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SCOTTISH DENTAL

ESSENTIAL KNOWLEDGE FOR DENTAL PROFESSIONALS IN SCOTLAND

SCOTTISH DENTAL SHOW PICTURES AND REPORT

SD AWARDS 18

RESILIENCE IN THE TEETH OF ADVERSITY

How eye surgery changed dentist Gordon Matthew's life and inspired a new career

MIKE ARTHUR

MIKE GOW

LARA PATERSON

NIALL MCGOLDRICK

LAURA FEE

FABIANO GALASSI

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Editorial

WITH SARAH ALLEN, EDITOR →
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A PROFESSION IN EVOLUTION

It's always difficult, when faced with a blank screen and a blinking cursor, to put the first words on the page. When writing your first editorial for your first magazine as a new editor, the task is even more daunting. However, on sitting down to write this, the problem was not where to start, but more where to stop!

When I first started working with dental professionals, several years ago, I was struck by how diverse a profession it was. I realised that, as a patient, I had only seen one small corner of the dental world. I was struck by how the profession was so often at the vanguard of developments in treatment and technology, and full of hard-working individuals who were committed to patient-care and who had found their vocation in dentistry, whatever their chosen career path. As a patient this was reassuring. As a non-dental professional working in the dental world, it was inspiring.

But... over the years I have spoken to so many who have begun to question their vocation. And their questioning has come about in the face of factors such as increasing litigation from private individuals and the GDC; less time with patients and more time with paperwork; increasing financial pressures; legal developments such as the Montgomery ruling on informed consent, which have transformed the patient/practitioner relationship; and developments in treatment which could bring about far-reaching consequences, such as the current consultation around the use of amalgam.

Add to this political factors such as the potentially seismic changes heralded by Brexit, and caution regarding the new and, critically, as yet un-costed Oral Health Improvement Plan, then it is hardly surprising that so many are feeling worried, disillusioned, or perhaps even desperate. We will seek to explore these issues, and more, in future magazines and we start with the first of a trilogy of columns from our own Arthur Dent, who is turning his eye on the factors which put real stress on the dental profession. In this issue he addresses financial factors and asks how the profession as a whole can work together to better support each other. This question of the support available for the dentist in crisis is one that we will be investigating in successive magazines. Dental professionals can often work in isolation, and it is hard to know who to turn to in times of difficulty.

Our ambition is to celebrate the achievements and reflect the concerns of the profession, to ask difficult questions and demand answers

The Oral Health Improvement Plan thinks it has one answer – the introduction of an occupational health plan for GDPs, members of the dental team, and other practice staff. Sounds great, but is it enough?

Also, despite this being scheduled for launch in the next few weeks, at time of going to press no further announcement about the service had been made, nor is it clear how it is going to be paid for. I hope that, in the gap between going to press and you reading this editorial, these questions will have been answered, and we look forward to reporting on it as a success story in the future. Hopefully, we will not be reporting on it as something that has still not come to pass months or years down the line.

All this paints a dark picture, but it is not the full story. Dentistry is full of wonderful examples of people dedicated to advancing the profession, providing incredible patient care and finding ways to triumph over adversity. It is an ever-evolving world full of innovation, dedication and inspiration, and we will be looking at many of these stories in future issues.

Four examples of people at different stages in their careers who have faced different challenges and taken different paths, can be found in Mike Arthur, Gordon Matthew, Mike Gow and Lara Paterson who we interview in this issue.

So, where to stop? Perhaps with you. Scottish Dental Magazine is evolving too. We want to showcase the entire dental profession, provide strong clinical content and write features which are of benefit and interest to you. You will start to see these changes in the near future, with a new look and feel to the magazine.

Our ambition is to celebrate the achievements and reflect the concerns of the profession, to ask the difficult questions and demand answers. Most importantly, we want this to be a magazine that you want to read and that gives you a voice so, please, get in touch. Write, email, tweet! Contact us however you would like, but please do contact us.

HAVING HIS SAY →
Arthur Dent is a practising NHS dentist in Scotland
arthurdent@sdmag.co.uk

DENTISTS IN THE GRIP OF A FINANCIAL VICE

In the first of a trilogy on the stresses of our profession's pressure points, Arthur examines the real costs of a fiscal squeeze

I received an email after my first article. Just the one, I'd like more. The writer, anonymised (thanks Ed.), offered their best wishes for the future and some very frustrated words about the state of dentistry in Scotland. The phrase "I hate my job now" came out. This is not an uncommon feeling and I've heard it a lot. It says "I used to like my job", "I still like dentistry", "it's all the other stuff we have to do".

I recognise this is a huge problem in dentistry. We have had some high-profile cases of extreme reactions to the stress that we're under, but I'm absolutely convinced it's the tip of the iceberg. I intend to write a trilogy of articles about the stress our profession provides. More accurately, I think it's the pressure, which seems to be coming from all directions. Like the volcano in Hawaii I can't pronounce, the pressure increases and eventually something blows. I'd like to explore these pressures and demonstrate the reasons why we need some release. I'm going to start with finance.

Dentistry is an unremitting, unrelenting profession that has been described as a high-volume, low-margin, highly labour intensive service industry. It is. Time is money, someone said. In dentistry, it certainly is.

There's a whole lot of statistics out there about our earnings and how they are down. There are a whole lot of reasons. Lloyds Bank produced some stats recently saying that the dentistry sector was more buoyant – Confident about the future. I just don't see how that's possible.

Since the financial crisis in 2007, we have had a very static economy. Private income is down: people don't have as much money to spend on niceties. The government has enforced public sector pay increases of 1 per cent. Inflation, and NHS inflation, (it's a real thing, which is way higher than CPI) has led to a real divergence in fee scales and actual costs. The way we are paid is simple, but the financial background is complex and just leaves us in the middle being squeezed.

So income is down. The number of dentists in Scotland has gone up by about a third. The SG has capped spending on dentistry, and our taxable incomes have gone down by about a third. I don't think these factors are unrelated.

Costs: here's the rub. There are no costs that have been stable in the last decade. But with fee income stifled and costs rocketing, it is the dentist in the grip of the vice. Our materials are made in Europe and America. The drop in the pound has made everything more expensive. Precious metals and lab costs have risen markedly.

Our major expense is staff. They expect pay rises, probably much closer to inflation. Auto-enrolment has just moved to 2 per cent and will rise further to 3 per cent next April. My staff don't see this as a pay rise, they look at it as an extra expense. It certainly is to practice owners.

For larger practices, the GDPA cap could mean a net loss of more than £100,000 a year. As the cap level has remained static, every fee increase brings more practices beyond the level where this affects them. Commercial Rates are now repaid more than a year behind rather than monthly. You get it back but you have to pay it out in advance. Larger overdrafts, larger fees.

HMRC is looking for its pound of flesh to balance the books, and we are a good target. We aren't VAT-registered despite providing services because we can't put VAT on fees. The VAT rate went from 17.5 per cent to 20 per cent. There has been a rise in insurance premium tax. We are being forced to have maintenance contracts for equipment, validation and servicing contracts, all of which attract VAT that we cannot reclaim. If you're in Scotland, there's another 1 per cent income tax to pay.

Brexit and the uncertainty it creates depletes our confidence and further destabilises our currency. The Independence question, although it seems much less prominent now, creates instability. The new OHIP and how it will roll out affects our confidence levels. Business owners lacking in confidence will not invest in the future. They won't invest at all. They protect their profits, which leads to associate fees dropping.

In the middle of these increased costs and depleted incomes we have to work far harder to make less money. Undervalued is an understatement. Unfortunately, I don't think this is going to change significantly any time soon. The SG has just started another data-gathering exercise on expenses. For my twopence worth, I'd suggest you participate. The DDRB won't do anything without further evidence, and I don't believe we are hiding any secret profit down the back of our collective sofa. We need to provide the evidence that shows how tight the squeeze is.

If we can act together then we may change something. If nothing else, if they publish the data, then you will know you're no different to everyone else. Thinking you're the only one under pressure and having no one to confide in is often a huge part of the problem. So tell someone, email me, let's talk to one another and share our problems. We all have them, and I'm pretty sure a lot of them are the same.

INDEPTH ON PAGE 32

> Dentistry can be a very isolated career. You go into surgery, work hard all day and you don't speak to another dentist
>
> MIKE ARTHUR

REFUGEE DENTISTS TO BE INCLUDED IN GLASGOW RETRAINING PROGRAMME

Government says Scotland will benefit from their expertise and specialised knowledge

Dentists are to be included in a scheme that has helped 37 refugee doctors start retraining to work in Scotland.

They will receive the same training, language support, professional mentoring and work experience necessary so their qualifications can be recognised by the General Dental Council.

The New Refugee Doctors Project is run by the Bridges Programme, a Glasgow-based organisation. Ten dentists will be supported by the scheme over the next year.

Equalities Secretary Angela Constance said: "The New Refugee Doctors Project has been a great success and is an example of how we can support refugees with medical skills start to practice in their new home country. Expanding the scheme to support dentists


Maggie Lennon

means Scotland will benefit from their expertise and highly specialised knowledge."

Maggie Lennon, Director of the Bridges Programmes, said: "We've been running the doctors' programme very successfully for a year and were receiving approaches from dentists asking if they could take part.

"When it came to talk about funding with the Scottish Government we told them we had identified at least 10 dentists who could benefit. The Government said yes and have put in money for English language provision, which is under way."

The Bridges programme is now building the clinical support programme, among other things talking to National Health Education for Scotland (NES) and Glasgow's Dental Hospital.

Maggie added: "The BDA are delighted with the programme and offering free membership for two years to dentists who qualify through the scheme, as well as access to study materials for clinical exams."

"We are also seeking dental practices and surgeries who will offer observation opportunities and placements so the refugee dentists can see modern dentistry in Scotland."

GOOD ORAL HEALTH MAY AID HEART ATTACK RECOVERY

New research has indicated that looking after their oral health could help the recovery of heart attack survivors' cardiovascular system. The study[1] found that bacteria that causes gum disease can impair the healing and repair of arteries after a heart attack. Researchers believe this impaired healing may be due to an enzyme produced by the bacteria that stops the body's immune cells from repairing the arteries. By keeping their mouths healthy and free of gum disease, people who have suffered a heart attack may be able to avoid further cardiovascular problems. The Oral Health Foundation is keen that people understand the potential links between oral health and cardiovascular disease. Chief Executive Dr Nigel Carter said: "This is incredibly interesting research which could offer hope to the future of millions of people affected by cardiovascular disease. There has been evidence for some time that gum disease increases the risk of cardiovascular disease but to now understand that preventing gum disease can also prevent further problems for victims of a heart attack opens up many interesting avenues for ongoing treatment."

1. Delbosc S, Alsac JM, Journe C, et al. Porphyromonas gingivalis Participates in Pathogenesis of Human Abdominal Aortic Aneurysm by Neutrophil Activation. Proof of Concept in Rats. PLoS ONE. 2011;6(4):e18679. doi:10.1371/journal.pone.0018679

ROBISON ATTACKS CAP ON VISAS FOR HEALTH PROFESSIONALS

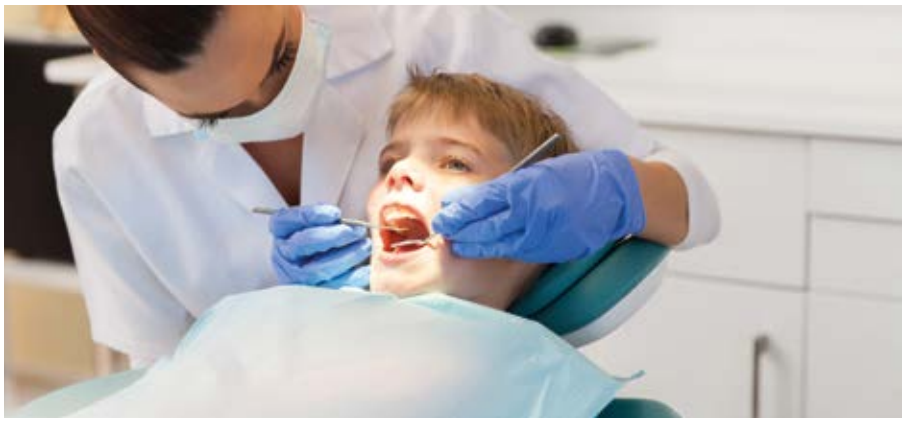
Scotland's Health Secretary has attacked the Home Office over its failure to grant visas to hundreds of dentists, doctors and health professionals who had planned to work in the UK for the NHS.

Shona Robison was responding to the NHS Employers' claim that, since December, 400 visas had been refused.

Ms Robison said: "The Home Office cap on Tier 2 visas is having a profound effect on our ability to recruit and retain clinicians.

"A number of health boards have signalled that applications have been refused since December 2017, resulting in unacceptable delays in filling posts. Coupled with the very real concerns that Brexit will have a negative impact on NHS staffing levels, this is deeply concerning.

"We wrote to Home Office Ministers to highlight the difficulties that visa refusals present to public services and businesses, and it is vital that the UK government takes immediate steps to mitigate the negative impact of its immigration policies which take no account of Scotland's needs."



Margie Taylor

MISSION TO CLOSE CHILD HEALTH GAP

Chief Dental Officer stresses that breaking link between poor oral health and deprivation remains a priority

Scotland's Chief Dental Officer, Margie Taylor, has responded to a call for every child to be given an equal opportunity to achieve good dental health by reiterating plans to break the link between poor oral health and deprivation.

A recent survey for the Royal College of Paediatrics and Child Health (RCPCH), assessed parents' knowledge of children's oral health and experience of accessing dental care. It found:

- only 50 per cent knew that the NHS recommends taking your child to a dentist before their first birthday
- 23 per cent had problems accessing free NHS dental care, either for themselves during pregnancy and in the early days of motherhood, or for their children.

This prompted calls from the RCPCH for areas where there are significant oral health problems to prioritise children's oral health and use tried and tested schemes to improve outcomes and reduce health inequalities.

Dr Elizabeth O'Sullivan of the Royal College of Paediatrics and Child Health (RCPCH), said: "Currently, there is a postcode lottery in children's oral health with some areas providing high-quality interventions and awareness campaigns while others do not. This means there are pockets of children up and down the country missing out on services that are provided free of charge to others in neighbouring towns and cities."

That prompted Margie Taylor to note: "Record numbers of people in Scotland have access to NHS dentists and our oral health is improving. However, we are continuing to work to break the link between poor oral health and deprivation.

"The Oral Health Improvement Plan will introduce preventative, personalised care plans based on clinical evidence – allowing those most at risk to see their dentist more regularly, helping to prevent poor oral health and reducing oral health inequalities.

"We are rightly proud of our Childsmile Programme, which has been recognised as an internationally leading programme, with a particular focus on children living in deprived areas. We have recently expanded the programme through our Fairer Scotland Action Plan to include even more children from deprived areas."

STUDY CLAIMS SELF-MEDICATION LINK WITH OVERDOSE AND LIVER FAILURE

A recent study claims that self-medication for dental pain with paracetamol is a significant cause of accidental overdose and potential liver failure. The study was undertaken at Queen's Medical Centre Nottingham's A&E unit.

Over a two-year period researchers found 436 cases presented to the emergency department with accidental paracetamol overdose, 164 of which were a direct result of dental pain. It revealed that lack of access to emergency dental care was a contributory factor to paracetamol overdose.

This has prompted the British Dental Association (BDA) to warn that self-medication must not fill the NHS access gap.

The BDA has estimated that around 135,000 dental patients attend A&E per year at an annual cost of nearly £18 million, while a further 600,000 patients a year seek treatment from GPs. Neither are equipped to treat dental pain, which usually requires specialised intervention by a dentist.

Henrik Overgaard-Nielsen, the BDA's Chair of General Dental Practice said: "Paracetamol is not a solution for dental pain, and is simply a temporary measure until a dentist can provide treatment.

Sadly lives are now at risk as failure to provide sufficient care for dental emergencies is leaving patients to self-medicate.

"Dental patients need to be treated in the right place, at the right time and by the right team.

"Again failure to invest in both routine and emergency dental care is jeopardising appropriate diagnosis and treatment, and heaping needless pressure across the NHS."

INDEPTH ON PAGE 35

> "There weren't enough VT positions so I had to get used to my disappointment and carry on trying to find a place"
>
> LARA PATERSON

ASSOCIATES ADVISED TO HOLD STEADY IN FACE OF STATUS REVIEW

Tax experts are advising dental associates to hold steady as Her Majesty's Revenue and Customs (HMRC) says it will review their employment status.

Recently, a number of associates have received letters from HMRC stating that a review is under way.

Until now associates have been classed as self employed. However, following the much-publicised case of Uber drivers being re-categorised as 'workers' by HMRC, there has been some confusion over the status of several groups, including associates.

Roy Hogg of Campbell Dallas, an accountants and business advisory company, believes this is simply a drive to increase revenue on the part of HMRC. He said: "This has been rumbling about for many a year, but it's at the stage where HMRC are going to argue that you (dental associates) are not self employed, but employees and any remuneration you receive will become subject to employer's national insurance or national insurance in general."

He believes this could create a dilemma over who is responsible for any additional contributions due to the Revenue – the associate or the practice principal.

Louise Grant of accountants EQ Healthcare explained that the issue could be further complicated by different cross border ways of operating: "In England, rather than the patient list being held under the individual names of the principal or associate, it's held under the practice name. I believe the Scottish government is looking to implement the same approach. That means if the patient list is with the practice and not the individual then technically that individual should be an employee of the practice."

However, since employment law and tax law are different, people could be classed as an employee for tax purposes but lose out on benefits such as holiday pay, sick pay and so on.

Louise has had associates approach her about this issue. She said: "My advice at the moment is that the ultimate decision will have to be made by the principal... and if they make the wrong decision then it's them as the employer who will be liable for national insurance payments."

Roy added: "This is very much at the embryonic stage – we don't know how serious HMRC are."

He believes there won't be any immediate impact. "I suspect people will hold their nerve and carry on as they have done for many a year."

Roy Hogg

DENTAL ANXIETY LINKED TO OVERALL QUALITY OF LIFE

New research indicates that being afraid of the dentist could seriously damage your overall quality of life.

A study published in the International Dental Journal revealed that dental anxiety can affect people psychologically and socially, leading to feelings such as shame, poor self-confidence and social isolation.[1]

Other elements of social wellbeing, such as income and education, were negatively affected by dental anxiety. Those questioned were almost twice as likely to be on a lower income if they feared dental visits. And results showed they were twice as likely to suffer from poor oral health.

More than 10 million adults in the United Kingdom have some level of dental anxiety, with an estimated six million suffering from dental phobia.

Responding to the research, Dr Nigel Carter, Chief Executive Officer of the Oral Health Foundation said: "About one in five Brits admit to being afraid or anxious about visiting a dentist in Britain.

"This is an incredibly widespread anxiety and is one of the key reasons why people don't visit the dentist as often as they should. This can put you at risk of significant oral health problems and, as this research shows, other important areas of your life.

"Avoiding a visit to the dentist due to fear puts you at greater risk of missing oral health problems."

1. Hakeberg, M. and Wide, U. (2018). General and oral health problems among adults with focus on dentally anxious individuals. International Dental Journal

CROUCH TAKES SWIPE AT DDRB

BDA PEC vice chair criticises review body's 'reluctance to tackle pressing issues'

Eddie Crouch, vice chair of the BDA Principal Executive Committee, has castigated the Doctors and Dentists Review Body (DDRB) and its apparent unwillingness to tackle issues that affect the sector.

Writing on the BDA website, Crouch said: "Each year we provide the DDRB with substantial evidence of the difficulties we face across dentistry, and – year after year – we have been frustrated by their reluctance, or maybe refusal, to listen to what we have to say.

"They might be unable, given the constraints that governments (if not the Treasury) have placed on them, but they definitely show a history of being unwilling.

"We're hoping this year will be different, given that the public sector pay cap seems to have been eased at last."

Crouch said it had been decided to provide a submission to the DDRB only after considerable debate by committees across the UK. Indeed, a motion passed at last year's annual conference of Local Dental Committees voted to withdraw from the process if the public sector cap remained in place.

"We expressed our anger at the disconnect between the evidence we submitted on the difficulties in recruiting and retaining NHS dentists, and the evidence submitted from the departments around the UK.

Eddie Crouch

"In effect they said there are no known recruitment issues, and quoted the gross numbers of dentists, ignoring the fact that increasing numbers are working part-time.

"We pointed out that we shouldn't have to wait until NHS dentistry collapses before the funds are found (as appears to be the case elsewhere in the NHS) to invest in the nation's oral health."

Crouch reiterated that practices are struggling to hit targets and feel they are not being given enough time to treat patients to the best of their abilities. He highlighted the uncertainty that exists in Scotland after the publication of an Oral Health Improvement Plan that hasn't been costed and lacks detail.

He concluded: "I'm not holding out much hope that the DDRB recommendations will do much to stop the slide into crisis that is evident everywhere in the delivery of dental services, but the review body seemed to be more receptive this time around.

"We think both practitioners and patients deserve that."

THE 'NEVER EVENTS' THAT NO PATIENT SHOULD ENDURE

Researchers led by the University of Edinburgh have helped in drawing up a list of scenarios dental patients should never face.

The checklist – which includes failing to note patients' allergies and not screening for mouth cancers during check-ups – is the first international agreement of its type in dentistry. Dental experts say it could be a major step forward in improving patient wellbeing across the globe.

So-called "never events" are failures so severe they should not happen under any circumstances when correct procedures are followed.

Researchers led by the University of Edinburgh engaged an international panel of experts to develop a detailed list of "never events" for dentists.

The agreed list covers routine assessments as well as surgery and includes equipment not being sterilised and dentists prescribing the wrong medication to children.

Project lead, Professor Aziz Sheikh, Director of the University of Edinburgh's Usher Institute of Population Health Sciences and Informatics, said: " By listing a consensus position on 'never events' in dentistry, we hope that regulators and professional bodies will be able to assess the frequency of such events and reduce their occurrence."

The consensus is published in the *British Dental Journal* and was funded by the Mexican National Council for Science and Technology (CONACYT). It was carried out in collaboration with researchers at Cardiff University and King's College London.

SUSIE SANDERSON INSTALLED AS BDA PRESIDENT

Susie Sanderson OBE has been installed as the new President of the British Dental Association (BDA).

A general dental practitioner in Yorkshire, Sanderson was also the first female dentist to be elected chair of the BDA's Executive Board (which preceded the current Principal Executive Committee).

Her work on behalf of the dental profession has been recognised internationally. She has played key roles at the Council of European Dentists and the FDI-World Dental Federation. Sanderson has shown leadership on issues such as antimicrobial resistance, amalgam, and professional regulation, and last year she was elected speaker of the FDI General Assembly.

In her inauguration address, she highlighted the similarities between dentists' experience wherever they worked, be it in the UK, in Europe or beyond. Common to all, she said, are the tensions between personal professional accountability and the perverse incentives set out by health authorities.

She said: "I am immensely privileged, honoured, and not a little humbled, to accept the responsibility of the presidency of the BDA. I intend to make my Association proud and look forward to meeting as many members and future members as I can."

BDA NOT GIVING UP ON GDPR EXEMPTIONS

The BDA is persisting in its attempts to persuade UK Ministers to exempt dental practices from the need to have a Data Protection Officer (DPO).

The Government rejected BDA's suggested amendments when the Data Protection Bill was debated in Westminster on 9 May. However, the organisation says it will carry on lobbying for the change to be made.

The EU General Data Protection Regulation (GDPR) did not require dental practices to have a DPO, but the UK Government put this duty on NHS primary care providers by including them in its definition of "public authorities". The BDA and others built cross-party support for amendments to the Data Protection Bill that would exempt dentists.

A group of four MPs co-sponsored the amendments that would have prevented what the BDA describes as 'this huge and needless burden' being placed on high-street providers. As yet, their efforts have not borne fruit.

Meanwhile, the BDA is urging members not to be lured into expensive contracts to outsource DPO duties and responsibilities. Members have reported some practices being quoted sums up to £15,000 for the service.

Although a DPO should have been in place by 24 May 2018 the BDA said it believes practices that don't yet have one are unlikely to face penalties if they are taking steps to recruit a DPO as soon as possible.

IN BRIEF

'MOUTHGUARDS SHOULD BE COMPULSORY'

A specialist in treating sport injuries, Dr Sally McCarthy, has told the annual conference of the Irish Dental Association that the use of mouthguards should be made compulsory for those taking part in contact sports.

It has been calculated that up to 20 per cent of players of contact sports will undergo serious dental trauma during their playing careers.

"Using a mouthguard can help avoid chipped or broken teeth, nerve damage to a tooth or even tooth loss. They also limit the extent of injuries to lips, the tongue and the soft tissues of the mouth," Dr McCarthy explained.

She said national sporting bodies need to recognise their role in protecting their members by making mouthguard use compulsory.

ABOVE: Mouthguards can limit extent of injuries to lips and the tongue, as well as teeth

IN BRIEF

FACIAL PAIN 'LINK' TO ABUSE

A potential link between facial pain and domestic abuse has been highlighted by a leading oral surgeon.

Dr Christine Goodall, a senior lecturer in oral surgery at the University of Glasgow, has suggested that dentists treat patients who present with facial pain, with no obvious bruising, as potential victims of domestic abuse.

The doctor, who is one of the founders of Medics Against Violence, outlined her thoughts at the British Society for Oral Medicine annual conference which was held at the University of Dundee in May.

IN BRIEF

A MONTH OF SMILES

National Smile Month, the UK's largest campaign to promote good oral health, took place between 14 May and 14 June.

Organised by oral health charity the Oral Health Foundation, the campaign aims to raise awareness of important health issues.

During the month there were activities up and down the UK to educate and engage local communities about the importance of a healthy mouth.

INDEPTH ON PAGE 36

> A lot of patients are not only embarrassed about their dental phobia, but also about their teeth
>
> MIKE GOW

DENTISTS' BUSINESS CONFIDENCE BOUNCING BACK, SAYS LLOYDS

Confidence among dentists in the UK has bounced back after going into decline last year, with renewed growth plans and expectations of better profits, according to research released in early May.

The Lloyds Bank Commercial Banking Healthcare Confidence Index is an annual survey of GPs, dentists and pharmacists that measures overall business confidence.

On a scale from -100 to +100, dentists' confidence has improved year-on-year, and is up from -10 in 2017 to -2 now. The previous year saw dentists' confidence fall for the first time in the history of the Index, with a decrease of five points.

Planning for growth

As well as improved confidence there are positive expectations on profit, with the number of practices expecting business profits to increase over the next 12 months growing from 65 per cent to 74 per cent, and fewer dentists expecting financial pressures to grow (down from 81 per cent to 75 per cent YoY).

> "GROWTH IS FIRMLY ON THE AGENDA AND THE INDUSTRY IS PROVING ITS RESILIENCE"
>
> IAN CROMPTON

Four in five (82 per cent) say they are planning for growth, up from a third (35 per cent) last year, while the proportion of dentists planning to sell their practice or retire in the next five years has fallen from 45 per cent last year to nine per cent.

The proportion of dentists who would encourage friends and family to join the profession has increased from 53 per cent last year to 69 per cent.

Future practice ownership

This improving sentiment is reflected in the goodwill values of dentist practices, with almost half (47 per cent) expecting values to improve, against one in 10 (12 per cent) who think they could fall.

Two in five (42 per cent) expect larger corporates to make fewer inroads into the industry, predicting either no corporate growth or even a fall in corporate ownership, though 58 per cent still say they expect big corporates to increase their market share over the next five years.

Notably, just 6 per cent would like to sell their practice to a corporate, with 83 per cent favouring a sale to an associate instead.

Ian Crompton, head of healthcare banking services, Lloyds Bank Commercial Banking, said: "This year's Index shows that dentists remain significantly more confident than the rest of the healthcare sector.

"Growth is firmly on the agenda and the industry is proving its resilience, with far fewer dentists considering leaving the profession than a year ago."

MDDUS SETS OUT 'IMPERATIVE' DISCOUNT RATE REQUESTS

MDDUS has asked the UK Government to address several key issues as part of the process of setting the new discount rate.

This follows a House of Lords debate where proposals to reform how the discount rate is set were discussed as part of the second reading of the Civil Liability Bill.

MDDUS chief executive Chris Kenny said: "It is imperative that a new rate is set as soon as possible that is fair to claimants and defendants alike and gives the market greater certainty."

Among other things, MDDUS wants the government to address how the current discount rate results in over-compensation and it is asking that the Bill is accelerated so the new discount rate comes into force as soon as possible, the review period should be five years rather than three, and the long title of the Bill should be expanded to allow a more joined-up approach to tort reform.

Chris added: "We welcome the Government's offer to reflect on many of these points, but expect to see that reflection leading to firm proposals in later stages of the bill's passage.

"We fully accept that there must be reasonable compensation for patients harmed through clinical negligence, but this needs to be balanced by society's ability to pay.

"By setting the discount rate with reference to 'low risk' rather than 'very low risk' investments, this more accurately reflects evidence of the way in which claimants choose to invest their compensation payments".

BSDH OFFERING COMMUNITY GRANTS

Members of The British Society of Dental Hygiene and Therapy are being encouraged to apply for community service grants worth up to £1,500.

The Society is collaborating with the Wrigley Company Foundation to provide the grants, which are intended to support oral health promotion and projects in local communities.

To apply, members must complete a form about their proposed project and demonstrate what the money would be used for.

To request a grant form, members can visit www.bsdht.uk, call 01788 575050 or email enquiries@bsdht.org

CHARTER SEEKS TO CUT SMOKING AND IMPROVE ORAL HEALTH

Dental practices across the country are being urged to play an active part in supporting Scotland's Charter for a Tobacco-Free Generation.

The Charter has been developed to support the Scottish Government's aim of creating a tobacco-free generation with a 5 per cent or less smoking prevalence rate among adults by 2034.

Smokers are at higher risk of developing tooth decay, tooth staining, gum disease, and in more severe cases, oral cancers. In particular, smoking causes approximately 65 per cent of mouth cancers in the UK; however, 91 per cent of all oral cancers are preventable.

Charlotte McDonough of ASH Scotland said: "Dental care providers have a wide range of skills and are the most knowledgeable about oral health. Dental teams are well placed to inform patients that stopping smoking is the best move they can make in support of their general wellbeing."

ASH Scotland has worked with the Oral Health Foundation, British Dental Association and NHS Inform Scotland to design a stop smoking referral card.

Dental practices are being invited to sign the Charter and pilot the use of the new cards. The learning from this initiative will inform the roll-out of future initiatives to improve stop smoking support through dentistry.

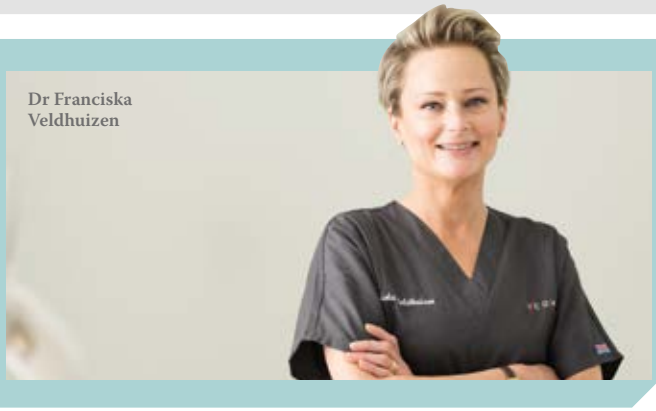
The country's new Oral Health Improvement Plan recognises that improving Scotland's oral health cannot be tackled alone. Broader issues detrimental to oral health such as alcohol, drug, and tobacco use must be improved ambitiously, but practically.

Charlotte added: "These solutions require everyone to be involved: dental teams, third and independent sector organisations, schools, councils and Health and Social Care Partnerships. It's an opportune time to introduce a card to signpost smokers to stop smoking services and make others aware of the impact smoking has on oral health."

- If your practice is in Highland, Lothian, Borders, Tayside or East Dunbartonshire and has not received an invitation to trial the card, you can opt in by contacting ASH Scotland: enquiries@ashscotland.org.uk
- Any practice in Scotland can support the Charter by visiting www.ashscotland.org.uk/Charter

MOVERS AND SHAKERS

- **Chris Barrowman** of Infinityblu Dental Care and Implant Clinic in Perthshire has bought out Smiles Dental owners Bruce Duguid and Caroline Bayles, adding practices in Crieff and Auchterarder to the company's portfolio.
- **Greig Stevenson and Colin Hunter** of One Dental Care in Ayrshire have expanded their operation by acquiring Breeze Dental in Troon.
- **Dr Franciska Veldhuizen**, a specialist in prosthodontics, has joined Vermilion in Edinburgh
- **Stephen Henderson and Susan Willatt** have joined the MDDUS dental advisory team in London, reflecting the organisation's continued membership growth.



Dr Franciska Veldhuizen

UPCOMING EVENTS

WE'VE GOT THIS COVERED

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF GLASGOW

1 JUNE
TC White Symposium: Complex patients, complex care - dental care under GA and sedation

5 JUNE
Leadership and Action in Global Health (President's Leadership Lectures)

6 JUNE
Admission ceremony

7 JUNE
The Goodall Symposium – 70 years of the NHS

7 - 8 JUNE
Advanced Cadaveric Vertical Augmentation Techniques for Dental Implants

19 JUNE
Mentor Training Programme – Refresher Day
All events in Glasgow.
More information at: https://rcpsg.ac.uk/events

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

6 JUNE
Preparation for the Diploma in Implant Dentistry
London

10 JULY
Preparation for the Diploma in Implant Dentistry
Manchester
More information at: www.rcsed.ac.uk/events-courses

OTHER EVENTS

2 JUNE
Root canals and restorations, a road map to success with Professor Simone Grandini (organised by Dentsply Sirona)
Crowne Plaza, Newcastle - Stephenson Quarter
Register and more information at: www.cvent.com/d/sgq8jt

15 JUNE
Digital Implant Symposium (organised by Dentsply Sirona)
Wrights, Kingsway West, Dundee
Register and more information at: bit.ly/2uMQ7P1

15 JUNE
Preparing for retirement (BDA seminar)
Doubletree by Hilton, Edinburgh
More information at: https://tinyurl.com/yc7vp2j3

17-21 JUNE
94th European Orthodontic Society Congress
EICC, Edinburgh
More information at: www.eos2018.com

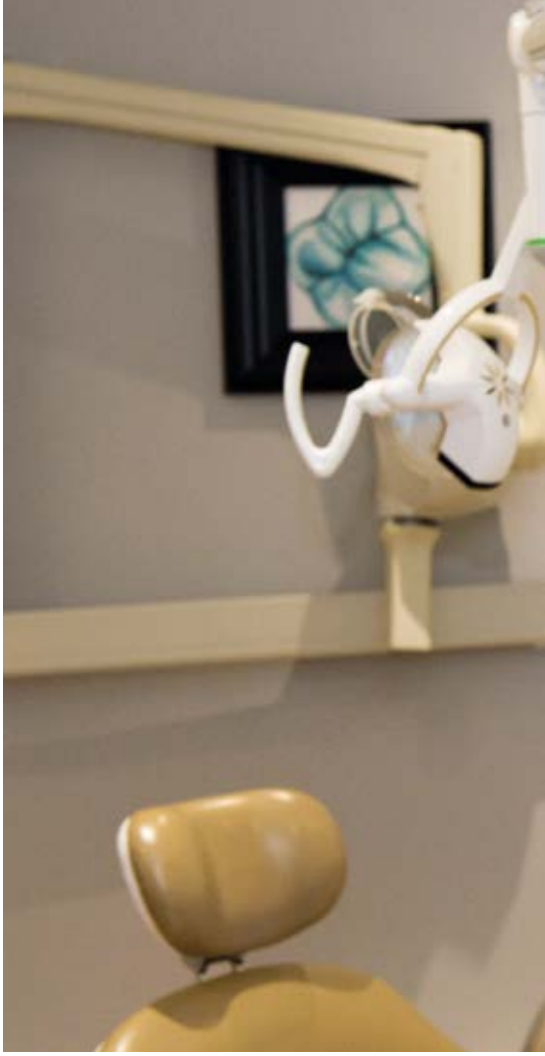
20-23 JUNE
EuroPerio9
Amsterdam
More information at: www.efp.org/europerio

Indepth

ESSENTIAL EDITORIAL CONTENT FOR DENTAL PROFESSIONALS

SHOW OF STRENGTH

See page 26



A NEW VISION OF THE FUTURE

GORDON MATTHEW WAS HEARTBROKEN WHEN TOLD HE COULD NO LONGER PRACTICE AS A DENTIST BECAUSE OF HIS IMPAIRED SIGHT. DETERMINED THAT 33 YEARS OF DENTAL EXPERIENCE SHOULD NOT GO TO WASTE, HE CHOSE TO REINVENT HIS CAREER

TIM POWER RICHARD CAMPBELL

After spending 18 years building up a thriving practice in Paisley, Gordon Matthew's professional life was thrown into turmoil when an eye operation went wrong and threatened his career as a dentist.

It was 2014 when Gordon first experienced discomfort in his left eye and an examination identified a detached retina. The initial eye operation went well and it was healing, but unfortunately it tore again and over the next two years he required five further operations on his eye.

He said: "What should have been a fairly simple operation just became more serious as I had further complications. While I was able to work between operations, after the sixth bout of surgery my consultant said it was time to stop. Further intervention could have resulted in irrecoverable damage and ultimately loss of sight in that eye."

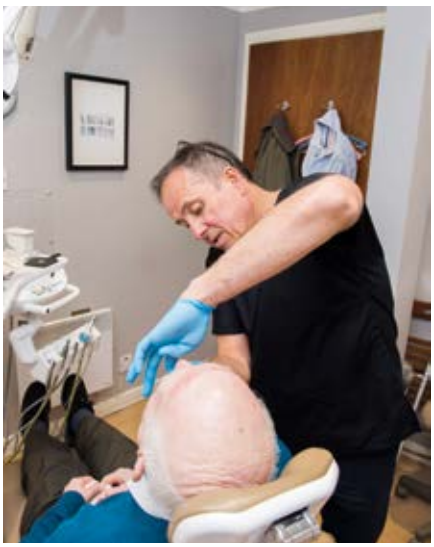
Gordon still had some vision in his left eye but his perception of depth and shape was hampered, so this limited his ability to carry out intricate dentistry.

He said: "At first I was very angry that this had happened to me and had wrecked my career, but, as a famous person once said, you should not worry about things you have no control over and should instead focus on what you can actually do."

Gordon qualified from the University of Glasgow in 1985 and started up his first practice in Paisley's Neilston Road in 1995 with one chair and one technician.

As the practice grew he expanded, and in 2002 bought another practice in the same road. However, the logistics of running two separate clinics was problematic so Gordon looked for an opportunity to bring both practices, which now employed five dentists and two technicians, under one roof. He achieved this when he moved further south on Neilston Road to take over an old car showroom, which provided plenty of room for growth.

Gordon said he took great pride in building up his successful practice but he could also see the benefits of going into partnership with Brite Dental in 2013 to allow him to focus on his patients rather than on running the business as well. And Brite Dental was funding a significant investment in the dental practice to create eight fully digital treatment suites. So, all was good in Gordon's professional life… until he felt that twinge in his left eye.



After the sixth and final operation Gordon had to take a pragmatic approach to his situation. While he could no longer undertake intricate dentistry techniques he had meetings with the local health board and his insurers, which approved him to undertake routine dental work with his patients, such as check-ups, simple orthodontic work and dentures

"They understood my capabilities, what I could and could not do, and it was good to work with the team again who had helped to hold the fort while I was recovering. And I was particularly enjoying working with the young VT dentists that were training at our practice."

The refurbished dental practice opened in August 2016, but while Gordon was getting back into his stride, nine days after the opening he was called to a meeting with the health board in 2016, the outcome of which stopped him in his tracks. It was decided that he was no longer permitted to undertake basic check-ups, because he was unable to identify the presence of potential oral cancer.

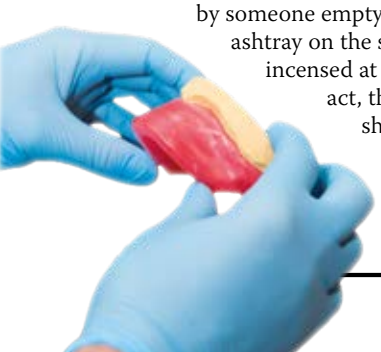
This was heartbreaking for Gordon but he could see the health board's point. He said: He said: "As I only have a

two-dimensional vision I would not be able to detect the bumps or swellings that could indicate mouth cancer. The health board argued that I could miss something important during a check-up, and I had no answer for them."

In November 2016, and with a heavy heart, he had to walk away from the practice he had built up over 18 years and take early retirement at 55, on the grounds of ill health.

However, Gordon was not prepared to let his 33 years of dental experience go to waste, and during 2017 he spent long hours at his Paisley home looking at opportunities to revive his career… he was not ready for retirement just yet.

If you need an example of Gordon's conviction and passion, and his ability to go against the odds, you only have to go back to 2005 when an incident annoyed him so much he decided to stand for Parliament to represent Paisley and Renfrewshire South in the UK General Election. He explained: "I was walking past the fire station on Gordon Street one day and I came across a pile of cigarettes and ash that had been thoughtlessly dumped by someone emptying their car ashtray on the street. I was so incensed at this despicable act, that someone should have such little regard for the fire service and for our city, that I decided to campaign under my own political party, Pride in Paisley."



> "DENTURE WORK IS LIKE STARTING WITH A BLANK CANVAS; I LOVE THE FACT THAT I CAN CREATE A SMILE FOR SOMEONE TO LOOK LIKE EITHER KEN DODD OR GEORGE CLOONEY"
>
> GORDON MATTHEW

When the votes were counted Gordon's party came in a credible sixth out of eight contenders with 380 votes, representing one percent of the vote; Labour's Douglas Alexander romped home with 19,904 votes.

But Gordon had made his point, and he also retained his sense of humour, saying that perhaps he could have picked a better name for his party, as the word 'Pride' may have been misunderstood by some voters!

It was this resilient spirit that Gordon drew on to plan his next career move and he thought back to the early days of his first practice in Neilston Road. He said: "It was just myself and my technician, and I remembered the way we worked together to craft beautifully made dentures for our patients. I realised that this was an area in which I have great expertise and it's not a practice that could be affected by my impaired vision."

In 2018, Gordon has launched himself as a dentist willing to visit practices for the provision of dental services. His role is to attend the dental practice and take the impressions from the patient and then liaise with the technicians on developing the length, shape, colour and position of the teeth in the denture that suits the patient's requirements.

He said: "I've got 33 years of experience in restorative dentistry and the provision of dentures, so my focus for every denture patient is on quality, personal service and achieving the highest standards to create the best possible fit and appearance for them. I aim to make the whole process as quick and easy as possible for dentists and their patients."

He's already working with local dental practices in Glasgow and is keen to develop his service across the Central Belt, particularly as he foresees a growing need to help elderly people in care homes that need this type of dental service.

He said: "Denture work is like starting with a blank canvas; I love the fact that I can help create a smile for someone to look like either Ken Dodd or George Clooney… but I'm sure most people would prefer George's smile!" ◤

SCOTTISH DENTAL SHOW 2018

A SHOW OF SKILL AND INNOVATION

SARAH ALLEN SCOTT RICHMOND

36 LECTURES

28 HANDS ON WORKSHOPS

43 SPEAKERS

2,600+ TOTAL DELEGATES

UP TO 11 AVAILABLE CPD HOURS PER PERSON

140 EXHIBITORS

The dental profession is one of the most diverse in healthcare. It reaches across primary and secondary care, is multi-specialty, and involves thousands of professionals, working individually and as part of a team, each of whom is committed to their chosen career path and field, and to the care of their patients.

The profession's ongoing commitment to continual learning and development was evident at this year's Scottish Dental Show, which saw a record number of more than 2,600 delegates from across the UK, and from all areas of dentistry, come together over two days in April to attend lectures, workshops and presentations that delivered Enhanced Continuous Professional Development learning outcomes for every member of the dental team.

The educational programme covered GDC-recommended core topics such as Oral Cancer: Early Detection, Child Protection and Safeguarding, Medical Emergencies, and Radiation Protection, with the hands-on workshops providing attendees with the opportunity to explore topics in a practical setting, as well as trying out new skills, techniques and equipment.

We were delighted to welcome expert speakers and workshop leaders such as Christine Park, honorary consultant in paediatric dentistry; Liz Connor, consultant in dental and maxillofacial radiology, Roger Currie, consultant oral maxillofacial surgeon and lead clinician for skin cancer in the West of Scotland, Lucy Mitchell from NHS Education for Scotland, Liz Webster and Lezley Ann Walker from Glasgow Dental Hospital and School, and Sarah Manton, Chair of the Faculty of Dental Trainers.

Essential business and regulatory topics were covered by speakers such as Aubrey Craig from the MDDUS, Dental Protection's Helen Kaney, dental accountant Roy Hogg, and lawyers Craig Stirling and Loretta Maxfield.

Dentistry is a fast-moving and ever-evolving profession, embracing new developments in knowledge, training, practice and technique and, with the GDC's introduction this year of Enhanced CPD, there is more focus than ever on providing educational and CPD opportunities for the dental profession. This spirit of innovation and advancement is also evident across the tools and services used in dental practice. Developments in products and equipment are announced with increasing regularity, with companies across the world investing heavily in ongoing research and development. Therefore, in addition to the broad educational programme, delegates had the opportunity to explore some of these latest developments at the show's exhibition, which welcomed 140 exhibitors covering the full spectrum of dental products and services.

Looking ahead, work has already started on the Scottish Dental Show 2019, and we are gathering feedback from delegates, presenters and exhibitors to find out how we can make it even better next year. We would like to thank everyone who was part of this year's Scottish Dental Show and look forward to seeing you at Braehead in 2019.

Liz Connor

Christine Park

Brian Millar

Sarah Manton

Roger Currie

Matthew Roper

Helen Kaney

Aubrey Craig

illian Eastmond

SCOTTISH DENTAL AWARDS 2018

BRILLIANT CAREERS

SCOTLAND'S PROFESSIONALS HONOUR THE SUCCESS AND ACHIEVEMENTS OF COLLEAGUES ACROSS THE DENTAL COMMUNITY

SCOTT RICHMOND

Wishaw dentist Mike Arthur was the recipient of the 2018 Scottish Dental Lifetime Achievement Award at the awards celebration at the Glasgow Hilton on 27 April.

The Scottish Dental Awards 2018, hosted by comedian and radio presenter Des Clarke, saw more than 500 members of the Scottish dental community come together to celebrate the best of the industry.

Dentist of the Year was won by Mike Gow of the Berkeley Clinic in Glasgow, while the Young Dentist of the Year accolade went to Lara Paterson of Clyde View Dental Practice.

Lara's colleagues at Clyde View, Ciara Dunleavy & Chloe Gall, picked up the Community Award.

Two of the big awards on the night went to Gray's Dental Practice of Cambuslang, which picked up Practice of the Year, and The Orthodontic Clinic in Aberdeen, which was named Employer of the Year. DCP Star was presented to Kirsty Mclaughlan, Kilbarchan Dental Practice.

Business Manager/Administrator of the Year went to Mikey Bateman of Fergus & Glover.

New College Lanarkshire had a successful evening. The college itself was awarded one of two new titles (Trainer of the Year) while the Unsung Hero winner was its staff member, Jennifer Lowe.

Mike Arthur received his award from Raymond Murphy

The other new category, the Innovation Award, was won by Calcivis.

Arshad Ali of the Scottish Centre for Excellence in Dentistry picked up the Business Excellence Award.

Repeat winners from 2017 were Donna Morrison from Kulzer Ltd who was named Best Sales Consultant, and Adam Morgan who for the second year in a row picked up the Best Professional Advisor title.

The awards culminated with the presentation of the Lifetime Achievement Award to Mike Arthur who was introduced by friend and fellow Lanarkshire dentist Raymond Murphy.

Mike received a standing ovation and entertained the audience with stories and observations from his long and distinguished career.

SCOTTISH DENTAL AWARDS 2018 WINNERS IN FULL:

- Scottish Dental Lifetime Achievement Award – Mike Arthur
- Practice of the Year – Gray's Dental Practice
- Dentist of the Year– Mike Gow, The Berkeley Clinic
- Young Dentist Award – Lara Paterson, Clyde View Dental Practice, Clyde Munro
- Dental Team Award – Kilmarnock Smile Studio & Dental Implants Centre
- Employer of the Year– The Orthodontic Clinic
- Business Manager/Administrator of the Year– Mikey Bateman, Fergus & Glover
- DCP Star – Kirsty Mclaughlan, Kilbarchan Dental Practice
- Unsung Hero – Jennifer Lowe, New College Lanarkshire
- Laboratory of the Year – Stranraer Dental Laboratory
- The Community Award – Clyde View Dental Practice, Clyde Munro (Ciara Dunleavy and Chloe Gall)
- Business Excellence Award – Arshad Ali, Scottish Centre for Excellence in Dentistry
- Best Sales Consultant – Donna Morrison, Kulzer Ltd
- Best Professional Advisor – Adam Morgan, The Adam Morgan Company
- Innovation Award – Donna Morrison, Kulzer Ltd
- Dental Trainer of the Year – New College Lanarkshire

Practice of the Year – Gray's Dental Practice with Jim Hall (right), Clyde Munro

Young Dentist Award winner Lara Paterson, with Connect chairman David Cameron,

Dental Team Award – Kilmarnock Smile Studio & Dental Implants Centre, with award presenter Gordon Morson (left), Macdonald and Morson Dental Care

Dentist of the Year Mike Gow celebrates with his Berkeley Clinic team after receiving his award from April East (third from left), of PS Newjob

Glasgow Big Smile Big Band

Entertainment on the night was provided by the Glasgow Big Smile Big Band who made a surprise appearance to the delight of everyone at the awards. Founded in 2014, the band consists of about 30 members, all of whom are Glasgow Dental School alumni, students or staff. The band currently has members including students from first-fifth year, vocational dental practitioners, core trainees, specialists, general dental practitioners and consultants. They hit the headlines in summer 2017 for the hugely successful Big Smile Big Band Event at which the Guinness World Record was set for creating the world's biggest smile.

The Dental Trainer of the Year award went to New College Lanarkshire, presented by Helen Wilson (second from left), of Coltene

Calcivis, the first winners of the new Innovation Award category

Best Professional Advisor, The Adam Morgan Company, received by Conor Morgan on his behalf, presented by Iain O'Neill

Best Sales Consultant Donna Morrison, Kulzer Dental, with award presenter George Campbell, Infinity Smiles

Employer of the Year winner The Orthodontic Clinic with Alan Ramsay, Connect MD

Business Manager/Administrator of the Year Mikey Bateman, Fergus & Glover, received his award from Patricia Munro, Strictly Confidental

DCP of the Year – Kirsty Mclaughlan, Kilbarchan Dental Practice, with award presenter Karen Murray, Dental Directory

Captions to come

Unsung Hero Jennifer Lowe of New College Lanarkshire

The Business Excellence Award was presented to Arshad Ali, of the Scottish Centre for Excellence in Dentistry, by Connect's Paul McGinnity

Community Award – Ciara Dunleavy and Chloe Gall received the award on behalf of Clyde View Dental Practice, Clyde Munro, from Wendy Sands (left), Dentsply Sirona Dental Practice, Clyde Munro (Ciara Dunleavy & Chloe Gall)

Laboratory of the Year winners Stranraer Dental Laboratory, with Rob Leggett (left), Scottish Denture Clinic

LEADING THE WAY

IN ALMOST FIVE DECADES OF PRACTICE, BDA FELLOW MIKE ARTHUR HAS SEEN SIGNIFICANT CHANGES IN THE PROFESSION – MANY OF WHICH HE HAS HELPED SHAPE

TIM POWER SCOTT RICHMOND

In addition to running his Wishaw dental practice for the past 46 years, Mike Arthur has also been representing his fellow dentists over this period through his tireless work with the BDA in Scotland, a role for which he was awarded a BDA Fellowship in 2012 to recognise his outstanding service to the profession.

Brought up in Birmingham in a medical family, Mike joked that he and his three brothers decided to become dentists as they did not fancy their father's GP lifestyle, where he was on 24-hour call every day.

However, after graduation, he was thrown in at the deep end, as he explained: "I graduated on a Saturday and on the Monday I was at the practice in Airdrie at 9am for a GA session. In those days, there was no gentle easing in with vocational training – we just got stuck in straight away. On that very first day I volunteered to do the GA session myself and by 10.30am I had extracted about three dozen teeth, thereby more than doubling my lifetime's experience of oral surgery. In my student days I had extracted about 20 teeth."

Two years later, he had bought the Main Street practice in Wishaw where he would practice for the next four decades and more, as well as providing a dental service to Longriggend Prison for 17 years.

"Of course, there has been a wholesale culture change in dentistry since those early days where the focus is now on preserving teeth," reflected Mike.

"When I started out, I still heard of stories – up until the 1970s – that some parents gave their daughters a wedding present of removing their teeth and replacing them with dentures so they would have a beautiful smile on their wedding day.

"It has been very satisfying to be part of that process of moving away from extracting teeth and encouraging people to look after their teeth."

In 1991, Mike was appointed a vocational trainer and he said he has always found the experience very rewarding.

"Working with these young dentists has really helped me keep abreast of developments in dentistry and also honed my own practice.

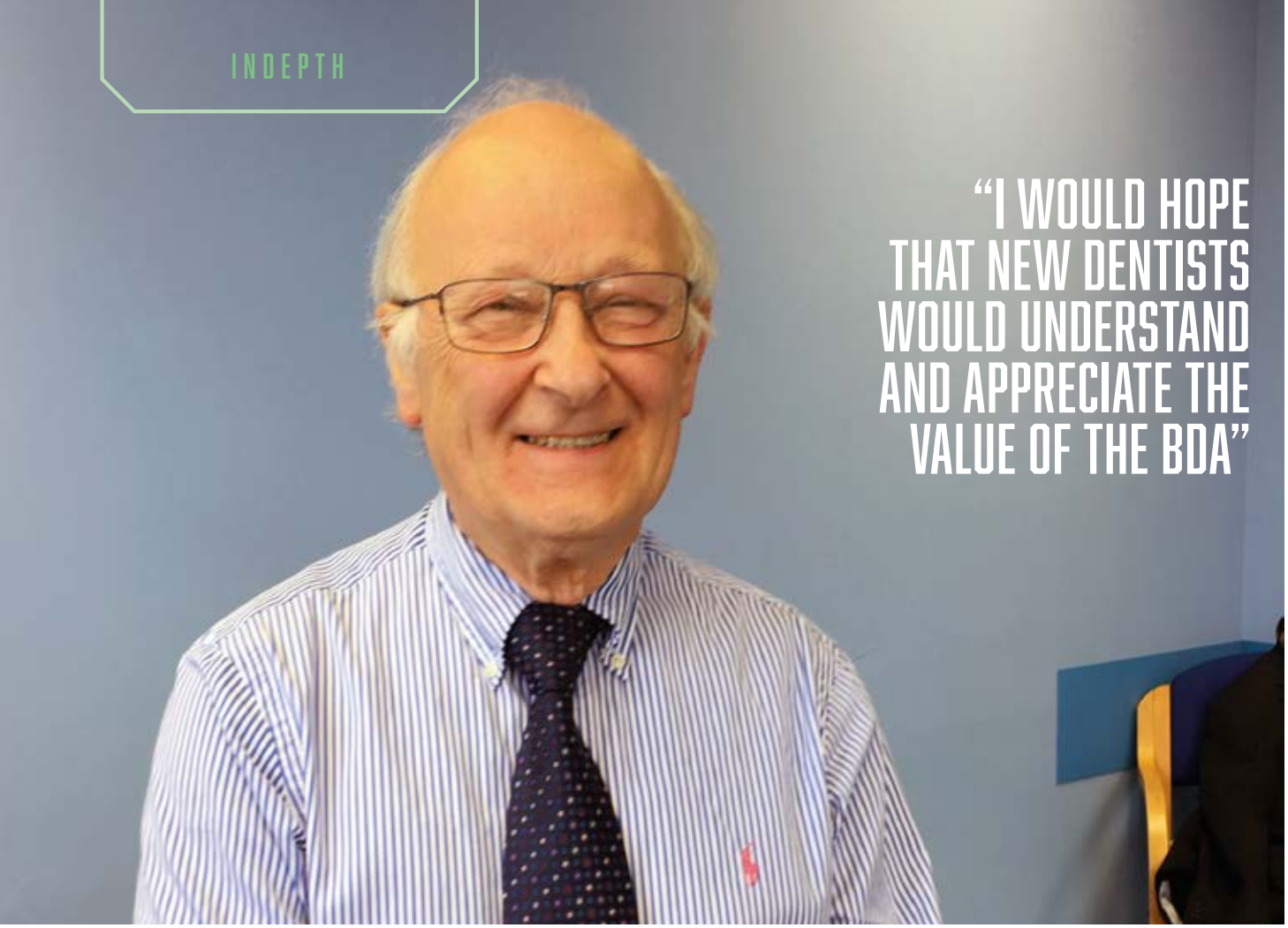
"When they work with me as a chairside assistant, they are always asking me searching questions about why I do certain things, or telling me about new procedures.

"And when I am assisting them as they undertake dental procedures themselves, it really helps me appreciate the skills and dedication of our own chairside assistants

> "WORKING WITH THESE YOUNG DENTISTS HAS REALLY HELPED ME KEEP ABREAST OF DEVELOPMENTS IN DENTISTRY"
>
> MIKE ARTHUR

CONTINUED OVERLEAF>

Mike Arthur at the Scottish Dental Awards where he was honoured with a Lifetime Achievement Award



"I WOULD HOPE THAT NEW DENTISTS WOULD UNDERSTAND AND APPRECIATE THE VALUE OF THE BDA"

FROM PREVIOUS PAGE >

who help me and our two other dentists day-in, day-out."

When Mike started up his practice, it consisted of only himself and a technician without the support of a chairside assistant. This is when he got interested in the BDA and started attending the monthly meeting of the Lanarkshire Section, held in Bothwell.

He explained: "Dentistry can be a very isolated career. You go into your surgery in the morning, you work hard all day, and you don't speak to any other dentist. And your worries just pile up.

"Attending the BDA meetings helped me not only learn about new developments in dentistry, but also gave me the opportunity to talk with fellow dentists about issues and to get advice from them. It always gave you a different angle on your issues and I enjoyed the social side with my fellow dentists.

"Someone suggested I go along to the AGM of the Lanarkshire Local Dental Committee and, in those days, if you turned up, you ended up getting elected! That's how I started my political career in the dental profession.

"This was in the 1970s and the main topic of discussion was the impending major NHS reorganisation in Scotland, which established the Area Health Boards. So I derived some modest satisfaction in the feeling that I was able contribute in a very small way to the once-in-a-lifetime opportunity – to mould the process which had created Lanarkshire Health Board. At least, I thought it would be a once-in-a-lifetime opportunity."

There were plenty of other opportunities for Mike to put forward the views of the dental profession in the seemingly unending restructures of the NHS, particularly when he became Chair of the BDA's Scottish Council from 2003-09.

When the provision of 24-hour emergency dental care became mandatory in 1990, Mike and his brother John, who had a practice in Motherwell, created the Mid Lanarkshire Emergency Dental Service to provide cover in the local area.

He said: "It was a bit ironic as we used the same rota system that my father had used in Birmingham to provide 24-hour care for his patients. In the end, we had 70 dentists on our network and the system worked so well that I was invited to advise the NHS about our experiences and offer advice on setting up a similar service for the forthcoming NHS24."

In 2012, his long dedication to the cause was recognised with a BDA Fellowship – one of only three that year – which are awarded to members who have shown outstanding service to the profession. Mike said: "If I worked long enough, I thought I might get something out of it! No, it was a great surprise and quite an honour."

Mike believes it's really important that new dentists get involved with the BDA. He said: "I'm a little disappointed that so few younger members of the profession are involved with the BDA as it brings the profession together to share problems and solutions.

"I would hope that new dentists would understand and appreciate the value of the BDA and the great advice and help it can provide, particularly for those just starting out in the profession."

While Mike plans to be working part time a little longer, he is concerned about the future direction of the profession.

He explained: "We are at a crossroads in dentistry as there is a lot of discontent, especially with the General Dental Council. I'm beginning to wonder if we really are a profession. All our standards are set now by the GDC, which is composed mostly of lay people who are appointed by the Government and not elected by the profession."

Mike has always had strong views about the profession and these started well before his graduation, as he submitted an essay while he was a dental student for the centennial prize for the Royal Odonto-Chirurgical Society of Scotland.

"My essay was entitled '*A student appraisal of the dental curriculum*', and I won the prize. So you see, even then, I was telling everyone else what to do," laughed Mike.

PRACTICE MAKES PERFECT CAREER

YOUNG DENTIST OF THE YEAR LARA PATERSON HAD CONSIDERED SPECIALISING, BUT THE OPPORTUNITY OF WORKING WITH THE CLYDE MUNRO TEAM HAS ALLOWED HER TO FLOURISH AS A COMMITTED AND POPULAR GDP

TIM POWER

One of the biggest cheers that went up during the Scottish Dental Awards at the Hilton Hotel in April came from the Clyde View Dental Practice table. The Clyde Munro Dental Group treated its whole Helensburgh team to the event and they had good reason to be excited as three of them were up for nominations: Ciara Dunleavy and Chloe Gall for the Community Award; and Lara Paterson for Young Dentist of the Year – and all three won.

Lara said she was absolutely elated to win the prestigious award. She said: "It's quite humbling to win, but wonderful too. As I have always tried to do my best everyday, and it's great to have this recognised by my peers."

Lara's journey into the profession started in 2008 when she entered Glasgow Dental School at 18 and braced herself for five years of hard graft.

She said: "I did not have much expectation from university, except for 'all work, no play', but the overall experience was much better than I expected.

"The staff and lecturers were keen that we also enjoyed ourselves, so the balls, field days and social activities really balanced the whole experience. It was particularly great because the staff joined in the fun with us, so there was great interaction and we got to know everyone very well. They were very good at encouraging us and driving us forward."

While university was hard work but fun, finding a vocational training (VT) position brought her down to earth with a shock.

She explained: "When you have sailed through Highers and spent five years successfully passing exams and gaining a degree, you think you are invincible, so to not be successful getting a VT placement first time was a great shock.

"The problem was there just weren't enough VT positions available, so I had to get used to my disappointment and carry on trying to find a place."

Her opportunity came when White Cart Dental in the southside of Glasgow took her on at a VT, and it was a perfect match. Lara said: "It was a great practice and very supportive so I loved my time there and even stayed on as an associate for a while."

Working full time, Lara appreciated the vital role of dental assistants. She said: "As a student, working with different nurses I did not fully appreciate the role, but when you work with someone day-in day-out you have to work very closely and you really understand how important they are to your work."

A new opportunity came Lara's way when Clyde Munro was looking to find a dentist for its Helensburgh practice, where the lead dentist was retiring.

Lara was under no illusions about the challenge ahead of her, as she explained: "The dentist had been in practice for more than 30 years and had built up a strong list; so here I was, a 25-year-old female ready to take over the patients of a 60-year-old seasoned male dental professional… but I won them over."

Such was her commitment to the practice and popularity with clients that she was promoted to lead clinician. Since then she has overseen the expansion of the practice with new colleagues coming on board and managed a major refurbishment of the facilities without disruption to patients.

Lara is enjoying the role of a GDP, and she is glad she did not decided to specialise: "When I was studying I was quite keen to go into pediatric dentistry at some stage, but after working in general practice I think this is where I want to stay, as you get a good balance of adult and child patients. But one thing I would definitely like to do in the future would be to do some teaching or coaching; I feel that I have had such good opportunities that I would like to give something back to new dentists coming into the profession."

What inspired you to go into dentistry in the first place?
My childhood dentist Katie at Cambuslang Dental Care. I used to love going to my check-ups and watching her treat my mum. She exuded enthusiasm, friendliness and compassion, and would roll around the surgery on her saddle chair and sing along to the radio. I like to think that singing along to the radio during appointments isn't the only quality I have taken from watching Katie.

Who has been your biggest inspiration in the profession?
At university, all of the dental hospital staff were great role models. They were so driven and successful; it always made you eager to succeed in dentistry.

What's the best thing about working at your current practice?
The great view outside the practice, overlooking Helensburgh seafront! No, definitely our team. They have been very supportive in helping me grow as a dentist and take over the patients of the previous dentist who had been here for 30 years.

If you could change one thing in the profession, what would it be, and why?
I would make local anaesthetic taste better, for obvious reasons.

THE GIFT OF A CAREER

DENTIST OF THE YEAR MIKE GOW RECALLS THE DEFINING MOMENT IN HIS STUDENT DAYS THAT SET HIM ON THE PATH TO SPECIALISING IN DENTAL ANXIETY AND HELPING PATIENTS TO ALLEVIATE THEIR FEARS

TIM POWER

It was when a grateful patient surprised student dentist Mike Gow with a Parker pen engraved with his name that he realised what he wanted to do with his career: to focus on patients with dental anxiety issues.

Mike, who qualified from the University of Glasgow in 1999, explained the significance of this event: "The elderly lady was very anxious about her treatment so I gave her the extra time and attention to help alleviate her fears. When she gave me the pen after her treatment as a gift, it really hit home how important this element of the dentistry was. I not only got the satisfaction of providing her dentistry treatment but also felt I actually made a difference in somebody's life. In that moment I realised I wanted to focus on dental anxiety."

Mike's journey into this field took him halfway around the world to Australia where he worked for a short time with Dr James Auld, a world-renowned expert in hypnosis in dentistry who was based in New South Wales. After a year travelling in Australia, he returned to Scotland to work in NHS dental practices for the next eight years while honing his skills by training in conscious sedation, studying a part-time Masters in Hypnotherapy at University College London, followed by completing a PGCert in the Management of Dental Anxiety at the University of Edinburgh. In 2007 he joined the Berkeley Clinic to work alongside Jamie Newlands, who was pioneering new techniques in digital 3D dentistry, which allows some treatments to be dealt with in one visit.

He said: "Jamie introduced me to more technically advanced techniques using digital dentistry and very quickly I realised there was a huge crossover with these techniques and working with anxious patients. Being able to make a crown in a single visit was a huge advantage of working with anxious patients who would find multiple visits difficult."

Mike celebrates his award

Although these new techniques can reduce the time a person spends in the clinic, the important work is done way before any treatment during the first 'therapeutic consultation' between Mike and the patient.

Mike explained: "One of the most important elements in this process is time, and getting to understand the patient and their particular needs. Every patient presents with an individual set of circumstances, so not every case is suitable for hypnosis or sedation."

According to the British Dental Association, 'one adult in three has moderate to severe fear of dental procedures', but, in Mike's experience, people's extreme dental anxiety often stems from a bad experience in the past.

He said: "There are a number of different models of acquisition of dental anxiety, but, by far the most common

is a bad past experience at the dentist. It's either where the actual procedure was been painful, but, more significantly, about how the dentist managed the patient at the time. If the patient was made to feel it was their fault, particularly if they were a child, that is a strong message that is quite difficult to overcome."

In addition to his dental practice, Mike has also set up the International Society of Dental Anxiety Management to bring experts together to better understand dental anxiety, fear and phobia as well as the use of pharmacological, psychological and clinical techniques and approaches. He is also involved in organising and chairing UK and international conferences and workshops in this area too.

Over his long experience, Mike has come to appreciate that in addition to anxiety, many patients also have acute embarrassment about the condition of their teeth, and this needs to be handled sensitively.

"I wish I knew about this aspect when I first qualified. It's not talked about a huge amount, but a lot of patients are not only embarrassed about their own dental phobia, but also about their teeth.

"IT'S IMPORTANT TO FOCUS ON THE POSITIVES OUTCOMES"

"A lecture about oral health to this type of patient is not the approach to take as they have often plucked up a lot of courage to finally come to visit a dentist after decades. If they are chastised or lectured to in any way about their teeth they won't return. Any negative comment on their teeth will just be too mortifying.

"That's why it's important to focus on the positives outcomes. The first thing I will ask any patient is 'what do you want to achieve?"

Mike and the team at Berkeley have had to keep a positive outlook themselves over the last year following the tragic death of Jamie Newlands in July 2017. As well as being a friend and a valued colleague, Mike says Jamie was instrumental in helping him develop his skills further in anxiety management through his understanding of digital dentistry.

Mike said: "Winning the Scottish Dental Award and having the team there on the night was really a nice positive thing for all of us after what had been a very difficult year. That's why I dedicated the award to all our staff, because at the end of the day, they are the ones that make it all happen for our patients."

What inspired you to go into dentistry in the first place?
When I was 12 years old, I had a conversation with my neighbour Bill Smith about 'careers'. He offered to let me spend a day with him where he worked at The Glasgow Dental Hospital. I made my decision that day that I would become a dentist! I'm still friends with Bill and very grateful for his influence 30 years ago!

If you could change one thing in the dentistry profession, what would that be, and why?
I think stress experienced by dentists is a real problem that seems to have grown in recent years. I'd certainly like to see that change. The main causal factors being workloads, growing demands and expectations and, of course, the fear of litigation or reprimand. There's no one easy solution to this, but I think there is at least a growing recognition of it as a problem and increasing support available for anyone struggling to cope. Dentistry should be and can be a fantastic and rewarding profession to be in.

THE LATEST IN RESEARCH AND PRACTICE DEVELOPMENT

MCGOLDRICK + RICHARDS + FEE + GALASSI + SULLIVAN

Clinical

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TOP TIPS FOR PRACTICING EVIDENCE-BASED DENTISTRY

RESEARCH

In the second of their series of articles, Niall McGoldrick and Derek Richards explain where to find the evidence and how to assess its quality

In the first article we explored how to establish a research question using the PICO (Population, Intervention, Comparator and Outcome) method and discussed the hierarchy of evidence. At this point in the search for evidence to support our practice, we know the question we need answered and also understand how different types of research can help to answer our questions.

We now need to think about where to find the evidence and how to assess the quality of what we find.

First let's revisit the five steps to an evidence-based approach.

Establishing an evidence-based approach has five steps

1: Asking answerable questions (ASK)
2: Searching for the best evidence (AQUIRE)
3: Critically appraising the evidence (APPRAISE)
4: Applying the evidence (APPLY)
5: Evaluating the outcome (ASSESS).

This article will explore points 2 and 3 of establishing an evidence-based approach to healthcare.

Question 2: Searching for the best evidence (AQUIRE)

The search for evidence

There are a number of databases that can be used to find the evidence. Which database you choose to search depends on what type of resource or evidence you require. In this section we will introduce and explore the use of databases that host most of the information required in day-to-day practice. Three of the most commonly used databases are included in Table 1 to the right.

There are other databases available for searches of more specific topics that can be accessed through the knowledge network; for example, PsychINFO is a good database to search for psychology and behavioural science-related topics. You can see the full list of databases on offer here: www.knowledge.scot.nhs.uk/home/help-and-training/databases.aspx

Searching for systematic reviews and guidelines

It is always a good idea to start your search for evidence at the top of the evidence pyramid. As we discussed previously, systematic reviews and randomised control trials are the level of evidence we would require in order to think about changing our practice. At the end of our first article, we briefly discussed guidance documents. The guidance produced by SDCEP, NICE and SIGN are all evidence-based and the groups will have come to their recommendations after a thorough process.

SDCEP methods

Dr Doug Stirling is Programme Manager of the Guidance

Database	Type of evidence	Key feature
PubMed	Systematic Reviews, Primary Research	Ability to create an account and save search results for later use
Cochrane Library	Systematic Reviews	Includes plain language summaries of reviews; useful for translating evidence for use at chair side
TRIP	Guidelines, Systematic Reviews, Primary Research	Displays results in the style of the hierarchy of evidence, reducing search time

Development Group, Scottish Dental Clinical Effectiveness Programme, NHS Education for Scotland. Here he tells us more about the work of the SDCEP team and the methods they use.

Who is involved in guidance development? What is the skill mix in a guidance team?
The SDCEP team operates within NHS Education for Scotland's Dental Directorate. Each guidance project is assigned an SDCEP project lead, who manages the project and is responsible for the methodology employed, and an administrator who helps to co-ordinate the project. For each project we also convene a Guidance Development Group comprising external individuals who are representatives of groups with a particular interest in the topic. Typically this will include various relevant branches of the dental profession and patients, and may also include other healthcare discipline relevant to the topic.

How rigorous is the process of appraising the evidence?
Each guidance project aims to answer a number of questions. SDCEP identifies the latest evidence that is relevant to these questions, focusing on systematic reviews and other evidence-based guidelines. To assess the quality of evidence in systematic reviews, SDCEP now uses GRADE (Grading of Recommendations, Assessment, Development and Evaluation), which is a widely accepted system for grading both evidence and recommendations in clinical guidelines. More information on the GRADE system can be found at www.gradeworkinggroup.org

We appraise guidelines using the AGREE II checklist, again an internationally recognised tool for assessing guideline quality and reliability. Find out more at www.agreetrust.org

Recommendations in SDCEP guidance result from a rigorous consideration of not only relevant research evidence, but also other factors, including, the balance of risks and benefits, patient's views and preferences, practitioner perspectives and the practicalities.

The process SDCEP uses to develop its guidance has now been accredited by NICE (the National Institute for Health and Care Excellence), which should give users added confidence in the reliability of the guidance as an aid to their decision-making.

How does the SDCEP guidance apply to a general dental practitioner?
The vast majority of dental care is delivered in primary care practice. Recognising this, most SDCEP guidance is primarily directed towards dentists and their teams working in general dental practice. However, the guidance is also likely to be of interest to those in training, dental educators, and secondary care and public health practitioners.

Do we always need to follow the guidance?
Healthcare staff have the right, and indeed the duty, to make decisions that are in the best interests of their patients with their consent. SDCEP guidance is provided to inform some of these decisions. There is no obligation to follow a recommendation in the guidance if a health professional feels that it is in the best interests of an individual patient not to do so.

However, it would be advisable to document a departure from recommended practice in the patient's clinical notes, including the reason for this.

Further information about SDCEP guidance development: www.sdcep.org.uk/how-we-work/ or to find out more about GRADE

TRIP database

TRIP (Translating Research Into Practice) is a useful resource for searching for the results of systematic reviews, randomised controlled trials and guidelines. You might think of it as a high-quality Google for health-care research. It is an online database that has a few very useful search tools. You can do a single-word search, which is similar to a Google search, but you can be more specific and use the search function established around a PICO question. Shown in Figure 1 below. The database displays results and categorises the level of evidence in a hierarchy. It is similar to the hierarchy of evidence discussed in the first article. This makes it easy to identify what type of evidence the study is before you spend time reading it.

Searching for journal articles

TRIP will also produce results from primary research but another useful database that you should understand how to use is PubMed.

PubMed is a search engine that searches the online database MEDLINE. It includes more than 27 million records. Here you will find a range of evidence. As we demonstrated in the first article, the results can be confusing at first and the searches can result in a lot of irrelevant material. We will discuss how best to use the search function later but will first look at the fundamentals of searching scientific databases.

PubMed can be accessed by typing 'pubmed' into any search engine or via https://www.ncbi.nlm.nih.gov/pubmed/

Free text searching and Boolean connectors

Having a systematic approach to your search will make finding relevant papers a lot easier and quicker. Most of the pointers demonstrated in this section can be broadly applied in other online searches.

You could decide to free text the search tab as you might use a search engine such as Google. This approach can often result in a large amount of unfiltered results, similar to a search for a hotel room without any information on location, standard or length of stay.

If you know the title of the exact paper you are looking for, then you could simply type this into the search box at the top of the page. You can tailor the search; for example, if you only have some of the information about a specific paper, such as the author.

A better way to search, and the best way to get the most

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FIGURE 1: A screenshot of the PICO input section on TRIP. It can be accessed by typing TRIP database into any search engine or via www.tripdatabase.com

FROM PREVIOUS PAGE>

out of the search engines, is to use Boolean search methods.

This approach still uses free text in the search but introduces AND, OR and NOT. The AND, OR and NOT are known as Boolean connectors. They all have specific functions and can help to widen or narrow your search.

Let's use our example in article 1 to explore the Boolean connectors. Our original question was about whether or not fluoride varnish has an effect on caries rate in children. The formulation of a PICO question resulted in this:

- Population, patient or problem: Children
- Intervention or treatment: Fluoride varnish
- Comparison: No treatment
- Outcome: Caries.

Using AND

To construct a search for Pubmed we could use the following:

Children AND "Fluoride varnish" AND Caries

This would produce results from papers that contain all three search terms. This is a method for narrowing a search.

Phrase searching and using speech marks

You may also have noticed that the words "fluoride varnish" have speech marks either side of them. This is another useful way of narrowing a search for a specific phrase. The speech marks instruct the search engine to only include studies that have the entire phrase. If we had searched without the speech marks then we would have papers returned that include fluoride as a standalone word from varnish and not specific to our question

Using OR

Using OR can help to widen a search. For example, if we were interested in fluoride treatments other than fluoride varnish we might search the following:

Children AND ("Fluoride varnish" or "Fluoride mouthwash") and Caries

This would produce results from papers that contain all our original three search terms but also include studies that look at fluoride mouthwash. Again, note the use of the speech marks to search for the entire phrase.

Truncation

Truncation is useful when you want to expand a search. An example might be in periodontics. By using the trunk of the word *Periodont* and then adding * to the end will return results for Periodontist, Periodontal, etc.

Controlled language searches

A more advanced way of searching the database is to use controlled language searches. MEDLINE uses Medical Subject Heading, known as MeSH. Those studying for higher level degrees may wish to use this method in their searches. Speaking to the university librarian or doing a short course would be the best way to learn more on this topic. A useful tip about PubMed is that you can register for a free account and save your searches as you go. You can also access the free online tutorials that will help you understand how to get the most out of the database.

Subscriptions/access to resources

Guidelines produced in the UK by groups such as SDCEP, SIGN and NICE are free and open access. They are readily available online. The Cochrane library is also free and open access in the UK and other countries who contribute to it, while it is also available in some developing countries. Some journal articles may be free but most will be only be available through subscription to the journal itself or via an institution of which you are a member.

All NHS employees are entitled to free registration on OpenAthens, which will give you access to The Knowledge Network that is maintained by NHS Education for Scotland. That includes general dental practitioners with an NHS contract. It is a gateway platform to accessing full text articles. If you register then you can access most articles that are returned in searches on PubMed; then you simply enter you username and password once the pay wall appears.

You can register at the address below.

https://www.athensregistration.scot.nhs.uk/

Royal College Library

If you are a member of a royal college then you have an entire library service at your disposal. Royal colleges offer members the services of a librarian who can help with literature searches and also source books that may be relevant to your search. Be sure to explore this service that is part of your membership subscription.

Specialist societies and unions

Many specialist societies have subscription services for their members. The BDA also has an extensive library and journal service for use by members which can be accessed remotely through their website.

Question 3: Critically appraising the evidence (APPRAISE)

Not every article published in a journal is a game changer. Sometimes this is easy to spot when reading an article, but other times it may be less clear as authors try to convince you about their work. Understanding the hierarchy of evidence and having some basic skills in critical appraisal will help you when trying to decide how seriously to take a new recommendation or proposed change in practice. Having critical appraisal skills can have wide-reaching benefits beyond the surgery.

At this point we have defined our search question and found the papers we think are relevant. We know about the hierarchy of evidence, but how do we decide which ones to use? Do they all meet the same standard? Are the results valid? Do they apply to the patients I see on a day-to-day basis? Do the results include the negative outcomes of the treatment?

These questions are important to consider, as how we act on the evidence will affect our patients.

Using a systematic approach to appraising the evidence in front of you is always the best way. There are a range of appraisal tools available and some are available for free download from the Centre of Evidence-based Dentistry website: http://www.cebd.org/practising-ebd/appraise/

The best way to understand critical appraisal is to practice it. If you are brand new to it, then there are number of ways you can get help to get started. This could be by attending face-to-face or online courses, reading a book or attending a journal club.

Online e-modules and tutorial videos

Terry Shaneyfelt is a teacher of evidence-based medicine; he has produced a number of YouTube videos that are useful when trying to get your head around critical appraisal.

Simply search YouTube for 'Terry Shaneyfelt' and click on his playlists where you will see the critical appraisal section.

If you wanted to spend some time and do an online e-module then you can access one provided by the critical appraisal company http://www.criticalappraisal.com/online-course. There is a cost associated and the course takes six to eight hours, but it gets good reviews.

Journal clubs

Most dentists in core or specialist training will have access to a journal club in their place of work. If there isn't one, why not take the lead and get one started over a lunchtime once a month? There are other journal clubs that anyone can attend, such as the Edinburgh Dental Journal club that meets regularly at the Royal College of Surgeons of Edinburgh. Search for them on Facebook© to find out when the next meeting is.

Conclusion

Hopefully after reading these first two articles you now have a basic understanding of the skills needed to practice evidence-based dentistry. We have introduced you to a range of resources that can help you to further develop your skill and knowledge. The best way to get better at using databases for searching and critical appraisal is to get on and do it. Look out for your local journal club or go online and make the most of the many free resources there are to hand.

The next and final article will focus on applying the evidence and evaluating outcomes in your practice.

ABOUT THE AUTHORS

Derek Richards BDS, FDS, MSc, DDPH,FDS(DPH), is a consultant in dental public health, editor of the *Evidence-based Dentistry Journal* and director of the Centre for Evidence-based Dentistry now based at the Dental Health Service Research Unit in Dundee. He holds honorary senior lectureships at Dundee and Glasgow Dental Schools and is a specialist advisor to the Scottish Dental Clinical Effectiveness Programme (SDCEP). He has been involved with a wide range of evidence-based initiatives both nationally and internationally since 1994. He is co-author of the book, *Evidence-Based Dentistry: Managing Information for Better Practice (Quintessential of Dental Practice)* and the chief blogger for the Dental Elf website.

ABOUT THE AUTHORS

Niall McGoldrick BDS, MFDS RCPS(Glasg), is a specialty registrar in dental public health and is currently studying for his masters of dental public health at the University of Dundee. He graduated from Dundee Dental School in 2013 and then went onto complete longitudinal dental foundation training and dental core training in a range of specialities in Scotland including a placement with the SDCEP. He is a co-founder of the Scottish Charity, Let's Talk About Mouth Cancer that is focused on the early detection of mouth cancer. He has received multiple awards for his work both inside and out of the NHS. Most recently, he received a National Award, NHS Young Achiever, from NHS Scotland and Scottish Government.

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VERIFIABLE CPD QUESTIONS

AIM: OBJECTIVES:

- To demonstrate the process of using a online scientific data base to search for evidence
- To explain how to use Boolean language in search strategies
- To share details on the process of developing evidence-based guidelines
- To highlight how dentists can gain access to the literature base
- To highlight the importance of critical appraisal.

LEARNING OUTCOMES:

After reading this article you should be able to:

- Operate an online scientific database to obtain evidence to answer clinical questions
- Describe some of the process of developing evidence-based guidelines
- Identify means of gaining access to the literature base
- Find resources to aid you in critical appraisal
- GDC Development outcomes covered: C-Maintenance and development of knowledge and skill within your field of practice.

QUESTIONS:

Question 1:
The process that the Scottish Dental Clinical Effectiveness Programme (SDCEP) use in guidance development is accredited by: (choose 1)
1: Scottish Government
2: National Institute for Health Care and Care Excellence (NICE)
3: Scottish Intercollegiate Guidelines Network (SIGN)
4: Guidelines International Network

Question 2:
Boolean connectors are used by most scientific databases. 'OR' is a Boolean connector that will:
1: Expand the search
2: Narrow the search

Question 3:
'AND' is also a Boolean connector, this is a method to:
1: Expand a search
2: Narrow a search)

Question 4:
TRIP is an online database that can be used to search for: Choose one
1: Randomised controlled trials and systematic reviews only
2: Randomised controlled trials, systematic reviews and primary research only
3: Randomised controlled trials, systematic reviews, guidelines and primary research.

Question 5:
All the journal articles stored on Medline are of good enough quality to support clinical practice:
1: True
2: False

HOW TO VERIFY YOUR CPD

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SUITABILITY OF PATIENTS FOR CONSCIOUS SEDATION

ANAESTHESIA

Dentists have to consider carefully a wide range of health conditions before deciding on the appropriate approach for those that need to be sedated

DR LAURA FEE

Patients suitable to undergo conscious sedation (CS) include those with moderate-severe anxiety, a swallow/gag reflex or a mild learning/physical disability such as cerebral palsy. Well-controlled medical conditions such as asthma, epilepsy, gastro-oesophageal reflux and mild hypertension are exacerbated by stress, making CS hugely beneficial. [1]

Hospital-based intravenous (IV) CS helps patients with severe systemic disease or disability to avoid unnecessary general anaesthesia (GA). However, a small percentage of patients will still simply not tolerate dental treatment without being 'knocked out', making GA essential to facilitate dental treatment.

An in-depth medical, dental and social history is mandatory at a visit before treatment. It is important to ascertain the patient's degree of dental anxiety. This helps determine the most suitable sedation technique as some patients with severe needle phobia are unable to tolerate cannulation making inhalation sedation the best option for them. [2]

General health considerations

ASA Physical Status Classification [3]

- ASA 1 – Heathy person – suitable for IV/inhalation sedation
- ASA 2 –Patient with mild systemic condition – mild disease with minimum functional limitation – generally suitable for IV/inhalation sedation in primary care
- ASA 3 – Patient with severe systemic condition – significant functional limitations such as with COPD – may be suitable for inhalation sedation in primary care, but otherwise careful evaluation for hospital-based sedation
- ASA 4 – severe systemic disease constantly threatening life – myocardial infarction or stroke <six months ago – anaesthetist-led team
- ASA 5 – Moribund.

Age

Age is not an absolute contraindication to sedation but older patients are more sensitive to sedatives. [4] The incidence of delirium following treatment with midazolam was 10 per cent higher in the elderly. [5] Elderly patients also tend to have poorly tethered, friable veins, which may be more susceptible to cannulation damage. IV sedative agents in children <12 is not recommended unless provided by a paediatric specialist. Disinhibition in adolescents is common and even slight over-sedation can lead to rapidly deteriorating respiratory depression. [6]

Cardiovascular System

(See table below).

There should be no elective surgery if the diastolic value is >110 mmHg. However, when measuring blood pressure always consider the risk of "white coat hypertension".
Patients with controlled/uncontrolled hypertension have a more labile haemodynamic profile during CS making hypotensive swings more likely. [7]
It has been shown that thereis little evidence that a BP < 180mmHg/110mmHg causes perioperative complications. However, a BP>180/110mmHg is linked to perioperative ischaemia, arrhythmias and cardiovascular lability. There is no clear evidence that deferring anesthesia lowers perioperative risk. The intraoperative BP should be within 20 per cent of best BP estimate. [8]

Dentists must evaluate pre-operatively for the presence

CARDIOVASCULAR SYSTEM
ASA According to Blood Pressure (BP):

<140 systolic and <90 diastolic	ASA I	Primary care suitable
140-160/90-94mmHg	ASA II	Primary care suitable
160-199/95-115mmHg	ASA III	Specialist unit
200 systolic and >115 diastolic	ASA IV	In-patient services

Increased stress levels exacerbate angina, making sedation important in reducing heart rate

of target organ damage such as coronary artery disease. Target organ damage lowers the treatment thresholds for raised BP.[9]

A study examining the cardiovascular effects of epinephrine with IV midazolam examined 75 patients with heart disease treated in two groups.The rate-pressure product (RPP) was used to indicate myocardial ischemia. This is the systolic BP x heart rate = RPP, which is a reliable indicator of myocardial oxygen consumption. Ischemic changes were demonstrated in patients with an RPP of >12,000, increasing their CS risk. The pressure rate quotient, which is mean BP divided by heart rate, also assesses a patient's suitability for CS. The results of this study indicated that treatment with midazolam and epinephrine does not generate significant ischemic risk. It is important that the lowest effective dose of local anaesthetic containing epinephrine is used and that intravascular injections are avoided.[10]

NYHA classification of angina

0 Healthy
1 No hindrance to normal physical exertion
2 Slight limitation, angina with fast walking, ascending stairs, excitement
3 Significant limitation of regular movement. Angina on climbing normal staircase
4 Angina with minimal activity/rest.

Increased stress levels exacerbate angina, making sedation and good local anaesthesia important in reducing heart rate. Unstable angina contraindicates elective treatment. Patients with angina that affects normal daily activity such as NYHA 3 are unsuitable for sedation in primary care. If the GP/cardiologist confirms stability of angina then NYHA 2 patients can progress with elective sedation.[11]

Post MI

At six months post-infarctiona patient is classed as ASA 3. The risk of re-infarction is 16 per cent. Elective sedation in well-controlled patients reduces stress, helping to lower risk.

Post-percutaneous coronary intervention (PCI)

Patients must wait three months after stenting before elective sedation. Angina must always be successfully controlled before treatment.[1]

Classification of cardiac functional reserve capacity

- Class 1: Able to climb a normal flight of stairs without stopping. Can continue walking with no rests – safest for IV CS
- Class 2: Climbs without rest. Rests on top – safest for IV CS
- Class 3: Climbs with rest during ascent – outpatient CS unsuitable
- Class 4: Unable to climb stairs.

Patients with palpitations

Patients with benign palpitations benefit from the stress reduction produced by CS. A patient with malignant palpitations, however, must be treated in hospital. Any individual with an automated implantable cardioverter-defibrillator is unsuitable for treatment in primary care. A hospital setting is mandatory for patients with a pacemaker or those following AV node/conduction pathway ablation surgery. Wolff-Parkinson-White syndrome is an absolute contraindication to sedation.[1]

Respiratory disease

Midazolam has a greater effect on the respiratory system compared to the cardiovascular system. Healthy patients who present with respiratory infections on the day of treatment should be rescheduled. Careful assessment of the patient's disease and functional reserve will indicate the most suitable setting for CS. It must be remembered that opioids act synergistically with sedation with regards to respiratory depression.[12]

Dyspnoea grading system[12]

0 Healthy
1 Mild dyspnoea
2 Moderate – limited outdoor movement – hospital management safest
3 Marked dyspnoea on minimal exertion indoors – unsuitable for outpatient sedation
4 Dyspnoea while resting – unsuitable for outpatient sedation.

Asthma

The dentist must ensure the asthmatic is well controlled. A mild asthmatic is considered ASA 2; however, an untreated Grade 2 is unsuitable for treatment in primary care. Hospital management is necessary for ASA 3 patients who have frequent episodes/attacks. It must be borne in mind that theophylline can interact unfavourably with IV midazolam. Inhalation sedation can be a safer option due to guaranteed oxygen levels.[13]

COPD

Extreme caution is needed with COPD patients who suffer with emphysema or bronchitis. A patient with chronic bronchitis is ASA 3. Midazolam results in dose-related respiratory depression, which is more exaggerated in COPD patients. Hospital treatment of the patient in an upright position with supplemental oxygen is required due to the increased risk of hypoxia.

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If a patient needs supplemental oxygen at home or has severe orthopnoea or a productive cough then sedation is contraindicated.[12]

Renal system impairment

Hepatic microsomal oxidation is responsible for midazolam's biotransformation. This is susceptible to factors such as old age, hepatic cirrhosis and drugs (cimetidine) as they reduce the oxidative capacity. A high regular intake of alcohol increases midazolam clearance.

Renal failure causes a build-up of metabolites which prolongs sedation. CS is contraindicated in cases of advanced liver disease.[1]

Patients undergoing haemodialysis or continuous ambulatory peritoneal dialysis are unsuitable for sedation. Haemodialysis patients swing from being centrally underfilled where they are at risk of hypotension to centrally overfilled. Day 2 is considered the safest time to treat but outpatient CS is still best avoided. Post-renal transplant patients with good renal function may be suitable for hospital-based CS.[11]

Methadone and midazolam are both metabolised by the cytochrome P450 3A pathway. Chronic methadone use leads to the induction of this pathway with more rapid midazolam metabolism and higher dosage requirements.[14]

Neurological disease

IV midazolam helps to reduce involuntary movement in patients with multiple sclerosis and Parkinson's disease making dental treatment more comfortable. Many patients will have reduced swallowing capacity so sitting the patient upright with adequate suction is vital. Controlled epileptics are suitable for CS although more research is needed to develop clearer guidelines. Liaising with the GP/neurologist confirms if the patient has a driving licence and when the last three seizures occurred. Anti-epileptic drugs such as phenytoin can increase or decrease plasma concentration of sedatives.[11]

Recovered stroke victims may experience a re-emergence of symptoms when benzodiazepines are administered. Light sedation can trigger a re-occurrence of symptoms such as right-sided paralysis and dysphasia. Sedation is contraindicated for one year after a stroke.[15]

Haematological disorders

Sedation should be avoided in patients with sickle cell anaemia and thalassaemia. This cohort are high risk for reduced oxygen tension with respiratory depression or over-sedation. Inhalation sedation is preferred.[16]

Pregnancy

The second trimester is the safest time to treat, but the mother's metabolism is altered due to the increased demands of the baby. This makes sedation unpredictable. There are also foetal teratogenic risks.[12]

Intellectual or physical impairment

Patients with mild learning disabilities are suitable for sedation. Severe learning or physical difficulties require management by an anaesthetist-led team.[17]

Endocrine diseases

Diabetes

HbA1c helps identify pre-diabetic patients. It also helps recognise diabetics at risk of complications. A BM check of >5mmol/l pre-treatment is advisable.[18]

Pre-operative starvation can upset blood sugar levels. The evidence for fasting is low so a degree of clinical judgement required.[19] Well-controlled diabetics are best treated in the morning to avoid interference with their insulin routine. Poorly controlled diabetics requires hospital management. Inhalation sedation can be a safer option as it is easily reversible.[16]

Adrenal insufficiency

Patients on long-term steroids must be treated in an anaesthetist-led facility to avoid an adrenal crisis.[13]

Thyroid disease

Hyperthyroidism can cause tachycardia and atrial fibrillation. Hypothyroidism can cause bradycardia, making CS unpredictable.[12]

Specific drug considerations

Cardiac medication: Ace inhibitors, beta blockers, calcium channel blockers and nitrates enhance the hypotensive effect of midazolam[20]

Erythromycin effects metabolism of midazolam[21]

Midazolam interacts with herbal medicine potentiating CNS depression[22]

Opioids such as heroin can cause significant respiratory depression with midazolam. Veins are often unusable[1]

Cocaine adversely effects respiratory/cardiovascular control with sedation[1]

Cannabis makes oxygen saturation levels unpredictable during sedation[1]

Central nervous system depressants for mental health conditions can act synergistically with benzodiazepines. Tolerance may have developed in these patients similar to recreational drug users.[20]

Assessment of vital signs

Blood pressure, oxygen saturation, BMI, heart and respiratory rate must provide a satisfactory baseline indicating fitness for sedation. Sometimes a screening may reveal an unknown condition requiring further investigation by a GP before sedation can be performed.[16] It is important to predict a patient's risk for conscious sedation. Hospital-based sedation is advisable in the following instances:

- Baseline SaO2 is <95 per cent
- Patients with respiratory disease such as COPD
- Patients classified as ASA 3-4

Patients with a history of more than one attempt for previous intubation.[23]

BMI

A patient with a BMI of <35kg/m2 is suitable for primary care CS. Caution is advised with a BMI of 35-40kg/m2 especially if the patient has co-morbidities such as hypertension and diabetes.

The standard dental chair has an upper weight limit of 140kg making referral to hospital sometimes necessary for the use of a DIACO chair which can hold 500kg. Successful

cannulation can be difficult due to the effects of increased adipose tissue on vein morphology.[24]

Sleep apnoea is more common in individuals with a BMI of >35. Sedation is an absolute contraindication in patients with obstructive sleep apnoea(OSA). The pharyngeal airway dilator muscles are highly sensitive to benzodiazepines.[25] The STOP-BANG questionnaire is a useful screening tool for identifying potential cases of OSA.[26]

Malampatti system

This is a visual assessment of the distance from the base of the tongue to the soft palate. A Class 3 or 4 patient is at increased risk of airway obstruction. The patient must be asked to protrude their tongue. It is important to document the level of visibility of the back of the mouth.[27]

A difficult airway can also be judged if the thyromental distance is <6.5cm. A short, fat neck and receding jaw is an airway risk. Males are more susceptible to airway obstruction.[28]

Indications for inhalation sedation (IS)

IS can be used from the age of three.[29] Patients who are allergic to benzodiazepines or those tolerant to them due to treatment for anxiety/insomnia are suitable for IS. In patients previously addicted to benzodiazepines IV, CS can reactivate dependence making inhalation sedation safer.[30]

Contraindications to IS

IV sedation suits mouth-breathers, anyone taking methotrexate due to the anti-folate effects of IS and also someone who had vitreoretinal surgery within 12 weeks. Severe autism or ADHD patients are unsuitable for IS due to compliance difficulties. A hearing impediment reduces the hypnotic suggestion aspect of IS treatment making CS more effective.[16]

Non-titratable sedation techniques

If titratable techniques are deemed inappropriate then oral or intranasal sedation may be considered. Special care dental patients with challenging behaviour benefit greatly from these advanced techniques.[31]

Conclusion

A treatment plan is devised by combining the information gathered during history-taking and the clinical exam. The patient must be of sound mind to give their valid written consent at a visit separate to treatment. If needed, the presence of a responsible adult escort must be possible.[32] Careful consideration regarding the nature of the patient's disease and functional capacity is essential. The dentist has a duty of care to predict patients at risk of complications with CS such as cardiac, respiratory or neurological deterioration. After risk stratification, the optimum timing and setting for treatment must be decided to ensure patient safety.

There will always be a place in dentistry for general anaesthesia, especially for treatment plans involving extensive work on multiple teeth that make multiple sedation visits impractical and overall more expensive. Also in certain sedation cases, patients can move unpredictably, compromising the quality of the dentistry performed, which may necessitate the use of general anaesthesia.

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SALIVARY DIAGNOSTIC TESTS OF PERIODONTAL DISEASES

PERIODONTOLOGY

Researchers looking for unequivocal markers of periodontitis to develop a simple test for infection have been focusing on saliva, a mirror of the body

DR FABIANO GALASSI

Periodontitis is a term that refers to a heterogeneous group of diseases characterised by loss of the tooth-supporting tissues. It is well established that periodontal diseases are of an infectious nature and the impact of dental plaque biofilms on the etiology of periodontal diseases has been studied in details. In fact, certain bacterial pathogens are considered to play a significant role in the pathogenesis of periodontitis, formation of the periodontal pocket, destruction of the connective tissue and resorption of the alveolar bone.

Therefore, the primary cause of periodontitis is bacteria, and when the quantitative and qualitative change in bacterial composition in the oral cavity is such that homeostasis cannot be maintained any longer, the host response appears to be impaired and the activity of the tissues become abnormal.

A publication from Hasturk et al. (2007) outstandingly defined the possible pathogenesis of the periodontal infections; in fact, Hasturk and co-workers suggested that while the etiology of periodontitis is bacteria, the pathogenesis is inflammatory. In other words, the interaction between the pathogenic bacteria and the host's defence system could lead to the development of an inflammatory process.

Once periodontitis is established, the inflammatory infiltration of periodontal tissues is composed of different immunological cell types. These cells produce a large repertoire of specific types of cytokines and chemokines, which could play a significant role in the pathogenesis of periodontitis. Some of these, together with the end products of periodontal tissue destruction, could act as possible biomarkers and eventually could have diagnostic value by identifying patients with enhanced disease susceptibility and sites with active disease. They could also serve as surrogate end points for the monitoring of the patient treatment effects and treatment status, to tailor the maintenance care based on the biological needs of the subjects.

These biological mediators could support the clinical measurements already used in the routine diagnosis of periodontal diseases such as probing pocket depth, bleeding on probing, clinical attachment levels, plaque index and radiographs quantifying alveolar bone level. Nevertheless, they are often of limited usefulness because they are indicators of previous periodontal disease rather than the present disease activity. In addition, current periodontal examination procedures performed at single visit cannot determine whether or not sites are currently undergoing additional attachment loss.

As various immunopathogenic mechanisms are involved in the disease process of periodontitis, a combination of indicators is needed to improve the specificity of periodontal disease diagnosis. On the basis of the current understanding of the complexity of periodontitis, the identification of one single diagnostic marker for all forms of periodontal disease seems illusionary.

Nevertheless, researchers have been searching actively for unequivocal markers of periodontitis in different biological sources such as blood or serum, subgingival plaque sample, gingival crevicular fluid (GCF) and saliva to develop a simple test, to be used as chairside test or home-use device, to determine whether a patient suffers from periodontitis and needs therapy, as opposed to another patient who needs no intervention even though he/she has gingivitis and/or to establish a "custom-made" frequency of recall appointments.

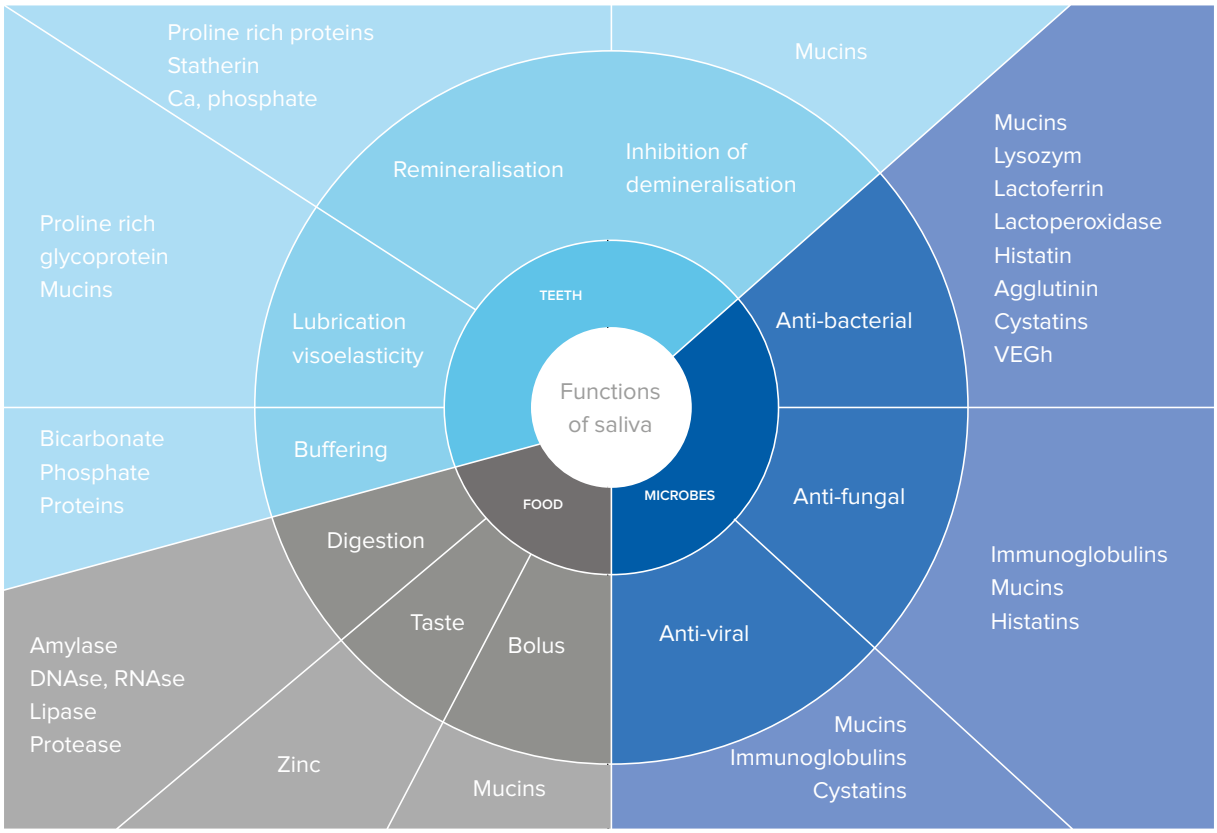
The aim of this literature review is to summarise data from the literature on periodontal disease markers with special focus on saliva.

Saliva and candidate biomarkers of periodontal diseases

Saliva is a mirror of the body that contains a large number of proteins and peptides that are responsible for maintaining the integrity of the oral cavity (see table opposite page).

Saliva also meets the demand for inexpensive and easy-to-use diagnostic aids due to the non-invasive and simple nature of its collection. It can be collected with or without stimulation. The collection of gland specific saliva (from parotid, submandibular and sublingual gland) can allow differences in the amount of fluid and constituents of each gland to be determined. Differently, whole saliva consists of a mixture of oral fluids, and includes secretions of the major and minor salivary glands and constituents of non-salivary origin, such as derivates from GCF, serum and blood cells in case of bleeding gingiva or oral wounds, and expectorated bronchial secretions. It might also contain bacteria, bacterial products, viruses, fungi, desquamated epithelial cells and food debris.

The use of saliva for diagnosis of periodontal disease activity has been the subject of considerable research activity; in fact, it contains locally and systemically derived markers of periodontitis, thus offering the basis for a specific test. Several potential markers have been investigated to produce an assay



system suitable for use in dental practices.

The main candidates in the search for biomarkers of periodontal disease activity fall into different general categories:

1 Inflammatory and immune products
2 Host-derived enzymatic and non-enzymatic proteins
3 Connective tissue degradation products
4 Products of bone resorption
5 Human salivary proteome and transcriptome
6 Substances associated with putative pathogens.

Inflammatory and immune products

While the bacterial infection triggers the destructive process, the host immune response to the bacterial challenge is responsible for the molecular processes leading to periodontal tissue destruction. The interaction between the pathogenic bacteria and their (toxic) components and the host defence system could lead to the development of a periodontal pockets, loss of connective tissue, and bone resorption. Once periodontitis is established, the inflammatory infiltration is composed of different cell types, such as neutrophils, T and B lymphocytes, and macrophages migrating into the perivascular connective tissue.

The substances released by the inflammatory immune cells as well as by resident fibroblasts endothelial cells and others during the disease process include a large repertoire of molecules, such as antibodies, complement proteins, acute phase proteins and a broad range of inflammatory mediators (i.e. cytokines, chemokines, arachidonic acid metabolites etc.).

A recent investigation found that salivary level of MIP-1α was significantly correlated with Aggregatibacter actinomycetemcomitans positive students who developed periodontal disease six to nine months before radiographic detection of bone loss. MIP-1α level was also significantly associated with increasing probing depth and the number of pockets > 6mm (Fine et al. 2009).

Host-derived enzymatic and non-enzymatic proteins

Non-enzymatic proteins have been examined in a number of studies to investigate whether or not there was a relation between periodontal disease and these proteins in saliva. For example, platelet-activating factor (PAF), a potent phospholipid inflammatory mediator, was identified in the mixed saliva of subjects with periodontal disease. Salivary PAF levels have been found to be significantly higher in untreated chronic periodontitis patients compared to controls (Garito et al. 1995). Its levels correlate with clinical indices of disease severity and extent of the disease. Furthermore, a longitudinal evaluation of the effect of periodontal therapy on salivary PAF levels in chronic adult periodontitis patients was studied and initial salivary PAF levels were found to be decreased following supragingival plaque control and further reduced following scaling and root planning (Rash et al. 1995).

Saliva contains also numerous enzymes that degrade proteins, proteoglycans, lipids and carbohydrates. Enzymes in saliva can originate from GCF, salivary glands, microorganisms, epithelial cells and polymorphonuclear leukocytes (PMNs). PMNs are an important cell type in host defense against periodontopathogenic bacteria. Their primary role of phagocytosis of microorganisms may promote local tissue destruction by the release of tissue-degrading enzymes. In fact, PMNs granules contain hydrolytic neutral enzymes,

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such as elestase, cathepsin B, cathepsin D, β-glucuronidase. Matrix metalloproteinases (MMPs), peroxidase, lysozyme, lactoferrin, and many other enzymes are also sheltered in PMNs granules. Some of these are now discussed below.

MMPs represent a neutrophil granule content, which are involved in many biological processes, including the tissue destruction in periodontitis. MMPs degrade mostly components of the extracellular matrix (ECM) and many non-ECM molecules. The major MMPs in neutrophils are MMP-8 and -9 and these are the main collagen-degrading enzymes in saliva. Since MMPs can potentially cause tissue damage, their activity is controlled by four members of the tissue inhibitor of metallo-proteinase family (TIMP). The presence of MMPs in saliva has been studied comprehensively with ELISA techniques. The levels of MMP-1, -3, -8 and -9 and their endogenous inhibitor, TIMP-1, in saliva of patients with adult periodontitis were compared to localised juvenile periodontitis and controls. Both MMP-1 and TIMP-1 were detected in all studied saliva samples, but interestingly no significant differences were detected between adult periodontitis and healthy control groups (Ingman et al. 1996).

Antioxidant activity and capacity

PMNs and macrophages produce reactive oxygen species (ROS) within their phagolysosomes and these may spill over into the tissues during phagocytosis or when they degenerate. This may cause bystander tissue damage around these cells. ROS have a great capacity to damage cells and tissues and are scavenged for within the tissues by antioxidants.

The antioxidant capacity of saliva has been investigated in healthy and chronic periodontitis patients. The major aqueous antioxidant component of whole saliva was found to be uric acid with lesser contributions from ascorbic acid and albumin. Using biochemical methods, the antioxidant capacity of the saliva was not found to be compromised in chronic periodontitis patients, and this was attributed to increased salivary flow and antioxidant flow from GCF.

Another research group investigated pheripheral (serum) and local (saliva) total antioxidant (TAO) capacities of chronic periodontitis and healthy patients using an enhanced chemiluminescent assay (Chapple et al. 1997). There were no differences in the serum TAO capacities but the salivary TAO capacities were significantly lower in the chronic periodontitis group compared with the healthy group. Thus the saliva of chronic periodontitis patients may have reduced TAO capacity, which could result from increased ROS production by inflammatory cells. The enhanced chemiluminescent assay provides a rapid simple method of measuring the total antioxidant defense in small volumes of biological fluid and hence could have diagnostic use. More work on its relationship to the progression of periodontal disease, and its capacity as biomarker needs to be done before this could be properly assessed.

Another enzymatic category, which has received the attention of periodontal researchers, is represented by enzymes released by dead cells (cytosolic enzymes). Aspartate amino transferase (AST) and lactate dehydrogenase (LHD) are soluble cytoplasmic enzymes that are confined to the cell cytoplasmic enzymes, and they can be released by dead or dying cells. Since cell death is an integral and essential component of periodontal tissue destruction, these enzymes

Saliva contains numerous enzymes that degrade proteins, proteoglycans, lipids and carbohydrates

should be released during this process and should pass with the inflammatory exudates into GCF and saliva.

While we do not have relevant studies on AST in saliva, a recent report demonstrated an increased LDH salivary activity in association with periodontal disease, specifically with the presence of calculus and pockets greater than 5mm (de La Peña et al. 2007). Clearly these markers are yet to be further investigated for their potential as salivary biomarkers for periodontitis.

Of the potential markers, PMNs-derived enzymes appear to be worthy of further study. The concentrations of host-derived elastase, chitinase and β-glucuronidase are increased in patients with periodontitis and decrease following therapy (Lamster et al. 2003).

However, at the present state of knowledge, their salivary levels are not predictive of disease activity, which is the basic requirement of a diagnostic test.

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Dr Galassi received his Dental Degree from "La Sapienza" University of Rome. After two years general practice, he moved to Dublin where he continued working as a general practitioner until 2008.

Dr Galassi graduated with Honours from the MSc programme in Periodontology and Implant Dentistry at the Academic Center for Dentistry in Amsterdam (ACTA), in 2011.

Dr Galassi has great interest in dental research, and he has published in peer-reviewed journals and written some chapters for periodontology textbooks.

Dr Galassi is a member of the European Federation of Periodontology (EFP) and the Italian Federation of Periodontology (SIdP). Now works in the Seapoint Clinic and Gleville Dental and his focus is on the treatment of periodontal disease, bone regeneration, cosmetic periodontal plastic surgery and implant dentistry.

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THE POWER OF REGENERATION

IMPLANTOLOGY

The wide-ranging application of platelet rich growth factor Endoret (PRGF) in surgical dentistry is helping to make outcomes safer and more predictable

DR JEROME P SULLIVAN

Due to its powerful regenerative properties, platelet rich growth factor Endoret (PRGF) is being increasingly used in many fields of medicine, such as plastic surgery and dental implantology.

It has been shown to reduce scarring, rejuvenate damaged facial tissue, and accelerate wound healing. Endoret (PRGF) is proven to promote angiogenesis, cell migration, cell proliferation and the secretion of growth factors active in the wound healing cascade, while at the same time decreasing inflammation and pain.

Through this simple case report, I would like to show how Endoret (PRGF) can be applied in the field of dental implantology to make treatment outcomes more predicable by optimising healing conditions.

Preparation of platelet rich growth factor (Endoret)

Step one is to collect a small quantity of the patient's blood. Four collection tubes, each containing 9ml of blood, are filled. A total of 36ml is usually sufficient for most implant cases (Fig 1) However, in larger cases where more augmentation is required it is usual to collect eight tubes (72ml).

Once the blood has been collected, the patient is asked to return to the waiting area while the fractionation process is carried out which takes about 15 minutes. The collection tubes are transferred to the centrifuge machine (Fig 2). At the end of the eight-minute cycle the collection tubes are immediately returned to their stand. It is important that this is done carefully with minimal disruption to the blood, which is now separated into four distinctive bands.

Each tube is now marked. The erythrocytes are heaviest and lie in the bottom half.

Next is a thin buffy layer approximately 0.5cm thick. This is the leukocyte fraction which must be avoided as these cells will evoke pain and inflammation.

In the top half of the tube is the liquid fraction of interest. Concentrated in platelets, plasma and growth factors, this straw-coloured layer is itself divided into two fractions: 1 and 2.

While fraction 1 (F1) is richer in the fibrin, which will create the collagen matrix for wound healing, fraction 2 (F2) contains the greatest concentration of platelets and protein markers. It is these protein markers which signal to the regenerative cells and trigger their activity.

Marking each tube, a safe distance of 0.5cm from the visible upper limit of the buffy layer, you then measure two centimetres up and mark the tube again. This threshold divides the most superior layer F1 from the second layer F2 (Fig 3).

Using the plasma transfer device,F1 and F2 are then separated into labelled collection tubes F1 and F2. Without activation, these fractions will remain viable for up to four hours.

At this point, I will normally ask for the patient to return and we follow the usual asepsis protocol for surgery and deliver the local anaesthetic and or intravenous sedation where required. When placing implants, I always require two dental surgery assistants, one sterile and the other non-sterile.

Depending on the planned length of the procedure, I will indicate to my assistants when F1 and F2 should be activated with calcium chloride (Fig 4). Once activated the fractions are transferred into sterile glass bowls and placed into a special oven that incubates them at body temperature for 15-25 minutes (Fig 5).

Endoret (PGRF) is used in three distinct forms. There is the clot (F2), into which autogenous bone collected during

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implant site preparation is added, and also xenograft in situations where more augmentation is required (Fig 6).

There is the fibrin membrane (F1), which is placed on top of F2 (Fig 7). This stimulates fibroblasts which accelerates wound closure and often creates thicker mucosal biotype.

The liquid form of Endoret (PRGF) is used to promote healing after ridge-splitting procedures, and to improve implant integration by up to 40 per cent when the implant surface is coated immediately before placement.

In this simple case, all three forms of Endoret (PRGF) were used to achieve a small lateral augmentation of the implant site, as well as promote osseointregration of the implant and wound closure by primary intention.

A number 15 scalpel was used to make a palatally inclined incision at the site of the missing upper right first premolar. This cut was extended mesially and distally around the adjacent teeth without relieving incisions.

A number 12 scalpel was then used to make a periosteal releasing incision in the pocket flap created being mindful of the proximity of the infra-orbital nerve.

After the creation of the pilot hole using a drill with irrigation at 1800rpm, the remainder of the osteotomy was created following a biological drilling protocol advocated by Professor Eduardo Anitua, Scientific Director of BTI Biotechnology Institute.

This involves preparation without irrigation at speeds of between 50 and 150 rpm. A high level of control can be maintained at these low speeds while biologically viable autogenous bone debris can be collected from the drill flutes, which is transferred to the F2 for later augmentation.

Immediately before implant placement, the selected implant's entire surface was dipped in liquid Endoret (PRGF). The liquid was also injected into the osteotomy. Engine placement of the Implant then proceeded as per normal protocol.

Lateral augmentation was completed easily and safely without the need for a membrane and in this case, without xenograft either. The F2 clot containing the collected autogenous bone drill debris was first placed against the bone (Fig 8). In situations where more lost bone volume needs to be replaced, a second clot of F2 containing xenograft is layered on top of the autogenous layer. Finally, the F1 fibrin membrane was placed on top (Fig 9).

The wound was closed with three interrupted sutures,which were removed after four days (Fig 10).

The autologous nature of Endoret (PRGF) means it has many applications in dentistry beyond the simple implant case described here.

In the atrophic maxilla where residual bone height below the sinus is very low, Endoret (PRGF) in combination with short implants can be used in a transalveolar elevation approach to gain 2-3mm of additional bone height very safely. Such an approach is now being used widely to avoid more traditional and invasive methods such the lateral window technique.

In the field of oral surgery accelerated and improved healing has obvious benefits; for example, the avoidance of dry socket through socket preservation with Endoret (PRGF), and the treatment of bisphosphonate osteoradionecrosis where necrotic bone has been resected.

In this simple case, all three forms of Endoret (PRGF) were used to achieve a small lateral augmentation of the implant site

Combining Endoret (PRGF) with traditional guided bone regeneration procedures significantly reduces the incidence of wound dehiscence as well as eliminating the need for costly and technique sensitive collagen membranes. When mixed with xenografts such as Bio Oss, Endoret (PRGF) will attract the osteogenic cells necessary to promote true bone formation.

Backed up by more than 15 years of research, and with more than 700,000 patients treated from 20 countries without adverse effects being reported, the applications for Endoret (PRGF) in surgical dentistry are wide-ranging, predictable and safe.

MORE INFORMATION

For more information please contact Info@gracefielddental.ie

ABOUT THE AUTHOR

Dr Jerome P Sullivan BDS, DipImpDent RCS (Eng), PG cert sed UCL qualified from Manchester University in 1993. He graduated with a diploma in dental implantology from the Royal College of Surgeons (UK) in 2011, and was awarded an inaugural gold medal for the high standard of his clinical cases. He has become increasingly involved in the field of platelet rich growth factor, and he now uses this technique to deliver implant solutions to patients with complex dental needs

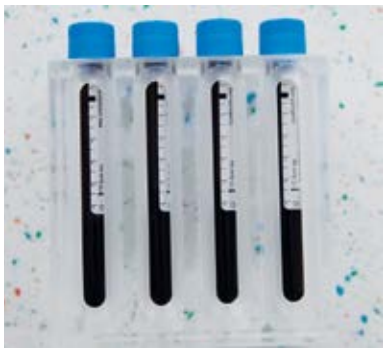

FIGURE 1
Collection tubes each containing 9ml of blood

FIGURE 2
Centrifuge machine being loaded

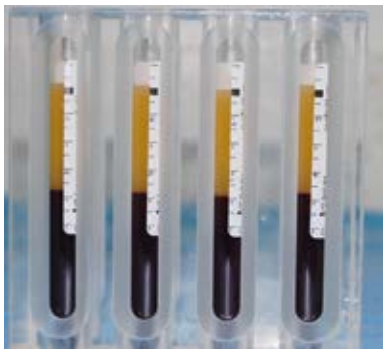

FIGURE 3
Blood now separated into fractions

FIGURE 4
Fraction 1 and Fraction 2 collection tubes

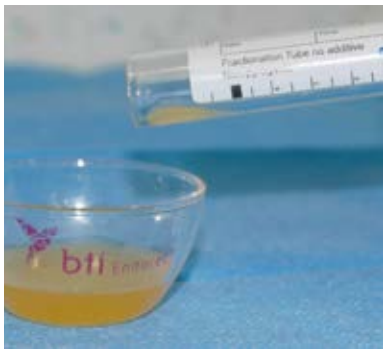

FIGURE 5
Fraction 2 being transferred to glass bowl ready for incubation

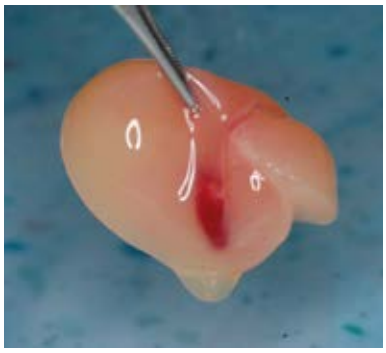

FIGURE 6
Fraction 2 clot containing autogenous bone debris

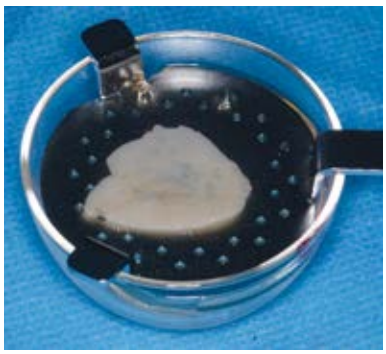

FIGURE 7
Fraction 1 clot shaped in a special press to form a membrane.

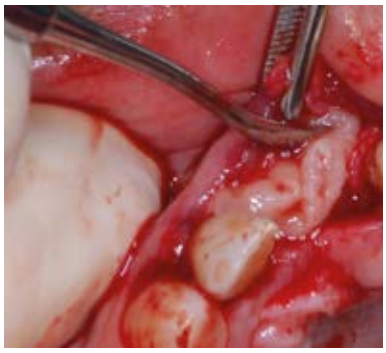

FIGURE 8
Fraction 2 clot being placed against the bone

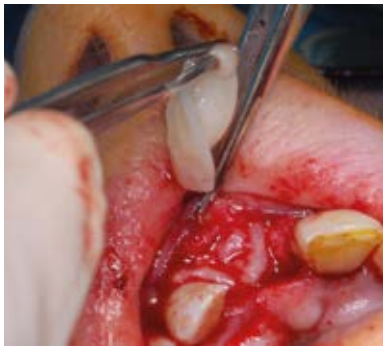

FIGURE 9
Fraction 1 fibrin membrane positioned over Faction 2 clot

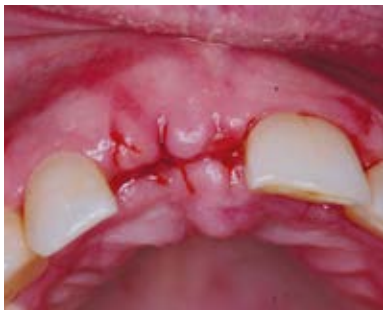

FIGURE 10
Healing at four days.

PROBLEMS OF A PHOBIC PATIENT

CASE FILES

Aubrey Craig recounts the case of a challenging restoration with composite filling and a subsequent root canal treatment that led to a claim of clinical negligence

Day One

Ms B attends as a new patient at a local dental surgery complaining of sensitivity in a number of teeth. A dental associate – Mr W – arranges bitewing radiographs and these show extensive distal caries at LR6 and caries in a number of other teeth. He advises that LR6 is of most concern and recommends treatment by an amalgam filling, given the size and depth of the caries. Ms B insists on a composite filling as it looks more "natural". Mr W agrees but records his discussion with the patient regarding the pros and cons of composite versus amalgam filling in this particular case.

Day Seven

Mr W places an extensive composite filling at LR6 but moisture control is difficult as Ms is intolerant of dental dam, has excess saliva and there is gingival bleeding due to the size of the cavity. Ms B is also phobic and "fidgety" and keeps closing her mouth. Mr W informs the patient that given the extent of the cavity and difficulty of the procedure, root canal treatment (RCT) may be necessary in the future if the tooth does not "settle". Ms B is also advised that a small amount of decay remains, again due to the size of the cavity.

Four months later

Ms B attends a different dentist complaining of pain in LR6. The dentist also notes untreated caries in three other teeth. A radiograph reveals decay under the filling at LR6 and the dentist undertakes the first stage of RCT and the tooth is appropriately dressed.

Two weeks later

The patient returns to the new dentist and undergoes root canal treatment on LR6 and another appointment is scheduled to carry out further restorations on the other untreated caries, including crowning of LR6.

A letter of claim for clinical negligence is received by Mr W from solicitors acting on behalf of Ms B. It alleges incomplete removal of caries at LR6 and also inadequate moisture control resulting in a reduced bond in the composite filling causing recurrent caries and chronic pain with later irreversible pulpitis necessitating root canal treatment.

Ms B claims damages amounting to the cost of the RCT and crowning of LR6 as well as loss of earnings due to time off work due to chronic pain.

MDDUS obtains copies of the patient notes and all relevant radiographs and sets out a letter of response based on a detailed case report. It is argued that Mr W carried out the initial restoration on LR6 in very challenging circumstances and to the best of his ability – as would any reasonable and competent general dental practitioner.

Moisture control was difficult given the problems of a phobic patient, restricted access and intolerance of dental dam. Mr W used high aspiration, cheek retraction and cotton wool to absorb moisture the best he could. To the extent there may have been a reduced bond this was more likely to do with the extent of the cavity and use of a composite filling rather than amalgam as was advised by the dentist. Amalgam may not be as aesthetically pleasing, but it will restore a tooth even in the presence of moisture whereas with composite materials moisture control is essential as bonding is actively to the tooth substance.

In regard to causation, MDDUS argues that the root canal treatment could not be the result of any act or omission by Mr W. The patient presented with extensive caries in LR6 and rejected the dentist's advice on an amalgam filling and – on the balance of probabilities – would have thus required root canal treatment at LR6 in any event.

It is clear that not all the decay was removed in Mr W's restoration of LR6, but it would not be unreasonable to leave some decay, restore the tooth appropriately, advise the patient accordingly and keep the tooth in question under review both clinically and radiographically.

MDDUS sends the letter of response and receives notification that the case is being dropped.

Key points

- Keep records of discussions with patients in support of shared decision-making and consent.
- Advise patients of likely prognosis even with adequate treatment.
- Consider being more proactive in advising patients on the "best" treatment option.

ABOUT THE AUTHOR
Aubrey Craig is head of dental division at MDDUS.
For more information, go to www.mddus.com

Management

PRACTICAL INFORMATION FOR PRACTICE MANAGEMENT PROFESSIONALS

DATA DRAMA

WHY YOU AND YOUR PATIENTS HAVE NOTHING TO FEAR

See page 62

GDPR'S TRUE AIM IS TO TICK OFF THE BAD BOYS

IN A LIGHT-HEARTED LOOK AT THE NEW DATA PROTECTION RULES, SUSIE ANDERSON-SHARKEY EXPLAINS WHY THE DENTAL COMMUNITY AND THEIR PATIENTS SHOULD HAVE NOTHING TO FEAR

By the time this article goes to print, the new GDPR regulations will have come into effect and we will either be heaving a huge sigh of collective relief or running for the (very distant) hills.

For many months now there have been Chinese whispers regarding the new rules and regulations encompassing GDPR. It has spread fear and dread into the hearts and minds of the business community from Lands End to John O'Groats, and I've heard from various camps that it is simply a step too far, and some people are turning their backs on owning and/or running a business.

So is there any foundation to these fears or is it a case that this is the Y2K of 2018 and indeed, life as we know it will still be more or less exactly the same albeit with a few caveats thrown in after 25 May?

In its simplest form, GDPR forces us to have a look at the data we hold on our staff and our patients, how we hold that data and who has access to it. For months I have been listening to the phrase "what we know so far is…" and the reason for this is that someone, somewhere, is sitting behind a desk still making decisions regarding how GDPR is going to play out in our everyday lives.

And let's get something clear. Although we have to jump through the GDPR hoops, the rules and regulations, belt and braces, are not first and foremost for small businesses who are toeing the party line and ticking the already vast numbers of boxes that all businesses must adhere to. This legislation is aimed at the bad boys of business who want to use our own private data to further their own, sometimes dubious, causes.

If you do all you can to make sure you've ticked all the boxes – and ensure your patients have ticked the boxes too – then I really think you can sit back and get on with your day-to-day business without looking over your shoulder to check that Sergeant GDPR isn't lurking in the shadows waiting to pounce.

Most practices will be running some kind of dental software, whether that is SOE, R4, Dentally or some other system. These companies have been working over the past few months to update their own systems as well as yours so that the hard work is taken out of your hands. I can only speak for SOE, which is the system we use at Dental fx, but already on the updated Clinipad is a privacy statement, signable by the patient. If you don't use Clinipad, there are now the 'preferences' options which should be asked as each patient comes for their six-monthly check-up. Sending a text or email to confirm a patient's appointment is not classed as marketing, and it is still perfectly lawful, not to mention sensible, to send these appointment confirmations to your patients. Judging from feedback from our patients, this is really appreciated, and to this day I have not yet had a patient say they would rather not receive it.

So what about your website? Again, if you have a company maintaining your website they will be implementing the changes necessary to comply with the new rules and regulations. They will no doubt have contacted you by now to let you know how they are ensuring your website is totally compliant, and once again the hard work has been taken off your hands.

One of the main areas they will be updating is the privacy policy on your website. Perhaps up until now you haven't had a privacy policy, but this is one area where the rules are changing, and we now need a clearly defined privacy policy on our websites. I also have a hard copy at reception in case anyone asks to see a copy.

So, my advice (although not exhaustive!) on GDPR is:

1. Check that your dental software company has made the necessary changes.

2. Check that your website provider has updated your website to be GDPR compliant.

3. Print out a privacy statement and have it on hand in case anyone asks to see it.

4. Have a meeting with all of your staff and go through the important points regarding GDPR.

5. Have a clear out of any paperwork you don't need…there will be a lot of it.

6. Remember that everyone is in the same situation; yes, we need to be compliant and tick the boxes, but the big guns are out for the big guys, not primarily small dental practices working to make an honest living.

Sit back and enjoy the ride!

IF YOU WISH TO CONTACT SUSIE ABOUT THIS ARTICLE OR OTHER PRACTICE MANAGEMENT ISSUES SHE CAN BE REACHED AT SUSIE@DENTALFX.CO.UK

A MORE BALANCED VIEW – THE ROLE OF THE KPI

INSTEAD OF COUNTING ANYTHING AND EVERYTHING, STRIVE TO GET A BETTER, FOCUSED PERSPECTIVE OF THE MEASURES THAT DRIVE THE PERFORMANCE OF YOUR BUSINESS

ALUN K REES BDS

According to *Forbes* magazine the phrase "If you can measure it, you can manage it" originated in the 15th century. The late Peter Drucker, probably the greatest thinker and writer on management and business, took the phrase and modified it to "What gets measured gets improved".

It is difficult to dispute Drucker's wisdom; if you want to lose weight you need to know from where you are starting and what the scales show you. If cycling or running is your thing, then you will almost certainly want to know how far you travelled and how long it has taken.

However, some seem to presume that just knowing these figures will be an incentive to improve them – sadly that does not always follow. For change to happen there has to be a good reason and motivation.

W. Edwards Deming, the man responsible for Japan's post-war success, argued: "Just because you can measure everything doesn't mean that you should." Certainly, I have visited some dental businesses where the counting of anything and everything has become such a laborious ritual that there is no time or energy for any sensible analysis or interpretation of results.

The acronym KPI, short for key performance indicator, is regularly used, often without thought for its true definition: "A KPI is a quantifiable measure a company uses to determine how well it meets the set operational and strategic goals."

Unfortunately many dental businesses have little more in the way of set goals beyond "survive until the end of the month". This results in them floating with the tide, at the whim of the changeable business weather and unsure of their direction.

Often when KPIs are measured they are limited to the financial metrics. As important as these are, they tend to overemphasise the short term. To be a winner in the long term, a more balanced view is needed. Kaplan & Norton writing in the *Harvard Business Review* in 2005, described four perspectives of the measures that drive performance in what they called "The Balanced Scorecard":

Financial Perspective
How efficient are the practice operations?

> "FOR A BIGGER PICTURE OF THE GENERAL HEALTH OF YOUR PRACTICE, YOU NEED TO MEASURE MUCH MORE THAN MONEY"

Customer Perspective
How do our patients see us?

Internal Business Perspective
What do we need to excel at?

Innovation and Learning Perspective
How can we continue to improve and create value?

FINANCIAL PERSPECTIVE

Let's start with the financial KPIs. These need to be measured daily, weekly monthly, quarterly and annually. They include:

- production – individual and the practice as a whole
- average daily productivity of all fee earners via daybook
- total practice expenses
- expenses broken down by categories
- net profit
- cash flow, highs, lows and all points in between
- percentage net profit of practice every month as a graph
- bank accounts with the worst and best figures as graphs
- analysis of and changes in operating expenses
- average production per patient
- profit per practitioner
- comparison of expenses with budgets
- debtors
- creditors.

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CUSTOMER PERSPECTIVE

Our patients tend to value things in terms of time, quality, performance and service and, of course, price. So we should record:

- number and (accurate) source of new patients
- number of enquiries vs. number of new patient appointments booked
- number of patients not returning to the practice, either for treatment or recall
- number of complaints
- recalls – expected vs. attendance
- average appointment time and waiting time (punctuality)
- emergency and post-treatment visits
- results of post-treatment questionnaires.

INTERNAL BUSINESS PERSPECTIVE

Here we examine where we need to excel:

- percentage of cancellations/rescheduling
- range of treatments offered
- uptake of treatments
- external and internal marketing initiatives and systems
- team – amount of "pain", including unplanned days off, lateness and sickness (using the Bradford Factor Calculator to measure)
- staff turnover, and the results of exit interviews
- understanding that the practice brand is based on consistency with the same excellent experience for everybody
- our patient journey is documented and reviewed regularly at team meetings.

INNOVATION AND LEARNING PERSPECTIVE

- Can we continue to improve and create value?
- What skills need to be learned to expand the treatments offered?
- All team members have personal development plans (PDPs), which are reviewed at six-monthly appraisals.

BENCHMARKING

Is defined as evaluating something by comparison with a standard, ideally best practice. In principle, this sounds good. However, in many cases it is difficult to know if the "industry standard" is completely relevant to your business. It may be purely of interest. Instead, I will usually compare practices with their own history, monthly, quarterly and yearly and the goals they have set for themselves to attain.

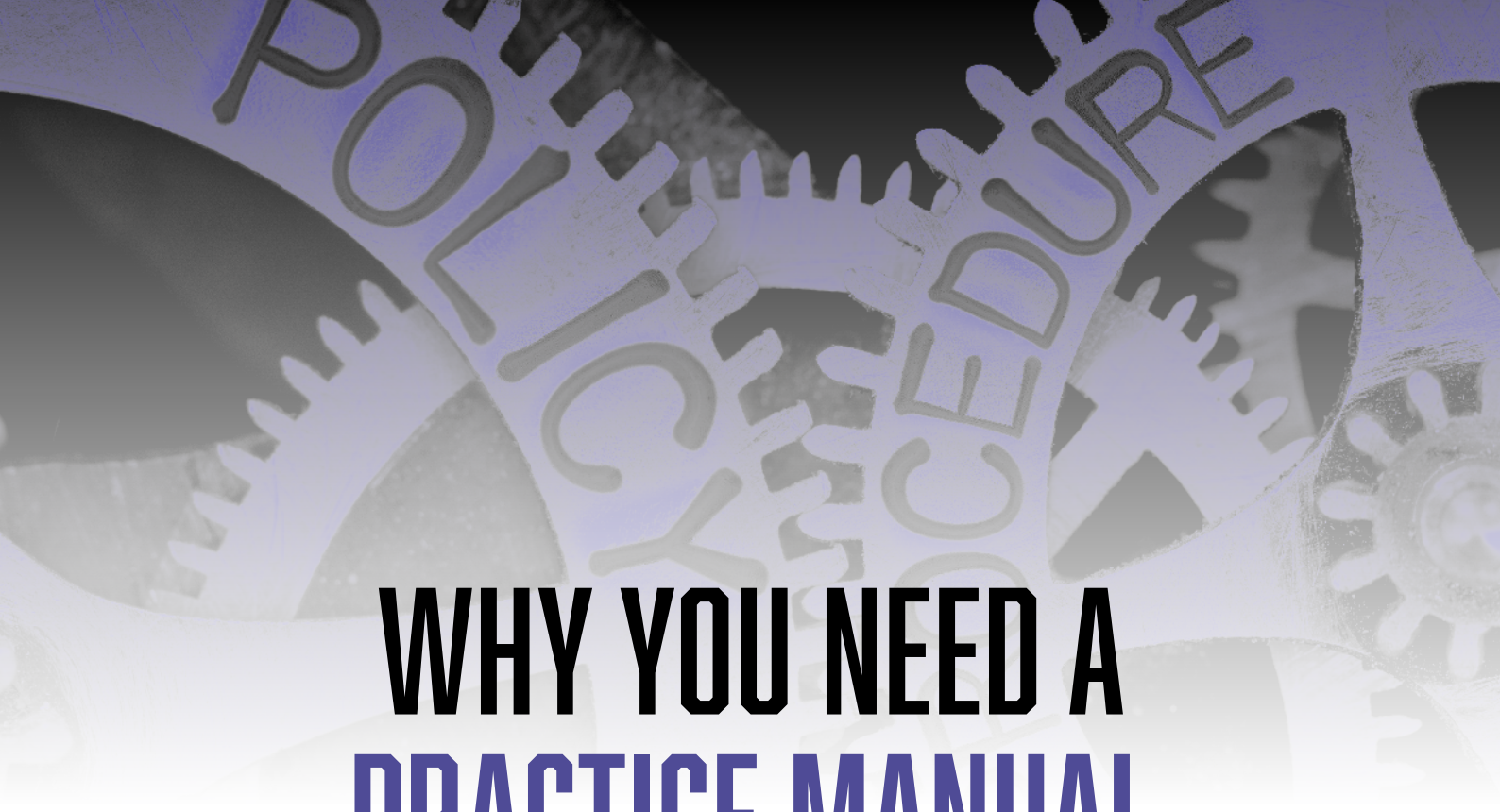
The use of KPIs should not be restricted to practice owners and managers. They should be shared across the board with all team members who should understand their use and importance.

Often I find practices restrict their measurements to purely the financials and thus have taken the short-term view.

For a bigger picture of the general health of your practice, you need to measure much more than money.

ABOUT THE AUTHOR

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 & broadcaster. He brings the wisdom gained from his and others' successes to help his clients achieve the rewards their work and dedication deserve.



WHY YOU NEED A PRACTICE MANUAL

IN THE FRENETIC PACE OF EVERYDAY BUSINESS, HAVING A PROPER GUIDE TO PROCESSES WILL HELP TO CREATE AN EFFICIENT, PATIENT-FOCUSED SERVICE

RICHARD PEARCE

There are a multitude of activities happening within a practice, every minute of every day. Because of the nature of the business, with patients constantly arriving, being treated and leaving there is significant scope for things to go wrong.

Patient payments being incorrectly recorded or lab work not checked can lead to significant disruption behind the scenes at the practice, to patients being inconvenienced and money lost.

Here, we review further why a practice manual can be useful, what it might contain and how to create one.

I can remember when I first starting working in dentistry, I asked a staff member how they dealt with recalls. The vague reply I received did scare me. She said: "Well, (pause for thought), what I tend to do is …!"

Much of the recall process is automated with texts, emails and letters, but there are two elements that currently are not; I would suggest that these could be clearly outlined in a process within our practice manual.

1. Reception staff should know and have been trained in the techniques to get the next appointment/examination booked before the patient leaves. They know how to respond when the patient says "I haven't got my diary, so I can't book it".

2. After the automated part of the recall process (texts, email, etc.), the practice manual then lays out clearly what to do next: how, when, how many calls and so on are made to the patient to get the appointment/examination booked.

If a process is documented it gives it legitimacy. It says to every staff member:

- We want every action here completed to the highest standard.
- We want to do this every time.
- We want to continuously improve.
- If something doesn't work correctly we want to know about it and fix it.

We want to reward staff members who look for the quickest, easiest, cheapest way of completing an action that gives patients a better service.

A practice manual helps when inducting new members of staff. It provides a great way to structure an induction period and ensures that the efficiency that you have spent so long creating within the practice is perpetuated. Your existing staff are not constantly distracted by questions. The new employee can go straight to the manual. Staff appraisals are made easier as staff behaviour can be compared directly with what is written down in your practice manual as "best practice".

> "A COLLABORATIVE APPROACH IS OFTEN BEST. INVOLVING YOUR MOST EXPERIENCED, TRUSTED STAFF WILL GIVE VALUABLE INSIGHT INTO PROCESSES"

So, what might you include in your practice manual? Ultimately, I would suggest every single system, process and procedure. It might be broken down into: reception, clinical and administration. Naturally, there will be overlaps with the policies that you already hold to ensure your compliance with CQC/RQIA, but a policy doesn't always tell you "exactly how we do it, here, in this practice".

HOW WOULD YOU CREATE YOUR PRACTICE MANUAL?

The answer is to start small and build it, one process at a time. Within 10 minutes of finishing this article you could have the start of your own practice manual.

Initially I would strongly suggest having a hard and soft version i.e. create a folder on your PC (in a shared drive, so others can

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access it) and also print each procedure and put it in a file, so it is easy to flick through. Here are the key steps to follow:

- Create 'Contents'
- Create the template for each procedure
- Draft a procedure
- Keep adding more procedures
- Have your practice manual at every staff meeting and refer to it when a particular procedure is discussed
- When a staff member refers to a procedure, ask them to open the relevant procedure (soft or hard copy)
- Have a non-compliance report template, which is available to everyone. Whenever a system failure is found, the staff member who discovered it investigates what went wrong, and they complete a non-compliance report. Note: It is quick and to the point. What is key is that we find what went wrong and fix it. Perhaps by changing some practical aspect of the process or possibly a staff member might need some retraining.

The last three points are very important. Many practices are not process-led and so to 'change' your practice to be process-led you will have to reinforce the message at every opportunity. Even more importantly, however, the staff will need to understand the benefits.

A collaborative approach is often best. Involving your most experienced, trusted staff will give valuable insight into processes, and you might well find that they enjoy coming up with the best way to perform each operation.

Some suggestions for what you might include in your practice manual:

- Appointment booking (how is the ideal day constructed for each clinician?)
- Taking payment (cash, card, cheque)
- Patient recalls (what happens before and after 'automation'?)
- Signing up a patient to the plan
- End of day cashing up
- Confirming patients by telephone (for tomorrow, all appointments over 45 mins?)
- Lab work, in and out
- Materials ordering
- Staff communication (daily huddle, weekly meeting, monthly review).

WHAT IS INCLUDED IN A 'PROCEDURE'?

- Procedure No.
- Title
- Overview – brief description of why this procedure is relevant
- Responsible person(s) – might be "All"
- Procedure
- Date
- Approved by (principal or practice manager)
- Next review date (three, six or 12 months from now).

We all know that every large, successful business has a well-documented system for how they perform their core operations. Tesco doesn't allow their shelves to be stocked just how the operative feels like it. A practice manual will help you to create a patient focused, differentiated and efficient service where patient care is at the centre.

ABOUT THE AUTHOR

Richard Pearce spent some of his early years living in Ballymahon and now lives in Northern Ireland. Following a business career in various sectors and an MBA, he joined his dentist wife in dentistry. Richard combines his wide commercial experience with being attuned to what it is like for an associate dentist, a practice owner and a practice manager. His unique perspective ensures he can assist a practice owner with every area of the practice to create a more profitable practice and to achieve their smart objectives.

SELLING A SHARE OF A PRACTICE

WHAT SEEMS A STRAIGHTFORWARD TRANSACTION CAN HAVE FINANCIAL IMPLICATIONS, AS MARTYN BRADSHAW EXPLAINS

As a company we undertake a number of dental practice sales where we are selling a partnership share rather than the whole practice. It is usual for the retiring partner to offer their share to the other partner(s), and this may well be a written requirement under the partnership contract. If the other partner is willing to buy, then this can often be the easiest transaction for all parties.

LOSING OUT

However, what happens when the partner does not wish to purchase? Usually the principal will need to consider the open market value.

If we assume that the practice is worth £800,000 and each partner has an equal share (which is not normally the case, as I discuss below), the retiring principal would not get £400,000 for their share because there is limited demand for purchasing shares in a practice.

One reason for this is that a prospective purchaser would be coming into a practice with a business partner they do not know. The value achieved is generally 20-30 per cent less than if the person received their share from the whole practice sale.

This would leave the vendor receiving £280,000-£320,000 instead of the £400,000, which is quite a discrepancy. Because there is far less demand for this type of practice, it can take much longer to find a buyer.

The remaining principal may not be concerned about the loss in value for their partner at the time.

However, in (say) 10 years when they are seeking to sell, they will be in a similar position, with a younger partner not wanting to sell their share. The remaining principal sells their share but another £120,000 of value is lost.

SHOULD BOTH PARTNERS SELL?

Where we have been involved in practices where one is looking to sell we suggest having an open discussion with both partners and examine whether it is advantageous for the younger partner to sell at the same time. If the younger dentist has (say) 10 years to their planned retirement, do they just need to make an additional £12,000 per annum for those 10 years against working as an associate?

Well, not quite. Assuming that the younger dentist sells at the same time and achieves the 'extra' £120,000, this would be taxed at 10 per cent (goodwill attracting Entrepreneurs' Relief) and the net position (after tax) would be £108,000. Thus over the 10 years this is £10,800 per annum after tax. Should the principal remain at the practice (and assuming they are a 40 per cent rate taxpayer) they would need to generate extra income of £18,000 to achieve the same net (after tax) income. There is also a consideration that the cash from the sale (even if we consider the extra amount that would be achieved) could be used to clear off a business loan or residential mortgage, which means that the principal would have lower income requirement.

Assuming that the whole practice was then marketed, a purchaser could be found that suits the requirements of the selling principals, i.e. the retiring dentist can stop work yet we would want to ensure that the buyer would want the other partner to remain as an associate post-sale. It would also give the younger dentist a more flexible exit strategy as they could then retire when they wanted, rather than having a more difficult and time-consuming sale ahead of them.

PARTNERSHIP TYPES

If a partnership share was the preferred option, it is important to understand the partnership type and the difference in valuations for both the vendor and the purchaser. Most people mistakenly assume that the share is just 50 per cent (assuming two partners) less the discount but this is not the case.

The type of partnership needs to be considered. The most common is an expense sharing arrangement. As the name suggests, the partners share the expenses equally. Each will have their own level of fee income, which less their share of expenses gives them their profit. If we assume that one partner generates £300,000 in fees and the other £200,000, each taking on the responsibility of £100,000 of expenses, this would leave the first with a profit of £200,000 and the second with a profit of £100,000. While I am not discussing in this article whether this would be a fair or unfair agreement, the important thing to highlight is that each of the shares would have a different value, as the profitability is totally different.

A NEW DEAL

We are starting to see a new trend for dentists opting for an 'associate-led' model in which they each pay themselves as associates, let's say 50 per cent of gross fees, and then split the remaining profit equally. This allows people to see the clear distinction between being a dentist and generating the gross fees and the ownership of the business and the responsibilities and extra profit that come with this.

ABOUT THE AUTHOR
Martyn Bradshaw is a director of PFM Dental and head of sales and valuations. Martyn undertakes dental practice valuations, sales and consultancy work advising internal buy-ins and buy-outs and structures. Go to: www.pfmdental.co.uk

What value is there in 'nothing'?

IN THE PURSUIT OF PROGRESS, LEAVING THINGS ALONE CAN OFTEN WORK BETTER

FRANK MORTON

As a kid, few things scared me, except dentists, needles and the look on my dad's face as my adventures became breaking news.

At the dentist, there were three magic words – "nothing needing done!" What is even better, double whammy, I'd been saved from another dread, needles.

Let's explore this "nothing" that needs done. It involved several parties – me, brushing my teeth twice a day for a couple of minutes, my parents strongly suggesting I brush my teeth daily for a couple of minutes, and the dentist who looked at, poked and prodded teeth and gums before uttering those magic words.

That's a lot of activity leading to "nothing" and real value in knowing things are in good nick; it's reassuring, confidence-boosting news.

We value regular progress meetings, client check-ups if you like, and what clients tell us about them is interesting.

Our clients don't get too excited by one-off big returns. That's the equivalent of spending a day brushing your teeth and thinking that's me for a few years, rather than a daily discipline over the long term. The benefits are self-evident. All clients tell us they want is steady measurable progress toward their personal goals.

We don't do much trading within portfolios. All the guesswork, stress, time and money spent on "Buy! Sell!" action leaves most clients worse off over the long term. Leaving things alone tends to work better.

"Nothing needing done" still makes me feel good. It suggests everything we do behind the scenes reviewing and examining our investment philosophy, our proposition and our partners works and results in our clients moving ever closer to their future ambitions.

Don't ever confuse "nothing needing done" with inactivity. It takes a lot of effort to make things look that good.

MORE INFO
Frank Morton is director of wealth services at Anderson Anderson & Brown Wealth Ltd, Chartered Financial Planners

Drilling into the detail

THREE ESSENTIAL ELEMENTS FOR SUCCESS IN BUYING A PRACTICE

MICHAEL DEWAR

You have found the practice you wish to buy. You have your surveyors' practice goodwill/value of the dental practice. Your accountants have given a positive viability forecast, even after factoring in changes in dental staff following the purchase. In principle, you know the lender will give you the finance needed for the practice. You're keen to get going with the purchase. What next?

To make your purchase a success, you need to have a firm idea not just of the finances, but also of the other foundations of the practice. Like any other business, these must be sound in order for the practice to be built up. Three fundaments stand out: the practice's major contracts, the premises and the employees.

Contracts

The introduction of the new Oral Health Improvement Plan rules in July mean that patient dental-plan financing contracts such as Denplan may become of greater importance to practices.

How, though, do the differing finance contracts compare? What are the costs and downsides of entering into such contracts? Equally important are the contract-like regulations that restrict marketing to patients and new patients. Is the practice's existing marketing data compliant with the new GDPR regulations? Are its website terms and conditions and privacy policy sufficient to allow web marketing?

Premises

If the practice does not own the practice premises, what is the basis for its occupation? It is surprising how often a practice occupies premises based on inadequate documentation. Yet, in the absence of a proper lease, the practice has no business being in the property and could be evicted at short notice. Alternatively, if a lease does exist, does it impose unacceptable conditions? What exactly are the repair liabilities? Who precisely owns the dental chairs and other equipment screwed into the walls or floor – the owner or the tenant?

Employees

Of all compliance issues, transfer of employees in a purchase is among the most complex. You will want to know the terms of the contracts of employment (e.g. salary, holiday entitlement, potential claims) and ensure that TUPE procedural rules are followed where employees' contracts of employment are to transfer to you.

The above are examples as to why these fundamentals are so essential to the success of a practice. Fail to address them before the purchase and, at best, significant management time will be eaten up trying to fix them; at worst, the problems won't go away and the practice has in-built instabilities and liabilities.

Fortunately, most of these issues, if identified early enough, can be resolved before the purchase goes ahead. They are generally also easier to fix before, not after. A good dental practice lawyer familiar with this sector can help achieve genuine value for a purchaser.

MORE INFO

Michael Dewar is a partner at CCW Business Lawyers. For further details visit the dental practice purchase guide on our website (https://ccwlegal.co.uk/resources/buying-dental-practice-guide/) or please do get in touch with us.

Scottish rate of income tax

TAXPAYERS NEED TO CONSIDER THE IMPACT ON PENSION RELIEF

You will be aware that the Scottish Government has the power to set the rates and bands of income tax (other than those for savings and dividend income), which apply to Scottish taxpayers. Historically these rates and bands have been the same as the rest of the UK, but since 2017/18 the Scottish Government has introduced changes to this regime, meaning the Scottish taxpayer will pay more tax than those in the rest of the UK.

The Scottish rate of income tax (SRIT) and bands for 2018/19 have been confirmed as follows:

SCOTTISH BANDS	SCOTTISH RATES	SCOTTISH BANDS	SCOTTISH RATES
Up to £11,850 (if entitled to full personal allowance)	0%	Over £24,000 - £43,430	21%
Over £11,850 - £13,850	19%	Over £43,430 - £150,000	41%
Over £13,850 - £24,000	20%	Over £150,000	46%

The SRIT applies to taxpayers who are residents in Scotland and applies to non-savings income only, such as employment income, profits from self-employment, partnership profits and property income.

The UK tax bands and rates continue to apply to savings and dividend income.

The SRIT will also result in changes to tax reliefs for Scottish taxpayers. HMRC has confirmed that those claiming Marriage Allowance can continue to do so at 20 per cent, and finance cost relief available to landlords will also continue to apply at 20 per cent as across the rest of the UK.

For Gift Aid, charities will continue to claim back tax at the UK basic rate of 20 per cent, and Scottish taxpayers will be able to claim additional relief on top of this at the correct rate (i.e. the difference between the Scottish higher/additional rate and the Scottish basic rate).

Scottish taxpayers also have to consider the impact of the SRIP on pension relief. Many dental professionals will be part of the NHS pension scheme, and perhaps invest into a personal pension fund.

Advice in this area will be very specific to each individual, but should you like more information, we'd love to hear from you.

MORE INFORMATION
For more information, please contact Louise Grant on 01382 312100 or louise.grant@eqaccountants.co.uk.

Managing timing expectations in dental practice transactions

WITH DEAL TIMES NOW TAKING UP TO NINE MONTHS TO COMPLETE, IT PAYS TO HAVE MARKET EXPERTS GUIDE YOU THROUGH THE EXTENSIVE PROCESS

PAUL GRAHAM

Buying or selling a dental practice is definitely not something to be taken lightly – or to be rushed. However, when timeframes in a transaction extend longer than expected, it can be difficult to appreciate why or how the delay has occurred.

Deal times are generally taking a lot longer than they used to and now take on average between six and nine months to complete. With so many factors to manage, it is understandable that some of them can be time-consuming, but it is not the bank funding process that typically poses an issue, it is the legal aspects and level of due diligence required in a transaction.

Finding the right solicitor to work with, who understands the sector and has the capacity to stick to your deadlines, can be a challenge. With more private equity firms entering the market and higher value deals becoming more frequent, solicitors will often have to make these a priority, meaning the smaller deals take longer alongside.

While solicitors generally are busier with transactions in the dental industry, it is still important to focus on their quality and market expertise above all. It may take longer for solicitors to complete, but it is invaluable to be able to work with experts in the field when undertaking such an important business move.

This message remains consistent through all aspects of a deal, as Christie & Co puts industry-leading advice and knowledge at the forefront; the same should also be true of the solicitors, banks or equity providers involved.

It is becoming more accepted that buying and selling a dental practice is an extensive process, but the end result will always be worth it when being handled by those who know the market and what works best for you.

MORE INFO

To discuss how Christie & Co might help you achieve your future plans, contact Paul Graham, director at Christie & Co on 0131 524 3416.

VOCO.SOCIAL: THE PLACE TO GO, SEE, SEARCH AND SHARE

VOCO LAUNCHES A NEW ONLINE PLATFORM FOR ALL THINGS DENTAL AND INVITES DENTAL PROFESSIONALS TO GO CONNECT – JOIN THE CONVERSATION AND HELP US SHARE BEST PRACTICE AND FIND SOLUTIONS TO TODAY'S CHALLENGES IN DENTISTRY

Staying in touch with the latest dental news and views and making connections with like-minded professionals are some of the most important criteria for clinical success, job satisfaction and forging a meaningful career. Communication and collaboration within the dental industry is also crucial if dental manufacturers are to develop the materials and equipment that will meet the challenges that dental professionals face.

As one of the leading international manufacturers of dental materials, particularly in the fields of preventative, restorative and minimally invasive dentistry, VOCO sees itself as the dentist's partner, not only through the quality of its products, but also through constant communication and conversation with dental clinicians, wherever they are based.

VOCO's mission is to foster close links with clinicians for an exchange of ideas among equals. As a result, it is constantly extending its network of contacts and gaining inspiration from practising clinicians, which informs everything it does. Armed with considerable in-practice experience and knowledge, the entire dental team provides information and guidance regarding products and techniques and in their capacity as trusted customer contacts.

VOCO listens to their opinions and needs, feeding this back into the company so that they truly work in partnership with the industry.

A NEW WAY TO CONNECT

Having become increasingly aware of the need for more effective channels of communication within the industry, VOCO is proud to launch a new online platform – VOCO.social – bringing together all the things we are passionate about:

- Connecting with dental professional
- Celebrating everything that's great about dentistry
- Discussing today's challenges and finding solutions together
- Discovering what's important to the entire dental team.

Featuring the latest content from guest contributors and industry professionals, as well as clinical case studies, videos and links to the must-read dental news and topics of the day, VOCO.social offers the chance for the whole dental team to see, search and share with like-minded professionals.

Discussions will centre around three core disciplines – Minimally invasive, Preventative and Restorative – as well as the digital technology that is revolutionising our industry, and education, the key to keeping up-to-date with the latest research and materials, and to furthering your career.

DISCUSS CHALLENGES AND FIND SOLUTIONS TOGETHER

VOCO.social is an open forum for everyone's benefit. As a dental products manufacturer, VOCO believes its duty is to listen to what the industry needs and to respond. VOCO.social does this by reporting on the latest endeavours and the clinical and technical challenges they are working to overcome.

VOCO would like to invite you all to:

- GO connect on VOCO.social via your mobile, tablet or computer.
- GO see what the current topics are and find out what some of your colleagues are saying about today's dental industry.
- GO share the ideas and insights you have gained by commenting on the articles or sharing them on social media to continue widening the conversation.
- GO search your areas of interest to see what others are saying – and if you don't find them, we invite you to become a contributor.

We would love to receive any articles or case studies from you based on your experiences in these vital areas so that we can understand the challenges you face as well as learning from your successes.

GO connect via your mobile, tablet or computer on www.VOCO.social. Get to meet your local VOCO Scotland Dental Consultant Lynda Steel at VOCO.social today who is ready and waiting to support you on your journey with VOCO.

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BE PREPARED, BE SUCCESSFUL

WHETHER YOU ARE CONSIDERING BUYING OR SELLING A PRACTICE, DILIGENT PLANNING BEFOREHAND WILL ENHANCE AND STREAMLINE THE PROCESS

BUYING A DENTAL PRACTICE

Buying the right dental practice to fit your lifestyle can be a very daunting task and take months if not years. You may be lucky to find the right practice on your first viewing or you may have to "kiss a few frogs to find a prince". It is still a very competitive market in Scotland with many practices receiving multiple offers. Unless you are one of the fortunate buyers to be offered a private sale (where the seller wishes to keep the sale highly confidential and only offer the practice to one potential buyer at a time) you will be bidding against many competitors.

Not every dentist will have business knowledge. Some will have the good fortune to have experienced their relatives run a business while others may feel like a rabbit stuck in the headlights. Where to start? What is a good prospect? How much money will I make? How will I manage staff? How much will it all cost? How do I write a business plan? What deposit will the bank require? What happens if I get sick?

These are all questions you may need assistance with. After all, you chose dentistry as a career, not necessarily as a business. Crawford Wilson can help.

Preparing to buy is crucial, especially if this is your first business purchase. Not every practice on sale will be presented as you might expect or hoped for, while others may well look fabulous but may not have optimum performance.

The potential of the business is more important than what is initially presented. Identify areas where to increase turnover and profitability:

- Could services on offer be extended?
- Opening times altered?
- Opportunity to reduce overhead costs?

Account for upfront costs such as: accountants fees, solicitors fees, valuation fees, bank charges, practice and personal insurances, non-transferable maintenance contracts, working capital for your first few months and any immediate restoration or renovations you may require. (Banks will sometimes extend an overdraft facility to allow you to find your feet for the first year).

Staff will transfer over with an existing purchase under the government TUPE agreement. Excellent change management is crucial. Ensuring there is a good handover between the outgoing owner and yourself coming in will enhance the process for everyone.

Be open to location, view the opportunity with an open mind and look ahead to exciting times.

SELLING A DENTAL PRACTICE

Selling your dental practice can be even more daunting than buying. Whether its due to retirement, ill health, change of career or something completely different, there will be a major change to your life.

Understandably most dentists worry about the practice sale remaining confidential, as they don't want to unnecessarily unsettle staff and associates. This is a huge responsibility.

PREPARING FOR THE SALE.

There are many questions to ask yourself:

- Who to sell to? Should you sell to a corporate, a mini corporate, have an open market sale or would you prefer to sell to a closed market where only one buyer at a time is invited to view your practice?
- Is it an asset or corporate (limited company) sale?
- Property be sold or rented to new owner?
- Exit strategy? Work on with the new owners or leave the day of sale?

What to prepare in advance of the sale:

- Three years' accounts
- Management accounts where annual accounts are more than three months old
- 12 months' schedules NHS/private split
- List of staff (roles, salary, holiday entitlement) and associate (percentage, lab bills)
- Patient numbers, adult/children, capitation and continuing care
- Open contracts/maintenance contracts (Transferable or non-transferable)
- Energy Performance Certificate and Asbestos report
- NHS Practice inspection documentation
- Three-year GP 234 documents
- Bad debt records.

The more prepared the buyer and seller are, the more streamlined the entire process can be and the less stress on all concerned.

Good luck in your new venture.

CRAWFORD WILSON

MORE INFORMATION

For more information contact Crawford Wilson – call 07403 109 947, email info@crawfordwilson.co.uk or visit www.crawfordwilson.co.uk

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25th June
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2nd & 3rd July
Getting Started in Aesthetic Medicine

13th & 14th August
Advancing Skills in Aesthetic Medicine

27th August
Non-Surgical Rhinoplasty Masterclass

3rd & 4th September
Getting Started in Aesthetic Medicine

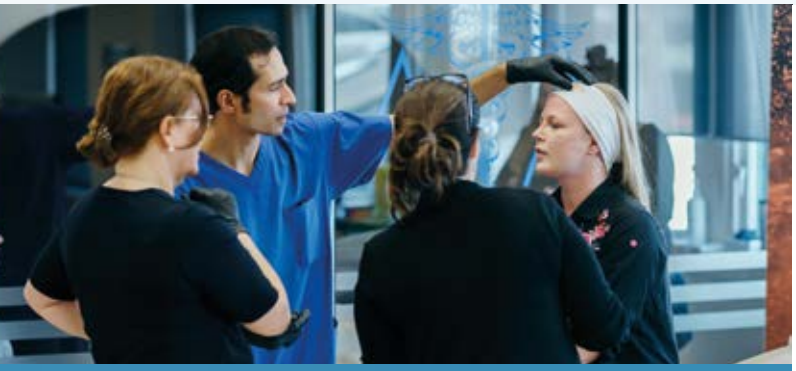
17th & 18th September
Advancing Skills in Aesthetic Medicine

1st & 2nd October
Getting Started in Aesthetic Medicine

22nd October
Expert Masterclass

23rd October
Expert Masterclass

5th November
Advancing Skills in Aesthetic Medicine



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TRUSTED IN TROON

ONE DENTAL CARE GROUP EXPANDS WITH ACQUISITION OF BREEZE DENTAL, A LONG-ESTABLISHED PRACTICE IN THE TOWN

North Ayrshire-based One Dental Care group has expanded into South Ayrshire with the acquisition of an existing dental practice in the seaside town of Troon. This is the group's fifth acquisition since it was formed in 2014 and One Dental Care founders Greig Stevenson and Colin Hunter are excited about developing the practice further.

The Troon practice is located in an attractive Victorian red sandstone building that has had several uses over the years, from a bank and library to a job centre, before being converted into a dental surgery 10 years ago by the original dentist owner Ainsley Coats, who has stayed on and joined One Dental Care as an associate.

> "THIS IS A DENTAL PRACTICE THAT HAS DEVELOPED A REPUTATION IN THE LOCAL COMMUNITY OVER THE YEARS FOR FRIENDLY, CARING AND HIGH-QUALITY DENTAL CARE THAT ITS PATIENTS CAN RELY ON AND TRUST"
>
> GREIG STEVENSON

For the time being, the Troon practice will keep its original Breeze Dental branding designed by Ainsley, as Greig explained: "This is an established dental practice located in the heart of the town, that has developed a reputation in the local community over the years for friendly, caring and high-quality dental care that its patients can rely on and trust.

"Therefore, we did not want to alarm or confuse people about the acquisition, as One Dental Group is not known in this area. All the staff are the same and Ainsley continues to work with us as an associate, so this helps create stability and continuity for the practice and its patients.

"We'll keep the Breeze Dental branding the same but may look to rebrand at a later date."

While the practice remains essentially the same, with its three surgeries fitted out with Belmont chairs, and Eschmann, NSK and Dolby sterilising equipment,

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the main emphasis is on integrating the practice into One Dental Care's IT management system which uses the Software of Excellence (SOE) package. The new practice will also use Denpro Dental Directory and contract all its lab work with Leca Dental, with whom the group has a good working relationship.

Greig said: "All our other practices operate with SOE so it makes sense to make this investment in Troon so we can integrate all our management and business information across the group. We are working with MicroMinder for hardware support while we bed in the new software and we are also providing training for all our staff at Troon over the next couple of months.

"We will also be training two of the staff at Troon as dental nurses, who will join two young people from our other practices on the Mentor Training Centre's Dental Nurse Training programme."

Greig and Colin studied together at Dundee Dental School and qualified in 2003, when they went their own ways working in various practices in the Central Belt. Greig worked in both NHS and private practices in Edinburgh for many years where he developed an interest in cosmetic dentistry, while Colin worked for 11 years in a family practice in Lanarkshire where he developed skills in restorative and preventative dentistry.

They came together in 2014 with the idea of creating One Dental Care to offer their patients the best of both worlds; modern practices that all offer a warm welcome, advanced technologies and highly experienced dentists combined with accessible NHS dentistry, affordable private dental care and 0 per cent finance.

That year they acquired two practices in Beith, and these have recently been brought under one roof in Wilson Street with three new surgeries featuring new Belmont Voyager chairs.

Greig Stevenson and One Dental Group's Area Manager Margaret Valenti

They also acquired dental practices in Dalry and Kilbirnie. The Dalry practice is currently on the first floor of a building in the heart of the town in New Street, but the group has recently bought the former Royal Bank of Scotland premises on the ground floor nearby and are in the process of moving the practice there to make it more convenient for patients, and those who require disabled access.

The Kilbirnie practice is based in the local health centre in Kirkland Road, which was originally opened in 2006. Greig said: "This is a great location for us as it is so central and it's good to have GPs and other services on site for our patients when they visit us."

Both Greig and Colin, and fellow associate David Pitts, are qualified vocational trainers for recently qualified graduates and have been providing this opportunity at the group's practices since 2014.

Greig added: "We have always been committed to the NHS and providing affordable dental care to our patients, but we also have expertise in Straumann and Southern implants, which we provide at Dalry and now Troon alongside Implantologist Mark Sorrentino, and C-Fast orthodontics and other cosmetic dentistry across all our practices."

Co-ordinating the management of the four practices across the group is One Dental Group's Area Manager Margaret Valenti, who is also excited about the prospect for the Troon practice. She said: "This represents an excellent opportunity for us. It's in a beautiful seaside town with a great sense of community, and there's a great deal of housebuilding going on in the area, which shows that the practice has good scope for expansion in the future."

STAYS LOOKING GOOD

A treatment centre is likely to be what patients first notice when they enter your surgery, so while functionality may be paramount in your mind, it's also got to look good. Belmont chairs do both. Moreover, the newly launched Ultrasoft Pro upholstery ensures your treatment centre stays looking as good as it did the day it was installed.

The Ultrasoft Pro upholstery is both ink and stain resistant, particularly important with the growing trend for lighter hues. It also offers greater microbial protection and is much more environmentally friendly as the material does not emit any toxic by-products as 99 per cent of solvents are recaptured and recycled. The upholstery is available in a diverse colour range to ensure you get just the right shade to complement your practice's decor. In total, there are 33 shades from which you can choose.

Comfort is obviously just as important. Good looks can sometimes belie the comfort of a dental chair, which is why Belmont's upholstery exudes luxury and comfort. Arguably, a comfortable chair is a prerequisite for a relaxed working environment, especially when patients are undergoing lengthy treatments.

Is it time that your surgery underwent a revamp? If so, why not pop along to Belmont's showroom to explore the functionality as well as the comfort of the different models available.

For more information visit belmontdental.co.uk.

ENGAGING TEENAGERS WITH THE POWER OF CALCIVIS

"I recently used the new CALCIVIS® imaging system with a female teenage patient who had stained fissures on her 6s," said Dr Jason Wong, from The Maltings Dental Practice. "These teeth were already 'on watch' and being regularly examined but I wanted to obtain a more precise way of monitoring these teeth and successfully engage and motivate the patient about her oral health.

"With the help of the CALCIVIS imaging system I saw my patient's view turn from indifference to immense interest as the image came into view at the chair side. The girl was very impressed with the picture that was generated and she even asked if she could have a copy to share with her friends. Of course, I agreed, and I was thrilled because this young lady had really become involved – she began to ask questions about improving her oral hygiene levels and was clearly interested in preventing any deterioration to her teeth.

"Following these first scans, fissure sealants were applied to the first molars and we agreed to continue using the CALCIVIS imaging system at six month intervals. The patient left the surgery happy and I was delighted that her outlook towards oral hygiene had improved significantly.

"The CALCIVIS imaging system is a powerful tool for patient communication and comprehension and offers an accurate record of demineralisation. I think that it has tremendous potential for the future of preventive dentistry."

For more information visit www.CALCIVIS.com or call 0131 658 5152

BE A WIZARD WITH YOUR WAND

No matter how good you are at delivering local anaesthesia, the chances are that your patients will still be very fearful of the procedure. Well, there's a way round it! The Wand is a computer-controlled anaesthetic delivery system that pushes the anaesthetic solution of your choice through a needle. The rate and pressure of delivery is what allows you to get your anaesthetic to where it is needed without much of the traditional discomfort/pain that is associated with using a syringe.

Dental Sky Academy is launching eCPD courses,

lead by Dr Richard Charon and Dr Mike Gow, aimed at both existing and new users of The Wand. The six-hour course will cover clinical applications and will review techniques versus a traditional syringe.

You will experience hands-on use of The Wand, including clinical tips and maintenance advice. There will be no commitment to purchase a unit on the day. Each delegate will receive a free box of Wand handpieces worth £125+VAT, which will offset most of the course fee of £135+VAT. The course provides delegates with 6 hours of eCPD.

Dr Charon, a GDP since 1975, has been using relative analgesia (RA) since 1977. Dr Gow is a past president of The British Society of Medical and Dental Hypnosis (Scotland)

For tickets and more information call 0800 294 4700 or email events@dentalsky.com.

ENLIGHTENED WITH ADVANCED TECHNOLOGY

Delegates were amazed by the advanced technology of the new CALCIVIS® imaging system at the British Dental Conference and Dentistry Show 2018.

Crowds gathered to see demonstrations of the innovative, award-winning imaging system that enables practitioners to visualise active demineralisation.

Using a recombinant photoprotein, the CALCIVIS imaging device identifies free calcium

ions released from demineralising tooth surfaces and produces a glowing, visual map of active demineralisation at the chair side.

As part of early caries detection and assessment, the CALCIVIS imaging system helps practitioners to spot demineralisation at its earliest, most reversible stage so that prompt management and preventive therapy can be applied.

The CALCIVIS imaging device also acts as a superb communication tool, helping patients to understand their risk of dental caries, which motivates them to take steps to improve their oral hygiene levels. Delegates agreed that CALCIVIS represents a significant step forward for preventive dentistry. If you would like to find out more, contact CALCIVIS today.

For more information visit www.calcivis.com, call on 0131 658 5152 or email at info@calcivis.com

FIVE GO ON A MISSION TO BIRMINGHAM

There are some exciting changes to Invisalign Go coming soon, and Align Technology invited members of the dental profession to a special showcase at the British Dental Conference & Dentistry Show at the NEC in Birmingham in May to let them hear about the changes first-hand.

Later this year, Align Technology will introduce several enhancements to improve Invisalign Go and will offer a new Services Scheme to improve dentists' clinical and practice experience. In July, the company will be launching a new, improved Invisalign Go with a more user-friendly digital platform and a product that offers more flexible and expanded treatment options.

Reasons to believe: Invisalign Go was designed to help general practitioners treat their more patients successfully and help them achieve a new smile; its expanded tooth movement capabilities and flexibility will enable them to treat wider range of cases:

- Treat 5-5 (2nd pre-molar to 2nd pre-molar) for greater arch expansion, and ability to treat more mild to moderate crowding cases
- Increased vertical movements for leveling incisors and anterior teeth
- Support improved patient uptake by comparing multiple treatment plans
- Increased number of aligners to help tailor treatment plans for your patients' diverse set of needs (up to 20 aligners).

At the press launch in Birmingham , a trio of experts gave delegates unrivalled access to the new Invisalign Go know-how, and the inspiration to adopt the expanded system in their practices. Align Technology's Zelko Relic, Chief Technology Officer and Senior Vice President, Global Research and Development, flew in from the US for the event to introduce the new Invisalign Go features and present the biomechanics behind the new features.

Meanwhile, "Young Dentist of the Year" Dr Affan Saghir explained why he had embraced Invisalign Go, both for his personal and practice growth. and provided insights on how it has impacted the patient treatment protocols. Invisalign Go trainer Dr Lance Knight lectured about the new Invisalign Go followed by a presentation at the Align Technology stand.

General practitioners keen to find out more about Invisalign Go can visit www.Invisalign.co.uk or speak with their Invisalign Go customer care representative

STRONG TEETH MAKE STRONG KIDS

Shocking research findings have revealed that 23 per cent of five-year-olds and nearly half (46per cen t) of eight-year-olds in the UK have obvious tooth decay in their primary teeth. Also, it was found that, sadly, 35 per cent of 12-year-old children are too embarrassed to smile or laugh due to the condition of their teeth.

These issues are particularly prevalent in UK children due to many factors, including poor oral care habits and nutrition.

Oral-B is on a mission to support UK parents/carers adopt appropriate home-based oral health behaviours and thereby reduce the number of children with toothache and dental problems – all through its #StrongTeethMakeStrongKids-campaign.

Oral health experts from Oral-B and the University of Leeds have launched a research and education programme to give dental professionals and parents the right support to prevent these dental health issues from now on.

Peter Day, Associate Professor and Consultant in Paediatric Dentistry at the University of Leeds, said: "Our research explored how dental teams can best support parents of young children to adopt appropriate oral health behaviours at home. We have examined the literature and undertaken qualitative interviews and focus groups to identify the challenges parents and dental teams face. These findings have provided the blueprint for Strong Teeth oral health intervention."

Oral-B's "Strong Teeth Make Strong Kids" programme aims to educate and support parents on how they can help their children develop the right habits, as well as lay down a strong foundation for good oral health – for a healthy and confident smile for life.

Jane Kidson, Oral-B Professional Team Leader UK & Ireland. said: "We are working closely with the UK's dental professionals by aiming to provide up to 20,000 of them this year with simple and engaging educational materials for parents and their children during routine check-ups. Oral-B is committed to take on this challenge to sustainably improve the situation in the UK."

Combined with the right dental care products, these positive oral health messages are designed to encourage parents to lead the way, so they can see that these oral health issues are mostly preventable with simple changes to their families' daily oral care routine.

NEXT-GENERATION TECHNOLOGY FROM ALIGN

Align Technology, Inc. has expanded the iTero Element portfolio with the launch of the iTero Element 2 and the iTero Element Flex scanners. These additions build on the existing high-precision, full-colour imaging and fast scan times of the iTero Element portfolio while streamlining orthodontic and restorative workflows.

The next-generation iTero Element 2 is designed for greater performance with 2 x faster start-up and 25 per cent faster scan processing time compared with the iTero Element. The new iTero Element Flex is a wand-only device that transforms compatible laptop computers into a highly portable scanner that works anywhere – it's perfect for practices with multiple locations who need a scanner that is convenient and easy to transport. The new scanners were showcased at the British Dental Conference and Dentisty Show in May.

Raphael Pascaud, Align Technology chief marketing, portfolio and business development officer and senior vice president, iTero scanner and services, said: "We're excited to expand the iTero portfolio with two new advanced digital scanners that expand customers' choices and provide them with the imaging precision, intuitive chairside visualisation and patient communication tools that enable efficient workflows for a full range of case assessment and restorative and orthodontic treatment.

He added:"With iTero Element 2 and iTero Element Flex, we are building on a trusted platform with enhanced features and processing performance, new mobility options and greater portability designed to fit the needs of our customers' practices and simplify their lives. Doctors can now choose the iTero Element scanner that is best for them with confidence knowing that each solution is going to deliver the precision, power, speed, and full-colour imaging they've come to expect for their iTero-powered workflows."

For more information. Visit www.itero.com or www.facebook.com/iterodigitalimpressionsystem/ for the latest news on the iTero Element scanner portfolio.