive solutions. The opposite is true, because all individual actions, including apparently insignificant ones (e.g., switching off the surgery lights over lunch), really do matter and can have a big environmental impact. This is especially so when every action is repeated and multiplied across thousands of dentists across the world.

'A problem shared is a problem halved' - The environmental impact of oral healthcare crosses all boundaries and is shared across the world. Thus, it follows that the only true way to solve this problem is by working in an effective collaborative manner with all stakeholders. Presently, there is a huge disconnect as the 'sustainability problem' in the

form of embedded carbon and waste products, that is created at the point of manufacture, continues to accumulate as it is passed down the supply chain, alongside the product or service being delivered and ultimately provided to our patients (*Figure 1*).

Effective collaborative solutions are created from a foundation of knowledge that in turn, arises from quality research and educational programmes. Research in the field of environmental sustainability in oral healthcare is becoming increasingly important to establish knowledge baselines and identify impactful evidence-led solutions. Thus, it is essential to promote and engage in high quality research that must, by definition, be robust, highly collaborative and multidisciplinary. For this to work, we need to establish research and innovation partnerships, in the manner of formal alliances, to jointly tackle sustainability projects. Within education, the integration of sustainability into the different curricula is now a high-priority agenda item for institutions and associations. The focus of this activity is the promotion of positive behaviour change by raising awareness among all end-users, including undergraduate dental students as the future clinicians.^{5,6} In this context, students are increasingly seen as a key voice and stakeholder to drive these changes. The Planetary Health Report Card is a great example of a pioneering and very successful student-led metric-based initiative that aims to inspire and promote planetary health in health professional schools.⁷.

The Planet is a shared environment and only working together, understanding each other and seeking collaborative solutions will we make the desired impacts.

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