UK dentists lack money and training to use CAD/CAM technology

By DTI

LONDON, UK: Computer-aided technology is evolving rapidly to meet the demands of patients and dentists. However, thus far, no published information existed on dentists’ use of and reporting on CAD/CAM technology in the UK. Therefore, a recent open market research survey was conducted to investigate the relationship between various demographic factors and use or non-use of this technology.

The survey was distributed online to 1,031 UK dentists. The questionnaire sought to obtain information regarding type of usage, materials, perceived benefits, barriers to access and disadvantages of CAD/CAM dentistry. In analysing the responses, the influence of demographic variables such as country of work, experience, level of training and type of work (NHS or private) was considered.

Of the 385 dentists who responded, most did not use any CAD/CAM technology. The main barriers were initial costs (especially for NHS dentistry) and a lack of perceived advantage over the conventional methods. Dentists performing mostly private work and those with further training, however, were most likely to have adopted a digital workflow.

However, 32 per cent of dentists surveyed reported being interested in incorporating this technology as part of their workflow, particularly in light of the cost reduction for patients (34 per cent) and improvement of the quality (69 per cent). Thirty-nine per cent of the respondents felt that CAD/CAM technology had led to a change in the use of dental materials, with increased use of zirconia and lithium.

The demand for aesthetic and metal-free restorations has led to the development of high-strength ceramics in dentistry, which may only be used in conjunction with CAD/CAM technology, the researchers explained.

A number of respondents (90 per cent) reported being concerned about the quality of the chairside CAD/CAM restorations. Furthermore, 27 per cent did not perceive any advantages over conventional production methods and this was particularly the case for dentists with further postgraduate training in restorative dentistry and specialist prosthodontics.

Most respondents were either self-trained or trained by companies to use CAD/CAM, and a third felt that their training was insufficient. This finding highlights a gap in dental education and the need for continuing professional development. Nevertheless, the majority of those surveyed (89 per cent) believed that CAD/CAM technology had a major role to play in the future of dentistry.

The survey results, titled “Survey of UK dentists regarding the use of CAD/CAM technology,” were published online on 18 November 2016 in the British Dental Journal. The study was conducted by researchers at UCL Eastman Dental Institute in London.
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New device detects bacteria during root canal treatment

By DTI

LONDON, UK: A new method of detecting bacteria during root canal therapy could eradicate the need for follow-up appointments and prevent treatment failure, according to a new study. The SafeRoot device, created by a team of researchers at King’s College London, enables rapid bacterial detection inside the root canal, ensuring the procedure has been successful and reducing the need for tooth extraction or surgical intervention.

During root canal treatments, bacterial infections are removed from the root canal space while as much of the natural tooth as possible is retained. Around a quarter of these treatments fail over time owing to secondary infections, and most procedures require one or two visits to the dentist, each of which involves drilling and the removal of part of the tooth.

The SafeRoot device was developed to detect any existing bacteria once the root canal treatment has been completed, with the aim of eliminating persistent or secondary infections and reducing the need for further treatments. Through fluorescent staining and microscopy, it can optically detect minute amounts of residual live bacteria in the root canal space. During trials, the research team was able to successfully detect bacterial cells after just 3 minutes of testing.

Using conventional sterile endodontic paper points, the process is performed during the treatment, preventing any impact on clinical treatment time and minimising additional clinical steps. “The resilient nature of bacteria, combined with often complex root canal structures, makes disinfection challenging, leading to a considerable number of persistent infections. This is one of the main causes of root canal treatment failures,” explained Dr Francesco Mannocci, Professor of Endontology at King’s College London Dental Institute.

SafeRoot will reduce the time for root canal completion and will increase the success rate of treatments by letting the dentist know when it’s safe to proceed with filling the tooth. This should produce fewer acute ‘flare-ups’ and failed root treatments, as any residual infection in the root canal will be identified,” said Dr Tim Watson, Professor of Biomaterials and Restorative Dentistry at the Dental Institute.

One million root canal treatments are performed under the National Health Service each year, costing £50.5 million. “The treatments are not only time consuming and painful for the patients, but cost the NHS a significant amount. If we can reduce the number of root canal treatments and re-treatments required, it could mean sizeable savings to the NHS,” added lead researcher Dr Federico Foschi from the Dental Institute.

“SafeRoot could be applied to a wide range of biological infections as well, ranging from wound or respiratory, to implant related infections and contaminations,” he said.

GDC reappoints Moyes as chair

By DTI

LONDON, UK: The Privy Council of the General Dental Council (GDC) has approved the appointment of William (Bill) Moyes as chair for another term. He will continue to head the regulatory body for four more years until September 2020, the GDC announced in a statement.

Moyes was first appointed as chair in 2015. Prior to that he worked as founding Executive Chairman of Monitor (now part of NHS Improvement), which authorised and regulated the finance and governance of NHS Foundation Trusts. He has also held positions at the Bank of Scotland Group and the British Retail Consortium, among others.

As GDC chair, he received criticism by the British Dental Association (BDA) and other organisations in 2015 over a report issued by the Professional Standards Authority that pointed out deficiencies in the GDC’s performance and fitness to practise process. Addressing some of these issues, he spearheaded a recent initiative that aims to improve the current system of dental regulation. It was published in January this year and proposed fundamental changes in areas like the complaints system.

“I am delighted to be reappointed to the GDC,” said Moyes in a statement. “This is an exciting time for the organisation as we press ahead with a series of reforms. While there are challenges which lie ahead, there is a real opportunity for the sector to work together to make the system of regulation work better for patients, and remain fair for dental professionals so that public confidence in dental services is strengthened.”

“Under Bill’s leadership, the Council has not shied from taking difficult decisions and has been willing to think radically about the way the GDC works in pursuit of our ambition to become a high-performing, effective regulator. That focus and determination is delivering results and has laid a solid foundation for further improvements,” commented Chief Executive Ian Brack. “This reappointment provides consistency in strategic vision which will help the GDC to realise the ambitious plans recently set out in Shifting the Balance—using regulation to enable and support dental professionals to prevent harm, whilst putting public protection at the heart of what we do.”

In an initial reaction, the BDA expressed disappointment at the reappointment.

“The GDC Chair’s term in office has been defined by a total collapse in trust in professional regulation among this profession, and the question remains whether such a figure can ever deliver the change we need,” BDA Principal Executive Committee Chair Mick Armstrong said. “While this reappointment represents a missed opportunity, our priority remains clear. Patients and practitioners deserve a regulator and a chair that really understands dentists and dentistry.”