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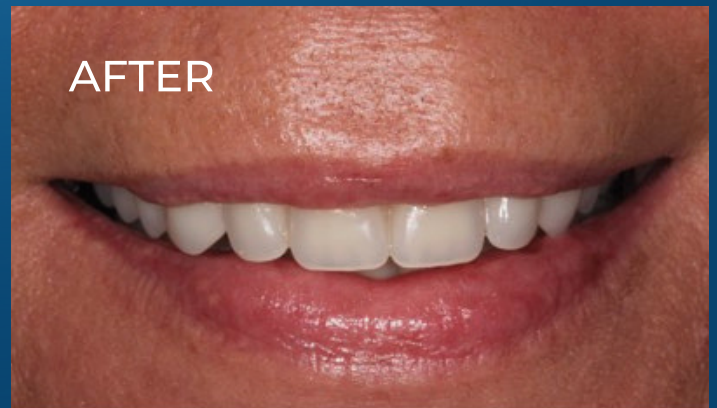
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# Time is running out

*As oral health improvements stall, a key question remains*

**I**t keeps cropping up. Why are NHS dentists not remunerated in the same way as GPs? Back in June 2021, I pondered that question here. I wondered why NHS dentistry is provided by what are effectively small businesses (and, increasingly, corporates). “Why is NHS dentistry not provided across Scotland by well-funded – and leading edge in their expertise – practices, that are purely NHS? If there remains a demand for purely private care – as there is in general health provision – that’s fine.” Effectively, the funding model that applies in general medical care. Fast forward two years and, during an interview at the Scottish Dental Show, Scotland’s National Clinical Director, Professor Jason Leitch, alluded to the formula which applies to GPs – where they receive a block of funding for caring for a geographically defined population, to keep them healthy, but are also paid for specific kinds of care; prescribing or cervical screening, for example.

Around the same time, the British Dental Association (BDA) was giving evidence to the Scottish Parliament’s COVID-19 Recovery Committee. The BDA said its preference was for a fully capitated model, along the lines of general practice, where lump-sum payments are made to care providers based on the number of patients in a population to provide some or all their care needs. Dentists described the current service model as “high volume ... low margin ... disease centred.” It places too much focus on treatment activity for decay and disease as a measure of productivity and not enough on measuring and incentivising preventative healthcare, the committee was told.

As we report on page 9, the committee has written to Jenni Minto, the Minister for Public Health, saying that it “understands that the Government appears to be committed to maintaining a blended system of payment, comprising a fee per item, capitation, allowance and direct reimbursement payment model. Nonetheless, the committee considers that the COVID recovery period presents an opportunity to rethink the service model for NHS dentistry

and for the Government to consult meaningfully with the sector on this issue.” It urged the minister to provide costings for – and consult on – different service model options “including those that it does not prefer, in partnership with the sector so that the opportunity is not missed to consider a full range of options for the future of service delivery”.

But that has not come to pass. As this issue went to print, the Government announced that NHS dental teams will receive increased fees under a new payment structure “which will help them to provide enhanced NHS care and treatment”. The reforms also include an additional £10 million to support the delivery of laboratory-based treatment items, such as dentures. The updated system will “drive greater consideration of patients’ specific oral health needs, with more focus on patient-centred care such as preventative periodontal – gum disease – treatment,” it said.

But the BDA said the reforms “fall short of the root and branch change required to make the service fit for the 2020s”. The service is still predicated on a low margin/high volume system, without the appropriate targeting of resources for those in greatest need, it said. It had been seeking a new patient-centred and prevention-focused model. The package “as it stands will do little to tackle deep oral health inequality across Scotland.” Time is running out; as Professor David Conway, Director of Dental Research at Glasgow University, told the committee: “When we look at oral health outcomes, the worrying statistic is that the improvement [as a result of Scotland’s Childsmile programme] we have seen for 15 years has stalled.”



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#### Restorative treatment planning

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- Implant restorative components & tools
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- Practical exercise -  
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- Practical exercise Restoration fits

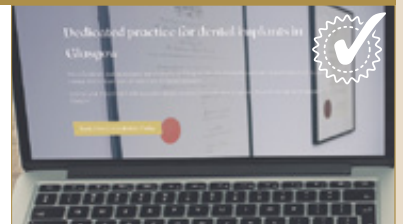


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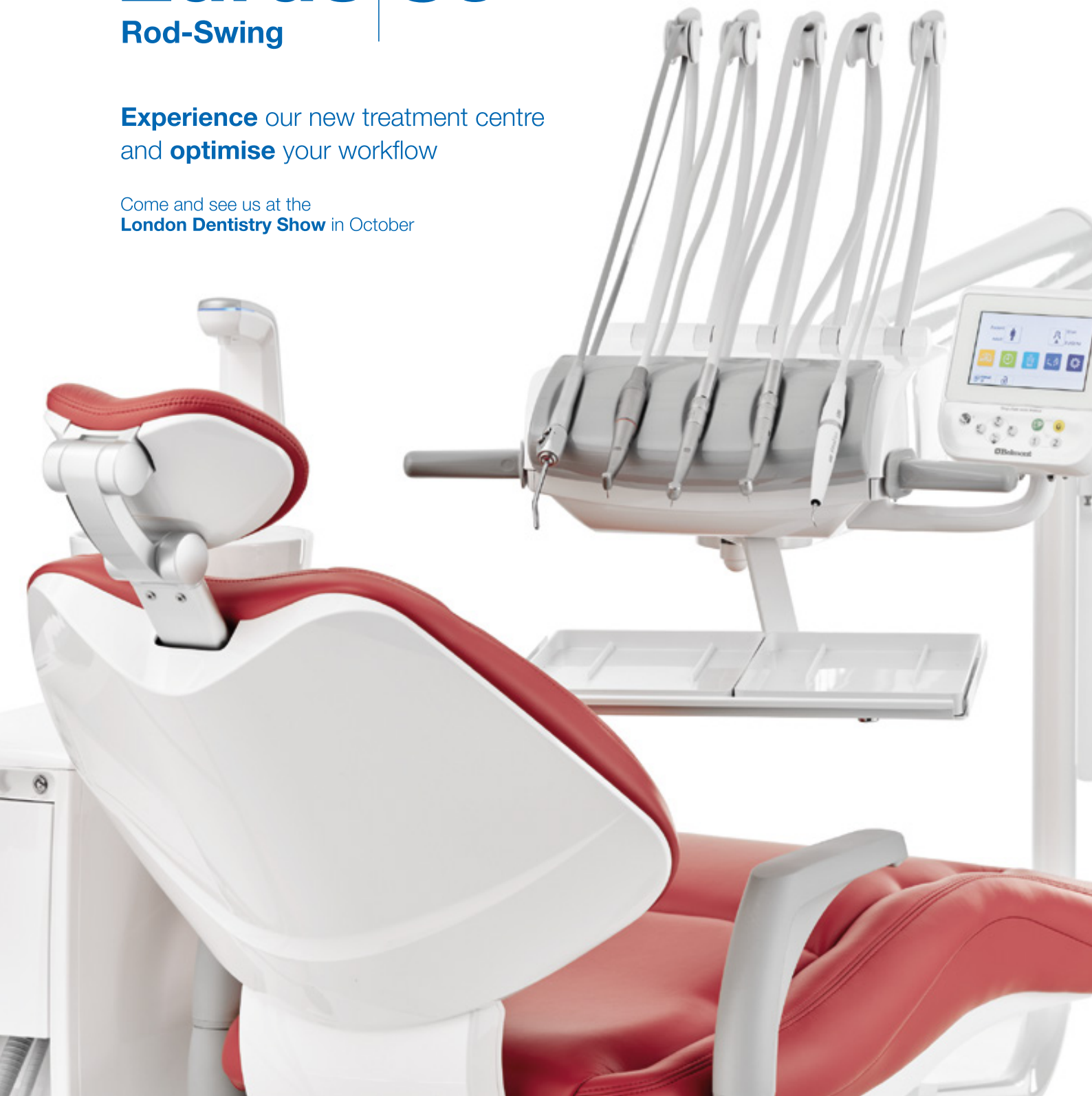
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## Be careful what you wish for

*Do we face a brave new world or a dark nightmare of uncertainty?*

**F**or my whole career I've worked in NHS dental practice. I've always been happy to work in NHS dentistry. However, over the past few months, I'm becoming increasingly concerned by the direction of travel in our profession and the public with respect to the health service, and not just dentistry.

For the first time in my career, I feel a real drive to get out of NHS dentistry. Not by me but lots of other people. Also a resignation among patients that it's going to happen. I still believe in what it stands for – and that it's possible to have a good standard of care and earn a good living. What concerns me is that I appear to be in the minority. Many of my younger colleagues seem to baulk at the idea of the hamster's wheel and high throughput. The reality of the situation – NHS or private – is, if we want to care for large numbers of people with the few dentists we have, we need high turnover of patients. There just aren't enough dentists. So, the burden of care is going to fall on the boards who will have to expand the Public Dental Service (PDS), as they did in the early 2000s, increase their salaries exponentially to make it appealing enough for dentists to go there and create a de facto salaried General Dental Service (GDS). But again, there are not enough of us to do that either.

In my last article, I appealed to the powers that be to train more dentists and quick smart. However, even if they listened, it's going to take time to bear fruit. Even then, will we simply train more young professionals with no tie or interest in NHS care and high throughput?

The new 'Det 1' has dropped. After years of discussion and inactivity, this whole 'new model of care' looks suspiciously like an abbreviated version of the old one. Are the new fees enough to keep people in the NHS? Is the change enough of a change? I don't think it matters. I think it's come too late and with too little shift to really alter anyone's decision. If you were contemplating private practice, I don't think this will alter your direction of travel. The perfect storm of tensions in the system which are contributing to a not so slow but seemingly inexorable shift to private dental care is not being quelled by this 'new model'. Don't get me wrong, I think it's better and I hope the 'light touch' ethos happens.

Let's for a moment think about the reality of the death of NHS dentistry. Forget how patients feel about it. Forget how professionals feel about it. If the pendulum starts to swing, the momentum will build and it will become inevitable that the vast majority of us will have to become private. The Scottish or UK Governments will look at their budget deficits and the savings to be had, blame us and accept the fate. If we did all vote with our feet and leave NHS dentistry behind in Scotland, does it solve the problem? There's no longer the simple logic of NHS prices set by someone on high creating

a level playing field, at least for pricing. So how do patients choose a dentist? It would be simpler for patients, wouldn't it? All they have to do is find the cheapest dentist, right? Or the most stars on Google? Or the middle priced one with four stars? Or the one with a guarantee that their dentist won't change every year? Or the one they actually like? I'm sure there's a website that will start ranking dentists, if there isn't one already, but for what? Wait times, cost, reviews, range of treatments, attractiveness of location, comfort of the dental chair, smell of mouthwash tablets in the waiting area?

Our marketing and website budgets, not to mention our level of input would have to go up significantly to attract the right clientele with the deepest pockets. Or do we race to the bottom to Hoover up those willing to attend for the cheapest procedures? Will we chase the new leads, like car insurance companies, to get those pricey one-off Invisaligns or composite veneers at the expense of old-fashioned, boring repeat custom/routine care? Will we have to make over our waiting rooms every year to match the latest 'Insta' trends in dentistry? Do we assume that, with far too few dentists for the number of patients who will want care, we can charge what we want? Or do we go with the insurance providers? Strength in numbers with Practice Plan, Denplan et al, creating cartels?

A wholly private dental landscape is quite different to our current mixed service. I wonder how prepared we are to operate in a truly commercial environment. It surely plays into the hands of the corporates and insurance providers to get what they want: higher levels of private, very remunerative, treatments and then divvy up our profits? Current practice owners would benefit from the inevitable boost in practice values, but from that moment onwards, there will only be the associates. There would be large corporate owners and insurance providers setting prices, boosting share and dividend values while squeezing associates and patients alike.

Think how much more we'll have to charge to replace the caps and cons, associated allowances, rent and rates rebate and clinical waste services. Not to mention the NHS pension; to replicate that will add huge sums to patient charges. Then there's the shareholders dividends. What about the inspection protocols we may face through Health Improvement Scotland? The demands of patient information websites? Our governance will not be less; it could be more but less well regulated. Who becomes responsible for the design of the governance and direction of the profession if the CDO is effectively redundant? What about the secondary care service, which is currently free to patients. Does that become private too? Is this a brave new world – or a dark nightmare of uncertainty, commercial depression and corporate overlords at the beck and call of the insurance providers? I guess my point is, be careful what you wish for.



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# High volume ... low margin ... disease centred

*Parliamentary committee hears damning verdict on NHS dental service model*



**THE** Scottish Government is under pressure to account for the failure of NHS dental services to return to pre-pandemic levels.

In evidence to the COVID-19 Recovery Committee, Jenni Minto, the Minister for Public Health, said that its recovery policy “has been successful, with sustained increases in dental activity from April 2023. We have achieved over 3.7 million patient NHS contacts for the period April 2022–March 2023”.

But she added that she understood “there is some concern we have not yet reached the levels of dental activity seen before the pandemic”. The minister argued that an explanatory factor “is a significant change introduced from February 2022, replacing the basic examination fee with an enhanced examination”.

The committee had been told by service providers that a significant backlog of patients waiting for NHS treatment persists; 69 per cent of dentists who responded to the committee’s survey said they have not yet cleared the post-pandemic NHS treatment

backlog and asked how long it would take, 35 per cent said more than two years.

The British Dental Association (BDA), the Scottish Dental Association (SDA) and the Scottish Dental Practice Owners group (SDPO) told the committee that a full recovery will not be possible without reform to services.

Dentists described the current service model as “high volume ... low margin ... disease centred”. It places too much focus on treatment activity for decay and disease as a measure of productivity and not enough on measuring and incentivising preventative healthcare, the committee was told.

In written evidence, the health minister said that “the single most important reform that Scottish Government can facilitate, in partnership with the sector, is payment reform”. The committee has sought clarification that the Government remains committed to implementing reform by 1 November.

It said it “understands that the Government appears to be committed

to maintaining a blended system of payment, comprising a fee per item, capitation, allowance and direct reimbursement payment model.

“Nonetheless, the committee considers that the COVID recovery period presents an opportunity to rethink the service model for NHS dentistry and for the Government to consult meaningfully with the sector on this issue.”

The BDA said its preference was for a fully capitated model, along the lines of general practice, where lump-sum payments are made to care providers based on the number of patients in a population to provide some or all their care needs.

The committee said the Government should provide costings for – and consult on – different service model options “including those that it does not prefer, in partnership with the sector so that the opportunity is not missed to consider a full range of options for the future of service delivery.” Consultation should include the SDA and SDPO, not just the BDA, said the committee.

## Government reforms ‘fall short of change required’

**NHS** dental teams will receive increased fees under a new payment structure which will help them to provide enhanced NHS care and treatment, the Scottish Government announced last month.

Developed in partnership with the dental sector and as part of the Oral Health Improvement Plan, the reforms also include an additional £10 million from the Government to support the delivery of laboratory-based treatment items, such as dentures.

The updated system will “drive greater consideration of patients’ specific oral health needs, with more focus on patient-centred care such as preventative periodontal – gum disease – treatment,” it said in a statement.

For dentists, it will streamline item of Service payments by reducing the number

of fees from more than 700 to 45 – reducing bureaucracy and giving them greater authority over the treatments offered, said the Government.

Jenni Minto, the Minister for Public Health, said: “This new NHS offer improves the system for both dental teams and patients and is the first step in the process to make the services available on the NHS reflect the changing oral health needs of the population.”

But the British Dental Association (BDA) said the reforms “fall short of the root and branch change required to make the service fit for the 2020s”.

The service is still predicated on a low margin/high volume system, without the appropriate targeting of resources for those in highest need, it said.

The BDA had been seeking a “clean

break” towards a new patient-centred and prevention-focused model and said that the package “as it stands will do little to tackle deep oral health inequality across Scotland.”

David McColl, Chair of the BDA’s Scottish Dental Practice Committee said: “We’ve secured some improvements, but the fundamentals of a broken system remain unchanged.

“The Scottish Government has stuck with a drill and fill model designed in the 20th century. They were unwilling to even start a conversation on making this service fit for the 21st. Ministers cannot pretend this is a final destination for NHS dentistry in Scotland.

“We struggle to see how these changes alone will close the oral health gap, end the access crisis or halt the exodus from the NHS.”

# Dental software firm invests in Scotland

*Chairside AI pioneer opens Glasgow technology development centre*

**AN** American dental software company is investing more than £10m in a new centre in Glasgow, creating 75 jobs. Planet DDS said it had chosen to base its technology development and support centre in the city in part because of local technical expertise.

The company provides dental software for more than 10,000 practices in North America. Its applications are designed to enable dental practices to “transition to a completely digital approach”.

The high-tech jobs are expected to be phased in over the next few years, with nine new staff already recruited for the company’s software engineering team. Scottish Enterprise provided a grant of £985,000 as a contribution towards the company’s £10.4m investment in its Scottish operations.

Angelina Henricks, chief technology officer at Planet DDS, said: “I am thrilled to be here in Glasgow to open our new technology centre and formally welcome our new local team members.

“We chose Glasgow based on the technical expertise of the people as well as the passion for innovation we see in the community. We are excited about expanding our Glasgow team in support of our company’s growth objectives and starting to contribute to the local technology community.”

Scottish Enterprise managing director of international operations, Reuben Aitken, said: “Planet DDS opening its technology development centre in Scotland is testament to the vibrant business environment and tech talent we offer inward investors. The company had a

choice of three global locations, with Scotland winning due to our skilled workforce, world-class universities and stimulating innovation districts.”

Earlier this year, Planet DDS announced the implementation of artificial intelligence (AI) within its Apteryx XVWeb cloud imaging solution. It was made possible through its partnership with Overjet, the leading dental AI solution provider, bringing AI-analysed images chairside for dental practices.

One practice owner said: “The AI capability is a game changer. We use it to show cavities and bone loss as we walk our patients through. Patients love it because it’s an objective look at their X-rays, so it’s increasing case acceptance. It also helps practitioners diagnose consistently.”



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# SDC secures follow-on funding

*Dental group expanding in key conurbations*

**THE** Scottish Dental Care (SDC) group has secured a multimillion-pound investment from equity capital firm BGF to support its continued growth ambitions. BGF is making its second significant investment in just over 12 months to support the company's acquisition plans which will expand its presence in key conurbations across the country.

SDC has grown strongly since BGF's original investment in February last year, and now operates a portfolio of clinics across the central belt, Dumfries and Galloway and Grampian, with revenue growing by more than 30 per cent in the past 12 months. It recently acquired two Glasgow-based businesses; the Barrhead and Gorbals Dental Practices, further expanding the group's portfolio to 19 clinics.

SDC was founded in 2016 by brothers Philip and Christopher Friel. It offers a full range of NHS, private and cosmetic dental treatments, including all aspects of dental implants and reconstructive dentistry, together with short-term orthodontics and facial aesthetic treatments across

its clinics. The company recently appointed its first Chief Executive, Lynn Hood. Appointing Ms Hood has enabled the director of dentistry, Philip Friel, to focus on strategic clinical matters and expanding the company's dental services, while co-founding brother Christopher is leading acquisitions and group legal services in his role as mergers and acquisitions director.

"We welcome this additional investment from BGF, which will support the momentum we currently have in implementing our ambitious plans," said Ms Hood. "In addition to supporting acquisitions, this will support Scottish Dental Care's ongoing investment in technology and innovations, making sure that patients get the very best service possible at every practice.

"We will continue to develop the fantastic culture at Scottish Dental Care as we look to grow the team and our footprint even further." The company also recently hired Donna McBurnie as finance director and Lauren Singh as Head of Recruitment.



Chris Friel, Lynn Hood and Phil Friel

## Peri-implant disease guideline published

**A NEW** guideline aimed at helping oral health professionals to better prevent and treat peri-implant diseases among their patients has been announced by the European Federation of Periodontology (EFP).

Based on the latest scientific evidence, the guideline offers a set of recommendations to maintain the health of peri-implant tissues and to effectively manage peri-implant diseases.

The S3-level clinical practice guideline, the highest according to scientific standards, is the outcome of Perio Workshop 2022, a meeting of experts and stakeholders organised by the EFP last November.

After months of work, including a rigorous synthesis of evidence in 13 specially commissioned systematic reviews, and a comprehensive consensus process, the paper *Prevention and treatment of peri-implant diseases - the EFP S3-level clinical practice guideline* was published in the EFP-edited *Journal of Clinical Periodontology*.

"Our guideline provides oral healthcare professionals with advice for effective management of peri-implant diseases," said Professor David Herrera, the paper's lead author. Prof Moritz Kebschull, the paper's co-author, added: "The guideline identifies specific interventions

demonstrated to be useful, structures them in needs-based care pathways and examines the current level of scientific support for a variety of widely employed approaches and techniques."

*More detail, see page 25*

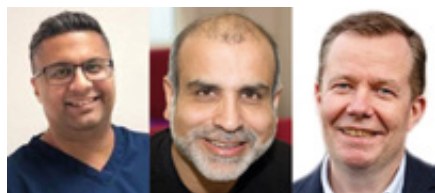


Experts met to reach a consensus on the management of peri-implant diseases



# Study day speakers announced

*The College of General Dentistry (CGDent) has announced Professor Shamir Mehta, Dr Subir Banerji and Professor Jason Leitch as speakers at its annual study day in Glasgow*



**PROFESSOR** Shamir Mehta and Dr Subir Banerji will deliver a series of lectures entitled 'Wearabouts – the how, what, wear and why of managing tooth wear in general dental practice', which will present the current evidence on tooth wear, provide a guide to managing tooth wear in general dental practice, and illustrate the clinical techniques applied in the rehabilitation of the worn dentition.

Professor Jason Leitch, the National Clinical Director for Scotland, will deliver

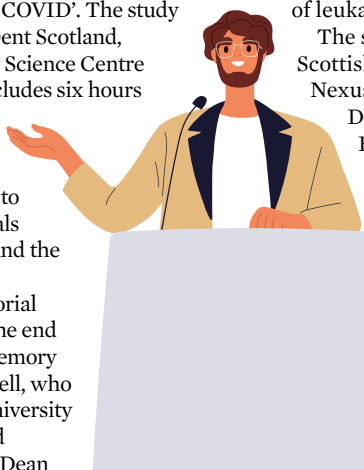
the annual Caldwell Memorial Lecture on 'Recovering from a Pandemic: NHS Scotland's legacy post-COVID'. The study day, organised by CGDent Scotland, takes place at Glasgow Science Centre on 1 December and includes six hours of CPD. Finishing with a drinks reception, the day will be attended by up to 400 dental professionals from across Scotland and the wider UK.

The Caldwell Memorial Lecture, delivered at the end of the day, is held in memory of Robert Craig Caldwell, who graduated from the University of Glasgow in 1950 and became a much-loved Dean

of the School of Dentistry at the University of California, Los Angeles, before he died of leukaemia at the age of 44.

The study day is supported by Scottish Dental Care, Martin Aitken, Nexus Dental Laboratory, Real Good Dental, Strictly Confidential, Bryant Dental, Clyde Munro, Coltene, the DDU, GC UK, Haleon, IWT, Kerr, MDDUS, Orasoptic, NHS National Services Scotland, Royal Bank of Scotland, Septodont, WEL Medical and Wright's.

For further information and to register, visit <https://cgdent.uk/2023/06/24/cgdent-scotland-study-day-1-december-2023>



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## Celebrating 37 years

**SHARON ROBB**, of Maybole Dental Practice, has celebrated 37 years of service, having begun work at the surgery aged 16.

Sharon, 53, is a practice manager, having recently been promoted thanks to her leadership and people-development skills. She initially trained as a dental nurse under the nurturing guidance of David Logan, the practice founder.

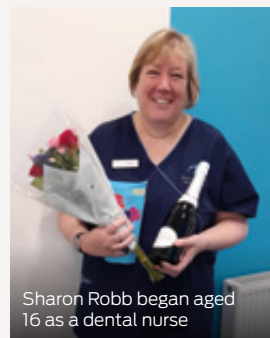
Last year she was given the role of practice manager which includes looking after 14 members of staff, including the three on-site dentists, a newly qualified vocational trainee and eight dental nurses and support staff.

In addition to managing the on-site personnel, Sharon is responsible for the business operations of the dental practice, patient care standards and general management work.

"It's been a fantastic place to work over the years. Training as a dental nurse through the Youth Training Scheme at the age of 16 was the best decision I could have made," said Sharon.

The practice was acquired last year by Clyde Munro. Fiona Wood, Chief Operating Officer, said: "Sharon is exactly the type of person we nurture and value at Clyde Munro.

"She has a wealth of experience in the clinical field, a passion for learning and improving dental care for patients and is in-tune with the local community and the subtle, but important, requirements of a local dental practice."



Sharon Robb began aged 16 as a dental nurse

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# Oral health improvement ‘has stalled’

*Holyrood committee expresses concern over Childsmile setbacks*

**IMPROVEMENTS** in oral health achieved through Scotland’s pioneering Childsmile oral health programme have “stalled”, according to an expert giving evidence to the Scottish Parliament’s COVID-19 Recovery Committee.

Professor David Conway, Director of Dental Research at the University of Glasgow, told the committee: “When we look at the oral health outcomes, the worrying statistic is that the improvement we have seen for 15 years has stalled. We collected the data differently, but the improvement has not continued on the trajectory that we were observing before the pandemic.”

Professor Conway, who was representing Public Health Scotland at the committee’s inquiry into the recovery of NHS dental services, added that registration levels for up to two-year olds have dropped to 25 per cent since the pandemic.

The committee expressed its “concern” at this statistic and that the Childsmile programme is not universally accessible across all nurseries in Scotland, with some expressing “hesitancy” to implement it in the COVID recovery period.

“The committee was [also] surprised to learn that NHS boards have no role in ensuring children can access preventative healthcare programmes, such as Childsmile,” it said in a letter to Jenni Minto, the Minister for Public Health.

“The committee was also concerned to learn from the responses to its survey that the recovery of dental services is lagging behind in areas that experience higher levels of deprivation and that there is currently no equivalent of the child inspection programme to assess the oral health of the adult population.”

In an update published in June to its overview of NHS dentistry in Scotland<sup>1</sup>, the Scottish Parliament Information Centre (SPICe) added looking at children’s oral health inequality before and after the pandemic, which shows a rising inequality gap.

Tom Ferris, the Chief Dental Officer, told the committee that the Scottish Government is trying to build “key indicators” into a reformed payment system, so that relevant data on oral health can be collected on an anonymised basis

and used to inform the clinician of the oral health of their case list.

Once implemented, these reforms would enable the data to be aggregated up to the practice level, board level and national level to build a better picture of the oral health of the adult population.

The committee said it was drawing this evidence on the current state of preventative oral healthcare programmes to the minister’s attention “as something which should be prioritised in the COVID recovery period”.

It added: “The committee also invites the Scottish Government to consider whether NHS boards should be given a greater role in service delivery, including whether they should have an underlying duty to provide services. The committee considers that this and any other options that may assist in increasing access to – and the impact of – preventative oral healthcare policies should be actively explored by the Scottish Government.”

<sup>1</sup>[spice-spotlight.scot/2023/06/22/nhs-dental-services-in-scotland-braced-for-change](https://spice-spotlight.scot/2023/06/22/nhs-dental-services-in-scotland-braced-for-change)

# Rowers’ feat aids microplastics study

*With dentistry a major contributor, the crew took more than 40 microplastic pollution samples*

**A TEAM** of six ocean rowers has set a new Guinness World Record for the fastest female team to complete the GB Row Challenge.

They battled torrential rain, strong winds, lightning and thunder, while rowing two hours on and two hours off for the last 44 days. Departing from Tower Bridge in London on 4 June, the crew of ‘Team Ithaca’ has rowed continuously and unsupported for 2,000 miles around the entire coast of Britain.

The Gulf of Corryvreckan, a narrow strait between the islands of Jura and Scarba in Argyll and Bute, marked the halfway point. Emma Wolstenholme, the skipper, from Grimsay in the Outer Hebrides, said: “We’re absolutely ecstatic that we have broken the world record and a little bit relieved that it’s all over after the

constant headwinds down the east coast. My highlight has been seeing the team dig deep, as I pushed them hard in often harsh conditions.”

In addition to completing this remarkable feat, the team has collected valuable data on microplastics, temperature, noise pollution and biodiversity, which will be analysed by scientists at the University of Portsmouth.

Toothpaste, composite restorative materials and the breakdown of single-use plastic cups are the primary dental contributors to the microplastic pollution of the environment.

Dr Fay Couceiro, Reader in Biogeochemistry and Environmental Pollution at the university, said: “This is an amazing achievement on its own, made more so by their commitment to collect an

incredible scientific data set while rowing.

“The team has collected more than 1,000 hours of underwater sound data, 80 eDNA samples for biodiversity analysis, more than 40 microplastic pollution samples, and a comprehensive

UK-wide sea surface temperature data set during the worst marine heatwave we have experienced. I am truly thankful for their fortitude in collecting this data for us, and I am eager to get the samples and data back to our labs for analysis.”



Skipper Emma Wolstenholme and teammates off the coast of Scotland



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\* measured on the Tyscor VS 4 and a comparable side channel blower by the Fraunhofer Institute.

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## Urgent reform of GDC needed

**REFORM** of how the General Dental Council (GDC) investigates dental professionals has been called for, as new research reveals significant numbers are experiencing suicidal thoughts or quitting dentistry as a result of their investigation.

In a Dental Protection survey of 125 dental professionals who have been investigated by the dental regulator in the last five years, 82 per cent said the investigation had a detrimental impact on their mental health and 96 per cent said it caused stress and anxiety.

A significant proportion (14 per cent) quit dentistry due to the investigation, and a further 38 per cent considered leaving. More than a quarter (28 per cent) said they experienced suicidal thoughts during the investigation.

Dental Protection, which supports dental professionals with regulatory investigations, called on both the GDC and the UK Government to take urgent steps to reduce the number of dental professionals needlessly dragged through this process, and resolve cases more quickly.

Dr Raj Rattan, Dental Director at Dental Protection, said: "We see how a GDC investigation takes its toll on the mental health of those involved day in day out, yet these survey results are still shocking and make for difficult reading.

"One dental professional quitting dentistry, or worse, experiencing suicidal thoughts due to a GDC investigation is one too many and this should act as a wake-up call for both the GDC and the Government.

"GDC reform would give the regulator discretion to not take forward investigations where allegations clearly do not require action, to focus on the most serious allegations and process them more quickly, and the Government must progress this with more urgency.

"But the GDC can and should make more progress in the meantime. It must deliver on its 2021 commitment to tackle the delays to cases itself, through alternative ways of managing the caseload and increasing the size of its team."

# New bacterial species identified in tooth decay

*Study reveals selenomonas sputigena as a key partner of streptococcus in cavity formation*

**RESEARCHERS** have discovered that a bacterial species called *Selenomonas sputigena* (*S. sputigena*) can have a major role in causing tooth decay.

Scientists have long considered another bacterial species, the plaque-forming, acid-making *Streptococcus mutans* (*S. mutans*) as the principal cause of dental caries. However, in the study<sup>1</sup>, published in *Nature Communications*, researchers showed that *S. sputigena*, previously associated only with gum disease, can work as a key partner of *S. mutans*, greatly enhancing its cavity-making power.

"This was an unexpected finding that gives us new insights into the development of caries, highlights potential future targets for cavity prevention and reveals novel mechanisms of bacterial biofilm formation that may be relevant in other clinical contexts," said study co-senior author Hyun Koo.

Caries is considered the most common chronic disease in children worldwide. It arises when *S. mutans* and other acid-making bacteria are insufficiently removed by teeth-brushing and other oral care methods and form a biofilm (plaque) on teeth. Within plaque, these bacteria consume sugars from drinks or food, converting them to acids. If the plaque is left in place for too long, these acids start to erode the enamel of affected teeth, in time creating cavities.

Scientists in past studies of plaque bacterial contents have identified a variety of other species in addition to *S. mutans*. These include species of *Selenomonas*, an anaerobic, non-oxygen requiring group of bacteria that are more commonly found beneath the gum in cases of gum disease. But the new study is the first to identify a cavity-causing role for a specific *Selenomonas* species.

The researchers from the University of Pennsylvania School of Dental Medicine and the Adams School of Dentistry at the University of North Carolina, took samples of plaque from the teeth of 300 children aged three-to-five years, half of whom had caries, and analysed the samples using an array of advanced tests. The tests included sequencing of bacterial gene activity in the samples, analyses of the biological pathways implied by this bacterial activity, and even direct microscopic imaging. The researchers then validated their findings on a further set of 116 plaque samples from three-to-five year-olds.

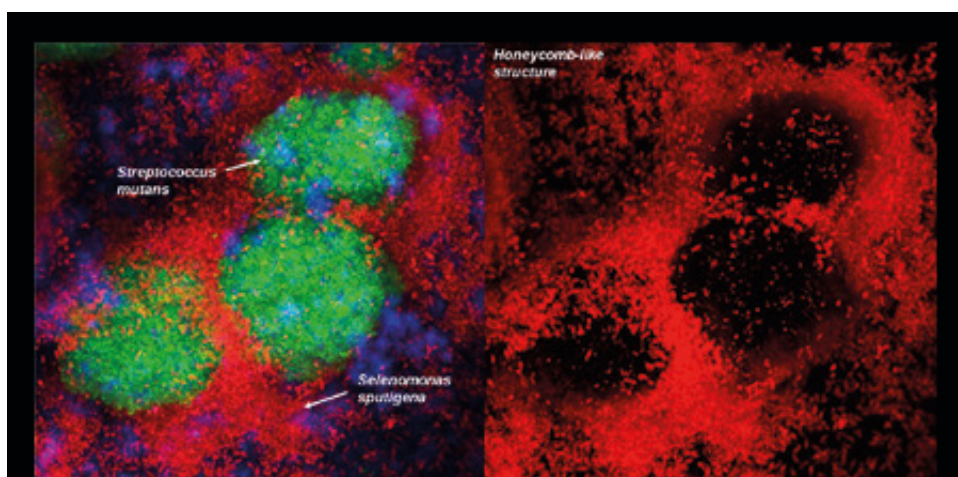
The data showed that although *S. sputigena* is only one of several caries-linked bacterial species in plaque besides *S. mutans*, and does not cause caries on its own, it has a striking ability to partner with *S. mutans* to boost the caries process.

Once trapped, *S. sputigena* proliferates rapidly, using its own cells to make honeycomb-shaped 'superstructures' that encapsulate and protect *S. mutans*. The result of this unexpected partnership, as the researchers showed using animal models, is a greatly increased and concentrated production of acid which significantly worsens caries severity.

The findings, said Mr Koo, show a more complex microbial interaction than was thought to occur, and provide a better understanding of how childhood cavities develop – an understanding that could lead to better ways of preventing cavities. "Disrupting these protective *S. sputigena* superstructures using specific enzymes or more precise and effective methods of tooth-brushing could be one approach," he said.

<sup>1</sup>[www.nature.com/articles/s41467-023-38346-3](https://www.nature.com/articles/s41467-023-38346-3)

Once trapped, *S. sputigena* proliferates rapidly to make honeycomb-shaped 'superstructures' that protect *S. mutans*.





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## First Alba owner to explore global innovation

*Move comes as Tayside practices benefit from £850,000 investment*

**HAVING** already become one of the most digitised dental surgeries in Scotland in 2021, with a £250,000 investment in the latest 3D intraoral scanning technology, First Alba Healthcare is going even further in its quest to provide patients with the most up to date, innovative treatments and services.

The business, which is owned by leading Scottish dentist Dr Rami Sarraf, and has two dental practices in Dundee, together with sister practices in Newburgh, Forfar and Kinross, is spending another £600,000 on a range of cutting edge equipment, including a 3D Einstein Printer, three Fatona lasers, bite recognition software, ModJaw, plus two VHF Milling Machines.

"We are delighted to announce another major technological investment by our dental business in both hardware and software applications which not only place us at the forefront of modern Scottish dental practices," said Dr Sarraf, "but will make a huge practical difference to the

services we offer our patients, cutting down waiting time for crowns, bridges and so on, whilst enabling patients to instantly see what a new smile will look like with superior 'before and after' imaging."

"This is 'serious kit' we have purchased, having been carefully researched and sourced," added Dr Sarraf. "Clearly it comes at a very significant price to the business, but this is one we feel is very much worth making as we push forward with ensuring First Alba Healthcare is the very best it can be. We want to care for existing patients in the best possible way, attract new ones, and attract and retain the very best staff to work and train here too, including dental graduates who are training in our digital scanning technology."

Dr Sarraf employs a team of forty five staff and associates at his five practices which are run with his wife, Dr Ewa Plewa Sarraf, who is also a dentist. The couple have grown First Alba Healthcare since they moved to Scotland from Nottingham in 2009,

beginning with 1,600 registered patients to around 40,000 patients in total; a mix of NHS and private.

Having been prominent in the Scottish dental community, and with his practices in very good hands, Dr Sarraf has now decided to step away from day to day practice and will be moving overseas to head up research and development, investigating the very latest global dental breakthroughs.

"Being partially based overseas in Dubai, and splitting my time between there and Scotland, will put us even in an even better position to introduce more technology in the near future," said Dr Sarraf. "In the circles in which I'm going to be mixing, I'll be at the very centre of innovation and will be able to ensure that my practice remain ahead of the curve. I'm also more than willing to advise other dental practices in Scotland on how they can introduce the correct technology, and indeed, how they can train their staff on it."

## Knighthood for college founder

**PROFESSOR** Nairn Wilson, honorary founding president and now president emeritus of the College of General Dentistry (CGDent), has been appointed Knight Bachelor in King Charles III's first Birthday Honours List.

Professor Wilson is a founder and founding fellow of the college, and its first chair,



serving from 2017 to 2020. He was then appointed honorary founding president and, following the full activation of the college with the transfer of the membership of the former Faculty of General Dental

Practice in 2021, president emeritus.

A patron of the Dental Wellness

Trust, he is a past President of the British Dental Association and emeritus professor of dentistry at King's College London, where he was Professor of Restorative Dentistry, dean and head of the college's Dental Institute.

His many other positions have included Dean of the Faculty of Dental Surgery of the Royal College of Surgeons of Edinburgh, President of the General Dental Council, Chair of the Council of Deans and Heads of Dental Schools and co-chair of the

Forum of European Heads and Deans of Dental Schools. Sir Nairn's wife, Margaret – who is honorary curator of the British Dental Museum, editor of the *Dental Historian* and a retired consultant in restorative dentistry, is now Lady Wilson.

Dr Abhi Pal, CGDent President, said: "The College is very fortunate indeed to have such a committed servant, and Sir Nairn's elevation will only reinforce the College's growing standing and status and that of the profession it serves."

# Reducing tooth decay – new report

*Water fluoridation, sugar-free gum, supervised brushing: how to save the NHS £50m-plus*

**A LEADING** national charity is backing the release of a landmark new report that aims to reduce the number of people suffering from tooth decay, while also saving the NHS millions.

The Oral Health Foundation is calling for the immediate roll out of three oral health policies outlined in the review and believes they have the potential to reduce unnecessary trips to the dentist, save people and the NHS millions of pounds, and free up capacity to deliver up to 8.3m more check-ups.

The report, *Economic Value of Good Oral Health*<sup>1</sup>, was undertaken by Frontier Economics and was launched in June to coincide with National Smile Month.

It says that water fluoridation programmes, sugar-free chewing gum and supervised toothbrushing could result in 1.43 million fewer tooth extractions, 1.6 million fewer fillings and 265,000 fewer root canal treatments carried out on the NHS every year. The associated savings to NHS dental services could reach more than £51m.

The Oral Health Foundation believe that with more people finding it difficult to access NHS dentistry, along with the significant cost of treatments for oral health problems, the immediate roll out of preventive interventions is essential.

Dr Nigel Carter, Chief Executive of the Oral Health Foundation, said: “The current model of NHS dentistry is broken and not fit for purpose. Treating oral health problems requires an endless pit of money and a workforce that matches population growth. Both resources are becoming increasingly scarce.

“With this in mind, we must shift our approach from treating oral health problems, to preventing them from happening at all. Oral health diseases are almost entirely preventable with the correct daily care and supportive policies.”

Dr Ben Atkins, a dentist and Trustee of the Oral Health Foundation, added: “Water fluoridation programmes, sugar-



free chewing gum and supervised toothbrushing all have the potential to reduce the amount and severity of oral disease.

“Politicians and policymakers now must step-up and make radical changes to how oral health care is managed in the UK. This report highlights the positive impact just a few new interventions can make towards reducing oral disease, lowering the pressure on a dwindling NHS workforce, as well as releasing the financial burden of an NHS dental budget that has been stagnating for years.”

## Triple action

- **Water fluoridation:** The report suggested that rolling out water fluoridation to the 90 per cent of the population who are not already covered in England and Wales could lead to 1.2 million fewer tooth extractions each year (currently there is no fluoridation in Scotland)<sup>2</sup>. Last year, the Office for Health Improvement and Disparities reported that water fluoridation reduced the number of children admitted to hospital for tooth extractions by up to 63 per cent.
- **Sugar-free chewing gum:** The report also highlights how sugar-free chewing gum can support good oral health by encouraging saliva production, which contributes to neutralising plaque acids, maintaining tooth mineralisation and removing harmful micro-organisms. Evidence suggests that chewing sugar-free gum (containing sorbitol or xylitol) twice or three times a day can reduce the risk of tooth decay.
- **Supervised toothbrushing:** The final recommendation from the report suggested that supervised toothbrushing programmes – pioneered in Scotland with Childsmile – should be used in schools or nurseries, to improve the oral health of younger children.

<sup>1</sup>[www.frontier-economics.com/uk/en/news-and-articles/news/news-article-i10334-the-economic-value-of-good-oral-health](http://www.frontier-economics.com/uk/en/news-and-articles/news/news-article-i10334-the-economic-value-of-good-oral-health)

<sup>2</sup>[www.nature.com/articles/s41415-022-4560-8](http://www.nature.com/articles/s41415-022-4560-8)

## Quo vadis, implant dentistry?

**THE** Oral Reconstruction Global Symposium, held in Rome in May, was attended by more than 1,000 people from 42 countries.

Topics discussed included different options for hard and soft tissue augmentation, including guided bone regeneration with blocks, shells, or computer-assisted bone augmentation.

The speakers examined questions related to bone and soft tissue healing around implants and reviewed options in the treatment of gingival recession.

Another focus was the use of autologous bone or allogeneic, xenogeneic, or synthetic

bone graft substitutes, membranes and soft tissue matrices. There were discussions around the question of the right time for implant placement and the advantages of digitisation.

The Oral Reconstruction Foundation Research Award was won by Dr Florian Kern, of the Albert-Ludwigs-University of Freiburg, for his research on ‘In vivo precision of intraoral scanners’.

<sup>1</sup>[www.thejpd.org/article/S0022-3913\(21\)00145-1/pdf](http://www.thejpd.org/article/S0022-3913(21)00145-1/pdf)



Award winner Dr Florian Kern, second from right

## DATES FOR YOUR DIARY

2023

### 16 SEPTEMBER

#### BACD Young Dentists Day

Royal Lancaster, London  
[bacd.com/event/young-dentists-day-2023/](http://bacd.com/event/young-dentists-day-2023/)

### 28-30 SEPTEMBER

#### British Orthodontic Conference

Queen Elizabeth II Centre, London  
[www.bos.org.uk/boc2023](http://www.bos.org.uk/boc2023)

### 02 OCTOBER

#### MGDS RCSI Examination 2023

Online  
[facultyofdentistry.ie/examinations/general-examinations/mgds-examination](http://facultyofdentistry.ie/examinations/general-examinations/mgds-examination)

### 07 OCTOBER

#### BDA NI Centenary Gala Ball

City Hall, Belfast  
[tinyurl.com/2yeu98yj](http://tinyurl.com/2yeu98yj)

### 09-11 NOVEMBER

#### BACD 19th Annual Conference

IET Savoy Place, London  
[bacd.com/annual-conference/](http://bacd.com/annual-conference/)  
[bacd-19th-annual-conference-2023-new-horizons/](http://bacd-19th-annual-conference-2023-new-horizons/)

### 17-18 NOVEMBER

#### British Endodontic Society (BES) Regional Meeting

International Convention Centre, Belfast  
[britishendodonticsociety.org.uk/events/19/regional\\_meeting\\_2023](http://britishendodonticsociety.org.uk/events/19/regional_meeting_2023)

### 07 DECEMBER

#### BDIA Midwinter Lunch 2023

Venue Tbc  
[www.bdia.org.uk/dental/events/midwinter-lunch-2023](http://www.bdia.org.uk/dental/events/midwinter-lunch-2023)

2024

### 31 MAY-1 JUNE

#### Scottish Dental Show

Braehead Arena, Glasgow  
[www.sdshow.co.uk/](http://www.sdshow.co.uk/)

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

## Admissions to Fellowship

**LISA CURRIE**, Clinical Director of The Orthodontic Clinic in Aberdeen, was among more than 40 dental professionals admitted earlier this summer into Fellowship of the College of General Dentistry (CGDent) in recognition of their high-level and wide-ranging capabilities.

Fellowship, which is denoted by the postnominal letters 'FCGDent', is the highest membership grade of the college.

The mark of accomplishment in general dentistry, it indicates a dental professional's commitment to professional development and reflective practice, diligence in upholding the highest standards of clinical care, and distinction across clinical and professional domains.

Addressing those gathered at the Summer Reception, Dr Abhi Pal, college president, said: "Fellowship of our college is a reflection of the years of sustained professional development you have undertaken throughout your career."

"No matter which path you have taken to Fellowship, it has required sacrifice and perseverance for the ultimate purpose of service to your patients and the profession. I not only commend you for that, but firmly believe the College of General Dentistry is the only body that will give recognition for these efforts."

"Admittance to Fellowship should however not be the end of a journey, but the start of another chapter."

Lisa Currie with Abhi Pal, CGDent president



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[glasgoworthodontics.co.uk](http://glasgoworthodontics.co.uk)



Simon Miller  
 GDC No. 57917  
 BDS (Glasgow 1983),  
 FDS, MSc, MDO, RCPS



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  
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**- Dr George Campbell**  
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**Scotland**  
**Virtual Awards 2022**

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Dentistry Scotland Awards 2022



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# PERI-IMPLANT DISEASE

*EFP publishes guideline on prevention and treatment*

WORDS  
WILL PEAKIN

# A

new guideline aimed at helping oral health professionals to better prevent and treat peri-implant diseases among their patients has been announced by the European Federation of Periodontology (EFP).

Based on the latest scientific evidence, the guideline offers a set of recommendations to maintain the health of peri-implant tissues and to effectively manage peri-implant diseases.

Peri-implant diseases, although less familiar to the public than gingivitis and periodontitis, which affect the gums surrounding natural teeth, pose a significant health concern due to their high prevalence and associated consequences. These diseases impact both the mucosa and the supporting bone around dental implants, and can lead to costly outcomes, including implant and implant-supported prosthesis loss.

This S3-level clinical practice guideline, the highest according to

scientific standards, is the outcome of Perio Workshop 2022, a meeting of experts and stakeholders organised by the EFP last November.

After months of work, including a rigorous synthesis of evidence in 13 specially commissioned systematic reviews, and a comprehensive consensus process, the paper *Prevention and treatment of peri-implant diseases – the EFP S3-level clinical practice guideline*<sup>1</sup>, authored by Prof David Herrera et al., was published in the EFP-edited *Journal of Clinical Periodontology*.

Prevention of peri-implant diseases should start as soon as dental implants are initially planned, the guideline states, defining those interventions within “primordial” prevention. Preventive interventions are also recommended when implants are surgically placed, or prosthetically loaded. Once implants are in function, the patient should follow a supportive peri-implant care programme, including periodic assessments of the peri-implant tissue health and oral hygiene instructions.

The popular assumption that maintaining hygiene at dental implants is somehow less demanding than around teeth is wrong. In fact, the opposite is true. The good news is that early detection of peri-implant diseases makes treatment easier, faster and more prone to success.

The guideline follows two similar S3-level clinical practice guidelines the EFP has produced in recent years for a modern, evidence-based management of periodontitis, developed in accordance with the 2018-updated classification of gum diseases.

These new-generation guidelines are based on the conclusions of Perio Workshop 2019 on the treatment of stages I-III periodontitis<sup>2</sup>, and Perio Workshop 2021 on the treatment of stage IV periodontitis<sup>3</sup>, and were published in 2020 and 2022, respectively. “Peri-implant diseases are highly prevalent inflammatory conditions and managing them can be quite challenging,” said Professor David Herrera, the paper’s leading

author. “Our guideline provides oral healthcare professionals with advice for effective management of peri-implant diseases.

“We authors are really proud to present a pioneering guideline informing clinical practices, health systems, policymakers, patients, and the general public, on the most effective modalities available to be implemented during the planning, execution and long-term follow-up of tooth replacement with dental implants.”

Prof Moritz Kebschull, the paper’s co-author, added: “Following the recommendations will facilitate a consistent, interdisciplinary, and evidence-based approach to the prevention and treatment of peri-implant diseases among all dental professionals.”

## Understanding peri-implant mucositis and peri-implantitis

There are two peri-implant diseases: peri-implant mucositis and peri-implantitis. Peri-implant mucositis refers to a treatable inflammatory lesion affecting the mucosa around the implant. It is primarily caused by accumulation of a peri-implant plaque biofilm, but smoking, diabetes and radiation therapy are considered as risk factors.

If left untreated, peri-implant mucositis may progress into peri-implantitis, a more serious peri-implant biofilm-associated pathological condition affecting not only the peri-implant mucosa but also causing a progressive loss of supporting bone. Its main risk factors are history of periodontitis, poor oral hygiene, and lack of supportive peri-implant care.

Peri-implant mucositis is sometimes assimilated to gingivitis and the same applies to peri-implantitis and periodontitis. However, compared to periodontal tissues, peri-implant tissues are less efficient in preserving tissue health and controlling the bacterial challenge which is always present around both teeth and dental implants. Thus, peri-implant diseases are more prevalent, develop with an earlier onset, and progress faster, when compared with periodontal diseases.

## REFERENCES:

<sup>1</sup>[www.onlinelibrary.wiley.com/doi/full/10.1111/jcpe.13823](http://www.onlinelibrary.wiley.com/doi/full/10.1111/jcpe.13823)

<sup>2</sup>[www.efp.org/education/continuing-education/clinical-guidelines/guideline-on-treatment-of-stage-i-iii-periodontitis/](http://www.efp.org/education/continuing-education/clinical-guidelines/guideline-on-treatment-of-stage-i-iii-periodontitis/)

<sup>3</sup>[www.efp.org/education/continuing-education/clinical-guidelines/guideline-on-treatment-of-stage-iv-periodontitis/](http://www.efp.org/education/continuing-education/clinical-guidelines/guideline-on-treatment-of-stage-iv-periodontitis/)



# HYPNOSIS SOCIETY

# AWARDS



Members of the BSMDH at their awards dinner in Glasgow

*Meeting in Glasgow was occasion to celebrate the past, present and future*

**T**he British Society of Medical and Dental Hypnosis (BSMDH) held an awards dinner this spring

at the House for an Art Lover in Bellahouston Park, Glasgow. Past president medals and fellow medals and certificates were presented.

Also presented – to Niamh McInnes – was The James Gall Dental Hypnosis Student Prize by Jane Wooff, the late Mr Gall's daughter. Ms McInnes is undertaking an elective project on the topic of dental anxiety management and dental hypnosis. Mr Gall was a strong advocate of lifelong learning and supported many students in their pursuit of learning more about dental hypnosis.

The idea for a hypnosis society was first raised at a meeting of the British Dental Association in 1952. A committee then formed what was called the British Society of Dental Hypnosis. With an influx of medical practitioner members, in 1955, this became the Dental and

Medical Society for the Study of Hypnosis. Dr David Keir Fisher and colleagues, mainly dentists, founded the Scottish Branch in 1959. In 1961, the London based Hypnotherapy Group amalgamated with the Dental and Medical Society for the Study of Hypnosis.

In 1968, the name was changed to The British Society of Medical and Dental Hypnosis (BSMDH) with several operating branches. In 1982, the 9th Congress of the International Society of Hypnosis (ISH) was hosted by the BSMDH Scottish Branch. It became a registered charity in 1987. Over time, differences in policy led it to become an independent society, BSMDH (Scotland) at the AGM in 1991. While based in Scotland, the BSMDH continues to offer training, workshops and membership to

healthcare professionals across the United Kingdom and Ireland and, as such, last year decided to drop the common usage of (Scotland) from the official society name. BSMDH is proud to be a member in good standing of The European Society of Hypnosis (ESH).

Applications of dental hypnosis include: fear or phobia, smoking cessation, bruxism, gag reflexes, pain control, encouraging oral hygiene regimes and dietary habits, modification of unwanted habits (e.g. thumb sucking), oral aphthous ulceration, TMJ (jaw joint) dysfunction, improved tolerance for orthodontic appliances and dentures, controlling salivary-flow and bleeding and helping children accept treatment.

Visit [www.bsmdh.co.uk](http://www.bsmdh.co.uk)

**WORDS  
WILL PEAKIN**

#### PAST PRESIDENT MEDALS WERE AWARDED TO:

Dr Alan Dewar  
Dr Alastair Dobbin  
Dr Kathleen Long  
Dr Lesley Barbenel  
Dr Mike Gow  
Dr Rosamund Carmichael  
Dr Chris Roan

#### FELLOWSHIPS WERE AWARDED TO:

Dr Alan Dewar  
Dr Alastair Dobbin  
Dr Kathleen Long  
Dr Karen McPhail

Dr Mary-Elizabeth Allen  
Dr Lesley Barbenel  
Dr Mike Gow  
Dr Mhairi McKenna  
Dr Paul Lim  
Dr Judith Chapman  
Dr Rosamund Carmichael  
Dr Chris Road

#### HONORARY CHAIRPERSON OF BSMDH

Dr Kathleen Long

#### HONORARY PRESIDENT OF BSMDH

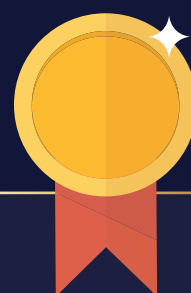
Dr Patrick McCarthy

#### THE JAMES GALL DENTAL HYPNOSIS STUDENT PRIZE

Niamh McInnes

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# CLINICAL LEADERSHIP FELLOWSHIP

*A development opportunity for NHS General Dental Practitioners in Scotland*

**T**he General Dental Practitioner (GDP) Leadership Fellowship<sup>1</sup> is a one-year, part-time programme which aims to develop future clinical leaders in NHS Scotland (NES).

Leadership training already exists for dental and medical specialist trainees, as well as community pharmacists. In recent years, Tom Ferris, the Chief Dental Officer (CDO), welcomed and approved an opportunity to add GDPs. “There was an identified gap in opportunity for GDPs to access NHS leadership training within the existing leadership programmes,” he said. “The Scottish Government worked with NES to design this dental programme aimed at experienced GDPs to step out of their clinical work, to be embedded in NHS Board dental management teams, in particular the Directors of Dentistry.”

The Fellowship provides leadership and management skills through experiential learning, supported by a programme of teaching, reflective practice (with peer thinking and 1:1 coaching provided), and access to senior leaders and role models. It presents an opportunity to explore, observe, and learn about leadership at a strategic level, as well as opportunities for intra- and inter-professional collaboration given the mix of specialty and general dentists within the cohort, the medical and pharmacy fellows, and the wider network across health boards and NES.

Furthermore, it offers potential to work within projects of interest or discover new ones. The Leadership and Management Development teaching is facilitated by Leading to Change with in-person and virtual sessions exploring topics ranging from resilience in leadership, Myers-Briggs, and project management. For 2022/2023, the fellow cohort had three GDPs:

WORDS  
**FIONA  
ANDREWS,  
JENNIFER  
DAVIDSON  
AND GEOFF  
PURNELL**

## **Geoff Purnell, GDP NHS Orkney. Fellowship host board: NHS Fife**

This fellowship appealed to me as I realised that 12 years of experience as a GDP still had left me unsure whether I had the ability to lead a project or with qualities to lead a team. The year provided a great balance of protected time for self-learning, teaching sessions with the full cohort, and host organisation projects. Protected time for reflection as a GDP is rare, and I found it wonderful to have the time to reflect on myself to support my self-learning. The host projects gave me the opportunity to dive into an area of my own interest, sustainability, but now with a larger network of people and resources I didn't know were available. The year can begin with uncertainty about your role and the work involved but on reflection that is part of the learning experience.

## **Jennifer Davidson, GDP NHS Lanarkshire. Fellowship host board: NHS GG&C**

During my fellowship year I have learned a great deal about how a health board functions, the specific roles of Chief of Dentistry and other leadership figures, plus accessed many governance and strategy meetings across primary and secondary care levels. From these experiences I have learned a great deal about collaboration and communication with both internal and external stakeholders. My project involved setting up a Clinical Excellence Committee and rolling out a pilot project working in collaboration with NES. Leading a project is something I would not have felt confident in doing prior to this fellowship.

## **Fiona Andrews, GDP NHS Forth Valley. Fellowship host board: NHS Orkney**

The Fellowship year allows you to get involved and begin influencing as a leader. I have had opportunities to present, to teach and to link in with, for example, the Open Wide national programme and the Realistic Medicine Board in Grampian and Orkney. From the higher level

of self-awareness that is gained throughout the year, you can put this knowledge back into your work for greater gain. Being grouped with the medical and pharmacy team is a tremendous privilege in gaining from their perspective and insight. From this it has been possible to create conversation and influence around the potential for a value-based approach to dentistry, a project that aims to be continued by the new incoming dental fellows and the “Fellow alumni”.

## **The value in Fellowship**

Collectively we have valued the personal and professional growth as individuals, while this programme also presents value also at an organisational level.

“Previous Fellows have commented that they have gained greater insight and a better understanding of the wider system as well as forging links with colleagues from other healthcare disciplines,” said Professor David Felix, Postgraduate Dental Dean. “Participation in the programme has opened other career opportunities in dentistry as future leaders within the profession. For each cohort it has been a pleasure to see the Fellows develop over the year and I am grateful to them for the contribution they have all made to the work of the Dental Directorate in NES.”

Tom Ferris added: “I think this has been a hugely successful programme, giving dentists experience of how the NHS system operates in real time. We are now starting our fourth GDS cohort of fellows and there remains a high level of interest in taking up the opportunity. I see these fellows being the leaders of the future and I look forward to working with them.”

## **Acknowledgements**

Each of the current fellows have enjoyed a successful year and would like to give thanks to the CDO's office, NES, our host boards and advisors, plus the team at Leading to Change. Good luck to our new incoming dental fellows: GDPs Leanne Scott and Clara Reid.

<sup>1</sup>tinyurl.com/3u84wdn4

# FROM SCAN TO INSTALL IN ONE HOUR

WORDS  
WILL PEAKIN

*Scottish start-up OurCrown has introduced a radically innovative service*

**I**n a first for the UK dental sector, Scottish start-up OurCrown has introduced a service that allows dentists to go from scan to install in under an hour – with no set-up costs and which puts the price of a crown at less than £30.

A dentist can prep and scan the patient in their practice, receive a design back within 30 minutes, print the crown in-house in under 20 minutes, then wash and cure in under ten minutes – ready for install.

The advantages are numerous; the procedure can take place on the same day, with no need for a second appointment, which is better for the patient and reduces carbon emissions resulting from multiple visits and the time taken to perform the procedure. The low cost also makes it more accessible to NHS patients.

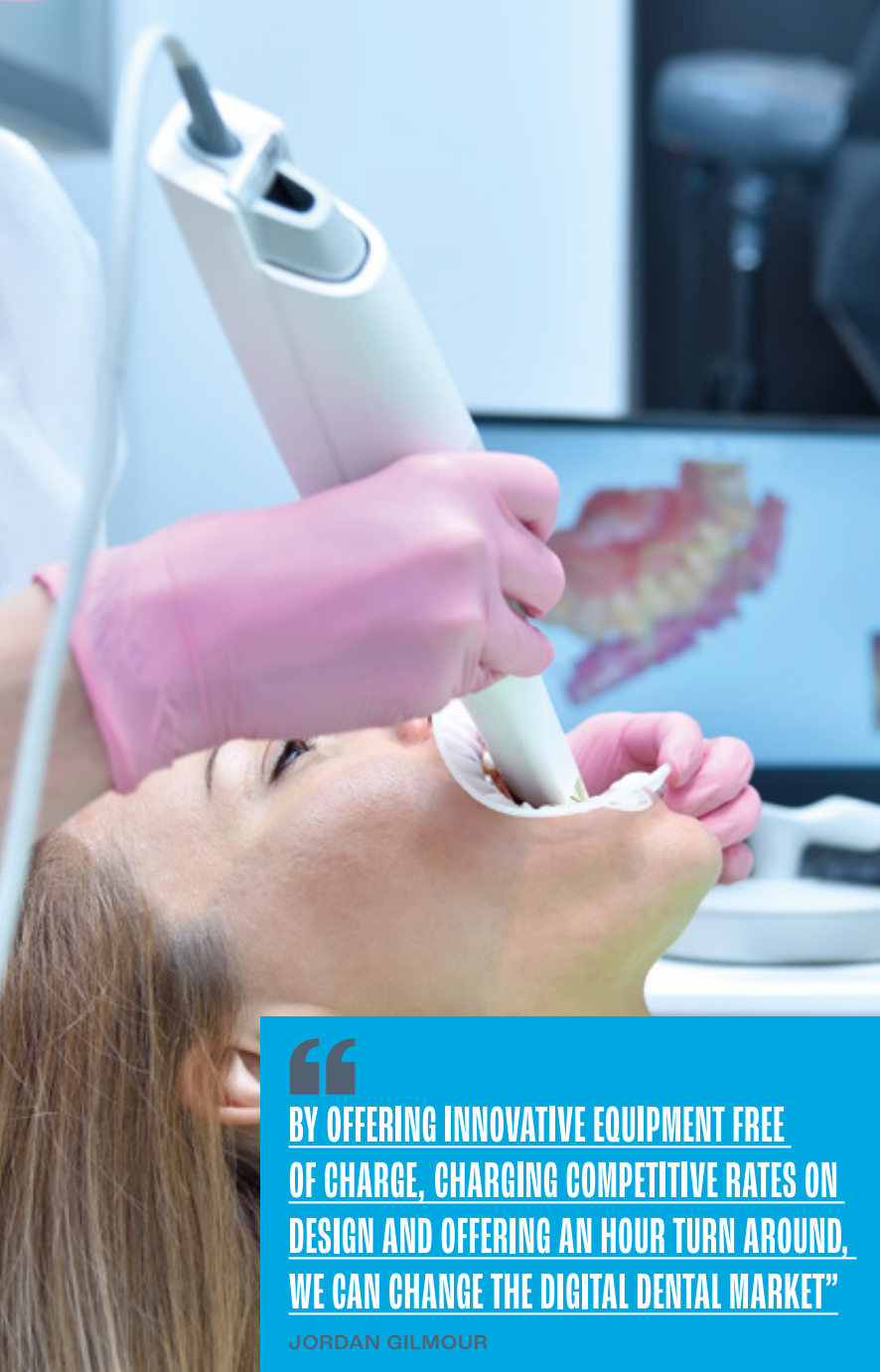
OurCrown was co-founded earlier by Robin Prior and Jordan Gilmour. It was formally launched at the Scottish Dental Show in May, and since then Robin and Jordan

have been engaging with practice owners and dental groups in Scotland, the UK and internationally. Robin is an MBA graduate from Glasgow University who has been successfully running his own businesses for more than 20 years, including Abergower Digital – which provides digital filing, document scanning and digitisation services in the UK and globally – for the last eight years. In 2021, he established Abergower Dental, a leading supplier of 3D printing systems, scanners and software which won a Scottish Innovation Award for the launch of its COVID-19 PCR test using 3D manufacturing.

Jordan is an honours graduate in business from Stirling University who began his career in corporate events before establishing an interactive loyalty programme to support the hospitality sector in Edinburgh. After meeting Robin and seeing what technology could do for the dental sector, he knew that they could bring change for dentists, technicians and, most importantly, patients.

“We came up with the idea with two other members of their technical team, heading to a training session with 3Shape,” said Jordan. “We were talking about the pressures





**“BY OFFERING INNOVATIVE EQUIPMENT FREE OF CHARGE, CHARGING COMPETITIVE RATES ON DESIGN AND OFFERING AN HOUR TURN AROUND, WE CAN CHANGE THE DIGITAL DENTAL MARKET”**

**JORDAN GILMOUR**

on the NHS and dentistry. We spoke about the barriers to entry, the costs, quality and realised we could remove them. By offering innovative equipment free of charge, charging very competitive rates on design and offering an hour turn around, we can help change the digital dental market.”

What does it mean for private and NHS dentistry? “For private dentists this gives them a brand-new service to offer their patients,” said Jordan. “A crown in an hour that your patient can walk away happy with. More profit and control for the dentist as well as an improved offering for patients with no up-front costs. We also offer more than 20 products including implants, dentures and nightguards with more on the way. For the NHS this is a game changer – a low-cost crown with no set-up costs. The NHS has always struggled to keep up with new technology because they have been out priced. But with OurCrown, they can not only offer their patients a crown in an hour, but it’s cheaper and has no upfront costs. Also, with the SDR changing to include white crowns this is a great opportunity for dentists to take advantage of our offer and help make NHS dentistry profitable again.”

And for patients? “This depends on how dentists apply the service,” said Jordan. “However, OurCrown offers a cheaper, high-quality option that allows patients to have a crown fitted in just one visit to the dentist. The fact that

this process saves patients time, money and a number of separate visits to the dentist will completely change their experience.”

Since launching the team has demoed to around 30 practices. They have been in discussion with leading dental groups in Scotland and the UK and are exploring routes into international markets and partnerships. Although OurCrown would seem to be a threat to dental labs, Jordan said that there could be advantages to labs in using the service through economies of scale or because they currently lack crowns, or other product, as an offering. This can be due to design and fabrication capacity, capital costs, skills or training. “OurCrown removes these barriers for labs,” he said.

“We do expect competition, but meeting this challenge is all about the best solution to all parts of the puzzle, which are not easy to put together. We can show that it works well, we offer a great service and have a strong brand. Our product is future proofed; as technology changes so will the equipment and services we provide. This will allow us to stay ahead as long as we remain cost-effective and we feel extremely confident that our customers will stay and grow with us as a result.”

## HOW IT WORKS

### Step 1: Intraoral scan

After prepping the patient, scan with your intraoral scanner. Any intraoral scanner that produces STL files can be used. OurCrown can provide intraoral scanners as an extra including Medit, 3shape and UP3D scanners.

### Step 2: Design

OurCrown employ some of the best designers from all over the world including the UK, Mexico, China and Ukraine to design crowns in under thirty minutes, bridges, onlays, inlays and veneers in under two hours and guided surgery, dentures and nightguards next day.

### Step 3: Chairside print

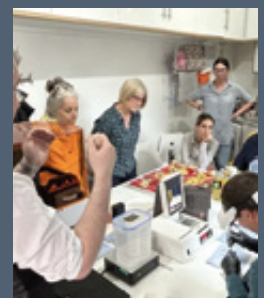
With OurCrown packages, practices do not pay for the printer, wash unit or cure unit – only the designs they need. OurCrown send the design straight to practices for printing and with the latest printing technology the Einstein can print permanent crowns in less than 15 minutes.

### Step 4: Finish

From the printer simply move the product to a wash unit and then cure unit to finish the printing process. After the print process is complete start to polish, stain or glaze the product (training can be provided). After a final minute of curing, the product is ready to be installed.



Robin Prior and Jordan Gilmour launching OurCrown at the Scottish Dental Show



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# A FOND FAREWELL

*Thank you to everyone who has helped me, encouraged me and believed in me*

“So long, farewell, auf Wiedersehen, goodbye” – and so the well-loved song made famous by *The Sound of Music* bids a farewell to a captive audience while the Von Trapp family heads for the hills. Well, I’m not exactly heading for the hills but this is, indeed, my final column in *Scottish Dental* magazine. More than 30 years ago, I stepped tentatively into a dental surgery in the west end of Glasgow to “help out for a short while” and, well, the rest is history, as they say.

As I look back on a career that has spanned three decades-plus, it has shown me the importance of where seemingly small decisions can lead us. Never could I have foreseen way back then the career that was to unfold to me, the people I would meet, the places I would go and how my love for life-long learning has never waned and there has always been that desire to constantly learn more and therefore be as much help to as many people as possible.

Neither had I any clue the day I walked through those surgery doors what UR1mi meant, or LL6mo. Teeth had sides to them and they each had a name!? And then there was the dreaded GP17 which looked like a foreign language to me. Boxes everywhere and I had to learn to distinguish left from right when really, left was right and right was left!

Masks and gloves were optional attire in those days and acronyms such as LDU weren’t even in their infancy; these were to come at a much later date. Instead of an LDU, we had a small benchtop autoclave that sat next to the sink in the surgery and unlucky for you if the windows couldn’t be opened in summer; you baked. Scrubbing instruments, soaking them in Cidex then moving them into the autoclave was the decontamination method of the day. And there wasn’t an instrument pouch in sight. Newly sterilised instruments sat, unbagged,

in drawers waiting to be set up in trays and the trays were then set on the countertop with a small cover over them. Although we may raise a few eyebrows, I honestly don’t ever remember one reported incidence of a patient (or clinician) suffering from the effects of cross contamination. We did our job, ticked all the boxes and got on with the work of fixing people’s smiles.

Paper records were the order of the day and I remember heaving a huge sigh of relief when even the most basic computer programme for the dental profession was developed. Things began to pick up apace from then on as we entered the computerised/digital age both clinically and non-clinically. Do you still know of any practice that keeps paper records? I don’t, but I know there were some practices who became computerised more quickly than others. However, I must stress that although we now have allegedly paper-free offices where even a sneeze is recorded online, I have still to witness a practice that has completely done away with A4 size paper and DL envelopes.... front of house may look pristine but believe me, every practice has ‘that room’ or ‘that space’ where paper abounds.

And so, our practices have well and truly entered the 21st century. CT scanners, digital x-ray machines (no more developer and fixer to be cleaned out), digital impression taking, you name it, the dental industry has it. And why not? All this technology has, of course, come at a very high cost. Not just financially, but in the hard decisions that clinicians have had to make regarding how they move their business forward on an ever dwindling NHS budget. Dentistry in the UK faces huge challenges and as I leave the dental industry, I look back to an almost unrecognisable NHS dental service that was in place when I started out in my dental career. Way back then there were cracks showing but over the years these have

developed into huge chasms that it’s anyone’s and everyone’s guess as to how these are to be traversed.

And so, I leave you all, not to hang up my scrubs or my management attire for a quieter life.... that will come in time. Instead, I move forward to take up my new position for The Canmore Trust, a charity that many of you will already be familiar with.

Thank you to everyone who has helped me, encouraged me and believed in me along the way (especially Paul Sharkey, without whom I would never have embarked upon my career). I very often doubted my own abilities but I had people around me who were always, metaphorically speaking, cheering me on. My last 17 years have been spent at Dental FX and I owe a huge debt of gratitude to Stephen Jacobs who gave me the freedom to develop in my career as well as run his practice. And a final thank you to Will and Ann at *Scottish Dental* who have been an incredible support to me in writing these articles for the magazine over the years. I wish everyone in the industry all the very best for the future.

Susie Anderson-Sharkey pictured around 25 years ago







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# TIME TO BE HEARD

MATERNITY LEAVE

*With increasing numbers of women in dentistry, support is needed for those who have dedicated their practice to the NHS and wish to start a family*

I had written this article a few weeks back, feeling very despondent about maternity leave and I wish to share my thoughts with you in the hope that maternity issues in orthodontics will improve.

This was not the start to maternity leave I had imagined. NHS maternity leave in dentistry has always had the reputation of being a reasonable standard and many would say above expectations.

Unfortunately, the landscape has changed, and this is a call to our profession to be aware of the pitfalls and limitations surrounding women in the workplace.

I am a Specialist Orthodontist and the rules by which I am governed are the same that apply to all general dental practitioners, via the Statement of Dental Remuneration.

Sadly, over the last few years, with many changes initiated by COVID-19, there has been an unintended separation between orthodontists and general dental practitioners.

Orthodontists are fighting to keep their voices heard alongside general dental colleagues because we are also facing the same NHS pressures of increasing practice costs, increasing inflation, patient demand and staff shortages – but we have less representation because of our small group.

In my case, I am almost on my own with this problem. As I write this, I am 36 weeks pregnant but have no ability to take maternity pay or leave despite being an NHS committed practitioner, something which I never anticipated would happen in modern-day working life.

To take maternity leave, I must transfer my patients to the list number of another orthodontist which requires discontinuing my patients (they are all prior approval cases) and wait for Practitioner Services Dental (PSD) to allocate a

fee for the treatment (the timescale is dependent on caseload). Transfer of the case is only permitted upon agreement of the fee, closure of the forms and acceptance by another orthodontist (that is, if you can find someone to locum).

This process can take anywhere from three to five months. With pregnancy lasting on average nine months, you can imagine the difficulty with timescales, patient management, recruiting locums ... and that is without factoring in any pregnancy related complications.

The problem? Who would risk taking on a maternity locum cover position with no way of knowing what they would be paid.

As it stands, with the shortage of specialist colleagues, I do not have anyone to transfer my patients to and am well beyond the timeframe of being able to fulfil the patient transfer required should I be fortunate enough to find someone at this late stage.

Orthodontic locums are reluctant to take on any work because they have no guarantee of how much value is left in each orthodontic treatment plan and will only be paid a fee once the course of treatment is complete (which we know for orthodontics is between 18 months and two years).

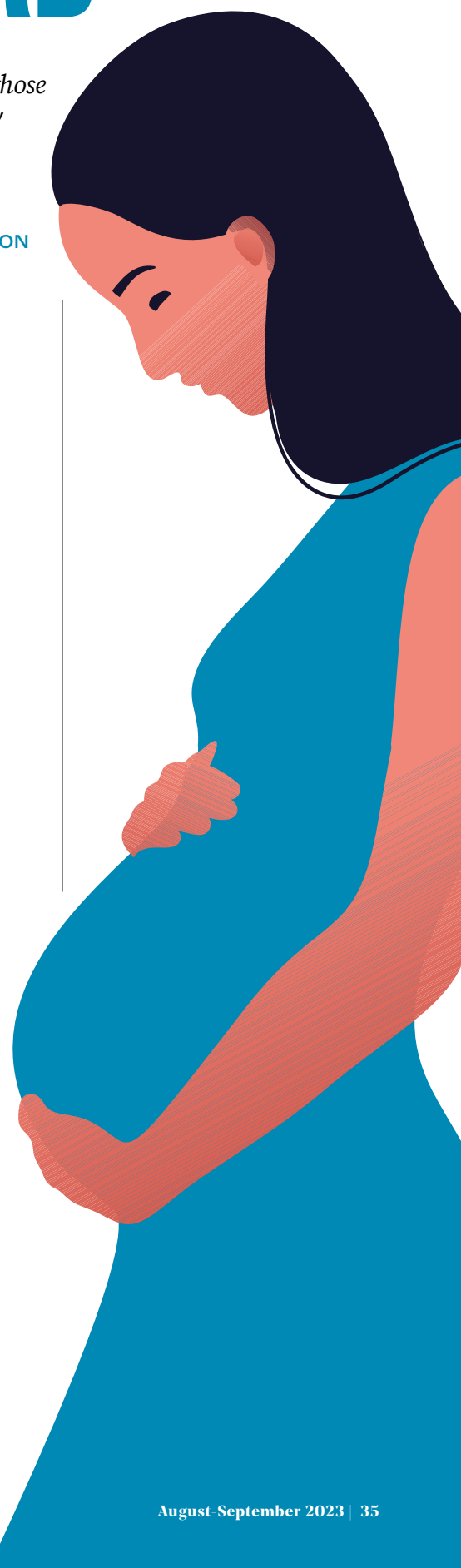
Taking an orthodontic locum position is a financial gamble.

Historically, maternity leave in orthodontics was managed by allowing the orthodontist to keep their list number open and income generated would pay for the locum(s).

An agreement was made between the associate and locum(s) – this also benefitted the practice owner, as it gave peace-of-mind that patients were being seen and that business could continue as normal.

The introduction of e-ortho now means that maternity pay, and item of service, are not able to be processed through the same list number, leaving many orthodontists in the same position as me; unable to secure a

WORDS  
LAUREN  
ANDERSON







locum, unable to transfer patients and unable to have the supported post-partum care which is required for both physical and mental health.

Would this situation deter practice owners from employing female orthodontists? My concern is that it deters women from joining specialist practice in Scotland, widening the inequalities and access to orthodontic care.

Recent GDC figures show a higher registration of women in orthodontics than men. This is mirrored in BDS graduates.

With the increasing numbers of women in dentistry, there needs to be support in place for those who have dedicated their practice to the NHS and wish to start a family.

Comparatively, there have been several concerns highlighted in general dentistry regarding maternity issues and the Facebook group 'Pregnant Dentists Scotland' was created to support fellow colleagues.

Many of us, like myself, have

gone into the profession to care for people, not expecting these difficulties. I am now faced with the prospect of juggling a new-born and NHS patients, despite raising this problem years ago, compounding another widely debated topic in our profession; burn-out.

I have spent the last three years trying to raise awareness of this problem, writing to the Scottish Government, engaging with MSPs and highlighting it with the BDA.

Three representatives (including myself) from the Facebook Group were able to secure a meeting with the Scottish Government and Practitioner Services through the BDA.

We discussed several issues which had been raised by fellow colleagues and it allowed an opportunity to explain the difficulties with maternity and orthodontics.

I am pleased to say that both PSD and the Scottish Government



**THERE NEEDS TO BE SUPPORT IN PLACE  
FOR THOSE WHO HAVE DEDICATED THEIR  
PRACTICE TO THE NHS AND WISH TO  
START A FAMILY"**

## Introducing Jackie Davidson

**Dentist**  
**Interest: Periodontics**

BDS University  
of Glasgow 2001  
GDC 79587



Jackie qualified from the University of Glasgow in 2001 and worked in a General Practice setting for 16 years both in Scotland and in Australia.

Jackie holds a teaching post at Glasgow Dental School where she is part of the Restorative team, teaching undergraduate dentists.

Her main interests lie in Clinical Periodontology and she is currently studying towards an MSc on the subject at the University of Central Lancashire. In addition to this, she is an active member of the British Society of Periodontology and the International Team for Implantology.

Jackie is currently building a referral service for Periodontal Care here at Clifton Dental & Implant Clinic, including non-surgical and surgical periodontal treatment of teeth and implants.

In the coming months, she will also be undertaking training in provision of clear aligner therapy with Invisalign.

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listened to our concerns and are now aware of the difficulties we face surrounding maternity leave. I feel encouraged that they are keen to resolve these issues to ensure equality in the workplace.

There is no easy answer for my situation due to the shortage of

specialists but they have committed to looking at it on an individual level and I hope that this will also be of some encouragement to any other orthodontists who might be in a similar position.

I hope that the maternity system becomes easier to navigate for

fellow colleagues to ensure that NHS orthodontics and dentistry in Scotland will support a female workforce.

*Dr Lauren Anderson is secretary of the Scottish Specialist Practitioners Group and a partner at Milngavie Orthodontics.*

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# A NEW FIELD IS BORN

*Delegates from all over Europe are preparing to converge on Edinburgh for the third International Sports Dentistry Symposium*

# T

he third International Sports Dentistry Symposium, organised by the European Association for Sports Dentistry (EA4SD) and sponsored by Clyde Munro, aims to bring together sports dentistry and medicine – and analyse how they work together for athletes' health. Sports dentists and physicians will highlight the important elements in preventing injuries and monitoring health.

Sport has always been a part of human activity and culture and it has become a key way in which to maintain and improve our health.

WORDS  
THANOS  
STAMOS

Sport is health. But does this come without any conditions? No. Sport can be healthy, fun, exciting and emotional – but there is one important condition; that it is practised safely.

We cannot expect an athlete with a knee injury or heart disorder to practise sports because in such cases, it means putting his/her health at risk. In the same way, how can we expect an athlete to exercise or compete while having a periodontal abscess, extensive caries, injured teeth or jaws?

The scale of care for sports people is significant. FIFA estimates there are more than 300,000 professional players and 300 million amateur players around the world. This is only in football! In the UK Premier League alone, the financial cost of injuries was estimated to £269 million in season 2014-15.

According to the Bureau of Labor Statistics in America, around 218 million people engage in daily physical exercise. That is 66 per cent of the population. In the US, dental injuries from recreational sports account for more than 600,000 emergency visits each year.

In the early nineties, a new medical field – sports medicine – was developed.







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Now, a detailed medical examination of athletes is conducted, prevention takes an important lead, specialised protocols of field emergencies are created and – most important – sports medicine has become multidisciplinary. Physicians and health professionals from different specialties form the medical team and are responsible for working systematically on the prevention and treatment of the sport-related injuries.

The research about the exercising human body is growing; the scientific evidence linking physical exercise to pathologies, injuries and performance in a two-way pattern has opened new horizons to medical science and athletes have started to benefit from a healthier participation. From the 2002 to the 2014 FIFA World Cup, the incidence of injuries decreased by 37 per cent.

When I started to treat professional football players and other athletes in my dental clinic, I soon realised that the existing examination and treatment protocols were not enough to provide the best possible dental

care to athletes who were traveling at least twice a month, exercising hard every day, and competing at their maximum twice a week.

The athlete had no time, or the motivation, for dental treatments.

The coach wanted the athlete available for training.

The team physician wanted the minimum ‘return-to-play’ time (the decision-making process of returning an injured or ill athlete to practice or competition). Overall, there was a complete lack of awareness in sports about the importance of oral health in the overall health and physical activity.

It was a challenging time to be a dentist treating sports people. What would a football player in possession of the ball do while being challenged by an opponent? He would look for teammates. Luckily, there



“

**IN PROFESSIONAL AMERICAN FOOTBALL  
ALONE, 100,000 TO 200,000 ORAL  
INJURIES PER YEAR ARE PREVENTED  
USING MOUTHGUARDS”**

### **A SUGGESTED UNIVERSAL PROTOCOL FOR DENTAL EXAMINATION IN SPORTS**

Athletes in any sport and at any level submit their bodies to constant exercise. Any given pathology can increase the risk of injury, illness or even reduced performance. The medical examination is valuable in diagnosing existing health problems and preventing medical issues that might compromise the athlete's overall health when exercising. The stomatognathic system is not an exemption, as oral pathologies, including dental caries and periodontal diseases, are found in high incidence in sports. The need for accurate and detailed dental examination in sports led dentists from the European Association for Sports Dentistry and the Academy for Sports Dentistry to elaborate a universal dental examination in sports protocol that can record the overall oral health of the athlete, including the teeth, periodontium, and musculoskeletal screening, for all athletes. The outcome of this stomatognathic examination allows sports physicians and professionals other than dentists to have a complete image of the individual oral health condition of any given athlete, and it allows the dentists to efficiently screen and prevent pathologies, as well as to advise on the eligibility to practice sports from the oral health perspective.

<https://onlinelibrary.wiley.com/doi/full/10.1111/edt.12863>

were a lot of dentists in a similar situation, so there were 'teammates' on the field.

It did not take long to agree with colleagues from different countries about the European Association for Sports Dentistry (EA4SD), based in Paris. We were motivated by our common vision to adapt our science to athletes' needs, conduct research, create a network, and present scientific evidence on how the oral health has an impact on sports. Soon, membership in Europe – and the rest of the world – began to grow.

As cofounders of the EA4SD, we agreed on the principle of creating an association where its members will have the opportunity to actively participate with their ideas, research and projects to our common goal, sports dentistry's international

development and integration in sports medicine. The following milestones were achieved:

- In 2017, the EA4SD became an official partner of the European College of Sports and Exercise Physicians (ECOSEP) which is the first international sports physicians' association to create a sports dentistry committee.
- In 2018, the World Dental Federation (FDI) created the first official guidelines and toolkit of sports dentistry<sup>1</sup>, available to more than one million dentists and 200 national dental associations in more than 130 countries. Sports dentistry is now officially recognised by the FDI.
- In 2019, the EA4SD became an official partner of the Academy for Sports Dentistry in the USA (ASD), thus creating a global network of sports dentistry and starting a strategic cooperation in terms of development and network.
- In 2020, the first Consensus Statement on sports dentistry integration in sports medicine, was published in *Journal of Dental Traumatology*, by the EA4SD, ECOSEP and ASD.

### The current picture

Oral health and dental treatments have an immediate and visible impact on the body, including the cardiovascular, respiratory, and musculoskeletal system, plantar arch, muscle strength, posture, and gait. Caries and periodontal disease are found in highly elevated incidence in athletes.

In professional American football alone, 100,000 to 200,000 oral injuries per year are prevented using mouthguards. We can now screen and treat our athletes using combined technologies, such as CBCT scan, facial electromyography, digital occlusal record and impressions, mouthguards and splints materials and devices of cutting-edge technology providing optimal injury prevention.

Today, thousands of dentists in Europe and around the world are interested in, and benefit from, this new field in dentistry. The research and scientific evidence about oral health in sports is increasing rapidly, sports dentistry has become continuing education, specialisation, post-graduate diplomas in dental faculties and is present in major sports medicine and dentistry international conferences.

## CONSENSUS STATEMENT ON SPORTS DENTISTRY INTEGRATION IN SPORTS MEDICINE

Sports medicine has a multidisciplinary character which allows different medical specialties to investigate the prevention, etiology and treatment of athletes' diseases. This leads to a decreased risk of injury and a faster return to play as well as an improvement in the overall health and well-being of athletes of any level and in all sports around the world. The oral health of athletes is now the subject of great attention internationally because of the increased prevalence and incidence of health issues such as dental caries and erosion, periodontal disease, defective occlusion, temporomandibular joint disorders and orofacial injuries. Scientific evidence and research on these issues have also intensified over recent years. The best way to maintain player's health and performance is to include oral health in sports medicine with physicians and dentists working closely together at the individual level as well as with the cooperation between local and international sports medicine and dentistry associations. The European Association for Sports Dentistry, the Academy for Sports Dentistry, and the European College of Sports and Exercise Physicians are leading the way and have worked together to develop a consensus statement describing the main pillars of oral health integration into sports medicine based on the most common oral diseases found in athletes and linked to exercise, sports and performance.

<https://onlinelibrary.wiley.com/doi/10.1111/edt.12593>

Sports dentistry began as an innovation, continued as a sustainable integration in sports medicine and now it is an emerging global trend in the dental and medical field.

### REFERENCE:

<sup>1</sup>[www.fdiworlddental.org/sports-dentistry-0](http://www.fdiworlddental.org/sports-dentistry-0)

**Dr Thanos Stamos (DDS, Greece)**  
is the co-founder & executive vice-president of the European Association for Sports Dentistry ([www.ea4sd.com](http://www.ea4sd.com)) and the co-author of World Dental Federation (FDI) Sports Dentistry Guidelines and Toolkits.



**“ORAL HEALTH AND DENTAL TREATMENTS HAVE AN IMMEDIATE AND VISIBLE IMPACT ON THE BODY”**



# INTERNATIONAL SPORTS DENTISTRY SYMPOSIUM 2023 EDINBURGH PROGRAMME

## FRIDAY, 24 NOVEMBER

**09.00: Registrations**

### WELCOME ADDRESS

**10.00:** Ten Years of EA4SD: What Sports Dentistry Learnt from Sports – Thanos Stamos (GRE)

### KEYNOTE SPEAKER

**10.15:** Life is a Pitch: The Role of the Medical Support Team – James Robson (UK)

**11.10:** Coffee Break and Trade Show

### ORAL HEALTH IN SPORTS

*Chairs: John Haughey (IRE), Marc Engels-Deutsch (FRA)*

**11.30:** The Value of Oral Health Screening in Sport – Peter Fine (UK)

**11.55:** Dentistry in Specialist Patient Groups: Lessons from Special Care in Paralympic Sports – Niall Elliott (UK)

**12.20:** Oral Health and Olympic Athletes – Jean-Luc Darteville (FRA)

**12.45:** Lunch Break and Trade Show

### SPORTS DENTISTRY MEETS SPORTS MEDICINE

*Chairs: Thanos Stamos (GRE), Sophie Cantamessa (FRA)*

**13.45:** Sports Dentistry Meets Sports Medicine

**14.10:** The Role of the Sports Dentist Within the Sports and Exercise Medicine Team – Umair Mohammed (UK)

**14.35:** Sports Dentistry Meets Sports Medicine

**15.00:** Coffee Break and Trade Show

### ORAL ENVIRONMENT IN SPORTS

*Chairs: Alessandro Nanussi (ITA), Fiona Davidson (UK)*

**15.15:** Sports Dentistry, Periodontal Approach and Global Athletes' Health – Sophie Cantamessa (FRA)

**15.40:** Saliva in Sports, Homeostasis and Biomarker – Christos Rachiotis (GRE)

**16.05:** Toxicology in Sports Dentistry – Tilman Fritsch (AUT)

### KEYNOTE SPEAKER

**16.45:** My Experiences as a Sports Dentist – Fiona Davidson (UK)

**17.30:** Drinks Reception and Trade Show / Matchday Dinner

## SATURDAY, 25 NOVEMBER

**09.00: Registrations**

### WELCOME ADDRESS

**09.30:** Keynote Speaker

**09.45:** Pulpless Teeth and Athletes' Health – Marc Engels-Deutsch (FRA)

**10.40:** Coffee Break and Trade Show

### WIDER ROLE OF THE SPORTS DENTIST

*Chairs: Stavros Avgerinos (GER), Christos Rachiotis (GRE)*

**11.10:** Women's' Football: From Functional to Social Protection and Integration – Alessandro Nanussi (ITA)

**11.35:** Sports Medicine Around All Kinds of Fields – Flavia Del Grosso (ITA)

**12.00:** Myofascial Chains: The Bridge Between the Body and the Mouth – Eider Unamuno (SPA)

**12.25:** Lunch Break and Trade Show

### KEYNOTE SPEAKER

**13.30:** The Role of IMG's in Managing Concussion in Contact Sports – Mike Dunlop (UK)

**14.25:** Coffee Break and Trade Show

### MOUTHGUARDS IN SPORTS

*Chairs: Jean-Luc Darteville (FRA), Markus Striegel (GER)*

**14.55:** The DGSZM PRO (Protection-Retention-Occlusion) Mouthguard Concept – Stavros Avgerinos (GER)

**15.20:** Functional Concept for Athletes – Johanna Herzog (GER)

**15.45:** What Is Performance Dentistry? – John Haughey (IRE)

### PANEL

**16.10:** Sports Dentistry, Sports Medicine and Athlete Collaboration  
Moderator: Thanos Stamos

**16.45: Closing remarks / Conference ends**

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# MANAGING EXTREMELY CURVED ROOT CANALS

It is important that clinicians have the instruments and expertise necessary, writes Mark Allen

**T**he aim of endodontic treatment is to remove the infected dental pulp to restore or maintain the function and appearance of the natural tooth. Ideally, the root canals are prepared in a way which respects the root canal anatomy, preserving the shape and form throughout the entire canal.<sup>1</sup> However, sometimes, root canals are more curved than usual, making conservative preparation more difficult. Cases like these can require additional planning and preparation, and it is important that clinicians have the instruments and expertise necessary before tackling cases with extremely curved canals.

## MANAGING CURVED CANALS

Even when adequate planning is undertaken, using radiographs, the root canal morphology may not always be as simple as anticipated. Extremely curved canals present the clinician with challenges, restricting the ways in which the canal can be prepared. Without adequate preparation, extreme curvature can affect the prognosis. Because of this, pre-operative assessments should include a focus on the root canal anatomy – enabling clinicians to establish the complexity, curvature and radius of the root canals. This will allow more adequate preparation prior to treatment. By having a clear idea of the root canal anatomy, treatment will become more predictable, and the occurrence of errors and excessive removal of tooth structure will be reduced.

## RELIABLE DIAGNOSIS AND TREATMENT

Predictability and reliability are key aspects of endodontic treatment. Because of this, diagnostic imaging is crucial for accurate treatment planning. 3D imaging is preferable in determining root canal curvature as curves that present buccolingually may not be visible on a 2D radiograph, leading to misinterpretation of the data. CBCT is an excellent tool here, providing clinicians with the ability to anticipate the exact root canal structure, from all angles. This lowers the risk of false negative outcomes.<sup>1</sup> It may also enable the clinician to detect any other pathologies not visible through an intraoral exam or with 2D imaging methods.

By gaining a clear image of the clinical situation, adequate planning is possible,



Mark Allen is  
General Manager  
at COLTENE

allowing the clinician to effectively prepare an extremely curved canal. There are a number of methods a clinician might implement to manage curved root canals. These include the balanced force technique, step back technique, step down technique, standardised technique and the anti-curvature technique. Each of these have their benefits and challenges, but it is important that clinicians take care during the hand instrumentation phase to avoid ledge formation, as well as the creation of zip, transportation and file fracture.<sup>1</sup>

## BUILDING TRUST WITH PATIENTS

Having established a clear understanding of the patient's canal anatomy, produce and explain the treatment plan to the patient, so that they know they are in very capable hands. Conversely, if the treatment plan were to change suddenly, due to unanticipated curved root canals, the patient may feel less confident, and lose trust in the abilities of their clinician. Because of this, it is important to have the equipment and instruments needed to complete effective endodontic treatment, despite potential root canal curvature.

To complete successful treatment of curved root canals, it is useful for clinicians to have versatile instruments available in their armamentarium at all times. This means they will be prepared to treat patients effectively in cases with complex anatomy. This is essential for building and maintain a trusting relationship with patients. Using reliable instruments will also reduce the likelihood of accidental perforation of the root canal walls,<sup>1</sup> allowing the clinician to accurately judge and prepare for the shape of the root canal. This is key for predictable endodontic treatment.

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Making an accurate diagnosis is key for successful endodontic treatment. By planning effectively, based on accurate assessments, clinicians are able to carry out predictable treatment, with successful outcomes. This helps to lower the risk to the patient, and maintain the trusting relationship which is essential for patient satisfaction.

Reliability is crucial here, which is why it is vital to use instruments which facilitate superior treatment even in complex cases. Build an armamentarium which facilitates versatility and supports the treatment of complex root canals – allowing you to provide your patients with outstanding endodontic treatment.

For more on COLTENE, visit [www.coltene.com](http://www.coltene.com), email [info.uk@coltene.com](mailto:info.uk@coltene.com) or call 0800 254 5115.

## REFERENCE:

<sup>1</sup>Balani, Pooja, Fayezi Niaz, and Haroon Rashid. "A brief review of the methods used to determine the curvature of root canals." J Res Dent 3.3 (2015): 57-63



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# REMOVING RISK

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The GDC requires that colleagues communicate and work effectively as a team in patients' best interests. Practices should have protocols in place so that all team members understand their roles and responsibilities within the referral process. The specialist societies often provide helpful guides for referring clinicians, such as that provided by the British Orthodontic Society<sup>1</sup>.

## Fees and charges

The GDC generally takes a dim view of any referral fees changing hands. To help avoid patient complaints, those working in the NHS need to understand and carefully

apply the current rules and regulations governing referrals.

## GDC advice

Good communication and record keeping are, therefore, fundamentally important in managing the situation. The GDC's Standards for the Dental Team make this clear<sup>2,3</sup>. The standards also say that you mustn't mislead patients into thinking that NHS-available treatments can only be provided privately<sup>4</sup>.

## Check and double-check

It is vital, therefore, that you are sure of the currency and accuracy of the information you provide, as a failure to do so may leave

you open to allegations of being misleading or even dishonest.

For example, where a patient is to be referred for molar endodontics, it is essential to have up-to-date knowledge of the local referral options. Reliance on anecdotal information or an assumption that there is no NHS provision can be risky, as the commissioning of such services may change from time to time and from area to area.

Practices can double-check their information by contacting their NHS Primary Care organisation and referral centres (such as dental hospitals) for written confirmation about referral options, criteria and protocols, and ask that they be updated when there are any changes. In this way colleagues can be confident that patients are not inadvertently given inaccurate information at the time of referral.

**John Makin is Head of the DDU. This is an edited version of an article first appeared in The DDU Journal (<https://ddujournal.theddu.com>)**


## REFERENCES

<sup>1</sup>[www.bos.org.uk/information-for-dentists/making-an-orthodontic-referral](http://www.bos.org.uk/information-for-dentists/making-an-orthodontic-referral)

<sup>2</sup>[standards.gdc-uk.org/pages/principle2/principle2.aspx](http://standards.gdc-uk.org/pages/principle2/principle2.aspx)

<sup>3</sup>[standards.gdc-uk.org/pages/principle4/principle4.aspx](http://standards.gdc-uk.org/pages/principle4/principle4.aspx)

<sup>4</sup>[standards.gdc-uk.org/pages/principle1/principle1.aspx](http://standards.gdc-uk.org/pages/principle1/principle1.aspx)




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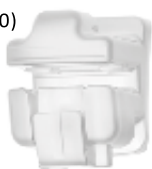



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# SYSTEMS AND SIMPLICITY



*From these come clarity, success and happiness*

**I HAVE** always been attracted to the acronym 'KISS': Keep it short and simple. Much to my frustration, I often found that work environments had systems of doing things that were anything but simple. Unnecessary complexity led to mistakes and more, not less, work.

My attempts to break things down into their constituent parts, to examine processes, and then to reconstruct them so they were simpler and easier, often led to my being labelled a troublemaker, or just plain difficult.

I started my own practice close to my uncle's engineering business and he introduced me to the concept of 'quality management and standards'. This led me to read about Edwards Demming and his work in post-war Japan, which I thoroughly recommend.

A system can be defined as "a set of things working together as parts of a mechanism or an interconnecting network; a complex whole" or "a set of principles or procedures according to which something is done; an organised scheme or method".

I had frequently found that when something went wrong in a dental business it was usually due to small problems. Often these came about by changes being made without thought for their outcomes and influences. So, small glitches could have larger consequences resulting in loss of productivity plus increased frustration for team members.

Lack of clear systems lead to assumptions which, in turn, lead to a lack of clarity and mistakes, or as one of my team members succinctly put it: "Assume makes an ass out of 'u' and 'me'."

I realised that I would have to start at the very beginning and examine each and every process and procedure within the business.

WORDS  
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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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This sound like a daunting process, but in fact proved to be far less difficult than I had initially feared. We started with the core values and purpose statement of the business and, over a period of months, examined everything that went on.

At weekly team meetings we asked the questions: 'What is working well? What is not working well? Why? How can we do it better? And what does better look like?'

Team members came to realise that far from being frightened of changes, as they were involved in the instigation, introduction and continuation of the changes their point of view was being respected and considered.

Instead of change being forced as a fast top-down process they had input into the bottom-up introduction with regular opportunities for monitoring and feedback.

Every month we examined where we were, how far we had come and our future possible course and challenges. This exercise was helped with five great questions:

1. What shall we stop doing?
2. What shall we do less of?
3. What shall we keep doing?
4. What shall we do more of?
5. What shall we start doing?

All processes and procedures were recorded in *The Red Book*, as the practice manual came to be called because it was kept in a red folder. This was a living document, as the saying goes. It was amended, updated and reflected the constant change that happens in any successful business. We took a pride in responding to change in our own way rather than having to introduce knee-jerk reactions without consideration.

Recently, I was introduced to a wonderful saying around the word

system: "System – saves you stress, time, energy and money". I heard it on a group call and I don't know the person's name that shared it.

## Stress

The business of dentistry is tough enough so there must be room to minimise the stressors on every team member, which helps to reduce stress for our patients. Lower stress leads to greater performance and a happier more productive team.

## Time

Analysis of the greatest stressors within a practice repeatedly point to time management (a misnomer if ever there was one as it is impossible to manage or control time) being top of the chart. A flexible and responsive appointment book system offers less angst and sand in the gears.

## Energy

A reduction in wasted energy leads to greater productivity all round, happier patients and a better workplace.

## Money

Which brings us to the last letter – m for money. Having good systems not only means that income increases, but it also means that management of finances – in the short, medium and long term – are controlled and monitored. Treatment plans are produced and accepted in a timely and successful manner, fees reflect changing costs, budgets are set and rewards are better all round.

There is one final point I want to make; systems help bring simplicity. "All things should be made as simple as possible, but no simpler." Einstein said that. "With simplicity and systems comes clarity, with clarity comes success, and with success comes happiness." I said that.

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# Inlay-retained fixed dental prosthesis: a clinical option using monolithic zirconia

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## Introduction

For the single tooth replacement in the posterior sextant, there are different fixed options available with a variety of dental materials. Implant-supported single crowns can be used, saving the natural tooth structure of the adjacent teeth. However, implant therapy may not be possible for cases where other variables are not conducive. These variables can be medical factors, scarce bone or anatomical constraints, the economic situation, a negative attitude of the patient toward surgical treatment.<sup>1</sup> In these cases, an inlay-retained fixed dental prosthesis (IRFDP) is an appealing minimally invasive treatment modality, especially if there is a presence of restorative fillings adjacent to the missing tooth. IRFDP should be opted for instead of a full coverage dental prosthetic restoration.

Notwithstanding the fact that a full coverage fixed dental prosthetic (FDP) restoration is the gold standard for such tooth replacement. They have several disadvantages, to name some, risk of secondary caries, soft-tissue pigmentation, and an opaque-to-darkish appearance in the cervical area of the abutment teeth with metal coverage.<sup>2</sup> Additionally, FDPs are known for their invasive nature, since they require anywhere from 67.5 per cent to 75.6 per cent of coronal tooth surface removal depending on the choice of material (ceramic, gold or metal).<sup>3</sup>

Dental restorations are placed under immense pressures in the clinical functions of biting and chewing. These mastication forces in the molar region can reach over 900N. As per the DIN standards, FDPs should be able to endure occlusal force greater than

1000 N in a static fracture resistance test.<sup>4</sup> Tooth coloured high pressed ceramics have the probabilities for debonding.<sup>5,6</sup> They have low fracture resistance.<sup>8,9</sup> There is a risk of fibre exposure, hair line microcracks in the fibre-reinforced composite bridges.<sup>9,10,11</sup>

However, the new high strength ceramics, with their stiffness and high mechanical properties (i.e., resistance to fracture and/or fatigue), could be considered a right choice in an IRFDP rehabilitation.<sup>12</sup>

A number of studies have shown that monolithic zirconia inlay-retained FDPs exhibit a higher resistance to fracture when compared with lithium disilicate inlay-retained FDPs.<sup>13,14</sup> It requires a conservative dental preparation, fewer dental sessions and less laboratory time. With its monolithic properties the risk of chipping is low, and it has satisfactory aesthetics. In addition, it helps achieve minimal wear on the antagonists.<sup>15,16,17</sup> Monolithic zirconia IRFDP are good option even for the patients with unfavourable occlusion with parafunctional habits or fracture history.<sup>17,18,19</sup>

The only disadvantage monolithic zirconia IRFDP had was their inability to achieve satisfactory transparency, which has been overcome to provide superior aesthetics.<sup>16,20</sup>

"Zirconia ceramic RBFDPs yielded a 10-year survival rate of 98.2% and a success rate of 92.0%."<sup>21</sup>

## Inlay-retained bridge design

IRFDPs require minimum coronal tooth height of 5mm, parallel abutments and a maximum mesiodistal edentulous gap of 12mm.<sup>23</sup> The patient needs to have a good oral hygiene

and low susceptibility to caries. The contraindications include severe parafunctions, the absence of enamel on the preparation margins, extensive crown defects and abutment-tooth mobility.

## There are four different designs for monolithic zirconia IRFDPs:

### 1 Box design:

The proximal box featured as same dimensions as the proximal box of the inlay-shaped preparation. Figure 1 (a,b)

### 2 Inlay-box design:

The inlay-shaped design involves occlusal and proximal box preparation with round line angles, corners, and a rectangular floor. The occlusal preparation allows a 2.5mm depth and 4mm width of zirconia, with approximately 6 degree's divergence of the walls. The proximal box was prepared with 1mm width and 2mm extension apical to the floor of the isthmus with approximately 6 degree's divergence. This will contribute to a 4.5 × 4mm connector dimension as shown in Figure 1 (c,d) and Figure 3.

### 3 Tub shape design:

This design involves occlusal surface preparation as the inlay design but without the preparation of the proximal box, with 2.5mm occlusal cavity preparation depth as shown in Figure 2 (a,b)





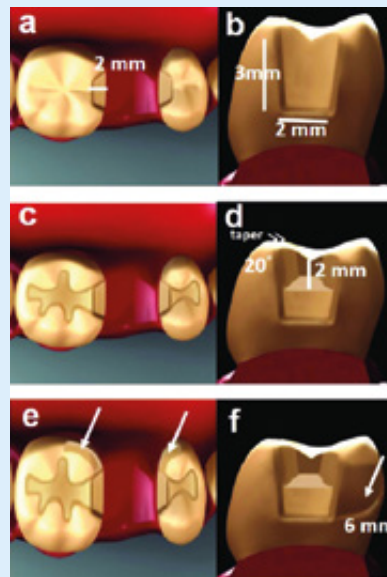


#### 4 Butterfly wing design:

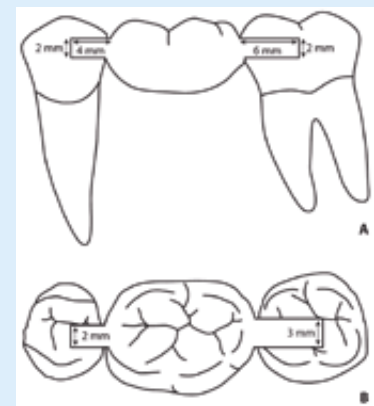
The wings are done to resemble that of the resin-bonded bridges on the lingual walls of the molar and the premolar. Wings were extended lingually to half the molar and premolar, covering most of the mesial cusp lingually on the molar and half the lingual cusp on the premolar. Occluso-lingually, they stopped at the lingu-occlusal line angles, leaving the occlusal surface intact and extended 0.6mm depth.<sup>26</sup>

The cavity is prepared for inlay-retained monolithic zirconia IRFDPs according to the following guidelines:<sup>27</sup> Figure 1 (e,f)<sup>27</sup>

- occlusal depth: 2.5mm (floor of isthmus to central groove)
- vestibular palatal/lingual width of the inter cuspal isthmus: 3mm.
- depth of proximal box: 2mm (shoulder with rounded internal angle)
- buccal vestibular width: maximum of 4.5mm (3mm of zirconia framework and 0.5– 0.6mm of ceramic veneer on each side)
- minimum dimensions of connectors:<sup>3</sup> 3mm
- cusps are included in preparation when an abutment tooth has a wide bucco-oral defect (>50 per cent) or has been devitalised.
- divergence angle of the cavity: approximately 6 degrees



**Figure 1:** Schematic diagrams for three different preparation designs for monolithic zirconia IRFDPs; a and b, box design. c and d, inlay-box design. e and f, c. a, c, and e (top views). b, d, and f (proximal views). Arrows represent butterfly wings of 0.6mm which extend lingually to half of the molar and premolar.<sup>24</sup>



**Figure 2:** Tub shaped cavity design a buccal view, b occlusal view.<sup>25</sup>



**Figure 3:** Inlay-box design.<sup>25</sup>

The recommended connector dimensions in all-ceramic posterior inlay-retained fixed partial dentures varied between 9mm<sup>2</sup> to 16 mm<sup>2</sup>, with no significant differences when zirconia was used as the frame material<sup>14</sup> while lithium-disilicate ceramic required 16mm<sup>2</sup> at least.<sup>28</sup>

The inlay retainers were constructed from computer- aided-design/ computer-aided- manufacturer (CAD/ CAM) zirconia to improve the fracture resistance and veneering of the zirconia inlays was omitted.<sup>29</sup>

#### Cementation

Zirconia still presents a challenge when used with adhesive techniques due to their single-phase tetragonal crystalline structure that is not etchable by commonly used agents such as hydrofluoric acid. Debonding of the adhesive interface and delimitation and microcracks of the ceramic veneering material were the most long-term failures observed and reported.<sup>30,31,32</sup>

There are two types of surface treatment of zirconia after contamination with saliva remnants.<sup>33</sup>

#### Mechanical surface treatment

After try-in, rinse the restorations with water spray and dry with air. Cover all bonded surfaces of the restoration with a layer of ZirClean®-Bisco-USA, Ivoclean- Ivoclar or 0.5M NaOH and leave for 20 seconds, then rinse the restorations thoroughly with water spray and dry with air.

#### Chemical surface treatment

Sandblast the fitting surfaces of the inlay bridges with Al<sub>2</sub>O<sub>3</sub> particles with 50×m diameter, 2.8 bar and 1cm distance water sprayed for 60 seconds and cleaned using the ultrasonic cleaner in 95 per cent ethyl alcohol for 10 minutes.

After surface treatment of zirconia, apply 10- methacryloyloxydecyl dihydrogen phosphate (MDP) containing primer (Z Prime Plus,

Bisco, USA) on the fitting surfaces of zirconia bridges.

However, there is no need for special surface treatment for the abutment as the cement is self-adhesive.

#### Final cementation of the restoration

We will need to apply the dual-cure self-adhesive resin cement to the intaglio surfaces of the bridges and to the preparation surfaces. Place the restorations in the site and apply finger pressure. Remove excess cement carefully using a brush. Apply a layer of glycerine gel to inhibit air. Light cure at the four axial line angles and in the occlusal direction for one minute. Finish and polish the margins using finishing diamond burs, rubber polishing points, and diamond polishing bur.<sup>33</sup>

A correct FDP and tooth cavity surfaces conditioning before adhesive cementation procedures is necessary to avoid mechanical and biological complications.<sup>34,35</sup>

## Case study

A 45-year-old woman requested replacement of her UL4, UL5 crowns and replacement of missing UR6 on the same quadrant (Figure 4a, b and c). She did not like colour of her upper left crowns (Figure 4a).

Detailed options discussed for replacement of UL6 with a fixed bridge, or a cantilever bridge, or an IRFDP, or an implant. Patient was not comfortable with any of the invasive options and consented for an IRFDP bridge to replace UR6 after whitening.

### Treatment planning

Patient was assessed for IRFDP in upper left side. There was space a minimum coronal tooth height of 5mm, parallel abutments and a maximum mesiodistal edentulous gap of 12mm with good oral hygiene.<sup>14</sup> Figure 4 (a,b,c).

The bone level of the vital abutment teeth was radiologically investigated. There were no signs of active bone resorption or any contraindicating periodontal and periapical pathology. UL6's maximum mobility of grade 1 was considered acceptable. As shown in Figure 4c there were no marginal leakage, discolouration, or secondary caries in the amalgam restoration.<sup>14</sup>

Figure 4a



Figure 4b



Figure 4c



### Preparation and scan

As there was no proximal box present after removal of old amalgam, tub shape design was chosen. In tub shape design the occlusal surface was prepared as the inlay design but without the preparation of the proximal box, with 3mm occlusal cavity preparation depth. The cusps were not included as UL7 has <50% bucco-oral defect. iTero was used for scanning the tooth preparation. Face bow was used to avoid cant (tilt).

Prepared dentin was sealed with an adhesive system (Scotchbond, 3M ESPE and flowable composite Venus's diamond flow, Kulzer) to prevent contamination by bacteria and components coming from provisional cementation materials.

Pro temp 3M ESPE was used for temporisation.

The minimum dimensions of the connector were 3×3mm, to enhance optimum mechanical stress distribution.



Figure 5: Monolithic zirconia IRFDP (UL5- UL6)



Figure 6: A pressed lithium disilicate crown UL4. B Milled monolithic zirconia UL5- UL7 IRFDP

### Placement

The temporary restoration was removed with spoon excavator. Rubber dam was applied to isolate tooth preparation from the oral environment. The abutment was cleaned with prophyl brush. The IRFDP was tried in mouth and saliva remnants were removed after soaking in 5M NaOH for 20 seconds. The restoration was sandblasted with 50µm of alumina for 60 seconds and cleaned with water spray. The restorations and abutments were dried with air. There is no need to sandblast if it has been done in lab.

The coat of zirconia primer (Scotchbond Universal Adhesive, 3M ESPE) containing 10- methacryloyloxydecyl dihydrogen phosphate (MDP) is used to increase the bond strength.

Maxcem Elite Kerr Corp self-adhesive cement was used for bonding IRFDP. Self-adhesive cement was cured for 10 seconds to increase bond and flexure strength. Static and dynamic occlusion was checked with 40µm articulating paper. The IRFDP occlusion was adjusted with fine diamond bur and then polished with compo glaze. Figure 7 (a,b,c).

Figure 7a



Figure 7b



Figure 7c



### Conclusion

IRFDP restorations are good and least invasive alternatives for the replacement of a missing tooth.

A good design, tooth preparation and choice of material and adhesives increases the fracture resistance of a prosthesis.

The digital oral scans provide the laboratory with precise margins, helping them prepare an immaculate IRFDP margin. With scans, there are either no or significantly reduced risk of distortions in preparation of margins (unlike impression materials which have the susceptibility for shrinkage or anomalies because of ill-fitting trays, or accumulation of saliva).

Even though there has been some research on IRFDP, we still need further clinical studies with greater sample sizes and a longer period to evidence the effectiveness and survival rates of IRFDP.





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## REFERENCES

1. Bömcke W, Rathmann F, Pilz M, Bermejo J L, Waldecker M, Ohlmann B, Rammelsberg P, Zenthöfer A. Clinical Performance of Posterior Inlay-Retained and Wing-Retained Monolithic Zirconia Resin-Bonded Fixed Partial Dentures: Stage One Results of a Randomized Controlled Trial. *J Prosthodont*. 2021;30(5):384–393.
2. Sailer I, Makarov N A, Thoma D S, Zwahlen M, Pjetursson B E. All-ceramic or metal-ceramic tooth-supported fixed dental prostheses (FDPs)? A systematic review of the survival and complication rates. Part I: Single crowns (SCs). *Dental Materials*. 2015;31(6):603–623.
3. Edelhoff D, Sorensen JA. Tooth structure removal associated with various preparation designs for posterior teeth. *Int J Periodontics Restorative Dent*. 2002;22(3):241–249.
4. Vallittu PK. The Second International Symposium on Fibre-Reinforced Plastics in Dentistry: A Scientific Workshop on Dental Fibre-Reinforced Composites on 13 October 2001 in Nijmegen. The Netherlands. Nijmegen. 2002.
5. Sorensen J A, Cruz M, Mito W T, Raffaeiner O, Meredith H R, Foser H P. A clinical investigation on three-unit fixed partial dentures fabricated with lithium disilicate glass-ceramic. *Pract Periodontics Aesthet Dent*. 1999;11(1):95–106.
6. Wolfart S, Bohlens F, Wegner S M, Kern M. A preliminary prospective evaluation of all-ceramic crown-retained and inlay-retained fixed partial dentures. *Int J Prosthodont*. 2005;18(6):497–505.
7. Freilich M A, Niekrah C E, Katz R V, Simonsen R J. Periodontal effects of fixed partial denture retainer margins: configuration and location. *J Prosthet Dent*. 1992;67(2):184–190.
8. Tan K, Pjetursson B E, Lang N P, Chan E S. A systematic review of the survival and complication rates of fixed partial dentures (FPDs) after an observation period of at least 5 years. *Clin Oral Implants Res*. 2004;15(6):654–66.
9. Göhring T N, Roos M. Inlay-fixed partial dentures adhesively retained and reinforced by glass fibers: clinical and scanning electron microscopy analysis after five years. *Eur J Oral Sci*. 2005;113(1):60–69.
10. Monaco C, Ferrari M, Caldari M, Baldissara P, Scotti R. Comparison of 2 bonding systems and survival of fiber-reinforced composite inlay fixed partial dentures. *J Prosthodont*. 2006;19(6):577–85.
11. Monaco C, Krejci I, Bortolotto T, Perakis N, Ferrari M, Scotti R. Marginal adaptation of 1 fiber-reinforced composite and 2 all-ceramic inlay fixed partial denture systems. *Int J Prosthodont*. 2006;19(4):373–82.
12. Zhang Y, Lee J J, Srikanth R, Lawn B R. Edge chipping and flexural resistance of monolithic ceramics. *Dental Materials*. 2013;12(29):1201–1208.
13. Choi J W, Kim S Y, Bae J H, Bae E B, Huh J B. In vitro study of the fracture resistance of monolithic lithium disilicate, monolithic zirconia, and lithium disilicate pressed on zirconia for three-unit fixed dental prostheses. *J Adv Prosthodont*. 2017;9(4):244–251.
14. Castillo-Oyagüe R, Sancho-Esper R, Lynch C D, Suárez-García M J. All-ceramic inlay-retained fixed dental prostheses for replacing posterior missing teeth: a systematic review. *J Prosthodont Res*. 2018;62(1):10–23.
15. Albashaireh Z S, Ghazal M, Kern M. Two-body wear of different ceramic materials opposed to zirconia ceramic. *J Prosthet Dent*. 2010;104(2):105–113.
16. Griffin J D Jr. Combining monolithic zirconia crowns, digital impressioning, and regenerative cement for a predictable restorative alternative to PFM. *Compend Contin Educ Dent*. 2013;34(3):212–222.
17. Christensen G J, Brux Zirande. MaxCAD: Superior Clinical Performance at 3+Years. *Clin.Rep*. 2014;7(6):1–3.
18. Rinke S, Fischer C. Range of indications for translucent zirconia modifications: Clinical and technical aspects. *Quintessence Int*. 2013;44(8):557–566.
19. Griffin J D Jr. Tooth in a bag: Same-day monolithic zirconia crown. *Dent.Today*. 2013; 32(1): 124, 126–131.
20. Tong H, Tanaka C B, Kaizer M R, Zhang Y. Characterization of three commercial Y-TZP ceramics produced for their high-translucency, high-strength and high-surface area. *Ceram Int*. 2016;42(1PtB):1077–1085.
21. Kern M, Passia N, Sasse M, Yazigi C. Ten-year outcome of zirconia ceramic cantilever resin-bonded fixed dental prostheses and the influence of the reasons for missing incisors. *J Dent*. 2017;65:51–55.
22. vanDalen A., Feilzer A.J., Kleverlaan C.J. A literature review of two-unit cantilevered FPDs. *Int J Prosthodont*. 2004;17(3):281–284.
23. Augusti D, Augusti G, Borogonovo A, Amato M, ReD. Inlay-Retained Fixed Dental Prosthesis: A Clinical Option Using Monolithic Zirconia. *Case Rep Dent*. 2014;2014:629786.
24. Samhan T, Zaghloul H. Load to failure of three different monolithic zirconia inlay-retained fixed dental prosthesis designs with three surface treatments. *Brazilian Dental Science*. 2020;23(2):1–10.
25. Gumus H S, Polat N T, Yildirim G. Evaluation of fracture resistance of inlay-retained fixed partial dentures fabricated with different monolithic zirconia materials. *J Prosthet Dent*. 2018;119(6):959–964.
26. Thompson M C, Thompson K M, Swain M. The all-ceramic, inlay supported fixed partial denture. Part I. Ceramic inlay preparation design: literature review. *Aust Dent J*. 2010;55(2):120–127.
27. Carlo Monaco, Paolo Cardelli, Mutlu Özcan, Inlay-Retained Zirconia Fixed Dental Prostheses: Modified Designs for a Completely Adhesive Approach. *J Can Dent Assoc*. 2011;77:b86.
28. Wolfart S, Ludwig K, Uphaus A, Kern M. Fracture strength of all-ceramic posterior inlay-retained fixed partial dentures. *Dent Mater*. 2007;23(12):1513–20.
29. Wolfart S, Ludwig K, Uphaus A, Kern M. Fracture strength of all-ceramic posterior inlay-retained fixed partial dentures. *Dent Mater*. 2007;23(12):1513–20.
30. Izgi A D, Kale E, Eskimez S. A prospective cohort study on cast-metal slot-retained resin-bonded fixed dental prostheses in single missing first molar cases: results after up to 7.5 years. *J Adhes Dent*. 2013;15(1):73–84.
31. ReD, Augusti D, Augusti G, Giovannetti A. Early bond strength to low-pressures and blasted zirconia: evaluation of a self-adhesive cement. *Eur J Esthet Dent*. 2012;7(2):164–175.
32. Ohlmann B, Rammelsberg P, Schmitter M, Schwarz S, Gabbert O. All-ceramic inlay-retained fixed partial dentures: preliminary results from a clinical study. *J Dent*. 2008;36(9):692–696.
33. Abdel fattah MAM, Mahallawi OSEDE, Abdelaziz AN. Clinical Assessment of Inlay-retained Bridge Designs (Tub-shaped and Inlay-shaped) in Missing Posterior Teeth Cases: A Randomized Controlled Trial. *World Journal of Dentistry*. 2020;11(2):121–127.
34. Monaco C, Cardelli P, Ozcan M. Inlay-retained zirconia fixed dental prostheses: modified designs for a completely adhesive approach. *J Can Dent Assoc*. 2011;77:b86.
35. ReD, Augusti D, Sailer I, Spreafico D, Cerutti A. The effect of surface treatment on the adhesion of resin cements to Y-TZP. *Eur J Esthet Dent*. 2008;3(2):186–96.

# THINK CAREFULLY

Martyn Bradshaw of PFM Dental – one of the UK's largest dental practice sales agents – discusses his top five tips when selling a dental practice

## 1. ACCURATE VALUATIONS

To ensure that you get the best price, you need to have the practice assessed properly. A decade ago, turnover was often used in calculating the values of dental practices. However, since then, we use a multiple of earnings before interest, tax, depreciation and amortisation (EBITDA). There are many other deductions and amendments when working under this type of model, so making sure that this is accurately calculated is very important, especially as this figure will then be multiplied to calculate the value. Getting the calculation wrong by only £10,000 can mean a difference of up to £75,000 in value.

There are also a number of different EBITDA calculations; using a principal-led model (assuming one principal at the practice) and an associate-led model (all income being generated by associates – or simply that we are adding an associate cost against all income). Both EBITDAs then have a different multiple applied to them. As such, some practices will work better under a principal-led model and some will work better under an associate-led model. We would use the better of the two, but this will have an impact on the likely types of buyers.

When buyers review practices, it is also important that they are confident with the figures presented to them. We are a firm believer that every cost that has been amended has to be justified and, as such, ensures that we can, to the pound, explain each and every one. With a buyer who is confident with the figures, comes a stronger offer.

## 2. DEMAND = PRICE

There is no doubt that the more potential buyers that people have, the higher the offers received. Using a specialist dental agent will ensure that your practice is marketed to as many suitable buyers as possible – and the right types of buyers. With multiple offers, often 'best and final' offers are asked for, which will lead to the price being pushed up. Not only this, but you would have the choice

of your perfect buyer – the person who will look after your practice, staff and patients.

## 3. TERMS

While this usually relates to large practice sales, this can affect some smaller practices also. Some buyers may require certain terms alongside their (price) offer. This could be as simple as asking the vendor to remain at the practice after the sale, or some legally binding terms. With some of the corporates, there may also be tie ins for the vendors, targets for future income, deferred consideration and financial penalties if these are not met.

Each buyer will be focused on different areas, with some buyers asking for a high number of terms and some asking for very little. An agent's job is to ensure that each offer is considered in its entirety, which may be a balance between price and the terms.

It is likely that most people will want to minimise the risk of any deferred payment. Often the terms can also be negotiated, which may vary from practice-to-practice dependant on the setup.

## 4. NOT FINISHED UNTIL COMPLETION

One thing that is certain is that until the dotted line is signed, the deal is not done. This is why, as an agent, we keep on top of the sale throughout the process.

However, under the current climate we have seen some vendors take their foot off the gas once

a buyer has been found. It should be noted, however, that the buyers, banks and the solicitors will request updated income details prior to completing to ensure that income is in line with what was previously achieved. As such, it is really important that the practice continues in a similar manner all the way through to completion.

## 5. TIMING

If you are considering selling to a body corporate or have a large practice that may not be affordable to individuals, then you would need to leave yourself with sufficient time to work any tie-in post sale. A body corporate may require one to three years if NHS, or three to five years if private. This needs to be taken into account when considering the timing of your sale, or you may find that you cannot sell to this type of buyer. Typically the legal work, regardless of buyer, will take between six and 12 months, and you will need to ensure that this has been considered before your ideal retirement date. Not allowing sufficient timescales may mean that you cannot sell to your ideal buyer or could impact on your plans for the future.

If you are considering the sale of your practice then it is never too late to start the discussion with an agent. If you are interested in looking at the sale of your dental practice then, please, get in touch with us.



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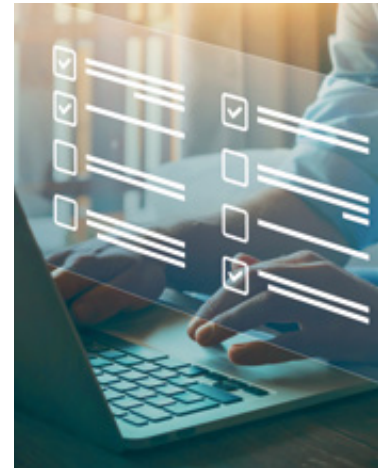
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# STUNNING EXPANSION HERALDS MOVE TO A FOUR-DAY WEEK

There are radical developments under way at Vermilion – The Smile Experts in Edinburgh where a new £800,000 extension is inspiring a move to a four-day week

As Dr David Offord, Vermilion Practice Principal explained, the second-floor expansion reflects increasing demand for the company's services. "The number of referrals is growing all the time, particularly in relation to implants, endodontics and periodontics. Simply put, we needed more capacity. We've also been very keen to have everyone back under one roof, and when the space above us at 24 St John's Road finally became available, we entered an agreement with the landlord to take it over. Subsequently, our satellite clinic at 50 St John's Road that we opened five years ago to accommodate our administrative team and dental hygienists will close."

As well as increasing the capacity in terms of clinical output – five chairs will become 10 – the opening of the second-floor clinic in September will coincide with a move to a four-day week. "We'll be open Monday through Thursday at our sites in Edinburgh and Kelso," said David. As he made clear, this significant change is partly a response to the circumstances created by COVID-19 which put great strain on healthcare workers, and a reluctance to return to the situation that existed before March 2020. "Lately, we've found ourselves back on the hamster wheel working as hard as ever," he said. "We want to have a team that is proud to work in a beautiful environment and has a notable work-life balance with a three-day weekend."

It's a move that has been welcomed by the Vermilion team and David believes it will prove an asset when it comes to recruitment and retention. "Many dentists and doctors are looking to quit because of burnout and fatigue, which is such a loss to the profession and their patients," he noted. "It is particularly important to look after clinicians in their 50s because they have so much to offer. But they've got to enjoy the work, and having recently crossed that age threshold myself, it has focused my mind."

## POSITIVE FEEDBACK

A campaign to inform patients and referring dental practitioners about the switch to a four-day week has been under way for some time. Similarly, the team has worked hard to move Friday patients to other days of the week, reassuring them that there will be no impact on the level of treatment and service they receive. David added: "We've been open

and upfront, asking patients for their views on the proposed change. All of the feedback has been positive."

The £800,000 second-floor expansion provides an additional 350 square metres and will be dedicated to endodontics, periodontics/dental hygiene and orthodontics. The existing first-floor clinic will be dedicated to dental implantology and oral surgery.

In addition, the expansion will provide enhanced CPD capacity. "Delivering CPD has always been a central focus throughout our 12-year existence. Every year we run a varied programme of CPD courses for our referring dental colleagues," said David. "Notably, the space will have the possibility of live video links to surgeries with delegates able to observe live endodontics, live implant surgery etc. Hopefully, we can offer inspiration. Younger dentists must keep the faith: they have picked a good degree and they can have a great career! At Vermilion, we see it as our role to offer inspiration and encouragement, especially to younger colleagues."

"In mixed dental practices, the emphasis must be on up-skilling. Again, that's where we have a strong track record of providing help. For example, last August we held a free symposium dedicated to composite restorations where Dr Jason Smithson, a renowned authority in the field, addressed approximately 80 referring dentists. It's about raising the standard across the board."

## AHEAD OF SCHEDULE

For Vermilion that ambition to move ahead currently means completing the extension. Fortunately, construction has gone smoothly. David commented: "Recruiting a builder can be difficult. Our contractors, George M Bolton Ltd, are based on this side of the city and were recommended to us. They have done a great job and are ahead of schedule."

"It's also a delight to work again with Farahbod Nakhaei and Malcolm Cullen from architects NVDC. Farahbod did a sterling job designing our original clinic 12 years ago and I had no hesitation in appointing him for this project. Ian Wilson and Bruce Deane from IWT are also superb – they are fitting out the five new surgeries and the LDU."

The progress that has been made means work will be completed by the end of August and the first patients will be treated in the new



David Offord on the second floor of Vermilion – The Smile Experts in Edinburgh where an £800,000 extension is under way

space on 4 September. David concluded:

"The expansion is giving us a lot of joy. It's going to be a great place to work. I will get such a buzz from walking from the first floor to the second floor, seeing our people enjoying their work, whether they're a dentist, an administrator, a receptionist, or a nurse."

"It will be beautiful, bright and airy. I'm sure people will recognise the investment that's been made. Ultimately, our business depends on referrals from dental practitioners. Hopefully they will recognise our commitment to looking after their patients through offering exceptional service and the best treatment in a stunning environment."

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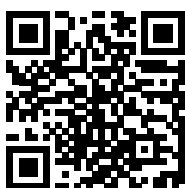
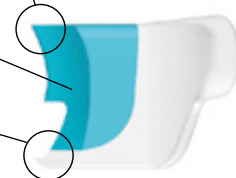
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# Selling the practice?

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

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**I**n 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 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

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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](http://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 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.

Remember always to seek professional advice.

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# WHY YOU NEED A WILL & POWER OF ATTORNEY

## Personal succession for dental practice owners

**A**s a practice owner, your day to day will be consumed with the delivery of patient treatment and the task of managing, developing and growing your business. With the busy schedule of most practice owners, planning your own personal affairs usually takes a backseat as a result of this.

With many practice owners being key to the success of their business, succession planning is essential if you want to avoid any unintended consequences should you become seriously ill or die. As your estate will likely consist of both personal and business assets, there are various considerations required when planning for the future. However, an easy and fundamental starting point is to make a Will and Power of Attorney.

You should consult a specialist Solicitor with regards to making a Will. As part of this process, they can carry out a full review of your estimated Inheritance Tax position to establish what tax reliefs may be available against your personal and business assets on your death and factor this into the shape of



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your Will. A detailed discussion should also be had about who would like to benefit from both your personal and business assets on your death (your beneficiaries) and who you wish to have the authority to wind up your estate and deal with all the necessary tax administration (the Executor(s)).

The assumption that your estate will automatically pass to your spouse/civil partner or children if you don't have a Will is incorrect. Without a Will, no family member will have any automatic powers to deal with personal or business assets on your death. Not having a valid Will is leaving matters outwith your control and has the potential to cause problems for both your family and your business. You also need to ensure that in the event of an untimely death, the business is not disrupted and there is a planned route to allow the business to continue operating.

As a further consideration, if you are in practice with others as a partnership or limited company, you need to have arrangements in place with your co-

principals which address eventualities such as long-term illness or death.

The second step is to ask your solicitor to prepare you a Power of Attorney.

By making a Power of Attorney you are confirming who will be your Attorney (or Attorneys) should you require assistance with running your finances, or if you become very ill, to make decisions about your welfare. You can only make a Power of Attorney while you retain the capacity to do so. Often, individuals leave it too late to make a Power of Attorney as they have already become very ill. A family member then has to apply to the Court for a Guardianship Order, a costly and burdensome process which is not designed to assist individuals with complex business interests. Within the Financial Powers of a Power of Attorney, in some circumstances, provisions can be included which relate specifically to your business.

While the development of your business will be your focus week to week, make sure that you do not neglect getting your personal affairs in order by making a Will and Power of Attorney.



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# SELLING YOUR DENTAL PRACTICE

Ensure you are making the best use of tax reliefs

**W**hen the time comes to sell your incorporated dental practice, you will have two options – sell the shares in the company or sell the assets of your company.

In a share sale you sell the whole of your company, including assets, goodwill and all liabilities. You may qualify for Business Asset Disposal Relief (BADR), allowing for any gain to be taxed at 10 per cent, instead of 10/20 per cent (subject to a lifetime limit of £1m). There are certain criteria to be met such as trading for the two years before sale, however most dental practices meet this.

Share sale is beneficial for the seller as they are free of any future obligations. There are benefits for the purchaser, such as no negotiation of NHS contracts and avoiding issues transferring assets to a new name. However, it also means taking on the financial history of the business and this can require a substantial amount of due diligence work.



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If you sell the assets of your practice, you still own the company. By selling the goodwill, equipment, property etc., this creates a gain on sale within the company, on which corporation tax would be charged, currently at 19 per cent or 25 per cent depending on profit levels. A second tax charge would arise when you withdrew the cash/reserves from the company in the form of Income Tax.

Selling the assets, as opposed to the shares, sounds more costly in terms of tax, but there are other considerations. Perhaps you would prefer to keep the property and instead rent it out to the new owner. This would make the sale price cheaper, and potentially more attractive. This is easily done with an asset sale, but more complicated with a share sale, as the property would need to be transferred out of the

company prior to the sale and may not qualify for BADR if sold further down the road.

As with all things tax related, each case is different. To ensure you are making the best use of tax reliefs, please get in touch with Anna Coff.



## Your Practice. Energised.

At EQ Healthcare, our dedicated team of specialists act for numerous healthcare practices of all shapes and sizes.



CHARTERED ACCOUNTANTS



We can offer assistance with the following:

- Buying or selling your practice
- Ensuring you have a tax efficient structure
- Managing your day to day financial controls
- Providing advisory support and practical solutions to your healthcare business challenges.

For further information please contact:

**EQ Healthcare**  
[healthcare@eqaccountants.co.uk](mailto:healthcare@eqaccountants.co.uk)

**DUNDEE** 01382 312100  
**FORFAR** 01307 474274

[www.eqaccountants.co.uk](http://www.eqaccountants.co.uk)





# Bone & Biomaterials

FRIDAY 20TH OCTOBER 23

## PATRICK PALACCI IN LIVERPOOL

AT THE NEW ROYAL  
COLLEGE OF PHYSICIANS

### PATRICK PALACCI

Post-covid implantology and a new approach to easier, quicker, outstanding outcomes!

For years, autogenous bone grafts were considered the gold standard. Biomaterials gradually replaced these grafts and became more and more predictable. However, the consistency of these materials was a problem in ridge augmentation. The addition of collagen in porcine material increased their efficiency and the addition of a Copolymer, brings new horizons in hard tissue grafting, especially in severely resorbed ridges.

### LUIGI CANULLO

Computer guided planning for clinical success in the aesthetic zone and crestal approach for sinus lifting.

Used in combination with the latest bone grafting materials, computer guided planning is becoming increasingly important to ensure success in a wide variety of implant procedures. It can help Surgeons achieve optimized implant placement and success rates in the aesthetic zone. It can also help Surgeons achieve predictable and standardized bone regeneration in sinus lifting procedures through the crestal approach.

### CARL HORTON & WILL MURPHY

Immediate full arch loading... Pathways to success!

Discussion of case selection criteria for immediate full arch loading cases, with surgical and restorative protocols.

Management of failures of both the biological and restorative aspects.



**Venue:** Royal College of Physicians, Liverpool

**Date:** Friday 20th October 2023

**Fee:** £250.00

**SCAN QR CODE FOR BOOKING & FURTHER INFORMATION!**



## &gt; COLTENE

## PRECISE ENDODONTIC TREATMENT WITH JENI!

For effective canal preparation, accuracy is key. The CanalPro™ Jeni endomotor from COLTENE is the autonomous assistance system that allows clinicians to achieve safer, simpler, and more efficient endodontic treatment.

Jeni controls file movements with precision and constantly regulates rotary movements and speed. Additionally, the assistant monitors crucial factors like intensity, torque, and file stress. This means that the system is able to constantly adapt to the unique contours of the patient's individual root anatomy.

The CanalPro™ Jeni will also alert you when it's a good time to irrigate, and when to change the file.

Find out more by contacting the team at COLTENE.



For more on COLTENE, visit [www.coltene.com](http://www.coltene.com), email [info.uk@coltene.com](mailto:info.uk@coltene.com) or call 0800 254 5115.

## &gt; CARESTREAM

## THE SIMPLE, PRECISE SOLUTION FOR YOUR PRACTICE

The ability to produce high-quality images in your dental practice is invaluable for effective diagnosis and treatment planning. The CS 8100 3D Evo Edition is the ideal solution for your practice.

The 4-in-1 CBCT system delivers outstanding image clarity, great for use in general dentistry and endodontics. Its award-winning design is able to fit into tight spaces, making it ideal for smaller practices, and you can enjoy the benefits of innovative software from improved image review.

Get in touch with the team at Carestream Dental for more information.



For more information on Carestream Dental visit [www.carestreamdental.co.uk](http://www.carestreamdental.co.uk)  
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## EDINBURGH DENTAL

IMPLANT & COSMETIC DENTISTRY



Edinburgh Dental is an independent clinic with a primary focus on providing referral services including oral surgery, management of anxious patients with sedation dentistry and dental implants. This referral service has been offered by Dr Ferhan Ahmed and his team for over a decade and we are committed to maintaining low waiting times for appointments. Our amazing team of skilled dental professionals use the most up to date dental techniques to deliver affordable world class dentistry and a great patient experience.

### Our Team:

#### **Dr Ferhan Ahmed**

Clinical Director and Implant Surgeon

#### **Dr Duncan Weir**

Implant Surgeon

#### **Dr Kaila Girvan**

Surgical and Sedation Dentist

#### **Dr Reem Ali**

Surgical and Sedation Dentist

#### **Stacey Milne**

Referral Coordinator

Edinburgh Dental - Implant and Cosmetic Dentistry

**[www.edinburghdental.co.uk](http://www.edinburghdental.co.uk)**

**0131 667 4433**

**[info@edinburghdental.co.uk](mailto:info@edinburghdental.co.uk)**



## Turnkey Surgery Installations

- Surgery strip-out
- All plumbing and electrical works
- Chair and dental cabinetry installation
- Flooring and final decoration

\* **Low cost finance packages available to include six month low payment start options.** \*Subject to Status, T&C's apply.



### IT Support

- Supply & install of IT Hardware
- Server based networks
- Phone & Audio Visual



### Stern Weber Dental Chair Package to Include

- Turbine with Fibre Optic
  - Scaler
- Electric Micro Motor
  - LED OP Light
- LCD Touch chair control panel
- Built in Suction Tube Cleaning System
- Built in Instrument Tube Cleaning System
- Includes required Durr wet line valves



"IWT have been supporting our practice IT network for many years so we were happy to discuss our new surgery requirements with them. IWT's hands-on approach throughout the purchase process and surgery design through to the end to end management of the new surgery installation greatly reduced any potential disruption to the practice throughout the surgery refurbishment project. In addition to the exceptional service and support we received throughout the surgery works, we have been delighted with the Stern Weber dental unit and the ongoing support from IWT."

**Alastair Fraser**, Principal Dentist, Greygables Dental



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