Dental Tribune survey sees majority of British dentists rejecting Brexit

More than half would vote against the United Kingdom leaving the EU

By DTI

LONDON, UK: Were it up to dentists, the UK would remain a member of the European Union after the national referendum in June. According to an online survey conducted among Dental Tribune Online readers between February and March this year, a slight majority of dental professionals would vote for staying in the EU rather than leaving it.

After analysing the results of the poll, Dental Tribune found that more than 55 per cent of dentists who participated in the survey intended voting against Britain leaving the EU, while 44 per cent were in favour of a Brexit.

Less than 1 per cent were still undecided on the issue, but perceived an overall more negative future should Britain decide to split from the Union.

Similar responses were given by the participants when asked whether a Brexit would have positive or negative consequences for the country. A larger share of dentists, however, replied “I do not know” to this question.

The overall majority of respondents to the survey said they will definitely vote in the referendum. Only one in ten did not intend to participate in it.

The poll was conducted among 16,000 recipients of the Dental Tribune UK & Ireland weekly newsletter, with almost half of all replies from dentists in southern England, particularly London, which made up almost 20 per cent of the survey respondents. There was less participation by dentists from the northern regions, with slightly less than 30 per cent taking part in the poll. Only one in ten respondents were from the Midlands.

Dentists from Scotland, Wales and Northern Ireland, who made up 12 per cent of the participants in the poll, were split, with almost the same number voting for the Brexit as voting against it.

Almost one-third of those who responded to the survey said they were in private practice, while one-quarter said they were employed in the National Health Service. Forty per cent worked in practices that offered both NHS and private dental care services.

Regarding the age of the respondents, more than half were between 30 and 50 years old, followed by a large group aged 50 to 60.

Britons have to decide on 23 June whether they want the UK to remain a member of the EU. Mirroring the results of the Dental Tribune survey, the latest national polls indicate that the slight majority of the population will vote to stay in the UK. However, 10 per cent of eligible voters have still not decided which way to vote. Prominent political and economic figures have argued that accession to leave the EU will have wide-spread negative consequences for the UK.

Profits of private practices leap over those of NHS in 2015

Eight per cent rise a direct result in fee income

By DTI

LONDON, UK: For the first time in over a decade, private dental practices in the UK have achieved greater profits last year than their NHS counterparts. On average, profits in private dentistry increased to £40,239 per principal according to the latest figures released by the National Association of Specialist Dental Accountants and Lawyers (NASDAL), approximately £10,000 more than reported by NHS practices.

The last time private practices were more profitable was in 2004/2005. The leap is a direct result of an 8 per cent rise in fee income, compared with NHS practices, whose income through fees only grew by 4 per cent last year.

Overall, all types of practices experienced a sustained recovery of profitability in 2015 compared with 2014, according to Humphrey & Co partner Ian Simpson, who presented the figures on behalf of NASDAL on Tuesday.

However, Associates’ profits decreased slightly last year and this could be attributed to increased insurance and subscription costs, he said.

“It’s positive to see that the UK dental market has continued to grow at a rate of around 4.4 per cent with relatively unchanged costs and prolonged recovery in profitability,” NASDAL Chairman Nick Ledingham remarked.

The figures were collected through tax reports and accounts provided by accountant members of NASDAL across the UK. They are published annually in March and reflect the finances of dental practices and dentists for the most recent tax year, according to the association.
Periodontitis: Faster cognitive decline in people with Alzheimer’s

By DTI

LONDON & SOUTHAMPTON, UK: A number of studies have demonstrated that poor oral hygiene, a common problem among elderly patients, is a risk factor for developing Alzheimer’s disease. Now, a joint research project led by scientists at the University of Southampton and King’s College London has provided further evidence that periodontitis could be associated with increased dementia severity and a more rapid cognitive decline in Alzheimer’s patients.

Fifty-nine non-smoking patients with an average age of 77.3 and a minimum of ten teeth who had not received treatment for periodontitis in the past six months participated in the study. The patients underwent dental examinations by a dental hygienist at baseline and at the six-month follow-up. In addition, blood samples were taken to measure inflammatory markers in their blood.

The presence of periodontal disease at baseline was associated with a sixfold increase in the rate of cognitive decline in participants over the study period. Periodontitis at baseline was also associated with a relative increase in the pro-inflammatory state over the follow-up period.

The researchers concluded that periodontal disease is associated with an increase in cognitive decline in Alzheimer’s disease, possibly via mechanisms linked to the body’s inflammatory response.

As the study only included a limited number of participants, the authors stated that the findings should be validated in a larger-cohort study. In addition, they highlighted that the precise mechanisms by which periodontitis may be linked to cognitive decline are not fully understood and other factors might also play a part in the decline seen in participants’ cognition alongside their oral health. However, the current evidence is sufficient to explore whether periodontal treatment might benefit the treatment of dementia and Alzheimer’s disease, they said.

Periodontitis is a common disease in older people. The World Health Organization estimates that 35 to 40 per cent of adults aged 35 to 44 worldwide have severe periodontal disease. The condition may become more common in Alzheimer’s disease because of a reduced ability to take care of oral hygiene as the disease progresses.

Higher levels of antibodies to periodontal bacteria are associated with an increase in levels of inflammatory molecules elsewhere in the body, in which turn has been linked to greater rates of cognitive decline in Alzheimer’s disease in previous studies.

Dr Mark Ide, from King’s College London Dental Institute and first author on the paper, said: “Gum disease is widespread in the UK and US, and in older age groups is thought to be a major cause of tooth loss. In the UK in 2009, around 80 per cent of adults over 55 had evidence of periodontal disease, while 40 per cent of adults aged 65–74 and 60 per cent of those older than 75 had less than 27 of their original 32 teeth, with half of them reporting periodontitis before they lost teeth.”

The study, titled “Periodontitis and cognitive decline in Alzheimer’s disease”, was published online on 10 March in the PLOS ONE journal.

The annual Pound rolling has begun

By DTI

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A new global language for dental professionals

Primespeak launches patient communication series in the UK

MANCHESTER, UK: Many dentists find it difficult to communicate the right treatment options to patients, who through false or incomplete information on the Internet present to practices with unrealistic expectations. While the majority of patient communication training programmes available today often focus on one or more fixed strategies at a time, there are other concepts that aim to make this process more natural and less stressful for the dentists. One of them is Primespeak, an import from one of Australia’s leading practice management companies, which is currently making its large-scale debut in the UK.

First introduced to the market here by Sydney-based Prime Practice three years ago, the seminar series is now on an extended road tour in the UK, stopping in cities like London, Birmingham, Bristol and Belfast, throughout the year and is made possible through a partnership with Henry Schein company Software of Excellence. The series was recently launched at a premier event in Manchester with 40 participants, where Dental Tribune had the opportunity to speak with some of the programme’s directors and trainers.

According to Prime Practice General Manager of Education and Training Patric Moberger, one of the key objectives of the programme is to help patients take responsibility for their own teeth and to understand the damaging consequences of not looking after them. In order to achieve this, the programme provides a number of tools and strategies that, when applied at the right time and in the right combination, can help dentists gain patients’ compliance with treatment, particularly those who do not truly understand the options before them.

"Primespeak is applied at its optimum for patients who think that nothing is wrong because there is no pain involved. It is quite like high cholesterol: you do not feel the consequences until it is too late," Moberger explained. “By stepping away, we let the patient come to you ask for a solution instead of recommending something they may not understand and thus want to get involved in.”

"Normally in sales you move towards the patient with a solution. All the tools that we are using with Primespeak however are counter-intuitive to sales training. The role that the dentists and the team have here is to make the patient understand that things are going on in their mouth and that they offer the right solutions for them," he added.

Feedback from dentists who participated in Primespeak seminars held in Australia and the US, where the series has been available to dental professionals for many years, has been very positive and encouraged the company, together with word of mouth, to bring the concept to the UK. In addition to the live seminars, it offers master classes, private consultations with a trainer and a library of online training videos. Seminars for dental assistants and front-end staff are under consideration. Participants at the seminar in Manchester responded positively to the programme.

"If a dental professional is looking to build trust quickly with patients, save time and gain greater acceptance of treatment, that person should come to a Primespeak Seminar. Time very well spent," commented a dentist from Hull.

Another participant from Glasgow said: "I cannot recommend this course enough. It will remove the pressure when interacting with patients and is key to avoiding sales pitching perception.”

Primespeak is holding its next seminar in June in Birmingham. Dentists or dental staff interested in registering for the programme can obtain more information at primespeak.com/uk.

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Sugar, sugar...honey, money

By Aws Alani, UK

The sugar tax is finally upon us, but are corner shops or supermarkets for that matter likely to worry about this potentially threatening change to their flagship product line? The tax targets all drinks and equates to a tax of 24 pence per litre on those with the most sugar content. This could potentially equate to an increase in the price to the consumer, but bearing in mind that soft drinks are more accessible and cost less in the UK than water in many Third World countries, it is doubtful that things will change markedly.

Overconsumption of sugar causes an inordinate amount of health problems. Indeed, Type II diabetes and obesity are leading causes of death and disability in the US, the birthplace of the canned, tearful tantrums for penny sweets of drink consumption in 2014) are likely red, refreshment. These life-threatening conditions are in addition to our experiences of sugar-laden drink devatation. In contrast, but just as worrying, the emerging evidence shows that low-/no-calorie drinks (49 per cent of drink consumption in 2014) actually fuel hunger and trick one’s stomach into thinking that calories are on the way, only to be disappointed, resulting in further food-seeking behaviour. The ordering of diet beverages in all-you-can-eat restaurants may not be as ironic as I first thought!

Erosive tooth wear seems to have been forgotten amongst overweight toddlers needing ear-to-ear clearances. From bulimics who like to taste but do not like their waist to the energy drink crew who prefer machismo gothic graphic designs, the younger generation is likely to experience more dissolution of tooth tissue. At the other end of the spectrum, obese patients are more likely to develop diabetes, which in turn makes them more susceptible to periodontal disease. Society’s gluttonous overconsumption is manufacturing pathology unheard of 50 years ago.

One could argue that sugar polutes much in the same way that inefficient power stations do. The societal repercussions need to be managed by all, with no or little comeback for the fizz producers. As carbonated drinks are so popular, these juggernaut companies are powerful and, as a result, dent their progress with a tax is unlikely to truly positively affect the general health of the population. In 2014, the UK soft drinks industry was worth £15.7 billion, with over 14.8 billion litres in overall consumption, which represents a steady and exponential growth that is likely to continue. One interesting observation is the slow demise of the 350 ml can—it being replaced by the 500 ml plastic bottle. The larger bottle may represent better value for money, but is less likely to represent better health value, especially since a re-sealable bottle is more likely to be sipped over hours than a can once opened.

Society’s gluttonous overconsumption is manufacturing pathology unheard of 50 years ago.

...food is an emotive issue...
Poor root fillings result of stress and financial pressure in dentistry

By DTI

GOTHENBURG, Sweden: A new survey has linked the quality of root fillings to the level of stress dentists experience in performing the procedure and the fee charged. Some dentists reported that “good enough” was often a more realistic goal than optimal quality in light of the complexity of root fillings and insufficient time allocated owing to the associated treatment tariff, among other reasons.

According to the study, which was conducted as part of a doctoral thesis at the Sahlgrenska Academy, only half of all root fillings that are performed in the Swedish public dental service are of good quality. Moreover, more than one-third of root fillings show signs of apical periodontitis, which can lead to acute symptoms, such as pain and swelling, and may even spread and become life-threatening in some cases.

Aiming to investigate the reasons dentists accept technically poor root fillings, Lisbeth Dahlström, a senior dental officer and researcher at the Sahlgrenska Academy, conducted group interviews with 33 dentists from the Swedish public dental service.

The results showed that treatment was often associated with negative feelings, such as stress and frustration, and it was common for treatment to be performed with a sense of a loss of control owing to the perceived technical difficulty. Another cause of dentists accepting poorer root fillings was that allotted time for treatment according to the fee charged was insufficient, participants reported.

“The dentist then finds they are facing a dilemma, to ‘go back’ to the treatment, to optimize quality, or to offer care within the framework of the compensation and, thus, risk accepting an incomplete root filling.” Dahlström explained.

Regarding quality, the dentists interviewed reported uncertainty as to what constitutes reasonably acceptable quality. According to Dahlström, they often stated that “good enough” was a more realistic goal than optimal quality. However, despite the difficulties experienced, the survey also showed that the dentists wanted to provide good treatment and that they were very concerned about their patients, the researcher said.

In order to improve the quality of root fillings, Dahlström suggested measures such as increased opportunity for continuing education, time for discussion and exchange of experiences at the workplace, as well as investment in equipment that enhances treatment, shortens the time needed and improves visibility.

Each year, approximately 250,000 root fillings are done in Sweden and it has been estimated that there are at least 2.5 million root-filled teeth affected by periapical periodontitis.

“do not think we are doing a good enough job”

An interview with Henry Schein Chairman and CEO Stanley M. Bergman

Henry Schein has been supporting the Senior Dental Leadership Programme (SDL) since its launch in 2007. Last month, the company’s long-term Chairman and CEO Stanley M. Bergman delivered the keynote address for SDL’s tenth anniversary meeting in London in the UK. Dental Tribune had the opportunity to sit down with him during the event to discuss the motivation behind the initiative, as well as public-private partnerships in dentistry in general and their importance for the improvement of oral health worldwide.

Dental Tribune: Mr Bergman, in your keynote at this year’s SDL Meeting, you talked about some of the key aspects that have made your company one of the leaders in oral health care worldwide. Could you summarise these for our readers?

Stanley M. Bergman: Henry Schein has been a very successful company by focusing on doing well by doing good. This requires balancing the five constituents that comprise our biosphere: customers, suppliers, investors, Team Schein, and society. One part of the mosaic is our commitment to society, which makes us different from others in the industry. With our public-private partnerships, we work with government as well as non-governmental organisations, customers, and suppliers to make a difference in society. This enables trust, and with trust you can move things forward—like advancing oral health, for example, by bringing together academia, professionals, public health officials and businesspeople from around the globe.

The SDL Programme tries to do exactly that. Is this why your company has supported this initiative for such a long time?

The SDL is clearly the epitome of a public-private partnership. So far, it has been pretty successful in bringing together all members of the dental community, including representatives of dental schools, like Harvard and King’s College here in London, as well as public health officials from around the world and the private sector.

There has been very good research in the last decade with regard to oral health. What we learnt from that is that we have to focus not just on the teeth but on the whole body. Good oral care results in good general health, which then results in a good quality of life. We use SDL to get that message out to all constituents of the dental community around the world.

With dental diseases still occurring in epidemic proportions around the world, according to reports, is there a general lack of leadership in the profession?

I would not exactly call it a lack of leadership. As you mentioned, however—and the latest statistics show this—it is a sad fact that there are over three million people in the world suffering from dental caries alone. Unfortunately, oral diseases—in addition to psychological diseases—are still not recognised as non-communicable diseases (NCD) by the World Health Organization (WHO) and, as a consequence, their improvement is not considered to be beneficial for better health.

Where do you think the main impetus has to come from?

It has to come from the profession itself. I think the FDI World Dental Federation is doing a good job in this regard and I am quite optimistic that it will lead us in this area. We need to make the science very new. There have been a number of studies published only in the last seven to eight years that show a direct correlation between oral health and other health areas, like cardiology. Dental schools like Harvard are advancing this research and many others will hopefully follow. However, there are other areas, such as cancer, where we have made good progress, but have not told people that around the globe about 150,000 people die of oral cancer each year. I do not think we are doing a good enough job to convince the world of the importance of oral health.

Also, dental schools are not taking a strong enough position on health care. It is part of their history that they would not necessarily be part of the medical school system. I remember the big fight over the New York University dental school a decade ago. There are also other dental schools that are connected to medical departments or institutions. We need more and more of that. Dentistry has to be part of total care.

In your home country, the upcoming presidential election has put health care and its delivery in the forefront of the debate. Which system do you generally consider to be better for achieving improved health?

In my country, the United States, we have a private system to have a public system to have some other. I am a free-enterprise person and therefore I think you have to allow those who wish to have a private system to have it. For those who cannot afford private insurance, the government has to provide some amount of care. I believe that the only way to achieve better health is through more preventive care. It is not about building more hospitals, but preventing people from getting sick. That is what health care reform is all about.

Thank you very much for the interview.

I believe that the only way to achieve better health is through more preventive care.”
Career opportunities and work–life balance in dentistry

By Dr Christine Bellmann

Dentistry is among the most rewarding professions and has a much broader scope of practice than ever before. Young dental professionals who have finished their studies and received their diplomas will have to individually decide on their career pathways. This choice is both exciting and difficult, as there are numerous options and opportunities to consider.

The transition from dental student to young working dental professional requires extensive adjustment. At university, students are told how to work, what to learn and what goals they need to fulfil. During practical work on patients, they are supervised by experienced dentists.

As a working professional, it is now up to each individual to assess patients on his or her own and to judge their needs and treat them accordingly. It is not just dental skills that are put to the test, however, as there are also other important skills that a working professional will need to have. These may be skills that are not taught at dental school, such as communicating with the patient, co-workers and assistants, as well as financial aspects and legal issues in the dental clinic. Acting correctly and appropriately is a substantial challenge, and may be overwhelming for some individuals. Being aware of those requirements is the first step to a successful transition.

Every graduate dental student has to decide where and how to embark on their professional careers. The majority of young dental professionals lay the foundation of their careers in private or public dental clinics, but some also remain at university to engage in research or teaching careers. Whichever way is chosen at this stage, it does not need to be the final decision. Paths can be changed and new ones explored, but the decision should be thought through, as the initial years in any profession form and influence one’s future career path.

Working in a dental office outside of university provides multiple options and opportunities. Dental practices come in every size and shape. There are small clinics and very large practices. Some have a specialisation or orientation, others are general dentistry practices. Each model has, for every individual, certain advantages and disadvantages, depending on one’s expectations and goals. A larger clinic, with more dentists, usually gives everyone more flexibility in relation to working hours and vacation planning, as well as in case of illness. Smaller teams can have the advantage of being forced to take more responsibility, from which great knowledge can be gained in living the concept of “learning by doing.”

Working in a clinic that has a certain specialisation will help a young graduate if he or she wishes to specialise in the same field, as knowledge can be gained during the daily workflow and, in combination with a postgraduate course, it can make the perfect choice. Choosing the right clinic can be challenging and sometimes the best choice is to go with one’s intuition.

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Many young dentists want to specialise in one of the many fields of dentistry. Once the decision has been made on the area in which to specialise, they should take their time to work out what is the right path of specialisation for them. What is their goal after specialisation? What is the specialisation to be used for: to work in a private dental clinic or establish their own clinic; or to enter into research and education at a university? And what is the goal for the practice?

There are many programmes on the market, and it is not always the best decision to choose the most expensive, most time-consuming one or the one that is the furthest away from home.

Since there are courses and post-graduate education programmes all around the world, many young dentists leave their home countries to gain experience and specialisation abroad. That can be an amazing experience and much can be gained from it. However, it is not the right choice for everyone, as it can hold more challenges and risks than might initially be expected. Studying or working abroad needs to be thought through and well planned, otherwise it can very easily end in a major disappointment. At first, working abroad may seem to be a great opportunity and exciting, and it certainly can be, but it may not turn out that way. An accurate assessment of the goals and the desired outcome of a life in a different country needs to be conducted.

Others may decide to open their own dental clinic or take over an existing one. Running one’s own business is a great opportunity to work in a comfortable work environment because it is self-created. Aligning a dental office to individual expectations and having a financially successful and well-run clinic can be challenging. Like any other business, strategies and standard operating procedures in various fields need to be established. It is not only the clinical abilities of the dentist that are important. Equally important are economic factors, such as analysis of the local conditions, human resource management, marketing strategies and legal guidelines.

With so many exciting opportunities in the dental field and the numerous options for how and where to work, it is easy to lose track of other important things in life. Time with family and friends or time for leisure activities is very important. Finding a healthy balance between fulfilling career goals and having rewarding downtime is the key to a happy and healthy life. It makes sense to take the time to reflect on the past and think about future expectations of life and, perhaps, write those down to keep them in mind. During these decision-making processes, of all the possible choices that have to be made, the most important factor that should be considered is one’s private life and what one wants in life.
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Breath odour is the presence of odorous volatile organic compounds in the breath of individuals. It is a widespread problem, as it affects a high percentage of the adult population; 30 per cent of the global population suffers from chronic oral malodour and 74 per cent considers it an issue.1 Breath odour has strong social implications for the sufferer and it significantly affects normal social interactions.

Breath odour can have physiological or pathological causes of intra-oral or extra-oral origin (Fig. 1). Physiological odour includes morning breath, which is transient and related to low salivary flow during the night. Other lifestyle factors can influence it too, such as smoking, as well as the consumption of alcohol or odouriferous foods and drinks (garlic, onion and cabbage, among others). These are fairly common reasons for concern in the adult population, but can easily be rectified by modification of beverages and foods consumed, toothbrushing, mouthrinsing and tongue cleaning.

Pathological malodour, however, is more challenging to treat. Extra-oral breath odour can arise from respiratory, gastrointestinal or metabolic issues, which cannot be addressed by oral hygiene, as these do not originate from the mouth.3–4 Most cases, however, originate from the oral cavity. Breath odour from intra-oral causes arises from volatile sulphur and organic compounds (VSCs and VOCs, respectively) formed as a result of the degradation of organic substrates by anaerobic bacteria on the dorsum of the tongue, particularly at the back of it.5 It can also result from gingivitis and periodontitis, and their combination with tongue bacteria. However, in individuals with good oral hygiene and general health, the main cause is the bacteria on the tongue (Fig. 2a). Breath odour is generally assessed by organoleptic score, which is determined by a trained odour judge, who measures the strength of target odours and expresses the value according to a predefined scale from 0 (no odour) to 3 (strong malodour). The tongue has a very complex rough surface structure covered with flexible papillae (Fig. 2b). Those papillae vary in shape, size and distribution pattern and give the tongue a surface with numerous crypts and fissures.6–8 This constitutes a perfect microbial niche for anaerobic bacteria to thrive and form thick biofilms largely undisrupted. Bacteria can degrade a complex mixture of amino acids and proteins from numerous origins (diet, debris, cells) with their complex enzymatic machinery. Particularly the degradation of amino acids, such as cysteine and methionine, produces VSCs with a very high odour power.9 The bacterial density on the tongue surface has been related to the degree of breath odour.5, 6 For example, individuals with noticeable breath odour (above 2.5 in the 5 point organoleptic scale) have more than 1 × 108 bacterial colony-forming units per cm² of the tongue, while individuals with lower organoleptic scores harbour lower bacterial numbers (approximately 1 × 107).5 Therefore, in order to reduce breath odour in patients, the tongue bacterial density must be reduced and kept at low levels.

Treatment of oral malodour

There are numerous over-the-counter products for oral malodour and these can be divided into chemical and mechanical treatments. At the moment, there are mostly mouthrinses specifically developed for oral malodour, containing a combination of antimicrobials and metal ions. Commonly used antimicrobials are chlorhexidine and cetylpyridinium chloride (CPC), which have a strong effect in killing bacteria. Metal ions, such as zinc, bind to sulphur compounds and form insoluble complexes (zinc sulphide) that are not volatile and are therefore non-odoriferous.9–14 Another category of mouthrinses for malodour contains chlorine dioxide, which neutralises the sulphur gases and oxidises VSC, while the chlorite anions act as an anti-bacterial compound.15

While mouthrinses have the potential to be very effective owing to their antibacterial and oral malodour-masking properties, they rarely provide a long-lasting result. They are effective for a few hours, but they have little effect on the tongue bacterial density.16–18 A possible cause of this limited effect on the tongue is that the active components of mouthrinses cannot reach the odour-producing bacteria. Biofilms that produce volatile gases are mostly located deep between the tongue papillae (Fig. 2c), where mixing and diffusion of active ingredients are difficult owing to the small papillary spaces, the viscosity of salivary molecules and the low permeability of biofilms. Clinical studies have shown that the use of mechanical methods reduces the tongue coating.19, 20–24 However, the effect on malodour is very short lived,19 which is probably due to the reduction of the bacterial density itself.22 The limited amount of bacterial removal from the tongue’s complex surface is due to the difficulty in reaching the biofilm between the tongue papillae. Moreover, as the tongue tissue is very flexible, the use of tongue scrapers could flatten the papillae, trapping the bacterial biofilm underneath and not removing it.

Combined approach for all-day fresh breath

The use of mouthrinses in combination with mechanical intervention could help the active ingredients penetrate deeper into the biofilm than when used alone, while simultaneously reducing the tongue coating and bacterial density. The combined approach of chemical and mechanical intervention could have a synergistic effect on oral malodour to deliver full-day
fresh breath, as has been shown in recent studies.23, 20 In a recent clinical investigation, we showed that the combined use of a newly designed sonic tongue brush with an antimicrobial spray delivered a significantly superior reduction in breath odour than did the individual treatments.

Philips Oral Healthcare has recently developed and launched a new sonic powered tongue brush and antibacterial spray combination, Sonicare TongueCare+. The brush has been designed to penetrate between the tongue papillae and to provide thorough mechanical biofilm removal. Bristle dimensions and stiffness parameters were optimised based on analysis of the human tongue. The brush head consists of 240 flexible elastomer MicroBristles mounted on to a Sonicare power toothbrush handle, with 31,000 vibrations per minute to help break up any tongue coating and sweep away debris and bacteria (Fig. 3).

TongueCare+ brush is used in combination with the BreathRx antimicrobial tongue spray (Philips), which contains antimicrobial agents, such as CPC and zinc. In the first proof of principle clinical investigation of this technology, it was shown that the organoleptic score and the tongue bacterial density can be significantly reduced with a single use of TongueCare+ with BreathRx, measured up to 6 hours (Figs. 4a & b). This combined treatment reduces breath odour significantly more than using TongueCare+ alone or BreathRx alone, supporting the idea that a combined approach is likely more effective. Moreover, TongueCare+ has been shown to significantly decrease the tongue bacterial density, which is kept low for up to at least 6 hours, indicating that the root cause of breath odour is addressed with this approach. This combination provides a more effective and long-lasting treatment option for people suffering from breath odour.

Possible oral health implications

Overall, it is of key importance to integrate tongue cleaning into the oral hygiene routine in order to have fresh breath all day. Additionally, it has been suggested that the tongue can act as a reservoir of periodontal pathogens for the rest of the mouth,24, 25 which could colonise other areas and have an impact on oral health in general. Moreover, several studies have shown that VSCs, such as hydrogen sulphide and methanethiol, are toxic to periodontal tissue even when present in very low concentrations, so it has been hypothesised that they can contribute to the progression of gingival diseases.26 Therefore, maintaining a good tongue cleaning routine could have far-reaching implications.

Editorial note: A list of references is available from the publisher.
The iTOP experience
Providing thorough oral hygiene instructions in a clinical setting

By Theodora Little, UK

“ITOP” stands for “individually trained oral prophylaxis”. You may argue that hygienists deliver this to their patients all the time, right? Unfortunately, with the time constraints placed upon hygienists in the UK, with 30- or 20-minute appointments and many without a nurse, the burning question is, how are we supposed to give patients the essential care, as well as effectively provide thorough oral hygiene instructions?

We mention time and time again that we strive for prevention and that this is key, but unfortunately all there is time for is a scale and polish with a little oral hygiene instruction. We are thus placed in a vicious cycle of patients returning for each appointment with the same oral hygiene as before. Habits remain unchanged!

At Curaden Dental Clinic, my hygiene appointments last a minimum of one hour. Curaden is a Swiss company, so this is something of the norm for it. The company takes great pride in offering high-quality products and services to patients, which is also why we recommend CURAPROX products. It is not just about their vibrant colours, which initially attract attention, naturally, there is more to the products than meets the eye. CURAPROX uses CUREN filaments instead of nylon, and their manual toothbrush contains 5,460 filaments—approximately 4,500 more than the average manual toothbrush. All of this is included in iTOP; since they only use the best in their training for dental professionals.

I suppose many will say I am lucky to be able to offer hour appointments, but as a practice we want the best for our patients. Our practice focus is prevention, and it is necessary to give time to our patients to achieve this. On occasion, the whole hour is used for iTOP training only, with my training to be a hygienist and therapist, the most basic training given would include correct and efficient brushing of teeth. I am somewhat ashamed to say that not once during my time at university did we have intra-oral brushes correctly.

I was trained as a hygienist and therapist and I did not know, nor was I shown at university, until I completed iTOP courses.

I have now completed my iTOP beginner and advanced courses and will hopefully attend the teachers’ seminar later this year. Going through this programme, I started to realise that correct, effective and thorough toothbrushing is somewhat of an art, and it should not be dismissed so easily. It is also something that should not be rushed; great care and time do need to be taken to change a patient’s habits. Of course, many may argue that patients will not want to spend x amount to receive oral hygiene instructions and that one cannot teach an old dog new tricks.

I agree to an extent, however, once one has gained a patient’s trust and he or she understands the value of this service, the patient will be more than happy to accept. We all understand how important it is to communicate well with our patients, and this combined with sufficient working time, allowing for iTOP is one of the greatest factors. Not only are my patients satisfied, happy and grateful, they are also shocked that they have never had training on how to brush properly. As a hygienist and therapist, I too gain enormous job satisfaction and can honestly say I love what I do.

I would encourage my fellow dental colleagues not to disregard the importance of being taught how to brush correctly until you have had iTOP training. It opened my eyes and made me feel the difference, and now I can pass my oral hygiene knowledge on to my patients, because I believe my service should include more than just cleaning their teeth for them.
“I’m in love”

Why dentists prefer to use AquaCare

Abrasion has long been discussed as a treatment in all areas of dentistry. With AquaCare, UK-based Velopex International has introduced an innovative and contactless way to abrade and polish teeth. The unit combines four powder cartridge systems with an easy-to-use multi-function headpiece—that can even double via the foot controls as a 3-in-1!

He received the AquaCare unit, and he said: “I’m in love!” He loves it because his patients love it. AquaCare has become the official partner of Styleitaliano and it will soon be publishing cases on www.styleitaliano.org.

What is the basic mechanism of AquaCare and how does the headpiece work?

All the clinician requires is an air line, which all dental practices have; everything else is provided in the AquaCare introductory kit.

Our handpiece is at the centre of fluid abrasion. The unique Venturi design tip allows for the solution to be kept separate from the powder and air and never clogs. This single-use tip delivers a gentle stream of solution and media directly to the tooth surface. The Aquaskol fluid is dispensed from an inverted bottle. This dual purpose solution also acts as a cleaning agent for the AquaCare while providing a pleasant aroma for the patient.

What are the major advantages of the AquaCare and AquaCare Twin systems for general dentists? Could you also explain the areas of preferred solution. Increasingly, clinicians are using 53µ for periodontic, endodontic, orthodontic, cleaning and paediatric treatments. Only in AquaCare units can one change settings of pressure, solution and medium to allow one to remove stains at 2.75 bar (275 kPa), clear fissures by abrading and cutting at around 5 bar (500 kPa), and work subgingivally at around 1 bar (100 kPa) minimum pressure with solution required.

Important note: In order to work subgingivally, the pressure must be reduced while remaining 3-5 mm supragingival.

Velopex International has coined the term “contactless dentistry”. Does contactless dentistry really have the potential to revolutionise common dental treatments, such as cutting, caries removal, cavity preparation, cleaning and polishing? What is your vision?

Across the world, contactless interactions are common in our daily life. Now dentists can offer patients contactless dentistry. Good preventive dentistry and oral health care can help prevent cavities, gingivitis and periodontal disease, keeping patients’ smiles happy and healthy. Our patient leaflet serves to aid the dental health care professional by explaining the gentle effect of AquaCare on the patient’s teeth and gums. Patients know about contactless and enjoy the speed of interaction, and research indicates that consumers are likely to spend more money owing to the ease of interaction. A practice that introduces, for example, a “Power Clean“ under the brand of contactless dentistry might benefit in this regard too. Contactless dentistry is not exclusively for prophylactic treatments. Other treatments include preparations for Class V cavities, use in orthodontic de-bonding and bracket removal and abrasion of occlusal brown spot lesions prior to fissure sealing (without the needle) - another practice-building enhancement, equating on the UK NHS to 3 UDA’s.

Fig. 3: Dr Jason Smithson: Powder abrasion with 29 micron alumina to remove prismatic enamel and improve bond strength prior to no prep direct bonding to close black triangles which were secondary to periodontal disease.

Fig. 4: Dr Thomas Taha used AquaCare 53 micron aluminium oxide cutting powder to remove fractured and decayed hypomineralised tooth tissue without the need for drilling.

Dr Walter Devoto, founder of STYLE ITALIANO, with the AquaCare Twin unit: “Finally, the sandblaster of my dreams!”

Dental Tribune: Many dentists in the US and Europe still prefer rotary cutting instruments and their use has been taught at dental schools and faculties for many years. Why do you see a need for change?

Keith Morgan: Dentistry is continuing the transition from mechanical dentistry to adhesive dentistry. A growing number of clinicians, academics and key opinion leaders are accepting that fluid abrasion enhances the tooth surface for increased efficacy of bonding—it is also an invaluable tool in the process of tooth stain removal. It is less invasive for the patient and there is no noise, vibration, generation of heat or creation of any unpleasant smells. This process is inexpensive, quick and incredibly effective. Many dental schools teach abrasion techniques, including those in Germany, the world’s second largest dental economy. Elsewhere, abrasion is taking hold and some leading dental institutions now have an MSc programme.

Apart from the dentist’s perspective, patients too are driving the change. Air polishing and fluid abrasion are more convenient and safe for patients. We have prepared a leaflet for patients that answer frequent questions about our technology. Dr Walter Devoto, founder of Styleitaliano and a leader in aesthetic and conservative dentistry, appears in the image. The moment, he reviewed the AquaCare unit, he simply said: “Finally, the sandblaster of my dreams! It is really what I needed!”. After two weeks, he could say was: “I’m in love!” He loves it because his patients love it. AquaCare has become the official partner of Styleitaliano and it will soon be publishing cases on www.styleitaliano.org.

What is your vision?

Dr Pasquale Venuti used 53 micron aluminium oxide, then used electrosurgery (20 watts) to remove the black triangles which were secondary to periodontal disease. The image is after sandblasting.

Fig. 1: Double via the foot control as a 3-in-1!

Dental Tribune: Contactless Dentistry. Keith Morgan, Sales & Marketing Director of the US and European operations of Velopex International will present AquaCare at the coming Dentistry Show in Birmingham. Right before the event, Dental Tribune talked to Keith Morgan, Sales & Marketing Manager, about the next big step in Contactless Dentistry.

Velopex International: Customers have been taught at dental schools for many years. Why do you see a need for change?

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Is AquaCare available worldwide or just in the US and Europe?

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NEW COLLECTION

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Wealth of offerings at DTS, Dentistry Show

Largest display of dental innovation and education for UK dental professionals at the NEC in April

By DTI

BIRMINGHAM, UK: The National Exhibition Centre in Birmingham is preparing for the next Dentistry Show and Dental Technology Showcase. Distinguished dentistry lecturers Dr Didier Dietschi and Louis Mackenzie are just two of the confirmed speakers at the upcoming edition to be held on 22 and 23 April next year.

The show will again see a wealth of continuing professional development (CPD) opportunities during an extensive two-day lecture programme. In addition to the Aesthetic Dentist Theatre, there will be sessions specially tailored to all members of the dental team and all specialties, including endodontics, periodontology and facial aesthetics. Moreover, the Short-Term Orthodontics Lounge will bring professionals up to speed with GDP orthodontics and the wide range of appliances that are available to practitioners today.

More than 7,000 visitors are expected again for the show, which will see over 400 manufacturers and distributors of dental equipment exhibiting their latest product developments and solutions in the field. Following its successful relaunch at last year’s edition, Dental Tribune will once again showcase its extended portfolio of publications at Booth M100. Interview, photos and daily news from the show floor are also available online at the Dental Tribune UK & Ireland website (dental-tribune.co.uk) and Facebook page.

With over 100 laboratory-dedicated exhibitors at the Dental Technology Showcase, experts will further demonstrate first hand the application of leading materials and advancements in dental technology. In addition, more than 30 hours of verifiable CPD will be on offer (with 14 hours of vCPD available), and highly popular features will be returning from the 2015 show, including the CAD/CAM Theatre.

Professionals interested in attending the events can register in advance on the official website (www.thedentistryshow.co.uk). Information about the programme and exhibition is also available there.

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Non-precious dental alloys on nickel-chrome base System KN and System NH
Non-precious dental alloys on cobalt-chrome base System NE and System Duro
Partial alloy System MG
CAD/CAM discs on cobalt-chrome base System NE-Blank and System Soft-Blank
CAD/CAM disc on titanium base System Ti5-Blank
Investment for crowns and bridges ADENTA/VEST CB
Investment for partial denture ADENTA/VEST PA

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Adentatec GmbH
Konrad-Adenauer-Str. 13
50996 Koeln - GERMANY
Phone + 49 2 21 - 35 96 - 100
Fax + 49 2 21 - 35 96 - 170
info@adentatec.com
www.adentatec.com
GC presents next generation in universal bonding

Selecting the appropriate bonding for a given indication and making sure to follow precisely the different procedure steps is not always easy. Convenience and having just one procedure to remember are perhaps the main reasons many dentists nowadays prefer to use universal bonding systems. Based on the experience gained with its previous adhesives such as G-Bond and G-ænial Bond, dental materials manufacturer GC (Booth 80) has introduced a one-component light-cured universal adhesive on the market that is said to achieve outstanding performance with all etching modes and in all situations.

A result of years of research and development, G-Premio Bond is the universal bonding solution for dentists who believe in zero compromises, according to the company. It is compatible with self-etch, selective etch and total etch techniques, and performs equally well in direct bonding cases, repair situations and hypersensitivity treatment. G-Premio BOND shows excellent, long-lasting bond strength on both enamel and dentin, regardless of the etching mode. In fact in GC’s own research on enamel and dentin in self-etch mode, G-Premio BOND had the highest shear bond strength values after thermocycling among all products tested. A unique combination of three functional monomers (4-MET, MDP and MDTP), notably excluding HEMA, ensures excellent stability and bond strength not just to tooth tissue but to all indirect substrates, including composites, precious and non-precious metals, zirconia and alumina for all repair cases. When combined with Ceramic Primer II, G-Premio BOND will create a durable adhesion to any type of glass ceramics.

The adhesive behaves like water, despite the presence of fillers and photo-initiators that help achieve a strong bonding layer. With G-Premio BOND’s optimal wettability and penetration and a drying procedure that takes just five seconds at maximum air pressure, an extremely thin film thickness of 3µm can be achieved. These characteristics and the absence of HEMA guarantee the preservation of the bonding layer over time, ensuring durable aesthetics without discolouration.

Errors caused by the operator are almost impossible with G-Premio BOND, according to GC, owing to a simplified procedure with low technique sensitivity. That means for instance that the bond strength is not compromised if the waiting time is cut short, drying guidelines are self-explanatory and light-curing is very efficient thanks to the high photo-initiator content. GC further added a visual control to drying & light-curing, with the liquid displaying a yellowish colour before curing and a perfect invisibility after curing.

G-Premio BOND helps to save precious time with a 25-second procedure in self-etch and 50 seconds in selective and total etch. This is especially useful in situations where isolation is not optimal or in cases involving children. G-Premio BOND has a working time of seven minutes in its dedicated dish, plenty of time for a stress-free application. Dentists will enjoy the hassle-free versatility of a one-bottle, easy-to-use solution, according to GC. The bottle design is supposed to protect the liquid from the heat of the fingers and prevents solvent evaporation. Waste is also minimised owing to a unique silicon bottle cover and a thin nozzle that releases up to 300 small drops per bottle.

50% OFF YOUR FIRST CASE

Just visit us at booth B60 and register for free.
3DISC presents expanded digital imaging portfolio in Birmingham

Dental equipment manufacturer 3DISC (Booth B52) invites the visitors of The Dentistry Show to experience the high diagnostic value of its digital imaging portfolio that include the compact and fast phosphor plate reader FireCR Dental and FireCam HD intraoral camera.

The size of a shoebox, the FireCR Dental fits into even the most space-challenged clinics, according to the company, while the easy-to-use software, network/TWAIN interface and free software upgrades make it a safe investment.

“We have a FireCR Dental in each of our exam rooms because it increases our productivity. The FireCR Dental is incredibly simple. It is easy to install and easy to use with a very unproblematic workflow. We received a good introduction, but even without training, the system is intuitively easy to use. I would definitely recommend to all dentists who are about to invest in new digital X-ray equipment to first consider a FireCR Dental,” said a Danish dentist, who already uses the system.

Dentists can use the FireCam HD during consultations to highlight the patients’ need for treatment by showing them a clear picture of oral issues and to register progress during on-going treatments.

More information on both products and the company’s other products are available online at www.3DISCimaging.com.

Adentatec: Whole range of lab products on display

A full size 4c phosphor image plate enables dentists to capture more teeth and roots on the same image, without having to stitch smaller images together on a computer. The FireCR Dental PSP Reader by 3Disc ensures fast and high-definition images with five IP sizes. Installing it takes just 15 minutes from box to first image. The IP-protecting magnetized tray ensures a longer IP life, by keeping it completely flat, avoiding to bend it during read-out.

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Based in Cologne in Germany, Adentatec (Booth 306) is a global provider of non-precious dental alloys on cobalt-chrome and nickel-chrome base, as well as CAD/CAM discs on cobalt-chrome and titanium base. Its SYSTEM SOFT-BLANK is a nickeland beryllium-free cobalt/chrome disc for use in CAD/CAM processes.

Furthermore, it is suitable for soldering. SYSTEM SOFT-BLANK is especially soft, good tensile and homogenous owing to special heat treatment and features high corrosion resistance and biocompatibility. According to the company, it is available in many diameters and measurements, for almost every type of machines.

Established in 1997, Adentatec offers a high-quality range of products for dental laboratories. All medical devices distributed by the company are exclusively produced in Germany and are certified to the highest standards (CE marking and US Food and Drug Administration), as it is committed to the strict implementation of the quality and process requirements of DIN EN ISO 13485 and DIN EN ISO 9001 for its entire manufacturing process.

EndoUltra for improved debridement

Dedicated to the industry, Vista Dental Products has been offering hundreds of quality dental products that include endodontic solutions for over 20 years. The EndoUltra ultrasonic activator EndoUltra is yet another example of product innovation from the US company.

Science has shown that irrigants are more effective when they are electromechanically activated. Acoustic streaming and cavitation of endodontic solutions significantly enhance cleansing of difficult anatomy. However, studies have shown that low frequency (sonic) oscillation (160–190 Hz) is not sufficient in creating acoustic streaming or cavitation within the canal space.

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Available exclusively from Vista, the battery-operated piezo ultrasonic (40 kHz) activation device is capable of producing acoustic streaming and cavitation in small canal spaces. This results in significantly improved debridement, disruption of biofilm, as well as improved penetration of irrigants into dentinal tubules, as well as the removal of vapour lock, the company said. EndoUltra features special 15/02 activator tips, that resonate along the entire length of the tip and do not engage tooth structure. They also feature depth markers at 18 mm, and 20 mm. EndoUltra is available for UK dentists through Euro Dental Depot at Booth M12.
#whybham

TOP 10 REASONS TO INVEST IN BIRMINGHAM

1. STRONGEST GROWTH IN ECONOMIC OUTPUT
   Between 2012 and 2013 (latest available data) Birmingham’s workplace based Gross Value Added grew by 6% - more than double the UK rate of 1.6%.
   Source: Office for National Statistics (ONS) GVA data

2. MORE FOREIGN DIRECT INVESTMENT (FDI) THAN ANY OTHER REGION
   77 foreign direct investment (FDI) projects were attracted to the Greater Birmingham and Solihull LEP (GBSLEP) area in 2014 – up by 57% on 2013 and the highest of all the LEP areas. The area also created the most jobs – a total of 4,841 - a 98% increase on the previous year. Source: UKTI

3. MOST ENTREPRENEURIAL UK CITY OUTSIDE LONDON
   18,337 new businesses were registered in Birmingham during 2014 – an increase of over 2,000 on the previous year, and more than any other city outside the capital. Source: StartUp Britain analysis of Companies House data

4. LEADING EXPORT PERFORMANCE
   At £21 billion to date in 2014 (Jan-Sept) exports from the West Midlands have been the second highest in the country behind only the South East – and higher than London. In 2013 the West Midlands reduced its balance of trade deficit by nearly £6 billion, the biggest reduction of any region. Source: HM Revenue & Customs Trade data, 2012/13

5. STRONGEST GROWTH IN INTERNATIONAL TOURISM
   Between 2012 and 2013 Birmingham saw an increase of nearly 230,000 (32%) in the number of international visits – the strongest growth in the country in absolute terms and more than all other core cities put together.
   Source: ONS International Passenger Survey

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TOP 10 REASONS TO INVEST IN BIRMINGHAM

6. BETTER QUALITY OF LIFE
Birmingham was ranked as having the highest quality of life of any UK city outside of London in 2013. In 51st place in the world rankings the city was ahead of Glasgow (54th), Aberdeen (56th) and Belfast (63rd).
Source: Mercer Quality of Life Index

7. BEST EDUCATIONAL ATTAINMENT AND HIGHEST QUALITY SCHOOLS
In 2013 Birmingham had the highest proportion of pupils achieving at least 5 GCSEs at grades A*-C including English and Maths of all the English core cities. Birmingham also had the highest proportion of local authority run schools receiving an ‘outstanding’ OFSTED inspection rating.
Sources: Department for Education, OFSTED

8. MOST POPULAR DESTINATION OUTSIDE THE SOUTH EAST FOR PEOPLE RELOCATING OUT OF LONDON
In 2013 5,480 people relocated from London to Birmingham, well ahead of its nearest rivals, suggesting that affordable housing, good quality of life and relative proximity to London are all making Birmingham a particularly attractive proposition.
Source: ONS Internal Migration Statistics

9. MOST POPULAR CONFERENCE AND EVENT DESTINATION
In 2014 Birmingham was the most popular conference and event destination in the UK outside London.
Source: British Meetings & Events Industry Survey 2014/15

10. FASTEST GROWING CITY
Between 2003 and 2013 Birmingham’s population increased by nearly 96,000 – well ahead of its nearest rival. Birmingham is also the youngest major city in Europe and has seen the fastest growth in numbers of under 25’s of any UK city outside London.
Source: ONS population mid year estimates

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ClearCorrect clear aligner therapy discreetly improves crowding and constricted archforms

Today, there are more options available to those seeking orthodontic services than ever before thanks to advances in clear aligner therapy. The rising popularity of ClearCorrect and other clear aligner providers has spiked over the past decade, and is only expected to continue its aggressive growth trajectory.

According to a recent Azoth Analytics research report, the global invisible braces market is expected to grow at an annual rate of 12.16 per cent from 2016 to 2021. Now more teens and adults are seeking orthodontic treatment for a wide variety of reasons, such as, improved aesthetics, affordability, and orthodontic relapse.

ClearCorrect aligners are more affordable than leading competing brands, allowing doctors to pass greater savings to their patients. Doctors can easily submit digital intraoral scans and manage their cases on the user-friendly website while also working with a designated customer service specialist. ClearCorrect is suitable for most treatment goals from minor cases to more advanced crowding and spacing complaints.

Dr Mark J Bentele successfully treated a patient’s chief complaint of adolescent orthodontic relapse with ClearCorrect. The patient had a Class I right, Class I left molar relationship, with a Class I right, end-on Class II left canine relationship.

ClearCorrect treatment plan estimated 24 sets of aligners. The patient was compliant wearing each set of aligners for three weeks (at least 22 hours a day). At the start of treatment, facial translation of premolars and canines occurred, and then.engagers were placed on teeth Nos. 7, 10, 22 and 27 and #22 and #23 were correctly aligned. The patient progressed more quickly than originally planned, and only needed 16 sets of aligners as opposed to 24 sets. At the end of the ClearCorrect treatment, all objectives were accomplished and the patient was instructed to wear retainers at night time indefinitely.

The ClearCorrect treatment plan was also given his sixth set to take home. Next to complete the patient’s total treatment, a contact check on tooth #27 was performed to ensure patient compliance, and teeth #23 and #25 were correctly aligned.

Dr Bentele submitted the case to ClearCorrect and requested an improved upper and lower midline, and also requested an idealized overjet, improved overbite, and improvement of the constricted arch forms while maintaining molar relationships. The patient progressed more quickly than originally planned, and only needed 16 sets of aligners as opposed to 24 sets. At the end of the ClearCorrect treatment, all objectives were accomplished and the patient was instructed to wear retainers at night time indefinitely. Upon treatment completion, Dr Bentele’s patient was very happy with the results and the effectiveness of ClearCorrect clear aligner therapy.

ClearCorrect understands the needs of both doctors and patients, and has been proven effective for more than 20,000 doctors worldwide. Doctors find that ClearCorrect is easy to implement into their practice with convenient access to online optional training with marketing kits at their fingertips. The company designs, manufactures and supports its products out of its headquarters based in Round Rock, TX, USA.

Teens and adults can benefit from clear aligner therapy due to the aesthetic, affordability, shorter treatment period, and lasting results.

ClearCorrect
21 Cypress Blvd, Suite 1000
Round Rock, TX 78665, USA
info@clearcorrect.com
www.clearcorrect.com

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An easier way to detect bruxism

An interview with Bruxlab owner Michiel Allessie

About 8 per cent of the world population has bruxism, a condition commonly associated with sleep disorders. While existing home testing devices are expensive and not patient friendly, Bruxlab (Booth N12) makes it possible to detect the oral parafunctional activity in a cheap and easy way. The Dutch company has developed diagnostic tools to record and quantify any grinding sounds using machine learning, mobile app technology and wearables.

Dental Tribune spoke with Michiel Allessie, owner of Bruxlab, about the algorithm used to detect bruxism.

Dental Tribune: Mr Allessie, you have been a general dentist with your own practice for over 14 years. How have you detected signs of bruxism in the past, and what have been the major disadvantages of conventional ways of diagnosing sleep bruxism?

Michiel Allessie: The clinical signs are always the same: excessive tooth wear, sensitive teeth, headaches, fatigued jaw muscles in the morning, etc. The problem is that sleep bruxism can stop spontaneously. Also, a large group of bruxers are not chronic bruxers. So, a dentist cannot determine whether there is active sleep bruxism and the patient is a chronic bruxer using the conventional clinical signs. I see this as a major disadvantage. Now, we can track patients using our DoIGrind app to see if there is active bruxism and if it is chronic. Our Bruxsticker makes it possible to measure movement of the lower jaw during sleep. The integrated nano-accelerometer and Bluetooth chip, in combination with our app, record and filter tooth-grinding sounds over multiple nights.

If bruxism is left untreated, the problems with chronic patients can be very severe in the long term. For non-chronic patients, the long-term problems may be mild. I track those patients with the app twice a year to check that they have not become chronic bruxers.

You founded Bruxlab in 2014 for effective treatment of bruxism using an innovative app. What is the idea behind Bruxlab and how does it work? What should dentists and patients know?

We created an algorithm that can filter any tooth-grinding sounds and tooth contact sounds. The latter often indicate the beginning of a clenching episode. I validated the sounds using the gold standard, polysomnography, better known as a sleep test. This test will tell you if there was muscle activity at the same time that a grinding sound was detected. The device on which the app is loaded is placed next to the bed and records and filters any tooth-grinding sounds. On average, we reduce 8 hours of sleep to 5 minutes of relevant sounds. The sounds are uploaded to the cloud, where the dentist can listen to them. Most dentists recommend the app to prove to patients that they are correct about suspecting sleep bruxism.

Once bruxism has been detected using the DoIGrind app, what treatment options do you recommend to dentists and patients?

This depends on whether the patient is a chronic and severe bruxer or a non-chronic and rather mild bruxer: For the chronic and severe bruxers, I usually prescribe a splint (night guard). For other patients, I first try behavioural modification through counselling to see if they stop grinding and clenching. That is the greatest advantage about this product you can use it over and over again at no extra cost to the patient.

Thank you very much for the interview.
LiSi from GC

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