Changes in dentistry deterring future generations

Rising costs of training and education is off-putting says dentists

The increasing cost of training and education, together with the falling financial incentives, will deter future generations from joining the profession, said 74 per cent of dentists in a recent survey.

The survey, carried out by Wesleyan, found that 51 per cent of dentists would not recommend their profession to someone at the start of their career, and 40 per cent wouldn’t choose the same career again given the chance.

Sixty four per cent of dentists said they were worried about rising costs and reduced profits, followed by the new dental contract for England and Wales (85 per cent) and changes to the NHS pension scheme (55 per cent).

The survey further found that 45 per cent of dentists were concerned about NHS reforms, while 57 per cent worried about the growth of corporate dentistry.

This comes after NHS England announced proposals to reduce the salary paid to Dental Foundation Trainees in England. It is proposing a cut of nearly eight per cent to the salary which would see those beginning DFT in September 2014 being paid £28,076; more than £2,000 less than those currently completing their corporate dentistry.

The British Dental Association has called this an ‘attack on the youngest and most vulnerable members of the profession’, and argues that dental students are graduating with increasing levels of debt. This means that they are already facing challenges to manage their finances and launch their careers.

In response, the BDA has launched a petition to oppose the proposals. At time of writing, the e-petition had 2,220 signatures. It can be viewed at http://epetitions.direct.gov.uk/petitions/64208.

Sixty four per cent of dentists said they were worried about rising costs and reduced profits, followed by the new dental contract for England and Wales (85 per cent) and changes to the NHS pension scheme (55 per cent).

‘31 per cent of dentists would not recommend their profession to someone at the start of their career’

Michael Buble knocks out tooth with microphone

Canadian singer Michael Buble had to undergo emergency dental surgery after he knocked out his tooth during a Sydney concert. Buble posted a picture of himself wearing a mask in a dental surgery on social media site Instagram, with the caption: ‘Thankfully no one knew but I knocked my tooth out with my microphone last night during the second song!!’ He carried on the rest of the show, with fans none the wiser that he was missing a tooth. He later visited a local dental surgery in Sydney to get it fixed.

Norwich-based illegal tooth whitener prosecuted

The General Dental Council (GDC) has prosecuted a woman for unlawfully carrying out teeth whitening. Catherine Davies, who carried out the treatment at Oasis Sport and Leisure Complex in Norwich on 6 January 2014, has never been registered with the GDC. On 50 April 2014 she pleaded guilty at Norwich Magistrates’ Court to unlawfully practising dentistry, and was sentenced to a 12 month conditional discharge. She was ordered to pay costs of £500 to the GDC, compensation of £99 to the complainant, and a £15 victim surcharge.

3D mouthpiece may help treat sleep apnoea

A new device to treat sleep apnoea has been developed by Australian researchers. A 3D technology is used to make a customised mouthpiece which changes the airflow through the mouth to the back of the throat, avoiding obstructions from the nose, the back of the mouth and the tongue. The developers say that the mouthpiece, which is expected to be available next year, can be tailored to every individual’s mouth using a 3D scan. In the UK, it is estimated that around four per cent of middle-aged men and two per cent of middle-aged women suffer from sleep apnoea, although the condition often goes undiagnosed. Studies have also shown that 60 per cent of people over 65 years old have sleep apnoea.
BAN SUGARY DRINKS FROM SCHOOLS, SAYS POLL

A new poll has found that two thirds of people would support a ban on sugary drinks in all UK schools and academies.

Current government policy bans the sale of fizzy drinks, crisps and sweets in local authority-run schools, but leaves the decision of whether children can bring them to school up to head teachers. These rules do not apply to academies, free schools and private schools.

The poll, carried out for BBC 5Live’s Richard Bacon programme, found that more than four out of ten people would support a tax on sugary drinks, while 50 per cent said health warnings on packaging would encourage them to eat more healthily. However according to the BBC, some representatives from the sugar industry say it is being ‘denounced’. Head of food science at AB Sugar Dr Julian Cooper said: “It’s quite simplistic just to demonise one ingredient to the exclusion of all others. We would say that we’re probably consuming too many calories and probably doing too little exercise and activity. There is probably an over consumption of all calories; not sugar per se.”

FOOD NEEDS TOBACCO-LIKE REGULATION, SAY HEALTH EXPERTS

The food industry should be regulated like the tobacco industry, international groups have said.

Consumers International and World Obesity Federation have called on the international community to develop a global convention to fight diet-related ill health, similar to the legal framework for tobacco control.

They say that obesity currently poses a greater global health risk than cigarettes, with global deaths attributable to obesity having risen from 2.6 million in 2005 to 5.4 million in 2010.

The groups are asking government to introduce policy measures designed to help consumers make healthier choices. These could include pictures on food packaging of damage caused by obesity, similar to those on cigarette packets, as well as placing stricter controls on food marketing and requiring reformulation of unhealthy food products.

Consumers International Director General, Amanda Long, said: “The scale of the impact of unhealthy food on consumer health is comparable to the impact of cigarettes. The food and beverage industry has dragged its feet on meaningful change and governments have felt unable or unwilling to act.

“The only answer remaining for the global community is a framework convention and we urge governments to seriously consider our recommendations for achieving that.”

If they do not, we risk decades of obstruction from industry and a repeat of the catastrophic health crisis caused by smoking.”

World Obesity Federation Director of Policy, Dr Tim Lobstein, says: “If obesity was an infectious disease we would have seen a few billions of dollars being invested in bringing it under control. But because obesity is largely caused by the overconsumption of fatty and sugary foods, we have seen policy-makers unwilling to take on the corporate interests who promote these foods. Governments need to take collective action and a Framework Convention offers them the chance to do this.”

CALL TO BAN MICROBEADS IN TOOTHPASTE IN NEW YORK

New York’s Attorney General Eric Schneiderman is making calls to ban the sale of products containing microbeads, such as face washes and toothpastes.

Schneiderman said that the beads end up in New York’s waters and can stay there for decades, absorbing cancer-causing toxins. He has received support from doctors, educators, activists and legislators from across the state, who all demand that the state Senate pass the Microbeads-Free Water Act.

If adopted, products containing microbeads would be banned by 2016. It would make New York the first state to ban the sale of these products.

HALVING LEVELS OF SMOKING COULD PREVENT 43 MILLION DEATHS

Reaching globally-agreed targets for health risks such as smoking and alcohol could prevent more than 57 million deaths by 2025, a new study has found.

The study, led by Imperial College London and published in The Lancet, found that the large majority of the extra deaths will be in low- and middle-income nations. Targets for reducing smoking and blood pressure will lead to the largest health benefits.

In 2011, the UN General Assembly agreed to reduce deaths from the big-four chronic diseases: cancers, diabetes, lung disease and cardiovascular disease. The World Health Organisation (WHO) created targets for both premature deaths from these chronic diseases and their key risk factors like smoking, alcohol use, high blood pressure and blood glucose, obesity and salt consumption.

The study shows that the big-four chronic diseases killed more than 28 million people in 2010; a number that is projected to increase to 59 million in 2025 is no new action is taken. If the six risk factor targets are achieved, more than 57 million deaths will be prevented by 2025.

Currently, global targets include a 50 per cent reduction in smoking levels, a 10 per cent reduction in alcohol consumption and a 50 per cent reduction in salt in food. However this new research found that if a more ambitious level of halving the levels of smoking is achieved, alongside the other targets, the risk of dying prematurely from the big-four would prevent nearly 45 million deaths by 2025.

Lead author of the study, Dr Vasiliis Kontis from Imperial College London, said: “Our study demonstrates that the tobacco use target should be more ambitious. Reducing the prevalence of smoking by 50 per cent by 2025 is feasible based on proven policy measures, and should become a global target to avoid millions of premature deaths.”

MAN PROSECUTED FOR YOUTUBE ‘DELTAL TECHNICIAN’ CLAIM

The General Dental Council (GDC) has prosecuted a man for unlawfully calling himself a ‘Dental Technician’ on YouTube.

Luis Fairman, who has never been registered with the GDC, unlawfully used the title ‘dental technician’ on a video entitles ‘NHS Dentistry – Ed’s Story’.

On Thursday 8 May, he appeared at Bodmin Magistrates’ Court and pleaded guilty to the charge. He has been fined £500 and ordered to pay a £50 victim surcharge. He must also pay £500 in costs to the GDC.
Tesco removes checkout sweets

Tesco has announced that sweets and chocolates will be removed from checkout trays across all of their stores.

This follows research that found 65 per cent of customers said removing confectionery from checkouts would help them make healthier choices when shopping. Larger Tesco stores stopped selling sweets at checkouts 20 years ago, but for the first time they will be removed from all stores, including Tesco Metro and Express.

Tesco Chief Executive Philip Clarke said: “We all know how easy it is to be tempted by sugary snacks at the checkout, and we want to help our customers lead healthier lives. We’ve already removed billions of calories from our soft drinks, sandwich-es and ready meal ranges by changing the recipes to reduce their sugar, salt and fat content. And we will continue to look for opportunities to take out more. “We’re doing this now because our customers have told us that removing sweets and chocolates from checkouts will help them make healthier choices.”

Tesco will be trialling a variety of healthier products at checkouts before implementing the full change across all stores at the end of the year.

Earlier this year, Lidl also announced that it was banning sweets and chocolate from checkouts in all of its UK stores.

Do you have an opinion or something to say on any Dental Tribune UK article? Or would you like to write your own opinion for our guest comment page?

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James Hull puts classic car collection up for sale

Dr James Hull, 53, who founded dental practice chain James Hull Associates, has put his classic car collection up for sale, with a reserve price of £100m.

Britain’s largest privately owned classic car collection, which has been 35 years in the making, will be sold to the highest bidder.

According to the Financial Times, Dr Hull is selling his collection because of health problems. It is made up of 457 cars, and includes Winston Churchill’s Austin and Lord Mountbatten’s Mini Traveller, as well as 365 replica miniature pedal cars and industry memorabilia.

The collection will be sold intact through a private bidding process. Dr Hull said: “Whether it’s a national exhibition venue in the UK, or to a foreign bidder, I will insist upon it being kept together. Hopefully, it will end up staying here.”

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New photoactive molecule hardens dental fillings faster

Researchers at the Vienna University of Technology have developed a new dental filling material which is easier to harden.

The researchers, in collaboration with dental manufacturer Ivoclar Vivadent, have developed photoactive materials based on germanium, which they say reduces the duration of the hardening process for fillings.

Modern dental composites contain photoactive organic resins which react to light of a particular wavelength and readily solidify. Professor Robert Liska from the University said: “Usually, light in the violet and ultraviolet region is used.” Light with longer wavelengths can also be used, which penetrates deeper into the material, but the polymerisation process is less efficient. If the filling cannot be hardened in one step, the procedure is repeated several times.

The newly developed composite contains 0.04 per cent of germanium. The researchers say that the molecule is split into two parts by blue light, creating radicals, which initiate a chain reaction: molecular compounds (which are already present in the filling) assemble into polymers, and the material hardens.

Tests showed that the penetration depth could be increased from two mm to four mm with the new compound.

Prosecuted man vows to carry on denture business

A Liverpool man who was prosecuted for unlawfully practising dentistry has said he will carry on his denture business.

Frank Mulholland, 74, was prosecuted for working as an unregistered Clinical Dental Technician from his dental laboratory located opposite the Royal Liverpool Dental Hospital, providing dentures and denture repairs.

Mr Mulholland later told the Liverpool Echo that he believes the prosecution was unfair and that he was appropriately qualified to carry out the work he was doing. He said he will no longer do dentures but will continue to carry out dental repairs, which he says the GDC allows.

He said: “Most people come to me to have old dentures, I mix up the dental materials, put it in the denture and they press them back into their mouths themselves. I’ve never been registered with the GDC because I’m 74 and there’s a grandfather clause to say I didn’t have to join it. The judge was horrible, she told me to plead guilty or the fine would be £12,000 rather than £4,000."

Saliva used to run power generators

Saliva can power micro-sized microbial fuel cells which produce tiny amounts of energy sufficient to run on-chip applications, a team of engineers from Penn State University has found.

“By producing nearly one microwatt in power, this saliva-powered, micro-sized MFC already generates enough power to be directly used as an energy harvester in micro-electronic applications,” the researchers wrote in the report, published in the journal NPG Asia Materials.

The researchers believe that the emergence of ultra-low-power chip-level biomedical electronics – devices able to operate at sub-microwatt power outputs – is becoming a reality. One possible application, the researchers say, would be a tiny osmolarity prediction sensor based on the conductivity of a woman’s saliva, which changes five days before ovulation. The device would measure the conductivity of the saliva and then use the saliva for power to send the reading to a nearby mobile phone.

Scientists find mechanism behind red wine’s health benefits

Resveratrol, found in red wine, blueberries, cranberries and peanuts, is associated with beneficial effects in ageing, reducing heart disease and some types of cancer, and inflammation.

Scientists from The Scripps Research Institute (TSRI) have now identified one of the molecular pathways that resveratrol uses to achieve its beneficial action. They found that resveratrol controls the body’s inflammatory response as a binding partner with the oestrogen receptor without stimulating oestrogenic cell proliferation, which is good news for its possible use as a model for drug design.

Study lead Kendall Nettles said: “Oestrogen has beneficial effects on conditions like diabetes and obesity but may increase cancer risk. What hasn’t been well understood until now is that you can achieve those same beneficial effects with something like reservatrol.”

According to Nettles, resveratrol doesn’t work very efficiently in the body. However, he said: “Now that we understand that we can do this through the oestrogen receptor, there might be compounds other than resveratrol out there that can do the same thing – only better.”

One in five adults vitamin D deficient

Twenty three per cent of adults have a vitamin D deficiency, new figures show. This comes after new guidance from the National Institute for Health and Care Excellence (NICE) Centre for Public Health confirmed that 1 in 5 adults are vitamin D deficient.

In light of these figures, the National Osteoporosis Society is urging people to get safe sun exposure every day between May and September to boost bone health, as part of their annual Sunlight Campaign.

Claire Severgnini, Chief Executive of the National Osteoporosis Society, said: “The Sunlight Campaign is all about raising awareness of vitamin D and its importance for bone health. We want to give clear advice about how to achieve this natural health boost safely so that people can be confident about going outdoors and getting the sun exposure they need without burning and damaging their skin.”

The charity advises that ten minutes once or twice a day in the sun with bare arms and legs is enough for us to top up our vitamin D levels to last through winter.

Dr Alison Tristone, Chief Nutritionist and Director of Diet and Nutrition at Public Health England (PHE) said: “I am delighted to see the launch of this campaign which highlights the importance of getting enough vitamin D they need by exposing their skin to summer sunlight for short periods, taking care to cover up or protect their skin before it burns.

“In line with government advice, PHE recommends that people who are unable to get enough sun, as well as infants and young children aged six months to five years, pregnant and breastfeeding women, and people over 65 years, take a daily vitamin D supplement to prevent deficiency.”

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E-cigarettes increase drug-resistant bacteria

E-cigarettes can increase drug-resistant and potentially life-threatening bacteria, while decreasing the ability of human cells to kill these bacteria, researchers have found.

Researchers at the VA San Diego Healthcare System and the University of California, San Diego, tested the effects of e-cigarette vapour on live MRSA and human epithelial cells.

Lead investigator Laura Crotty Alexander said that exposure to e-cigarette vapour increased the virulence of the bacteria, helping MRSA escape killing by antimicrobial peptides and macrophages.

However, they found that when MRSA is exposed to regular cigarette smoke, their virulence is even greater. In a mouse model of pneumonia, cigarette smoke exposed MRSA had four-times greater survival in the lungs, and killed 50 percent more mice than control MRSA. E-cigarette vapour-exposed MRSA were also more virulent in mice, with a three-fold higher survival.

Crotty Alexander said: “As health care professionals, we are always being asked by patients, ‘Would this be better for me?’ In the case of smoking e-cigarettes, I hated not having an answer. While the answer isn’t black and white, our study suggests a response: even if e-cigarettes may not be as bad as tobacco, they still have measurable detrimental effects on health.”

Apex Dental Care bought by Oasis Healthcare

Oasis Healthcare has acquired Apex Dental Care for an ‘undisclosed sum’.

Oasis also took over Smiles Dental in April 2014. The additions of Apex and Smiles to the Oasis portfolio will increase the company’s turnover by 40 percent from £160 million to more than £225 million. Its practice network will have grown by more than 50 percent from 204 to more than 310 in six weeks.

Justin Ash, CEO at Oasis Healthcare Group, said: “We are delighted to welcome the Apex team to Oasis. Both companies share the same commitment to providing high quality, easily accessible dental care and have developed a patient-led culture.

“Adding both Apex and Smiles to the Oasis portfolio rapidly transforms the size and scope of Oasis and underlines the rapid progress we are making in building a strong, trusted and customer-focused dental brand in a fragmented market. Our ambitions for growth do not stop here and we have a strong pipeline of acquisitions and new builds.”

Ben Chaing, CEO at Apex Dental said: “We are pleased that Oasis will be taking forward the Apex practices and teams. Following initial discussions with the Oasis team it soon became apparent that we shared the same vision for how the dental market should evolve. By combining Apex’s dental practices with Oasis the group will be well placed to continue improving the breadth and quality of our service to patients with the benefit of an expanded network and even stronger clinical support team.”

Antibiotic resistance is ‘serious worldwide threat’

A new report from the World Health Organisation (WHO) reveals the serious global threat of antibiotic resistance.

The report reviewed the levels of antimicrobial resistance in many types of bacteria, viruses, fungi and parasites, in 114 member states. It notes very high levels of resistance in all WHO regions in those that cause both community and healthcare-associated infections; this includes E.coli, MRSA and TB among others.

Dr Keiji Fukuda, WHO’s Assistant Director-General for Health Security, said: “Without urgent, coordinated action by many stakeholders, the world is headed for a post-antibiotic era, in which common infections and minor injuries which have been treatable for decades can once again kill.”

Some WHO regions were also more virulent in 2014 than they actually did. Those surveyed thought their teeth made them look up to five years younger and improved their employment potential by 10 percent.

Dr Paul Cosford, Director for Health Protection and Medical Director at PHE, said: “Whist the UK does not have the levels of antibiotic resistance seen in some parts of the world we do see patients with infections resistant to antibiotics. This is a trend that is increasing and we take this very seriously.

“Combating the development and spread of antibiotic resistance requires a multifaceted approach and PHE is working very closely with its stakeholders to address this. Our work is contributing to the new cross-government national strategy that aims to tackle one of the biggest healthcare issues of our time.”

Teeth are new sign of social status

Teeth are becoming the new indicator of social status, according to social scientists Malcolm Gladwell.

The writer of David and Goliath said that obesity and bad teeth will now define status, rather than race and gender.

He told The Times: “That’s kind of the way we’re moving, as the gap between the fit and unfit grows. The teeth thing and the obesity problem are the same; they are symptoms of the same set of inferences that are being drawn.”

He also added that having bad teeth will mean that you are denied certain entry-level jobs, leading to a lower chance of success.
A review of Amit Rai’s book by James Bannister

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lind spots tend to go unnoted until it’s rather too late. Take choosing a career – most people would agree that to enter into a profession, one has to take a relevant course at university. Which is true, for the most part (apprenticeships are an oft-overlooked alternative), but then comes the big question: what happens between university and that first job? Like a movie with a missing scene, people often just assume there’s a jump cut from graduation to the start of your chosen career. In truth, it’s a lot more complicated than that; no less so in Dentistry.

Dental Foundation Training: The essential handbook for foundation dentists is precisely that: an essential handbook detailing quite literally everything you will need to know during your transition from undergraduate study to unsupervised performance. The book employs a very thorough, concise writing style not dissimilar to a journal article, and wastes no time in bringing the reader up to speed on the details of foundation training – one is quickly informed of what it is, its purpose and how to secure a place on the scheme. Substantial detail is also provided on its technicalities, such as the role of your supervisor and what to do if you miss assessment. This survival guide aspect of the book’s nature shines through – one tip later on to set up a code word with your nurse to alert a supervisor mid-procedure particularly struck me as invaluable advice.

After detailing the purpose of foundation training, the book goes on to describe general dental practice with particular respect to NHS dentistry, complete with a checklist of things to do in preparation for your first day of practice. Chapters 3, 4 and 5 are dedicated to describing the teaching process, curriculum and assessment involved in foundation training, and the latter half of the book discuss the future following foundation training – potential career paths, dento-legal considerations (with a particular focus on how to avoid being sued) and a general survival guide for your years as a foundation dentist. Indeed, the advice given in these last few chapters has universal application, such as how to respond to a complaint not just in terms of formal proceedings, but in terms of personal development and growth. Equal parts textbook and syllabus, Dental Foundation Training acts as a catch-all guide to a year of functional dental training, providing advice on every step of your journey from university into the dental profession (including a substantial portion on potential career paths following training). However, while comparatively easy to read, the scientific journal writing style may not appeal to all readers. Abbreviations are ubiquitous, for example, and it can prove challenging to memorise every single one. While there is an abbreviations section to help with this, it merely adds a secondary problem of having to constantly flick back-and-forth in order to make sense of some sentences. Overall, the type of reader that would benefit from this most would be a graduate dental student keen to make the most of their career. The book is filled with good advice, and acts as a consolidated library of information regarding training, development, and the subsequent career possibilities for dentists. I would stop just short of calling it “essential,” but it’s nothing less than invaluable.


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Top Tips For Aesthetic Brilliance Part 1
Lloyd Pope BDS describes Galip Gurel’s use of APTs for veneers, one of the cornerstones of Galip Gurel’s presentation at the 10th Annual BACD Conference

The keynote presentation at this year’s BACD Conference was delivered by Galip Gurel, arguably one of the world’s leading exponents of minimally invasive aesthetic dentistry. Nowadays, just a small amount of treatment to one or two teeth can have a dramatic effect on the overall aesthetic result. We need to be able to visualise the final result ourselves and then introduce our ideas to the patient. One of the most important tools for achieving this is the use of Aesthetic Provisional Temporary (APT) mock-ups, one of Galip’s outstanding areas of expertise.

Galip highlighted the evolution of veneer preps as follows:
1) Solely using depth guide diamond burs
2) Silicone indexes, which were an improvement but still had some faults
3) APT mock-ups

With simple cases, you can virtually guarantee that every dentist will do the same veneer preparations because all the teeth are perfectly aligned. What is more they can easily be prepped using depth cutting burs following a standard protocol. There are various depth cutting burs available, some with single sections and some with multiple sections. These burs are also available with different depths so that there is something available for every circumstance. The preparations should be supra-gingival. Once prepped you can provide provisionalaries for the patient to wear whilst the final restorations are prepared. Simple preps, with reductions within the enamel only offer good long-term success because there is optimal bonding and minimised flexing of the residual tooth.

However, if the case involves space management, either because of overcrowding or over-spacing, this creates different problems. If space management is involved this requires a degree of visual illusion in order to achieve an aesthetic result. Essentially you can change the alignment and appearance of the smile by altering line angles etc.

Sometimes not every prep is perfect, no matter who does it, therefore you need a protocol to make it more reliable and predictable.

Rule 1 – if the teeth are crooked don’t do veneers straight away, use orthodontics first to move them into a reasonable position first.

The Aesthetic Provisional Temporary Protocol
Step 1 – The mock-up and silicone key
Do a mock-up in composite to create the final outcome, though not necessarily in every detail. This is designed to assess the length of the teeth etc and to share the information with the patient. At this stage you can add composite to the teeth and even onto the soft tissue to see the effect of any proposed soft tissue adjustment within an appropriate frame, the lips. Both you and the patient can assess the effect. Will orthodontics be required or not? This depends upon the patient’s opinion, so sometimes yes and sometimes no.
After creating an acceptable mock-up you take two impressions; one impression of the mock-up and one impression of the existing teeth. By comparing the two the laboratory can do a wax-up to mimic the results. The resultant wax-up will have the perfect outline. This then enables you to create a silicone key either within the laboratory or chairside.

Step 2 – The old way!
Use the silicone key to create the perfect APT (Aesthetic Provisional Temporary) mock-up using an appropriate temporary crown and bridge material. GG uses DMG’s Luxatemp because it is simply the best. This is then used to assess everything before you start to prep the teeth. At this stage you can evaluate the aesthetics, occlusion, phonetics, etc.

Because the patient is not yet anaesthetised you can still assess the smile-line etc too.

How much space is required for the veneer?
The minimum must be 0.5mm, but the actual thickness entirely depends on the amount of shade change required.

As a rule of thumb, on average you require 0.15mm per shade change with a minimum of 0.5mm, though this does depend upon the lab and the materials they will be using. Therefore a shade change of four requires a minimum reduction of 0.7mm.

Consequently, after removing the APT use the silicone key to assess which parts of the teeth to prep and which to leave alone. Prep if >0.5mm gap between silicone template and tooth and leave if <0.5mm. However it is very difficult to perform this by simply looking at the two things and attempting to judge the size of the gaps. Normally results in over-prepping as a precaution, with all the complications this entails.

Step 3 – Galip’s way!
GG realised that you actually don’t need to be able to see the teeth to prep them.

He realised that when you have an APT to demonstrate the aesthetics to the patient, and they like it, you can simply leave the APT over the teeth and prep through it using an appropriate 0.5mm depth drill. If the gap is >0.5mm the drill will penetrate the enamel. If the gap is >0.5mm it won’t and the teeth don’t need prepping. To make this even easier GG uses a pencil to highlight the grooves on the tooth. Then, once the APT is removed, it is simply a case of reducing the enamel in the appropriate areas until all the pencil lines have been eliminated.

Research proves that if veneer preparations are entirely within enamel there is a 99 per cent success rate, but that if the dentine is involved in any way the success rate drops to just 68 per cent. Typical failures are fractures, discolouration, marginal leakage etc. This research includes a retrospective study by GG himself in which he followed his own veneer retention results. It was published in two articles in the JPPD in November 2012 and February 2013. It showed that in enamel you only get failures due to fractures, you don’t get microleakage or debonding. These fractures are mainly due to occlusal problems relating to new crowns, changes in chewing patterns etc.

You then do a simple butt joint across the incisal edge to a depth of 1.5 mm. This is the strongest type of joint.

Look out for part II of this article series in the next issue of Dental Tribune.

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Stress in the dental profession
Neel Kothari discusses the stress that comes with practising dentistry

Despite the many rewards of being a dentist I have always felt that, overall, ours is a lonely profession. The stress of day to day decision making, potential litigation and the practice of defensive dentistry is enough to keep anyone busy, but add on the stress of complying with non clinical organisations such as the CQC and having to nod politely with the sheer mass of risk assessments, practice policies and legislation, this is simply enough to suck the soul out of any person.

Fellow editorial board member Stephen Hudson once told me that all you really need with your patients is rapport, “no one sues you if you have rapport with them”. At the time I politely nodded and pretended to agree, however as time went on I found myself strangely drawn to that statement and have tried to improve my rapport with patients ever since. I don’t know if this will reduce the future risk of complaints or litigation, but I can certainly say it has made day to day working a slightly happier environment.

Since entering dental school I was always told that dentists have the highest suicide rates amongst all professions. I’m not completely sure whether this is in fact true, however a number of authors have raised the issue of suicide and have highlighted its prevalence. A literature review published in the International Dental Journal by Sancho and Ruiz (2010) looking at whether the risk of suicide amongst dentists is a myth or a reality came to the conclusion: “In the literature we find systematically a suicide rate among dentists higher than those of other occupations. These studies lack the correct scientific weight and new studies are required that introduce the demographical variables, the psiquiatric morbidity previous to the development of the profession, the opportunity factor, the stressors not related to work and the relative emphasis to these are necessary to for the profession to decrease the risk of suicide.”

Last December dentist Dr Kamath committed suicide after feeling “harassed and bullied” by health chiefs over standards of record keeping at his practice in Leeds. Dr Kamath was under investigation by NHS, Airedale, Bradford and Leeds over the keeping of his records and his suicide prompted calls for an immediate inquest. The inquest at Wakefield heard father-of-three Dr Kamath feared for his career and that the trust had threatened to refer the practice to regulatory body the General Dental Council. The inquest also heard how following two minor complaints about the dental practice, the primary care trust decided to conduct an audit of 50 of the practice’s patients and how Dr Kamath committed suicide just five days after a meeting with PCT officials.

In a statement read to the court, wife Dr Rajni Prasad described how the couple felt after their last meeting with the trust: “My husband and I were both very stressed by this and both felt very vulnerable and harassed and bullied with no support offered.”

The need for support is an absolutely essential part of our profession and I for one am sick and tired of government officials telling us how intelligent dentists are every time they want to enforce a new change. Our dental school training doesn’t teach us why or how to do a legionella risk assessment or why I find it easier to access my bank account online rather than the NHSBSA website to update and verify my pension contributions! It teaches us the foundations of clinical dentistry instead.

It really bugs me when dentists are asked to put their professional integrity above all other incentives but are not supported in doing so. It really bugs me when dentists are asked to put their professional obligation upon all healthcare workers to report colleagues they suspect of poor practice or misconduct - and if they failed to do so, they would themselves face disciplinary action. However at the same time the Committee said they were well aware that some doctors and nurses who have blown the whistle have ‘sometimes been subject to suspension, dismissal or other sanctions’.

Over the course of our professional careers we will all encounter situations outside of our control that must make us question whether or not we should continue our careers or move our concerns to higher powers. Whilst on face value it may seem that this decision should be an easy one, in reality very few people actually do whistle blow and those who do are not always met with welcoming arms.

At the risk of stating the obvious it is clear that the business of dentistry is a very stressful one and it probably always has been. It’s difficult to point the finger at one specific part of the job that brings rise to such stress, but in my opinion dealing with the non clinical business side of things brings rise to many more problems than the healthcare side we were taught at dental school.

For most of us, creating happiness within a workplace clearly involves more than just a monetary reward and unfortunately having to comply with the raft of legislation imposed upon the profession such as HFTM01-05 and CQC inspections simply crawl away just that little bit more happiness from our day to day working lives.

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About the author

Neel Kothari qualified as a dentist from Dental University, Eastman Dental Hospital in 2001 and currently works at Sawston, Cambridge as a principal dentist at High Street Dental Practice. He has completed a year-long postgraduate certificate in implantology and is currently undertaking the Diploma in Implantology at UCL’s Eastman Dental Institute.

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Flapless MIMI® implantation using the two-piece implant shuttle preventing physiological bone loss

Armin Nedjay discusses Flapless implants

**Fig 1**

According to valid scientific criteria for a successful implant treatment, bone loss after one-year loading is considered as inevitable, and some traditional implants are frequently associated with bone loss.

**Fig 2**

The epithelial attachment in natural teeth and the one in osseous implants have many features in common, but there are also differences between them. The connective tissue fibers adjacent to the implants are in parallel with the longitudinal axis of the implant, which is different from the biological structures around natural teeth. There are no nerve and vessel structures adjacent to the implant surface; the tissue is similar to scar-like tissue and differs from periodontal tissue, which is connected to the tooth and alveolar bone.

**Fig 3**

Soft tissue consists of the sulcus, the gingival epithelium, and the connective tissue fibers adjacent to the implant are in parallel with the longitudinal axis of the implant (Fig. 1, implant on the right). The epithelial attachment is the arrangement of these three components in a way that can be both stable and functional.

**Fig 4**

Physiologically speaking, bone loss has been considered as inevitable, and some traditional implants are frequently associated with bone loss.

**Fig 5**

Micro-gap

The micro-gap is located between the implant body and abutment. It has been considered as a disadvantage of two-piece implants. If the micro-gap is too big, as is the case with many conventional two-piece implant systems and due to loading of the implant-abutment connection, there is a high risk of bacterial contamination of the micro-gap and implant body. This can lead to bone loss.

**Platform Switching**

Implants with a Platform-Switching concept have a proper potential to prevent bone loss. The diameter of the healing abutment is narrower than the diameter of the implant platform/shoulder. In this way, the implant-abutment connection is not platform-matched. Dental implant systems such as the Champions (R)Evolution® and Astra Tech® have an integrated Platform-Switching design and an internal cone that is long enough and that has an optimal angle. In addition, the geometry of the implant-abutment connection is the same for all implant diameters, so there is a prosthetic line for all implant diameters. With the Platform Switching function, the central position of the micro-gap is moved to the implant axis. Through the separation of the micro-gap, which might risk being contaminated with bacteria, from the peri-implant bone tissue in the implant shoulder area, the biological width is shifted away from bone.

**Conclusion**

Conventional implantation methods have been increasingly questioned. MIMI® is the abbreviation for the Minimally Invasive Method of Dental Implantation. One-piece implants and also two-piece implant systems will be ideal for MIMI® if they can remain bacteria-resistant even if they are loaded with strong forces.
The Shuttle: The two-piece Champions® (R)Evolution® implant system consists of an integrated bacteria-proof “Shuttle”/Insert, which remains in the implant for at least eight weeks post surgery until the final prosthetic restoration is fit. During the healing phase in the first weeks, the implant internal thread will not be contaminated with bacteria. During implantation, the Shuttle and micro-close connection protects the internal thread from contamination with bacteria, blood or saliva. With these two-piece implant systems and also one-piece implants, there is very little risk of bone loss. Sufficient primary stability at a torque of at least 35Ncm is a prerequisite for a successful implantation. The implant with the Shuttle can be inserted at a torque of up to 70/80Ncm and achieve sufficient primary stability without deforming or breaking the outer part and inner thread and without loosening the abutment during the prosthetic phase.

Platform Switching & Optimised Cone Connection: It has been found that crestal bone loss can be prevented with implants with an integrated Platform-Switching design. In addition, internal cone connections should have an angle of 5° to 10°, and the cone should be long enough in order to prevent bacterial migration even if, for example, a 3.5mm-diameter two-piece implant is loaded with a force of 200 N. Since one-piece implant systems have no micro-gap at all, they are bacteria-proof as well. The one-piece implant system is particularly indicated for the rehabilitation of four or more implants/teeth. In order to compensate insertion divergences, Prep-Caps (zircon or titanium) can be cemented. The impression can be cast with super hard plaster (no Laboratory Analogs!) in the dental laboratory. If done correctly, the cement will not be pressed subgingivally so that there is no risk of periimplantitis because of cement remains in these one-piece implant Prep-Caps (“abutments”).

Due to the flapless MIMI® procedure and the fact that a second or third session is not necessary (implant exposure, subgingival impression), the biological width can be formed and is not disturbed because of a second post surgery until the final prosthetic restoration is fit. During the healing phase in the first weeks, the implant internal thread will not be contaminated with bacteria. During implantation, the Shuttle and micro-close connection protects the internal thread from contamination with bacteria, blood or saliva. With these two-piece implant systems and also one-piece implants, there is very little risk of bone loss. Sufficient primary stability at a torque of at least 35Ncm is a prerequisite for a successful implantation. The implant with the Shuttle can be inserted at a torque of up to 70/80Ncm and achieve sufficient primary stability without deforming or breaking the outer part and inner thread and without loosening the abutment during the prosthetic phase.

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When inserting the implants using the flapless and periosteum preserving MIMI® method, we drill the bone cavity transgingivally at a rotation speed ranging from 50 – 250 rpm with the conical triangular drills, depending on the bone density. In most cases, this is done without water cooling. The cylindrical drills are additionally used to prepare the D1 and D2 bone. For preparing the soft D3/D4 bone, it is sufficient to use the conical triangular yellow drill and special bone condensers. After each step, the bone cavity must be checked with the thin BCC (Bone Cavity Check) probe. While avoiding bone overheating, a two-piece Champions® (R)Evolution®, which is equipped with an Insert/Shuttle, can be inserted at a torque ranging from 40-60 Ncm without deforming or breaking the inner thread and the thin titanium part (for instance, a 3.5 mm-diameter implant has an approx. 0.4 mm-thick outer part). Sufficient primary stability can be achieved.

The bacteria-proof platform-switched Shuttle (see Fig. 11 and “2”), which is set in the implant cone, is restored with a Gingiva-Clix. The Gingiva-Clix is made from white bio-compatible BINC©, and it is available in 6 combinations of heights and dimensions. During the bone remodeling phase within 8 weeks following surgery, the Gingiva-Clix stays on the Shuttle. After 8 weeks, the Gingiva-Clix is removed, and with this particular Clix type, the gingiva is shaped irritation-free. An impression post is transgingivally set in the Shuttle and manually screwed...

The Impression Coping is set. After making the impression and the supraconstruction, the Shuttle, which is connected to the implant, is removed with the Shuttle Extractor. The Shuttle is removed for the first time, while the screw remains uncontaminated. After removing the Shuttle, the Abutment (ICA zircon abutment) is screwed seal-tight, preventing bacterial migration. Finally, the crown is cemented and fit.

After removing the small implant/Shuttle connecting screw, you can easily remove the Shuttle from the Champions® (R)Evolution® with the Shuttle-Extractor. This procedure is performed either about 8 weeks after implantation (transition between Primary Osseointegration Stability and Secondary Osseointegration Stability) in many cases or immediately after the insertion of the implants like in this case.

View of the implant in Tooth site 14: when the Shuttle was removed from the implant, the inner thread and the exterior wall of the Champions® (R)Evolution® remained intact and was not contaminated with bleeding, saliva and bacteria.

After removing the Shuttles, the Abutments for Ball-Head are screwed with the Insertion Aid that is also used for one-piece Champions®. The Shuttles are removed from the implants (without local anesthesia because the treatment, including the impression, is performed supragingivally).


Fig. 41-43: The initial situation in the 4th quadrant shows bone parts and adosional structures that were not completely solated. Tooth 21 could not be preserved, so a modified surface was selected for Tooth 23 in the maxilla. After the patient had received a periodontal treatment and had been informed about possible therapy solutions, the patient opted for a fixed implant-supported restoration in the sites 46 and 47. He provided the pa- tient with a provisional fitting restoration. Tooth 45 was also provided with a crown. In this way, the patient was able to eat “soft” his implants.

Fig. 44-46: The patient was treated under anesthesia (EOL forte). He was given 600 mg Ibuprofen. With the yellow, black, white and blue drills, we drilled in the 1/32 bone at a maximum rotation speed of 220 rpm. Then, we checked the bone cavity quality with the BC: (Bone Cavity Check) probe. Then, we inserted the Champions(R) Evolution(R) implant with the Insert/Shuttle, which had been fixed on the implant at a torque of only 10 Ncm Ex Works, at a torque ranging from 40 to 60 Ncm. In most cases, the Shuttles remain aloe loco. Then, we set Gingiva-Clix on the Champions®- Insert/Shuttle immediately after an X-ray check. The pressure and anesthesia are usually not necessary.

Fig. 47-49: After eight weeks, when – independent of bone type – the transition of all Champions® from Primary Osseointegration to Secondary Osseointegration can be assured, we remove the Gingiva-Clix and the small screw from the Insert/Shuttle and screw the metal impression posts in the Insert/Shuttle. In this case, we prepared Tooth 45, which was then provided with a crown. The Impression can be made without removing the Insert/Shuttle from the implant and without contaminating the implant with saliva. The impression of this two-piece implant system is made transgingivally or subgingivally. Implant exposure, pressure and anesthesia are usually not necessary.

Fig. 50-52: After taking X-rays, we fixed the white impression coping on the metal impression posts and made a closed impression.

Fig. 53-55: The abutments are chosen. Then, the final prostheotic restoration is fabricated. When fitting the prostheotic restoration, the Gingiva-Clix are removed, and the Inserts/Shuttles are removed from the implant for the first time. With a Pattern Resin key, you can set the abutments in the 9.5° Champions inner cone and screw them at a torque of 30 Ncm.

Fig. 56-58: After closing the abutment screws with Cavit, the crowns can be fixed with ImplantLink semi (company Dreux, Champions- Lips).

Fig. 59:

Fig. 60: This figure shows a placed 3.5 mm-diameter and 10 mm-diameter Champions(R) Evolution(R) implant, which were inserted transgingivally using the Duple MMR® method. The bone cavity depth corresponded to the implant length. After each drilling step, the bone cavity was checked and cleaned. Once the cavity was checked as a 1/32 bone, the Insert/Shuttle was removed, and the implants were immediately restored with Ball-Head Abutments to fix the prosthesis. Because of the gentle, patient-friendly and pressure preserving keyhole and Duple MMR® method, which is indicated in at least 60% of the cases, you hardly see any bleeding and open wounds. With this method, swelling, pain, and hematoma following an implantation are seen as a thing of the past in many cases. However, even if this technique might be quite easy to learn, it is not always suitable for beginners in Implantology. In order to apply the MMR® method successfully, it is necessary that the dentist has enough experience in Implantology and that he/she has considerable manual dexterity.

Fig. 61: This 99-year old patient from Munich (patient at risk) was the oldest patient worldwide who was treated with implants using the Duple MMR® method. In June 2012, this lady was provided with 4 implants to support a full provisional in the mandi- ble. Under local anesthesia, surgery lasted about 20 minutes, and the preparation of the restoration and matrices in the dental laboratory took about 2 hours. Two hours follow- ing surgery, she was able to eat an apple strudel. Two years later, she was still satisfied with her implants and did not experience any pain.
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Titanium has been established in dental implantology as the reference material owing to its biomechanical properties and its biocompatibility. Today, we are able to benefit from over 40 years of clinical and experimental experience in implantology. Customised abutments can be fabricated from titanium, zirconia or hybrid materials, such as a combination of titanium and zirconia, which in certain clinical circumstances improves the aesthetics of the visible areas while respecting the requirements of biocompatibility and biomechanics.

Dr Thierry Lachker describes an implant case

The multiplicity and sophistication of the offering in the field of prosthetic elements in implantology allow the practitioner to make a choice appropriate to the clinical particularities of each case. If the practitioner chooses a standard implant abutment, the dental technician will have to make adjustments, which implies considerable losses in precision and time. Moreover, with such abutments it is difficult to create an anatomical emergence profile because it cannot be modified and the base of the abutment cannot be changed. This observation is equally applicable to the angulation, which might even be selected by default.

A customised abutment created with CAD/CAM is the most accurate and simplest solution for an optimal result. The abutment is individually designed in order to ensure the homothety of the thickness of the materials and therefore the overall strength of the prosthesis. The dental technician has in this case maximum freedom in terms of design in order to create an abutment with the optimum emergence profile and angulation. In this manner, the abutment is specifically designed and fabricated for each patient.

Seating a four-unit bridge on three anatomical implant abutments

Clinical case
A 40-year-old male patient presented for treatment. He had no particular medical conditions or any contra-indications concerning the placement of implants. In 2009, the patient had undergone a sinus lift (an increase of the maxillary bone volume and the displacement of the sinus membrane to ensure implant success by increasing the height of the available bone) at a hospital prior to the placement of implants to replace teeth 15–17. The post-operative sequelae (pain, oede-
mas, etc.) resulted in the patient being entirely opposed to another intervention of this kind on the opposite side of the mouth.

During an appointment in October 2011, I was able to persuade the patient to accept implant treatment. I suggested first removing the three-unit bridge on teeth 25–25 and then extracting the roots of teeth 23 and 25, as well as seating of a denture on the day of the extraction, followed by placement of three implants in regions 23–25, the extraction of tooth 26, and seating of a four-unit bridge as the final prosthetic solution.

As the height of the available bone around tooth 26 was insufficient, I would not place an implant in that area but a tooth extension (a sinus lift would otherwise have been essential). The treatment plan was accepted by the patient two weeks later, and teeth 23 and 25 were extracted at the end of the month.

The patient was seen on 10 January 2012 for implant placement: two implants (NobelReplace RP, Nobel Biocare) with a diameter of 4.5mm and a length of 15mm for regions 25 and 24, and one implant (Nobel-

dentaire Crown Ceram) and 35N, and sealed with composite.

In May 2012, implant-level impressions were taken (open-tray impression technique), and the patient’s occlusion was recorded using silicone and a bite tray. Owing to the constraints related to the angulation of the implants in regions 24 and 25, I opted for titanium abutments. The angle of the implant in region 25 allowed for the insertion of a titanium–zirconia abutment for good gingival grip and a better aesthetic result.

Ten days later, two titanium abutments (ANA, T, Laboratoire Dentaire Crown Ceram) and one titanium–zirconia abutment (ANA, TZ, Laboratoire Dentaire Crown Ceram) were screwed onto the implants at a torque of 55N, and sealed with composite. An adjustment check of the contact points and of the occlusion was performed, followed by cementation of a ceramic bridge with a zirconia framework. A follow-up visit took place three days later.

Technique

For this case, it was possible to use abutments made from different materials according to the angulation of the implant: titanium for the pronounced angulations, and a combination of titanium and zirconia for the angulation with no particular constraints. It would have been equally possible to use a titanium abutment for the implant in region 25 but I opted for the titanium–zirconia abutment to obtain a better aesthetic result in the anterior region: brightness, translucency and no visible metal margin.

Customised CAD/CAM prosthetic elements and abutments respect the dental anatomy and allow extremely precise seating of a bridge on implants. Peri-odontal maintenance is therefore easier owing to easy access with a toothbrush because of the predetermined interdental spaces.

The simplicity of the process saves a considerable amount of time: no adjustments are necessary, the bridge is seated immediately, the occlusion is usually ideal, and greater accuracy can be achieved. In addition, only two appointments are necessary: one for impression taking and another for seating of the bridge.

Dental technician’s perspective

When the laboratory (Laboratoire Dentaire Crown Ceram) received this case, we were asked to create three customised anatomical abutments with a titanium interface for an individual and more precise fit, respecting the requirements of biocompatibility and biomechanics, and a coronaary part in zirconia for a better aesthetic result.

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Once the moulds had been cast, we determined that the considerable angulation of the implants in regions 24 and 25 and their shallow position in the tissue posed difficulties regarding the design of titanium–zirconia abutments. However, Dr Lachkar explained to us that in this case (ie the patient’s reluctance to undergo pre-implant surgery) he was forced to place the implants in the bone available and not necessarily in the ideal situation according to a prosthetic plan.

In this case, the titanium interface would have considerably exceeded the buccal surface and it would therefore have been necessary to reduce it. The bonding surface would therefore have been limited, which would have resulted in a great loss of mechanical resistance. We thus decided to use a titanium abutment manufactured from a single block and specially made to allow for such substantial angulations for teeth 24 and 25. For tooth 25, the implant angle allowed for a titanium–zirconia abutment, which was preferred to a titanium abutment for a better aesthetic result.

replace WP) with a diameter of 5mm and a length of 10mm for region 25. Tooth 26 was extracted days later.

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In this case, the titanium interface would have considerably exceeded the buccal surface and it would therefore have been necessary to reduce it. The bonding surface would therefore have been limited, which would have resulted in a great loss of mechanical resistance. We thus decided to use a titanium abutment manufactured from a single block and specially made to allow for such substantial angulations for teeth 24 and 25. For tooth 25, the implant angle allowed for a titanium–zirconia abutment, which was preferred to a titanium abutment for a better aesthetic result.

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Customised CAD/CAM prosthetic elements and abutments respect the dental anatomy and allow extremely precise seating of a bridge on implants.

Dental technician’s perspective

When the laboratory (Laboratoire Dentaire Crown Ceram) received this case, we were asked to create three customised anatomical abutments with a titanium interface for an individual and more precise fit, respecting the requirements of biocompatibility and biomechanics, and a coronaary part in zirconia for a better aesthetic result.

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Customised CAD/CAM prosthetic elements and abutments respect the dental anatomy and allow extremely precise seating of a bridge on implants. Peri-odontal maintenance is therefore easier owing to easy access with a toothbrush because of the predetermined interdental spaces.

The simplicity of the process saves a considerable amount of time: no adjustments are necessary, the bridge is seated immediately, the occlusion is usually ideal, and greater accuracy can be achieved. In addition, only two appointments are necessary: one for impression taking and another for seating of the bridge.

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Treatment options for peri-implantitis
A look at options for peri-implantitis therapy

The idea of creating a prosthetic dental implant to replace a missing tooth is certainly not a new one – in fact, there is evidence of early civilisations using dental implants as far back as 4,000 years ago, when the Chinese fashioned pegs out of precious metals. Millions of dental implants are placed every year on partially and fully edentulous patients – most of which achieve long-term success and do not develop complications.

But, this is not true of all dental implants: the oral disease peri-implantitis, caused by bacterial infection and tissue inflammation around the implant site, is now known to affect a huge number of patients – although its prevalence is hard to define as studies quote varying figures. However, peri-implantitis is thought to affect approximately one out of every 10 implants placed. The oral disease is therefore shaping up to become a major concern for both patients and dentists involved in implant treatment in the future. New implants that promise better osseointegration may have an effect on whether peri-implant diseases develop, but the results would need to be studied in the future.

Booming business

The number of dental implant purchases is on the increase, with approximately five million being sold annually. It is a very popular treatment option for people in Asia, as well as the Middle East, in particular, Israel – and has been rising in popularity the world over since the modern implant was introduced in the 1970s. Some dentists now believe that we are placing too many implants – opting for the invasive treatment because the patient requests it, or simply expects it and is unaware that there are other non-invasive solutions available that don’t run the risk of infection.

Cases demonstrating biological complications such as peri-implantitis and the less serious peri-implant mucositis, which is often the precursor to peri-implantitis, look set to increase in number in coming years, as studies have shown that occurrence of peri-implantitis increases with the number of years that the implant has been in place.

Awareness among dentists about peri-implantitis is growing and most are aware that it is no longer rare – although knowledge of the aetiology of peri-implant diseases is.

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* Based on research of other UK based BruxZir registered laboratories. ** Results are based on research carried out by Glidewell Laboratories in the USA. E&OE.

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Peri-implant diseases

If peri-implant mucositis is allowed to develop, it turns into peri-implantitis, which can lead to progressive loss of the supporting bone, and implant failure – and is therefore much more complex to treat.

Peri-implant diseases are caused by bacterial infection and/or biomechanical overload, which cause the inflammation. Patients with existing periodontal disease and poor oral hygiene habits – and smokers in particular – are very susceptible to developing a peri-implant disease.

Poor oral health and plaque control are a big cause of peri-implant diseases, and often occur due to the patient’s reticence to clean the area due to fear of pain or bleeding. Additionally, the patient may be unable to brush and floss properly due to the implant’s positioning or design increasing bacterial prevalence.

Diagnosis and treatment

It’s important to ensure that the dental team works together to spot the warning signs of peri-implant diseases – as these are often not noticed until they become more severe – and that each member of staff is knowledgeable about the risk factors, signs and symptoms in order to achieve early diagnosis and intervention. It is also a good idea to partner with a periodontist as soon as possible following diagnosis. Evidence suggests that peri-implant mucositis can be treated effectively if detected early, and is easily treated non-surgically. Prevention is possible with regular monitoring of dental implants, comprehensive periodontal evaluation and proper periodontal maintenance.

Peri-implantitis can be treated with mechanical debridement with antiseptics such as chlorhexidine, or surgery – or when all other therapies fail explanation. It is preferable to try a non-surgical treatment first, where possible. In terms of the merit of using antibiotics, Stefan Renvert et al in 2012 found that the use of antibiotics makes no difference. Many bacteria are now also resistant to most antibiotics – we’re in the era of widespread antibiotic and multi-drug resistance.

In cases where just an implant is affected by peri-implantitis, a non-surgical approach can have its merits. For example, scaling and root planing combined with an antiseptic such as chlorhexidine digluconate. This has been clinically proven as an effective adjunctive treatment for peri-implantitis and an effective first-line treatment for periodontal pocketing.

In conclusion, as with all inflammatory diseases, early detection and intervention of peri-implant mucositis and peri-implantitis is the best solution – however in cases that do develop, judge the merits of a non-surgical approach on a case by case basis and choose this option where possible to avoid invasive surgery. More study is needed on peri-implant diseases; we still do not know enough about them and require further research to substantiate emerging claims.

Prescribing information for PerioChip available on request.

About the author

For more information or to contact the team behind PerioChip®, email team@periochip.co.uk or call 0800 013 2333.
The University Hospital in Copenhagen is offering its 4th Trauma Symposium in Copenhagen

The understanding of healing after trauma is of vital importance for the oral health specialist. Tooth loss or anaesthetic treatment results can have a serious psychological effect on the patient. Therefore it is necessary that the specialist knows the log-term consequences of the different treatments available, says Dr. Jens Ove Andreassen, author of 11 textbooks and 560 scientific articles, who is the main researcher behind the organisation of the symposium.

The participant in the symposium can expect to be updated with an evidence based approach on various topics, for example the treatment of pulp necrosis in immature teeth. A number of treatment options are available, each presenting advantages and disadvantages. Information about indications, technical procedures in treatment, and outcome expectations of both traditional as well as current approaches will be shown.

In recent years new knowledge has been accumulated about the long-term fate of composite restorations. In this symposium critical aspects of composite restorations of crown fractured teeth will be presented. Furthermore various types of crowns will be compared based on their biomechanical properties, and the long-term fate of porcelain laminates will be discussed.

In case of premature loss of anterior permanent teeth, orthodontic space closure often becomes an actual treatment option. In the past, large experience has been gained using such a treatment and it appears that what seems to be simple treatment often result in a less aesthetic solution. The critical aspects of space closure will be presented.

Dental trauma may result in significant loss of alveolar bone and soft tissue. A poor aesthetic outcome of reconstrustions is therefore often seen. Especially sufficient and stable vertical dimension of the reconstructions are difficult to obtain. A variety of different surgical techniques, including vertical alveolar distraction and interpositional osteotomies is a part of the arsenal used, depending on the individual case. The results of such different treatment methods will be presented.

A large consensus group representing implantologists, oral surgeons and prosthodontists was recently assembled in Scandinavia to answer some critical questions about the use of implants: are implants long term reliable especially in relation to gingival health, functional stability and actual loss. The same analyses were made for conventional bridges and resin bonded bridges. The results of this consensus conference will be presented.

Examples of how the technical problems with implants can be reduced and furthermore the results of the treatment of periimplantitis will be presented. For more information about the 4th Copenhagen Trauma Symposium and trauma treatment guidelines visit www.dentaltraumaguide.org.
Excavating caries: check-ups are good, SIRONET is better
In May 2014, technology leader in the dental industry, is bringing a detection system onto the market that enables dentists to identify reliably, quickly and simply where caries does or does not exist: SIRONET.
SIRONET is based on Fluorescence-Aided Caries Detection technology, known as FAC2®, which exploits the fluorescence characteristics of teeth. If teeth are illuminated with violet light, spectroscopy of around 405 nm, it doesn’t only stimulate degradation products of caries bacteria but also healthy dentine to fluoresce. Healthy dental tissue lights up green whereas carious doesn’t only stimulate degradation products of caries bacteria but also healthy dentine to fluoresce. Healthy dental tissue lights up green whereas carious

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For more information, please contact: Dr. M. A. Al-Busaidi, Dubai University, UAE.

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Whether delegates were endodontic specialists looking for the perfect post for their cases, or general practitioners looking to improve their patients’ care, the dental industry was in for a treat.

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