

Technologic changes in dental practice



BACKGROUND

The advances in technology have led some to suggest that fewer patients will be seeing health care practitioners in the future. Instead diagnoses will be made remotely and robotic assistants may be introduced. A recent Topol Review publication, *Preparing the healthcare workforce to deliver the digital future*, commissioned by the Secretary of State of Health and Social Care in Great Britain, suggests how technology may allow patients to stay at home and rarely need to see a medical practitioner. The implications for dental practice should also be considered.

MEDICAL TECHNOLOGY TRENDS

In medicine of the future, many patients will manage their own long-term conditions, such as high blood pressure, with wearable sensors and other devices. These offer the ongoing reporting of the patient's status and are far better than the occasional doctor's appointment. A current example is the Apple watch, which can take ECG readings and make emergency calls if it detects the wearer has fallen and is not moving. Home blood pressure monitoring is already a common practice and adds important data to the patient's medical records to aid in the diagnosis, treatment, and even prevention of conditions.

This will have an impact on the medical workforce. New health care practitioners, possibly termed nursing associates, will be added who can work alongside registered nurses and interpret blood pressure readings and temperature monitors. Physician associates could support doctors in diagnostic decision-making efforts and manage patients under the physician's direction. Thus fewer doctors would be needed, and those who are practicing could concentrate on the sickest patients, avoiding the burnout associated with an overload of patients.

DENTAL IMPLICATIONS

Dental care provision differs considerably from medical care provision, and the monitoring that is so common among medical

patients would have to be adjusted. Most patients can monitor their oral health in terms of how successful their preventive and oral health regimens are. Tooth brushing habits are already tracked. However, intra-oral cameras are still too expensive to be used by non-professionals. Should the pricing change, however, patients could find themselves using these devices to check on their condition and allow the dentist to diagnose problems distantly.

Other areas that require monitoring include whitening, pulp vitality, bleeding on probing, and periodontal screening. If proper tools are developed, it's possible that YouTube videos could instruct the patient in these areas and allow self-monitoring.

Active treatment presents problems that technology may have difficulty overcoming. However, if new team members are created who have training in the appropriate areas, dentists may be left with just complex cases to manage.

Clinical Significance

Dentistry's 'democratization' will depend on patterns of disease and lifestyle choices to a large extent. Technology may be able to bridge the gap in many areas, however, and, combined with new, carefully trained dental team members, it's likely that the practice patterns of dentistry in the future will include some interesting changes.

Hancocks S: The democratisation of dentistry. *Br Dent J* 226:237, 2019

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