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Scottish Dental

OCTOBER 2018

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The wisdom of informed choice

When I was 12, in common with my friends, I went for my first appointment with the orthodontist. However, unlike my friends, this did not result in me sporting a brace for a few years; instead, I ended up in hospital having all four of my unerupted wisdom teeth taken out under general anaesthetic.

I was told by my orthodontist that there was no clinical need for any orthodontic work, though a brace might bring some minor cosmetic improvement, but if my wisdom teeth came through naturally, they would push all of my teeth forward and, potentially, I would end up needing a brace later in life. The suggestion was therefore to have these teeth removed before they became a problem. Well, as an image-conscious pre-teen desperate not to have a brace then or in the future, this seemed a small price to pay and agreed to have the operation.

Come the day, everything went smoothly, until I woke up from the anaesthetic and became very ill. I'd had an allergic reaction to one of the drugs I'd been given, and was very sick for several days, meaning I had to stay in hospital for much longer than expected.

And, though I gloried in having my teenage years unblighted by what I and my peers considered to be horrific, disfiguring braces, as their smiles improved, I became aware that I had retained the same rather imperfect teeth I had started with. I was left with huge regrets, but I and my parents had, of course, 'consented' to it all.

This consent, however, was far from informed. An allergic reaction to anaesthetic drugs is rare, but it is a risk. There is also a risk with every GA of dying, but nobody had told me that. No one had discussed with me how it might feel to see my friends emerge from their brace-wearing cocoons with beautiful straight teeth. Though I was warned about the swelling and the discomfort, it had certainly been down-played from the post-operative effects that I experienced. Even more upsettingly, over the years, I have been reliably informed by many different dental professionals, that the whole operation was entirely unnecessary, and would never be done now.

I don't know what I would have chosen to do if I had been presented with all of the risks and options, but at least I would have been able to make an informed choice. And that is, in essence, what lies at the heart of the question of consent, at least from the perspective of the patient. For the practitioner, it is a more complicated issue entirely. The Montgomery ruling laid down that the practitioner has a duty to provide information about all 'material' risks; they must disclose any risk to which a reasonable person in the patient's position would attach significance. But how does any clinician make that judgement and, pertinently, how do they prove that they have done as required, should the worst occur, and they end up in a FTP hearing, or in court? Those in primary dental care can have the small advantage of an established relationship with their patients, but what about those, particularly in secondary care, who are meeting a patient for the first time? What about when a proxy is involved, or translation is required?

In my case, I know I would have attached significance to the risk of an adverse reaction, or the risk of death – however small those risks were – I think most 'reasonable' people would. I would also have liked to be able to discuss what my orthodontist really meant when he referred, dismissively, to the outcome of having a brace as 'minor cosmetic improvement', before he shut down the conversation entirely.

I had a bad experience, but I think the dental profession has always communicated well and has a strong history of involving patients in discussions about their treatment. To that end, it could be argued that Montgomery has really only put into law what good practitioners have been doing for years.

I'm not sure whether all patients understand this though, and there is a risk that patients now think their right to choose overrules clinical expertise and knowledge. In an industry facing increasing litigation, where practitioners openly discuss living in fear of their regulator, Montgomery could be seen not as the law catching up to good practice, but as a blunt instrument used to punish people who have done everything right, expect keep their paperwork in order.

Ultimately, yes, a patient has the right to consent, or not, to treatment. The duty of the practitioner is to lay out and explain the clinically recommended option or options.

As Montgomery's own counsel put it: "Decisions about diagnosis and treatment must necessarily, and by definition, be made by the medical practitioner by reference to his special skill, learning and experience in an expert field which is not shared by the patient. By contrast decisions by the patient as to whether to submit to proposed treatment are his to make as of right, and his to make by giving whatever weight he thinks it right to put upon the risks and benefits which the options available bring."

Arthur Dent is a practising NHS dentist in Scotland
Got a comment or question for Arthur? Email **arthurdent@sdmag.co.uk**

Please relieve me

There's enough stress in daily life without the added anxiety induced by the actions of our paymasters and regulators. A consistent approach with consideration for those doing a difficult job is not much to ask

The final part of my stress-related trilogy; or should it be the final nail in the coffin? Patients, money, staff, admin, Brexit, "Indy ref 2', the weather, my kids: all create stress on a daily basis. What causes me more worry and ire than anything else? Our paymasters, police and regulators. In conversation with any of my colleagues, young and old, the causes of real stress are seen to be the PSD, DROs and GDC. Why? It feels like they don't understand us, don't seem to have consistency in their approach and at no point seem to help or benefit us.

Now, I know that's probably not why they exist, however. PSD says it wishes to help and facilitate, and it monitors the satisfaction of their end users: dentists in the NHS. The GDC is supposed to be changing its Fitness to Practice process to speed it up and reduce costs resulting in a more streamlined service. The DRO service is overworked and understaffed and, therefore, not statistically relevant in terms of quality assurance.

I do have sympathy for the budgetary constraints these 'services' operate under. PSD has a standing 5 per cent funding cut year on year. If you asked us to work under that regime do you think we could? The GDC has maintained its fees for the last five years or so, so in real terms its funding is being cut by inflation. The DRO service, I believe, hasn't had any realistic change in the couple of decades I've been working. Certainly not in staffing, which is its major cost, but also the only way it could improve its ability to assess and monitor our quality.

There's a flip side to the funding issue. A representative and statistically relevant DRO service would require significant funding to ensure enough patients were seen to reflect the qualities of individual dentists. Very expensive. But it would be a great way to identify problems early and direct training to both individuals and groups of practitioners. In the longer term, this would result in higher quality, reduced misclaims and allow 'outliers' to be identified reliably and dealt with. All of this would ultimately help patients, dentists and PSD to achieve higher quality and better value for money.

PSD is moving to a more electronic-based system to reduce their staffing and allow them to reduce costs. That should, in theory, be good as a more straightforward system should be more consistent and reproducible. Very often individuals and their opinions create the inconsistency that we perceive. The Senior Dental Advisor said, in an interview in this magazine, that they wanted to create a service which educated their end users and interacted in a more positive way. However, they brought in the new system for EDI and ran road shows to tell us about it after the fact. Surely, if you want to educate, avoid problems to users and facilitators alike, and reduce the chances of errors, you run the education first?

The biggest bugbear of the dentists I talk to is the apparent inconsistency with which we are dealt with. Prior approval of treatment plans which, in years gone by would have been approved without question, are being challenged or declined. There always seems to be some line that they trot out to justify it, like 'treatment in excess of that required to secure and maintain oral health'. What does that mean? Surely it could be: 'take all the teeth out and put in plastic dentures'? That would secure and maintain oral health, wouldn't it? It would also result in a referral to the GDC.

Speaking of the GDC; our esteemed regulator strikes fear into the heart of every dentist I know. Why should ordinary and reasonable dentists be worried by the regulator? Surely this kind of honourable dentist should have no concerns about referral? The GDC advertised for complaints. They created a complaints system where patients can refer directly to the regulator without any local resolution being explored. They have a Fitness to Practice system which is not fit for purpose. You can be caught in the system for two years waiting to have your case dealt with. I cannot imagine the kind of prolonged stress this would cause. Then to add insult to injury, they make us pay huge amounts for the privilege.

It seems nowadays that being judged by your peers is not applicable. If you don't perform an endo like a specialist then you must be inept. (PSD is of the same mind – 'suboptimal root treatment'!) Working in the NHS and having financial and associated time constraints are no mitigation either. So we have to take the time and have the skill of a specialist who charges eight times the cost and takes four times as long? It just doesn't seem fair.

A level playing field with care and consideration for those doing a very difficult and stressful job would seem reasonable. It just doesn't seem to be possible from where I'm sitting. I long for a framework in which everyone understands their role and achievable aims are constructively monitored and funded. Unfortunately, I work in NHS dentistry. Never gonna happen. Perhaps that realisation is the kind of mental Shangri La that could relieve me of my work-related stress?

The question of consent

A Scottish Dental round-table examines the effect of the landmark 'Montgomery Ruling' and its consequences for healthcare professionals

IN 2015, the Supreme Court handed down a ruling in the appeal case of a mother who had taken an action against Lanarkshire Health Board after her son was born with cerebral palsy due to complications at birth.

The mother was small in stature and diabetic. She had raised concerns that these factors may cause problems with a vaginal delivery. However, she had not asked about the 'exact risks', which, for shoulder dystocia, the complication her baby experienced, was about 9-10 per cent; the risk of cerebral palsy as a result of shoulder dystocia is cited as 0.1 per cent.

It was the opinion of the treating obstetrician that the risks were minimal but, if told of the risk, the mother would have opted for a caesarean section and they did not believe that this was in her best interests.

The mother claimed for negligence, arguing that she should have been told of the risks. The Supreme Court found in her favour, overturning a previous ruling by the House of Lords which had been law since the mid-1980s.

The mother, Mrs Nadine Montgomery, was awarded more than £5 million in damages and the 'Montgomery Ruling' was to transform the way patients and healthcare professionals understood 'consent'.

Reactions to the ruling were diverse. Some believing it made no difference at all, and simply enshrined in law those practices, which regulators already propounded and those behaviours which the majority of clinicians were already displaying.

Others felt that it would open the floodgates for historic claims and bring a new tension into healthcare professionals' relationship with their patients blurring the lines between clinical judgement and professional opinion and discretion, and the patient's right to choose.

Effectively, the ruling established that, rather than being a matter for clinical judgment to be assessed by professional medical opinion, a patient should be told whatever they want to know, not what the doctor thinks they should be told.

In September 2018, with the support of the Royal College of Physicians and Surgeons of Glasgow who have been looking into the issue in detail, *Scottish Dental* magazine brought together a group from across the dental world in a round-table discussion on what consent means in a post-Montgomery world. The group considered what 'informed consent' means from all their perspectives and how it impacts them on a day-to-day basis. Among the issues they discussed were the reality of record-keeping and the consent pathway between primary and secondary care as well as what it means for different members of the dental team.

Read the full report on pages 24-29.

Fears for NHS dentistry as incomes collapse

CONCERNS have been expressed about the long-term sustainability of NHS dentistry as new data[1] shows NHS dentists have experienced a significant pay squeeze over the last decade.

What has been described as an unprecedented drop has seen real incomes for practice-owning dentists fall by as much as £47,000, and their associates by more than £23,000. Meanwhile, costs facing individual practitioners for regulatory compliance and registration have gone up by 1,000 per cent in the same period[2].

The Scottish Government's recent below-inflation pay award of 2 per cent to general dental practitioners does little to ease the pressures.

Other official data has revealed that morale and motivation among NHS dentists is now at an all-time low (see p16).

David McColl, Chair of the British Dental Association's Scottish Dental Practice Committee, is one of those worried about the trends. He said: "In July, we called on the Scottish Government to provide sufficient funding to make the aspirations in its Oral Health Improvement Plan (OHIP) – including prevention and meeting the needs of older people – a reality.

"We have since received assurance from the Government that the OHIP proposals will be adequately resourced, but we need guarantees that funding will keep pace with demand.

"The OHIP states that dental practices will have the opportunity to plan for changes while maintaining their financial sustainability.

"The Scottish Government also needs to ensure that dentists are fairly paid for their work, including a realistic recognition of their increased expenses.

"Continued underfunding would send a signal, both by those already working on the coal face, and among those who could make up its next generation, that dentistry is no longer seen as a valued profession."

1 Source: NHS Dental Earnings and Expenses Estimates 2016/17, published 30 August 2018

2 Source: National Association of Specialist Dental Accountants and Lawyers

'Don't bury your head over tax,' NASDAL tells dentists

THE National Association of Specialist Dental Accountants and Lawyers (NASDAL) has warned against ignoring tax issues after HMRC revealed plans to introduce a new points-based penalty system.

The new approach is designed to tackle late payments by businesses and individuals for corporation tax, income tax and self-assessment.

As with the existing penalty regime, there will be a "reasonable excuse" get-out, but inability to pay and reliance on a third party are not reasonable excuses.

There will be a first charge determined by the number of days that have elapsed after the due date (up to 31 days) and whether or not a 'Time to Pay' agreement has been reached.

A second charge will become payable and will be calculated on amounts outstanding from day 31 after the payment due date until the outstanding balance is paid in full.

Heidi Marshall, Secretary of NASDAL said: "These changes illustrate the need for you or your accountant to be in communication with HMRC and to not bury your head in the sand or 'hide' from the debt if there any issues. As of yet, there is no date for the launch of the points-based system for non-VAT taxes or details of the rates at which the penalties will be charged, but watch this space."

> "THE CHANGES ILLUSTRATE THE NEED TO NOT BURY YOUR HEAD IN THE SAND"
>
> HEIDI MARSHALL

Roebuck named as new BSPD president

LIZ Roebuck, a consultant in paediatric dentistry based in Edinburgh, is the new president of the British Society of Paediatric Dentistry (BSPD).

Talking about her new role, which will involve chairing the BSPD's council and its executive committee, Liz said: "I feel very privileged. I joined the Society around 1992. I was aware of many of the changes that had evolved over time and I have found the last year, since joining the executive committee, truly inspirational.

"The work of the Society, and the way it conducts business, has expanded significantly and nationally through the dedication and passion of its members."

She added that she will be looking to see how her skills and expertise can best contribute to the BSPD as a whole, across all four home nations.

"There is so much going on and supporting the work that executive and council members are already engaged in is a priority," she added.

Liz Roebuck: privileged

The British Society of Paediatric Dentistry (BSPD) annual conference in September focused on the management of dental caries in children. Report on page 14

Top dentists call for action on school meals in Scotland

Call to take unhealthy puddings off the lunchtime menu and offer pupils more fruit and vegetables

THE lunchtime menu in Scottish schools should be improved to reduce excess sugar and ensure children and young people eat more fruit and vegetables, according to the Faculty of Dental Surgery of the Royal College of Physicians and Surgeons of Glasgow.

The call comes in the Faculty's submission to the Scottish Government's national consultation on the nutritional requirements for food and drink in schools, which closed in August.

The Faculty, which represents more than 1,000 dentists and trainees, called for schools to take unhealthy puddings off their lunchtime menus and instead offer pupils a healthier choice of soup or fruit.

Publishing the submission to the consultation, Faculty Dean Professor Graham Ogden welcomed the overall process, but he called for a bolder approach from the Scottish Government. Professor Ogden said: "We fully support the positive intention of these proposed regulations, but we feel that the Scottish Government should take a bolder approach if it's to ensure that our young people have the healthiest possible start in life.

"For example, we all agree that children should have greater access to more fruit and vegetables as part of their school day, but increasing access does not necessarily increase consumption. The guidance must include an evidence-based plan to ensure any increase in provision also ensures that our young people consume larger amounts of healthier food during school meals.

"Our membership also welcomes the intention to reduce the free sugar content of school meals. However, we totally oppose the inclusion of sugar-free drinks on the list of permitted drinks for secondary school as this could see the reintroduction of diet fizzy drinks. This intention is a mistake and we suggest that it must not be permitted.

"Some will argue sugar-free is a harm reduction approach, but it has all of the well-known disadvantages of that tactic. We also know that diet drinks cause dental erosion, in addition to being a gateway to sugar. We should aim to ensure that our children's oral health gets off to the best possible start in life."

The Faculty's submission also calls for action to ensure that all children and young people have access to facilities in schools to brush their teeth after meals.

Professor Ogden added: "Although this consultation only covers nutrient and food and drink standards, we would urge the Scottish Government to ensure that other factors involved in school meals that could influence a long term shift in food culture and improve children's food choices and health are also addressed.

> "THE GOVERNMENT SHOULD TAKE A BOLDER APPROACH IF IT'S TO ENSURE THAT OUR YOUNG PEOPLE HAVE THE HEALTHIEST POSSIBLE START IN LIFE"

Professor Graham Ogden

"Childsmile primary schools already provide excellent facilities where pupils can brush their teeth with fluoride toothpaste after eating school meals, and so we feel that this approach should be available more widely. We also need to take tangible steps to empower schoolchildren so that they are fully engaged in the process of improving the nutritional quality of school meals themselves.

"Around a third of Scottish children currently suffer from dental decay. That's why we need to take action now. This consultation process is a good start by the Scottish Government, but it doesn't go far enough if we're to effectively tackle this serious problem."

Dental Showcase dedicates day to needs of trainees

WITH no other UK event attracting such a wide range of dental suppliers under one roof, there will be plenty that's new at this year's Dental Showcase at the ExCeL Arena in London on 4-6 October.

Whether you want to check you're taking advantage of the latest advances in technology or want marketing or financial advice, all the leading players will be at your service.

This year, for the first time, there will be a specific day dedicated to foundation dentists. One of the keynote lecture theatres will be committed to the needs of trainee dentists. Topics will cover how to bridge the gap from DFT to associate, organising your CPD, risk management, effective treatment planning and complaint handling. As well as formal lectures, there will be a specific Foundation Dentist Hub where you can get one-on-one career advice.

If education is your driver, then there will be no shortage of opportunities, whether you prefer the longer length lectures by keynote speakers in the Dental Update Theatre, or would rather dip in and out of shorter sessions in the Innovation Theatre. There's a lot of focus this year on the NHS, with its landmark birthday, so maybe you want to learn more about what the government is doing to support dentistry. Sarah Hurley, CDO for England, will be talking each morning about the development and provision of NHS dental services.

Dental Showcase provides an invaluable opportunity to network. All key associations will be in attendance, so you can discuss matters pertinent to your community whether you're a dentist, hygienist, nurse or practice manager. If perio is your passion, then talk to the BSP, or if ortho enthuses you, then the BOC will be on hand to support, listen and advise.

The four chief investigators on the FiCTION trial: (l-r) Professors Nicola Innes, Gail Douglas, Anne Maguire and Jan Clarkson

Focus on fighting childhood caries

British Society of Paediatric Dentistry conference updated on FiCTION trial to prevent, detect and treat dental caries

THE management of dental caries in children was one of the key topics discussed at the British Society of Paediatric Dentistry (BSPD) annual conference held in Dundee in September.

Delegates were told that the results of the FiCTION (Filling Children's Teeth: indicated or not?) trial set up to test three approaches to managing dental caries in children would be made publicly available in the near future.

It's believed that, among other things, the results confirm that the trust engendered by the dentist providing care and delivering preventive advice is critical to any outcome.

Similarly, once a child has developed caries, they are likely to experience pain and/or infection, and intensive prevention should be targeted at the child and its parents.

Professor Jan Clarkson, chair of the conference organising committee as well as a lead investigator for the FiCTION trial, said: "Our findings will now feed through into advice for the dental profession. We are working to ensure it is included in updates of the Scottish Dental Clinical Effectiveness Programme (SDCEP) and Delivering Better Oral Health."

The FiCTION trial involved seven locations (Cardiff, Glasgow, Leeds, Newcastle, Sheffield, London and Dundee) and 1,144 children aged three to seven. More than 70 general dentists across the UK tested three approaches:

- Conventional (drill and fill) with prevention
- Biological management (sealing in) with prevention
- Best practice prevention alone.

Public health dentist Professor Zoe Marshman from Sheffield was one of the core team and led on the patient and parent perspectives. She said of the findings: "As well as looking at the clinical perspective, we also focused on pain, infection, anxiety, quality of life and health economics. We interviewed children, parents and dental professionals about their views on the acceptability of treatment and found that, with the child-centred patient management, all treatments were considered acceptable."

Professor Nicola Innes, Dundee-based and a lead investigator along with Professors Anne Maguire, Gail Douglas and Jan Clarkson, said: "Successfully delivering this complex research is a testament to collaboration across the paediatric dental community and the willingness of general practitioners to participate in research and contribute to improving patient care."

Professor Maguire from the Centre for Oral Health Research, School of Dental Sciences, Newcastle University, said: "FiCTION was conceived back in 2007, so it has been a long but interesting journey for everyone involved at each stage. We thank all the 'FiCTIONEERS' who took part: the children, their families, the general dental practice teams and the researchers."

Claire Stevens, BSPD spokeswoman said: "One of the key messages of this trial is the importance of evidence-based prevention which must underpin any approach to caries.

"As soon as early caries is identified, clinicians need to be re-evaluating the child's caries risk status and providing enhanced prevention in line with Delivering Better Oral Health and SDCEP guidance."

The preventive approach was amplified by Professor Douglas, Honorary Consultant in Dental Public Health at the University of Leeds whose research interests include caries detection and prevention.

"It's saddening that caries is such a common disease in children. There is much that the dental team can do to help but prevention at home from the first tooth erupting is key. Avoiding sugary drinks and snacks helps, and toothbrushing with fluoride toothpaste is vital, especially last thing at night.

"An important thing many people may not know is that the fluoride from toothpaste keeps working long after the teeth have been brushed so it's best to avoid rinsing with water after brushing."

NHS report: dentists' morale continues downward trend

Figures show majority of principals often think of leaving general dentist practice

MORE than two thirds of principal dentists and over half of associate dentists in Scotland "often think about leaving general dental practice", according to figures released by NHS Digital.

Dental Working Hours 2016/17 and 2017/18 is a report on the working patterns, motivation and morale of self-employed, primary care dentists across the UK, drawn from the biennial Dental Working Patterns Survey.

The figures for Scotland show 69.3 per cent of principal dentists said they often considered leaving general dental practice in 2017/18 compared to 57.1 per cent in 2015/16, with 57.1 per cent of associates saying they often thought about leaving general dental practice in 2017/18 compared to 45.9 per cent in 2015/16.

The sense of despondency is not limited to Scotland. Corresponding figures in England and Wales revealed 62.7 per cent of principal dentists often thought about leaving general dental practice in 2017/18 compared to 57.2 per cent in 2015/16, while 56.1 per cent of associate dentists said they often contemplated leaving general dental practice in 2017/18 compared to 47.6 per cent in 2015/16.

In Northern Ireland, 64.0 per cent of principal dentists said they often considered leaving general dental practice in 2017/18 compared to 59.2 per cent in 2015/16 while 52.1 per cent of associates said they often considered leaving general dental practice in 2017/18 compared to 51.1 per cent in 2015/16.

Levels of morale among the profession revealed in the report were equally bleak.

In Scotland, more than 61 per cent of principals and over 52 per cent of associates said morale was "very low" or "low". Conversely, almost 18 per cent of principals and more than 22 per cent of associates said morale was "very high" or "high".

The most commonly cited reasons for low morale were:

- increasing expenses and/or declining income
- risk of litigation and cost of indemnity fees
- regulations (for principal dentists).

You can see the *Dental Working Hours 2016/17 and 2017/18* report at: https://tinyurl.com/ybj79mjk

> IN SCOTLAND MORE THAN 61 PER CENT OF PRINCIPALS SAID MORALE WAS "VERY LOW" OR "LOW"

PEOPLE NEWS

GDC appoints new Scottish representative

Scotland has a new representative on the General Dental Council (GDC) following the appointment of Simon Morrow to the Council.

Simon, who took up his post on 1 October, graduated with a bachelor of dental surgery from the University of Glasgow before going on to gain his postgraduate diploma in conscious sedation from the University of Newcastle.

In addition to being the clinical director at Three Towns and Kilwinning Dental Care, he is dental practice advisor and inspector for NHS Ayrshire and Arran, a lecturer for NHS Education for Scotland and a sedation practice inspector for several Scottish health boards.

GDC chair William Moyes said: "Simon joins us with a wealth of experience and we welcome the contribution he will make to our vital work."

Simon joins the GDC as the regulator presses ahead with its *Shifting the balance* reforms.

He said: "Times are challenging in dentistry and this is one reason I am delighted to accept this position. I'm looking forward to working with my new colleagues on the Council towards realising the ambitious programme of work set out in *Shifting the balance,* which will make a real difference to dental professionals across the country."

Restart a Heart Day in Aberdeen

Undergraduates from Scotland's four dental schools are taking part in the Restart a Heart Day on Tuesday, 16 October. The event will take place at Aberdeen Science Centre, Dundee Science Centre, Edinburgh Surgeons Hall Museum and Glasgow Science Centre.

Members of the public will receive training in CPR to raise awareness of cardiac arrest, increase the rate of bystander CPR and deliver higher survival rates.

The aim is to teach 600 people across the four sites on the day.

Healy takes over EDI programme

Joanne Healy has taken over as Programme Director, BSc Oral Health Sciences and Senior Lecturer for Dental Care Professionals at Edinburgh Dental Institute. This follows the retiral of Margaret Ross earlier this year.

New associate dean at NES

Donald Thomson has been appointed to the role of Associate Postgraduate Dental Dean at NHS Education for Scotland following the retiral of Ann Shearer. Donald took up his role on 3 September

DATES FOR YOUR DIARY

8 OCTOBER
BDA Scotland Aberdeen Section – Children and young people: Management of traumatic dental issues
Doubletree Hilton Treetops, Springfield Road, Aberdeen***

11 OCTOBER
President's Lecture – Gross Negligence, Manslaughter and Culpable Homicide
Royal College of Physicians and Surgeons Glasgow (RCPSG) – Glasgow*

12 OCTOBER
CBCT Training for dentists (two-day course)
Royal College of Surgeons in Ireland (RCSi) – Dublin#

18 OCTOBER
Dental Faculty Dinner
Royal College of Surgeons Edinburgh (RCSEd) – Edinburgh**

18 OCTOBER
Mentor Training Course – Non-Clinical Skills
RCPSG, Glasgow

19 OCTOBER
Management of Medical Emergencies in Dental Practice (Simulator course)
Dublin#
RCSi

20 OCTOBER
Annual Scientific Meeting
Dublin
RCSi#

24 OCTOBER
BDA Scotland, West of Scotland Branch - Inspiring change - orthodontics in the 21st century
RCPSG, Glasgow***

26 OCTOBER
RCPSG Faculty of Dental Surgery, Annual General Meeting
RCPSG, Glasgow*

26 OCTOBER
RCPSG Faculty of Dental Surgery, Annual Dinner
RCPSG, Glasgow*

1 NOVEMBER
Core Topic Study Day for DCPs
RCSEd, Edinburgh**

2 NOVEMBER
Global Citizenship Conference
RCPSG, Glasgow*

7 NOVEMBER
MFDS Part 2 Preparation Course – Glasgow
RCPSG, Glasgow*

28 NOVEMBER
BDA Scotland, West of Scotland Branch - An evening with Grant McGeoch
RCPSG, Glasgow***

29 NOVEMBER
BDA Scotland, BDA Member Series - A day on paediatric dentistry
Double Tree by Hilton, Edinburgh***

30 NOVEMBER
BDA Scotland, North of Scotland Branch - Dental sleep medicine
DoubleTree by Hilton Hotel, Aberdeen Treetops***

1 JANUARY 2019
Dental Care Professionals' Network
RCSEd, Edinburgh**

18 JANUARY 2019
Scottish Orthodontic Conference
RCPSG, Glasgow*

** More information for RPCSG events at: https://rcpsg.ac.uk/events*

***More information for RCSEd events at: www.rcsed.ac.uk/events-courses*

****More information for BDA events at: www.bda.org/events*

 # More information for RCSi events at: http://facultyofdentistry.ie/postgraduate-programme/upcoming-events

ROUND TABLE

The essence of consent

Montgomery has cast a spotlight on the primacy of informed consent, but does anything really have to change in dentistry? Is this not just the law catching up on existing good practice?

WORDS
SARAH ALLEN & TIM POWER

PICTURES
SCOTT RICHMOND

The requirements, legalities and practices around obtaining informed consent are now a major part of the teaching in all the dental schools, but what about those who were trained before Montgomery, does this mean that the way they consent their patients is risky or even illegal?

There is certainly a lack of clarity in the profession as to how much Montgomery should affect existing practices and relationships with patients, if at all. This has led to concern and confusion but is this really something to be concerned and confused about? What is the truth of the matter, and what does 'informed consent' really mean to dental professionals three years after the ruling was passed down?

This is a complex and nuanced topic and it is hard to separate fact from fiction. Certainly, consent impacts every area of dentistry and is an issue where unforeseen factors can crop up at unexpected times. At *Scottish Dental* magazine, we wanted to look at the topic in more depth and discuss it with those for whom it is an everyday reality.

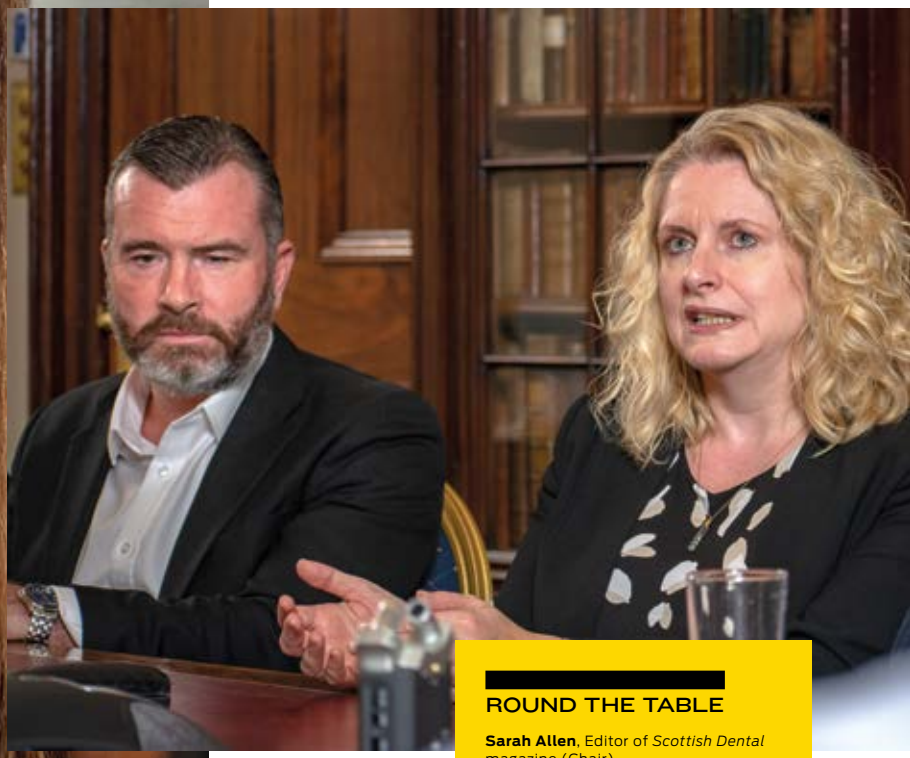
Therefore, with the support of the Royal College of Physicians and Surgeons of Glasgow who have been looking into the issue in detail, we brought together a group from across the dental world in a round-table discussion on what consent means in a post-Montgomery world. The group considered what "informed consent" means from all their perspectives and how it impacts them on a day-to-day basis. They discussed the reality of record-keeping and explored the consent pathway between primary and secondary care as well as what it means for different members of the dental team, the extra considerations when consenting children and vulnerable adults, and the complications when payment is thrown into the mix.

So how worried should people be in the dental profession about the Montgomery ruling? This was the opening gambit to the round-table discussion to see if it had changed people's approach to obtaining consent and the general opinion was "not much, but keep good notes just in case!". It was pointed out that new dentists coming through dental schools were very aware of the consent issue, but there could be issues with others who are not fully aware of the ramifications of Montgomery. However, the good and long-standing relationships that dentists have with their patients puts them on a more solid foundation compared to their clinician colleagues in the medical sector who can be seeing people of whom they have no prior knowledge.

Helen Kaney: I don't think we should really be worried at all. It has brought case law into line with the advice and guidance of the regulatory bodies, but it has not really changed how clinicians should proceed and treat patients following the GDC guidance that came out in 2013.

I think we get very exercised about consent, and, of

Left: Sharon Letters
Below: Douglas Hamilton and Helen Kaney



course, clinicians have to have consent from their patients, but, in terms of Montgomery, I don't think people should worry overly. They should just carry on doing what everyone has been doing in terms of record-keeping.

Douglas Hamilton: Montgomery essentially concerns the interaction between a patient and a clinician in shared decision-making, and this is something that GDPs have been doing intuitively for many years. They see their patients regularly so they do know them well and have a relationship with them. The requirements of Montgomery are perhaps less onerous on GDPs than medical clinicians who are seeing patients on a less regular basis and have no pre-existing insight into these patients, particularly their values, preferences and wishes.

Dentists are good communicators, but where they can fall down sometimes is in recording information. We often see notes that say very little. They may say 'examine, scale and polish' but it's not clear what the actual treatment options were.

If a complaint goes into a more formal setting, be it the ombudsman, GDC or court of law, you need the back up of your notes. It's important to get that message across to dentists about taking quality notes that show consent.

All the panel agree that newly qualified dentists have a better understanding of the need to obtain and record consent, but many have seen that these dentists can end up writing too many notes, and there is a danger that this becomes the norm when it is not required, as Christine Goodall pointed out: "We certainly need to reach a happy medium, but we also need to have confidence in what we say to people and what we write down – not writing 10 pages, that's ridiculous."

Douglas Hamilton: The point here is that one of the essences of consent is that it is a two-way process, but if it comes to a complaint, it is a harsh reality of the situation that the patient is more likely to believed. Even if dentists consider record-keeping as excessive or onerous, it is a matter of fact that this type of defence does need to be exercised because it will come down to patient's recollection or yours.

Helen Kaney: I spend a lot of my time talking with clinicians about how they discuss things with a patient in order to agree the treatment provided. I think, in theory, everyone agrees that record-keeping has to be good so that if anything goes wrong then you have evidence in your records. I'm jumping for joy when I'm helping someone with good records!

ROUND THE TABLE

Sarah Allen, Editor of *Scottish Dental* magazine (Chair)

Helen Patterson, Consultant in Special Care Dentistry at NHSGCC and Honorary Secretary of the Dental Faculty at the Royal College of Physicians and Surgeons of Glasgow

Douglas Hamilton, Dental Adviser at MDDUS

Helen Kaney, Lead Dento-legal Consultant and Head of Dental Services, Scotland at Medical Protection Society

Roger Currie, Consultant Oral and Maxillofacial Surgeon, NHS Ayrshire & Arran and Member of Council of the Royal College of Surgeons of Edinburgh

Christine Park, Senior Clinical Teacher at University of Glasgow and Paediatric Dentistry at NHSGCC

Sharon Letters, GDP and Clinical Director with My Dentist, board member of the Faculty of General Dental Practitioners West of Scotland Group

Andrew Leitch, GDP and VT Advisor

Peter Ommer, Clinical Director Dental Services at NHS Ayrshire & Arran

Christine Goodall, Honorary Consultant in Oral Surgery at Glasgow Dental Hospital and Vice Dean of the Dental Faculty at the Royal College of Physicians and Surgeons of Glasgow.

Everyone agrees that records should be as good as they can be – but 'as good as they can be' means different things to different people. What was fine five years ago may not now be sufficient if they had to go through a forensic examination.

Douglas Hamilton: We have to accept there is a lag of getting in front of the GDC of usually two to three years in the case of a complaint. I fully accept there will be cases where you can remember the situation perfectly well for a number of reasons, but you are caught 'betwixt and between' if you sit there and claim to recall with great clarity something that occurred two-to three years ago – you can actually come across as being unreliable. Therefore, being able to refer to records is the best defence.

Sharon Letters: To be honest, I don't think Montgomery has really changed what GDPs do in terms of consent because, on the whole, we were very good at it before, and if we are following GDC standards we are already involving the patient in the process. The difficulty is in recording all this and making sure that is enough to defend us should we need it

The difficulty comes where we have those relationships with patients where they say: "Well, you know me, you know best – you choose what you think is the right." That is where you can start to get into difficulties because obviously it has to be their choice and not ours.

Andrew Leitch: I agree in terms with your relationship with the patients. Because you have been involved with them over a number of years you do know what would be relevant to them in terms of the consent process.

I do vocational training and I almost always have to edit the notes that new graduates are writing as they write so much! But it has helped my notes to become naturally better.

My concern would be for the GDPs who are not involved in VT or the Faculty as their notes may not be good enough.

Peter Ommer: One of the aspects that runs through my mind is that most everybody is on computers now so they can have pre-notes, and they will produce standard forms. This can be just a tick-box exercise, and I'm not really sure this is actually recording consent.

Helen Kaney: The advice we would give is that the records have got to be tailored to the patient as much as possible and we can't just have notes with auto text which is not relevant to that patient – no one is going to buy that.

Helen Patterson: Without resting on our laurels, as a profession we do fairly well, but since Montgomery came out there is a question of what do we tell patients about a treatment, because we cannot tell them absolutely everything. For example, for every anaesthetic there is technically a risk of death but what percentage of patients get told this? So I think that is where people will have a bit of difficulty with Montgomery.

Roger Currie: Montgomery may be a blunt instrument but the refinement will come from case law and going through the GDC, but, you are right, do we need to tell everyone about the risk of death for every treatment?

Helen Patterson: We need to interpret Montgomery appropriately for each patient.

Douglas Hamilton: That's the essence of it. You'd have a far greater feeling for a patient's wishes if you have been treating them for the past 20 years, but you cannot make paternalistic assumptions – you still have to have consent, but you probably are one step further forward in primary care than in secondary.

The panel discussed the issues concerning the consent pathway from primary to secondary care via referrals, and all agreed the onus was on the GDP to firstly prepare their patient with the right information about the treatment and, secondly, the quality of their referral letter. However, once the specialist has seen the patient there was also the issue that they may not progress with the original referral request if the situation did not warrant it.

Christine Park: Although there has been a discussion in primary care where the patient has been referred for general anaesthetic, we may well change the treatment plan partly because of our investigations and partly because we have different skills. So they come in expecting to be consented for something, and then we give them all this other information, and sometimes they can't make the decision on their own. They have to go away and come back.

Peter Ommer: We put the onus back on the GDP – it may be defensive from our aspect but it's to make sure the patient is informed as early as possible. We want to move it

Left: Andrew Leitch (left) and Peter Ommer.
Above: Christine Goodall and Douglas Hamilton

downstream but we will follow it up with a phone call to the dentist to explain that we need more information.

Christine Goodall: We will also send things back, and I don't think that is unreasonable.

Douglas Hamilton: This leads into one of the wider issues with Montgomery as it can be over-interpreted, particularly by the younger dentist who thinks they have to give the patient autonomy and what they want. I think that some patients believe that the 'new age' of Montgomery is a bit of a free-for-all; patients say "I want this done, I understand there are alternatives, the risks and procedure, therefore I consent and you have got to do it", but consent will not make up for bad dentistry.

The panel agreed there was a growing paranoia from dentists about being sued, and some people feel somewhat intimidated by Montgomery and that they have to agree to whatever a patient desires. Consultants say they are getting an increasing number of referral letters with the correct diagnosis and asking for a second opinion, which is some cases creates unnecessary delays.

Douglas Hamilton: That is going beyond what is strictly reasonable, simply from a fear of a complaint or a claim, but the point is you cannot acquiesce to patient rights to deliver a treatment that is contra to your professional judgement.

The panel next discussed consent where a patient group may not have the capacity to give their consent and it would have to come from proxies.

Helen Patterson: It is difficult if you have never had consent from a patient and you have to go through proxies for judgement, which sometimes come with personal prejudices.

When prejudices have an impact on your own care that's fine, but when your own prejudices have an impact on someone else's care it is a little bit more complicated and can lead to unreasonable expectations. The individual proxy wants the best but their best comes with their own views on things.

Christine Park: It's important to have the conversations about the treatment now and the risk of not having the treatment later, like talking about a carious tooth that is going to give the patient pain in a year's time. It's important to explain that in an emergency situation the treatment options will be different – particularly for a child.

It's also difficult when we need to do treatment but there is no one to get consent from because there can be some very sad cases where the parents have passed away or there is a fight over custody. In this situation when someone says 'yes' you are worried that whoever finally gets parental custody will not agree with the treatment.

> "EVERYONE HAS THE RIGHT TO MAKE BAD DECISIONS, BUT NOT TO MAKE BAD DECISIONS FOR SOMEONE ELSE!"
>
> HELEN PATTERSON

Helen Patterson: Dementia cases are difficult too, as I have known patients and what their views were before they got dementia and now the proxy wants another thing to happen.

Peter Ommer: From a paediatric point of view we have that same issue where you have that consent for the back teeth to be removed but you are not allowed to touch the front – you have to explain it's all or nothing and we can't be constrained. That is a really difficult conversation. Quite often if social work is involved you don't know who is legally allowed to consent for that child – and you might need translators. I feel more comfortable in a room doing consent under those circumstances as I can actually have a conversation with someone – you can't do it over the phone.

Roger Currie: One thing we have in Scotland that is a major advantage is the Adult Incapacity Act. It's a huge advantage when it comes to consent compared to what they have in England.

Above: Roger Currie and Christine Park

Douglas Hamilton: That is right as it expressly references a patient's best interests – not those of the proxy – without being regarded as too paternalistic. The difficulty is where you have the opinion of the patient before treatment and the proxy/guardian who has parachuted in later has a different view. It's always going to be a 'push me, pull you' situation.

Helen Patterson: Everyone has the right to make bad decisions, but not to make bad decisions for someone else!

Another issue that was raised was consent over payment, as dentistry is not free at point of entry, as is the case with the rest of the NHS. It's another hoop that GDPs must go through to get consent and then, in the case of proxies, find out who is going to pay for the treatment.

Douglas Hamilton: It places the onus on practitioners to get consent not only on the clinical aspects of treatment but also the financial aspects and more specifically on the basis on which it is going to be delivered. We have terrific issues over NHS v private fees and whether people are being misled regarding the quality and availability of treatments – it's a component of consent.

You have the additional responsibility of discussing costs and recording it so if they subsequently turn around and query any private treatment you can take them back to the document they signed.

Who will pay in cases of incapacity? That's a minefield but, again, it is a necessary component of the consent process.

Andrew Leitch: The time it takes to consent someone properly is huge: you know you have to present the options and risk for each individual thing and show the private options. The patient goes out with many different treatment plans and bits of paper and you worry that you are giving the patients too much information. We will show them everything from the X–rays on screen, give them printouts of the treatment plans and talk them through it, and often they will leave and then ask the receptionist all about it. Can they really go away and process all that information and make the correct decision?

Roger Currie: That's a good point, as I recently came across an illiterate patient who was only spotted thanks to my senior nurse. I was consulting the guy in my clinic, talking him through it all and I knew something was not right when we were looking at the paperwork. It's a big unrecognised risk as people are often ashamed to admit it, and we are not always good at picking it up.

Peter Ommer: It's an issue with prisoners too. I will always go though everything verbally as ultimately you do not know who can or cannot read, and they are not going to admit it most of the time. I even change the language I'm using sometimes to make sure they understand – it's all about putting it into a language they can comprehend.

Douglas Hamilton: Montgomery and GDC standards state that things need to be explained in a way, which is comprehensible to that patient – you have to tailor your discussions to the patient.

So far the discussions have been focused on the dentist-patient relationship, but now the panel looked at how consent should look with other members of the dental team.

Christine Park: Clinicians think if they have a form that's ticked and signed that this will protect them, but, as we have said already, consent is more around the conversations that they had or what is obviously recorded in the notes. I think sometimes it is difficult for patients to understand why they are being sent to a DCP or a hygienist because, historically, they are so used to just seeing a dentist. So it's a mind-set change and I think it does take quite a lot of change to explain to the patient that this person is qualified and they are GDC registered and they are going to look after them.

Douglas Hamilton: I think you have two models here – a DCP who is working under direct access who is entirely responsible for consenting patients within their scope of practice and recognising when it is outwith their scope of practice. You also have the situation where the DCP is working on prescription and the consenting will primarily be carried out by the primary clinician/dentist.

But even in the second case, bearing in mind that consent is a dynamic process rather than a one-off event, I would expect the professionalism of the hygienist would meant they would ask the patient about the treatment to see they had any questions and are still happy to continue.

They are not the primary consenter, but they are effectively reinforcing that consent process even when they are working from a prescription.

> "CONSENT IS A DYNAMIC PROCESS RATHER THAN A ONE-OFF EVENT"
>
> DOUGLAS HAMILTON

Christine Goodall: I quite often see patients in my consultant clinic but I do not do the treatment, as I pass them on to a member of my team. Most people don't question that but I am aware that patients don't always understand who is who and why I am not personally carrying out their treatment. It is not an unreasonable question for them to ask about the experience and qualifications of people whose job titles are unfamiliar so we have created something to show what experience all the different grades of staff have got so that people can understand.

If a parent does not want a student to work on their child, then that is fine, although we do make it perfectly clear that we are a teaching hospital.

Roger Currie: But if they don't want a core trainee then that becomes a different matter in my book, as that person is a fully registered practitioner with the GDC. I would want to hear a valid reason why they would not want treatment from this person.

Christine Goodall: You are right. I would have a discussion with the person why they were concerned about it but if they insisted on me doing it then I would explain they would be waiting quite a while as I only have one surgical session a week.

Sarah Allen: Could it be argued that this issue of who does the treatment is part of the consent process, i.e. consenting to this person giving me the treatment? Or is the biggest misunderstanding about Montgomery among patients that it gives them the right to choose whoever they want to do the treatment?

Christine Goodall: Most people are quite reasonable about it and we've never had a situation where we have had to say: "Well, you are not getting the treatment and you will have to wait six months for it".

Helen Patterson: However, you are quite right that there is a misunderstanding about the parameters around your right to choose, but this is the NHS and in the NHS we work as a team. You have every right to have appropriate treatment delivered by that team.

Christine Park: We will get requests for a particular consultant, and sometimes they are appropriate and understandable requests, so we will try to meet those requests.

> "CLINICIANS THINK IF THEY HAVE A FORM THAT'S TICKED AND SIGNED THAT THIS WILL PROTECT THEM, BUT CONSENT IS MORE AROUND THE CONVERSATIONS THAT THEY HAD OR WHAT IS OBVIOUSLY RECORDED IN THE NOTES"
>
> CHRISTINE PARK

After the wide-ranging subjects covered by the roundtable, Sarah asked for the panel members to define what 'informed consent' means to them.

Douglas Hamilton: I would define it as a neutral, professional and comprehensive description of the procedure, the alternatives, the risks and benefits and an indication of the likely costs.

Christine Goodall: I would definitely describe consent as a process and not just a one-off event, but it has to be based on your professional and/or expert opinion of what would be most appropriate treatment in the clinical circumstances you are faced with and without bias. You also have to take into account the patient's likely understanding of what you are going to be saying to them and also – and this is difficult for us – their likely expectations and desires of the outcome of the treatment.

Sharon Letters: It's involving the patient in the process. It's a conversation, and it's working in their best interests within your own scope of practice and referring on where appropriate. It's giving them the risks and the benefits as well as the options of no treatment, and making sure they understand what the conversation is and what the treatment proposed is – putting it in terms they understand.

And, as others have said, it is an on-going process, so revisiting it at each examination or treatment appointment to make sure they still consent to what they agreed to at the previous appointment.

Left: Helen Patterson

Crash & burn

Scottish Dental continues its exploration of the growing stress, anxiety and depression crisis that is afflicting the dental profession and talks to some of those working to counsel, help and relieve those suffering

WORDS: DR.SUZY JORDACHE

IT is now well recognised that rates of burnout within the dental profession are significant. Studies from around the world quote rates of 15-84 per cent depending on the dimension of burnout studied [1].

The prevalence of burnout varies according to gender, age, career stage and practice setting. Burnout symptoms correlate with the extent of NHS or public work undertaken and to a lesser extent to the number of hours worked or patients seen. Younger dentists appear to be most vulnerable. While general dentists and oral surgeons appear to have the highest rates of burnout, orthodontists appear to have lower rates of burnout [2,3].

The impact this has on the wellbeing of dentists, patient safety and patient satisfaction is now a recognised challenge.

Determination and dedication to meet the demand and fulfil personal and patient expectations can lead dentists into a very unhealthy relationship with work that spills over into their family life and can have an effect on their health. There are also clear dentolegal consequences.

As Professor David Peters, Director of the Centre for Resilience in London, states: "Long-term drowning in high levels of adrenaline and cortisol eventually makes you ill. But before that, it makes you stupid and unfriendly."[4]

Litigation and complaints are often seen to arise against the background of a burnt-out, unhealthy clinician. Deficits in cognitive control, working memory, reasoning, skills in problem-solving, planning and execution lead to unsafe clinical decision-making with impaired performance. These can lead to a decline in the dentist-patient connection and the deterioration of professional relationships [5,6].

What is burnout?

Burnout is an occupational hazard that occurs frequently among professionals who do 'people work' of some kind. According to Mindtools.com, burnout occurs when "passionate, committed people become deeply disillusioned with a job or career from which they have previously derived much of their identity and meaning. It comes as the things that inspire passion and enthusiasm are stripped away, and tedious or unpleasant things crowd in".

The widely recognised Maslach Burnout Inventory (MBI)[7] proposes three domains that make up burnout:

- emotional exhaustion
- depersonalisation – a cynical attitude with distancing behaviours
- low sense of personal accomplishment.

Burnout reflects an uneasy relationship between people and their work. Avoiding burnout requires a commitment to build or sustain the opposite of burnout – engagement at work. Psychology professors Christina Maslach and Michael Leiter propose that engagement and joy at work can be determined from the following six areas of work [8]:

- workload (too much work not enough resources)
- control (micromanagement, lack of influence, accountability without power)
- reward (not enough pay, acknowledgment or satisfaction)
- community (isolation, conflict, disrespect)
- fairness (discrimination, favouritism)
- values (ethical conflicts, meaningless tasks).

What can be done to avoid or reverse burnout?

The first step in avoiding burnout is to carefully scrutinise your relationship with your current workplace and ensure that potential difficulties in each of the six key areas of work are minimised or resolved. If this is not possible, a change of environment or workplace can reverse burnout completely.

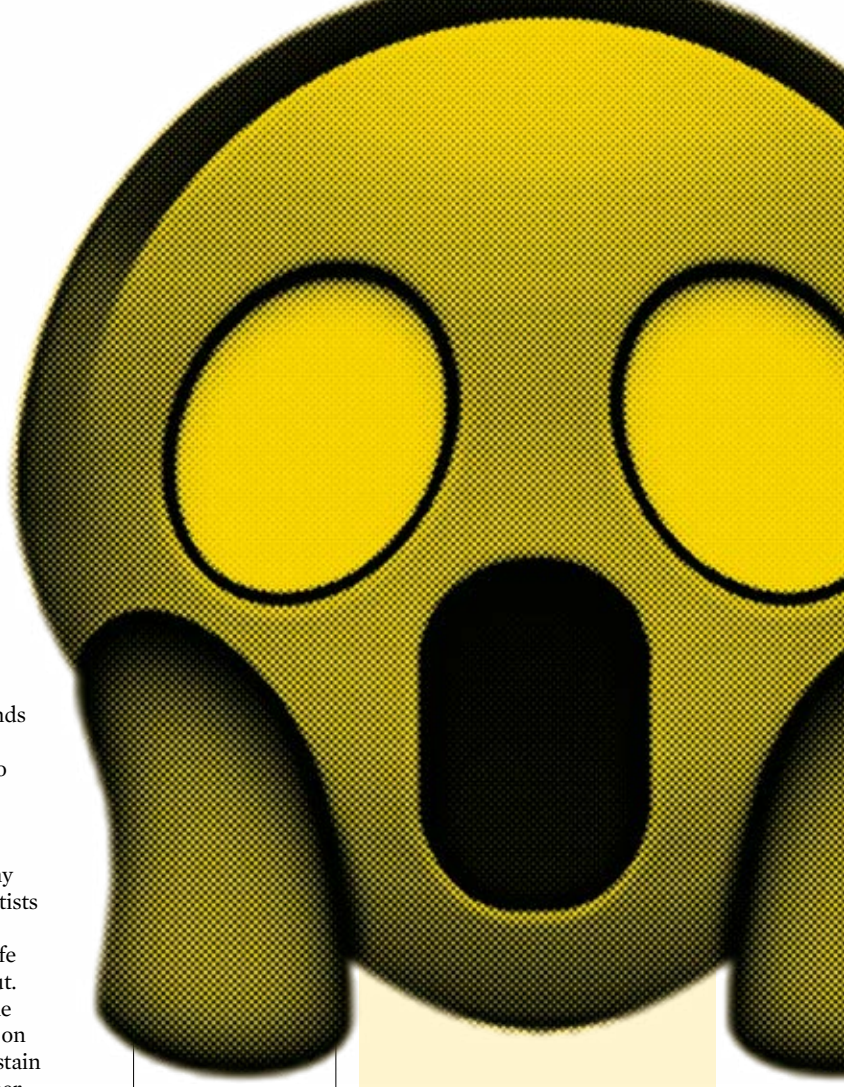
It is perhaps astonishing that so many dentists continue to practise in the full knowledge that their workplace generates risk of burnout for them in more than one of the key areas. It is equally astonishing that despite evidence that complaints, productivity and staff turnover are significantly affected by burnout, employers consistently fail to address the problems.

To avoid or reverse burnout and build engagement requires careful attention to develop good individual coping strategies in the workplace. Organisational policies and procedures must ensure these coping strategies are respected and enforced. As a starting point, it is important for dentists to focus on physical and emotional wellbeing and to ensure that their sense of calling is not eroded. This can require a profound shift in mindset and behaviour for many dentists.

Physical wellbeing: Developing rituals and routines that promote regular healthy eating, hydration and sleep underpins all other more sophisticated strategies.

Unfortunately, many dentists find that their workplace culture requires them to have considerable courage to say "no" to skipping breaks and taking on extra work. Prioritising personal wellbeing can be a significant challenge for many. Often dentists give much of their energy to their work and arrive home exhausted and unable to enjoy or participate fully in time with family

> "THE IMPACT ON THE WELLBEING OF DENTISTS, PATIENT SAFETY AND PATIENT SATISFACTION IS NOW A RECOGNISED CHALLENGE."
>
> DR. SUZY JORDACHE



and friends; they fail to exercise or eat healthy food and struggle to relax into restorative sleep.

Managing their energy rather than their time is a key concept to ensure safe performance across a practising lifetime [9]. Prioritising and diarising activities outside of work to support high performance at work can help.

Dentists should resist the deeply ingrained need to work even if unfit, also known as 'presenteeism'. They should be encouraged to take time off work without fear or guilt if they think that they are infectious or feel unsafe to provide care.

Proactive employers will have policies and procedures in place to insist on this and reduce these under-recognised risks to patient safety and satisfaction and dentist wellbeing.

Emotional wellbeing: Coping with the stress of working with suffering, anxious or demanding patients day after day requires attention to emotional wellbeing to avoid secondary traumatic stress disorder or compassion fatigue. Mindfulness, journalling, and peer support groups [10] are evidence-based techniques that promote self-awareness and resilience. There is evidence that a growing number of social media support forums can help significantly [11].

Interestingly, some research and opinion suggest that introverts and extroverts recover energy very differently. In the book *Introvert Power*, psychologist Laurie Helgoe suggests that introverts recover energy best when reflecting alone, and extroverts recover energy best when interacting with others.

Sense of calling: A sense of mission and purpose can also build resilience and maintain engagement. Remembering why an individual chose dentistry and celebrating achievements that align with these values can be a powerful way to bounce back in an environment that constantly challenges and surprises. Employers can support this by collecting evidence and stories of good practice as well as rewarding, thanking and celebrating their employees' success.

It is unsustainable for a dentist to continue working in an environment that constantly introduces 'moral distress'. When such practice is at odds with their personal values, steps should be taken to address the mismatch, or they should seek different employment.

Two-way solution

Evidence across healthcare settings strongly suggests that individuals cannot build or maintain resilience in isolation [12]. It is crucial every employer understands this and works carefully with individual dentists so that they are less likely to experience burnout.

In a dental partnership where they have autonomy over their workplace, dentists will have to regulate their energy needs to ensure safe practice and avoid burnout. This level of self-discipline with the potential impact on earnings is required to sustain long-term health and career satisfaction.

Whether you are an employer or an employee, avoiding burnout will require thought and action.

As Maslach and Leiter wrote before: "When burnout is counteracted by engagement, exhaustion is replaced by enthusiasm, bitterness by compassion and anxiety with efficacy." [13]

Please visit https://educationatmps.com/course/search?categoryid=2&country=UK

> "DENTISTS SHOULD RESIST THE DEEPLY INGRAINED NEED TO WORK EVEN IF UNFIT, KNOWN AS 'PRESENTEEISM'. THEY SHOULD BE ENCOURAGED TO TAKE TIME OFF WITHOUT FEAR OR GUILT"
>
> DR. SUZY JORDACHE

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WORDS
TIM POWER

UNDER PRESSURE

'Don't let me die on Christmas Day.' For some, the stresses and strains of their everyday job bring a significantly greater awareness of human fragility, as George Medal recipient Captain Karl Ley explains

A moment of respite for the then Warrant Officer Karl Ley in Afghanistan

Capt Ley GM , who is now based at Headquarters Defence School of Transport, enlisted in 1999

IT WAS CHRISTMAS DAY IN 2009

and Karl was on his third call-out of the day. Instead of basking in the festive cheer with his wife and children back home in Sheffield, he was sweltering under the Afghan sun in Helmand Province and, once again, heading out with his team to defuse another suspect roadside bomb.

As a High Threat IEDD (Improvised Explosive Device Disposal) Operator, Warrant Officer Karl Ley was usually calm, cool and collected after years of experience in a job that he says he enjoys, but all that was going through his head was: "Don't let me die on Christmas Day!"

Recalling that day, Karl said: "People don't generally believe me when I say that I've never really seen bomb disposal as a particularly dangerous or stressful occupation. We are all highly trained and have years of intense field experience and, as a tight-knit group, we have full trust in each other and our capabilities.

"On the whole, I have found the whole experience enjoyable and rewarding, particularly in Afghanistan where we had a role to make things safe for our comrades.

"However, there are times when the stress gets to you as self-doubt starts to sink in.

"I was away from my family and it just got into my head that Christmas Day would be the worst time to die because of the effect it would have on my three children; I could imagine the knock at the door and Christmas Day would be ruined for the rest of their lives.

"So I made sure I dug deep into my experience and training and did everything right that day."

This is a maxim that has served Karl well over the 18 years he has helped to defuse more than 500 explosive devices, and earned him a George Medal for his service in Afghanistan.

During one six-month tour, he made safe 139 IEDs planted by the Taliban in Helmand Province.

Karl said he fell into bomb disposal by accident after the sergeant in the Sheffield Army Recruitment Centre suggested he do something "technical" following his positive aptitude test results. He entered the Royal Logistical Corps as an Ammunition Technician in 1999 and his technical aptitude, quick thinking and even temperament were identified as ideal characteristics for the bomb disposal team.

When he was approached to join he leapt at the chance and after six years of intensive training as a 'High Threat IEDD No 2' – the support role to the bomb disposal team leader – he became a team leader in 2005, seeing service in Iraq and Afghanistan.

Ask him why he enjoyed it and continued doing this role for such a long time, he'll say exactly the same reason why a footballer wants to play for England at Wembley: to be the best they can.

He said: "Stress comes with everything you do, particularly the first time you do something. When I defused my first bomb I was not in fear of my life because I have been well trained; it was a personal stress I was experiencing because I wanted to get it right.

"We want to operate at the highest level of our career and, although we don't seek bombs out, it is what we have trained for."

It's the long, arduous training that gives Karl and his colleagues the confidence to go into action with a level head and a determination to do a good job that helps to deflect any stress they may feel.

However, like his experience at Christmas, he admits there have been stressful periods that he has had to deal with during his tours of duty.

He said: "During 2009-2010 in Afghanistan, there was a lot of action around the British base in Helmand and lots of casualties, particularly from IEDs. This made us very busy so we were under a lot of stress, particularly when you are commanding your men on the scene, making sure they are doing everything right, trying to get information from locals through interpreters, being under time pressures... and occasionally getting shot at."

During one period he defused 42

> "WHEN I DEFUSED MY FIRST BOMB I WAS NOT IN FEAR OF MY LIFE. IT WAS A PERSONAL STRESS BECAUSE I WANTED TO GET IT RIGHT"
>
> KARL LEY

IEDs within 72 hours, having to clear bombs while Taliban mortars and gunfire rained down nearby.

"As you can imagine, you feel the stress as you defuse the first few bombs on a six-month tour, but then you get into the rhythm and everything settles down. But as the days count down to coming home, the self-doubt looms again and, although you have made it this far, you start to worry about getting it wrong in the last week of tour."

On Karl's second tour of duty in Afghanistan he was promoted to Operations Warrant Officer, which brought a different kind of stress, as he was now responsible for allocating teams to IED jobs and staying behind a desk to direct the bomb disposal operations.

He said: "I was sending people I knew very well out to tackle these devices and then advising them on procedure when they called me after inspecting the bombs. After I'd confirm their approach, I would then ask them to call me back when they had competed the tasks: those hours were the longest and most stressful in my life."

Karl said this type of stress – the frustration that builds up when you are not in control of a situation – is found in most professions and that is why it is important to focus on what is within your power to change and ignore what you cannot influence.

He said: "My advice to people is to always remain aware of the bigger picture and don't get hung up on the smaller bits and pieces. Try to keep the goal in mind; don't focus on the process – focus on the output.

So basically, don't stress on the little things but, equally, don't stress on the bigger things that you can't change or deal with anyway.

Karl added: "My daughter works as a dental nurse and tells me about the frustrations and stresses at her work dealing with long waiting lists. A single dentist is not going to cure the entire waiting list – just focus on what you can change."

Karl said that getting support from your colleagues is crucial to dealing with stress, and he says the Army has become very good at looking after the wellbeing of its people.

He said: "I was supported by an amazing team and, as we all knew each other inside out, they knew when to leave me alone for a bit of quiet time to 'decompress' and when to give me a bit of a ribbing when I needed to laugh.

"Although I was senior to them, they also knew when to call me out if I made a suspect decision, or even reminding me to drink water if I've been out in the 50°C heat for hours. You can get tunnel vision when you are so focused so it's important to have people looking out for you. I couldn't see the wood for the trees sometimes, so you rely massively on your team."

> "I WAS SENDING PEOPLE OUT TO TACKLE DEVICES. THOSE HOURS WERE THE LONGEST AND MOST STRESSFUL IN MY LIFE"
>
> KARL LEY

Identifying stress and mental health issues, and looking after the wellbeing of soldiers, is embedded in the British Army, which has a number of programmes that assess wellbeing, deal with stress-related issues and also help the transition of soldiers from war zones back to the UK.

Karl said: "The Army has come such a long way in dealing with stress as there is no corporate stigma attached to it now. It has formalised a number of programmes such as Trauma Risk Incidence Management (TRIM) where soldiers are supported by peers on the front line.

"Before, soldiers suffering from stress and burnout would be sent back behind the lines for treatment, but it is recognised that it's important to support people by keeping them with their mates who can share their experiences. It was only 100 years ago when people suffering from 'shell shock' would have been shot for cowardice."

Karl left front-line duty in 2012 and was promoted to Captain in 2017 and now works at the Defence School of Transport. However, he spends a lot of time talking to people in other professions, sharing his experience of stress and dealing with its issues.

He said: "When I give talks to the NHS and other organisations, the people in the audience all think my job is incredibly stressful, but I do not recognise that it is. I feel a bit of a fraud sometimes as, when I'm speaking to surgeons and dentists, I think their job looks incredibly stressful too.

"My wife works in childcare and I even view her job as definitely more stressful than mine was – there is stress in every job."

Karl Ley at work in Helmand. During one arduous 72-hour period he defused 42 IEDs, often under fire from the Taliban

On high alert?

Our 'flight or fight' response in the face of imminent life-threatening danger has enabled humankind to survive so far. But this distress signal from the brain can greatly aggravate modern-day stress and anxiety, and it needs to be managed. Tim Power reports

Sabre-toothed tigers may have died out 11,000 years ago but no one has told the amygdala – the primitive part of our brain that controls our conditioned 'flight or fight' response. While this response was vital for early man's survival in order to react to danger, in today's world the workings of the amygdala can contribute to the build-up of stress and anxiety.

Most people have experienced this 'flight or fight' response – pounding heart, short breaths, tense muscles and sweating – but these physical effects usually fade once the threat or difficult situation passes. However, if you are constantly stressed your body stays in a state of high alert and you could be in danger of developing stress-related symptoms.

On the whole, stress is a mechanism designed to protect us by helping us to respond quickly to 'dangerous' situations: typically perceived pressures from a new or unexpected situation or event; something that threatens our wellbeing; or a situation that gives us a feeling of loss of control.

In most circumstances this stress is helpful as it gives us the energy and perseverance to 'push through', for example, to get up in front of people and give a speech or make it to the finish line of a marathon.

We all encounter different levels of stress in our everyday lives, from crossing the road to meeting a tight deadline at work, but there are situations that can heighten our stress levels, such as relationship breakdowns, insecurity at work, bereavement, coping with a serious illness or financial problems.

The amygdala is an almond-shaped section of the brain that is responsible for the perception of emotions such as fear, anger and sadness

Living with heightened levels of continual stress can cause us to feel permanently in a fight or flight state. Rather than helping to push people through this situation it can actually overwhelm them, making people feel they are unable to cope. This can lead to anxiety and other mental health problems such as depression.

Education and Information Officer Reuben Millward facilitates anxiety management groups and one-to-one sessions for mental health charity

Strategies to relieve stress

Belly breathing. Breathe in through the nose to fill your lungs from the belly upwards. Inhale for a count of five, hold for five and exhale over five. Repeat until you feel more relaxed.
Muscle relation. When you are stressed the body tenses up. To relieve this tension, tense up various muscle groups for a count of 10, then relax. Start with the scalp, forehead, muscles around the eyes and work methodically down the body through various other muscle groups in the shoulders, upper and lower body, legs, arms, feet and hands.
Mindfulness. Take a break and walk in a natural environment, like a park, wood or by a river. Focus on the natural sounds around you and block out any other thoughts.
Relaxation. Take a warm shower or bath, download a relaxation/meditation app and take time to chill out.
Exercise. Reuben advises that exercise, together with healthy eating, is one of the best ways to combat stress. He said: "The extra oxygen, raised heart rate and endorphins you get from exercise really helps the whole body relax, and it also gives you a good appetite and results in a good sound sleep."

For more stress-busting techniques, visit www.nhschoice.org

RAMH, in Renfrewshire, and also works to raise awareness and challenge the stigma around mental health issues.

He said: "Stress is natural and is here to protect us, but we are all different in how we deal with stress. It's a very subjective condition and can be related to a whole range of factors from people's personalities, education, profession, family situation, life experience and learned coping strategies.

"When people experience high levels of stress it can be debilitating and can start to affect their work and relationships. It impedes their cognitive faculties, their ability to focus, make decisions and learn, and the build-up of stress can become the precursor to an anxiety response."

Reuben said there are a number of simple and immediate strategies that people can do to 'de-stress' (see panel above) but where stress has become more of an issue he advises seeing a GP or a mental health professional for advice. He uses cognitive behavioural techniques (CBT) in his group and one-to-one sessions, which help people to manage their stress by changing the way they think and behave. CBT is based on the concept that your thoughts, feelings, physical sensations and actions are interconnected, and that negative thoughts and feelings can trap you in a vicious cycle. CBT challenge people's reactions to negative thoughts and stressful situations and gives them coping strategies to improve the way they feel.

> "STRESS IS NATURAL AND HERE TO PROTECT US, BUT WE ARE ALL DIFFERENT IN HOW WITH DEAL WITH IT. IT'S A VERY SUBJECTIVE CONDITION AND CAN BE RELATED TO A RANGE OF FACTORS"
>
> REUBEN MILLWARD

Reuben said: "The build-up of stress can be controlled and managed by a number of techniques, but, ultimately, it is dependent on the individuals going away and practising the skills and techniques we teach them.

"The CBT approach I use is very collaborative and based on empowering the individual to become their own therapist, or as I like to say: 'their own manager of life'.

"This is essentially what this is all about: learning to live healthily and being able to manage stress, which we all encounter in our daily lives."

Symptoms of stress

Stress can affect how you feel emotionally, mentally and physically, and also how you behave.

How you may feel emotionally
- overwhelmed
- irritable and "wound up"
- anxious or fearful
- lacking in self-esteem.

How you may feel mentally
- racing thoughts
- constant worrying
- difficulty concentrating
- difficulty making decisions.

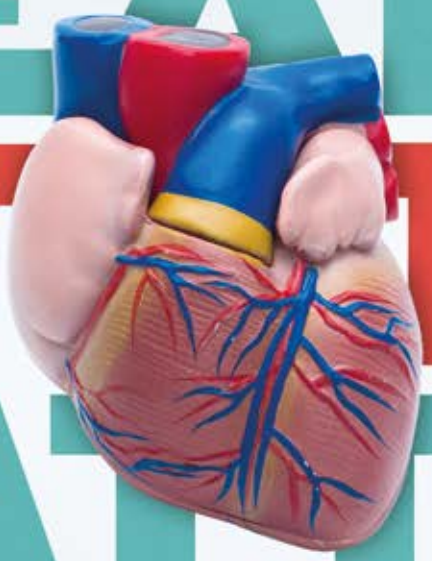
How you may feel physically
- headaches
- muscle tension or pain
- dizziness
- sleep problems
- feeling tired all the time
- eating too much or too little.

How you may behave
- drinking or smoking more
- snapping at people
- avoiding things or people you are having problems with.

Find out more at: www.nhs.uk/conditions/stress-anxiety-depression/understanding-stress/

WORDS
DR SAMANTHA RUTHERFORD

HEART OF THE MATTER



The Scottish Dental Clinical Effectiveness Programme has issued new advice on use of antibiotics against infective endocarditis. In this article we look at what this means for the dental profession and hear the views of expert cardiologists on the clinical input to the process

In August 2018, the Scottish Dental Clinical Effectiveness Programme (SDCEP) issued new advice to support the implementation of National Institute for Health and Care Excellence (NICE) Clinical Guideline 64 (CG64) *Prophylaxis Against Infective Endocarditis*. The advice has been endorsed by NICE and is supported by a range of resources for practitioners and patients.

What is infective endocarditis?

Infective endocarditis (IE) is a rare infection of the endocardium (the inner lining of the heart), which has significant morbidity and mortality. The infection can be difficult to diagnose and particularly affects the heart valves. About 50 per cent of IE patients require corrective cardiac surgery, and fatality rates among IE patients are approximately 30 per cent.

What are the dental risk factors?

Patients with some predisposing cardiac conditions (see p41) are known to be at increased risk of IE, with most cases in this patient group caused by a bacterial infection originating from a transient bacteraemia. However, in about 50 per cent of new IE cases there is no known pre-existing cardiac disease. In the past, oral streptococci have been implicated in up to 45 per cent of IE cases. However, the proportion of IE cases associated with oral streptococci has fallen in recent years.

Previously, invasive dental procedures that cause high-grade bacteraemias were thought to be the main risk factor for IE of oral origin. This resulted in widespread use of antibiotic prophylaxis against IE in dentistry. However, the number of IE cases that originate from an invasive dental procedure appears to be small, and it is now believed that cumulative, low-grade bacteraemias, triggered by normal daily

activities such as toothbrushing, flossing and chewing, are of greater significance. There is also a lack of evidence to support the use of antibiotic prophylaxis to prevent IE.

What is NICE Clinical Guideline 64 and why was it amended?

NICE Clinical Guideline 64 was issued in 2008 and provides recommendations on preventing IE in children, young people and adults. In a move away from previous practice, the guideline stated that "antibiotic prophylaxis against infective endocarditis is not recommended for people undergoing dental procedures". Subsequently, prescribing practice in the UK changed, with a significant reduction in the provision of antibiotic prophylaxis against IE.

In 2015, the NICE guideline committee reviewed Clinical Guideline 64 in response to the publication of a study, which suggested that the incidence of IE in the UK might have been affected by the restriction of antibiotic prophylaxis. It found that there was no new evidence to determine whether antibiotic prophylaxis reduces the incidence of IE after interventional procedures, and the recommendation on antibiotic prophylaxis remained unchanged.

In 2016 NICE amended the recommendation to include the qualifying word 'routinely' to read: "Antibiotic prophylaxis against infective endocarditis is not recommended routinely for people undergoing dental procedures".

Invasive dental procedures	Non-invasive dental procedures
› Placement of matrix bands › Placement of sub-gingival rubber dam clamps › Sub-gingival restorations including fixed prosthodontics › Endodontic treatment before apical stop has been established › Preformed metal crowns (PMC/SSCs) › Full periodontal examinations (including pocket charting in diseased tissues) › Root surface instrumentation/sub-gingival scaling › Incision and drainage of abscess › Dental extractions › Surgery involving elevation of a muco-periosteal flap or muco-gingival area › Placement of dental implants including temporary anchorage devices, mini-implants › Uncovering implant sub-structures	› Infiltration or block local anaesthetic injections in non-infected soft tissues › BPE screening › Supra-gingival scale and polish › Supra-gingival restorations › Supra-gingival orthodontic bands and separators › Removal of sutures › Radiographs › Placement or adjustment of orthodontic or removable prosthodontic appliances

Table 1: Examples of invasive and non-invasive procedures

NICE noted that this change was made to ensure that the recommendation was consistent with the obligations of healthcare professionals to involve patients in decisions about their care. It was not intended that the amended recommendation would result in a change in practice as it remains true that the vast majority of patients at increased risk of infective endocarditis will not be prescribed prophylaxis. However, for a very small number of patients, it may be prudent to consider antibiotic prophylaxis (non-routine management), in consultation with the patient and their cardiologist or cardiac surgeon.

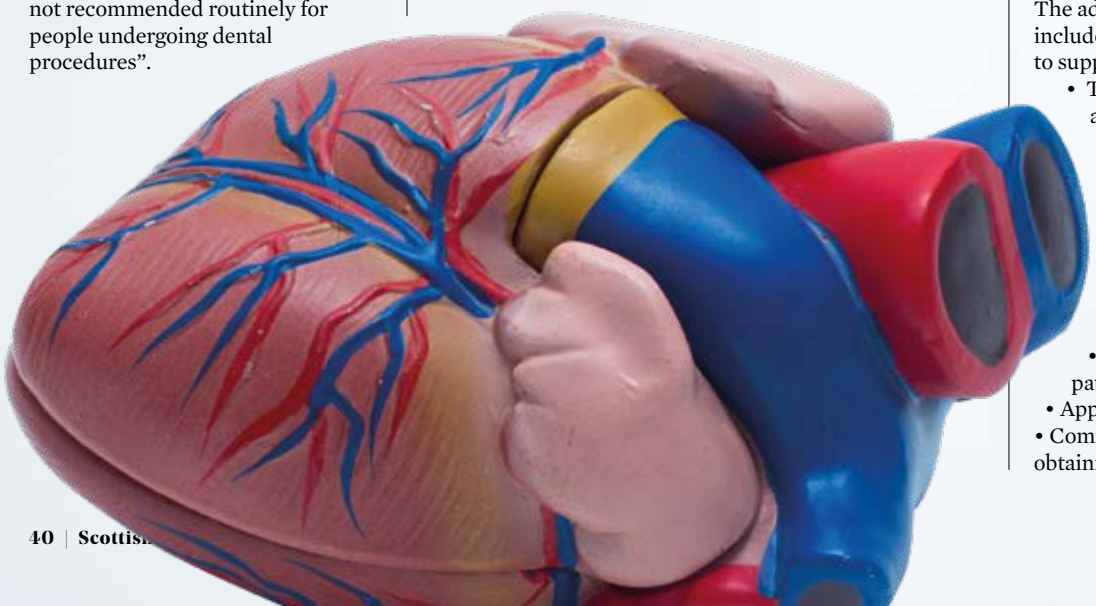
Why has the SDCEP advice been published?

There were concerns that the 2016 amendment to the NICE guideline did not define which individual patient should be considered for "non-routine" management. There was also a lack of information on appropriate antibiotic prophylaxis regimen(s) for use in a dental setting. SDCEP has developed advice to help the dental team implement the NICE recommendations. The advice also aims to prevent variation in how Clinical Guideline 64 is implemented in practice.

What does the SDCEP advice cover?

The advice is comprehensive and includes information and resources to support:

- The identification of patients at increased risk, and those requiring further special consideration
  - Routine and non-routine management
  - Management of children with cardiac conditions
  - Definition of invasive dental procedures
  - Treatment of emergency patients
- Appropriate prescribing
- Communication with patients and obtaining valid consent.



Patients at increased risk

NICE recommends that healthcare professionals should regard people with the following cardiac conditions as being at increased risk of developing infective endocarditis:

- acquired valvular heart disease with stenosis or regurgitation
- hypertrophic cardiomyopathy
- previous infective endocarditis
- structural congenital heart disease, including surgically corrected or palliated structural conditions, but excluding isolated atrial septal defect, fully repaired ventricular septal defect or fully repaired patent ductus arteriosus, and closure devices that are judged to be endothelialised
- valve replacement.

While the vast majority of patients at increased risk of infective endocarditis (IE) will receive their dental treatment without antibiotic prophylaxis, a small sub-group will require special consideration for non-routine management:

- patients with any prosthetic valve, including a transcatheter valve, or those in whom any prosthetic material was used for cardiac valve repair
- patients with a previous episode of infective endocarditis
- patients with congenital heart disease (CHD):
  - any type of cyanotic CHD
  - any type of CHD repaired with a prosthetic material, whether placed surgically or by percutaneous techniques, up to six months after the procedure or lifelong if residual shunt or valvular regurgitation remains.

As well as being at increased risk of IE, these patients are also considered to be at particularly high risk of developing serious and potentially life-threatening complications. The identification and assessment of these patients will require liaison with their cardiology consultant, cardiac surgeon or the local cardiology centre. The number of patients requiring special consideration is likely to be small and therefore most dental practices would be expected to have very few of these individuals registered.

Cardiology input critical to success

One notable aspect of the SDCEP approach to developing the new advice was its inclusion of all shades of experience and knowledge. The short-life working group included expert cardiologists, a move welcomed by members of that profession, *writes Stewart McRobert*

Michael Stewart, Consultant Cardiologist at South Tees Hospitals NHS Foundation Trust, regularly treats patients affected by endocarditis and was one of those in the working group. He said contact between cardiologists and dentists focuses mostly around practical clinical advice. "We can receive enquiries from dentists about individual patients – do we think the patient requires antibiotic prophylaxis? If so, what prophylaxis should be given? In the past, different cardiologists will have given slightly different advice. The guidance helps bring consistency and emphasises that, ultimately, it should be the patient's decision.

"Unfortunately, there were occasions in the past where a patient, backed by his/her cardiologist, wanted to minimise risk through antibiotic prophylaxis but found their dentist reluctant to prescribe. The new SDCEP advice should help us avoid that potential conflict."

> "THE GUIDANCE HELPS BRING CONSISTENCY AND EMPHASISES THAT, ULTIMATELY, IT SHOULD BE THE PATIENT'S DECISION.

John Chambers, Consultant Cardiologist and Professor of Clinical Cardiology at Guys' and St Thomas's NHS Foundation Trust, believes that clinical input to the SDCEP process was crucial and helped to ensure that the resulting guidance provided a pragmatic solution.

"The NICE guidance was confusing for patients, dentists and cardiologists. It was engendered by people who did not understand the clinical aspects of what they were pronouncing upon."

In contrast, he emphasised, the SDCEP advice incorporates the considered opinions of clinicians and scientists involved in patient care. He does admit to one or two minor concerns about the new guidelines.

"They don't indicate the level of risk in the 'high risk' groups, that is those with prior endocarditis, artificial heart valves or uncorrected congenital disease. Those risks are very high; at the order of 300 times the average for prior endocarditis and 50 times for replacement heart valves. In addition, some dentists I have spoken to are concerned that dental scaling is not recognised as a high risk procedure. That said, this is a solution that brings us in line with worldwide practice. It will help patients and those trying to apply guidance in a more clinical way."

Top tips for practicing evidence-based dentistry: Part 3

Niall McGoldrick BDS, MFDS RCPS(Glasg); Derek Richards BDS, FDS, MSc, DDPH,FDS(DPH)

Introduction

Implementing the best available evidence and enabling positive sustainable change in practice is an enviable goal for anyone providing healthcare services. In this final article of a three-part series we will discuss applying the evidence and methods of evaluating the outcome, as the final two parts of taking an evidence-based approach. These final two parts are arguably the most important but are often perceived as the two most difficult to achieve.

In general dental practice there are any number of barriers to implementing effective change, including the healthcare system, the will of staff, patient expectations and time available. That said, this stage does not need to be overly complex but it does need to be planned and there are a number of tools we can use to deliver evidence-based dentistry to each and every patient. This article is focused on giving some practical advice and pointers.

Systems thinking

Any challenge is easier when it is broken down into smaller chunks. So think of what you are trying to achieve, then the process that takes place to get to that goal and the system it is part of. Everything we interact with is a system, and there are processes within that system. As soon as we walk out the door in the morning we begin to interact with systems and we start processes.

The footpath network is part of a national infrastructure system that we interact with, queuing for a coffee at the train station is part of a small local system, the surgery at work is a complex local system with many interacting and moving parts. Within these systems there are various different processes; for example, the footpath network has a series of pedestrian crossings, the process to crossing the road will often start by pushing a button and waiting for the green man on the traffic lights, but, of course, it is often a lot more complex than this.

In order to understand the system and how best to implement evidence within a system you need to be able to map the processes you are thinking of changing and determine what might influence the application of evidence. This is called process mapping. Once you have the map, then you can think about the possible barriers to applying the best evidence and equally think about what would enable application of best evidence. The ultimate system makes it easy to do the right thing without relying on humans to do so. Equally, an effective system can make it difficult to do the wrong thing.

Figure 1 illustrates how a process map for crossing the road might look. This map is very simple and doesn't take into account all potential choices or influences, but it should give you an idea of how to go about constructing a process map (see below).

Let's return to our clinical example of our paediatric patient in practice whose parent has withheld consent

Figure 1: Process map for crossing the road

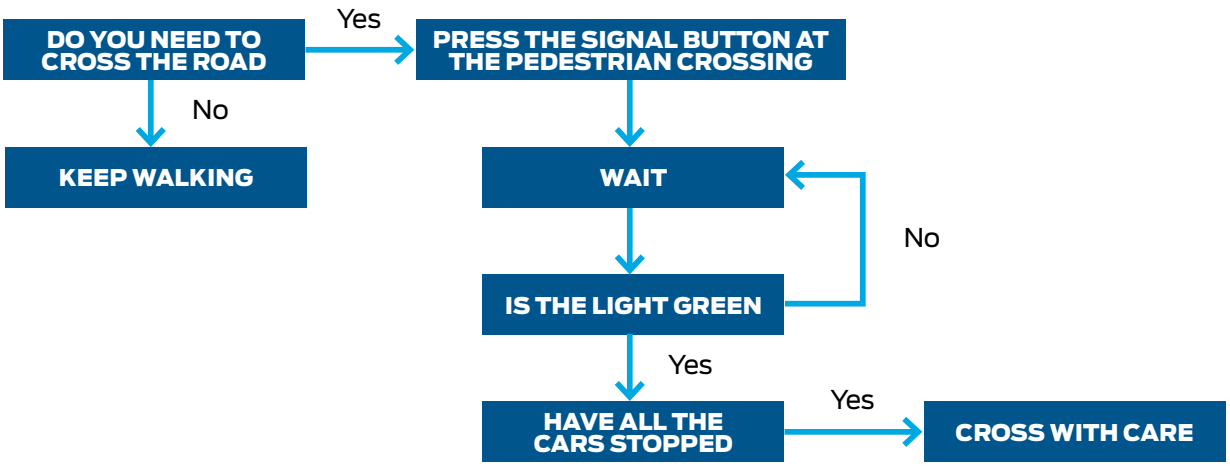
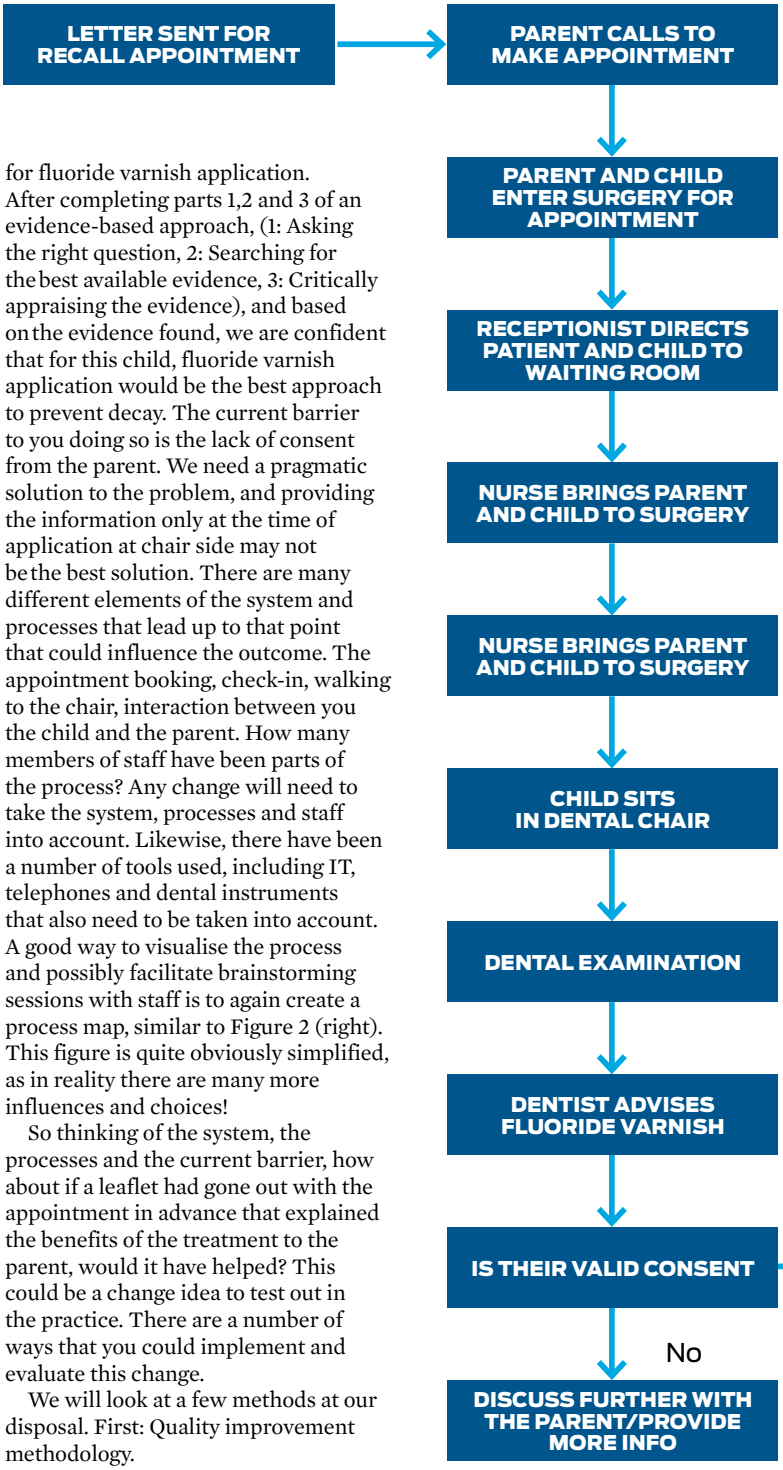


Figure 2: Process map for paediatric patient attending for routine appointment



for fluoride varnish application. After completing parts 1,2 and 3 of an evidence-based approach, (1: Asking the right question, 2: Searching for the best available evidence, 3: Critically appraising the evidence), and based on the evidence found, we are confident that for this child, fluoride varnish application would be the best approach to prevent decay. The current barrier to you doing so is the lack of consent from the parent. We need a pragmatic solution to the problem, and providing the information only at the time of application at chair side may not be the best solution. There are many different elements of the system and processes that lead up to that point that could influence the outcome. The appointment booking, check-in, walking to the chair, interaction between you the child and the parent. How many members of staff have been parts of the process? Any change will need to take the system, processes and staff into account. Likewise, there have been a number of tools used, including IT, telephones and dental instruments that also need to be taken into account. A good way to visualise the process and possibly facilitate brainstorming sessions with staff is to again create a process map, similar to Figure 2 (right). This figure is quite obviously simplified, as in reality there are many more influences and choices!

So thinking of the system, the processes and the current barrier, how about if a leaflet had gone out with the appointment in advance that explained the benefits of the treatment to the parent, would it have helped? This could be a change idea to test out in the practice. There are a number of ways that you could implement and evaluate this change.

We will look at a few methods at our disposal. First: Quality improvement methodology.

What is quality improvement (QI)?

QI is an approach we can use to build change into processes and systems that is sustained. It is a new kid on the block in dentistry, but it has been around in healthcare for more than 30 years and for much longer in industry.

The first formal introduction to QI in Scottish dentistry was through the Scottish Patient Safety Programme in 2016.

Our healthcare colleagues working in the acute and other Scottish primary care services have been doing QI for just over 10 years now. We have some catching up to do, but the benefit is that we can learn from those that have gone before. There are plenty of QI success stories published in a bespoke journal for QI, BMJ quality and safety, access it here: https://qualitysafety.bmj.com/

QI methodology and science take a pragmatic approach to implementation of change in a system, focused on tests of change and clear measures so we understand the implications of any change. This controlled approach to implementing change is ideal for use in dental practices. QI is also ideal for finding ways to implement best practice that is supported by evidence.

There is a level of skill and knowledge required to maximise all the QI tools available. NES has developed a number of useful resources that can be accessed online to help navigate QI and can be accessed here: https://learn.nes.nhs.scot/2272/quality-improvement-zone/qi-tools/process-mapping

Changes to the SDR in October 2017 mean that dentists can now include

quality improvement work where this would have been traditionally audit activity.

Peer review

Another method to achieve the final two parts of an evidence-based approach might be to use peer review. This is a process of collaborative working with colleagues to establish a group that facilitates peer-to-peer discussion. It involves practitioners outside your practice and could bring a fresh point of view to the processes in your practice. NES has laid out some advice on the requirements of a peer review group on their website, have a look here: http://www.nes.scot.nhs.uk/education-and-training/by-discipline/dentistry/areas-of-education/professional-development/quality-improvement-activity/peer-review.aspx

If done correctly this approach can be used to fulfil quality improvement hours.

One way to use peer review to improve care might be for discussion and implementation of the updated SDCEP guidance on paediatric dentistry that has recently been published [1].

You could establish a local group of dentists to come together and discuss the guidance, using it as your standard of care and benchmarking against it, then working together to make changes that will benefit patients and improve the quality of care.

In our example of using a leaflet as a test of change, the practice down the road might have more success in winning parents over because they give the leaflet out with appointment letters rather than when they arrive at the reception desk. Or they might have more experience of paediatric dentistry and could share some tips on behavioural management and helping kids accept treatment.

Behaviour change models

Sometimes implementation can come up against a lot of barriers and it seems like there is no path through all the issues and reasons not to change. Susan Michie's research group at University College London has produced a number of models and theories that could be helpful.

The TRIADS (translational research in a dental setting) team uses some of these methods alongside guidance development and implementation of SDCEP guidance [2]. Thinking about barriers to change, it is sometimes down to the physical confines of the working environment or maybe it is the people within it. There are various methods for helping to work through the barriers and understand how to break

CPD

VERIFIABLE CPD QUESTIONS

Aim

› To provide practical advice on how to implement the evidence in practice and sign post to key resources.

Objectives

› To introduce a systems thinking approach in implementation of evidence
› To demonstrate how to construct a process map
› To share key learning resources associated with quality improvement, peer review and behaviour change

Learning Outcomes

After reading this article you should be able to
› Construct a process map
› Describe the peer review process
› Recognise different approaches to evaluating outcomes
› Describe behavioural change methods
› Describe quality improvement

GDC Development outcomes covered:

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

Questions

1: A peer review project can be carried out only by two dentists in the same practice
› True/ False

2: Quality Improvement requires the collection of data at two time points only.
True/False

3: The theoretical domains framework is:

1 A quality improvement methodology similar to PDSA cycles
2 A framework for assessing implementation problems
3 A key component of the peer review process
4 Used by NES to assess quality improvement project reports

4: The statement 'I am fully involved in all decisions about my care and support' is taken from:

1 The GDC standards for dental professionals
2 The Scottish Governments Health and Social Care Standards
3 The practice support manual
4: SDCEP Prevention and Management of Dental Caries in Children

5: Process mapping involves drawing out the various IT processes involved in the patient journey for clarity:
› True/False

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them down and facilitate positive behaviour change.

The theoretical domains framework is made up of 14 domains that can help you understand what the barriers are by providing a framework to create questions from [3].

For example, the first domain is knowledge, questions in this domain might look like: Do practitioners know that new SDCEP guidance for paediatrics has been published? The second domain is skills; a question in this domain might be: Do dentists in the practice know how to place a Hall crown?

Once you gain answers to these questions you can begin the frame ideas and develop facilitators that will enable application of evidence-based practice and guidance. That might be issuing each practitioner with the guidance and arranging a team meeting to discuss it, changing pro-formas on the surgery operating system to include risk assessments that hadn't been previously included or arranging for the practice to have a training day on fitting Hall crowns. You can only come up with effective solutions if at first you understand the real underlying barriers. You can read more about the TDF in a free open access journal here: https://implementationscience.biomedcentral.com/articles/10.1186/s13012-017-0605-9

Evaluating the outcome further

All of the approaches above have evaluation built in. The usual go to mechanism for measuring and evaluating change tends to be a traditional style audit of pre- and post-intervention data collection. This is an effective method of evaluating an outcome, but it only gives a snapshot, usually of quantitative data, of an ongoing and dynamic system. This type of audit activity still has a place to ensure standards are met and identify areas where there could be improvements but we shouldn't be restricted to it.

There are a many other ways of evaluating outcomes and presenting evidence of effective change. It is important though, to distinguish between process measures and outcome measures. In the fluoride varnish example, a process measure might be the number of successful applications of varnish applied, but the outcome measure would be the reduction in caries rate or continued prevention of caries for the patient. Having the ultimate health outcome in mind throughout the project is important, as after all everything the project is striving to achieve is improve the quality of care we provide to patients and improve their health.

Qualitative feedback from staff on a new process is an important measure when evaluating outcomes and could be gathered in staff meetings or in questionnaire form. Staff often come up with pragmatic and innovative ideas that might not have been thought of previously.

Gathering patient feedback is another very valuable measure. The Scottish Government's Health and Social Care standards provide some useful questions and themes to base outcome markers on [4]. An example of the headline outcomes in the document are 'I have confidence in the people who support and care for me' and 'I am fully involved in all decisions about my care and support'. The document is worth a read; the standards are meant to compliment already existing standards set out by various legislative bodies.

Staff and patient feedback could be combined with quantitative data as part of the evaluation of a project in your practice. Returning to QI, the method of quantitative data collection in QI uses a sustained approach to data collection. QI has a programme of active data collection taking place throughout the change process. Instead of collecting large amounts of data at two time points, QI asks that you collect smaller amounts of data at more regular time points. This provides greater levels of regular feedback that can help you understand the implications of any changes you have made earlier.

Conclusion

The three articles we have published in this magazine should give you a good basis for moving forward and practicing evidence-based dentistry. Providing high-quality care and sustaining it is the end goal. Backing up your clinical decision-making and informing your treatment plans with evidence will inevitably help you achieve that. Hopefully the top tips in these articles help you to do that.

If you are further interested in the implementation of evidence in practice and want to be part of testing ideas more formally, then the Scottish Dental Practice Based Research Network will be of interest to you, check out their website to find out about their current projects how to get involved:

http://www.sdpbrn.org.uk/

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Intraoral scanners In dentistry – an update on digital technology

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With the introduction of the first intraoral scanner, CEREC (Chairside Economical Restoration of Esthetic Ceramics) by Dentsply Sirona in 1985, dentistry was offered an exciting alternative to conventional means of impression-taking. Since then, digital technology has developed, resulting in faster, more accurate and smaller scanners than ever before.

As of writing, approximately 15 separate intraoral scanners are available from a variety of companies – all competing within a fierce, growing market. In 2014, the global intraoral scanner market was valued at US$55.3 million, estimated to expand with an annual growth rate of 13.9 per cent from 2015 to 2022 [1].

Intraoral scanners have gained traction within the orthodontic speciality, with restorative dentistry following suit. Intraoral scanning technology aims to address fundamentally multiple contemporary clinical issues, including the intuitively error-prone volumetric changes of impression materials and the expansion of dental stone.

This review will provide an overview of the advantages, limitations and clinical applicability of intraoral scanners and serve as an introduction for those unfamiliar with this technology.

Firstly, it is pertinent to discuss the technology of intraoral scanners. The objective of an intraoral scanner is to record precisely the 3D geometry of an object, to allow this to be subsequently used to produce customised dental devices. The fundamentals of intraoral scanning relate to structured light being cast upon an object to be scanned by a handheld device. Images of the object of interest are then captured by image sensors within the handheld scanner and processed by software. This results in the production of a point cloud which is further analysed by software to create a 3D surface model, also known as a mesh [2]. The most widely used output file is the STL (stereolithography/standard tessellation language [3]).

Numerous technologies exist to process scan data including: triangulation, confocal, active wavefront sampling (AWS) and stereophotogrammetry.

- **Triangulation** works by the concept that the point of a triangle (object of interest) can be calculated knowing the positions and angles of images from two points of view.
- **Confocal** technology relates to the acquisition of focused and defocused images from selected depths – the sharpness of the image infers distance between points and is related to the focal length of the lens [4].
- **AWS** needs a camera and an off-axis aperture module. The module moves around a circular path centred on a point of interest – the distance and depth information are derived from a pattern produced by each point [5].
- **Stereophotogrammetry** estimates all co-ordinates through analysing images using an algorithm – relying on passive light projection and software as opposed to active light projection and expensive hardware.

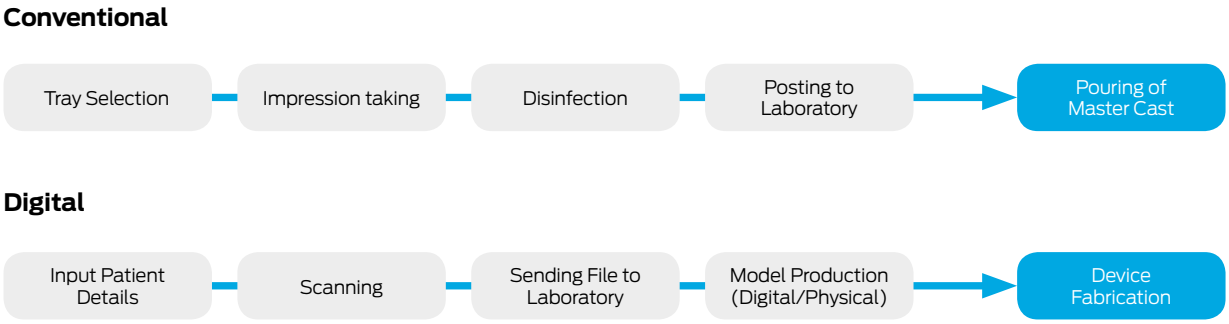
No matter the imaging processing technology, this data is then constructed into a virtual 3D model. The major challenge of this is rendering a point of interest taken at multiple angles. Accelerometers within the handheld scanner allow distances and angles to be measured between images, with extreme points eliminated statistically, culminating in the production of an STL file suitable for further use to create the custom dental device [6].

The accuracy of an intraoral scan is paramount for a well-fitting custom dental prosthetic. This is assessed through the values of "trueness" – being the measured deviation from the actual value and "precision" – the repeatability of multiple measurements.

These terms were defined by

Advantages	Limitations
Enhanced patient comfort	Initial learning curve
Gag reflex management	Unable to displace soft tissue – marginal inaccuracies
No physical study models requiring storage	Expensive hardware/annual software agreement
Streamlined workflow	Unpredictable for extended edentulous sites
Predictable for single teeth/implants/short span bridgework (<5 units)	Unable to register dynamic soft tissue relationships
Immediate preperation feedback in high magnification (undercut/margin depths)	Requires laboratory familiar with digital technology
Improved patient communication	

The advantages and limitations of intraoral scanning technology



Digital vs conventional impression workflow comparison

the International Organization for Standardization – standard 5725-1. Studies investigating accuracy of intraoral scanners should ideally include both measurements, to adequately represent both how "correct" a scanner is, as well as how predictably similar its measurements are.

In 2016 [8],Ender and co-workers, and other studies, demonstrated intraoral scanner trueness of between 20 m and 48µm and precision between 4µm and 16µm [9-11].

Later, in 2017, Imburgia et al [7] reported scanner trueness and precision in the region of 45µm and 20µm respectively for the most accurate scanners tested. To put these figures into perspective, conventional impression trueness and precision is generally reported in the region of 20µm and 13µm respectively [12-14] . In its totality, the literature currently reports intraoral scanning is at least as accurate as conventional methods of impression-taking, subject to the complexity of the clinical case [11,15,16].

A common finding is that of partial scans being the most reliable and accurate, when compared to full arch scans [2, 17,18]. When scanning over five units (implants or teeth), the data would suggest scanning is not as predictable as conventional impressions [7].

Full arch scans are shown to suffer distortion, specifically at the distal end of the scan [17, 19, 20]. Therefore, the scanning of extended preparations or the edentulous mandible is at high risk of error. Shorter scan distances therefore yield the most accurate results [9, 21]. A clinically acceptable marginal gap for an indirect restoration may be defined at below 100×m [22-25].

It is evident that intraoral scanners can achieve errors of consistently less than this value (in single tooth and limited span situations), giving clinical validity.

Advantages

Intraoral scanning provides many advantages for the clinician within single unit, tooth or implant supported restoration or full arch appliance (such as orthodontic retainers or aligners [26-28]) situations. Digital records of the patient obviate the need to store plaster models. This has positive implications for storage and consumable costs [27]. This data also allows the clinician to easily and accurately monitor changes within the dentition over time – for example, tooth wear or orthodontic relapse [5]. It has been evidenced by multiple authors [7, 11, 27, 29]. that intraoral scanning results in less patient discomfort compared to conventional impressions.

Patients also prefer scanning to conventional methods of impression-taking [28,30] and gag reflexes can be avoided. There is a modest improvement in chairside time [30,31] with a reported average scan time of between four and 15 minutes[4] however greater time saving is gained through the elimination of certain following laboratory steps. A small quadrant scan is ideal for a single restoration [9,32].

Scans of prepared teeth can be scrutinised by the clinician at extreme magnification and software overlays of undercuts/preparation depths are available, with potential for improved clinical outcomes as a result. Files can be directly emailed to the laboratory – thus avoiding the need to physically post an impression. The dental technician can also assess the impression in real time and request another scan to be taken – avoiding an extra visit for the patient [33,34].

Certain problematic sections can be retaken thus avoiding the need to retake a full impression. Patients are shown to feel more involved with treatment and are interested in scanning technology – serving as a good advertising tool [35-37].

Limitations

Limitations exist within the practice of intraoral scanning however. As previously mentioned, scanning is currently predictable only within limited parameters. Full arch implant retained prostheses, extended bridgework and complete dentures are currently not supported by compelling evidence. In relation to complete dentures, a predictable dynamic impression of soft tissue borders, muscle attachments and mucosal compressibility is currently severely limited by technology [2].

There is an accepted learning curve in relation to intraoral scanning. It has been reported that subjects with a greater affinity for the world of technology will find the technology easier to adopt than those without this affinity [36,38,39]. Issues arise in the detection of deep margins of prepared teeth[39] as light cannot record the 'non visible' areas of the preparation [2] as normally conventional impression material may be able to displace the gingival margin and record valuable data, following the retraction process. As with conventional impressions, blood or saliva may obscure important margins [40].

With good technique and speed, it has been reported one can overcome many of the reported limitations [15,29]. The issue of reflective restorations or teeth may also arise. This can result in disruption of the matching of points of interest within the software – resulting in an inaccurate 3D model. This can be counteracted by changing the orientation of the scanner to increase diffuse light, using a camera with a polarizing filter or coating the teeth in powder. Powder coatings (aluminium

oxide) can add a variable thickness of up to 90µm [41] and further issues arise if taking a full arch scan as powder inevitably gets mixed with saliva – resulting in time spent cleaning teeth and reapplying powder [29].

The scan path can also affect the quality of the scan [42] and can result in lost tracking. This should ideally be at a constant distance from the point of interest and moved in a fluid manner, avoiding jerky or fast movements – this can be clinically challenging [6]. When scanning and tracking is lost, one should return to an area easily recognisable by the software – for example, the occlusal surface of a molar – to predictably re-establish tracking. If scanning a complete arch, multiple small interocclusal records appear to be the most predictable method of achieving accurate articulation or a small scan of the anterior sextants, as described by a 2018 study [32].

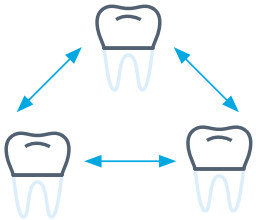
The initial expense and management costs of hardware may also be prohibitive – the average intraoral scanner costs between £13,000 and £31,000. An annual update agreement may also exist to "unlock" STL files for use of the laboratory – this again has an associated cost.

As more scanners reach the market, it is likely these costs will become more competitive and attractive to new adopters.

Conclusion

In conclusion, intraoral scanning presents a viable alternative to (and occasionally outperforms) conventional impression techniques within the confines of strict case criteria. Despite being in its late "innovator" and "early adopter phase", intraoral scanning has shown great potential within restorative dentistry, orthodontics and more recently guided implant surgery (combined with CBCT) [43]. Many of its limitations can be circumvented with good clinical technique. Technology, potentially prohibitive costs and market inertia currently prevent its routine use in a wide array of clinical situations.

Scanning technology schematic (modified from Richert 2017)



Triangulation: 3D location of a point of interest can be calculated by two images taken at a known distance and angle

Confocal: Focused and defocused images combined at known depths to determine 3D location point of interest

Active wavefront sampling: Camera off axis aperture required to take multiple images rotating around a point of interest

Stereophotogrammetry: 3D model compiled from software algorithm analysis of multiple images of object

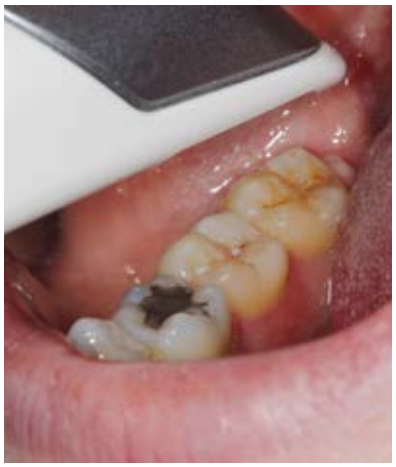


Figure 1: Mid scan

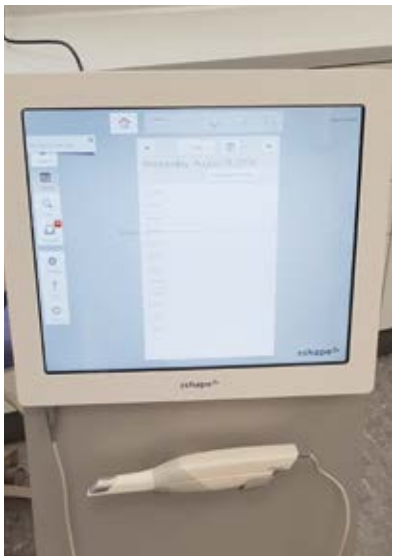


Figure 2: Three-shape unit

Figure 3: Scan of quadrant shown in clinical photo

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The management of a paediatric dental avulsion in general dental practice

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ABSTRACT

A paediatric dental avulsion is not a clinical scenario that you will be faced with on a daily basis in general practice. Being confident in the steps required to manage a paediatric dental avulsion may reduce the stress of the situation and will allow for the most effective treatment to be provided in a timely manner. When managing a paediatric trauma, a clear, structured history and initial assessment will allow for the most appropriate treatment to be administered quickly, ensuring that no potential child protection concerns are missed. The initial assessment should establish; any head injury concerns, whom the child is with, the nature and timing of the injury and the child's medical and tetanus status. The extra oral dry time and the stage of the tooth's development will affect your subsequent management and the tooth's long-term prognosis. This article is going to highlight the key factors that should be taken into consideration when assessing and managing an acute paediatric dental avulsion.

Introduction

The management of acute paediatric dental trauma within general practice doesn't occur on a daily basis, so when it does occur it can be a daunting experience. The blood, tears & worried parents will inevitably create a more stressful encounter than a routine treatment appointment. Being confident in the initial history taking and clinical steps required to manage the patient's care will reduce the stress and will improve the long-term prognosis of the damaged teeth. This article aims to highlight the key factors that should be considered when you are presented with a paediatric dental avulsion.

Twenty-five per cent of children experience dental trauma [1], ranging from concussion to complex dental trauma affecting multiple teeth. The maxillary incisors are most commonly affected, most commonly affecting the 7–14 age group. The main aetiology includes sport, falls and fights [2]. Other factors that can increase an individual's risk of dental trauma include; the presence of a skeletal overjet or incompetent lips [3,4]. Avulsions account for 0.5 – 3 per cent of dental trauma [5]. Although they are not the most common form, they are associated with a poor long-term prognosis and the initial management can have a significant input towards the short and long-term outcomes [6,7].

From the moment the child walks through the surgery door, your initial assessment should commence. Key factors that have to be taken into consideration include; the risk of head injury, the child's medical history and tetanus status, the nature of the injury, the time from the trauma to the replantation, the child's social and dental history, whether the tooth has an open or closed apex, the storage medium and the risk of infection.

Having an extra oral dry time of less than an hour will significantly affect the tooth's long-term prognosis and will influence the management of the avulsion. Furthermore, an open apex will significantly improve the tooth's long-term survival. The loss of neurovascular blood supply to the pulp following an avulsion is detrimental to survival. The International Association of Dental Trauma (IADT) Guidelines recommends the elective root canal treatment of all permanent teeth with a closed apex to prevent infection and resorption [8].

Non-accidental injury should also be kept in mind when assessing any child presenting with a dental trauma injury. A study looking at 390 clinical case records of children with suspected physical abuse showed that 59 per cent of children had orofacial signs of the abuse [9]. It may be necessary to discuss the patient's case with the child's named person or with the local social work department. If you deem the child to be in imminent danger the case may require escalation to the local police service.

Head injury/airway

Has there been any associated head injury or loss of consciousness? Is the child conscious and breathing with no threat to their airway? Any concerns over potential head/ c-spine injury or any compromise to the patient's airway will require attention from the local Emergency Department. Ask about any nausea, sickness or loss of memory that may have occurred since the time of injury and rule out these potential concerns at the start of the consultation.

Medical history

As with any consultation, any relevant medical conditions that may affect the subsequent management of the patient should be considered. Does the child have a bleeding disorder? Do they have any allergies to the metal wire you may plan to place or to the antibiotics you would consider prescribing? Are they asthmatic and already in distress over their current injury? If they are asthmatic, ibuprofen may not be an appropriate analgesia for when they are discharged home. If the child is immunosuppressed or has a cardiac defect immediate replantation may not be the most appropriate treatment option. Acute specialist input will likely be required.

These factors should all be considered before planning clinical treatment.

Haemostasis

Bleeding is often associated with dental trauma. This can be active bleeding or a clotted wound with a bloodstained face. Regardless of whether the bleeding is fresh or residual staining, this can be distressing for the patient and the accompanying adult. Active bleeding may be from a tooth socket or from an associated laceration. Once the source of the bleeding has been identified, haemostasis should be achieved through the use of local anaesthetic, pressure and sutures as required. This can be challenging if the child is already distressed. If the child has a bleeding disorder achieving haemostasis may be difficult. This may necessitate a prompt referral to secondary care.

History

When taking a history for a paediatric trauma case it is firstly important to establish who is with the child – parents, carers, teacher etc. Time should be taken to listen to the history provided from both the child and their accompanying adult.

It is very important to find out when the injury occurred. Time is of extreme importance when planning treatment and discussing prognosis. If the tooth has been avulsed, the transport medium should also be established: water, milk, saliva, dry?

Once aware of when the injury occurred it is important to carefully find out where and how the injury happened. Was the child accompanied at the time of the injury? Does the story match with the clinical presentation? Does the child's account match the history provided by the accompanying adult? Was the environment clean or dirty? Clear documentation of this discussion is crucial.

It is important to compare the story with the injury to assess whether the two coincide. If the presentation is delayed find out if there is a legitimate reason for this delay in presentation. Follow the local practice policy to raise concerns if you are suspicious of the injury and associated circumstance. Under the new GIRFEC Guidelines, each child should have a named person. They can be contacted and the incident shared in a confidential manner, if you are at all concerned.

When sharing information, the 'golden rules' should be followed [10]:

- Adhere to the principles of the Data Protection Act 1998
- Share information that is necessary, relevant and proportionate
- Record why information has been requested or shared
- Make the child, young person or family aware of why information is being shared (unless there are child protection concerns).

Immunisations

Is the child's tetanus up to date? They may require a booster if they are not up to date with their vaccinations or if it is out of date.

Standard vaccination protocol: The primary course of tetanus vaccination consists of three doses of a tetanus vaccination given within one-month intervals. At three years four months old the child should receive a tetanus booster. A second booster should then be given at age 14.

If in doubt, advise a medical review by their GMP.

Antibiotics

There is minimal evidence supporting the use of antibiotics following an avulsion. The prescription of antibiotics is at the discretion of the clinician. Factors that can influence this are highlighted in the British Society of Paediatric Dentistry Avulsion Guidelines [11].

- There has been additional contamination of the tooth or soft tissues.
- There is injury to multiple teeth, soft tissues or other parts of the body which may necessitate the need for antibiotics on their own or as a result of the combination of these injuries.
- To facilitate the safe delivery of subsequent surgery or
- The medical status may make the child more prone to infections.

Dental history

Find out the child's level of dental anxiety, previous treatment and how likely they will cope with the required treatment. In this acute instance, the main priority is to replant the tooth as time efficiently as possible, if patient compliance will allow for this. It is also important to consider the subsequent treatment. If the patient is unlikely to cope with the treatment in general practice or if the treatment required involves specialist input, e.g. an MTA plug for an open apex, prompt referral will ensure no treatment delay is encountered.

Social History

When recording the child's social history make a note of who they live with and which nursery/ school they attend. This information may be required if external services are being involved. Ensure they are registered with a GP and that you have their details.

Management

The International Association of Dental Traumatology (IADT) Guidelines [12], updated in 2012, give clear guidance on the management of paediatric trauma. A summary is provided below:

General Trauma Advice

- A soft diet for one-two weeks depending on the nature of the trauma
- Avoidance of sports
- Continuing with oral hygiene measures, using a soft tooth brush
- The use of chlorhexidine mouthwash twice a day for seven days
- Analgesia – paracetamol and ibuprofen as required.

Deciduous Teeth

If a deciduous tooth has been avulsed don't replant the tooth. Discuss with the child and the parents the potential risk of damage to the permanent successor. Discuss:

- Delayed eruption/failure of eruption
- Decalcification
- Discolouration.

Provide general trauma advice and arrange a review appointment.

Closed Apex

(Permanent teeth)

a) Tooth has been replanted prior to the patient's arrival

1. Clean the gingiva and surrounding area, ensuring there are no lacerations or associated injuries.

2. Use clinical and radiographic assessment to ensure the tooth is in the correct position.

3. Place a flexible splint which will be in place for two weeks.

4. Assess tetanus status.

5. Prescribe a course of antibiotics if deemed appropriate.
6. Give general trauma advice.
7. Start root canal treatment in 7–10 days.

b) Extra oral dry time <60mins
1. Hold the tooth by the crown and gently clean the root surface using saline.
2. Use local anaesthetic to provide suitable anaesthesia.
3. Gently irrigate the socket.
4. Assess for lacerations or loose bone.
5. Replant the avulsed tooth gently back into the socket.
6. Use clinical and radiographic assessment to ensure the tooth is in the correct position.
7. Place a flexible splint which will be in place for two weeks.
8. Assess tetanus status.
9. Prescribe a course of antibiotics if deemed appropriate.
10. Give general trauma advice.
11. Start root canal treatment in 7–10 days.

c) Extra oral dry time >60mins
1. Clean any soft tissue from the tooth's root using gauze
2. Root canal treatment can be carried out at this stage or following reimplantation
3. Two per cent sodium fluoride solution can be used to soak the tooth for 20 min if you have this available
4. Use local anaesthetic to provide suitable anaesthesia
5. Gently irrigate the socket
6. Assess for lacerations or loose bone
7. Replant the avulsed tooth gently back into the socket
8. Use clinical and radiographic assessment to ensure the tooth is in the correct position
9. Place a flexible splint which will be in place for four weeks
10. Assess tetanus status
11. Prescribe a course of antibiotics if deemed appropriate
12. Give general trauma advice
13. Start root canal treatment in 7–10 days (if it hasn't already been carried out).

Open apex

(Permanent teeth)

a) Tooth has been replanted prior to the patient's arrival
1. Clean the gingiva and surrounding area, ensuring there are no lacerations or associated injuries.
2. Use clinical and radiographic assessment to ensure the tooth is in the correct position.
3. Place a flexible splint which will be in place for two weeks.
4. Assess tetanus status.
5. Prescribe a course of antibiotics if deemed appropriate.
6. Give general trauma advice.

b) Extra-oral dry time <60mins
1. Hold the tooth by the crown and gently clean the root surface using saline.
2. Use local anaesthetic to provide suitable anaesthesia.
3. Gently irrigate the socket.
4. Assess for lacerations or loose bone.
5. Replant the avulsed tooth gently back into the socket.
6. Use clinical and radiographic assessment to ensure the tooth is in the correct position.
7. Place a flexible splint which will be in place for two weeks.
8. Assess tetanus status.
9. Prescribe a course of antibiotics if deemed appropriate.
10. Give general trauma advice.

c) Extra – oral dry time >60mins
1. Clean any soft tissue from the tooth soot using gauze
2. Root canal treatment can be carried out at this stage or following re-implantation
3. Two per cent sodium fluoride solution can be used to soak the tooth for 20 minutes if you have this available.
4. Use local anaesthetic to provide suitable anaesthesia.
5. Gently irrigate the socket.
6. Assess for lacerations or loose bone
7. Replant the avulsed tooth gently back into the socket.
8. Use clinical and radiographic assessment to ensure the tooth is in the correct position.
9. Place a flexible splint which will be in place for four weeks.
10. Assess tetanus status.
11. Prescribe a course of antibiotics if deemed appropriate
12. Give general trauma advice.
13. Start root canal treatment in 7–10 days (if it hasn't already been carried out).

Summary of key learning points

• Take a thorough history for all paediatric trauma patients taking into consideration; potential head injury, the child's medical history and tetanus status, the nature of the injury, the time from the trauma to the replantation, whether the tooth has an open or closed apex, the storage medium, the risk of infection, any suspicion of NAI.
• Don't replant deciduous teeth
• All permanent teeth with a closed apex should have a root canal treatment commenced within 7–10 days (IADT Guidelines)
• Permanent teeth with an open apex which have an extra oral dry time > 60mins should have a root canal treatment commenced within 7–10 days (IADT Guidelines)
• Avulsions with an extra oral dry time of <60 minutes should be splinted for two weeks (IADT Guidelines)
• Avulsions with an extra oral dry time >60 minutes should be splinted for four weeks (IADT Guidelines)
• General trauma advice including oral hygiene, sports avoidance and a soft diet should be given to all paediatric dental trauma patients.

Conclusion

This article has covered the key considerations required for the acute management of a paediatric dental avulsion. Following these steps will allow for the effective, timely management of your patients care, improving the long-term prognosis of the tooth and ensuring no potential child protection concerns are missed.

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THE IMPLICATIONS OF TWO LITTLE WORDS

There's more to consent than 'I do'. It's imperative that each patients is involved in the decision-making and has a clear, unambiguous understanding of what is happening

[WORDS: SUSIE ANDERSON SHARKEY]

CONSENT COMES IN MANY different shapes and sizes and can be applied widely in our 21st century lifestyle. When we ladies sit down at the hairdresser, our very presence there is consent in itself that we are willing to put our coveted coif at his or her mercy, and we have confidence that we will emerge even more beautiful that when we entered the salon.

However, I suppose the most life-changing consent a person is ever likely to give is when they say those two small but exceedingly significant words "I do". In my case, I gave my consent to that state, which is referred to as matrimony, more than 30 years ago, and although I said "I do", I certainly don't remember having a multi-page list of what I was consenting to, not to mention a pre-nuptial agreement. It boiled down to me consenting (even promising) to stand by hubby for richer or poorer (definitely been tested), in sickness and in health (say no more) and for better or for worse (there have been times of both I can assure you), and then we were duly pronounced husband and wife.

With the benefit of more than 30 years hindsight, I can say that I probably had no idea what I was consenting to, but young love (which matures like a good wine) won through and so far we've lasted the course.

According to Mr Google, the whole concept of consent came from battery, which is defined as the unlawful touching of another person. There was a case in the New York courts way back in 1914 that laid the foundation for what we know today as informed consent. The case stated "Every human being of adult years and sound mind has a right to determine what shall be done with his own body..." (Schoendorff v Society of New York Hospital 211 NY. 215; 1914).

So, back to dentistry. When patients attend a dental practice, are examined by a dental professional and decide to move forward with a course of treatment, are they fully aware of what they are consenting to? What procedures have we put in place to ensure that a patient is given as detailed an understanding of their dental procedure as possible? Are we fulfilling our obligations regarding informed consent, which is when a patient voluntarily agrees to a proposed treatment after a discussion of advantages, disadvantages, risks and alternatives?

It is no longer a sufficient argument that because "the patient opened their mouth and I carried out the treatment" it was taken as consent.

Consent must be given "by a statement or by a clear affirmative action" under the new GDPR directive. Nowadays we need to make sure we have dotted all the *i's* and crossed all the t's to ensure that the patient has a clear, unambiguous understanding of what is happening.

With the introduction recently of GDPR, I'm sure practices across the length and breadth of the country will be re-assessing their procedures for consent to make sure it measures up to GDPR scrutiny.

As a referring practice here at Dental fx, the consent procedure is fairly lengthy but necessary to ensure that each patient is involved in the decision-making regarding their own treatment, and they are happy with what is happening.

A detailed treatment plan is tailor-made for each patient, which is signed and dated by the patient; if during the course of their journey the treatment changes, an updated plan is given to the patient that then takes the place of the original treatment plan. Patients are kept informed at all stages of the treatment and this is the case whether it is implant treatment or treatment being carried out on the NHS.

And that's just consent for a specific course of treatment. I haven't even mentioned consent to hold patient details such as address, mobile number, email address. That is another area of consent that is insufficient to assume by the mere nod of a head. But it's reassuring to know that tools are at our disposal to make the task as least onerous as possible.

In this article, we have merely scraped the surface of the whole topic of consent; there will be whole books available on the subject but suffice to say there are clear rules and regulations that must be followed in order to satisfy the governing bodies of the land."

> "IT IS NO LONGER A SUFFICIENT ARGUMENT THAT BECAUSE 'THE PATIENT OPENED THEIR MOUTH AND I CARRIED OUT THE TREATMENT' IT WAS TAKEN AS CONSENT"

If you wish to contact Susie about this article or other practice management issues she can be reached at susie@dentalfx.co.uk

THE RESILIENT DENTAL PRACTICE

The pressures of running a successful business can take a toll on a practice and its people. A robust strategy is required to cope with the daily challenges

[WORDS: ALUN K REES]

DENTISTRY IS TOUGH. TREATING conscious patients by carrying out procedures to a technically high standard in a sensitive area is never going to be easy. Practicing professionally with an overarching atmosphere of fear of potential litigation and the need for compliance with sometimes abstract rules makes for a challenging life.

Little wonder then, that problems with stress and burnout are growing, and I have had many painful conversations with individuals following my presentation, "Is dentistry making you sick?"

There is clearly a need for an improvement in individual resilience, but that will be wasted if the organisation where you work does not take its own resilience seriously.

In this article I want to discuss the "Resilient Dental Practice", what it means, why it is important, how to build one and most important, how to maintain it.

"All things should be kept as simple as possible, but no simpler." These wise words from Albert Einstein reflect my views on building the resilient practice which I define as "The ability of a dental organisation to quickly absorb and adapt to the impact of an external or internal stressor or disruptor without a noticeable drop in its level of patient care and service."

We live in a world often described by the acronym "VUCA". It's Volatile, Uncertain, Complex and Ambiguous. The rate of change both within and outside dental practices is increasing; the pressures of running a successful dental business grow higher with every passing day. In order to succeed there is a need not only to be able to cope with the daily challenges that life and business are going to throw at us but also be ready for whatever the future will bring.

The four facets of resilience have been defined as preparedness, protection, response and recovery; I will reflect these in the following eight characteristics of a resilient dental business.

1) They have standard operating procedures. These can be defined as a set of step-by-step instructions for each process within the business. These individual sets build one on the other to produce a manual of "how we do things". From decontamination to marketing and answering the telephone to giving a perfect local anaesthetic, all processes are examined and described. Building these small steps into larger blocks means they can be regularly examined and amended in the light of experience, new knowledge or business demands.

2) They understand that change will happen, they do not resent it, but rather, they embrace it. They understand that change is the only constant and that any (dental) business that wants to be and remain successful must be ready for changes and the challenges they bring. A resilient business has a competitive edge in the marketplace.

3) The people are trained and ready. From owner to apprentice, there is an emphasis

on constant training. That can be in clinical procedures, where they are always seeking to look round the next corner for coming advances in procedures, materials or equipment, or business ideas and practice.

4) There is a clear "Purpose of the Practice". Often overlooked or allowed to lapse, it is important everyone understands that in addition to "what we do and how we do it" all can embrace, "why we do it". Simon Sinek's book *Start with Why* is a great source of inspiration.

5) There are clear plans for action in the event of necessary change. I should point out that too often change is viewed as a negative, and certainly we must be aware of threats to the smooth flow, success and profitability of the business but change can be a power for good.

6) The people talk to each other. There are routine and regular meetings and conversations between all team members. These are not "top down" sets of instructions, or monthly moans rather they are opportunities to look, listen and learn from each other.

7) They are proactive rather than reactive. Most of the changes in the business happen because they have seen the need ahead of time rather than waiting for the worst to happen. Even when the unseen or unexpected occurs there is a discipline within the organisation that understands what is most important and what has to be prioritised. In dentistry, this of course is patient care so that, no matter how trying or testing the challenge, the patient will not be inconvenienced or any disruption will be kept to a minimum.

8) Finally, the leaders lead effectively. In his excellent book about his life as a restaurant entrepreneur, Danny Meyer wrote, "The hallmarks of effective leadership are to provide a clear vision for your business so that your employees know where you're taking them; to hold people accountable for consistent standards of excellence; and to communicate a well-defined set of cultural priorities and non-negotiable values. Perhaps most important, leaders hold themselves accountable for conducting business in the same manner in which they have asked their team to perform."

In an ideal world, all change would be incremental with as few shocks as possible. The practice that works on and builds its resilience is prepared for change, it operates in a state of constant "Flow" and, instead of an atmosphere of crisis, always keeps its calm. No matter what the threat – or opportunity.

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

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"IN AN IDEAL WORLD, ALL CHANGE WOULD BE INCREMENTAL WITH AS FEW SHOCKS AS POSSIBLE. THE PRACTICE THAT WORKS ON AND BUILDS ITS RESILIENCE IS PREPARED FOR CHANGE"

WHAT DOES PRACTICE GROWTH MEAN TO YOU?

Understanding the difference between sales, margin and strategic growth will help you to achieve what's best for you, your practice and your patients?

[WORDS: RICHARD PEARCE]

GROWTH IS TALKED ABOUT OFTEN, whether in relation to a dental practice or the economy as a whole. But do we properly understand it and know what sort of growth we want? Here, we will consider different sorts of growth and make observations in relation to a single practice and consider growth to create a small group of practices.

Normally we think in terms of growth in revenue, not least because this does tend to lead to growth in margin (profit). But you could be more interested in growth of you and your family. This may mean that the practice affords you a three-day "clinical" week and so gives you crucial time out of the practice but still provides your minimum income requirements.

Let's consider three types of growth within a practice:

1. Sales growth – more revenue, fill the appointment book, do more per hour
2. Margin growth – increase prices/ reduce costs
3. Strategic growth – increase opening hours, add more surgeries, add specialisms, add practices.

The majority of practices work at '1', think about '2' occasionally (perhaps once a year) and never consider '3' (or might do when some event jolts them into contemplating a development, e.g. a practice three miles away has been offered to them off-market).

Businesses don't tend to make money out of their core product, and dentistry is no exception. If exams/check-ups are our core product then we know that we must limit the number of check-ups in a day (let's say no more than 10/day and two new patient consults/day) and ensure that we have treatment clinics available. Diagnosing the treatment need is one thing, but being able to bring the patient back quickly for the treatment they want takes real organisation.

Practices have traditionally focused on sales growth – with offers, for instance – but more recently, some have started to realise that brands sell faster. This is evident by the rise in significance of reviews. Reviews don't dwell on how cheap the appointment was (see FREE consultation), but on the lovely, friendly staff, the dentist who didn't hurt and the great "experience".

Videos sell a brand and therefore some are realising this. Going to the dentist (and receiving significant dental treatment) is an emotional journey for many. Connecting with patients' emotions can lead to real margin growth.

So, if your practice is not delivering what you want in terms of income and/ or non-clinical time then it needs to change – to grow. So be clear about this to begin with. Create a brand and then promote it consistently through your staff and then through every part of how your patients 'meet' you. This means that your website, with videos, the practice kerbside appearance, the entrance and the marketing collateral are all consistent with a brand that connects with the patients you want.

A WORD ON STRATEGIC GROWTH

Top down works faster! This means that if you started with a vision that you would have 10 practices (key criteria: less than one hour's drive between any practice), then you can organise operations so much more effectively from the outset. Therefore, achieving your aim so much quicker.

And don't forget the 'Rule of 150,' referred to by Malcolm Gladwell in his book, *The Tipping Point*. Put simply, with more than 150 people in an organisation, communication breaks down, cohesion is lost and convergence of goals is very hard to maintain.

If I was a 35-year-old dentist, currently working as an associate (who wanted to sell a business and potentially retire at the age of 50), I would consider the following strategic growth plan:

- Decide on the geographical area I want to be in for the next 10-15 years.
- Target where my first practice will be – which town(s).
- Be able to list what it will have (no fewer than four surgeries might be one requirement).
- Start looking – it could take a while!
- Acquire the first practice and think '10 practices working as a coherent group' from Day 1.
- Hire the best (associates and support staff, particularly a business manager).
- Develop operational standards that you can keep replicating.

• Become known throughout the area as a great dentist and practice owner (you want nearby practice owners to come and ask you to buy them).
• Be ready to acquire ad-hoc – practices won't become available just when it's right for you.
• Think group/integration/economies of scale at every step.

But remember, nothing goes according to plan. So, you need to maintain some flexibility and be ready for the unexpected.

Growth is a very over-used and misunderstood term. Understanding the difference between sales, margin and strategic growth might help you achieve the most important type of growth – growth for you and your family.

Richard Pearce 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.

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MDDUS CASE STUDY:

SUPERVISED NEGLECT

A damages claim underscores the importance of keeping records of all treatments given and what options were discussed with the patient

[WORDS: AUBREY CRAIG]

DAY ONE

A 53-year-old man – Mr T – attends his dental surgery for an emergency appointment with swelling in his upper jaw and two loose teeth. The dentist he had been consulting on numerous occasions for the last eight years – Mr L – has moved on to another practice so he instead sees Mr G, the senior partner. Mr G examines the patient and takes a series of radiographs. These reveal that Mr T has suffered considerable periodontal bone loss associated with 14 teeth. He discusses his findings with the patient, who asks why Mr L had not drawn attention to the problem. Mr G can offer no explanation.

DAY 24

Mr T re-attends the surgery with significant pain in LR7 and LR8, which are both significantly mobile. Mr G judges that both teeth are no longer viable, and the patient opts for extraction. The dentist advises that his gum disease is now so advanced it may not be possible to save some – or most – of the affected teeth.

MONTH 6

Solicitors representing Mr T write to the practice alleging clinical negligence over the patient's treatment by Mr L. The letter also includes a request for copies of the patient notes accompanied by a signed consent form from the patient. Mr G forwards the letter to Mr L at his new place of employment and advises him to contact the solicitors directly. Mr L phones MDDUS and a dental adviser asks him to forward copies of the letter and Mr T's full dental records. A report is commissioned by a dental expert who examines the case papers.

The expert considers the patient's treatment over the eight-year period under Mr L's care. Bitewing radiographs taken on Mr T's first consultation with Mr L show most of the molar teeth have been filled and three had been root treated. There were a number of existing carious lesions needing treatment but periodontal bone levels of the molar teeth were satisfactory at the time. No evidence of the state of anterior teeth at that time is recorded.

In subsequent years Mr T attended for numerous examinations and treatment including fillings and regular scaling and polishing. A radiograph taken three years ago shows periodontal bone loss associated with UR6 and UR7, but there is nothing in the records to show any action was taken based on that information.

Examination of the patient by the expert reveals periodontal pocket depths of greater than 5mm in 12 teeth with seven teeth at mobility grade I or II. Based on this examination and available radiographs, the expert offers a poor prognosis for several of Mr T's teeth with extraction necessary within 10 years. He believes that immediate extraction of some teeth would facilitate a more effective restoration plan.

The expert recommends a remedial treatment plan involving a periodontal specialist to remove any sub-gingival deposits from the root surfaces and then a number of extractions followed by implant retained crowns and bridges – providing there is adequate alveolar bone available for the placement of fixtures. A cost estimate is also provided.

The MDDUS adviser consults legal colleagues over the case notes and the expert report. The lack of any reference to periodontal assessment of the patient over the period of his treatment by Mr L is considered legally indefensible. In consultation with the member it is decided that the case is best settled out of court with the amount based on estimated treatment costs for restoration as set out in the expert report.

KEY POINTS

- Avoid the charge of "supervised neglect" by using every appointment as an opportunity to assess the overall oral health.
- Ensure that patients understand clearly the significance of periodontal disease and provide advice on good oral hygiene.
- Keep adequate notes of home care advice given to patients and the importance of flossing, brushing and smoking cessation to avoid gum disease.

Aubrey Craig is head of dental division at MDDUS

SCOTTISH DENTAL

PROFESSIONAL FOCUS

Professional Focus is a brand-new section of Scottish Dental Magazine for all those involved in the business of dentistry. It's the ideal opportunity for you to showcase your products and services and share what your business has to offer. You can use your sponsored content to highlight:

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THE M-BRACE OF EXCELLENCE

Achieving excellence is the bottom line for M-Brace Orthodontics, a specialist orthodontic practice that operates in Glenrothes and Bathgate. And that approach has brought success. Reacting to demand, the practice's site in West Lothian, which opened just six years ago, has now undergone further development

M-Brace Orthodontics opened its first practice in Glenrothes in June 2010, and its second in North Bridge Street, Bathgate (the subject of this profile) in 2012. There are plans to open a third practice in Airdrie in the near future.

The aim is to provide modern, fully computerised practices including a digital OPG/ceph machine, with friendly, highly trained orthodontic therapists and nurses, and admin staff.

The practice owner is Raja Mahesh, who qualified in 1994 in India. He completed FDSRCS after working in oral and maxillofacial surgery, and completed orthodontic training at Edinburgh in 2003. Raja established M-Brace Orthodontics in 2009.

WHAT DEVELOPMENTS HAVE TAKEN PLACE IN BATHGATE?

The site used to have three surgeries. However, to meet expanding local need and popular demand, we recently extended the practice when a residential flat next door became available.

By connecting that flat to the existing practice we have been able to add a new office, enlarge our staff room, add a fourth surgery, create a more spacious waiting room and a seminar room with presentation facilities.

Our surgeries are specifically designed with in-built cabinetry/computer monitors, display units and LED lighting. They are bright, spacious and air-conditioned.

We have an automatic alginate mixer machine to take impressions, with plans to introduce digital scanners for taking impressions next year.

IS THERE ANY INTERESTING BACKGROUND TO THE BUILDING?

It is a very well-established local building dating back to 1856. When we first acquired it in 2010 it took a substantial refurbishment project to turn it into a modern, well-equipped practice. Among other things we had

to remove the original wooden staircase, which was situated in the centre of the building. And we uncovered a serious problem with woodworm which necessitated the ripping out of certain wooden fittings and thorough treatment of others.

WHAT RENOVATIONS OR STRUCTURAL CHANGES WERE REQUIRED?

On this occasion the changes were less dramatic than before, though they did involve the well-planned incorporation of the apartment next door.

WHICH COMPANIES DID YOU WORK WITH AND WHAT WAS INVOLVED?

We got great help from IWT Dental + Services who acted as the main contractor for the refurbishment.

Our design and construction specialists were NV Design, who were also involved when we undertook the initial upgrade of the building between 2010 and 2012.

Cabinetry was supplied by Modwood who we have also worked with in the past.

And Dental Directory provided invaluable help by supplying the dental chair, suction unit and compressor.

ARE THERE ANY FACILITIES THAT HAVE BEEN SPECIFICALLY DESIGNED TO MAKE THE EXPERIENCE OF VISITING THE PRACTICE GOOD FOR YOUR PATIENTS?

We have a TV in the ceiling so that youngsters can watch cartoons and DVDs – it occupies them while they are having their braces fitted.

The larger, spacious waiting room is in the middle of building with no direct window. Therefore we've added a mural of an open window, as if looking out into a beach. There are TVs in both waiting rooms along with piped radio/music.

Most important, there is disabled access on the ground floor with a fully compliant digital X-ray room and a large surgery.

CAN YOU TELL US ABOUT YOUR STAFF AND THEIR AREAS OF SPECIALTY OR SPECIAL INTEREST?

We have two specialist orthodontists, three orthodontic therapists, seven dental nurses trained in taking impressions and dental radiography, four dental receptionists and three practice administrators/managers. The skills of the practice were recognised recently when it picked up the Interdisciplinary Team Orthodontic-Restorative award at the 2018 Aesthetic Dentistry Awards.

DO YOU PROVIDE NHS AND PRIVATE SERVICES? IF SO, WHICH PRIVATE SERVICES DO YOU PROVIDE?

Ours is mainly an NHS practice. However, we provide private cosmetic orthodontic treatment using the latest advances in clear ceramic fixed appliances, self-ligating brackets, aligner systems such as Invisalign, lingual fixed appliances and fixed functional appliances.

WHAT SORT OF TRAINING DO YOU PROVIDE FOR YOUR STAFF?

Keeping our people bang up to with all the latest techniques, technology and thinking is vital, so staff regularly attend a wide range of conferences and training courses. Our new seminar room is ideal for training courses, lectures and practice meetings. There's a wall-mounted TV for presentations.

HOW WOULD YOU DESCRIBE THE ETHOS OF THE PRACTICE AND ITS APPROACH TO PATIENTS AND EMPLOYEES?

There's a thought-provoking story that we use to illustrate our philosophy...

A gentleman once visited a temple under construction where he saw a sculptor making an idol of God.

Suddenly he noticed a similar idol lying nearby.

Surprised, he asked the sculptor, "Do you need two statues of the same idol?"

"No," said the sculptor without looking up. "We need only one, but the first one got damaged at the last stage."

The gentleman examined the idol and found no apparent damage. "Where is the damage?" he asked.

"There is a scratch on the nose of the idol," said the sculptor, still busy with his work.

"Where are you going to install the idol?"

The sculptor replied that it would be installed on a pillar 20 feet high.

"If the idol is that far who is going to know that there is a scratch on the nose?" the gentleman asked.

The sculptor stopped work, looked up at the gentleman, smiled and said: "I will know it."

For us, the desire to excel is exclusive of the fact whether someone else appreciates it or not.

"Excellence" is a drive from inside, not outside. It is not for someone else to notice but for your own satisfaction and efficiency. Alternatively, you could say: "Don't climb a mountain with an intention that the world should see you, climb the mountain with the intention to see the world."

ORTHODONTICS PRACTICE CEMENTS POSITION AT ROOT OF DENTAL COMMUNITY

Eleven years and 20,000 patient referrals after launching, Beam Specialist Orthodontic Practice is proud to play a key role in Scotland's dental sector.

Every day, the growing team at this Dundee clinic, headed up by three specialist orthodontists, focuses on one goal – perfecting smiles.

With more than 40 years of orthodontic experience between them, principal specialist orthodontist and Beam co-founder Ruaridh McKelvey and specialist orthodontists Ruth Fowler and Elinor Chalmers benefit from unrivalled experience in a range of different appliances and techniques, with the knowledge and training required to ensure the very best results.

Founded in 2007, Beam welcomes patients from throughout Dundee, Angus, Fife, Perthshire and beyond. Ensuring an optimum standard of care is the support team of six qualified orthodontic therapists (and one more in training), eight orthodontic nurses, two receptionists, front of house manager, practice business manager and two treatment co-ordinators.

The open-plan, cutting-edge practice has also recently increased its opening hours to provide two separate clinics, allowing a better separation of NHS and private clinics.

However, what really sets Beam apart from other practices is their success in training and maximising the potential of their therapists and nursing team. The open-plan environment enables the specialist orthodontists to closely oversee all treatment and patient interactions, allowing them to make clinical decisions while the team carry out routine procedures and adjustments as prescribed. Indeed, Rhu feels that training up the team and maximising the therapists' role is one area that the general dental community could benefit from.

In addition, Rhu has taken a sidestep from what he describes as "the coalface of NHS dentistry", allowing him to invest more time and attention on Beam's growing private caseload. One area that Rhu is currently investing significant time and training in is the use of Invisalign – indeed, he currently treats more patients with Invisalign than any other specialist orthodontist in Scotland, more than 130 case starts within the last 12 months alone.

Beam was also the first practice in Scotland to join The Invisible Orthodontist (TIO), the UK's largest network for specialist orthodontists, with Rhu and four of his 'Beam Team' heading to its annual conference in Portugal this autumn.

Rhu explained: "We pride ourselves on being at the cutting edge, embracing new technologies and meeting the ever-changing needs and expectations of our client base.

"However, as new custom-made, bespoke technologies like Invisalign grow increasingly popular, the learning curve facing clinicians grows steeper. Despite my 16-year career as a specialist orthodontist, there are many subtleties involved in aligner treatments, which require a whole new skillset. I am therefore making significant investments in time and training to ensure that we stay at the top of our game when it comes to offering Invisalign to our private patients."

Meanwhile, when it comes to NHS orthodontic treatment, Beam enjoys an excellent relationship with dentists throughout the East of Scotland, looking after their patients' treatment planning and management.

Rhu added: "We go to great lengths to ensure a seamless relationship with our referring dentists and fully understand the challenges they face. We are always available at the end of the phone to discuss cases and work as a team, ensuring the very best outcomes for patients. We are exceptionally proud to have earned the respect we enjoy amongst the dental community through the East of Scotland, and take real pleasure in serving them while transforming the smiles of each and every Beam patient."

Ruaridh McKelvey founded Beam Specialist Orthodontic Practice in 2007. You can contact him and the Beam Team at 36 South Tay Street, Dundee.
Tel: 01382 202604
Email: smile@beamortho.com

AN EXCELLENT CHOICE

DO YOU OFFER IMPLANTS TO YOUR PATIENTS?

The Scottish Centre for Excellence in Dentistry is committed to offering the very highest standards of care for patients in need of dental implant treatment. The centre uses the very latest technology and techniques. Many implant patients and referring dentists have testified to the exceptional standards of treatment and care provided.

A TEAM OF EXPERTS IN DENTAL IMPLANTS

Arshad Ali, Scot Muir, Abid Faqir, Colin Burns and Kevin O'Farrell make up the implant team, they have a huge amount of experience with more than 50 years in implantology between them. Arshad has 30 years of experience in working with implants and has won many prestigious awards. We also have a dedicated support team of implant nurses, managers and co-ordinators. The team shares their knowledge and expertise by training other implant dentists.

AESTHETIC ALLIANCE PROGRAMME

This is an outstanding introduction for GDPs who wish to start to restore dental implants in general surgery. The objectives of the course are to consider treatment planning options for missing teeth and to gain hands-on experience for single and multiple implants. It will allow dentists to restore implant crowns on their own patients at their own surgeries, after implants have been placed at SCED. Held at SCED with Dr Scot Muir and Dr Kevin O'Farrell, this is a four-week course run over four Monday evenings from 6.30pm to 9pm. The dates for the remainder of 2018 are: 17 September, 1 October, 29 October and 5 November. The cost is £495 including a Nobel Biocare restorative kit. Contact yvonnemuir@scottishdentistry.com for more details.

NOBELPEARL IMPLANTS

The Scottish Centre for Excellence in Dentistry is delighted to now offer NobelPearl implants. This metal-free, two-piece ceramic implant solution with a cement-free internal connection, provides a unique alternative to titanium implants. They are designed to support a natural soft-tissue appearance and can help patients gain the natural aesthetic excellence that they desire.

If you would like to visit the laboratory or speak to any of the technicians regarding the services, please contact lucycollins@scottishdentistry.com or call 0141 419 5005.

LABORATORY EXPANSION

The Scottish Centre for Excellence in Dentistry has an on-site laboratory, which is now expanding to offer crown and bridge and prosthetic work to external clients. The team has more than 40 years' experience in crown and bridgework, as well as offering All-on-4 and immediate loading service from the prosthetics department. It's a digital dental laboratory incorporating scanning and 3D printing equipment including a Nobel Biocare Procera scanner, a Straumann scanner and a Straumann 3D P30 printer. The laboratory is approved for both Nobel Biocare and Straumann.

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COURSES & SEMINARS FOR 2018

Throughout the year we will be holding seminars and courses for dentists who refer patients to us.

Visit our website for the 2018 course programme

We are running the Esthetic Alliance Programme in conjunction with Nobel Biocare. Join Scot Muir on the e-learning Smiletube courses

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TWO HEADS MEAN EVEN BETTER SERVICE

Strictly Confidental's latest recruitment initiative has brought together a pair of long-time friends to form an experienced and dynamic leadership team with an intimate knowledge of the dental profession

More experience, more expertise, greater service and greater insight.

It's impressive what you can gain when you add the right person to your team. And that's exactly what Strictly Confidental has done with the recruitment of Gillian Wylie.

She's joined Patricia Munro as a director of the firm and she brings with her a very impressive track record. Gillian has spent 32 years in the profession, first as a dental nurse (latterly specialising in maxilo-facial) before a lengthy and successful period in dental sales. "I've focused on all aspects of dentistry during my career," she said. "And I've had the good fortune to work with lots of very talented and intelligent people."

The initial move from dental nursing was inspired by coming into contact with sales people serving both general dental practice and specialist areas. "They were very customer focused, discreet and professional. That made me think 'I'd like to do that'," said Gillian.

One of those who she regarded as a mentor was Patricia. "I've known Trisha for around 20 years. She's very knowledgeable and puts the needs of customers first and foremost. That's something I've based my own ethos around. We both realise that the success and reputation of Strictly Confidental depends on the relationships we build with our clients."

Gillian joined the company in November 2017, initially as a consultant. "I saw it as a great opportunity. The buying and selling of practices has always interested me. We provide a confidential, bespoke service and aim to make the process stress-free for everyone involved, something I know clients appreciate."

Patricia was delighted when her long-time friend joined up. "Business was growing and, because of the way this part of the sector works, I needed someone who had the utmost discretion, who knew the dental profession from the clinical and the commercial sides, and was exceptional at client service. Gillian fitted the bill perfectly."

Gillian Wylie (top) and Patricia Munro (bottom): "Dental is under our skin and we're very passionate about it"

For her part Gillian knows she's now working with a kindred spirit who understands how dentists tick. "Dental is under our skin and we're very passionate about it.

"We know that when someone decides to sell up it's imperative that the purchaser is the right fit. It's not always about the money; yes, it's very important to the seller, but it may not be the main driver. In every case, the seller has the needs of their patients and staff at the top of their priority list."

Soon after Gillian joined, the idea of partnership was raised. Patricia was enthusiastic, since it was a clear indication of Gillian's commitment to the business and its future.

Patricia said the changes have brought a huge buzz to Strictly Confidental. "We've just moved into new offices at Charing Cross in Glasgow and we're about to revamp our website.

"It's great to have a new perspective. We're always talking about how we can take things forward. Above all, clients are now getting an even better service than before."

WHEN ADVICE IS ESSENTIAL

For any principal considering selling, along with deciding whether to continue as an associate post completion, pursue academia or take that first step on the road to retirement, one of the first questions to be asked is "What is the state of the practice sales market and how much is my practice worth?"

Once something of a cottage industry where practices changed hands for small amounts or in some cases, were 'given away' to lucky associates or practice owners nearby, the dental sector is now among the most dynamic, with an increasing number and variety of buyers seeking opportunities.

With an estimated 450-500 transactions annually and demand exceeding supply in most areas and market segments, it is no surprise that it is a crowded marketplace and one full of mixed messages for those looking to sell their business. As such, a practice owner should consider the following fundamentals.

WHOLE OF MARKET OR RESTRICTED APPROACH?

While most practice sales are handled confidentially, it is generally advisable to adopt a 'whole of market' approach. This ensures that the buyer pool is of sufficient size to create competition, but not so large that it is impossible to control the sale process. It is critical for the selling agent to get to know the practice so that the right buyers can be selected, rather than the 'round robin' approach, which is indiscriminate and can lead to wasted time.

ON OR OFF MARKET?

Demand for quality practices is at an all-time high. Dental companies often directly appeal to practice owners to join them, and while an 'off market' sale will save an agent's fee, every fee 'saved' could also mean a loss of tens of thousands in sale price if the market has not been tested properly. Current pricing is highly volatile and we often see sale prices well in excess of asking when buyers complete, so having an experienced adviser by your side is invaluable. As prices are generally lower in Scotland than in England and Wales, buyers are moving north to find better value acquisitions. However, with so much competition from established buyers already based in Scotland, prices continue to be pushed with premium offers being achieved.

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

BEWARE OF FALSE PROFITS!

Goodwill is valued by multiplying sustainable profit (EBITDA); it is essential to calculate EBITDA accurately so that it is not under or overstated, leading to issues further down the line. Associate pay scales should not be reduced, nor should extra sessions that do not currently exist be factored in. Price should be maximised but must bear scrutiny to an independent valuation on behalf of a lender or investor. Principals are advised to begin planning their sale well in advance of the likely 'exit' date to ensure an orderly sale process.

SELLING YOUR PRACTICE TO AN ASSOCIATE

An associate buying your practice has advantages but beware of taking shortcuts, as Martyn Bradshaw explains

A principal seeking to sell to their associate may feel that half the battle has been won and the transaction can proceed with minimum formalities. This is rarely the case as there is still plenty of work to be done. It is also important that the vendor's day-to-day working relationship with their associate continues and that neither party is put on the spot into making decisions not to their best advantage. At PFM Group we undertake independent valuations of dental practices and find that more than half of principals selling to associates choose to use a sales agency, solicitor and accountant in the same way as an open-market sale.

THE PREFERRED ROUTE

Using professionals means vendors take advantage of experienced advisors who deal with practice sales daily. Such experience may result in, say, tax savings of thousands of pounds and pre-empting difficult negotiations later in the process.

Some purchasers may also prefer to have an experienced agent who can answer questions on how things normally work and who can also assist with putting things into place – such as the finance – to ensure that the sale goes through as smoothly as possible.

PRACTICE INFORMATION

An agent is likely to prepare a sales prospectus for the practice as if it were going on to the open market. This is done for numerous reasons but the main advantage is to demonstrate to the purchaser that the practice could, if necessary, be readily placed for sale on the open market. Marrying this up with a deadline for the sale completion puts the vendor in a significantly stronger position in the negotiations.

The prospectus is also a good source of all the information the buyer will need. This includes the background information, staffing, gross fee income and accounts, which can be passed on to the buyer's accountant and bank.

OFFERS AND NEGOTIATIONS

As previously mentioned, the negotiations would usually be handled by an agent. This leaves the vendor and purchaser to enjoy their normal working relationship, without feeling they need to negotiate – which could put the vendor in a less favourable position.

Where associates have not been actively looking at practices on the open market they often don't realise how high values are and sometimes feel a practice is overvalued. A sales agent can discuss market values with the associate so they understand the practice value is accurate in the current market. If the associate is not willing to pay the asking price, the practice is ready to put on the open market – should the vendor wish to progress the sale on this basis.

FINANCE CONFIRMATION

If the associate does wish to proceed with the purchase, the next stage is to ensure that finance is possible. The banks are happily lending to dentists looking to purchase a dental practice but they are more cautious than they were 20 years ago. It is important that this is established 'early doors' so as not to waste time and money in legal costs if the buyer is unable to raise the finance.

Where a buyer has not yet arranged finance, I ask about their deposit, assets, liabilities and expenditure as this gives a strong indication as to whether they should be able to raise the required finance. As a company we will happily assist the buyer to arrange finance. Doing so means we can ensure everything is done correctly and that the sale goes through smoothly.

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

GETTING TO THE END

Once the offer has been agreed and finance has been verified, the next step is to instruct solicitors. Ideally, both parties will instruct solicitors with experience of the specific requirements for dental practice transactions.

The sales agent should be in regular contact with both your solicitor and the purchaser's solicitor to ensure everything is going to plan. They may also need to interact with the accountants – especially if the practice trades as a limited company – for the split of the goodwill and equipment as each element has different tax consequences. Mistakes in dealing with the taxation requirements could mean the loss of many thousands of pounds.

In addition, as the buyer's bank is likely to require their own valuation of the practice (as with a residential mortgage), the buyer's valuer would generally contact the agent to get the relevant information and ask for comparisons with other practice sales. A valuer to valuer conversation is likely to be beneficial. If the bank's valuation comes in lower than expected, the bank will seek to lend less, which will most likely affect the buyer's offer.

NOBELPEARL™ – A UNIQUE 100% METAL-FREE TWO-PIECE CERAMIC IMPLANT SOLUTION

Nobel Biocare's unique new alternative to titanium implants offers a highly welcome new option to dental professionals for patients wishing to gain the natural esthetic excellence they desire.

The evolutionary NobelPearl ceramic implant uses a flexible cement-free internal connection designed to support a natural soft-tissue appearance.

"With NobelPearl, we are proud to finally bring the first completely metal-free, screw-retained, two-piece implant system to the market. The result of many years of active research in ceramic dental implant technology, it adds an exciting full-ceramic, metal-free dental implant option to Nobel Biocare's leading range of titanium dental implants with the clinically proven TiUnite surface," said Hans Geiselhöringer, President of Nobel Biocare.

NATURAL AESTHETICS

Recent trends in the dental implant market indicate that patients increasingly prefer metal-free solutions as they can provide the look and feel of natural teeth. Compared to titanium dental implants, ceramic implants appear more natural since the oxide is ivory in colour, making it similar to the colour of the natural tooth. This is important for restoring teeth, especially in the anterior zone.

SOFT-TISSUE FRIENDLY

Particularly beneficial to patients with a thin gingival biotype, NobelPearl is designed for excellent soft-tissue attachment and demonstrates a low inflammatory response. 1. With fully tissue-friendly, biocompatible ceramics there are no allergic reactions, no sensitivity to temperature and no impact on taste. 2. Additionally, the zirconium oxide ceramic shows no interactions with other dental materials and is electrically neutral.

PEACE OF MIND

NobelPearl's zirconia make-up also benefits patients by demonstrating a low plaque affinity [1] and offers greater restorative flexibility compared with one-piece or cemented ceramic implants. Its two-piece, reversible, cement-free internal connection, specifically designed for ceramic implants, avoids the risks associated with soft-tissue

inflammation and the development of peri-implant mucositis and peri-implantitis [2].

AN EVOLUTION OF CERAMIC IMPLANTS

Discover the NobelPearl's unique inter-X connection. While the ceramic absorbs compressive forces, the VICARBO screw made of carbon-fibre-reinforced PEEK withstands tensile forces thanks to its continuous longitudinal carbon fibres. The abutment's simple placement and secure seating is enabled by the connection's high-precision geometry. The slightly bevelled contact surface of the implant platform is designed to facilitate the centring of the prosthetic components, while the four interlocks prevent abutment rotation within the implant.

INNOVATIVE TECHNOLOGY

The high-performance metal-free VICARBO screw is made of carbon fibre-reinforced polymer designed for a strong ceramic-to-ceramic connection. The hydrophilic sand-blasted and acid-etched ZERAFIL™ surface, combined with a partially machined collar is proven to osseointegrate effectively [3,4] .

NobelPearl implants and abutments are milled from hot isostatic-pressed (HIP) zirconia (ATZ*) blanks, which are proven to be strong.

No thermal process (sintering) or finishing takes place after the final shaping of the external and internal implant geometry. This manufacturing method enables a high level of dimensional precision and accuracy [3].

For more information, contact Nobel Biocare on 0208 756 3300, or visit www.nobelbiocare.com/pearl

PROVEN STRENGTH FOR A SUCCESSFUL START IN CERAMIC IMPLANTOLOGY

NobelPearl is engineered for primary stability [5] and is available for a broad range of indications, from single to multiple units.

The NobelPearl implant has been proven to provide strength for success, and its thread design and tapered implant shape, combined with the tapered-drill protocol, have been engineered to achieve high primary stability. Tapping into natural biology, beauty and beyond, Nobel Biocare's unique ceramic implants add a valuable time-efficient and affordable option to all implant dentists' portfolios.

NobelPearl is to be integrated into Nobel Biocare's digital workflow that includes treatment planning with the NobelClinician™ software and guided implant surgery with NobelGuide™ pilot drilling. Later this year, clinicians will also be able to offer patients the NobelPearl Ceramic Base CAD/CAM solution using DTX Studio™ design software.

CREATING OUTSTANDING RESTORATIONS MADE EASY

Use NobelPearl and discover everything you need for a successful start in ceramic implantology.

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SOLID FOUNDATIONS OF A GOOD PRACTICE

The importance of the 'bricks and mortar' aspect of premises can be overlooked in the business of buying and selling practices. It pays dividends to ensure that your practice property arrangements are well organised

The Dental Team at Thorntons deals with a broad range of issues for our clients, from queries regarding the sale and acquisition of practices, to disputes between partners, regulatory issues and much more.

Often seen of less importance are the practice premises. Sometimes the view is that it's just bricks and mortar, in many cases much less valuable than the goodwill of the practice. While that may be true, our experience is that lack of attention to the property can cause considerable issues, particularly at key points such as the sale of a practice, or when bringing in new partners. It therefore pays dividends to ensure that your property arrangements are well organised.

Each practice is different, but some of the key problem areas which we encounter are:

- Works having been done to the premises without the appropriate local authority consents – make sure that you have all the necessary planning permissions and building warrants before doing the works. In turn, with works covered by a building warrant, you need to remember to apply for a completion certificate after the works are carried out – this confirms that the council is happy with the completed project.
- If you extend the surgery at any time utilising a building which previously had a different use – for example, into a neighbouring office or residential property – bear in mind that you will need a planning permission for change of use.
- If you own your premises, make sure that the title deeds are kept up to date as the practice evolves. This is particularly important in a partnership where partners come and go over time. We regularly see title deeds which include the names of long-retired partners. Having to track down former partners who have emigrated to a sunnier lifestyle, so that they can sign documents relating to the premises, does nothing for the blood pressure.
- Alternatively, if you lease your premises, the landlord will have an interest in various steps which you might decide to take in relation to the practice. For example, the landlord will need to consent to any alteration works which you decide to carry out, and so you should ensure that you obtain that consent in writing in plenty of time before you want to start the alterations. The lease may also require you to reinstate the property to its original condition at expiry, and so you will need to be prepared for the hassle and cost of having to do maintenance and reinstatement works in the future (this may not be an inexpensive exercise!).
- One final point which is worth noting is the involvement of a SIPP. Some of our dental clients have transferred their premises into their pension scheme, and this is often very good tax and retirement planning. However, you must bear in mind that the fact that it is your pension scheme does not mean that you entirely control everything that happens with the building. A SIPP is a separate legal entity, usually administered by a pension provider, with a number of regulatory and administrative controls which go with that. So if you are planning to sell your practice, make alterations, etc, make sure that you approach the SIPP administrators as early as possible so that they have time to deal your requests.

For further information, please contact Nina Sinclair, Associate, Thorntons Dental Team
Tel: 01382 229111
Email: nsinclair@thorntons-law.co.uk

CLOUD ACCOUNTING – ISN'T THAT OLD NEWS NOW?

Over the past few years, the shift towards practices now maintaining their financials on a cloud-based accounting platform has been evident, with many accountants demonstrating the significant benefits to be achieved by the efficiencies of practices automating their basic bookkeeping processes.

The ability to produce regular detailed reports to deliver key financial indicators of the practice has meant principals have meaningful real-time financials that can help them assess and benchmark their practice's performance. With technology in both the dental and cloud accounting sectors advancing at faster pace now than ever before, what further benefits can cloud accounting hold?

Some of the major cloud accounting platforms have the advantage of a large number of application add-ons that fully integrate with their software to offer different types of functionality.

So what kind of application add-ons might a dental practice that uses cloud accounting software choose to make their bookkeeping even more efficient? If you are using spreadsheets to keep track of surgery stock, there are inventory application add-ons that link directly with the cloud accounting software to automate that process. For the processing of supplier invoices and receipts, there is an app that automatically converts that data, uploading to the cloud accounting software. Staff timesheet recording apps can link directly to your payroll function. These apps can save more time, removing the risk of errors in a manual process.

Mairi MacIver, Accounting Services Senior Manager at Anderson Anderson & Brown LLP

Cashflow is key, so look to implement a cashflow forecasting app that uses the financial information to allow you to keep an eye on future peaks and troughs within the practice.

By having advisors that also have dedicated in-house cloud accounting specialists, who have developed strong relationships with the cloud accounting and application developers, is key to keeping one step ahead with the technology advances.

MAKING TAX DIGITAL – CHOOSING THE RIGHT SOFTWARE FOR YOU AND YOUR PRACTICE

HMRC has embarked on a massive project – Making Tax Digital (MTD) – to insist that most businesses, including self-employed dentists and corporate dental businesses, keep their accounting records using computer software. The aim is that the software will automatically update HMRC with relevant data on their business income and expenses on a quarterly basis.

As this draws ever closer, more software providers are engaging with HMRC to test their software for functional compliance with rules of MTD. HMRC has recently published a list of suppliers who are currently working on pilot schemes for the digitalisation of tax recording systems. You can find this list on their website.

While this list continues to grow, it is an important reminder that we should not become complacent. Just because you are using some form of accounting software, does not mean it will be MTD compliant.

All businesses, over the coming months will need to assess their current record-keeping methods to ensure that they are meeting the requirements of HMRC's MTD initiative. Should you find that your current software package is not on this list, you may need to consider adjusting your future arrangements.

For more information or advice, please contact Louise Grant (louise.grant@eqaccountants.co.uk) or call 01382 312100.

This may be a convenient opportunity to review your current record-keeping procedure, to establish if it is best suited to your business going forward. We are in discussions with a variety of software providers and are involved in Beta testing for MTD so are best placed to advise you on this matter and can make recommendations for improvements.

If you would like to discuss your accounting software and/or processes to ensure your MTD compliance then do not hesitate to contact our dedicated team who can offer expertise and support on your transition to Making Tax Digital.

LOOKING FOR THE TRUE ALTERNATIVE TO AMALGAM?

As the EU-wide phase-down of the use of dental amalgam begins in earnest, we look at why all-ceramic composites are proving to be the ideal replacement

As all dental professionals already know, July 2018 marked a defining moment in the EU dental industry with the initial stage of the EU-wide phase-down of the use of dental amalgam in fillings. This is the first step designed to implement the EU's Regulation on Mercury, which is the union's mechanism to ratify the Minamata Treaty of 2013, a global environmental treaty aimed at reducing the release of mercury into the environment.

The immediate impact of the July deadline has meant that clinicians, including those in Scotland, can no longer use amalgam in the treatment of deciduous teeth, in children under 15 years of age or in pregnant or breastfeeding women, "except when deemed strictly necessary by a dentist based on the specific needs of the patient".

As a consequence of the new EU regulation, every clinician, if they haven't already done so, has had to find a viable mercury-free alternative to amalgam fillings. Dental manufacturers have been pioneering new materials to rival those containing amalgam and there is a wide choice of alternatives on offer. But what factors should clinicians be taking into consideration to find the most functional, durable and aesthetic mercury-free restorative material?

CONSIDERING THE ALTERNATIVES

Many clinicians consider that glass ionomers are a suitable alternative to amalgam. However, it is also argued that glass ionomers are not a clinically viable alternative to amalgam for a number of key reasons:

- Their use is primarily for temporary, small Class I fillings and as a liner.
- They are not strong enough especially for posterior fillings.
- Their low abrasive resistance makes them more likely to wear and eventually fracture.
- They do not match tooth colour as effectively as composite resin.
- Glass ionomers need to be applied and cured in thin layers and as a consequence lengthens treatment time.

With these points in mind, it's worth considering the following in the search for a viable alternative to amalgam:

- Is it a clinically-defensible alternative to amalgam? This means a composite material that can offer stability, longevity and aesthetics as a permanent solution, unlike glass ionomers whose inferior strength and low abrasion resistance means they should chiefly be used for temporary, small Class 1 fillings and as a liner.
- Is it suitable for the whole family? If the search is on for mercury-free restorative alternatives for the under-15s and pregnant and breastfeeding mothers, why should this not be extended to treating the whole family? Using just one group of materials avoids the expense and inconvenience of using multiple systems as well as avoiding the strict amalgam handling and waste management requirements that are coming into force in 2019.
- Is it an ethical and environmentally-friendly solution? The amalgam phase-down results from an environmental treaty. When this is combined with the increasing concerns of the impact of environmental exposure to classic monomers and their effect on patients, especially those suffering from allergies and asthma, it's essential to provide materials that further reduce exposure to such harmful chemicals.

To find out more about VOCO's range of restorative materials, call your local VOCO Scottish Dental Consultant Lynda Steel on 07500 769615, email l.steel@voco.com or visit www.VOCO.social

Facebook: @VOCOUK
Twitter: @VOCOuk
Instagram: @voco_uk

The case for turning to minimally invasive, all-ceramic composites as a permanent alternative to amalgam is – like the material itself – strong and able to stand the test of time. The Admira Fusion composite range offers nanohybrid ORMOCER® (ORganically MOdified CERamic) technology that significantly reduces the chance of microleakage due to the lowest polymerisation shrinkage (1.25 per cent by volume) and low shrinkage stress (up to 50 per cent lower compared to other composites). Free from all the classic monomers, including BPA and bis-GMA, they offer long-term stability combined with aesthetics and strength, but they handle just like a composite.

TAKING THE NEXT STEP

Delivering outstanding long-lasting and durable direct restorations that are more than a match for amalgam fillings, all-ceramic composites offer a classic aesthetic, mercury-free alternative to amalgam. Ideally suited for simple or complex, anterior or posterior cases, and compatible with all conventional bonding agents, Admira Fusion is the strong, stable, functional and aesthetic solution for all indications.

LEARN FROM EXPERTS AT THE STUDY CLUB

The Scottish Dental Study Club is honoured to be hosting world-renowned composite master Dr Viktor Scherbakov from Russia on the weekend of 19-20 January 2019 for an intense, hands-on anterior and posterior composite course.

This will be his first visit to the UK, having lectured all over the world on the topics of composite dentistry and dental photography. The focus will be very much on practical exercises and demonstrations to be able to help mimic nature for highly aesthetic cases.

Topics discussed over the two days include shade selection, optical characteristics, creating effects in anterior teeth, anterior and posterior tooth anatomy, creating lifelike results and finishing and polishing restorations effectively. The course has CPDA approval for four sessions and also 15 hours of verifiable CPD.

The Scottish Dental Study Club was set up by husband-and-wife team Drs Tariq Bashir and Saimah Ahmed (pictured). They started this to help provide a networking opportunity and also to provide a platform for colleagues to bring along complex cases at evening study clubs and discuss with like-minded colleagues.

In addition to this, it was an opportunity to hear from leading colleagues in the profession and gain verifiable CPD. So far this year they have had Andrew Smith QC, Dr Hatem Algrafee, Dr Attiq Rahman and Dr Shiraz Khan present to the group. The next study club evening on 8 October will have Dr Jimmy Makdissi coming to Glasgow to discuss problems in radiology and CBCT uses in dentistry.

To book any of the courses or for more information please see our Facebook page or contact us at scottishdentalstudy-club@gmail.com

The study club continues to grow and is now hosting full-day courses in photography in October and November with the talented Dr Billal Arshad as well as the weekend composite marathon with Style Italiano team member Dr Scherbakov in January.

Systems for Dentists

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Here at Systems for Dentists, we simply don't do 2nd place, that's why we've been the 1st Practice Management Software company to successfully lead the way in eDental. As a specialist in this area, our aim is to provide Scottish dental practices with an innovative software package whilst providing exceptional customer support.

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As a specialist in Practice Management Software, celebrating our 30th anniversary in business, we recognise the importance of your practice running smoothly and efficiently.

Our software has been developed with you in mind and offers a host of functionality to help you deliver the very best care and communication to your patients. Our team are now gearing up for the January 1st 2019 deadline for eOrtho and we intend to continue our record of firsts.

Call our friendly team on:
0845 643 2828

e-mail info@sfd.co to request an info pack.

30 YEARS

› CALCIVIS

PREPARE TO BE AMAZED BY CALCIVIS

For the ultimate technology to accelerate minimally invasive, preventive dentistry come and see the CALCIVIS imaging system at the BDIA Dental Showcase 2018.

The science behind this innovative device was inspired by the bioluminescent (light emitting) mechanism that is seen in nature by marine animals, such as jellyfish. CALCIVIS applies a highly specific bioluminescent photoprotein, which in the presence of free calcium ions released from actively demineralising tooth surfaces, produces a low-level light. An integrated intraoral sensor detects this light and displays a precise, glowing map of active demineralisation at the chairside.

With clear, engaging images, the CALCIVIS imaging system is also an advanced communication tool. Dental professionals can explain demineralisation, illustrate problem areas and motivate patients by helping them to understand and improve their oral health.

The CALCIVIS team will be on stand B52 to show delegates this amazing imaging system, so make sure you don't miss it.

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

› ADI

ADI TEAM CONGRESS 2019 – SPEAKERS ANNOUNCED

The ADI Team Congress 2019 will be a highlight of the educational calendar, offering a unique learning opportunity for all members of the dental team.

Internationally renowned speakers on the plenary programme are:

- Istvan Urban – Hungary
- Lyndon F Cooper – USA
- Mark Montana – USA
- Alessandro Agnini – Italy
- Andrea Agnini – Italy
- Markus B Blatz – USA
- Tord Berglundh – Sweden
- Wael Att – Germany
- Anabell Bologna – Venezuela
- Barry P Levin – USA
- John E Davies – Canada
- Markus B Hürzeler – Germany
- Craig M Misch – USA
- Daniele Cardaropoli – Italy
- David Guichet – USA

The exciting lecture programme will cover topics including advances in regeneration and implant design, hard and soft tissue management, surgical veneer grafts and vertical augmentation.

ADI Team Congress 2019
Shaping the Future of Dental Implantology: Techniques – Technology - Teamwork
2 - 4 May, EICC, Edinburgh

Book today at www.adi.org.uk/congress19 Reduced rates for ADI members– join online

› CARESTREAM

STAY AT THE CUTTING EDGE WITH CARESTREAM DENTAL

For every dental professional looking to use cutting-edge technologies to deliver outstanding care to all their patients, Carestream Dental has a solution for you.

The CS R4+ practice management system offers an array of features designed to make your every day life easier. The KPIs enable you to monitor business performance in real-time and then decide for yourself what you'd like to change going forward. The seamless integration with DEPPA also means that all Denplan practices enjoy significant time saving benefits and simpler workflows.

With regard to imaging, Carestream Dental provides a comprehensive portfolio of solutions that caters to the needs of every practice. From the worldwide popular CS 8100 family of imaging units to the CS 3600 intraoral scanner and the CS 7200 imaging plate system, there is something for you!

To find out more about which technologies are ideal for you, meet the Carestream Dental team on stand L34 at the BDIA Dental Showcase this October. For all the latest news and updates, follow us on Twitter @CarestreamDentl and Facebook

For more information please contact Carestream Dental on 0800 169 9692 or visit www.carestream dental.co.uk

› 3M ORAL CARE

SPEAK TO THE EXPERTS

Committed to constant product development and innovation, 3M Oral Care is a leading provider of restorative, prosthodontic and orthodontic solutions.

At the upcoming BDIA Dental Showcase, the team will be on hand to demonstrate the latest products on the market, including the new Impregum Super Quick heavy body polyether impression material, featuring all the precision of a polyether with the speed of a VPS.

Delegates will also be able to find out why RelyX Unicem self-adhesive resin cement is so popular among dentists, with 3M Oral Care celebrating 15 years of its clinical success.

Speak to the experts at 3M Oral Care about these and many more proven solutions on stand H42 at the BDIA Dental Showcase.

3M, Impregum and RelyX are trademarks of the 3M Company.

For more information, call 0800 626 578 or visit www.3M.co.uk/Dental

> W&H

SPOILT FOR CHOICE

Delegates will be spoilt for choice on exclusive offers and innovative product launches at this year's BDIA Dental Showcase.

Industry-leading manufacturer W&H is excited to be exhibiting the latest clinical solutions including the advanced Osstell Beacon handheld device, which identifies when an implant is ready for loading, thereby improving osseointegration.

You can explore how the intuitive Implantmed can enable you to assume utmost control of surgical implant procedures, thanks to the unit's automatic thread cutter function and customisable W&H Osstell ISQ module.

The expert W&H team can demonstrate how the Assistina TWIN handpiece care and maintenance unit provides a cost-effective solution to extending the working life of handpieces. Delegates can also find out how sterilization procedures can be streamlined with the user-friendly Lisa type B vacuum sterilizer, featuring Eco Dry technology that adapts the drying time to the mass of each load.

Meet W&H at stand I22 to discover the latest dental technology, products on offer, including the Piezomed unit and the Synea Vision range of handpieces.

To find out more visit www.wh.com/en_uk, call 01727 874990 or email office.uk@wh.com

> ESCHMANN

DISCOVER ESCHMANN'S NEWEST LITTLE SISTER AT DENTAL SHOWCASE

At this year's BDIA Dental Showcase, visit decontamination experts EschmannDirect on stand M10 for the best disinfection and sterilisation equipment.

Eschmann will be introducing a brand new Little Sister steriliser that builds on the unrivalled technology of market leading products such as the SES3000B and SES 2010. It represents the next generation of decontamination equipment.

The state-of-the-art solution will be available alongside Lifetime Breakdown Warranty, Care&Cover Protection, complimentary training and more for complete peace of mind and compliance.

For more information on the highly effective and affordable range of decontamination equipment and products from EschmannDirect, please visit www.eschmann.co.uk or call 01903 753322

To find out more, visit M10 for the grand unveiling

> COLTENE

GREAT RESULTS IN A SINGLE STEP

Aesthetic, long-lasting results are important to practitioners and patients alike, which is why COLTENE offers Fill-Up™ – a dual curing, medium viscous bulk composite of the newest generation.

Fill-Up™ can be applied in one single step without the need of an additional covering layer, meaning it is both faster than the conventional increment technique and more economical.

So if you need a bulk composite for Class I and Class II fillings, cavity linings and core build-ups that you can rely on, Fill-Up™ is for you.

For even better results and an optimised marginal seal, pair Fill-Up™ with ParaBond® Adhesive. Together, they offer an even more effective system for everyday restorative situations, ensuring a long-lasting solution for your patients.

So what are you waiting for? Find out more about Fill-Up™, ParaBond® Adhesive and other products available from COLTENE today.

To find out more visit www.coltene.com, email info.uk@coltene.com or call 01444 235486

> ORAL-B (STAND I50)

NOBEL BIOCARE'S NEW TREASURE

Much interest is expected in the company's flagship power toothbrush, Oral-B GENIUS 9000. By combining built-in motion sensor technology and video recognition using a smartphone's camera with the Oral-B app, all zones of the users' mouth can be tracked, providing real-time feedback on which areas they've brushed and which areas have been missed.

The mechanical benefits of Oral-B's power toothbrushes compliment the chemical efficacy afforded by their toothpaste. Their Pro-Expert toothpaste includes stabilised Stannous Fluoride which provides 24-hour oral protection. Those wanting more specific protection might prefer Oral-B Gum & Enamel Repair toothpaste, which actively protects gums and strengthens enamel.

Visitors will also be able to view Oral-B's new 'Strong Teeth Make Strong Kids' campaign, which this year will provide up to 20,000 dental professionals with educational materials on how to support parents with their kids dental care needs. Oral-B will also be running free 30-minute CPD sessions on their stand, focusing on children's oral health.

For more information on this release please contact: Michelle Hurd, AB Communications PR Ltd, 07920-178179, michelle@ab-communications.com

› ORAL-B

24-HOUR ORAL HEALTH PROTECTION WITH ORAL-B PRO-EXPERT D

Normal fluoride toothpastes do not provide the best protection against plaque. Patients may think they're looking after their teeth, but 90 per cent of toothpastes do not provide complete oral protection beyond regular fluoride technology, which was invented 60 years ago and is not designed to resist the high amounts of acids in our modern diet. But that can all change with Oral-B.

Powered by the innovative stabilised stannous fluoride formula, Oral-B Pro-Expert toothpaste provides 24-hour protection for the eight areas of your patients' mouth that you check the most including: cavities, dental plaque, gum problems, tooth sensitivity, stains, bad breath and enamel erosion – giving patients a healthier mouth and stronger teeth from day one with continued use.

Oral-B Pro-Expert is a prevention and protection toothpaste that provides 24-hour protection to the whole mouth. In terms of cavity rotection, the soluble fluoride helps to re-mineralise areas of weakened enamel and makes it more resistant to future acid attacks. Its stabilised stannous fluoride formulation prevents and inhibits plaque bacteria, as well as reducing the toxins released to help prevent gum problems. It has also been proven to deliver up to 33 per cent less plaque 12 hours after brushing vs. ordinary toothpastes.

It's hardly surprising that Oral-B Pro-Expert is the #1 most used toothpaste by dentists in the UK!

For more information on this release please contact: Michelle Hurd, AB Communications PR Ltd, 07920-178179, michelle@ab-communications.com

› SHOFU

CERAMAGE UP BY SHOFU –THE STATE OF THE ART IN COMPOSITE LAYER-ING!

The best of both restorative worlds: technologically sophisticated and aesthetically optimised. Ceramage UP, the new flowable C&B composite system combines all the benefits of composites and ceramics in an in-novative high-performance material.

Its high ceramic filler load and homogeneously compacted nanostruc-ture guarantee excellent abrasion resistance, flexural strength and col-our stability. At the same time, its perfectly structured layering concept with opalescent enamel and high-translucency colours allows dental technicians to achieve amazingly natural aesthetic results, comparable to layered porcelain restorations.

Ceramage UP is indicated for almost all anterior and posterior restora-tions and comes in a modular system featuring great ease of use.

The individual shades are ready for use and thixotropic, so that tooth shapes can be freely sculpted using a probe or brush directly after dis-pensing. To further customise the appearances of anterior and posteri-or restorations, the flowable materials can easily be mixed with each other or characterised with the light-cured stains of the Lite Art system. Thanks to the additive layering technique, only minor shape adjust-ments will be necessary. So the Ceramage UP C&B composite system, which is suitable for all types of crowns, bridges, inlays, veneers and long-term temporaries, uniquely combines cost-effectiveness, efficiency and aesthetics.

For more information visit www.shofu.com

› BELMONT

ADVANCED LIGHTING

Good lighting is necessary to practice good dentistry. Belmont have a range of options including both traditional halogen lights as well as LED options. New to the LED range is their 300 Series light. These have five LEDs with a touchless sensor for light activation, thus avoiding unnecessary cross contamination. The white natural light beams give the clinician fantastic visibility. They also feature easily adjustable controls (from 3,100 lux to 28,000 lux) so that you can change the intensity when working with composites. The rectangular light pattern emitted is designed to prevent eye fatigue, whilst the compact head design, with forward-facing handles, makes the unit easy to maneuver.

Alternatively, there's the top-of-the-range 900 LED light. Once positioned correctly it will provide a flooded area of illumination, with minimum heat transfer and white light, the closest match to daylight. It also encourages good posture, as the light output is so good that the clinician should not need to lean into the patient. The 900 LED also has a third axis of rotation, unlike most lights, which have to sit directly at 12 o'clock. Changing position does not therefore interfere with visibility; full illumination is maintained and space is available both above and to the front of the patient.

Both the new 300 and the 900 LED Series lights can be fitted retrospectively. To find out how they might brighten up your day call 020 7515 0333.

For more information on this release please contact: Michelle Hurd, AB Communications, Tel: (020) 8399-6730, E-mail: michelle@ab-communications.com

› NOBEL BIOCARE

THE NATURAL-LOOKING IMPLANT SOLUTION

Are your patients worried about titanium implants not meeting their aesthetic standards?

Ensure they'll want to flash their pearly whites with pride with NobelPearl™ implants from Nobel Biocare.

An innovative, metal-free implant solution, NobelPearl has been developed to help promote natural-looking aesthetics. Made from zirconia, the implants support the soft tissue appearance for a seamless, aesthetic finish.

Furthermore, as the implant is especially effective in cases where the patient has a thin gingival biotype, you no longer need worry about grey metal being exposed.

Find out more about Nobel Biocare's latest natural-looking solution by contacting the friendly team for more information.

For more information, contact Nobel Biocare on 0208 756 3300, or visit www.nobelbiocare.com/pearl

› DMG UK

LONG-LASTING CROWNS MADE EASY – WITH DMG'S LUXACROWN

Ideally suited for the elderly who do not want to invest in more expensive longer-lasting restorations, patients with a limited budget and children requiring a space maintainer following tooth loss, DMG's new LuxaCrown enables simple, quick and cost-effective chairside fabrication of long-lasting crowns. The result is an incredibly precision-fit, aesthetic and long-lasting restoration which can be worn for up to five years.

In addition to excellent flexural strength, it also possesses outstanding fracture toughness, which ensures long-term stability of semi-permanent restorations. Very hard, with a Barcol hardness of 54, in-vitro studies have confirmed its high mechanical strength. Its unique indication as a semi-permanent crown and bridge material with outstanding wear allows for a wide range of indications. It can be used to protect the remaining tooth as well as to restore the anatomical form and masticatory function. LuxaCrown is recommended, too, if long-term observation of treatment success is necessary, when bridging the gap for healing phases.

With LuxaCrown Dentists can offer their patients a long-lasting semi-permanent solution with excellent results – and a cost-effective, attractive alternative to laboratory-made crowns.

For further information contact your local dental dealer or DMG Dental Products (UK) Ltd on 01656 789401, email info@dmg-dental.co.uk or visit www.dmg-dental.com

› J&S DAVIS

SUPPORT ALZHEIMER'S SOCIETY WITH J&S DAVIS AT DENTAL SHOWCASE

In recognition of the association between poor dental health and Alzheimer's disease, J&S Davis and LM Dental hope to raise awareness of the condition by donating £1 to Alzheimer's Society for every LM-SharpJack instrument sold.

The LM-SharpJack scaler features long, thin blades for convenient interproximal access. The instrument shank is optimally angulated to universally adapt in anterior and posterior regions. Each tip is dual-edged and can be conveniently used for both medial and distal, as well as buccal and lingual surfaces. The LM-SharpJack has a Sharp Diamond, sharpen-free coating which makes the instrument razor sharp, extremely hard, yet smooth and light.

J&S Davis will also have 'forget me not' pin badges from the Alzheimer's Society available on the stand with a suggested minimum donation of £1 and a 'Healthy Gums, Healthy Mind –Memory Wall'.

The memory wall will be built onto the stand (I52) and invites everyone to write a name or a memory of someone who they haven't forgotten but may have forgotten them. This wall will also feature a photo of John Davis (former owner of J&S Davis) who was one of many to have suffered from this horrible disease.

Please visit stand I52 to show your support for Alzheimer's Society

› DENTAL ELITE

DENTAL ELITE CAN HELP

As concerns mount over recruitment issues and impaired growth of dental businesses, assistance from a specialist agency with dental experience is more vital than ever.

Dental Elite has many years collective experience across the team, and with a customer rating of 4.8 out of 5 it is one of the profession's must trusted recruitment, sales and acquisitions, valuations and finance agencies.

"I would definitely recommend Dental Elite to others, and would certainly give them a call if I ever needed to find another job in the future," says associate Justin George.

Veronica Balbontin who sold her practice through Leah Turner and Sue Humphrey also has high praise for Dental Elite. "The transition was seamless, and I am really happy with the service I received from both agents. They were both extremely helpful and very professional; I couldn't have completed the process without them."

If you are experiencing recruitment issues, looking for a new role, or want to sell or buy a practice then visit Dental Elite on stand E26 at the BDIA Dental Showcase 2018.

For more information contact Dental Elite. Visit www.dentalelite.co.uk, email info@dentalelite.co.uk or call 01788 545 900

› CURAPROX

ANOTHER CHANCE TO SEE CURAPROX

If you haven't yet tried Curaprox's range of Be You whitening toothpastes, there will be a chance to do so at the upcoming BDIA Dental Showcase in October in London.

Exhibiting on stand F50, Curaprox will once again be presenting the Be You line, giving you the opportunity to learn more about the exciting range that could inspire your patients and improve their oral health. The whitening toothpastes are available in six original flavours and colours, including watermelon, gin tonic and persimmon, and grapefruit and bergamot – be sure to try them all!

Curaprox will also be exhibiting the sophisticated Black is White range alongside favourites such as the CS 5460 manual toothbrushes and CPS interdental brushes, available in a variety of vibrant, eye-catching colours.

If it's advice you're after about products that could help your patients, the expert team will be on hand to answer your questions and make recommendations, so swing by F50 at the BDIA Dental Showcase.

For more information please call 01480 862084, email info@curaprox.co.uk or visit www.curaprox.co.uk

› PRO DENTAL

UPGRADE YOUR CLINIC WITH PROPACS

Save time on radiology reporting. Lower your medical legal liability. Comply to the recently upgraded GDPR requirements!

PROPACS from PRO Diagnostics UK is the perfect solution to seamlessly and quickly manage your diagnostic imaging workflow with the touch of a button.

PROPACS automatically stores a copy of your diagnostic image library within the UK.

The system also has a unique dental radiology reporting service. In just 24 hours, your radiographs could be analysed by dedicated dental radiology specialists, saving you time and ensuring that you have all the necessary information you need to create an effective care plan for your patient.

If you're worried about potential legal action, or simply want a system to store your patient images securely, why not visit the PRO Diagnostics UK team at the BDIA?

We'll be at stand D20 and will be looking forward to telling you all about our innovative system and how we can bring your clinic up to speed.

For more information, please visit www.prodentalradiology.com or email sales@prodiagnostics.co.uk

› 3M ORAL CARE

GENTLE BUT EFFECTIVE INTERDENTAL CLEANING

If you haven't yet discovered the benefits of the Wisdom Clean Between Rubber Interdental Brushes, don't miss your opportunity to do so at the BDIA Dental Showcase this year.

Clinically proven to reduce gingival disease, these are the No. 1 selling rubber interdental brushes in the UK. The wire and latex-free solutions feature flexible, tapered brush heads and micro-fine rubber filaments that glide smoothly between the teeth for a gentle yet effective clean.

Available in three sizes, the Wisdom Clean Between Interdental Brushes are ideal for anyone who has found wire interdental brushes difficult or uncomfortable to use.

Also on display will be the Wisdom Clean Between Easy Slide Tensioning Flossers, with a new Waveform Tension Control System that ensures the tape remains taut so as to slide effortlessly between the teeth. The silk-like tape is shred resistant and gentle on the soft tissue, thereby maximising patient comfort.

To find out more about these and many other products, visit Wisdom Toothbrushes on stand N40 at the BDIA Showcase.

To find out more, please visit www.wisdomtoothbrushes.com or call 01440 714800

Sell your practice and start something exciting

As one of the UK's leading providers of private and NHS dentistry, we can bring a wealth of experience and expertise to help your practice build on its success. While we take care of the day-to-day running of your practice, you can dedicate more time to your patients, family or even yourself.

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