DENTAL TRIBUNE

The World's Dental Newspaper · United Kingdom Edition

PUBLISHED IN LONDON | May 2014 | VOL. 8 NO 5

News

YouTube
Men prosecuted for YouTube claim
page 2

Feature

Stress
Neel Kothari on stress in the profession
page 10

Implant Tribune

Peri-implantits
What are the treatment options?
pages 19-20

Advertorial

University Hospital Copenhagen
Fourth Trauma Symposium
page 21

News in Brief

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 30 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 £300 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.

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 31 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 (63 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 37 per cent worried about the growth of corporate dentistry.

> *'31 per cent of dentists would not recommend their profession to someone at the start of their career'*

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 DFT year.

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 DT

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 59 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 'demonised'. 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." DT

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 3.4 million in 2010.

The groups are asking governments 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 packages, as well as placing stricter controls on food marketing and requiring reformulation of unhealthy food products.

Consumers International Director General, Amanda Long, says: "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 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." DT

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. DT

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 37 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-to-middle-income nations. Targets for reducing smoking and blood pressure will lead to the largest health benefits.

In 2011, the UN General Assembly agrees 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 39 million in 2025 is no new action is taken. If the six risk factor targets are achieved, more than 37 million deaths will be prevented by 2025.

Currently, global targets include a 30 per cent reduction in smoking levels, a 10 per cent reduction in alcohol consumption and a 30 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 43 million deaths by 2025.

Lead author of the study, Dr Vasilis 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." DT

Man prosecuted for YouTube 'dental 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. DT

DENTAL TRIBUNE
The World's Dental Newspaper · United Kingdom Edition

Published by Dental Tribune UK Ltd
© 2014, Dental Tribune UK Ltd.
All rights reserved.

Dental Tribune UK Ltd makes every effort to report clinical information and manufacturer's product news accurately, but cannot assume responsibility for the validity of product claims, or for typographical errors. The publishers also do not assume responsibility for product names or claims, or statements made by advertisers. Opinions expressed by authors are their own and may not reflect those of Dental Tribune UK.

Editor
Lisa Townshend
Tel: 020 7400 8979
Lisa@healthcare-learning.com

Sales Executive
Joe Ackah
Tel: 020 7400 8964
Joe.ackah@healthcare-learning.com

Design & Production
Ellen Sawle
Tel: 020 7400 8970
ellen@healthcare-learning.com

Advertising Director
Joe Aspis
Tel: 020 7400 8969
Joe@healthcare-learning.com

Editorial Assistant
Angharad Jones
Angharad.jones@healthcare-learning.com

Dental Tribune UK Ltd
4th Floor, Treasure House, 19–21 Hatton Garden, London, EC1N 8BA

Tesco removes checkout sweets

Tesco has announced that sweets and chocolates will be removed from checkouts 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, sandwiches 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. DT

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?

If so don't hesitate to write to:
The Editor,
Dental Tribune UK Ltd,
4th Floor, Treasure House,
19-21 Hatton Garden,
London, EC1 8BA

Or email:
lisa@healthcare-learning.com

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 to 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."

SIRONA.COM

SIRONA. THE BEST IN YOUR SURGERY

DAC UNIVERSAL
HYGIENE
AT THE TOUCH
OF A BUTTON.

HANDPIECES
PREMIUM
COMFORT
ECONOMY
THREE
CLASSES
ONE CLAIM
WE ONLY PUT THE
BEST INTO YOUR HANDS.
- Excellent ergonomics
- Highest functionality
- Best reliability
- Titanium sleeve

134 °C

SIROINSPECT
DON'T LET CARIES
BECOME A REPEAT
OFFENDER.
Now you can identify reliably, quickly and simply where caries does or does not exist with SIROInspect

Sirona Dental Systems, Lakeside House,
1 Furzeground Way, Stockley Park,
Heathrow, London UB11 1BD
0845 0715040
info@sironadental.co.uk
sirona.com YouTube

The Dental Company sirona.

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. DT

Prosecuted man vows to carry on denture business

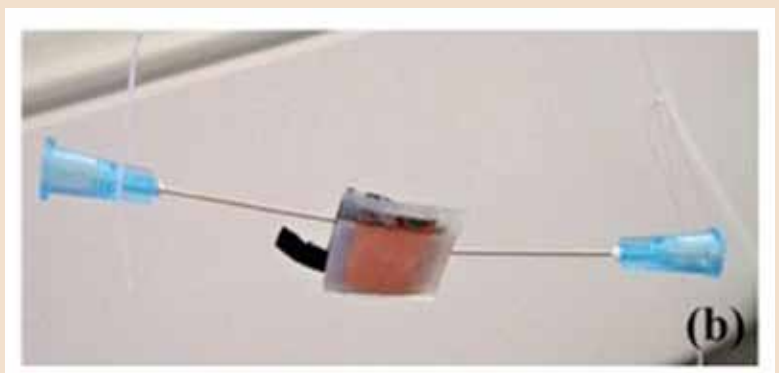
A Liverpool man who was prosecuted for unlawfully practising dentistry has said he will carry on his denture business.

Frank Mulholland, 74, was prosecuted for working as an un-registered 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." DT

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 microelectronic 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 ovulation predictor 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. DT

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 Tedstone, Chief Nutritionist and Director of Diet and Obesity 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." DT

Scientists find mechanism behind red wine's health benefits

Reservatrol, 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 reservatrol uses to achieve its beneficial action. They found that reservatrol 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, reservatrol 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 reservatrol out there that can do the same thing – only better." DT

Qualifications

Healthcare Learning: Smile-on collaborates with some of the best universities around the globe to deliver blended learning postgraduate qualifications for healthcare professionals worldwide. The attraction of a blended learning programme is that a large proportion of the curriculum can be undertaken online so you can participate in top class degree programmes from wherever you are in the world without too much disruption to your work and home life.

Students on the courses can study at their own pace, completing a **Masters degree, part-time over two-years**. Bringing together renowned international lecturers and a diverse multi-ethnic community of peers, with whom they will also share residential courses in fantastic settings, these courses make for a truly modern and global classroom experience.

The best of everything — lecturers, online technology, live sessions and support

Master of Science in
Restorative & Aesthetic Dentistry

The University of Manchester

Master of Business Administration
MBA in Healthcare

ASHRIDGE business school

Master of Science in
Advanced Endodontics

Cardiff University / Prifysgol Caerdydd

Master of Business Administration
MBA in Healthcare

PLYMOUTH UNIVERSITY PENINSULA SCHOOLS OF MEDICINE & DENTISTRY

Call Healthcare Learning Smile-on to find out more:

tel: 020 7400 8989 email: info@healthcare-learning.com

web: www.healthcare-learning.com/msc

smile-on healthcare learning
inspiring better care

in partnership with

The University of Manchester · ASHRIDGE business school · Cardiff University / Prifysgol Caerdydd · PLYMOUTH UNIVERSITY PENINSULA SCHOOLS OF MEDICINE & DENTISTRY

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 30 per cent 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." DT

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 per cent from £160 million to more than £225 million. Its practice network will have grown by more than 50 per cent 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." DT

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 found to have very high levels of antibiotic resistance in many different bacteria, but this wasn't the case in the UK; resistance to carbapenems, the antibiotics of 'last resort' for multi resistant 'klebsiella' has increased over the years but the number of isolates is still relatively low in the UK.

There is an area of concern in the treatment for gonorrhoea, however, as the bacteria shows high levels of resistance across a range of antibiotics. This is coupled with sustained transmission and repeat infections.

Dr Paul Cosford, Director for Health Protection and Medical Director at PHE, said: "Whilst 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.

"Combatting the development and spread of antibiotic resistance requires a multi-faceted 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." . DT

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 and hamper upward mobility, 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.

This follows a poll conducted by Vision Critical last year that found people with whiter teeth were thought to earn £10,000 more on average than they actually did. Those surveyed thought their teeth made them look up to five years younger and improved their employment potential by 10 per cent. DT

Dental Foundation Training

A review of Amit Rai's book by James Bannister

Blind spots tend to go unnoticed 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 a session. This survival guide aspect to the book's nature shines throughout – 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.

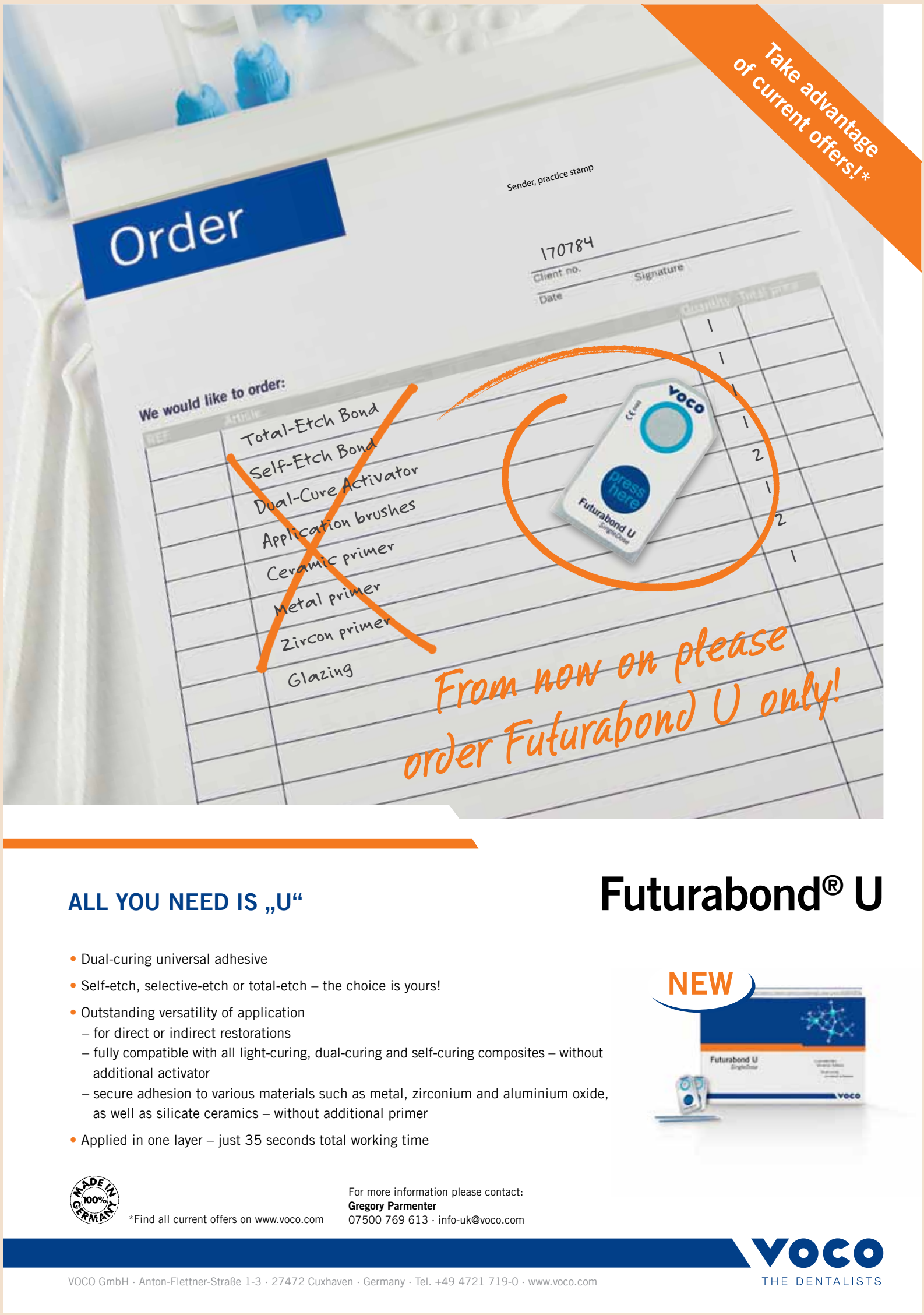
After detailing the purpose of foundation training, the book goes on to describe general dental practice with particular respect to NHS dentistry, complete with a checklist of things to do in preparation for your first day of practice. Chapters 3, 4 and 5 are dedicated to describing the teaching process, 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. DT

Book info

Dental Foundation Training: the essential handbook for foundation dentists by Amit Rai. ISBN: 9781846199974 Available from Radcliffe Health at £29.99. Go to http://www.radcliffe-health.com/ to order a copy



Dental Tribune United Kingdom Edition · May 2014

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 provisionals 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 overspacing, 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 gap between silicone template and tooth. 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.

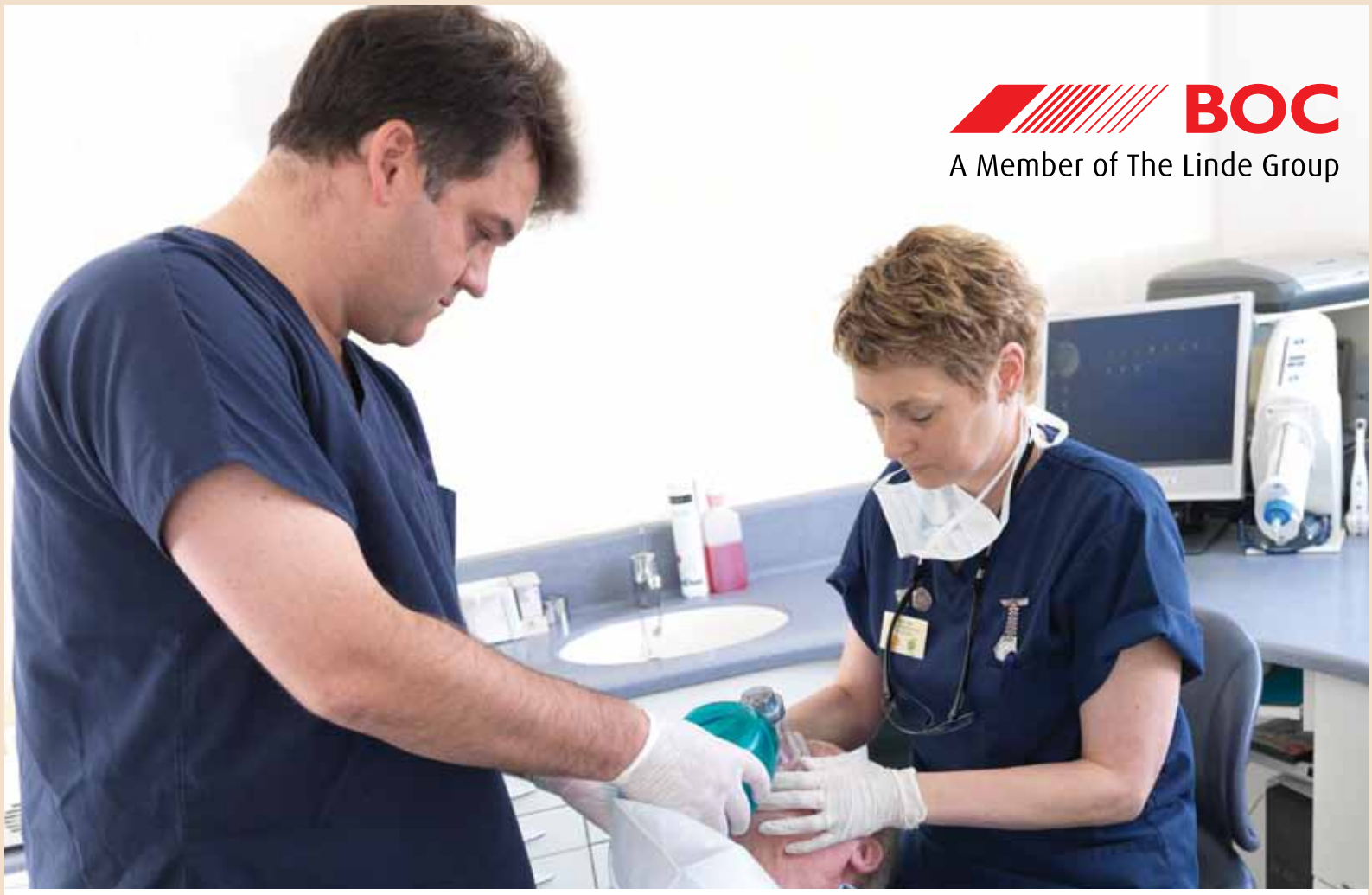
He realised that when you have an APT to demonstrate the aesthetics to the patient, and they like it, you can simply leave the APT over the teeth and prep through it using an appropriate 0.5mm depth drill. If the gap is <0.5mm the drill will penetrate the enamel. If the gap is >0.5mm it won't and the 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. DT

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

BOC
A Member of The Linde Group



Are you prepared for a medical emergency in your dental practice?

Emergency drugs from BOC Healthcare.

The following emergency resuscitation drugs[1] are available from BOC Healthcare
→ Glyceryl trinitrate (GTN) spray (400 micrograms/dose)
→ Salbutamol aerosol inhaler (100 micrograms/dose)
→ Adrenaline injection (1:1000, 1 mg/ml)
→ Aspirin (300 mg)
→ Glucagon injection (1 mg)
→ Oral glucose gel
→ Midazolam 10 mg (buccal)

Features of the complete drugs kit
→ Supplied in a bespoke bag for easy storage and transport[2]
→ Supplied with algorithms on management of medical emergencies
→ Items can be bought individually or as part of a combination[3]
→ No intravenous access required for the drugs

[1] All drugs are only available to prescribing medical professionals
[2] Bag is an optional extra and will incur a charge
[3] Only applies to certain products

We also supply medical oxygen with prices from £197 +VAT per annum and Automated External Defibrillators from £799 +VAT only.

For further information or to place an order call 0161 930 6010 or email bochealthcare-uk@boc.com

BOC: Living healthcare

BOC Healthcare
Customer Service Centre, Priestley Road, Worsley, Manchester M28 2UT, United Kingdom
www.bochealthcare.co.uk