Dental Health: Current Research

Advanced Technology in Dental Treatment

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Dental Treatment

Already, dentists employ software to get insights in clinical decision making. These will develop further to integrate A.I. algorithms to enable clinicians to find the best modalities for their patients. Authors of a 2019 study write that with the exponential rise in health data and the maturing of healthcare A.I., dental medicine is entering a new stage of its digitisation. Such smart algorithms can be integrated within the healthcare system to analyse health data, research findings and treatment techniques to offer diagnostic and therapeutic recommendations for individual patients. This will be made further possible with the accumulation of health data; in particular, genomic data that can offer deeper understanding into each individual's system for personalised care. With AI tools having access to such information, they can instantly offer the best treatment options and probabilities of success to the clinicians. On top of churning health data, A.I.-based algorithms can help specialists better tend to dental conditions. Researchers in 2019 developed a machine learning method to accurately quantify immune cells in the vicinity of oral cancer cells. This gives better insights into the spread of and resistance to cancer; thereby helping in determining chances of survival. Others are using neural networks to better detect dental decay and periodontal disease from radiographs. Such approaches can become standard practice in the near future. Gum infections, such as periodontitis, have been linked to premature births and low-birth weight in pregnant women. Diabetes reduces the body's resistance to infection, making the gums more susceptible to infection, which can adversely affect blood sugar. And painful mouth sores, are common in people who have HIV.

Teledentistry

If you are reluctant to go to the dentist, imagine how hard it is for children, patients with special needs or elderly in nursing homes. Another issue is distance: people living in rural areas rarely get access to a dentist, and almost never have the possibility of choice. This can change significantly with the spread of Teledentistry services offered by companies like The Teledenists and Mouth Watch provide easier access to oral and dental care; are significantly cheaper for patients; shift towards cheaper prevention practices; and allow patients to consult with otherwise unavailable medical professionals. For instance, Mouth Watch's Tele Dent service offers an all-in-one Teledentistry platform allowing patients to capture images, send relevant information to a dentist remotely and do a live consult. The dentist might start a video chat with the patient and the caregiver so that the medical professional can actually see and talk to the patient, build rapport, help connect them and bring them into the office. As remote care's importance swelled during the pandemic, Teledentistry is also picking up steam and authorities are responding accordingly. The American Dental Association issued a policy on Teledentistry that offers guidance on the modalities that such services can follow. This sets the pace in making Teledentistry a general practice.

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