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Scottish Dental

FEBRUARY
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in dental education, p41

Plus: New dental diploma examinations, page 33

SAVE THE DATE: Friday 31 May – Saturday 1 June, The Scottish Dental Show, Braehead Arena, Glasgow



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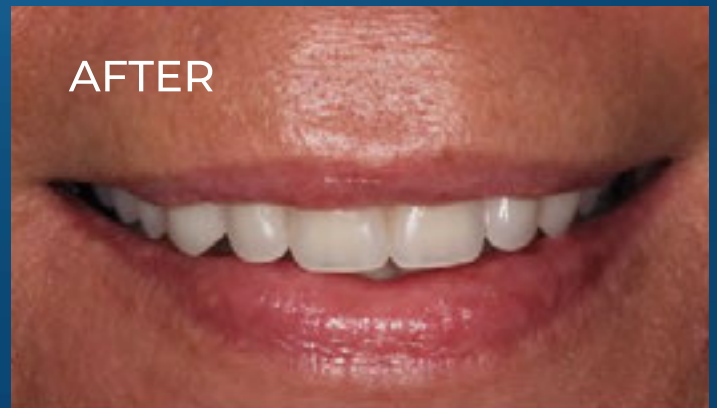
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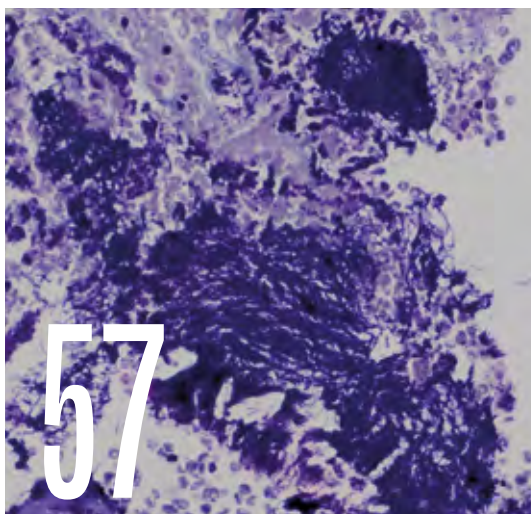
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www.sdmag.co.uk/replacing-nhs-income

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MANAGING EDITOR
David Cameron
david@connectmedia.co.uk

EDITOR
Will Peakin
Tel: 0141 560 3019
editor@sdmag.co.uk

ADVERTISING
Ann Craib
Tel: 0141 560 3021
ann@connectmedia.co.uk

DESIGN
Ruth Turnbull

SUBSCRIPTIONS
Claire Nichol
Tel: 0141 560 3026
claire@connectcommunications.co.uk

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ISSN 2042-9762

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Challenges and opportunities

The impact of NHS payment reform will become clear in the coming months

Analysing the future of NHS dentistry in Scotland in 2024 is a complex task, as the service faces numerous challenges and recent changes that could significantly impact accessibility and quality. Let's consider some key factors, both challenges and opportunities.

First, the challenges. There's a long-standing shortage of NHS dentists in Scotland, leading to difficulties finding appointments and long waiting times. This issue might persist in 2024 unless significant recruitment and retention strategies are implemented.

Then there are the financial pressures. Running an NHS dental practice can be a challenge, causing some dentists to move towards private practice. The new payment system introduced in November last year aims to address this, but its effectiveness remains uncertain.

For patients, access to NHS dentistry varies geographically and according to socio-economic status. Rural areas and low-income communities often face the biggest challenges. The COVID-19 pandemic disrupted dental services and created a backlog of patients needing treatment, which is still being worked through.

Conversely, there is the potential for improvement. The revised payment system could incentivise dentists to take on NHS patients and make it more financially viable to offer a wider range of treatments within the NHS. However, its impact remains to be seen. The Scottish Government has expressed its commitment to reforming and improving NHS dentistry.

In terms of practise, technological advancements, such as tele-dentistry and digital dentistry, could potentially improve access to care in remote areas and streamline processes. An increased focus on oral health education and preventative care could reduce the need for complex and expensive treatments in the future.

Overall, the future of NHS dentistry in Scotland in 2024 remains uncertain, with both challenges and potential improvements on the horizon.

The success of the new payment system, the government's commitment to reform, and the adoption of innovative technology will all play a crucial role in determining the accessibility and quality of care available to the public.

As we detail on page 20, there has recently been a surge in deaths from dental sepsis fuelled by ongoing access problems. The British Dental Association (BDA) is compiling

data for Scotland, but one clinician in the North of England described their local hospital as "like a battlefield" given the volume of dental sepsis cases.

The Mirror quotes a dentist working in secondary care who observed: "We're now seeing patients dying from toothache. We've never witnessed this before, and there have been multiple cases. One patient came into A&E, was intubated immediately, but died of dental infection without ever regaining consciousness."

As previously reported by *Scottish Dental* magazine, data released last year showed 9,860 cases of mouth cancer in the UK in 2020/21 – up 12 per cent on the previous comparable year. The disease killed more than 3,000 people in 2021 which was up 46 per cent, from 2,075 a decade ago. Early detection results in a 90 per cent survival rate. This drops to a 50 per cent survival rate after a delayed diagnosis.

The BDA has previously observed how problems in dental primary care put pressure on other parts of the health service. A recent Freedom of Information request from the Labour Party showed 52,000 patients visited A&E with dental abscesses last year, with another 15,000 presenting with tooth decay.

Eddie Crouch, Chair of the British Dental Association, said: "This crisis is hitting every corner of our health service. It's the patients piling into emergency rooms and GP surgeries. It's the oral cancers caught too late, and the simple problems that end up as life threatening infections. Official indifference to NHS dentistry has a body count."

Now, while the challenges to NHS dentistry north and south of the border may be similar, Mr Crouch's reference to "official indifference" does not apply here; the Scottish Government is engaged and has been actively working with the profession. Post the introduction of the new payment system – which was developed with the profession's involvement – Scotland's Chief Dental Officer is in the process of establishing a review group to ascertain the effect of payment reform on practising clinicians.

Its work will be ongoing; as *Scottish Dental* went to print, most practices will have only had one payment and reconciliation to date. But the principle – of working with the profession – has been established. The review group will not be the only forum, however. The BDA, of course, is long-established in acting as a channel for its members to communicate their experience. It is calling on dentists UK-wide to share their feedback on what they are seeing at the chairside. Complete their survey here:

www.smartsurvey.co.uk/s/Deliveringdentistry



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The year ahead

Things are forever changing, hopefully for the better, but changing nonetheless

I'm rarely one for resolutions but I do think about what may happen in the year to come. We have had a significant change to the NHS fees and items recently. It feels a little early to assess the impact of that. There are other changes which we should consider in the year ahead.

Digital radiography and photography are well established in our environment. Digital dentistry is becoming a major factor for laboratories and practices. It is moving from specialist clinics into the mainstream.

Scanners are a major expense, but costs are reducing. The quality, performance and user interfaces are improving. The digital workflow is a common topic of CPD and conversation in clinics. Milling and 3D printing are becoming more frequent in laboratories and even clinics themselves. Most of the workflow is still dictated by the interaction with lab work. However, there are certainly benefits in monitoring hard tissues with regular scanning. PSD now accepts – and expects – scans or pictures of models: paying the same fees.

The likely future is incorporating digitisation into all our working patterns and interactions with other professionals for referrals, approvals, payments and lab work. It cuts material costs and simplifies cross-infection protocols. I suspect digital milling and 3D printing will reduce the 'mess' in traditionally dusty and plaster-covered laboratories. How long will it take for the economics to balance in favour of mass use of digital workflow? I think, currently, costs are still prohibitive for general NHS use but there will come a tipping point. Especially, if the lack of technicians can be mitigated using digital means. Perhaps in-practice use of digital manufacturing may help this? I am concerned how that fits with the GDC and medical devices being produced by a non-GDC registered technician (although if it is the dentist, they are a registrant).

The other major benefit is the reduction of a postal/pick-up stage from clinic to lab. At the moment, there is a lot of chatter around 'sustainable' and 'green' dentistry. Emailing a lab all the data required to produce an appliance or device must be 'greener' than a man in a van running around practices. I have seen posts about utilising re-usable aspirator tips, impression trays and other items. I understand the rationale for it; we used to re-use all of these in my working lifetime.

How long will it be before our waste production problems overtake infection control worries to reduce single-use items? We've seen the other extreme in the move to LDU's, washer disinfectors and a drive to mass use of single use everything. Now, is the tide turning?

The flip side of this 'green drive' is the use of huge quantities of digital data we need to store and backup.

Digital radiographs and photo files are big enough.

Add to that routine scanning for patients, children with orthodontic needs, non-carious tooth surface loss mapping, plus all that lab work entails; our servers will be straining. Then there's that cloud; you know, the one we pay for but have no idea where it is. That takes a lot of power and cooling to keep things properly looked after; not so green in terms of energy usage.

The other thing about data storage, is people seem to be desperate to get a hold of it these days, by fair means and foul. How long it will be until our cyber security comes under significant challenge? In my own practice, we don't keep any financial data, but I suspect that may have to change in time. At that point, we may become a bigger target for hackers. Or maybe we just haven't got to the top of their list yet? I won't say this too loudly, but if my very expensive cyber security does get hacked by a super-smart and fiendish teenager from another state and they ask for a ransom, my insurers will probably pay out, if they're not unreasonable. Unfortunately, insurers often have get-out clauses for these costs unless your systems are watertight. This could become a cost of business. Perhaps, it may not even be a teenager but a highly developed AI 'bot' extracting a few thousand pounds and staying under the AI police's radar.

That may be fanciful, but it does bring me to the next big thing: AI. How can AI affect dentistry? I am certain it will. However, I am not sure what it can bring to us. Not being incredibly technically minded, I'm not the person to ask. What I do think is that dentistry, by the nature of fee per item and tooth surface notation, in NHS or private care, has created a huge amount of data. AI works best when it has lots of data and outcomes to feed the learning process. At this stage, I think it will have its biggest effect on our care, by reinforcing or improving our diagnostic and treatment planning processes.

I think it will be many years before there are automated systems that can do what we do. I doubt they will be technically proficient enough to take our place in my working lifetime, perhaps even in my lifetime. However, there will be elements of the learning which will impact our processes – and sooner than we think. The question is, who will pay for it? Not the NHS, even if they thought they could save money in the long run. I think it will be up to manufacturers of materials and, perhaps, entrepreneurs setting up websites to provide AI generated guidance at a cost? As long as we have a world leading facility like the SDCEP, I don't see that being utilised often in this part of the world.

So, much to look forward to, to incorporate or to view from afar. Things are forever changing, hopefully for the better, but changing nonetheless.

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Looking forward to the Show

With a busy exhibition and world-class education programme, SDS 2024 is a must-attend event

THE Scottish Dental Show, with more than 130 exhibitors and an education programme featuring 40-plus speakers, is on 31 May – 1 June this year at Braehead Arena, Glasgow.

Exhibitors will be demonstrating the latest technology and developments in dentistry as well sharing best advice in the areas of law, finance, and life planning. The education programme features lecture and workshop sessions on more than 20 areas of clinical expertise.

There are also sessions dedicated to Dental Nurses, Hygienists and Therapists, and Practice Managers. The business and finances of dentistry will be covered by experts in their field. The programme will also include a briefing on the latest in regulation and – on the reform of NHS dentistry – an update from the Scottish Government.

Speakers include Simon Crewe, Forensic Odontologist, and Brian Millar, Professor of Blended Learning in Dentistry at King's College London.

The programme also covers all eight of the GDC's Highly Recommended and Recommended



Register for the Scottish Dental Show at Braehead Arena, Glasgow, 31 May – 1 June: www.sdsshow.co.uk

topics: Medical Emergencies, Disinfection and Decontamination, Radiography and Radiation Protection, Legal and Ethical Issues, Complaints Handling, Oral Cancer: early detection, Safeguarding Children and Young People and Safeguarding Vulnerable Adults.

GDC topic speakers include Nick Beacher, Stuart Clark, Aubrey Craig, Mark Greenwood, Jane Holt, Mike Lewis, Jim McCaul, Christine Park, Emma Riley, Suzanne Riordan and Julie Willis.

The programme can provide up to nine hours of verifiable Continuing Professional Development (CPD) in compliance with the General Dental Council's Enhanced CPD scheme regulations.

See you there! See page 24.

Study highlights dentistry's chronic disease screening potential

DENTAL professionals could make a positive difference to public health by being trained to spot some of the key markers of chronic disease, according to a new study.

Researchers from the Royal Liverpool University Dental Hospital and the University of Plymouth oversaw the trial introduction of health screenings during regular dental check-ups in general dental practices.

In the UK, up to 11 per cent of the adult population is affected by impaired glucose regulation and nearly half of dental patients aged 45 years and older are at risk of developing diabetes within the next decade.

The study authors said that this indicates the potential benefits and positive impact of implementing diabetes screening in dental settings, particularly for early intervention in Type 2 diabetes.

Their study evaluated health screening in dental settings, including patient willingness to accept such a service and recommendations for improvement. The data was gathered from two dental practices located in North West England and the Welsh border region, one a predominantly NHS practice and the other offering a mix of NHS and private dental services.

The data collection spanned August 2020 to November 2021 at the first practice and from

February 2021 to January 2023 at the second. At the NHS practice, 4.1 per cent of the 11,200 patients accepted the offer for screening and 6.5 per cent of the 871 patients at the mixed practice.

The screenings included assessments of blood pressure, cholesterol, blood glucose, body mass index (BMI) and waist-to-height ratio – crucial for detecting early signs of cardiovascular diseases and Type 2 diabetes in healthy adults. The selection of these specific screening tests was based on their relevance to oral health and shared risk factors for oral health complications, such as diet and chronic inflammation.

The findings showed that 78.4 per cent of the patients screened had blood pressure readings above the normal range, 55.8 per cent had BMI values that fell outside the healthy range and 16.7 per cent had cholesterol levels that deviated from the healthy range. Elevated blood glucose levels were observed in just over 3 per cent of the patients.

Dr Janine Doughty, the lead author, said: "A health check at the dentist could provide reassurance for many patients, and a wake-up call for others to become healthier. We have someone already sitting in the chair who visits the dentist every six to 12 months yet who may not have seen a GP for years. It is simple to give them a few minutes of health checks at the same time."

Dental clinic welcomes 500 new NHS patients

MAJOR expansion works have been completed at a long-established Glasgow dental clinic in a bid to meet the rising demand for dental services in the area.

Cardonald Dental Clinic reopened its doors in December, following an investment of £400,000 by sector leader Scottish Dental Care.

Employing 10 team members, the clinic is all set to welcome a further 500 NHS patients from surrounding areas including Paisley, Renfrew and Ralston, adding to its active register of 4,000.

Commenting on the reopening of the clinic, Chris Stephens, MP for Glasgow South West, said: "Investing in the health of our communities is vital, and I commend Scottish Dental Care for its refurbishment of this clinic. With state-of-the-art new equipment and facilities, this clinic will enable first-rate dental care for local families for years to come."

The practice has expanded its footprint by 55m² as well as recruiting two new dentists and a hygienist. Additionally, the clinic will be introducing a new affordable dental plan, to offer both those struggling to find dental services, as well as existing patients.

Established in the early nineties, Cardonald Dental Clinic became part of the growing family-led dental group, Scottish Dental Care, in 2017.

Lynn Hood, Chief Executive of Scottish Dental Care, said: "Keeping dentistry local and investing in community clinics like Cardonald is important to us, and forms a key part of our growth strategy. We're committed to ensuring our patients have access to high-quality dental care."



Glasgow to host hypnosis congress

Aim is to create fresh enthusiasm for hypnosis in the next generation of healthcare professionals

GLASGOW is to be the venue for the 2026 Congress of the European Society of Hypnosis (ESH).

The ESH is a confederation of national societies specialising in the use of hypnosis in the fields of medicine, dentistry, psychology and psychotherapy.

Its mission is to promote the highest professional standard in the practice of hypnosis for clinical and experimental purposes. The commitment is to evaluate and elaborate the newest developments in professional hypnosis and to disseminate such information among members.

ESH was founded in 1976, when a group of European medical professionals proposed the setting up of a European section of the International Society of Hypnosis (ISH). ESH became independent from ISH in 1990, when the ESH Constitution was ratified.

The congress this year was held in Antalya, Turkey. It featured 12 keynote speeches, 48 lectures, 45 workshops, six panel discussions and six posters, and was attended by delegates from 38 countries. The 2026 congress will be hosted British Society of Medical and Dental Hypnosis (BSMDH).

"Our vision is to deliver a congress that is great value for money, full of high quality content and that creates a fresh enthusiasm for hypnosis in the next generation of healthcare professionals," said Mike Gow, treasurer of the BSMDH and principal of The Berkeley Clinic in Glasgow. "All in 'the friendliest city' in the 'most beautiful small country' in the world!"

"Hypnosis was first described by the Scottish surgeon James Braid in 1841. In 2026, we invite you to celebrate the 185th anniversary of the birth of modern hypnosis



back in Scotland. Join us in this celebration of history and be part of the future of hypnosis."

Hypnosis has many potential applications in dentistry including: reducing stress and anxiety (of patient and practitioner!), fear or phobia of the dentist, needles etc, bruxism, TMJ dysfunction, strong gag reflexes, pain control, encouraging compliance with oral hygiene regimes and dietary habits, modification of unwanted habits (eg smoking/vaping, thumb sucking, nail biting etc), oral aphthous ulceration, improved tolerance for orthodontic appliances and dentures, and controlling salivary flow and bleeding.

You can be alerted to updates by following @esh2026glasgow on Facebook and Instagram.

GDC fails to meet standards

Regulator falls short on registration and fitness to practise cases

THE Professional Standards Authority (PSA) has published its report on the General Dental Council's (GDC) performance for the period 2022/23, which concluded it met 16 of the 18 Standards of Good Regulation.

There was positive recognition for the GDC's engagement with stakeholders and response to the backlog of applications from overseas dental professionals. The GDC tripled the number of places for Part 1 of the Overseas Registration Exam from this year and has increased the number of Part 2 sittings from three to four in 2024.

The PSA found that Standards 11 and 15 were not met, specifically the parts of those standards relating to the respective timely resolution of registration and fitness to practise cases.

The changes to legislation to register dental professionals who qualify overseas prompted a surge of applications and the GDC recruited additional people and external associates to process and assess applications, and it said the backlog is now starting to reduce.

The PSA noted that registration applications for UK-qualified dental professionals showed recent improvement. As an indication of the increased workload,

the GDC is on course to register more new dental professionals this year than before, with 117,983 professionals on the register (as of 30 September 2023).

There has been a long-term issue that GDC fitness to practise cases often take too long to resolve. The GDC said it had increased the size of the casework team, streamlined processes, improved guidance to reduce delays and, with support from stakeholders, is undertaking a pilot to enable single clinical issues to be resolved more quickly, while continuing to effectively maintain public safety and confidence in the dental profession.

These reforms reflect the GDC's determination to make improvements to the fitness to practise process where it can, ahead of any potential regulatory reform. It is also hoped that improved timeliness and proportionality will reduce the impact of fitness to practise investigations on the health and wellbeing of those involved.

Gurvinder Soomal, Interim Chief Executive Officer and Registrar, said: "We are making very real improvements to the fitness to practise process. It is disappointing that the effects are not yet visible in the performance data."

Changes to rules for international registrants

THE General Dental Council (GDC) has announced that changes to the rules for the registration of internationally qualified dental professionals will come into effect on 9 March.

The rules are being introduced following a consultation on routes to registration for internationally qualified dentists and dental care professionals held earlier this year.

Making sure that the dental professionals who join the register meet the GDC's high standards for safe and effective care is fundamental to the regulator's public protection role, said the GDC.

The same standards for registration are applied to applicants who qualify abroad as those who train in the UK, and those who qualify outside the UK make an important contribution to the UK dental workforce.

Using its new powers to make rules for international registration, the GDC held a public consultation last year. The new rules provide the basis for the GDC to introduce an ORE application processing fee and to increase examination fees to ensure associated cost are recovered and fees are allocated fairly.

These initial changes mean that the GDC can now take further steps to deliver additional ORE capacity while it modernises its international registration framework.



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Long-term looks positive

Specialist business property adviser launches its business outlook for 2024

DESPITE inflation and rising interest rates the long-term outlook for the dental market is positive, according to specialist adviser Christie & Co.

In 2022, the dental sector experienced robust transaction activity, largely fuelled by corporate buyers committed to acquisitions. However, the swift escalation in interest rates, soaring operational costs, and staffing difficulties led many corporate entities to halt their acquisition strategies at the beginning of 2023.

This shift resulted in a notable decrease in transaction volumes as companies shifted their focus towards organic growth over acquisitions. During this period of change, Christie & Co reported a 9.8 per cent decrease in transaction completions.

In contrast, the independent dental market saw a resurgence in the latter half of 2023. With reduced competition from corporate buyers, there was a significant uptick in transactions involving first-time buyers, current owners, or smaller independent groups, accounting for 69 per cent of deals.

This revival was partly driven by Christie & Co introducing 45 practices to the market on behalf of BUPA earlier in the year, leading to a 150 per cent increase in agreed transactions. This surge in the independent sector also led to practices achieving, on average, 113 per cent of their asking price in 2023. The number of offers received also increased on the prior year by more than 80 per cent, with an average of 4.4 offers per sale, nearly double that of 2022.

The latter half of 2023 also saw an improved influx of new practices entering the market. Looking forward, Christie & Co is optimistic about a return to more stable trading conditions in 2024 as this trend continues.

Paul Graham, Managing Director Medical at Christie & Co, said: "In a landscape reshaped by economic shifts, the dental sector emerges resilient and ready for transformation."

The year ahead, see page 26.

Number of UK dentists increases

THE number of dentists on the UK Register, following the recent annual renewal period, has increased compared with recent years.

On the morning after removals, there were 44,209 dentists on the Register; a 2.5 per cent increase compared with last year, with 1,079 more dentists on the register.

This year, 1,003 dentists did not renew their registration, which is 2.3 per cent of those on the Register on 31 December. This compares with an average of 2.6 per cent over the previous four years.

A spokesperson for the General Dental Council (GDC) said: "We recognise there are important issues of concern, including access to NHS dental services and significant ongoing recruitment challenges in some areas.

"It is important to note that this data does not provide insight into the number of professionals working in different patterns – e.g. full time vs part time – how many dentists are working in NHS services compared to private practice, local workforce conditions, or the numbers of professionals working in different roles, e.g. academic.

"However, for the first time, as part of the dentists' renewal process in 2023, we have gathered data about the work dentists do, including the number of hours they are working, whether they are working in the NHS or privately, and in clinical or non-clinical roles. We will publish these figures once the analysis is complete.

"While the register is constantly changing, what we invariably see, for both the dentist and dental care professional registers, is that over the course of the year, the number of registered professionals increases due to new registrations, and then that number drops at the point of renewal as professionals leave the Register for a range of reasons."

New radiation procedures published



A NEW set of employer procedures to ensure radiation is used safely and appropriately in general dental practices is due to be published.

The documents are the result of a collaboration between Health Improvement Scotland and stakeholder groups including the Scottish Radiation Protection Advisors Group, the Scottish Dental Adviser Group, National Services Scotland and the Chief Dental Officer's team. They are supported by the Ionising Radiation (Medical Exposure) Regulation regulator in Scotland.

Dental radiographs continue to be the most taken radiographs in the delivery of healthcare and the templates will help dental practices to comply and apply the regulations in a more tailored and proportionate way.

Some of the highlights of the changes within these documents include the provision of a 'pregnancy poster' template, narrative around holding, and patient identification protocols.

Each of the new templates will be supported by a short video to help dental practices complete the document and better understand the requirements of compliance with the legislation. Some poster templates are also included in the package.

The documents are being published three templates at a time on scottishdental.org from 24 January to allow dental practices to review and update their EPs. The publication will continue fortnightly until the end of March.

Revamp of periodontology education planned

LEADING international experts have met to discuss a new consensus on teaching periodontology at undergraduate, postgraduate and continuing education levels.

Chaired by David Herrera, Professor of Periodontology at Madrid University, the workshop brought together a selection of specialists from the European Federation of Periodontology (EFP) and Association for Dental Education in Europe (ADEE).

"We identified relevant factors that have been impacting education in periodontology since 2009," said Professor Herrera. "Those include the recent recommendations of the World Health Organization, the new framework for the undergraduate

curriculum in dentistry proposed by the ADEE, the impact of teaching and evaluation methods after the COVID-19 pandemic and the recent workshops on the classification and management of periodontal and peri-implant diseases and conditions."

The outcomes of these four days reviewing the latest studies available in this field will be published as a consensus paper in the EFP-edited *Journal of Clinical Periodontology* later this year.

They are set to shape how periodontology and therapeutics with dental implants are taught in the coming years by any public or private organisation teaching periodontics around the world, including the EFP-accredited postgraduate programmes.



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Dentistry's carbon footprint increasing

THE carbon footprint (CFP) of dental practices has increased significantly, according to a new study¹.

It found that there have been "notable shifts" in different components, such as increased waste and staff travel, despite a decrease in electricity-related emissions.

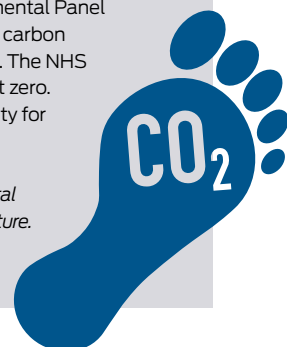
Life cycle analysis (LCA) methodology was used to calculate the carbon footprint of a full-time dental clinic operating 220 days a year.

Compared with a study by the same authors in 2015, the latest calculation shows reduced water use emissions but increased total waste emissions. Staff travel and patient travel continues to significantly impact the CFP, it added.

"The carbon footprint of incinerating mixed dental waste is estimated at 1,552 kg carbon emissions per tonne, emphasising the significant environmental impact associated with waste management in dental practices and the need for sustainable waste disposal strategies," said the authors.

They added: "Growing awareness of environmental sustainability is essential. The Intergovernmental Panel on Climate Change's report stresses urgent carbon reductions to limit global warming to 1.5 °C. The NHS in all four countries of the UK aims to be net zero. Dental practices must prioritise sustainability for public health."

¹ What is the environmental footprint of a dental practice? A life cycle analysis (Part 1) www.nature.com/articles/s41415-023-6710-z



Mums can pass dental decay to newborns

Study suggests new mothers should undergo regular plaque removal

MOTHERS with high levels of dental plaque can pass cavity-promoting yeast to their newborns and infants, a new study suggests.

The yeast, *Candida albicans*, is found in the mouths of many healthy babies, but it can play a role in tooth decay in early childhood — a condition known as severe early childhood caries. In addition, the fungus can cause a mouth infection in infants called oral thrush.

Because of these potential health effects researchers investigated *C. albicans* in the mouths of mothers and their offspring, to see if there was a link. Their study¹, published in the journal *PLOS ONE*, suggests that mothers with a large accumulation of dental plaque are eight times more likely to pass the yeast to their infants than mothers with less plaque on their teeth.

Although babies also pick up *C. albicans* from other sources, not just their mothers, the study emphasises a potential link between a mother's oral health and that of their children.

For the study, researchers took oral samples from 160 mothers and their children

between 2017 and 2020. Samples were collected over the course of eight visits, which were conducted during pregnancy, at the time of birth and then up to when the child turned two years old. The scientists sequenced the genomes of organisms in the samples to identify the fungi.

In all, 93 (about 58 per cent) of the mother-child pairs had *C. albicans* in their samples. There were higher levels of *C. albicans* in children later in their lives compared with birth. Notably, 94 per cent of the mothers and children with *C. albicans* in their mouths carried strains that were highly genetically related, suggesting that mothers play a role in transmitting the fungi to their children.

To see how oral health factored in, the researchers used a scale to gauge how much plaque mothers had accumulated on their teeth; the scale rates plaque build-up from zero to three. They found that women who scored two or higher on the scale were eight times more likely to transfer *C. albicans* to their babies than those with lower scores.

The researchers did not investigate exactly how the yeast transfers, but theories suggest that babies may be exposed during delivery, skin-to-skin contact or potentially while feeding. The finding suggests that mothers should consider the effects of their oral health on their children and undergo regular plaque removal, or dental scaling, from a dentist, said the authors.

In addition to plaque accumulation, the researchers looked at other ways in which babies might pick up *C. albicans*. The infants who tested positive for the yeast were more likely to have been fed with a bottle at night when they were two months old, while those without the fungus were more likely to have been exclusively breastfed at 12 and 18 months.

1 Multilocus sequence typing of Candida albicans oral isolates reveals high genetic relatedness of mother-child dyads in early life. Naemah Alkhars, Nisreen Al Jallad, Tong Tong Wu, Jin Xiao. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0290938>

Energy drink ban urged

POLICYMAKERS are being urged to revisit plans to restrict the sale of energy drinks to children.

It comes after a new evidence review of the effects of energy drinks on children revealed wider ranging risks of mental and physical health problems associated with consumption.

The study, published in the *Public Health* journal, adds further evidence that consumption of energy drinks high in caffeine and sugar can be harmful to the health of children and young people.

In the comprehensive study, researchers from Fuse, the Centre for Translational Research in Public Health at Teesside University and Newcastle University, looked at data from 57 studies of more than 1.2 million children and young people from more than 21 countries.

Additional health effects noted in the research review included increased risk of suicidal thoughts, psychological distress, attention deficit hyperactivity disorder (ADHD) symptoms, depressive and panic

behaviours, allergic diseases, insulin resistance and tooth decay.

The study also links consumption of the drinks with an increased risk of poor academic performance, sleep problems and less healthy dietary patterns. Energy drink consumption has also been associated with increased risky behaviours such as substance abuse, violence and unsafe sex.

More than 40 health organisations, including the British Dental Association, researchers and public health leaders have appealed to the UK Government and the Opposition to restrict the sale of high caffeine energy drinks to under-16s.

“**CONSUMPTION OF ENERGY DRINKS HIGH IN CAFFEINE AND SUGAR CAN BE HARMFUL TO THE HEALTH OF CHILDREN AND YOUNG PEOPLE**”



Amalgam ban 'sends shockwaves'

BDA supports phase-down but says rapid phase-out is 'neither feasible nor justifiable'

THE European Parliament has voted to ban dental amalgam from 1 January 2025. The British Dental Association (BDA) says it is a decision that will "send shockwaves across the UK's already struggling dental services".

Amalgam is the most common material for NHS permanent fillings across the UK. Last July, the European Commission adopted a proposal to revise the Mercury Regulation, to introduce a total phase-out of the use of dental amalgam and prohibit its manufacture and export from the EU from 1 January 2025 – five years earlier than expected.

In a letter¹ to the UK's four Chief Dental Officers (CDOs), the BDA said that there

were currently no alternative restorative materials that compete with amalgam on speed of placement or longevity.

It urged the CDOs to work together to adopt a renewed focus on prevention to reduce the need for dental restorations, work with industry to secure an ongoing supply of amalgam and work with the BDA to ensure that there is no financial impact on dentists from the need to use alternative materials.

"Without action a ban will eat into clinical time and resource that are in short supply, likely creating further access barriers," said a BDA spokesperson. "There are no indications where the millions in additional funding required will come from nor the workforce to carry out the tens of thousands of extra clinical hours."



The spokesperson added: "We have long supported a phase-down in dental amalgam. But this rapid phase-out is neither feasible nor justifiable. Dental amalgam has been in use and extensively studied for 150 years as a restorative material. Its safety and durability are well established, and it remains the most appropriate material for a range of clinical situations."

No longer the silver lining, see page 52.

¹www.bda.org/media/h5ceamgl/letter-on-amalgam-to-cdos-jan-2024.pdf

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Preventative care 'inconsistent'

Study reveals just 34 per cent of oral health professionals always offer advice

THERE are "clear discrepancies" in the understanding of preventative care and it is not being offered consistently to patients across the UK, according to research undertaken by healthcare company Haleon and the College of General Dentistry (CGDent).

This is despite a high incidence of tooth decay — with 70,000 people treated in UK emergency departments for the disease last year alone.

Just one third (34 per cent) of oral health professionals said they always offer preventative care advice to patients, while one in four (25 per cent) patients said they

weren't given preventative advice during their last dental appointment.

The 'Dental Health Barometer' study, which included a survey of 2,000 consumers and 505 dental health professionals, also found that:

- More than half (59 per cent) of oral health professionals are more likely to offer preventative advice for private patients than NHS patients,
- More than a third (37 per cent) of NHS oral health professionals cited time constraints as the top reason for not being able to routinely offer preventative care advice, as opposed to just 15 per cent of private professionals.

• Oral health professionals differed on the preventative advice they would recommend to patients.

Bas Vorsteveld, General Manager of Haleon UK and Ireland, said: "We know that oral health professionals are facing huge pressures, and we want to help support them to be able to provide better preventative advice.

"We will look to develop new initiatives to support dental professionals alongside our existing initiatives which include providing educational materials."

Promoting prevention, see page 34

Students promote mouth cancer awareness

THE City of Discovery was again a hive of activity for mouth cancer awareness in November. With support from the charity Let's Talk About Mouth Cancer (LTAMC) the Dundee Dental Student Society held information stalls on the main University of Dundee campus and a fundraising Acoustic Night.

The stall saw hundreds of people interact with the students to learn about their own risk of oral cancer, how they can reduce this and the signs and symptoms to look out for. The self-examination leaflets and online video were particularly well received as were the UV protection lip balms and toothpaste samples given out.

To mark the end of the week, the talented students brought out the guitars and sung their hearts out to raise an astonishing £2,360 for LTAMC, with the raffle prizes pulling in extra with strong ticket sales.

Sophie Craig, Charities and Sponsorship Representative for the Dundee Dental Student Society, said: "We wanted to raise awareness of mouth cancer within our community and about the risk factors and typical features of this disease.

"We know that if we can help patients achieve an early diagnosis, this gives them the best chance of successful treatment. Joining with Let's Talk About Mouth Cancer, we could help promote how essential it is



that patients 'self-check' their mouth at home to catch it quick."

On receiving the cheque, Ewan MacKessack-Leitch, charity trustee and treasurer, said: "Every year the dental students at Dundee pull it out of the bag. Not only do they deliver a stall and campaign that captures and engages the population here in Dundee, but they also then raise money so we can continue our mission.

"Let's Talk About Mouth Cancer, is about action; empowering patients and dentists to talk about the disease, minimise risk, detect it early and reduce the diagnostic delay. The enthusiasm the students show really helps in this fight and the fundraising will enable more of our resources and activities getting out to the population. I want to thank the Dundee Dental Student Society for their continued support."

Scottish firm launches preventative tech in US

EDINBURGH-BASED Calcivis is launching its bioluminescent dental imaging system in the United States.

The company filed a pre-market supplement with the US Food and Drug Administration last year for enhancements to its imaging system and its wireless, handheld imaging device is now approved for commercialisation.

As part of the business' projected growth in the American market, the company has established its US headquarters in Milton, Massachusetts, and added personnel to its commercial team.

Adam Christie, chief executive, said: "With our US commercial team in place and a very user-friendly, ready for market device, we are confident that the Calcivis Imaging System will significantly improve patient care and enable restorative dentistry to move to a more preventative approach."

The company says that its imaging system will "revolutionise" caries management through early detection, which allows for a more preventative treatment model. The ability to visualise active demineralisation "live" on patients' teeth will "provide crucial insight as to whether a caries lesion is likely to progress and requires treatment."

The imaging system applies a patented photoprotein which, in the presence of free calcium ions released from an actively decaying tooth surface, produces a very short, low level light flash. An integrated intra-oral sensor within the imaging device detects the luminescence and presents clinicians with a chairside demineralisation map.

How dentistry could retain nurses

A SURVEY has revealed why many dental nurses are leaving the profession – but also potential ways in which they could be encouraged to remain.

Dental nurses are the largest occupational group of dental registrants but in recent years their number has been falling to the point where the situation has been described as a “recruitment crisis”.

Dr Debbie Reed is Chair of FCGDent’s inaugural board of the Faculty of Dental Nursing and Orthodontic Therapy and a Reader and Director of Advanced and Specialist Healthcare in Global and Lifelong Learning at Kent University.

Last year, Dr Reed conducted the Dental Nurse Retention Survey¹ which aimed to explore

the state of the UK’s dental nurse workforce. The main conclusions of the subsequent report provide valuable insights into the reasons dental nurses want to remain in the profession, as well as some of the factors that may lead them to consider leaving.

The top three factors that encouraged nurses to remain were ‘meaning and growth’, extrinsic rewards, and workplace and environment. The top three reasons why nurses intended to leave were ‘employers not valuing, recognising or showing appreciation for their contribution’, feeling they were unable to progress in their careers’, and ‘no longer enjoying working as a dental nurse’.



Dr Reed commented: “It is not too late for employers, there are steps that can be taken to retain this group of dental nurses, and the report offers ideas to be used as a starting

point for such discussions and negotiations.”

¹www.researchgate.net/publication/374919034_Dental_Nurse_UK_Retention_Survey_2023



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Justine Weir
GDC No. 79327
BDS (Glasgow 2001),
MFDS, MSc, M.Orth, RCS



Jonathan Miller
GDC No. 64147
BDS (Dundee 1989),
MFDS, MSc, M.Orth, RCS



Sheena Macfarlane
GDC No. 53199
BDS (Glasgow 1979), BSc



Paul Mooney
GDC No. 178517
BDS (Glasgow 2009),
MFDS, MSc, M.Orth, RCS

Dental crisis 'has a body count'

'We're seeing patients dying from toothache,' says a dentist working in secondary care

THE British Dental Association (BDA) has responded to reports in *The Mirror* of a surge in deaths from dental sepsis, fuelled by ongoing access problems.

The BDA is currently compiling data for Scotland, but one clinician in the north of England described their local hospital as "like a battlefield" given the volume of dental sepsis cases.

The Mirror quotes a dentist working in secondary care who observed: "We're now seeing patients dying from toothache. We've never witnessed this before, and there have been multiple cases. One patient came into A&E, was intubated immediately,

but died of dental infection without ever regaining consciousness.

"Ultimately these are the result of access problems in primary care. It's clear to me these infections will claim more lives. The powers that be should never have allowed dentistry to get into this state."

The BDA says it has been overwhelmed by feedback from members on the growing problems among patients presenting late, often with more serious conditions that could have been captured early.

As previously reported by *Scottish Dental* magazine, data released last year showed 9,860 cases of mouth cancer in the UK in 2020/21 – up 12 per cent on the previous comparable year. The disease killed more than 3,000 people in 2021 which was up 46 per cent, from 2,075 a decade ago. Early detection results in a 90 per cent survival rate. This drops to a 50

per cent survival rate after a delayed diagnosis.

The BDA has previously observed how problems in dental primary care put pressure on other parts of the health service. A recent Freedom of Information request from the Labour Party showed 52,000 patients visited A&E with dental abscesses last year, with another 15,000 presenting with tooth decay.

Eddie Crouch, Chair of the BDA, said: "This crisis is hitting every corner of our health service. It's the patients piling into emergency rooms and GP surgeries. It's the oral cancers caught too late, and the simple problems that end up as life threatening infections. Official indifference to NHS dentistry has a body count."

The BDA is calling on dentists UK-wide to share their feedback on what they are seeing at the chairside. Complete the survey here: www.smartsurvey.co.uk/s/Deliveringdentistry



Question mark raised over fluoridation

EXISTING drinking water fluoridation programmes in England provide "marginal savings" for the NHS, but there is no guarantee that new schemes would continue to do so, according to a study¹ by researchers at Manchester University.

The National Institute for Health and Care Research-funded data study of 6.4 million UK adults and adolescents across England, and published in *Community Dentistry and Oral Epidemiology*, estimated the public sector saved £16.9m between 2010 and 2020 because of water fluoridation.

People receiving optimally fluoridated water in the study experienced a 3 per cent reduction in NHS invasive dental treatments such as fillings and extractions, and a 2 per cent reduction in the numbers of decayed, missing and filled teeth when compared with the non-optimally fluoridated cohort over 10 years.

But the research team found no compelling evidence that water fluoridation reduced social inequalities in dental health – and the numbers of missing teeth between the cohorts were the same.

Over the 10-year period studied, optimal water fluoridation cost £10.30 per person. NHS treatment costs were £22.26 lower per person (5.5 per cent) and patients paid £7.64 less

(two per cent) in dental charges. Using the data, the researchers estimate that if 62 per cent of the adults and teenagers in England attended NHS dental services at least twice within 10 years, the total return on investment would have been £16.9 million between 2010 and 2020.

Dr Deborah Moore, the lead author, said: "Fluoridation of drinking water is justifiably recognised as one of the 20th century's greatest public health achievements. But as fluoride toothpastes became available in the mid-1970s – considered to be the key factor in the dramatic decline in the prevalence and severity of dental decay – the context of water fluoridation has changed.

"There is no doubt that population-level, mass preventive interventions for tooth decay are still required. However, in high income countries, we may be reaching the limit of what can be achieved through fluorides alone.

"The relationship between sugar consumption and tooth decay is very clear; average consumption of sugars in the UK is more than double the recommended level for adolescents and is almost double for adults. Managing sugar consumption is another area of policy that needs to be investigated."

¹<https://sites.manchester.ac.uk/lotus/>

Wellbeing through dissolvable innovation

BSOLVE Dental was established in 2003 with an ambition to bring innovation to the use of thin dissolving films (TDF) and meet customer needs – helping them look better, feel better and live better.

The Scottish company is now one of Europe's largest TDF manufacturers and its strips are used in a wide range of dental, healthcare, cosmetic and nutritional products.

Bsolve manufactures dissolvable teeth whitening strips containing hydrogen peroxide for the UK and European professional dental market and international retail markets as well as non-hydrogen peroxide strips for the UK and European retail market.

The key advantages of the dissolvable teeth whitening strips are improved whitening, less tooth sensitivity, greater convenience for the patient or consumer, great taste and less waste.

Bsolve, which is certified to manufacture cosmetic, nutritional and medical device products, develops and manufactures their range at their purpose built facility in Blantyre, just outside Glasgow.

As well as manufacturing dissolvable teeth whitening strips for some of the biggest brands and retail outlets in the world, Bsolve has also created two brands of its own. For dental practices, there is the Be Brighter range and for retail there is Origin.

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www.orthodontic-ong.org/home/spring-study-day/

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www.baos.org.uk/events/event/teaching-and-learning-course/

31 MAY-1 JUNE

Scottish Dental Show

Braehead Arena, Glasgow
www.sdsshow.co.uk



11 SEPTEMBER

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SEC, Glasgow

www.ifea2024glasgow.com

Note: Where possible this list includes rescheduled events, but some dates may still be subject to change.

VR-haptic dentistry meet-up

Join online or in-person to meet colleagues, learn and develop

AN educational meet-up on the use of VR-haptics in dental education is being hosted by Utah University's School of Dentistry on 8 June.

In association with the recently founded VR-Haptic Thinkers network, the one-day, hybrid, free-to-join meet-up on VR-Haptic Dentistry, Pedagogy and Curriculum Evolution aims to explore the transformative impact of virtual technology on dental education.

The event is being organised in collaboration with the Institute of Dentistry, University of Eastern Finland. With support from the American Dental Education Association (ADEA) and the Association for Dental Education in Europe (ADEE), the event is free to join both in person and online.

Join here <https://vrh-t.com/> to learn, develop professionally, meet colleagues and celebrate the supportive power of VR-haptic training. Keep to date by following @VR_H_Thinkers. For further information and to contribute by e-poster (or otherwise), contact szabolcs.felszeghy@uef.fi

The science of touch, see page 41.

Young people urged to get HPV vaccine

HEALTH experts are encouraging young people to ensure they get the HPV vaccine, as recent statistics reveal that approximately one-in-six girls and one-in-five boys in England remain unvaccinated by the time they reach school year 10.

The HPV (human papillomavirus) vaccine provides protection against various cancers, including mouth, head and neck, cervical, anal, and genital cancers, impacting both girls and boys.

Administered to all 12-13-year-olds in schools and community clinics, parental consent is necessary for their child to receive the vaccine from NHS nurses. School closures and pupil absences caused HPV vaccination rates to plummet during the COVID-19 pandemic.

Yet, new figures reveal vaccine coverage remains significantly lower than before the pandemic. Data reveals that by the end of this school year, more than 50,000 girls and more than 70,000 boys in year 10 didn't get vaccinated against HPV.

Dr Nigel Carter, CEO of the Oral Health Foundation said: "In the wake of the pandemic, our hopes for a swift recovery in HPV vaccination rates for children have been disappointed by current figures. It is disappointing and concerning that the post-pandemic rebound of the program has yet to materialise.



"The HPV vaccine is a proven and effective measure in preventing HPV-related cancers, such as mouth cancer. By vaccinating children early, we not only shield them from these life-threatening diseases but also contribute to the overall reduction of HPV prevalence within our communities."

Meanwhile, a new study has found that no cases of cervical cancer have been detected in young women who have been fully vaccinated as part of the HPV immunisation programme. The Public

Health Scotland (PHS) research said the HPV vaccine was "highly effective" in preventing the development of the cancer.



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Dr Fadi Al-Silwadi, GDC No. 252526, BCom, DDS, MClinDent, MFDS M.Orth (RCS Edin), DipMJDF M.Orth (RCS Engl): Specialist in Orthodontics

I got into dentistry after completing a degree in international management because I wanted to be in a position to make a direct positive difference in people's lives. I studied dentistry in the UAE and practiced for two years after qualifying before moving to the UK in 2011.

Since moving to the UK, I specialised in Orthodontics at the University College London, completed many robust examinations and assessments to enable me to register with the General Dental Council as a general dentist and specialist. This helped me gain membership in General Dentistry and Orthodontics at both the Royal College of Surgeons in England and Edinburgh.

In 2015, I moved to Scotland and have since had the opportunity to treat a vast number of adults and children with varying complexity. My reputation in Orthodontics has been built over time,

as I consider treatment a partnership between myself and the patient.

I joined the Scottish Centre for Excellence in Dentistry (SCED) as I believe the benefits to the patient care in a multidisciplinary dental environment are immeasurable. The wealth of clinical experience in all aspects of dentistry, coupled with the outstanding support, made joining SCED a very easy decision.

I take a patient-centred approach to planning and providing orthodontic treatment, ensuring the patients' needs are met at all stages. Every decision I make uses my knowledge and experience, and I treat each patient as though their teeth were my own. My goal is to ensure that every patient is happy with their result while prioritising their oral health.

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I will ensure that every patient knows that I genuinely care for their wellbeing above all else. Although dentistry is a practical profession, it requires



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Exhibitors will be demonstrating the latest technology and developments in dentistry as well sharing best practice in the areas of law, finance and life planning.

Thank you from the team here at *Scottish Dental* to all the exhibitors who have booked stands so far; there are more than 80, which puts the show floor at two-thirds capacity with five months to go.

The Education Programme will feature lecture and workshop sessions on more than 20 areas of clinical expertise. Plus, there are sessions dedicated to dental nurses, hygienists and therapists, and practice managers. The business and finances of dentistry will be covered by

experts in their field. The programme will also include a briefing on the latest in regulation and an update from the Scottish Government on the reform of NHS dentistry.

Speakers include Simon Crewe, Forensic Odontologist, and Brian Millar, Professor of Blended Learning in Dentistry at King's College London.

Plus, there will be Tariq Ali, Tariq Bashir, Lisa Bainham, Chris Barrowman, David Claridge, Flo Couper, Lisa Currie, Abid Faqir, John Gibson, James Green, Mike Gow, Phil Friel, Siobhan Kelleher, Gillian Leslie, Lauren Long, Audrey Kershaw, Fiona McAndrews, Nicole McKee, Ilona McLay, John McQueen, Peter Mossey, Barry Oulton, Carol Rafferty, Kayleigh Robinson, Andrea Rodriguez, Khuram Shafiq and Paul Tipton.

The programme also covers all eight of the GDC's Highly Recommended and Recommended topics:

1. Medical Emergencies
2. Disinfection and decontamination
3. Radiography and Radiation Protection
4. Legal and Ethical Issues
5. Complaints Handling
6. Oral Cancer: early detection

7. Safeguarding Children and Young People
8. Safeguarding Vulnerable Adults.

GDC topic speakers include Nick Beacher, Stuart Clark, Aubrey Craig, Mark Greenwood, Jane Holt, Mike Lewis, Jim McCaul, Christine Park, Emma Riley, Suzanne Riordan and Julie Willis. The education programme at the Scottish Dental Show 2024 can provide up to nine hours of verifiable Continuing Professional Development (CPD) in compliance with the General Dental Council's Enhanced CPD scheme regulations.

Enhanced CPD outcomes

In the Enhanced CPD scheme, specific standards for the dental team are brought to the forefront of CPD planning and activity through four development outcomes. These outcomes provide encouragement to link learning activity more closely to the standards and help you embed the principles further in your working life. The four development outcomes are set out below:

Outcome A

Effective communication with patients, the dental team and others across dentistry, including when obtaining consent, dealing with complaints and raising concerns when patients are at risk.

Outcome B

Effective management of self and effective management of others or effective work with others in the dental team, in the interests of patients; providing constructive leadership where appropriate.

Outcome C

Maintenance and development of knowledge and skill within your field of practice.

Outcome D

Maintenance of skills, behaviours and attitudes which maintain patient confidence in you and the dental profession and put patients' interests first.

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A selection of presentations

SMILE DESIGN: HOW TO DESIGN AND CREATE AESTHETIC RESTORATIONS – BY BRIAN MILLAR

Aim: to provide a deeper understanding of how to design and create aesthetic restorations in the smile zone.

THE ESSENTIALS OF TOOTH PREPARATION – BY PAUL TIPTON

Aim: to provide delegates with a modern overview of accurate and detailed tooth preparation techniques.

INTRAORAL SCANNING: SUCCESSFUL ADOPTION – BY DAVID CLARIDGE

Aim: to understand how digital workflows and digital-focused clinical days can easily pay for your hardware investment, and then deliver profit and reduce chair time and stress.

HYPERMOBILITY AND DENTISTRY – BY AUDREY KERSHAW

Aim: to improve awareness of the relevance of hypermobility syndromes to dentistry and give an understanding of common dentally relevant comorbidities of hypermobility syndrome.

HUMAN FACTORS IN DENTISTRY – BY AUBREY CRAIG

Aim: to enable you to drive positive change and reduce your own and your team's risk, when providing dental care.

BITE CLUB: THE FIRST RULES OF CREATING AN OUTSTANDING PATIENT JOURNEY – BY LISA BAINHAM

Aim: to introduce a set of rules for creating an outstanding patient journey, in order to apply them effectively within a general practice setting.



THE YEAR AHEAD

Owners are increasingly positive in their outlook, according to a new report

WORDS WILL PEAKIN

Specialist business property adviser Christie & Co last month launched its Business Outlook 2024 report which reflected on the themes, activity and challenges of 2023 and forecasted what 2024 might bring.

The dental industry, like many sectors, has faced its share of challenges due to cost inflation and rising interest rates. Before the mini-budget announcement in September 2022, the industry was already adapting to less predictable market conditions. Despite these hurdles, including ongoing workforce issues particularly within NHS dentistry, Christie & Co maintains a positive long-term outlook for the dental market.

In 2022, the dental sector experienced robust transaction activity, largely fuelled by corporate buyers committed to acquisitions. However, the swift escalation in interest rates, soaring operational costs, and staffing difficulties led many corporate entities to halt their acquisition strategies in early 2023. This shift resulted in a notable decrease in transaction volumes as companies shifted their focus towards organic growth over acquisitions. During this period of change, Christie & Co reported a 9.8 per cent decrease in transaction completions.

In contrast, the independent dental market saw a resurgence in the latter half of 2023. With reduced competition from corporate buyers, there was a significant uptick in transactions involving first-time buyers, current owners, or smaller independent groups, accounting for 69 per cent of deals.

This revival was partly driven by Christie & Co introducing 45 practices to the market on behalf of BUPA earlier in the year, leading to a 150 per cent increase in agreed transactions. This surge in the independent sector also led to practices achieving, on average, 113 per cent of their asking price in 2023. Furthermore, the number of offers received increased on the prior year by more than 80 per cent, with an average of 4.4 offers

per sale, nearly double that of 2022.

The latter half of 2023 also saw an improved influx of new practices entering the market. Looking forward, Christie & Co is optimistic about a return to more stable trading conditions in 2024 as this trend continues.

Market sentiment

As part of its annual sentiment survey, the company surveyed dental professionals across the country to gather their views on the year ahead. Encouragingly, 68 per cent of people said that they are positive about the year ahead – a 20 per cent rise on survey figures reported in the previous year – while just 9 per cent feel negative. When asked about their sale and acquisition plans in 2024, 64 per cent said they are planning to either buy or sell this year.

Pricing

Reverberations since the mini-budget in September 2022, including the ongoing workforce challenges, collectively instigated a strategic reassessment among buyers in the dental sector, particularly the dental corporates. Consequently, many chose to moderate or temporarily suspend their acquisition plans, a sharp contrast to their aggressive growth in 2022. As a result, Christie & Co saw a 6.4 per cent decrease in pricing in 2023, with the market subsequently undergoing a constructive and healthy recalibration. Christie & Co confirms that stability has been restored in pricing, signalling a new phase of equilibrium and resilience.

Market predictions

In 2024, Christie & Co expects:

- The transactional volume within the market to rebound. However, it's anticipated that these levels will still fall short of the peak witnessed in 2022. This forecast suggests



a gradual recovery and stabilisation of market activity, moving towards a more sustainable pace in comparison to the heights reached during the market's zenith.

- Merger and acquisition activity from corporate operators will reflect a strategic recalibration, with these entities showing restraint in their investment choices and a heightened focus on long-term value over immediate expansion.
- During a period where corporate entities are exercising enhanced selectivity in their acquisitions, experienced multi-site independent operators and first-time buyers are poised to capitalise on this opportunity. This scenario presents a prime opportunity for these operators and newcomers to expand their foothold in the market and establish a stronger presence.
- Some group operators will continue with strategic plans to review and divest underperforming or non-core sites, reflecting a focused effort to streamline their operations and enhance overall efficiency.

Paul Graham, Managing Director – Medical at Christie & Co, said: “In a landscape reshaped by economic shifts, the dental sector emerges resilient and ready for transformation. Christie & Co's latest report captures this pivotal moment, forecasting a 2024 marked by strategic recalibration. This year is set to be a period of balanced growth, stability, and an air of optimism that permeates the sector.”

For the full Business Outlook 2024 report, visit: www.christie.com/business-outlook-2024

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ANCIENT SCOTTISH TEETH YIELD CLUES

The Black Death link's to changes in the human oral microbiome

The second plague pandemic of the mid-14th century, which began with the so-called Black Death, killed 30 to 60 per cent of the European population and profoundly changed the course of European history.

Now, a study¹ led by researchers from Penn State and the University of Adelaide suggests that the plague, potentially through resulting changes in diet and hygiene, may also be associated with a shift in the composition of the human oral microbiome toward one that contributes to chronic diseases in modern-day humans.

"Modern microbiomes [microorganisms, predominantly bacteria] are linked to a wide range of chronic diseases, including obesity, cardiovascular disease and poor mental health," said Laura Weyrich, Associate Professor of Anthropology at Penn State. "Uncovering the origins of these microbial communities may help in understanding and managing these diseases."

According to Weyrich, dietary changes are believed to have influenced oral microbiome evolution through time. However, few studies have directly examined the history of human oral microbiomes in a single population.

Weyrich noted that some studies have used the microbiomes of living indigenous people who practice traditional subsistence lifestyles as a proxy for the microbiomes of pre-industrialised peoples.

But this strategy is faulty, she said, because modern-day non-industrialised populations may not have microbes that accurately reflect those that existed in the ancestors of industrialised peoples.

"This research places unnecessary responsibilities and obligations on indigenous communities² to participate in microbiome research, where the benefits of these studies may not directly serve indigenous peoples," said Weyrich.

A more accurate and ethically responsible method, she said, is to directly examine the oral microbiomes preserved within calcified dental plaque, known as calculus, from the ancestors of industrialised people with the permission and collaboration of decedent populations and stakeholders.

In the largest study to date of ancient dental calculus, Weyrich and her colleagues collected material from the teeth of 235 people who were buried across 27 archaeological sites in England and Scotland from about 2,200 BC to AD 1,853.

The researchers identified 954 microbial species and determined that they fell within two distinct communities of bacteria; one dominated by the genus *Streptococcus*, which is common in the oral microbiomes of modern

**WORDS
SARA
LAJEUNESSE**

Industrialised peoples, and the other by the genus *Methanobrevibacter*, which is now largely considered extinct in healthy industrialised people.

Researching the origins of these two communities, the team found that almost 11 per cent of the total variation in microbiome species composition could be explained by temporal changes, including the arrival of the Second Plague Pandemic. But how could the Second Plague Pandemic contribute to changes in the oral microbiome?

"We know that survivors of the second plague pandemic earned higher incomes and could afford higher-calorie foods," Weyrich said. "It's possible that the pandemic triggered changes in people's diets that, in turn,

Laura Weyrich selects an ancient tooth for DNA extraction.
©Patrick Mansell.





influenced the composition of their oral microbiomes.”

The team used a novel approach to investigate whether a change in diet could have influenced the emergence of the *Streptococcus* group and the extinction of the *Methanobrevibacter* group. They assembled a list of functional differences among the bacteria in the two groups that could be linked to diet; for example, functions linked to high or low-dietary fibre digestion, carbohydrate metabolism and lactose — a sugar in milk — metabolism.

The researchers found that the bacteria in the *Streptococcus*-dominated group had more functional traits that are significantly linked with low-fibre, high-carbohydrate diets, as well as dairy consumption — all of which characterise modern-day diets. By contrast, the *Methanobrevibacter*-dominated group was missing traits associated with dairy and sugar



IT'S POSSIBLE THAT THE PANDEMIC TRIGGERED CHANGES IN PEOPLE'S DIETS THAT, IN TURN, INFLUENCED THE COMPOSITION OF THEIR ORAL MICROBIOMES”

— LAURA WEYRICH

consumption, which characterised the diets of some ancient humans.

The team further determined that the *Streptococcus* group was associated with the presence of periodontal disease, which is characterised by infections and inflammation of the gums and bones around the teeth. When this disease progresses, bacteria can enter the bloodstream through gum tissue and potentially cause respiratory disease, rheumatoid arthritis, coronary artery disease and blood sugar issues in diabetes. The *Methanobrevibacter* group, on the other hand, was

associated with the presence of skeletal pathologies.

“Our research suggests that modern-day oral microbiomes may reflect past changes in diet, resulting from the Second Plague Pandemic,” Weyrich said. “Importantly, this work helps to inform our understanding of modern-day chronic, noncommunicable diseases.”

REFERENCES

- 1 www.nature.com/articles/s41564-023-01527-3
- 2 www.psu.edu/news/research/story/qa-Indigenous-community-first-approach-more-ethical-microbiome-research

VIKING DENTISTRY WAS ‘SURPRISINGLY ADVANCED’

Widespread caries and toothache, but also some dental work and filing of front teeth



Carolina Bertilsson examining teeth from the Viking Age population

VIKING AGE teeth from Varnhem bear witness to surprisingly advanced dentistry, according to a study by the University of Gothenburg. It examined 3,293 teeth from 171 people among the Viking Age population of Varnhem in Västergötland, Sweden.

The site is known for extensive excavations of Viking and medieval environments, including tombs where skeletons and teeth have been well preserved in favourable soil conditions.

The research team from the university's Institute of Odontology worked with an osteologist from Västergötland's museum.

The skulls and teeth underwent dental-style clinical examinations, and the teeth were similarly X-rayed — each on a small imaging plate. The results, published in the journal *PLOS ONE*, show that 49 per cent of the Viking population had one or more caries lesions. Of the adults' teeth, 13 per cent were affected by caries, often at the root. However, children with milk teeth — or with both milk and adult teeth — were entirely caries-free.

Tooth loss was also common among adults. The studied adults had lost an average of six per cent of their teeth, excluding wisdom teeth, over their lifetimes. The findings suggest that caries, tooth infections and toothache were common among the Viking population in Varnhem.

However, the study also revealed examples of attempts to look after teeth in various ways. “There were several signs that the

Vikings had modified their teeth, including evidence of using toothpicks, filing front teeth — as some kind of identity marker — and even dental treatment of teeth with infections,” said Carolina Bertilsson, a dentist and Associate Researcher, and the study's first-named and corresponding author.

One sign of more sophisticated procedures was molars with filled holes, from the crown of the tooth and into the pulp, probably to relieve pressure and alleviate severe toothache due to infection.

“This is very exciting to see, and not unlike the dental treatments we carry out today when we drill into infected teeth. The Vikings seem to have had knowledge about teeth, but we don't know whether they did these procedures themselves or had help,” said Bertilsson.

“The study provides new insights into Viking oral health and indicates that teeth were important in Varnhem's Viking culture. It also suggests that dentistry in the Viking Age was probably more sophisticated than previously thought.”

- 1 <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0295282>



A filled hole from the crown of the tooth into the pulp. © Carolina Bertilsson



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Implantology:

Kevin Bruce | Special interest in implantology | BDS (GLAS) 1995, FDSRCS (ENG) 1999 | GDC NO. 70499

Endodontics:

Ross Henderson | Special interest in endodontics | BDS 2003 MSC (ENDO) 2013 | GDC NO. 82322

Aesthetic, restorative dentistry, and clear aligners:

Ian Cumming | Special interest in aesthetic dentistry and implantology | BDS MJDF RCS (ENG) DIPCONSED DIPRESTDENT | GDC NO. 191060

Oral surgery:

Catriona Easton | Oral surgeon | BDS (GLASGOW) 2007, MFDS RCPS (GLASGOW) | GDC NO. 114105

Sedation:

Catriona Easton, Clive Schmulian and Ian Cumming | Sedationists

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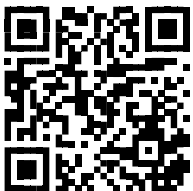
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NEW DENTAL DIPLOMA EXAMS LAUNCH

RCSEd initiative set to enhance career pathway for GDPs in the UK and across the globe

The Faculty of Dental Surgery at The Royal College of Surgeons of Edinburgh (RCSEd) will be introducing a new suite of Dental Diploma Examinations in 2024 on a staged basis.

These examinations have been developed from the desire for the Faculty of Dental Surgery to enhance the career pathway

for general dental practitioners in the UK and across the globe.

I recognise in conversations with colleagues in general dental practice how hard they work and, moreover, both their desire to develop specific specialty-related skills and the lack of recognition of such expertise within the professional arena.

Across the UK, the NHS is becoming increasingly fragmented and our dental journals are regularly filled with items related to contractual issues and professional development.

Many courses have laudable aims and aspirations but unfortunately do not link to a clear milestone that confirms the attainment of specific knowledge, clinical and professional skills that the dental profession, the NHS, and indeed patients and the public recognise.

The RCSEd is the oldest and largest surgical royal college, with our roots in Edinburgh and operating across 110 countries across the world. The Faculty of Dental Surgery

is recognised across global dentistry as a leader in quality assurance and an awarding body for professional recognition.

With this in mind, the new dental diploma examinations will credentialise general dental practitioners who have developed skills in the following specialty areas:

- Endodontics
- Prosthodontics
- Periodontics
- Paediatric dentistry
- Oral surgery
- Oral medicine
- Dental sedation.

What will the examination format be?

Each examination will comprise a series of single best answers and a clinical aptitude test involving unseen clinical cases. The examination format is designed for dentists to be able to undertake these examinations online as many dentists have not sat a professional examination since their university days.

Why should I sit a Dental Diploma Examination as a UK dentist?

On completion of the examination process, dentists will become an Associate Member of the Faculty of Dental Surgery and will be entitled to use the following RCSEd post-nominals in their professional practice:

- Dip Dent Sed RCSEd
- Dip Oral Surg RCSEd
- Dip Oral Med RCSEd
- Dip Endo RCSEd
- Dip Perio RCSEd
- Dip Pros RCSEd
- Dip Paed Dent RCSEd.

The RCSEd's Faculty of Dental Surgery advocates continually

on behalf of the profession and specifically on behalf of RCSEd members.

Completion of these examinations professionally will have the potential to form a key part of a general dental practitioner's portfolio for recognition as a Tier 2 dentist in England and Wales and, in time, the Faculty of Dental Surgery will champion a similar framework for professional practice and recognition in the other devolved nations throughout the UK.

Why should I sit a Dental Diploma Examination if I currently work outside the UK?

As the Dental Diploma examinations develop, the Faculty will run these examinations internationally. As other countries progress towards a post-qualifying examination, the Faculty and wider College will work with Ministries of Health and key stakeholders in relation to the recognition of the Dental Diploma Examinations as part of wider professional practice.

How do I prepare to sit a Dental Diploma Examination with RCSEd?

The RCSEd is the home for the whole dental team and provides a rich source of professional education for our membership base. We recognise the range of education available to dentists in each of the specialty areas provided by both the NHS through a range of courses and self-directed learning. As such, dentists will not need to have undertaken a specific programme of study towards these diplomas and can sit them when they feel they are ready, in the same way that people plan and prepare for their advanced driving test.

How do I find out more about the Dental Diploma examinations?

The Faculty of Dentistry will be running webinars to help candidates prepare for these new and innovative exams in 2024.

Professor McIntyre is Dean of the Faculty of Dental Surgery at the Royal College of Surgeons of Edinburgh.

WORDS
PROFESSOR
GRANT
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PROMOTING PREVENTION



But preventative care is inconsistent across the UK, study finds



here are “clear discrepancies” in the understanding of preventative care – and it is not being offered consistently to patients across the UK, according to research undertaken by healthcare company Haleon and the College of General Dentistry (CGDent).

The Dental Health Barometer study, which included a survey of 2,000 consumers and 505 dental health professionals, found that:

- Just one third (34 per cent) of oral health professionals always offer preventative care advice to patients.
- One in four (25 per cent) patients weren't given preventative advice during their last dental appointment.
- More than half (59 per cent) of oral health professionals are more likely to offer preventative advice for private patients than NHS patients,
- More than a third (37 per cent) of NHS oral health professionals cited time constraints as the top reason for not being able to

routinely offer preventative care advice, as opposed to just 15 per cent of private professionals.

- Oral health professionals differed on the preventative advice they would recommend to patients.

Preventative care is defined as proactive dental care and advice that helps a patient to take action to maintain a healthy mouth, protecting against tooth decay, gum disease and more serious issues such as tooth loss and negative impacts on general health.

Yet, the survey of UK consumers and dental health professionals reveals that preventative oral care advice is not being offered consistently to patients. That's

WORDS WILL PEAKIN

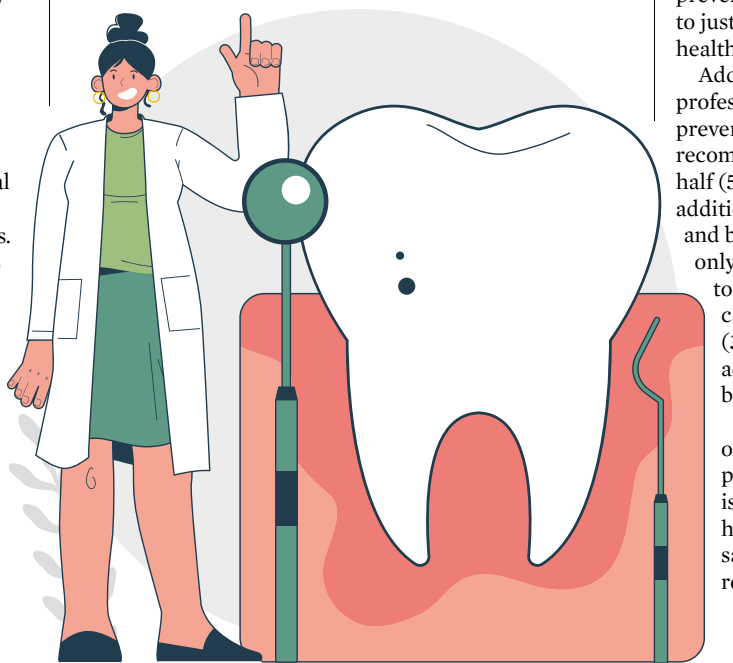
despite a high incidence of tooth decay – with 70,000 people treated in UK emergency departments for the disease last year alone.

Just one third (34 per cent) of oral health professionals said they always offer preventative care advice to patients, while one in four (25 per cent) patients said they weren't given preventative advice during their last dental appointment.

More than half (59 per cent) of oral health professionals said that they are more likely to offer preventative advice for private patients than NHS patients, and over a third (37 per cent) of NHS oral health professionals cited time constraints as the top reason for not being able to routinely offer preventative care advice, as opposed to just 15 per cent of private oral health professionals.

Additionally, oral health professionals differed on the preventative advice they would recommend to patients. While half (50 per cent) said advice on additional oral hygiene products and brushing techniques were key, only 2 in 5 (41 per cent) pointed to advice on diet as preventative care and just over a third (34 per cent) would consider advice on caring for gums to be preventative advice.

Nearly half (49 per cent) of the UK public think preventative care for oral health is very important with over half (54 per cent) of consumers saying they would prefer to receive preventative care advice



for their oral health from their dentist. Meanwhile, the majority (87 per cent) of oral health professionals think that preventative action is beneficial and aim to provide it proactively.

Bas Vorsteveld, General Manager of Haleon UK and Ireland, said: “We know that oral health professionals are facing huge pressures, and we want to help support them to be able to provide better preventative advice – not just during routine dental appointments, but outside of appointments too.

“Our findings revealed preventative care advice is not always offered consistently, despite patients and dentists understanding its importance. We remain committed to addressing these issues and will look to develop new initiatives to support dental professionals.

“These will form alongside our existing initiatives which include providing educational materials to healthcare professionals, continuing to innovate and provide therapeutic oral care for patient issues at home and through campaigns like Shine Bright which raises awareness in children of the prevention of oral health conditions.”

The study revealed a lack of understanding across consumers and oral health professionals over whether preventative care is routinely available on the NHS. Almost half (48 per cent) of consumers said preventative oral healthcare advice is offered on the NHS, and more than a third (34 per cent) were unsure.

Oral health professionals were more aware, with 74 per cent saying preventative oral healthcare advice is offered on the NHS. Once again, younger dentists are more aware that preventative care advice should be routinely available on the NHS.

The study found patients have a strong level of trust in advice given by their dentist. Where it is offered, 9 in 10 (88 per cent) found the advice helpful. The study found that NHS patients, younger people and men were less likely to proactively ask for preventative care advice.

Dr Abhi Pal, President at the College of General Dentistry, said: “We are committed to quality and standards of excellence in general practice dentistry – helping professionals to do the best for their patients.

“The research revealed some fascinating insights into the role that preventative care plays in the UK. It’s quite properly a mainstay of both private and NHS appointments, and we support any initiative that promotes prevention.”

Regional split

The Barometer also found that there were regional discrepancies between both patients and oral health professionals:

- Only 40 per cent of consumer respondents from Greater London think that preventative care is very important for oral health compared with more than half (55 per cent) in Northern Ireland and South West England.
- Respondents from Greater London also were less likely to have received advice, with only 37 per cent having encountered preventative care advice compared with more than half of respondents (55 per cent) in the South East and nearly half (47 per cent) in the North East.
- More than half (55 per cent) of respondents in Wales said thinking back to their most recent trip

to an oral health professional, they received preventative care advice verbally from them, compared with 50 per cent of those in Scotland, 48 per cent of those in England and under two in five (37 per cent) in Northern Ireland.

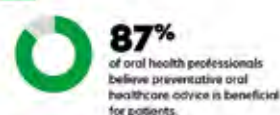
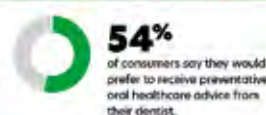
• Northern Ireland recorded a particularly low level of preventative care during dentist visits – with only slightly over a third of respondents (37 per cent) having received advice at their last appointment. Despite this, the respondents from the region were some of the most interested in learning about preventative advice (53 per cent).

• The East of England saw the lowest level of detail from their oral health professional on preventative care advice, with only 30 per cent feeling their dentist provided a lot of detail.

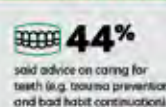
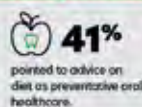
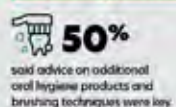
Dental Health Barometer

We know that the dental industry is facing huge pressures. On the other side, many patients are struggling to access NHS dental care.

There is an agreement that preventative oral healthcare advice is important:

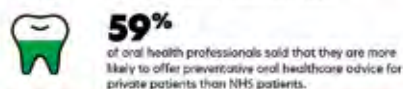
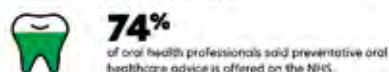
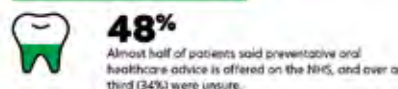


Oral health professionals disagree over what constitutes oral healthcare:

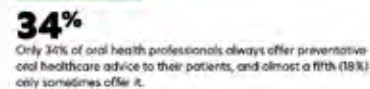


Preventative oral healthcare can play a significant role in sustaining health, and, through better preventive actions, patients are more likely to avoid oral health issues later in life.

Lack of clarity around place of NHS in preventative oral healthcare:



Some people are still missing out on preventative oral healthcare:



Regional disparities around preventative oral healthcare:

Over half (55%) of respondents in Wales said that they recently received preventative oral healthcare advice verbally from their oral health professionals, compared to half of those in Scotland, under half of those in England, and under 2 in 5 in Northern Ireland.



The reasons many oral health professionals don't offer preventative oral healthcare advice is down to:

- Time constraints
- Lack of patient requests
- Longer appointment times needed
- The need for appropriate reimbursement under the NHS

Both patients and oral health professionals agree and clearly understand that preventative oral healthcare advice is beneficial and important, although not all agree on what exactly constitutes this. There is also a lack of understanding over whether it is offered across both private and NHS appointments.

There is guidance out there for oral health professionals:

The vast majority (76%) of oral health professionals are aware of the Department of Health's Delivering Better Oral Health Toolkit.

We want to support dentists and oral health professionals, to enable them reach more patients with preventative oral healthcare advice.

HALEON

College of General Dentistry



Certificate in Orthodontics for General Practice

A Scotland-based Certificate in Orthodontics for General Practice (EduQual Level 7) was launched by Identiti to start in April 2024. After successfully selling out the course by January 2024 and with several enquiries they will now be running a second cohort to start at the end of August 2024. This will follow on in 2025 with the 6 day Diploma in Orthodontics for General Practice (EduQual Level 7)

The qualification is designed for GDP's who want to build a successful orthodontic addition to their book but with the reassurance, back up and support of a specialist. This is open to those who have little or no experience of fixed orthodontics.

The course will be run by Specialist Orthodontist Andrew McGregor of Park Orthodontics.

Comprising 12 intensive study days, delegates will diagnose,

treatment plan and deliver safe and effective treatment with supervision of a team of specialist orthodontists.

"It's about supporting dentists to understand the fundamentals of orthodontics, diagnosis, treatment planning and, in particular, treatment mechanics," said Andrew.

"No-one is left feeling abandoned once they have completed the course. The ongoing support is, I think, crucial for anyone wanting to get serious about their orthodontics."

August 29th - 31st 2024

October 24th-25th 2024

January 16-17 2025

March 6-7 2025

May 8-10 2025

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REFLECTIONS ON DENTISTRY IN THE ARMY

WORDS
MAJOR GENERAL
EWAN CARMICHAEL

*The second of two articles on
healthcare in the military*

Having been invited to give a reflective talk at Glasgow Dental School towards the end of last year, I was asked to set down some key thoughts on dentistry in the Army. It's quite a challenge to distil

38 years into 600 words, but here goes...

The first thing is that you are part of a – part of *the* – team. This is not a commercial enterprise. The soldiers you care for are your colleagues and comrades. They put themselves in harm's way, so you owe it to them to practise to the highest reasonable standards.

You do this in two main ways: by making, and keeping, them fit to deploy; and by being prepared to deploy alongside them. By 'deploy', this may mean to fairly inhospitable spots, anywhere on the globe. Ideally, your preventative care should allow them to operate for about six months without requiring routine maintenance. However, a proportion will require emergency care in the field, and that is why a uniformed dental service – whether Regular or Reservist – is essential.

Your soldier patients work around the clock, in any weather and in any terrain so, as an Army dentist or dental nurse, you may need to be prepared to do the same. On deployed operational service, every emergency visit may take many hours and

tie up several personnel as escorts, so your treatment must be prompt and effective.

Your dentistry needs to be durable and lasting. While you will have much clinical freedom and access to good clinical equipment, you need to bear in mind that 'heroic' or fashionable trends may not always be in your patients' best interests; sometimes, simplicity is best!

In peacetime, you practise in garrison dental centres or hospitals. On deployment, you may be part of a medical regiment or a field hospital. You and your staff are non-combatants, wearing the Red Cross, but armed to protect yourselves and your patients. While operating in challenging circumstances, and required and expected to share some of the hardships, your combatant comrades will do their darnedest to ensure that you are safe.

You will be encouraged and resourced to continue your professional development to a high standard.

Your staff (in my experience, well-trained, well-motivated, and entertaining companions) will look to you for genuine leadership. So, you owe it to them to be an authentic leader. The Sandhurst motto, 'Serve to Lead' reminds you that you must look after your staff before yourself.

Inevitably, this means that you must take responsibility for an element of administration. However, the leadership training offered by the Services is probably second to none.

As you become more experienced and senior, you will be required to pull your weight in planning, procurement and training.

The Army draws from a wide demography so, while you are unlikely to practise much paedodontics or geriatric dentistry (unless on a humanitarian mission), your patient base will tend to be young-ish and generally fit. Many play contact sports. However, some of your patients may not have experienced much dentistry prior to the Army, and that can bring its own challenges. Add to this, that deployment in combat may render dental hygiene a secondary consideration; it means that you sometimes have to coax/cajole better dental standards from them.

Servicemen and women sign up that they are prepared to give their lives. Sadly, very occasionally, you may be required to carry out forensic identification of colleagues.

The rewards and satisfaction flowing from being encouraged to practise to high standards, both professionally and ethically, and from being part of a team, are immense. You live, work and play alongside your patients – which is almost unique in dentistry.

Read part one here: www.sdmag.co.uk/healthcare-in-the-military



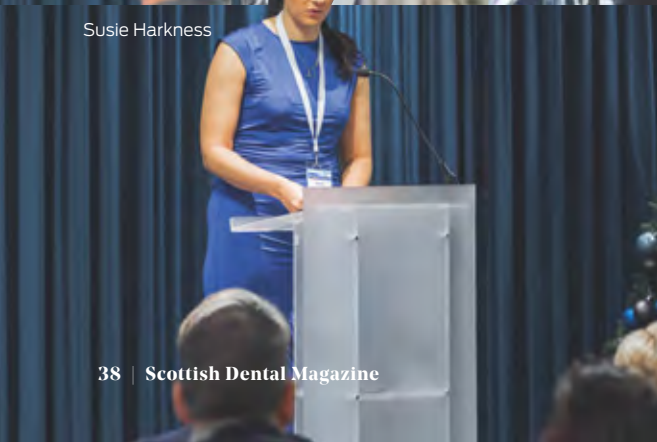
THE SANDHURST MOTTO, 'SERVE TO LEAD' REMINDS YOU THAT YOU MUST LOOK AFTER YOUR STAFF BEFORE YOURSELF"



HIGH PERFORMANCE



Niall Elliott



Susie Harkness

WORDS
WILL PEAKIN

EA4SD's conference in Edinburgh was a unique opportunity to gain insights from leading presenters

D

elivered in partnership with Clyde Munro, the conference brought together more than 100 sports dentists from more than 15 countries across Europe. The theme of the conference was 'Sports Dentistry meets Sports Medicine'. This theme was demonstrated throughout the conference with multiple sports medicine and sports dentist speakers.

After a presentation on the EA4SD formation and development over the last 10 years by EA4SD co-founder Thanos Stamos, Scottish Rugby sports medicine legend James Robson presented on his experiences and how he has helped develop sports dentistry support in Scottish Rugby. Presenting to a room full of dentists on his birthday demonstrated James's passion for collaborating to ensure his athletes have the best support possible.

Niall Elliott, Head of Sports Medicine at the Scottish Institute of Sport, and Susie Harkness, Special Care Dentist, presented on the challenges of para-athletes and highlighted the need for more knowledge and support when working with this group of athletes.



Tomás Appleton



Sophie Cantamessa

SPORTS DENTISTRY

In the afternoon on day one of the conference Tomás Appleton, dentist and captain of the Portugal Rugby Team, explained how he has been able to balance successful careers both on and off the pitch. He explained how important and special the success of the Portugal Rugby Team at the Rugby World Cup was. EA4SD co-founder and Sports dentist to the French soccer team Sophie Cantamessa rounded the day one presentations demonstrating the oral health needs of elite athletes at the top of their sport.

The conference dinner and match that evening was a great occasion. It involved a pre-match hospitality dinner and post-match pies, with ex-Scotland Rugby and current Scotland

cricketer Hugo Southwell being host for the event. Injured Scotland Rugby player Hamish Watson and Tomás Appleton provided some pre-match discussion. Then after watching a thrilling match between Edinburgh and the Italian rugby team Benetton, Scotland Rugby Captain Jamie Ritchie and Scotland player Grant Gilhurst provided some post-match analysis.

Day two of the conference kicked off with chairman of the conference and EA4SD committee member John Haughey presenting on the aspects of performance dentistry. This was followed by EA4SD president Marc Engels-Deutsch explaining the importance of apical infection in root filled and non-root filled teeth and the impact on athletic performance.

Fresh from being the pitch-side lead medic at the match the night before, Mike Dunlop, team doctor for Edinburgh Rugby, presented on intelligent mouthguards (iMGs) and their use in sport. He explained how iMGs may become commonplace in sport and the impact that would have on a dentist providing them to their patients. He also explained the new rule change by World Rugby mandating iMGs at elite level from this year.

Other highlights of the conference included presentations from current Scotland Cricketer and sports dentist Umair Mohammed on attitudes on collaboration between sports

dentists and the athlete medical team. Dr Peter Fine presented on the importance of screening of athletes and explained the current oral health status of elite soccer players in the UK based on his recent research.

The conference was completed by a presentation from Scottish Rugby Sport Dentist Fiona Davidson who presented on her experiences as a Sports Dentist and explained how she had developed a sports dentist programme in Scottish Rugby over the years. A discussion followed between Mike Dunlop, Edinburgh Rugby's doctor, and Fiona Davidson on how sports dentistry has been integrated into the medical support of Edinburgh Rugby players.

The conference, supported by Clyde Munro, Wrights Dental, DD Group and Haleon, provided a unique opportunity to gain insights from presenters not commonly heard at dental conferences and left attendees with a passion to develop sports dentistry in their area.

Building on the success of Edinburgh, the next EA4SD conference has been pencilled in for Friday 21 and Saturday 22 November 2025 in Germany. Keep an eye out for updates on the EA4SD website, www.ea4sd.com, and the EA4SD social media pages.

Pictures: www.jasonkimmings.passgallery.com/portfolio

“THE CONFERENCE BROUGHT TOGETHER MORE THAN 100 SPORTS DENTISTS FROM MORE THAN 15 COUNTRIES ACROSS EUROPE”



John Haughey



Mike Dunlop and Luan De Bruin, of Edinburgh Rugby, with and Fiona Davidson



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THE SCIENCE OF TOUCH

Integration of virtual reality haptic technologies into the dental curriculum is gaining momentum

“H

aptics: the use of technology that stimulates the senses of touch and motion, especially to reproduce in remote operation or computer simulation the sensations that would be felt by a user interacting directly with physical objects.” - Robotics@UMass Amhers.

It began with a conversation over a cup of coffee in Kuopio, Finland, at the University of Eastern Finland's Institute of Dentistry. An informal group of university teachers, researchers and dental specialists were discussing the possibilities of virtual reality haptic technologies (VR-haptics) in dental education.

Imagine, as a student, practising, and feeling the delicate resistance of a tooth as you drill, the subtle vibration of a scaler against tartar or even the temperature change when polishing a filling; that is the promise of VR-haptics. Through specialised devices and software, haptic simulators mimic the physical sensations of real-world dental procedures,

WORDS WILL PEAKIN

creating an immersive and interactive training environment.

One of the group's conclusions was that successful integration into the curriculum would depend on collaboration between 'haptic thinkers' around the world. Last November, a newly established formal group convened at the university – and online – for the first International VR-Haptic Thinkers Meetup¹ involving more than 200 scientists, dentists and students interested in

VR-haptics and dental education.

The aims of the meetup were to:

- Advance knowledge on the usability of VR-haptics in preclinical, clinical and postgraduate dental training.
- Share experimental data, challenges and solutions, and reinforce collaborative capacity initiatives in education and research.
- Engage with universities' policy makers to address the benefits of VR-haptics in manual dexterity development.

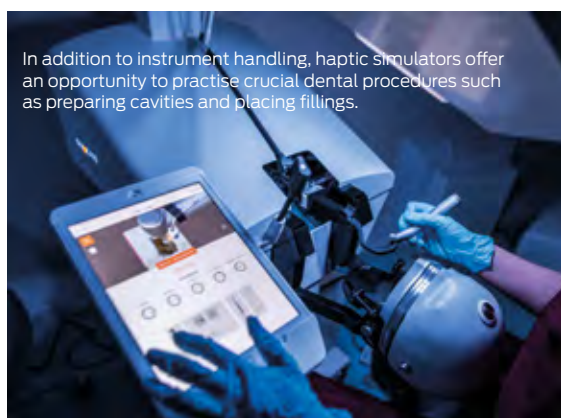




- Bring together those interested in dental education to strengthen the existing partnerships and extend networking.

“From its humble beginnings over a coffee to becoming a global group of VR-haptic thinkers, the journey has been nothing short of remarkable,” said a spokesperson following the event. “VR-Haptic Thinkers are only just getting started. We will continue to dream, do cross-border research and work towards free to join hybrid meetups – for a future where most dental schools are empowered by the transformative possibilities of VR-haptics.”

Dental education traditionally uses well-proven phantom head-based teaching methods and clinical training. But the use of VR-haptics has become more prevalent in dental education in the past few years. Students can practice handling drills, scalers and polishers; experiencing the resistance of different tooth materials and learning to control pressure with precision. This tactile feedback builds muscle memory and dexterity, translating into smoother, more controlled movements when they treat real patients.



In addition to instrument handling, haptic simulators offer an opportunity to practise crucial dental procedures such as preparing cavities and placing fillings.

In addition to instrument handling, haptic simulators offer an opportunity to practise dental procedures. From preparing cavities to placing fillings and performing root canals, students can rehearse on a variety of virtual teeth with varying textures and densities. The simulators provide real-time feedback on tool placement, pressure and technique, helping students refine their skills and build confidence before stepping into the clinic.

The power of haptic technology extends beyond mimicking procedures. Some advanced simulators integrate virtual X-rays and other diagnostic tools, allowing students to train in identifying dental issues like caries, periodontal disease and even abnormalities in jaw structure. This immersive approach fosters



Tactile feedback builds muscle memory and dexterity, translating into smoother, more controlled movements when treating real patients

critical thinking and decision-making skills, preparing students to diagnose and plan treatment for patients in a virtual, risk-free environment.

Its backers say that by implementing VR-haptic dental trainers in preclinical and clinical courses it is possible to improve students' learning curves and outcomes. In addition, they add, studies have shown that students feel that their self-confidence improves after practising within the VR-haptic environment.

Last year, a review of their use in more than 40 universities across China was published². It concluded: “Haptic simulation technology is a valuable complementary tool to the phantom head in dental education. The combined utilisation of these two training devices has been superior to either in isolation.

“However, there is a lack of research on the sequencing of the two systems, as well as the appropriate distribution of curriculum between them. It is necessary for educators to organise or engage in experience sharing, collaboration and knowledge dissemination. These actions are essential for promoting effective teaching within dental educational institutions.”

In January, a comparison of the effectiveness of virtual reality-based education and conventional teaching methods in dental education was published³. It concluded: “Based on our findings, adding haptic technology to virtual reality can improve students' practical skills, hand skills, theoretical knowledge, self-confidence and learning environment.

Although a fair amount of research needs to be done, notably on cost-effectiveness, student satisfaction and other potentially adverse effects, virtual reality is a growing phenomenon with immense potential.”



In 2021, Leeds University's School of Dentistry installed haptic simulators running in-house software based on real patients' dental models, including anatomically correct contact points and gingival margins; the first in the world to do so.

In the UK, the roll-out of haptic trainers has begun in earnest. In March 2021, the School of Dentistry at Leeds University installed haptic simulators. The working relationship between the units' makers and the school's digital dentistry group meant their introduction was informed by the needs and use-cases identified at Leeds.

World-leading, in-house software has led to Leeds being the first dental school in the world to offer custom haptic training cases based on real patients' dental models, including anatomically correct contact points and gingival margins; both crucial during the preparation of crowns. The simulators also offer haptic cases aligned to the bespoke 3D printed training models currently used in

the preclinical skills laboratories, with additional cases lined up to be produced, physically and virtually, going forward.

Future work will focus on expanding students' clinical awareness of the high biological variation encountered in root canal morphology by presenting a catalogue of true, scanned tooth root morphologies, enabling students to gain an understanding of natural variation within endodontics. To support this work, the school invested in a new nano CT scanner.

In October 2022, the Institute of Dentistry at Queen Mary University of London welcomed Sara Hurley, the then Chief Dental Officer for England, to officially open the Institute's Haptic Training Suite. "The possibilities and advantages of using artificial intelligence in clinical learning are extraordinary," said Ms Hurley. "The benefits of immediate objective feedback to the student, and the ability to rehearse endless times those rare procedures such as dental traumatic injuries are impressive."

The units employ the same haptic technology used in flight simulators – adapted and tailored for dental simulation – with a highly realistic haptic feedback provided through a dental drill hand piece and mirror. The aim is that students develop psychomotor skills and confidence more rapidly, so they spend less time in the traditional phantom

head setting and transfer safely to patients sooner. The haptic trainers also allow for the upload of patient-specific dental information and images, facilitating the practise of a particular procedure, virtually, before undertaking the same procedure on the actual patient.

Paul Coulthard, the then Dean, described the investment in 42 VR-haptic training units – understood to be the highest number installed by any dental school in the world – as "transformational". He added: "The scale allows us to fully integrate artificial intelligence (AI) learning into our undergraduate curriculum and postgraduate training. Importantly we can undertake pedagogical research to fully explore the advantages for learning and patient benefit."

Christopher Tredwin, the new Dean and Institute Director, added: "We recognise the transformational power of technology in training the dentists of the future. Incorporating VR and AI into our curriculum enables students to develop their skills and gain confidence before working with patients. It also allows us to undertake educational research to explore the advantages for students and patients of incorporating this technology into the curriculum."

At the VR-Haptic Thinkers Meetup, Professor Barry Quinn, Secretary General of the Association of Dental Education in Europe

(ADEE), said simulation had become an indispensable tool in the training of dental and medical students. "We should not be sending any of our students to do a procedure for the first time on a patient," he said.

Associate Professor Marjoke M Vervoor, of the Academic Centre for Dentistry Amsterdam (ACTA), added: "Technology enables users to collect data on performance and thus is a valuable tool in enhancing quality assurance."

Lectures and ePosters from the first meetup can be viewed here: vr-hapticthinkers.com/meetups

Both the ADEE (adee.org/january-2024) and the American Dental Education Association (ADEA) will be supporting the formation and future meetings of the VR-Haptic Thinkers network.

The second meet-up, 'VR-Haptic Dentistry, Pedagogy and Curriculum Evolution', is planned for later this year: twitter.com/VR_H_Thinkers/status/1748332938939212245

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¹<http://tinyurl.com/mscfue64>

²Application of virtual reality and haptics system Simodont in Chinese dental education: A scoping review <https://onlinelibrary.wiley.com/doi/10.1111/eje.12984>

³Comparison of the effectiveness of virtual reality-based education and conventional teaching methods in dental education: a systematic review <https://pubmed.ncbi.nlm.nih.gov/38172742/>



Paul Coulthard, former Dean of the Institute of Dentistry, QMUL, with Sara Hurley, England's former Chief Dental Officer, at the opening of the institute's Haptic Training Suite – home to 42 Simodont haptic training units – in October 2022



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GLASGOW STUDY DAY

A review of CGDent Scotland's third Annual Study Day

On 1 December 2023, the dental community of Scotland, and beyond, convened at Glasgow Science Centre for CGDent Scotland's third Annual Study Day as CGDent Scotland since the transition from FGDP. This was the continuation

of a tradition of annual high-quality CPD conferences in Glasgow, initiated by the highly esteemed John Craig, the man charged with setting up the West of Scotland division of FGDP (UK) when it was established in 1992. He was a man of great vision and, supported by a group of other altruistic like-minded GDPs, nurtured the community of dental practice in Scotland, an initiative which has been continued to this day.

Many distinguished speakers from around the world have addressed our conference over the years. Memorably, several years ago Professor Van Haywood travelled from Georgia with his wife to headline our study day.

On being transported from Glasgow Airport by one of Glasgow's finest taxi drivers, after asking where they had come from and receiving the reply: "Georgia USA," the taxi driver spluttered: "What the **** are you doing in Glasgow in December!?" The warmth of this reply was much to Van Haywood's amusement, and he recounted the conversation to the delegates, delivered in his version of a broad Glasgow accent.

WORDS
**PATRICIA
THOMSON**

This year's speakers – the mild mannered Professors Subir Banerji FCGDent and Shamir Mehta FCGDent, Directors of the MSc in Aesthetic Dentistry at King's College London – may have been asking themselves the same question in less fruity language when they experienced the sub-zero temperatures during their stay in Glasgow and woke up to a blanket of thick snow on the day of their departure. Finally, after spending Saturday's daylight hours in Glasgow Airport, they managed to board a flight back to Heathrow that evening.

We were very honoured to welcome Subir and Shamir to spend the study day with us addressing the problem of toothwear.

The 400 delegates present comprised dental professionals of all levels of experience, with more than 130 vocational dental practitioners, the final year students at Glasgow Dental School, and a number of dental students from Dundee University. Most delegates attended in person, but a small number participated online.

In step with our evolution from FGDP West of Scotland to CGDent Scotland, we were delighted to welcome VDPs from all parts of our country and are grateful to NHS Education Scotland (NES) for continuing to engage with this event, which welcomes the most recent recruits to our profession into the community of general practice and demonstrates to them the fellowship and support that we offer.

The day was very generously supported by various dental organisations and members of the dental trade who have enabled the event to grow to the ambitious scale that we now enjoy.

Proceedings kicked off at 8.15am with hot beverages and breakfast rolls, before a prompt start to the lecture programme at 9am.

Image: Professors
Shamir Mehta and
Subir Banerji



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Our speakers held the delegates' attention for two lectures in the morning and one lecture after lunch, during which they discussed the need to record and categorise tooth wear and moved on to the aetiology and treatment. The lectures were titled 'Wearabouts: the how, what, wear and why of managing tooth wear in general dental practice'.

Subir and Shamir have a unique style of delivery which consists of them sharing the stage and running through their presentation in a conversational manner, in which they discuss various points and anecdotes, bouncing ideas and, occasionally, challenging each other. They have an excellent interpersonal chemistry, and their discussion appeared to flow effortlessly throughout the sessions.

There was a separate breakout session for the students during the second lecture of the day, and they convened in another lecture theatre for several 'TED Talks' presented by multiple stakeholders. This started with an introduction to the College of General Dentistry, its aims and ambitions, the career pathway, and the study clubs and activities that we offer in Scotland, together with an encouragement to engage.

This was followed by talks on entering the Vocational Training Scheme and ultimately embarking on general practice as an independent practitioner. There was a very enlightening presentation by one of our main sponsors, Martin Aitken, the Scottish accountancy firm with an in depth knowledge of the business of dentistry.

It was a bit of an undertaking to feed almost 400 delegates at lunchtime, but this was ably achieved by the staff of the Science Centre, and there was even time for delegates to visit the exhibition hall and interact with our trade sponsors.

All delegates reconvened in the IMAX auditorium for the afternoon with Subir and Shamir's final lecture and, after another coffee break the final lecture, The Caldwell Memorial Lecture, was presented by Professor Jason Leitch, National Clinical Director of Healthcare Quality and Strategy. Jason graduated as a dentist from Glasgow University, became an oral surgeon and then attended Harvard to undertake his master's in Public Health. He then returned to Scotland, but not to dentistry, climbed the ladder of promotion in public health, and found himself in the unenviable position of Clinical Director of Scotland when the COVID-19 pandemic arrived. He became the main media persona in Scotland during the pandemic and was praised for the clarity of his public health messaging.

Jason spoke eloquently about the demands that governments faced throughout

Professor
Jason Leitch



THE SUCCESS OF THE DAY IS DOWN TO COOPERATION AND ENGAGEMENT OF THE ENTIRE DENTAL COMMUNITY"

the pandemic in managing the four harms caused by the virus; to public health, to the health and care system, to social wellbeing and to the economy. He then moved on to the challenges that we face in the future as a nation with the provision of health and social care, discussing the implications for both manpower and finance.

Just after 5pm, it was time for the delegates to return to the upper floor of the Science Centre for the post-conference drinks reception, and to admire the night-time panoramic view of the banks of the Clyde stretching to the spires of Glasgow University. This part of the day facilitates the mingling of the varied members of our community, the chance for delegates to meet the speakers, networking and catching up with old friends and colleagues.

The success of the day is down to cooperation and engagement of the entire dental community and was capably orchestrated by our events coordinator Patricia de Vries. We are hugely indebted and grateful to her for the service that she provides.

The Study Day is a well-oiled machine that has been staged over the last three decades, but it does not happen without much planning and effort by its event coordinators and members of the CGDent Scotland Committee. However, it is very rewarding for all involved and we believe it displays the essence of what it means to belong to the 'community of practice'.

Any speaker or delegate who comes to Glasgow in future, even in December, can be assured of a warm welcome from everyone ... even the taxi drivers.

Patricia Thomson FCGDent is Vice President of the College and Council representative for West and North Scotland.

Delegates at the
post-conference
drinks reception

Scotland Study Day 2024

Arrangements are ongoing for the next study day on the 6 December 2024.

<http://tinyurl.com/5fxfp7v3>





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Dentistry)
- **GDC NO 63897**



ADRIAN PACE-BALZAN

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RCS (Glasg)
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LOOKING TO

Innovation took centre stage at the Forsyth Institute's Dentech Conference



The ADA Forsyth Institute's annual Dentech conference is a haven for those passionate about pushing the boundaries of oral healthcare. The event, held last autumn, was no exception; with a dazzling array of technologies taking centre stage.

From AI-powered diagnostics to 3D-printed dentures, Forsyth Dentech

2023 offered a glimpse into the future of dentistry – where precision, personalisation and convenience reign supreme.

Artificial intelligence (AI) is rapidly transforming many professions, and dentistry is no different. Forsyth Dentech saw several companies showcasing AI-powered solutions designed to streamline diagnoses, improve treatment planning and personalise patient care.

3D printing technology has made significant strides in recent years, and its impact on dentistry is undeniable. Forsyth Dentech showcased several innovative applications, from printing custom-fit crowns and bridges to creating biocompatible implants. While AI and 3D printing grabbed the headlines, Dentech 2023 also featured other noteworthy advancements. TeleDentistry solutions highlighted the growing trend of virtual consultations and remote care delivery. Advanced materials research presented possibilities for stronger, more biocompatible fillings and dental implants. Oral microbiome analysis tools offered insights into the link between oral health and overall wellbeing, paving the

THE FUTURE

**WORDS
WILL PEAKIN**

way for personalised preventive care strategies. As well as convening thought leaders, stakeholders and investors from the oral health innovation ecosystem – and featuring keynote speakers and discussion panels – Dentech included a pitch competition attracting investors from all over the world. The past two Dentech conferences led to more than \$50m being raised in funding for participating start-ups. More than 65 companies pitched for Dentech, with 17 being showcased and the four



FROM AI-POWERED DIAGNOSTICS TO 3D-PRINTED DENTURES, FORSYTH DENTECH 2023 OFFERED A GLIMPSE INTO THE FUTURE OF DENTISTRY – WHERE PRECISION, PERSONALISATION AND CONVENIENCE REIGN SUPREME”

Ones to watch

- Customisable, 3D-printed scaffold for repairing and regenerating bone in oral and maxillofacial surgery (3DOS).
- Automated workflow for dental front desk teams around benefits verification, cost calculation and out of pocket payments (AirPay).
- Resorbable hydrogel and chitosan-based glue and barrier that has the adhesion and mechanical strength to reconnect trigeminal and other peripheral nerves, eliminating the need for suture (Amend Surgical).
- Prescription oral care device that uses microcurrent stimulation to treat periodontitis (Bioelectrics).
- Colorimetric based platform capable of identifying cavities inside or outside the dental setting (Cavisense).
- Bioengineered tissue for dental applications (Cutiss)
- AI-powered diagnosis, treatment design and patient engagement (DeepCare).
- An oral mist delivered from a pocket-sized applicator to boost saliva's remineralising and buffering function after consumption of food, snacks or drinks. (Dentherapy).
- A narrow-spectrum bactericidal compound with selective activity against spirochetal bacteria and Fusobacterium and limited impact on the gut microbiome (Flightpath Biosciences).
- A proprietary starch particle technology platform, involving small submicron particles that can be targeted, enabling dentists to visualise caries disease better and earlier, and to accurately assess when to treat

- and make painless, natural repair possible (GreenMark Biomedical).
- Ion release materials, delivered through toothpaste, to address tooth sensitivity and enamel repair and mineralisation (IR Scientific) (IR-S) is a biomaterials research and development company based in Halifax, Canada. It is focused on the development of cosmetic and therapeutic products and the commercialisation of ion release materials for specific roles in consumer, professional, and industrial applications.
- A non-invasive, real-time, and visually intuitive means of assessing oral inflammation levels (Oral Science International).
- A gel which activates the regenerative properties of a tooth to restore vital pulp and dentin damaged by decay or trauma (RegendoDent).
- A biocompatible bone adhesive, inspired by the marine sandcastle worm, for bone-to-bone and bone-to-metal wet field applications (RevBio).
- Non-invasive therapeutic ultrasound dental technologies to enhance the effectiveness and efficiency of bone remodelling in orthodontic, periodontal and dental implant treatments (SmileSonica).
- A 3D printing and digital technology that combines braces and retainer in one (Straightwise).
- A CAD software platform for the design of dental treatment appliances, from dentures to aligners, to support the transition to next generation digital and cloud-based work flows in dentistry (Voyager Dental).



→ highest scoring companies were invited to a closed session with investors. Among the 17 was Scotland's Denththerapy. It has developed Toothboost® Technology, a proprietary formulation. Toothboost supports healthy oral microbiome and combines preventative, restorative and sensory properties, supported by in-vitro studies and consumer trials. It gives consumers the opportunity to boost their daily oral care routines with it's easy to use, anytime, anywhere application. The pocket sized 'no-rinse' spray application, boosts the saliva's remineralising and buffering function, enabling consumers to protect their teeth directly after foods, snacks and drinks – at times when use of toothpaste or mouthwash are not convenient or possible.

But Denthtech was not just about showcasing the latest technological breakthroughs; it was also about fostering collaboration. The conference brought together thought leaders, researchers, entrepreneurs and clinicians. It was attended by more than 200 people representing countries (20) from all around the world, universities (25), companies (56), dental practices (11), government agencies (3), organisations (16), venture capital (14) and startups (27 were chosen from 75 applicants, of which 17 pitched and 10 shared posters). Panel discussions focused on equity and 'access for all' to oral care support and provision. The importance of user driven research was also discussed; how we translate our science into new technologies and products to support oral, metabolic and systemic health. Keynote speakers and panel discussions also focused on the link between oral, metabolic and systemic health. Dental and



Carol Rafferty of Aberdeen-based Denththerapy

medical professionals need to align and collaborate in delivering preventative advice and treatments to support both oral and systemic health "While listening to the panel discussions and keynote speakers," said Carol, "I reflected that Toothboost Oral Mist is a 'user-driven' product, with the potential to support both oral and systemic health, for wide range of consumers and patient groups to include those in community settings. We are following up a number of interests and commercial opportunities after taking part in Denthtech."

Conference showcases new institute

The Forsyth Institute and the American Dental Association (ADA) have formed the ADA Forsyth Institute. Dr Raymond Cohlmlia, the ADA's Chief Executive, and Elyse Cherry, chair of the Forsyth Institute's board, announced the partnership at Forsyth Denthtech 2023. It will, said representatives of both organisations, "bring together unparalleled talent, visionary research opportunities and dynamic innovation prospects, dedicated to advancing oral health through scientific innovation and research." Maura Healey, the Governor of Massachusetts, said: "The Institute will continue to advance oral and overall health through ground-breaking research and innovation. The Institute has been, and will continue to be, an integral part of the Massachusetts bio-innovation and research community."

"This new venture will build on more than a century of excellent work, including the discovery of how fluoride prevents cavities." Dr Wenyuan Shi, President and Chief Executive of the Forsyth Institute, said: "The new institute will be a world-class leader in dentistry, defining the future of oral health through biological research, local and global public health outreach and technological innovation. The positive impact will be felt globally." Founded in 1910 by James Forsyth, who was known as "the father of the rubber industry", The Forsyth Institute began as a philanthropic effort to provide dental care to children in the Boston area and grew to become a leader in biomedical research. Among its many advancements, it developed the first local antibiotic to treat gum disease and discovered the bacteria that causes cavities. It also provides oral healthcare through mobile, private practice and global programmes.



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NO LONGER THE SILVER LINING

Europe's amalgam ban poses a dilemma for the profession



For decades, amalgam fillings have been the workhorse of dentistry, silently mending countless cavities with their steely resolve. But in recent years, controversy has swirled around this metallic stalwart, questioning its place in a future focused on aesthetics and environmental concerns.

So, what does the future hold for amalgam? Will it fade into the annals of dental history, or will it continue to play a vital role in oral health? In July last year, the European Commission proposed revising the Mercury Regulation to introduce a total phase-out of dental amalgam from 1 January 2025. The proposal aligns with the Minamata Convention on Mercury, aimed at minimising mercury use globally. Last month, the European Parliament voted in favour of the proposal.

The British Dental Association says that there are currently no alternative restorative materials that compete with amalgam on speed of placement or longevity. It has urged the UK's chief dental officers to work together to adopt a renewed focus on prevention to reduce the need for dental restorations, work with industry to secure an ongoing supply of amalgam and work with the BDA to ensure that there is no financial

WORDS WILL PEAKIN

impact on dentists from the need to use alternative materials.

Amalgam's claim to fame lies in its unmatched durability. A blend of mercury, silver, tin, copper, and other metals, it forms a rock-solid bond with teeth, enduring the relentless grind of daily chewing for a decade or more. This makes it the choice for restoring large cavities in posterior teeth, where aesthetics take a backseat to sheer functionality. Additionally, amalgam's affordability has made it a cornerstone of accessible dental care, particularly in regions with limited resources.

However, looming over amalgam's strengths is the spectre of mercury, a potent element raising concerns about potential health risks. While research suggests that the amount of mercury released from properly placed fillings is negligible, the environmental impact of its disposal has become a pressing issue. Stringent regulations are phasing out amalgam use in some countries, pushing for mercury-free alternatives.

Fuelled by advancements in materials science, composite resins have emerged as formidable rivals to amalgam. These tooth-coloured fillings offer a more natural look, particularly appealing for front teeth. While initial concerns about their longevity existed, advancements in resin technology have narrowed the gap, making them a viable option for a wider range of cavities.

The future of amalgam is unlikely to be a binary tale of triumph or demise. Instead, it will likely be a

nuanced story of adaptation and coexistence. Here are some key factors shaping its trajectory:

- **Regulation:** as environmental concerns gain traction, stricter regulations on mercury use are likely to further restrict amalgam's application.
- **Technological advancements:** continued improvements in resin materials and placement techniques could solidify their dominance in aesthetic restorations.
- **Cost and accessibility:** amalgam's affordability may remain a crucial factor in resource-constrained settings, ensuring its continued use in underprivileged communities.
- **Dentist education:** equipping dental professionals with knowledge about both amalgam and alternative materials will be crucial for informed decision-making alongside patients.

Ultimately, the choice between amalgam and other materials should be individualised, considering factors like cavity size, location, budget, and personal preferences. Open communication between patients and dentists is key to navigating this evolving landscape and ensuring optimal oral health for all.

The discussion about amalgam transcends the realm of mere fillings. It reflects a broader shift in dentistry towards a more holistic approach; where aesthetics, environmental responsibility and individual needs converge. By embracing innovation and fostering informed dialogues, the profession can hopefully navigate a path through.

Following in the footsteps of the hugely respected Dr Stephen Jacobs, Dental Fx continues to offer high quality dental care, and work closely with referring dentists from all over Scotland.

The team at Dental FX is now led by Dr James Millar, who has a passion for all aspects of dentistry, and a special interest in dental

implants. Every member of the team shares James' passion and commitment for providing the highest standards of dental care to patients. Many of our treatments are available with sedation for anxious patients.

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James Millar

Principal Dentist

BDS, MFDS RCPSG, DiplImpDent RCS Eng GDC No 176308

Since taking over Dental Fx earlier this year James has continued in the footsteps of the previous owner Stephen Jacobs and welcomes private referrals for all aspects of implant dentistry and bone augmentation



Gareth Calvert

Consultant in Restorative Dentistry and Honorary Clinical Senior Lecturer at Glasgow Dental Hospital and School.

BDS MFDS FDS (Res.Dent.) RCPS (Glas) GDC 152051

Gareth's clinical practice here at Dental FX is devoted to the management of periodontitis (gum disease) around teeth and dental implants and cosmetic gum surgery including gum grafting and crown lengthening.



Catriona Easton

Catriona joins the team at Dental Fx, providing a private oral surgery referral service.

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TURNKEY SURGERY DESIGN

Vermilion's stunning second floor expansion is a showcase for IWT's expertise and exceptional service

IWT Dental Services were the obvious choice, says Kay MacMillan, General Manager at Vermilion – The Smile Experts. "I have worked with the Ian [Wilson] and Bruce [Deane] on two other clinic build projects for Vermilion and we have developed a good working relationship."

Their latest collaboration has been on Vermilion's £800,000 second floor expansion at 24 St John's Road in Edinburgh.

"We were looking to expand our current offering by doubling our clinic capacity," said Kay, "offering our referring practitioners more specialist services and to reduce patient wait times. It was also an opportunity for us to bring our hygiene and admin team back under the one roof and condense the working week."

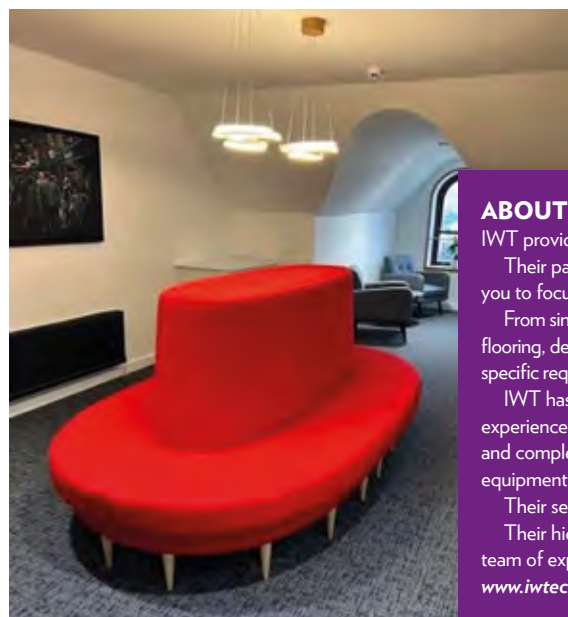
The expansion covers 3,500 square feet and comprises a swish reception, staff area, five beautifully executed surgeries, a high-end LDU and space for continuing professional development courses with capacity for live video links to the surgeries.

"IWT were involved in the early stages of planning to install all of our dental chairs, the LDU and x-ray equipment as well as the IT/AV offering," said Kay. "They collaborated with both our architect and builder throughout the project to ensure that nothing was a surprise along the way."

"Bruce also worked with a bespoke supplier to install their high calibre dental cabinets in all of our surgeries and LDU. Ian was responsible for the IT and the audio visual equipment that we have in every area of the clinic."

HOW DID THE PROCESS WORK?

"They attended planning and site meetings – assisting me in the preparation of the new space, back when it was a blank canvas – working out the correct equipment for the practices needs."



Surgery >



They also provided detailed schematic drawings to ensure that the equipment was installed accurately in the surgeries and LDU.

"The install was seamless, with minimal disruption in the clinic during this time. All of the technicians were professional and supportive throughout; the guys are a credit to both Bruce and Ian. There were challenges during the project – it's not surprising with a large team of people working on the build – but I feel we all worked together to achieve an amazing result overall."

WHAT QUALITIES DO IWT BRING TO A PROJECT?

Kay said: "They're personable, they have a hands-on approach, wanting to understand your business needs while offering their knowledge. Ian and Bruce are always there to help."

'Reaching new heights', see page 70.

< Reception area

ABOUT IWT

IWT provides industry-leading solutions for dental practices of any size and at any stage in their development.

Their partnership philosophy offers full optimisation of your practice, equipment and workflow, enabling you to focus maximum attention on your patients.

From single surgery installations to end-to-end managed services, including building works, plumbing, electrics, flooring, dental chairs and bespoke cabinets, IWT are experts in working with you and your team to identify your specific requirements and deliver your vision.

IWT has long-established relationships with leaders and vanguards of dental equipment supply, and their experience in delivering excellence throughout the industry allows them to offer you cutting-edge innovation and complete practicality, regardless of budget. They strive to provide your business with the right equipment, supported by their expert advice and exceptional customer service.

Their service covers IT and networking, dental chair supply, imaging supply and project management.

Their high client retention rate is a source of great pride to all at IWT and is testimony to their dedicated team of expert technicians and the exceptional service they provide.

www.iwtech.co.uk

ON PARTNERSHIPS AND CONTRACTS

A few lessons I'd like to share with you

I RECENTLY watched *Squaring the Circle* on Netflix. It's a documentary about Hipgnosis, the art and design company famous for their work on many iconic vinyl record album sleeves from the late 1960s through until 1982 or so. The demise of the business came about when the two founders stopped talking to each other and started pulling in different directions, against a background of the business changing with the rise of the compact disc.

It made me think of the times, too many to include here, that I have seen business and personal disputes which have led to distraction, unpleasantness and, too often, expensive litigation. After an abortive hospital career I started work as an associate in a fairly established practice, created to fulfil a need in an expanding new suburb. For the first few years the founding, profit sharing, partners were so busy they had little chance for any differences.

As time went on, it was clear that their characters and opinions, their philosophies of dentistry and business were not overlapping. Disagreements followed, mostly on the direction of the business. Two of the partners were strongly opinionated on most things and would not budge, lawyers were consulted, both sides became more deeply entrenched and ultimately barristers became involved. One partner left and started their own practice a few miles away. Both sides claimed victory, split the very significant legal costs and licked their wounds. As the one who moved on told me several years later: "We could all have had long holidays and new cars on what we spent on legal fees".

This was my introduction to dental partnerships and handshake contracts, together with the misunderstandings and disputes, unhappiness and distraction that they can cause. Perhaps it was just my interpretation but the way some dentists behaved towards one another was one of the main things that led

WORDS
ALUN K REES



Alun K Rees BDS is The Dental Business Coach. An experienced dental practice owner who changed career, he now works as a coach, consultant, trouble-shooter, analyst, speaker, writer and broadcaster. He brings the wisdom gained from his and others' successes to help his clients achieve the rewards their work and dedication deserve.
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me to start and remain in 'single-handed' practice for twenty odd years. Since making the move to consulting and coaching I have frequently encountered the same attitudes that so intrigued me early on.

What lessons can I share?

Always have a contract in writing with anyone with whom you do business. It's a legal obligation if you are an employer but there seems to be less compulsion or obligation when it comes to self-employed relationships or partnerships. Perhaps it is the difference between the meanings of those things 'obligation' and 'compulsion' that can be partly to blame.

An obligation is something that you must do, because someone else needs/wants you to, or because you have a responsibility. That responsibility could be legal, contractual or moral. On the other hand a compulsion is something you do because something inside you wants to do it. This latter may influence the way you practise your profession, your philosophy of practise if you wish, the way you relate to colleagues and employees and the prism through which you view the world.

Start as you mean to go on and never take anything for granted, especially with a partnership. I still hear the phrase "done on a handshake" when disputes have arisen. The old cliché is true: "A handshake contract isn't worth the paper it's written on!". And: "We have an understanding," only works until one side no longer understands.

Keep contracts as simple as possible but no simpler. When I asked a solicitor friend why their firm used the BDA associate contract as a basic, I was told that this was viewed as the "industry standard" and any deviations would only increase the risk of legal disputes. Like all lawyers who are busy and reliable, they wanted to minimise and prevent disputes, because they can lead to unpleasantness and not only do they have to pick up the pieces, but also

stick them back together again. I was told: "The greater the detail the more chance of a dispute."

Keep talking to other parties, whether that is a business partner, a principal or an associate. That does not mean that you're constantly chivvying them for little changes in the working relationship, nobody needs or wants such a needy colleagues (associates take note!) – rather that you sit down quarterly with an agenda to discuss the things that you have in common. If there are problems, concerns or challenges bring them out in the open, work them out, agree and move on.

Keep your business and social relationships cordial but separate. Spouses/life partners can fall out, especially where money is involved.

Be upfront and honest. Don't open a branch practice on your own without discussion.

Share your professional ambitions. There was a case in a Gloucestershire town where a practice was physically split down the middle over a decision to leave or stay with an NHS commitment.

Don't spend someone else's money. One partner re-equipped their surgery without consulting the other but spent shared funds. Make sure that, should any partner wish to leave or to change their commitments, the path is straightforward and clear – so that any new solicitor can understand what was agreed.

Have different business and personal advisers, when appropriate.

Never presume or assume. Another cliché: "Assume makes an 'ass' out of 'u' and 'me'".

I have witnessed all of the above, and more. So much that these days I seem to be involved in what feels like negotiation, conflict resolution and conciliation more than coaching.

"When I first signed a contract, it was more than a handshake then..."
– Pete Townshend, from *How Many Friends, The Who by Numbers*, 1975.

SUPPORTED DEVELOPMENT FOR NEW DENTAL THERAPISTS.

Dental therapists are essential members of the dental team, helping to ensure that patients receive high-quality care. They contribute significantly to the skill mix of the modern dental practice, making sure that patients are seen efficiently and by the right professionals.

Clyde Munro understands this and has created a dedicated educational programme for all dental therapists who join the group. This has been designed for newly qualified professionals, helping them to consolidate and expand their clinical capabilities in a range of relevant areas.

The year-long programme builds on dental therapists' existing skills, allowing them to confidently work within their full scope of practice for the delivery of exceptional patient care.

It puts prevention at the core of all topics discussed, which include:

- Preventative treatment and advice, fluoride varnish application, fissure sealants and delivery of Childsmile (an initiative aiming to reduce oral health inequalities in children across Scotland)
- Restorations on deciduous teeth, including stainless steel crowns and pulpotomies
- Extractions of deciduous teeth
- Direct restorations on permanent teeth in adults and children
- Periodontal treatment, BPE and full pocket depth recording and monitoring
- Making of radiographs and creation of study models
- Placement of dressings and recementing crowns with a temporary cement

These subject areas reflect the priorities in terms of learning and development for dental therapists, while aligning with the broad scope of practice that professionals enjoy. A high level of support is available throughout the programme within a managed clinical network, helping to meet the training needs of clinicians during the year.

To actively facilitate this on-going personal growth and professional development, **Clyde Munro** has also considered the logistics and practicalities for dental therapists. To allow for the programme to provide excellent support and sufficient time for

dental therapists to build confidence in a clinical setting, candidates are offered an employed role. This ensures a confirmed salary during their first year in general practice, reducing any financial concerns they may have while refining and furthering their skills.

The role allows dental therapists to join a practice full-time, where they can continue to build on their clinical skills within a supportive environment and with an on-going focus on patient care. Newly qualified dental therapists can expect a salary of £30,000 during their first year in a **Clyde Munro** practice, providing financial security as they embark on their first year in general practice post qualification.

This dental therapist programme is just one way in which **Clyde Munro** strives to ensure a supportive environment for all its team members. As a leading dental provider in Scotland, the organisation appreciates what it takes to build a long and successful career in dentistry and is proactive in helping professionals to achieve all that they aspire to.

To find out more about this and other educational programmes available to professionals from Clyde Munro, contact the team today.



David McColl

David qualified from Glasgow University in 1987 and has been working in a busy NHS practice in Glasgow South, alongside dental therapists for 15 years. He is currently the Chair of SDPC, Vice Chair of GGC GP subcommittee of the LDC, Vice Chair of the Area Dental Committee in GGC, a BDA UK pensions committee member and board member of SPPA. Outside of dentistry, he enjoys cycling, running, ski mountaineering and tennis.

Find out more about the career opportunities and vacancies available with **Clyde Munro** today at careers.clydemunrodental.com



A conceptual review on reconstructive peri-implantitis therapy: challenges and opportunities

Amanda Rodríguez Betancourt,
Patrick R. Schmidlin.

Introduction

Oral implants are a widespread solution for restoring oral function and aesthetics, with a growing number of patients receiving at least one implant; however, while the overall outcomes are promising, a significant subset of implants, estimated to be between 10 per cent and 20 per cent, experience peri-implantitis, a destructive inflammatory process affecting both soft and hard tissues around dental implants¹. Peri-implant mucositis, characterised by soft tissue inflammation without pathologic bone loss, and peri-implantitis, characterised by both soft and hard tissue manifestations, are the primary two types of inflammatory peri-implant diseases classified by recent research².

The diagnosis of peri-implantitis is based on various criteria, including the depth of probing exceeding 6mm, bleeding on probing, and/or the presence of suppuration/pus. Without a baseline radiograph for comparison, bone loss of more than 3mm indicates peri-implantitis, compared to 2mm when a baseline radiograph is available³. The prevalence of peri-implantitis varies in the literature, primarily due to differences in population and disease definition. Peri-implantitis is believed to be caused by bacterial pathogens in susceptible individuals, leading to the loss of supporting bone and eventually, the implant, causing a significant financial burden and affecting patients' welfare⁴.

Like periodontitis, peri-implantitis is still primarily treated following periodontal surgical strategies to halt disease progression and rescue the implant. While nonsurgical therapy in combination with proper oral hygiene reinforcement remains a basic standard of care and the first step, surgical measures are required in advanced cases since nonsurgical protocols with an adjunctive or alternative failed to demonstrate efficacy in resolving the disease⁵. From a surgical perspective, regeneration is desirable as it has the potential to restore the function and architecture of lost tissues.

The literature reports the efficacy of reconstructive procedures, with mixed results. Systematic reviews show that the average bone gain is 2–3mm; however, there is still a good portion of cases that are not resolved. Wide variations in reported results may be attributed to the heterogeneity in the severity and variation of the disease, selection of surgical techniques and materials, surface decontamination methods, surgeons' skills, and other factors⁶.

There is a need to identify the obstacles to effectively and predictably regenerate peri-implant tissues from biologic and biomechanical viewpoints to develop meaningful research strategies and evidence-based treatment protocols⁷. While most work in this field focuses on biomaterials and related surgical topics, the primary aim of this manuscript is to discuss relevant biological and biomechanical challenges of treating peri-implantitis based on the surgical biological regeneration principles. Strategies to overcome these challenges are suggested for future validation with research and clinical evaluations and modifications in the upcoming sections.

Challenges of reconstructing peri-implant tissues

Tissue perfusion	<ul style="list-style-type: none">• Scar-like tissues at baseline.• Interrupted nutritional diffusion from bone.• Avascular implant underneath.• Compromised microvasculature after tissue releasing.
Bony topography	<ul style="list-style-type: none">• Higher incidence of non-contained defect.• Reduced progenitor cell resource.
Implant surface decontamination	<ul style="list-style-type: none">• Calcified deposits on implant surface.• Inaccessible macrostructure.• Rough surfaces in micro-scale
Biomechanical wound stability	<ul style="list-style-type: none">• Inflamed wound edge with weakened tensile strength.• Limited keratinised mucosa.• Soft tissue flap recoil.• Unstable biomaterials.• A challenge to obtain primary wound closure.

Table 1: Descriptive challenges on peri-implant reconstructive procedures.

Postoperative tissue perfusion

One of the most common postoperative complications of oral tissue reconstruction is soft tissue dehiscence at the wound edge, resulting in sustained inflammation, disrupted granulation tissue formation, epithelial down growth, and loss of biomaterials⁸. These negative events eventually increase the risk of converting



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to unfavourable clinical outcomes. Insufficient tissue perfusion at the wound edges might have partially accounted for wound opening⁹. Most of the periodontal/peri-implant tissue perfusion arises from the supra-periosteal plexuses (SPP) at the base of the flap¹⁰. The latter reduce in number and diameter as they travel from the lining mucosa to the attached mucosa (Figure 1).

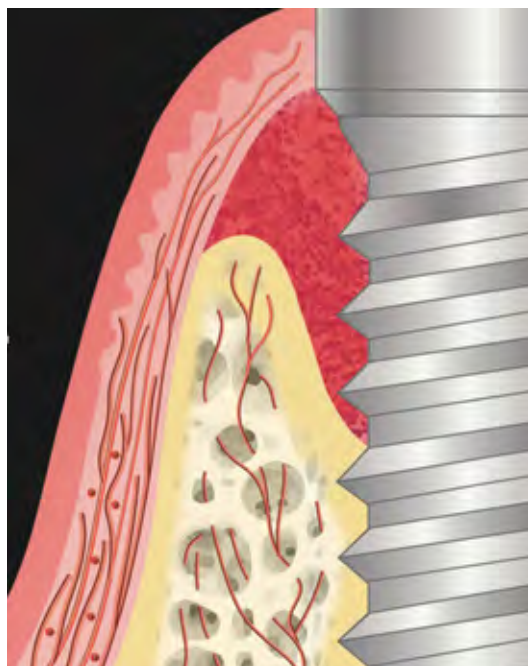


Figure 1: Tissue perfusion in the peri-implant tissues. Arterioles have an apico-coronal direction and they can be intraosseous, suprapariosteal, and in the peri-implant soft tissue. The vessel dimension and density decrease when they pass to the mucogingival junction. They have a parallel orientation with the implant. Only small anastomoses of the arterioles reach the mucosal margin and the peri-implant crestal bone.

In other words, the attached mucosa/keratinised mucosa is less perfused and is vulnerable to ischemia and necrosis under normal conditions¹¹.

However, from biomechanical point of view, a minimal amount of this type of tissue is needed to facilitate suturing and wound closure. Specifically for peri-implant tissues, preclinical studies have shown they are essentially scar tissues with less vascularisation and cellularity, compared to the periodontium¹². Therefore, the baseline peri-implant tissue perfusion is already at its disadvantage. After flap reflection, the microvasculature communicating between the hard and soft tissue interface is disrupted¹³.

During the first few days of healing, nutrient diffusion from the bone to the soft tissue also serves the role of sustaining the flap vitality. With placed biomaterials in between the residual bone and soft tissue flap and the presence of an avascular implant underneath the flap, this diffusion is compromised. What might further compromise the tissue perfusion is the tissue-releasing steps that are performed to allow for coronal advancement of the flap¹⁴.

These releasing steps, either the periosteal scoring, the pouch technique, or vertical incisions, have the potential to disrupt the microvasculature. These aspects might contribute to insufficient tissue

perfusion at the wound edge after the reconstructive procedures that result in wound dehiscence and unpredictable outcomes (Table 1).

Bone defect morphology

Bony topography surrounding infected implants is a basic factor, which determines the intrinsic conducive potential leading to defect regeneration. Such defects typically comprise suprabony and infrabony components (Figure 2).

Regarding the infrabony component, bone loss patterns usually involve circumferential loss, affecting both interproximal and facial bones. In some cases, the palatal/lingual bone is also lost. These defects tend to be wide, ranging from approximately 1.5–2mm. The creation of such dimensions results from the body's attempt to isolate the source of infection at the expense of losing peri-implant bone volume¹⁵.

Regenerating these types of defects typically requires a combination of vertical and horizontal bone augmentation, which has been challenging even for augmenting the alveolar ridge or around pristine implants. Especially, the presence of the suprabony bony component makes bone reconstruction even more challenging¹⁶. Currently, regenerating the bone loss coronal to the interproximal crestal bone is not possible¹⁷.

Thus, the regeneration potential of such defects is determined by the relative spatial relationship between the implant platform and the interproximal crestal bone. Complete recovery of the bony defect around the implant may be only possible if the interproximal bone remains coronal to the platform; otherwise, the suprabony component of the implant is not expected to be covered by bone even after a successful procedure.

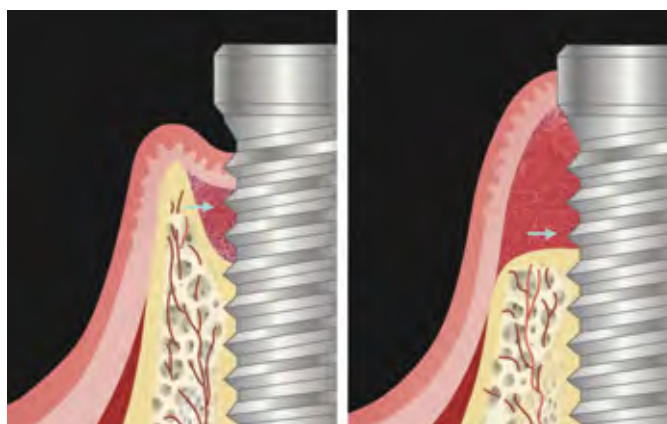


Figure 2: Bony topography surrounding infected implants. The left image shows a vertical defect with an infrabony component and a small suprabony component (a cyan arrow shows the space between the implant platform and the bone crest). The right image shows a horizontal defect without an infrabony component (a cyan arrow shows the suprabony defect above the bone crest).

From a biological concept of peri-implant osseous formation, reconstruction requires the presence of bone-forming/progenitor cells in the surrounding vicinity of the defect, since progenitor cells can only derive from the remaining bone tissues¹⁸. The distance between the residual bone and the implant, along with missing bone walls, may limit the source of bone-forming cells critical for bone reconstruction in peri-implant defects. Therefore, defects with missing bone





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walls and wide defects present a significant challenge for predictable bone reconstruction, which is usually the case in clinical scenarios.

A crucial step in peri-implant treatment lays in adequate defect cleaning. The focus is put on the degranulation of the soft tissue-filled defect on one side and the decontamination of the affected exposed implant on the other side. The implications and consequences of removing granulation tissue on the healing process have been evaluated in various ways over time. As a typical example, granulation tissue is formed after tooth extraction and bears the notable and important potential to differentiate into autologous bone and filling up even empty defects.

While it is obvious from a practical point of view that granulation tissues need to be removed, especially whenever defects are compensated with fillers, complete removal of it has also been questioned since multipotent progenitor stem cells can be even identified in infected granulation tissues. Therefore, the common practice of removing all granulation tissue during bone surgery may also result in the removal of vital multipotent stem cells that could lead to favoured tissue healing if retained.

Studies have also assessed nonsurgical debridement and local detoxification leaving deliberately granulation tissue in the peri-implant pockets, and periodontal tissues with promising results, however further longitudinal studies are required.

A closer look at histology taken from excised material from pathologically altered peri-implant soft tissues highlights the crucial role of histological analysis, understanding, and diagnosing peri-implant defects. Figures 3-5 depict fragmentary overviews and histologic



A CRUCIAL STEP IN PERI-IMPLANT TREATMENT LAYS IN ADEQUATE DEFECT CLEANING”

highlighting different foreign bodies and bacterial aggregates, which themselves showcase the potential role of histological analysis in diagnosing peri-implant defects, underscoring the need for accurate assessment of tissue composition and structure to determine the severity and nature of the defect, enabling personalised treatment planning and intervention.

In this context, one must therefore keep in mind that leaving granulation tissues behind potentially increases the risk of leaving non-vital foreign material with pathogenic character and potential, as well as leaving infectious material that challenges the immune system and complicates healing.

In addition, remaining granulation tissues also interfere with the proper dental implant surface debridement, inspection, and control; the access to the implant surface is restricted in addition by the location in the oral cavity, the bony wall configuration (width and depth), and implant supra-structure, which also limit the ability to effectively reach and decontaminate the implant surface. System-inherent thread designs of modern implants create crevices that are difficult, if not impossible, to reach with currently available armamentarium.

Even under optimal in vitro conditions, instruments display unprocessed areas depending on the implant designs; in addition, titanium remnants can be found in the surrounding tissues, especially after treatment with mechanically more aggressive instruments, which then leads to the controversially discussed and anticipated unwanted biological sequelae.

Beside inevitable soft deposits, that is, biofilms, a second challenge is the presence of calcified deposits, which may adhere to the implant surface. Simple chemical treatment or mechanical blasting with glycine or erythritol is insufficient to remove such calcified

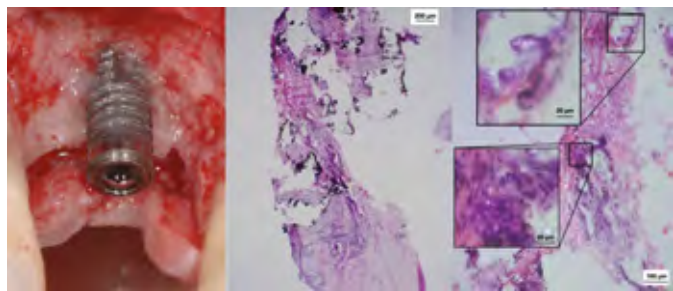


Figure 3: Clinical situation of a peri-implant defect after degranulation and cleaning (left), along with a biopsy fragment overview and histology (middle). The right image focuses on a detailed view of foreign material using light-optical birefringence.

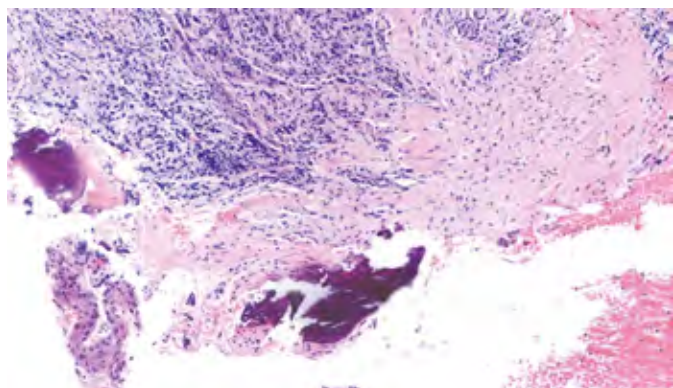


Figure 4: Histologic image capturing an excised sample from another case, revealing the presence of bone fragments (dark staining).

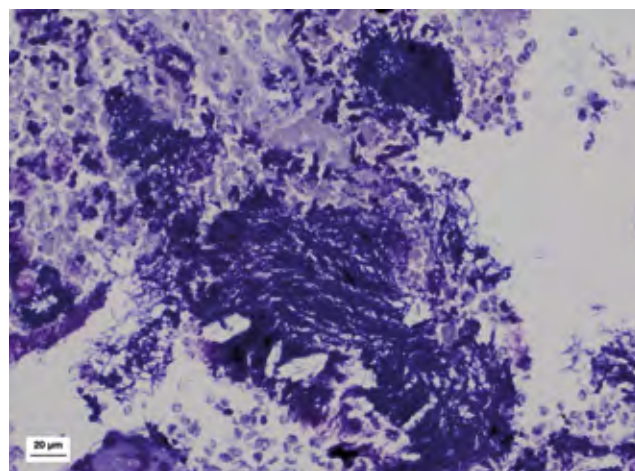


Figure 5: Histological example demonstrating the accumulation and aggregation of bacteria resembling actinomycosis.



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deposits. The inability to visualise these concerns, including vital biofilms with our naked eyes or loupes represents a significant challenge. Bleeding may additionally interfere with proper visual control. Without proper access/visual, effective decontamination is like finding a needle in a haystack.

In summary, effective surface decontamination remains a major obstacle for reconstructive peri-implant tissues resulting from peri-implantitis. But even after ideal defect degranulation and decontamination, re-osseointegration may not be an attainable and realistic goal; rather the aim is to recreate a biocompatible implant surface that allows for inflammation resolution, bone reapproximation, and the elimination or reduction of peri-implant pockets to a maintainable status.

Postoperative wound stability

Stable tissue support is crucial to facilitate the reconstruction of periodontal or peri-implant defects. There are essential biological principles and conditions that can unleash the innate potential of the tissues to attain optimal reconstruction, especially when flaps are mobilised coronally and maintained in a new position for adequate wound coverage,

while biomaterials must be immobilised for bone conduction and maturation.

The basic principles encompass the biological trinity of space provision, wound stability, and optimised conditions for primary intention healing. Therefore, the final success of reconstructive procedures, especially in the critical peri-implant wound system, lays in long-term stable, vital, and infection-free soft tissue conditions after surgery.

Clinicians are aware of multiple factors, which may hamper the desired tissue stability in an already critical and fragile system. We know that sustained and non-resolving inflammation results in reduced collagen content and inferior tissue quality, leading to weakened tissue tensile strength. Secondly, limited keratinised mucosa width, particularly following prior tissue destruction due to periodontitis, is associated with a higher incidence of wound dehiscence after reconstructive procedures. Thirdly, soft tissue flaps tend to return to their original position due to viscoelastic properties, muscle pulls, and postoperative swelling. Finally, biomaterials are typically mobile unless fixation methods are employed, which can lead to soft tissue invagination and decreased opportunity for consolidation and maturation.

The interrelationships between residual bone topography, quality/quantity of soft tissue flaps, macro- and microstructures of implant surfaces, and mechanical properties of biomaterials placed are critical in determining the success of reconstructive procedures around infected implants.

These factors are interconnected and must be considered together, including the size of suprabony defects that may be related to the amount of coronal flap advancement needed for primary closure, which in turn affects the blood perfusion and biomechanical properties of the soft tissue. Balancing conflicting factors is also essential, as extensive flap release can compromise tissue perfusion.

The critical and profound understanding of the influencing factors that negatively affect wound stability is crucial in the development of successful reconstructive procedures for peri-implantitis. A comprehensive approach that considers all the interrelated factors is necessary to achieve predictable outcomes.

For discussion and conclusion see
www.sdmag.co.uk/reconstructive-periimplantitis-therapy

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Selling the practice?

One of the key issues for practice owners planning to retire or sell a business centres on how best they plan their tax liability, specifically Capital Gains Tax (CGT) and Inheritance Tax (IHT), writes Jayne Clifford

WORDS
**JAYNE
CLIFFORD**



Jayne Clifford,
Martin Aitken
0141 272 0000
jfc@maco.co.uk
www.maco.co.uk

In our experience it is never too early to consider financial planning and while 'younger' principals may not place this at the top of the agenda right now, the reality is that planning at an early stage can be structured to help with current tax liabilities as well as those on retirement or sale.

Don't hand the tax man a blank cheque

Both CGT and IHT need to be considered carefully as part of the planning exercise and examined

in close detail – without appropriate planning for these two very real scenarios practice owners might find themselves or their 'estate' handing a blank cheque to the tax man.

CGT is payable when you sell an asset, for example, premises or a dental business, and there has been an increase in the value of the asset. Currently, CGT rates on most gains are 10 per cent for basic rate taxpayers and 20 per cent for higher rate taxpayers.

Furthermore, where you sell a business asset – such as a dental practice – Business Asset Disposal

Relief can reduce the tax rate to 10 per cent on the total gain.

However, there are exceptions: for example, gains from the sale of a residential property that does not qualify for principal private residence relief continue to be taxed at 18 or 28 per cent.

CGT liabilities can be reduced by utilising the tax allowances to which you are entitled and by careful planning of your CGT position throughout your life. If you leave it too late to consider your CGT liabilities, especially if you are planning to sell investments made many years ago, it can be quite

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a shock to realise how large the CGT liability can be.

You can also offset capital gains on successful investments with losses from investments that haven't worked out so well. Losses can also be carried forward to offset gains in future tax years and equally important is the use of your Annual Exempt Amount (AEA). See our Tax Rate Card on maco.co.uk for the current rates and allowances.

A will is a very effective tax planning tool

Moreover, a priority for any practice owner should be the setting up of a will as the first step in any estate-planning exercise, not only to make certain that matters are dealt with in a tax-efficient way, but to ensure that your exact wishes are carried out.

Having a will means you avoid relying on the intestacy rules that come into play where there is no

“A PRIORITY FOR ANY PRACTICE OWNER SHOULD BE THE SETTING UP OF A WILL AS THE FIRST STEP IN ANY ESTATE-PLANNING EXERCISE”



will. Effectively the law decides what happens to the estate – remember the point above about writing a blank cheque to the tax man! This can lead to financial anxiety for the surviving spouse/family along with a possible immediate charge to IHT.

Consider setting up a trust

If you don't want to give directly, you could consider a trust. With a little planning, you can transfer the asset(s) into a trust with minimal CGT or IHT consequences and it can also reduce your taxable estate.

There are, however, some additional tax charges and costs related to trusts that may be applicable. If you are interested in setting up a trust, you should have a conversation with your accountant/lawyer first to ensure that setting up a trust will meet your requirements.

Know your allowances and reliefs

Everyone has an inheritance tax (IHT) Nil Rate Band of £325,000 and this will remain frozen until 2028. In addition to the main nil-rate band, the Residence Nil Rate (RNRB) came into force in April 2017. The maximum RNRB allowance is £175,000, which effectively raises the IHT free allowance to £500,000 per person. Where married couples jointly own a family home and wish to leave this to their children, the total IHT exemption is now £1m.

Business Property Relief can, with careful planning, remove the full value of a dental business – sole trader, partnership, or shares in private company – from being subject to an IHT charge, either via lifetime gifts or on death.

You can also gift as many assets as you wish during your lifetime, in what is referred to as a 'potentially exempt transfer'. Should you survive for seven years from the gift, the assets will be completely outside your estate.

Acts of benevolence have a double impact

Gifting income-producing assets to your children, such as shares in the family business or an investment property, may also be a good way of reducing the overall family income tax bill whilst at the same time conducting succession planning. Do take care to ensure there are no income tax consequences or CGT/IHT liabilities that crystallise on the gift/transfer.

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DENTAL PRACTICE SALES

Five simple steps to achieving a successful sale, by Kim Campbell

Selling your dental practice is a major milestone in your life, regardless of whether it is being done to allow you to reap the benefit of your hard work and dedication by retiring from practice, or simply to take a step back from the additional strains that life as a practice owner can bring. As with most things in life, it is useful to plan ahead and have a full understanding of the steps involved in selling your practice.

STEP ONE: ORGANISATION

As part of any sale process, a purchaser will ask for certain information and documentation relating to your practice. Common examples include three years' worth of accounts for the practice, signed employment contracts and associate agreements and the latest practice inspection report (or Healthcare Improvement Scotland inspection, if the practice is fully private). It would be hugely beneficial to take some time at the outset to organise the documentation in your practice, so that it is readily to hand when the sale process begins.

STEP TWO: FINDING A BUYER

Some practice owners sell their practice privately, either to an existing associate or via a confidential advertisement, for example in the specialist dental press. However, the

more common route to finding a buyer is through a specialist dental sales agent who will market your practice for you and maximise the value you will receive. At Thorntons, we have strong relationships with all of the dental sales agents within the Scottish dental market and so would be happy to provide you with the relevant contact details should you require these.

STEP THREE: PROFESSIONAL TEAM

Selling a dental practice is different to selling any other type of business and you need solicitors and accountants with a proven track record in the dental sector in your corner in order to maximise your return and ensure that you are fully protected against any adverse outcomes once your sale completes.

STEP FOUR: NEGOTIATIONS

Once your practice has been marketed, you will usually receive a verbal offer from any interested potential purchasers. Once you have accepted a verbal offer, your solicitors will then assist with the review of any formal written offer or Heads of Terms you receive from your potential buyer, which sets out the main commercial terms on which you are willing to sell your practice. Once Heads are

agreed, the due diligence process begins and the asset purchase agreement (or share purchase agreement, if the practice is owned by a company) is prepared by the buyer's solicitors and is negotiated between all parties until it is in an agreed form – this can take a few months to achieve.

STEP FIVE: COMPLETION

At the end of the road, you will reach the stage where completion can take place and your hard work over the years will result in you hanging up your drill in exchange for a well-earned payment. The effort involved in selling a practice shouldn't be underestimated, but with the right advice and good preparation, it is possible to make the process smooth and stress free.

Kim Campbell is a Partner in the specialist dental practice team within Scottish legal firm, Thorntons. She regularly advises dentists on practice sales and acquisitions, associate contracts and NHS regulatory and compliance issues, and is ranked as a "Next Generation Partner" within the health sector in Scotland by specialist publication The Legal 500. She regularly presents at dental industry shows throughout Scotland and can be contacted by telephone to 07843 977630, or by email to kimcampbell@thorntons-law.co.uk





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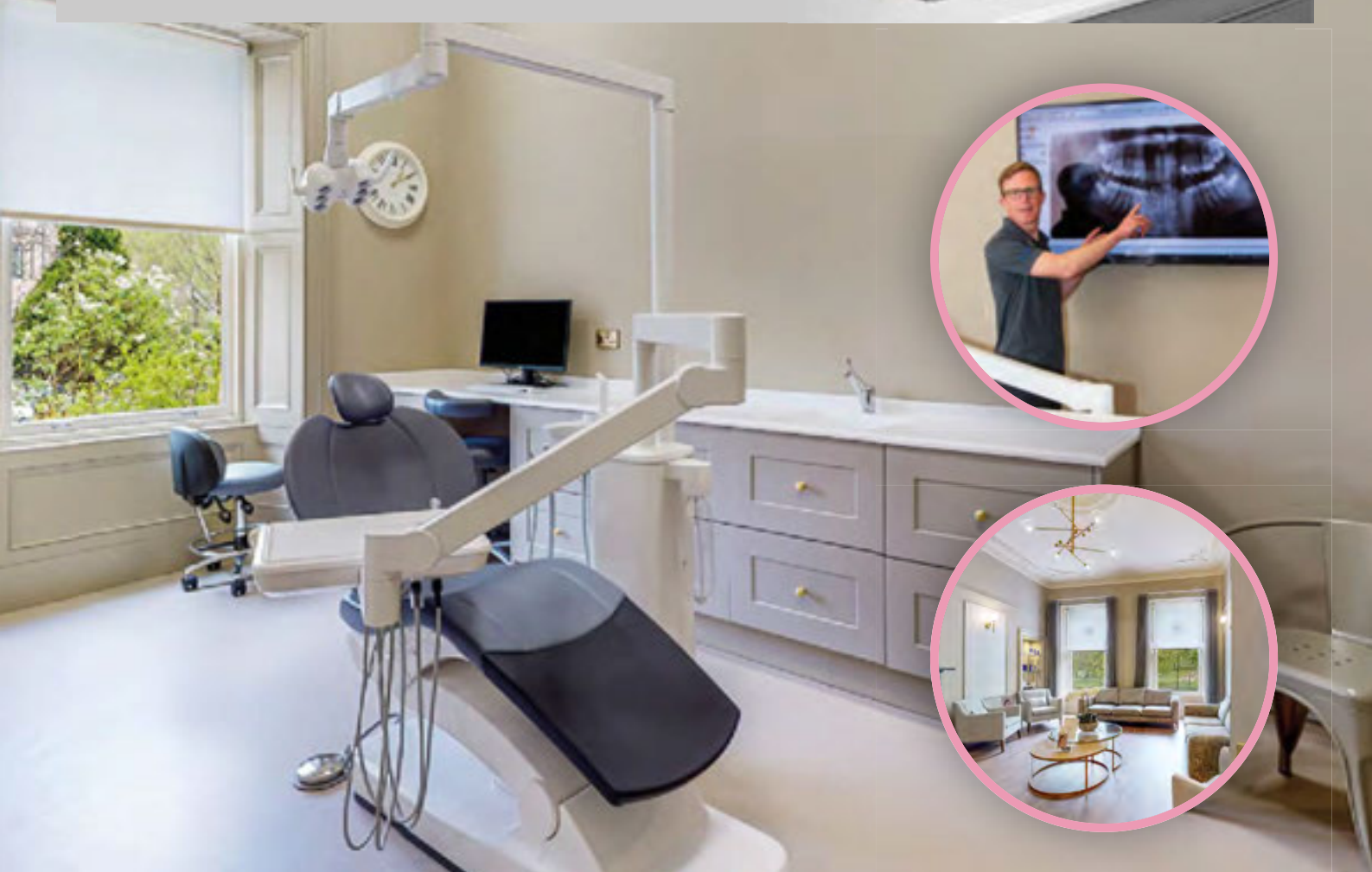
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VAT IMPLICATIONS OF FACIAL AESTHETICS

It is crucial that practices and associates correctly differentiate between exempt and standard rated treatments

In recent years, there has been an increase in dental practices and associates diversifying their business to include facial aesthetics.

While offering these procedures can help boost sales and your client base, it also requires careful consideration. It can get



particularly confusing as to whether the aesthetic treatments you offer will qualify for VAT exemption or not, and it is a potentially costly mistake you want to avoid.

While dental treatments carried out by a qualified medical professional are exempt from VAT, facial aesthetic treatments (such as anti-wrinkle injections, fillers and skin treatments) are standard rated, with 20 per cent VAT charged. As such, it is crucial that practices and associates correctly differentiate between the two and keep accurate records.

The VAT registration threshold set by HMRC is currently £85,000 for a 12-month rolling period, not your financial year, but this limit excludes income which is VAT-exempt. Therefore, it is essential for dentists to keep accurate monthly records of your total sales



Samantha Turkington
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showing how their income is split. If the threshold is breached, VAT returns will need to be completed and filed.

Confusion can also arise when aesthetic treatments are performed for a medical purpose. If the treatment is performed as part of protecting, restoring or maintaining health, it is VAT-exempt. This should be documented detailing the medical necessity, should this later need to be relied upon.

Due to the rise of aesthetic treatments, it is an area which is drawing the attention of HMRC. Our EQ Dental team has experience in this specialist area if you are unsure of your tax position.

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DEMAND REMAINS GOOD

Martyn Bradshaw, of leading sales agency PFM Dental, on how increased borrowing costs have impacted dental practice values and what this means for you in 2024.

For the 13 years prior to March 2022, the Bank of England base rate had been no higher than 0.75%. Since March 2022 we have seen significant rises, with a current rate of 5.25% (as of January 2024) which now looks to have stabilised. However, when talking about the Bank of England base rate it is important to note that, before the banking crisis of 2008, the base rate was also round 5% and the previous 40-year average was 7.2%. As such the current rate is probably trending back to 'normal', rather than the being high.

Around 2006 the way in which practices were valued changed from using a percentage of turnover to a multiple of EBITDA (earnings before interest, tax, depreciation and amortisation). As such, a multiple of an adjusted profit figure is used. For the purposes of the EBITDA calculation 'interest', i.e. bank borrowing is ignored. Historically, low borrowing rates over the past 15 years have in reality driven demand and values higher without affecting the buyer's

affordability (take home profit after tax and finance). As such the EBITDA multiple used had crept up from a circa 5x multiple to 7.5x multiple under an 'associate led' model.

Examining the affordability of practices (profit less tax, less loan interest) there is no doubt that the previous multiples cannot unfortunately be sustained, based on the increased cost of borrowing. This is the same for corporates and individuals. However, it is important to also confirm that we have only seen a softening of the multiples with a reduction in the region of 0.5x and there is still strong demand for practices.

As the financial viability of practices tightens, it is important that vendors show their practice in the best light, while ensuring that the buyer is confident with the figures presented. As a professional agency we will demonstrate the current income and costs whilst removing personal costs. This is vital to ensuring the highest valuation. Such costs may include indemnity insurance, personal GDC

Martyn Bradshaw
is a Director of
PFM Dental.
T: 01904 670820
E: martyn.bradshaw@
pfmdental.co.uk
W: pfmdental.co.uk

registrations and other personal items. We are highly competent in reviewing the EBITDA of the practice and calculating this under an 'associate led' and 'principal led' model. The calculation of the actual EBITDA of the practice is likely to have the biggest impact on any valuation.

Especially in today's market, a buyer and their professional advisers need to be confident with the figures that have been put to them, something that an experienced and trusted sales agency can do with ease with a comprehensive brochure of the practice for sale. This ensures that a buyers can put in their best offers, knowing that they are able to proceed with confidence.

In summary, there is no doubt that the increase in borrowing has impacted the values of practices, due to the calculation of affordability. However, this is only a small reduction in the multiple being used, and not any significant drop. The calculation of the EBITDA is as important as the multiple being used to ensure that the value of the practice is maximised. Demand for dental practices remains at a good level, and those looking to sell their practice should not worry.



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With the unrelenting forward march of AI we watch with interest how it may impact the world of dentistry.

Already we are seeing large-scale investment in its applications, in particular within the areas of treatment planning, practice management and digital dentistry. It shows clear opportunities (and perhaps risks) for the sector and those 'second wave' adoptions are likely to bring enhancement and efficiencies to many areas.

As Darwin said: 'It is not the strongest that survives, nor the most intelligent. It is the one that is most adaptable to change.' As always, we recommend an open-minded and a professionally curious approach to learning and to taking stock of other delivery methods when possible. There will always be a need for strong human clinical input in the profession. However, you should never ignore ways to potentially improve the outcomes for patients, the dental team and the practice as a whole.



Victoria Forbes
Director, Dental
Accountants Scotland
E: victoria@dentalaccountantsscotland.co.uk

The recent, and final collapse in December of the controversial 'direct to patient' model of Smile Direct Club is, perhaps, an example of this perhaps, and we encourage the sector to review any learnings available from its collapse. It can perhaps be argued that dental consumers were attracted to the accessibility of their model, clear pricing and guarantees (which are now gone). Is there scope to adapt current practices around your own short-term orthodontic services to react to the market

findings? The 'slight edge theory' in a crowded market requires you to stand out from your competitors. As the cost of living crisis tightens the market for short-term orthodontics, what could you be doing to make your practice more attractive?

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T: 0131 248 2570 **W:** www.dentalaccountantsscotland.co.uk

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MSc Clinical Implantology

2 Years, Part-time | Scotland & Northern Ireland | September 2024



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Hands-on surgical training on fresh cadaver heads



Focus on contemporary practice, evidence-based principles and systems to ensure an optimal outcome for both the patient and practitioner

Course Overview

Module DX4016 Clinical Implantology Year 1

MSc course introduction followed by 13 days of lectures and hands-on tutorials

6th Sept. 2024: MSc Course Induction. Remote.

Sat. 12th Oct.: Treatment planning and case selection. Face to face contact day with hands-on workshops. UCLan Campus - Preston.

Sat. 2nd Nov.: Basic sciences for Implant dentistry. End of Module Assessment. Pre-recorded lectures; live webinar discussions.

Sat. 16th Nov.: Implant Design. Pre-recorded lectures; live webinar discussions. End of Module Assessment.

Sat. 14th Dec.: Surgical skills for Implant dentistry. Face to face contact day with hands-on workshops.

Sat. 11th Jan.: Occlusion. Pre-recorded lectures; live webinar discussions. End of Module Assessment.

Sat. 1st Feb.: Restoring Implants. Pre-recorded lectures; face to face contact day with hands-on workshops.

Sat. 8th Mar.: Digital Workflow in Implant Dentistry. Pre-recorded lectures; face to face contact day with hands-on workshops.

Sat. 29th Mar.: Bone Defects. Pre-recorded lectures; live webinar discussions. End of module assessment.

Sat. 26th Apr.: Complications and their management & revision. Pre-recorded lectures; live webinar discussions. End of Module Assessment.

28th Apr. - 5th May: Formative Written Exam. Online using Maxinity.

Sat. 17th May: Cadaver course. Face to face contact day with hands-on surgical skills workshops. West Midlands Surgical Training Centre Coventry.

25th May: Case Report Presentations covering case selection & treatment planning – each delegate to present one case.

3rd - 4th June: End of Year Exam. Written Exam and Unseen Case oral presentation.

CBCT Masterclass: 2 days, consecutive to be completed before Feb. 28th 2025. Choose from a selection of dates.

Module DX4017 Utilising the evidence base – completed online

Module DX4016 End of year Assessment

Complete 5 Clinical days - supervised clinical practice

You will assess and plan appropriate treatment for patients. Includes: case assessment and treatment planning, including use of radiographic stents and CBCT.

Module DX4026 Clinical Implantology Year 2

Complete 10 Clinical days - supervised clinical practice. Includes: case consultation, implant placement, GBR procedures, restoration, follow up.

Module DX4027 Research Strategy. Prepare and submit a 8,000-word clinically orientated research project, which may take the form of a mini systematic review.

Final examinations.

PLEASE NOTE that all webinars are preceded by recorded lectures and long questions for discussion.

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This leaflet was compiled in September 2023 and all reasonable care has been taken to ensure its accuracy. We cannot guarantee that the course will be available exactly as described; it may be necessary to vary the content or availability. Material changes will be highlighted in course documentation at the time an offer is made. The full list of options indicated may not all be delivered every year. We hope that you are happy with your UCLan experience; if not we have a complaints procedure in place, please email enquiries@uclan.ac.uk or phone 01772 892400.

THE 2023 SCOTTISH DENTAL MARKET IN REVIEW

Analysis by Joel Mannix, Associate Director – Dental, Christie & Co

The swift escalation in interest rates, soaring operational costs and staffing difficulties led many corporate entities to halt their acquisition strategies in early 2023. This resulted in a notable decrease in transaction volumes as companies shifted their focus towards organic growth over acquisitions. Despite this, Christie & Co brought 31 Scottish dental practices to market last year, arranged more than 110 viewings and secured one offer for every two viewings.

The independent dental market enjoyed a resurgence in the latter half of 2023. With reduced competition from corporate buyers, there was a significant uptick in transactions involving first-time buyers, current owners, or smaller independent groups, accounting

for circa 90 per cent of our deals in Scotland. The latter half of 2023 also saw an improved influx of new practices entering the market. Looking forward, we are optimistic about a return to more stable trading conditions as this trend continues in 2024.

This year, we expect to see:

- The transactional volume within the market will rebound. However, it is anticipated that these levels will still fall short of the peak witnessed in 2022. This forecast suggests a gradual recovery and stabilisation of market activity, moving towards a more sustainable pace in comparison to the heights reached during the market's zenith.
- M&A activity from corporate operators will reflect a strategic recalibration, with these entities showing restraint in their investment



Joel Mannix
Associate Director
– Dental, Christie & Co
E: joel.mannix@christie.com
M: 07764 241691

choices and a heightened focus on long-term value over immediate expansion.

- During a period when corporate entities are exercising enhanced selectivity in their acquisitions, experienced multi-site independent operators and first-time buyers are poised to capitalise on this. It presents a prime opportunity for these operators and newcomers to expand their foothold in the market and establish a stronger presence.
- Some group operators will continue with strategic plans to review and divest underperforming or non-core sites, reflecting a focused effort to streamline their operations and enhance overall efficiency.

For the full *Business Outlook 2024* report, visit: christie.com/business-outlook-2024

PLAN AHEAD FOR 2024 AND BEYOND!

IN 2023, THE SCOTTISH CHRISTIE & CO DENTAL TEAM:

- Sold **c.90%** of dental practices to independent buyers, with half of those being first-time buyers
- Brought **31** new practices to market
- Arranged **110 +** viewings
- Secured **1 offer** for every **2** viewings

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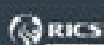


JOEL MANNIX
Associate Director

M: +44 (0) 7764 241 691
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PHILIPPA brings a wealth of expertise to our team, boasting an impressive 20-year career in dentistry and orthodontics. With seven years dedicated to TOC, she has diligently served customers in Scotland, the north-west of England, and Northern Ireland. Notably, Philippa held the position of Specialist Orthodontic Dental Nurse at Wirral University Teaching Hospital for four years and contributed her skills to Liverpool University Dental Hospital. Her passion for orthodontics is evident as she loves engaging with clients, ensuring they derive optimal benefits from their chosen materials. Philippa offers her professional services via Zoom, face-to-face, or phone appointments. Don't hesitate to reach out for a consultation with this seasoned expert who seamlessly blends a 20-year commitment to dentistry with a decade-long tenure at TOC. Your orthodontic needs are in capable hands with Philippa's unwavering dedication and extensive experience.



Philippa Ball
Business Development
Executive
E: pball@tocdental.com
M: 07525 984383
Facebook: Philippa Ball-Toc
Instagram: tocdental

MEET DENTAL SKY'S NEW SALES SPECIALIST!

INTRODUCING Dental Sky's new Sales Specialist, Violeta!

Violeta joined the Dental Sky team in August 2023 bringing with her a wealth of clinical knowledge as she previously worked as a Senior Implant Nurse and Practice Manager.

Now, as Sales Specialist, Violeta is on the road visiting dental practices across the UK and Ireland delivering hands-on training and live demonstrations on The Wand STA as well as other exclusive products.

Violeta has hit the ground running in her new role and is passionate about illustrating how The Wand doesn't just benefit all patients, but also benefits clinicians too by reducing anxiety and ensuring the anaesthesia is delivered correctly every time. She loves showing the whole dental team just how painless it really is.

The Wand can painlessly perform all traditional dental injections under the patient's pain threshold with no collateral numbness to the lips or face, and can even deliver single tooth anaesthesia! Don't believe it? See it for yourself. Contact Violeta for a free in-practice demonstration and see how you can build your practice, increase patient satisfaction and patient referrals all while reducing anxiety for your clinical team and patients.

Contact Violeta today for a free demonstration, she can't wait to meet you!



www.dentalsky.com
0800 294 4700



Violeta Maftei
Sales Specialist
E: violeta.maftei@dentalsky.com
M: 07881 958198

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Allison Cruickshank

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0141 4888348



Stuart Gunn

**Business Development
Executive**

E: sgunn@mddus.com

M: 07818 277699

**LinkedIn: [www.linkedin.com/
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GREAT BARRIER RELIEF - TRUST IS ENOUGH FOR MOST PATIENTS

Practice Plan Regional Sales Support Manager, Selina Alexander, addresses a popular objection to making the move from NHS to private dentistry

Many times over the years, dentists exploring the idea of leaving NHS dentistry for private practice have expressed the fear that they're not good enough to be a private dentist. They've often worked delivering NHS care for years and they're concerned that their patients will expect a lot more from them after the move. They worry that when they convert, their patients will be paying higher fees for their treatment and so will expect a different standard of dentistry from them.

While I appreciate stepping away from the way of working you've known for years can be daunting, the belief that private dentistry demands a different level of skill couldn't be further from the truth. The patients who will be moving to private practice with you are the same ones you've been looking after already; some of them probably for years. It's likely you already have established a relationship with them, which is why they have continued to come to see you.

Dentistry is a very personal and intimate service. Patients are in a vulnerable position when you're working on their mouth so the relationship between dentist and patient requires trust. And trust in the dentist is still one of the key factors that patients consider when deciding who they want looking after their oral health.

SAME TRAINING

Very often, a dentist's clinical skills are taken as read. All dentists have gone through the same initial training in this country, whether they work in an NHS practice or a private one. So, their knowledge of general dentistry will be the same. It will be your social skills and ability to build rapport with your patients that will determine whether they stay with you, not your ability to carry out root canal treatment, as they're not able to see the work you're carrying out inside their mouth.

Dentist Anju Jairath admitted that while she was still working as an NHS dentist, she didn't feel as good as her counterparts in private practice. "I had imposter syndrome," she told me. "I just kept saying, I'm not good enough. I'm not good enough. I used to go on courses, and they'd say, 'hands up, who's got an NHS contract?'. When I put mine up, I was always made to feel I wasn't good enough because I did NHS work."

Finally, after working in private dentistry for a couple of years, Anju has appreciated that she was always good enough to be a private dentist. She now sees that the difference between NHS and private dentistry had nothing to do with her skills but was about having the time to take care of her patients. "What's been really nice," she says "is to talk to patients. I'm not thinking 'Can I put that filling in and would that be right?' Or 'What if it fails and what if it comes out? What do we do?'. Because I'm spending so much time talking to my patients, I've preempted all the things that could happen. It's just been a breath of fresh air. But it took me a while to realise, actually, my dentistry is fine. I don't do anything extravagant, but what I do, I feel is of a good quality. And if it fails, they've already had the discussions, so there's that trust element."

HAVE FAITH IN YOUR SKILLS

It's important to remember you are a competent dentist. You've spent years qualifying and on top of that, you have the experience you gained providing dentistry to a high standard on the NHS. Those skills will be welcomed in private practice, so believe in them. I speak to lots of practices that tell me their patients have been getting a private service delivered on the NHS, but they just can't afford to do that any longer.

One of the main advantages of converting to private practice is you will have more time. So, if you do feel that there are

some gaps in your skills, then there are plenty of courses that you could go on to develop your skills. Or you might want to specialise in something such as delivering implants or orthodontic treatments and really embrace the skills you want to attain and the type of dentistry you want to deliver.

Private dentistry is NHS dentistry at a much slower pace and with greater choice of treatments and materials, that's all. The basic principles of dentistry remain the same. As Anju says, to be successful in private dentistry: "You've got to care and you've got to talk to your patients. And if you can do that, you'll do well in this job."

So, you will always be good enough. Your patients will stay because they're committed to you. So, fear of losing them should never be a barrier to moving to private practice.

If you're considering your options away from the NHS and are looking for a provider who will hold your hand through the process while moving at a pace that's right for you, why not start the conversation with Practice Plan on 01691 684165, or book your one-to-one NHS to private call today: practiceplan.co.uk/nhsvirtual

For more information, visit the Practice Plan website: www.practiceplan.co.uk/nhs

Selina Alexander is a Regional Support Manager at Practice Plan and has around 28 years' experience in the dental industry. She began her 28-year career in practice as a Trainee Dental Nurse and progressed to become Regional Manager for 10 practices, through to Mergers and Acquisitions Manager. Practice Plan is the UK's leading provider of practice-branded patient membership plans, partnering with more than 1,800 dental practices and offering a wide range of business support services.



If you're thinking of leaving the NHS, here's some...

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* CPD hours subject to change. Actual CPD attendance may vary

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RCPS (Glasgow), GDC 72097



Dr Ioannis Sagxaridis
Dental Surgeon

Practice Limited to Endodontics,
DipDS Thessaloniki, Greece,
PostDip (Endodontology),
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Alastair Fraser, Principal Dentist, Greygables Dental



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