

Letters to the editor

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Coronavirus

COVID and perio

Sir, in February 2021, Marouf *et al.* discovered a strong association between periodontitis and severity of COVID-19 infection with 568 patients.¹ Shamsoddin used the same data from the Hamad Medical Corporation (HMC) in the state of Qatar for confirmation of the Marouf *et al.* study and supported its conclusions.² However, Shamsoddin suggested that a more rigorous methodology, an unbiased approach, and studies on a broader scale (external validity, generalisability) would be needed to clarify the relationship between periodontitis and COVID-19.²

Meta-analyses of epidemiological studies have shown that patients with periodontitis are more likely to have a more severe course of COVID-19.³ Current evidence suggests that this association can be explained by the direct role of periodontitis in exacerbating pulmonary infections and the indirect effect of periodontitis in triggering systemic inflammation and priming the immune system to increase the response to severe COVID-19 infection.⁴ Mishra *et al.* showed that the probability of developing severe COVID-19 was 2.81 times higher in patients with periodontitis. There is an association between periodontitis and severe COVID-19.⁵

The existing studies showed that periodontitis is strongly associated with increased risk of intensive care unit (ICU) admission and increased blood levels of biomarkers associated with poor prognosis. The result suggested that while it is wise not to get COVID-19, it is wiser to reduce periodontitis with regular oral care.

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Oral health

Precision dentistry

Sir, in 2015, US President Barack Obama announced the launch of the Precision Medicine initiative. Given that genetics, environment, lifestyle, and diet all have an impact on health, it is an excellent endeavour that takes into account the distinctive biological blueprint that each human is born with.

The National Research Council's *Toward Precision Medicine* adopted the definition of precision medicine as 'The tailoring of medical treatment to the individual characteristics of each patient [...] to classify individuals into subpopulations that differ in their susceptibility to a particular disease or their response to a specific treatment. Preventative or therapeutic interventions can then be concentrated on those who will benefit, sparing expense and side effects for those who will not.'¹

Precision dentistry is a multifaceted, data-driven approach to oral and dental health care that uses individual genetic data to segregate and stratify individuals with similar genetic makeup into phenotypic groups to deliver precise or targeted treatment. The aforementioned approach to disease will eliminate the undue side effects of the conventional treatment which targets the 'average patient'.

The stark understanding of precision dentistry will necessitate sufficient global data collection, initial adequate funds for

introducing technology for data collection, bio-banking, framing of data safety protocols, designing easy data access to corresponding individuals, and measures to implement genetic data to clinical practice. Once achieved, this will necessitate the introduction of the concept of 'precision dentistry' to the dental education system. We believe precision dentistry too will advance, taking cues from medical practices in their pursuit of precision medicine. Precision dentistry is the future and it is closer than you believe.

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Who cares for the young carers?

Sir, in the latest Census, there were a reported 5 million people over the age of five years providing unpaid care in 2021.¹ We would like to raise awareness of this group to dental teams and, in particular, of children who provide caring responsibilities. Young carers are defined as children under 18 years of age who help to look after a relative with a disability, illness, mental health condition, or drug or alcohol problem.²

The numbers of young carers are high, with a Barnado's report estimating there may be up to 700,000 young carers in the UK.³ More locally, 907 young carers were identified through the 2020 Plymouth Young Carer School survey.⁴ Of these, 522 (58%) were disadvantaged and 123 (14%) had an attendance of less than 90% at school due to caring responsibilities, which can vary considerably.

Working with young carers and community organisations in Plymouth that support them has been eye-opening for

our dental students. Being a young carer presents multiple challenges to oral health; for example, some young carers can be as young as five years of age, and this may impact on their resources and ability to perform personal oral hygiene at home or arrange dental visits. This puts young carers at increased risk of dental disease, and they are a high priority group for accessing dental care, yet little is known about the oral healthcare needs of these children and how best to create a suitable care pathway for them. Many of the young carers we speak to are also sensitive to their social circumstances, which may limit their agency in seeking dental help when they need it.

Awareness in dental teams of the needs of young carers, and the number of young children in the community with caring responsibilities, may facilitate better understanding of their oral care needs and improved access to dental care. The challenge for dental teams is that it may not always be obvious who is a young carer, and more work needs to be done to think about how dental care can be provided to this group in a sensitive and equitable way at the individual, community and system level. Barnardo's describe young carers as hidden and ignored;³ the challenge is for this not to be the case for their oral health.

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