

Why now is the time to embrace digital dentistry

Crowned Dentist of the Year at this year's Dental Awards, Digital Ambassador for *The Probe* Dr Patrik Zachrisson shares his unique insight into the latest industry technologies – and what it all means for you.

In the past 20 years or so, we've seen a rapid series of developments in dental technology. From the introduction of the first CEREC 1 systems in 1985, clear aligners in 1997, to light-accelerated bleaching agents in the early 2000s, the first robot-assisted dental implant placements in 2017 and now lately, the rapid developments in 3D printing, we have seen technological progress in the field of dentistry that seems to be moving

forward at an ever-increasing pace.

Just a few years ago, digital dentistry was regarded purely as the domain of early adopters and looked upon with a degree of scepticism by many who wondered whether the benefits would match the hype and the often-hefty price tags of the equipment needed. While it is true that some elements of digital dentistry are still in the early stages, a quick look around us shows that many digital technologies have already moved into mainstream, everyday use in many practices. On the office side, these include practice and patient record management, while on the clinical side CAD/CAM, intraoral imaging, and digital radiography, including cone beam computer tomography (CBCT) continue to go from strength-to-strength.

So, where is dentistry heading? Will it continue to become more digital in nature, and if so, what are the implications as we head into the 2020's?

We are truly lucky to live in an era with so many fantastic new gadgets! Based on the advances we've been seeing over the last 10 years or so, it is almost certain that the shift towards digital dentistry will continue and that the technology will become more advanced and widely-used in the next decade.

This is largely because of the numerous practical, clinical and financial

benefits that digital dentistry affords dentists, patients and practice owners. The main ones are that:

- Digital dentistry is more efficient – work can be completed faster and at lower cost. There's also less material required and also less waste. A great example of this is the use of 3D printers for models, making mock-ups, splints, temporary crowns, surgical guides and in-house production of clear orthodontic aligners.

- Digital dentistry is often better for the patient – for example, implants can be placed more precisely, restorations made more quickly (reducing chair time and eliminating problems with failing temporaries) and with more aesthetically-pleasing results and a more predictable outcome.

- Negative effects from treatment, such as radiation from X-rays, can be minimised. The ability to provide same day laboratory made restorations is greatly appreciated by patients.

- Digital alternatives to conventional technology are also more environmentally friendly; for example, digital X-rays require no chemical processing, and are more pleasant for patients (e.g. digital dental impressions and computer controlled anaesthetics such as The Wand).

- Digital information is easier to share with peers – improving collaboration – and can also be accessed remotely.

- Treatment plans can also be shared with patients (e.g. digital smile design) to build enthusiasm for the treatment, improve practice sales and to provide a

much stronger consent process.

- Perhaps the most important reason for shifting to digital technology is because it improves clinical results. Digital dentistry enables us to be more precise, to work more efficiently and for treatment to be less intrusive. Outcomes are also likely to be faster and more affordable.

It is because of results like these that we can expect digital dentistry's popularity to continue to rise. Along with the shift from reactive to preventive dentistry and towards holistic dental treatment, digital dentistry isn't going anywhere for the foreseeable future.

The unique benefits this technology offers dentists, patients and practice owners means that now is the ideal time to think about getting more involved, if you have yet to do so.

In next month's issue of *The Probe* we'll be looking at some ways you can start to make digital dentistry work for you, increase your effectiveness and enjoyment at work, and help you deliver even better results for your patients.

In the meantime, if you're looking for more information about digital dentistry, would like to see some examples of it in action, or have questions you'd like answers to, check out the free IDDA group on Facebook, and join our global network of forward thinking dentists, technicians and auxiliaries with a passion for digital dentistry. Our 3rd International Conference in Birmingham on 2nd November will bring a large number of world renowned digital dentists for a full day of lectures and workshops. ■



How much do your patients know about perio?

A letter to the BDJ two years ago asked, "What is gum disease?". The writer talked of an "inconsistency in the information and advice given" that had led to, in their opinion, patient confusion about the seriousness of the condition.

At the beginning of 2019, a working group set up by the British Society of Periodontology (BSP) published a review of the 2017 Classification of Periodontal Diseases. The report included guidelines for management and a case study, to illustrate how the new classification system could be used in practice.

For dentists, dental hygienists and dental therapists, the guidelines can help with identification of periodontal conditions in order to halt progression and begin treatment as part of a bespoke plan. The efforts being made to standardise advice given, it is hoped, will improve outcomes for patients. Good protocols for diagnosis are obviously important, but a patient's personal oral hygiene is key.

Most people in the UK have a degree of periodontal disease. In the last Adult Dental Health Survey, the extent of periodontal pocketing in dentate adults was recorded as 45 per cent having some level. This survey was undertaken in 2009 (published in 2011) and it will be interesting to see the state of the UK's periodontal health by the time the next large-scale survey comes around. We must also take into

consideration younger patients too. Gingivitis is common in children and will advance to periodontal disease if untreated; poor oral hygiene is most commonly the cause. The figures for children's oral health in the UK are rarely out of the news, what is just as worrying is the sorry state of oral health education in our primary schools. As part of the last World Oral Health Day, it was reported that the UK ranked last out of 13 countries when it came to promoting good oral health in schools.

Education – or lack of – continues to be the part of the prevention puzzle that is frustratingly missing. Arguably, this applies to our adult patients as well as children. Would they be able to tell you what gum disease is and the signs and symptoms that they should be looking out for? What do they think when they see blood on their toothbrush, or they feel swollen or tender in the gum area? Are they aware of the link between periodontal problems and a range of serious, systemic diseases from cardiovascular disease to Alzheimer's?

For practitioners who live and breathe prevention it is always important to see things from a patient's perspective. No doubt one of the most frequent questions a dentist, dental hygienist or dental therapist gets asked by a patient is how to get whiter teeth; but beautiful looking teeth need a healthy structure to surround and support them! If a patient simply does not know how important periodontal health is, they

will not comprehend how fundamental their behaviour is in order to halt and reverse it.

Time is the enemy of every dental practitioner, but 'education' does not mean lengthy lectures. Some practices have developed a simple questionnaire to ascertain their patients' level of knowledge about periodontal disease; this may be something you could action via your website, or maybe even a box in reception. Your patients need to know gums are just as important as teeth.

At every routine appointment, tell them what periodontal disease is and what it can do if left unchecked. Also, what they can do to keep their whole mouth healthy. For younger patients, cue cards with bullet points can be helpful; it's about condensing professional knowledge and experience into short, snappy sentences that they will understand. Photographs and other visual aids (charts, diagrams) can also be wonderful tools for motivation; seeing what inflammation looks like and how extensive it can get. The aesthetic and functional consequences of losing a tooth need to be stated too!

The bedrock of prevention is good cleaning, which means a practical demonstration of proper technique, while recommending the tools and adjuncts patients should use to support their periodontal health between appointments. Interdental cleaning is essential and this can be achieved with the efficient and functional interdental

brushes available on the market, which most patients will find easier to use than traditional string floss. Recommend to them TANDEX interdental brushes, including the FLEXI™, with a unique rubber handle so it can be held firmly and correctly even when wet. No routine appointment is complete without a discussion of the right diet and lifestyle choices either.

Periodontal disease has been called the 'silent disease' because there is often a range of symptoms that do not include pain. This is why work is on-going to help practitioners with diagnosis. Patients must be motivated to look after this part of the mouth; only with their commitment will a treatment plan have maximum chance of success. ■

Visit www.tandex.dk or visit the Facebook page: www.facebook.com/pages/Tandex-UK/234855250044190?fref=ts

About the author
Kimberley Lloyd-Rees graduated from the University of Sheffield in 2010, where she now works as a clinical tutor in Dental Hygiene and Therapy as well as working in practice. She has spent her career working across a variety of specialist private and mixed dental practices, for the MOD and volunteering her time to a dental charity in Nepal.

