Sound Bite
ISSUE 10

BREAKING THROUGH

WIDENING ACCESS TO DENTISTRY

ALSO INSIDE

AN MDDUS PUBLICATION

Welcome to your SoundBite

A CAREER in dentistry remains a desirable option for many, but competition for places is fierce and training is expensive. Statistics show that people from poorer backgrounds are less likely to enter the profession – but is it just about costs, or are other factors at play? I explore some of the reasons behind this inequality, and what can be done about it, in my article on page 4.

Entering general practice for the first time can be daunting for new dentists. On page 6, dentist and VT adviser Billy Cameron highlights key risk areas, covering NHS regulations, communication skills and the importance of acting within your competence.

Holding a conversation with your dental nurse while you're treating a patient may seem harmless enough, but on page 7 MDDUS risk adviser Alan Frame discusses how this can be an unexpected source of complaints.

Raising concerns about a colleague is difficult for any dentist, but can be especially challenging for trainees. MDDUS dental adviser Claire Renton offers advice on how to handle this difficult situation on page 12.

Evidence-based dentistry encourages clinicians to bring together their expertise, the best available information and the patient's needs when dealing with clinical problems. Derek Richards offers an overview of this process on page 10.

The specialty of oral microbiology may be small but it's had a big impact on the profession. Find out more about getting involved in this exciting field in our career article on page 8. And a disputed extraction and poor record keeping are the focus of our case study on page 14.

• **Sameera Teli**
Editor

LANGUAGE CHECKS FOR DENTISTS

LANGUAGE checks are set to be introduced for European dentists coming to the UK under new government proposals.

A consultation is underway into plans to ensure clinicians from EU countries can speak fluent English. Currently, tests only apply to those from countries outside the EU. Laws are already in place to check the English skills of doctors coming to the UK from Europe.

The changes would give the General Dental Council the power to carry out "proportionate language controls on European applicants" and to take fitness to practise action where concerns are raised about the language skills of existing practitioners. The new rules would apply across the UK to dentists and dental care professionals.

The consultation document states: "This will ensure that healthcare professionals on their registers have a sufficient knowledge of the English language to enable them to practise safely in the UK."

EU rules on equality mean all dentists – not just non-EU practitioners – would have to show they have the "necessary knowledge of English" to practise in the UK.

However, the consultation document offers reassurance to UK dental graduates, stating that "a registrar should be able to be satisfied about the English language ability of UK qualified applicants with no additional procedural burden."

The consultation ends on December 15, 2014.

VISITING DENTISTS NOW NAMED ONLINE

OVERSEAS dentists who are in the UK for temporary work or for educational roles are now displayed on the General Dental Council online register.

A rule change which came into force on November 1 means the names of temporary registrants and visiting practitioners from Europe Economic Area (EEA) countries must now be made public.

Temporary registrants are dentists who hold a recognised overseas diploma and who are registered for a limited period for the purpose of training, teaching or research in approved posts.

Visiting EEA dental practitioners or dental care professionals are individuals who register with the GDC under UK and EU legislation, which allows a national of an EEA state to provide services on a temporary and occasional basis.

The GDC said: "Adding these two registrant groups will ensure that the online register is fully reflective of the GDC registrant base, enabling patients to confirm whether a dental professional is registered with the GDC."

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DENTAL DECAY STILL TOO COMMON IN YOUNG CHILDREN

ONE in eight children age three in England suffer from tooth decay according to a survey by Public Health England. PHE found that those children affected had an average of three decayed teeth due to the disease.

The survey also found a wide variation of tooth decay prevalence across the country, ranging from two per cent to 34 per cent. PHE singled out the East Midlands, North West, London and Yorkshire and the Humber as the four regions with the highest prevalence. The variation is linked to a number of factors including deprivation, the availability of fluoridated water and feeding bottles containing sugar-sweetened drinks.

The *Dental public health epidemiology programme, oral health survey of 3-year-old children 2013* provides information on the prevalence and severity of dental decay (caries) in those attending state or privately funded nurseries, nursery classes attached to schools and playgroups. A total of 53,640 children were examined in 145 upper tier local authorities, representing eight per cent of the total age three population across England.

Responding to PHE's figures Dr Christopher Allen, Chair of the BDA's Dental Public Health Committee, said: "As tooth decay is largely preventable, parents, nurseries, retailers, governments and dental professionals must all play their part to reduce, if not eliminate this disease."

GDC ANNOUNCES 54 PER CENT ARF RISE FOR DENTISTS

TRAINEE dentists are facing a 54 per cent rise in the annual retention fee (ARF) with the General Dental Council setting the 2015 rate at £890. This is less than the 64 per cent hike initially proposed but still a substantial increase. Dental care professionals (DCPs) will pay £116 – a £4 decrease.

The new fee level was announced after a GDC council meeting considered forecasts and budget projections for 2015-2017, which had been reviewed by the auditor KPMG. The council was asked to consider options for the 2015 ARF based on three financial models. All three models involved significant fee rises for dentists but two featured fee reductions for dental care professionals.

The ARF has not increased for four years but since 2011 the GDC has seen a 110 per cent rise in complaints. This has contributed to rising costs for the regulator which the GDC says must be addressed with a significant increase in the ARF for dentists.

The announcement came on the same day that the British Dental Association (BDA) revealed that its application for leave to bring 'rolled-up' judicial review proceedings against the dental regulator has been granted. The BDA claims the GDC has not provided sufficient details of the policy and business case supporting the fee hike – thus "rendering the regulator's case unlawful".

The judicial review is now confirmed to take place on December 15, 2014 and should enable resolution of the case before dentists are legally required to pay the new ARF on 31 December 2014.

GDC Chair, Bill Moyes said: "The decision is directly related to the effective delivery of our primary duty of patient protection. The additional funds that will be collected as a result will enable us to deal with the very significant increase in our fitness to practise caseload experienced over the last three years."

GDC Chief Executive and Registrar, Evlynne Gilvarry added: "We will continue to seek efficiencies in the way we work but significant savings will require wholesale change of our outdated legislation."

TRAINEES WELCOME PAY CUT U-TURN

A MOVE to abandon plans to cut foundation dentists' pay by £2,000 has been welcomed by trainees.

The Department of Health (DoH) had planned to reduce the salary of new dentists in England to bring it in line with that of foundation year one doctors.

But the British Dental Association launched a vigorous campaign against the move, including an online petition that gathered almost 7,000 signatures. This prompted the DoH to eventually scrap the planned cut.

The BDA's Mick Armstrong hailed it as "a victory for young dentists and for common sense."

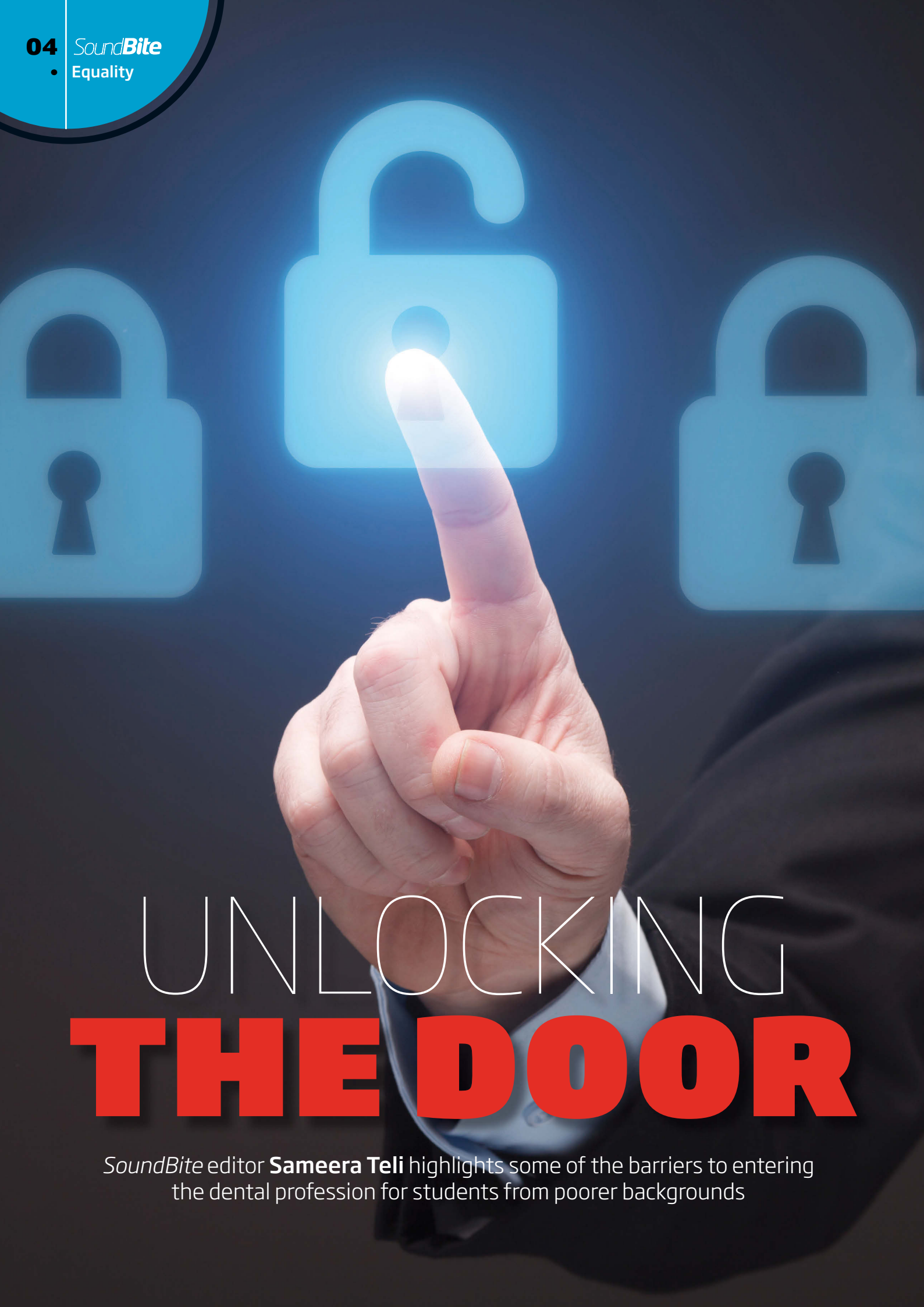
APPLY NOW FOR AN ELECTIVE GRANT

TRAINEE dentists seeking funding for their 2015 elective are invited to apply to the British Medical and Dental Students' Trust (BMDST).

The charity provides travel scholarships to medical and dental students going abroad for their electives. The deadline for applications for electives between April and September 2015 is January 31, 2015. Those going on electives between October 2015 and March 2016 have until July 31, 2015 to submit an application.

Applications should include the presentation of the proposed project, featuring an introduction, aims, methodology, analysis and benefit/use of data. They should also identify possible applications in clinical practice.

To find out more and to download an application form visit **www.bmdst.org**



UNLOCKING THE DOOR

SoundBite editor **Sameera Teli** highlights some of the barriers to entering the dental profession for students from poorer backgrounds

PURSUING a dental career takes a lot of time and money, and competition can be fierce. It is not surprising, therefore, that people from poorer backgrounds are statistically less likely to enter the profession. So is this imbalance all about money or are other factors at work? And what can be done to widen access to the profession?

A research team led by Kate Purcell at the Institute for Employment Research, University of Warwick, has studied factors affecting access to higher education. The first phase of their *Futuretrack* study surveyed 130,000 people applying to higher education, while the second questioned 50,000 full-time students after their first year.

Results from the second phase, published in the *Times* in November 2009, identified cost as the number one deterrent for those who apply but do not enter higher education. Almost 40 per cent said they were put off by cost, while 32 per cent were deterred by the prospect of incurring debt.

No doubt debt is a substantial factor for prospective dental students. The cost of dental study combined with the length of the dental programme, particularly in comparison to other undergraduate courses, can seem understandably daunting. The shorter holiday periods also limit opportunities for earning extra in seasonal jobs.

"Lower school attainment in poorer students can hamper access to dental school"

Cost became even more of an issue in 2012 when tuition fees in England increased from £3,000 to as much as £9,000. Figures from UCAS show that between 2011 and 2012 the overall number of university applicants in England fell by 10 per cent while medical and dental applications decreased by 2.6 per cent (although these numbers recovered slightly the following year).

Interestingly, a UCAS report from November 2014 found the rise in tuition fees did not increase inequality in accessing higher education. They concluded that "neither application rates nor entry rates have shown any differential effect by background."

Those countering concerns over high fees and debt often point to the fact that foundation dentists are paid £30,132, significantly above the UK national average salary of £26,500. Unemployment is also rare in dentistry and the prospect of a secure, well-paid job may mean that young people will be more prepared to take a punt on investing in a dental degree versus a more esoteric subject with an uncertain financial future.

Lower grades

Despite its appeal, research shows students from poorer backgrounds are still less likely to apply for more selective courses such as dentistry. And while cost is no doubt one deterrent, other factors may be involved – including low educational attainment and perhaps also a belief that such a career would not be a realistic option, a mindset that could stem from social expectations and/or family dynamics.

An official report by the Scottish Funding Council in November 2014, entitled *Learning for All,* highlighted the gulf in attainment between state schools in the wealthiest and poorest areas. Only 3.9 per cent of pupils in Scotland's most deprived communities managed to get three A grades in their Higher exams compared to 24 per cent in wealthier areas.

With competition for dental places strong, this factor can only hamper attempts to get more disadvantaged students into dental school. Indeed, the report noted: "Lower levels of school attainment among those from more deprived backgrounds is likely to impact on the ability of institutions to recruit students from these backgrounds."

One proposed solution is for dental schools to make differential offers to "compensate" for lower academic attainment related to socioeconomic disadvantage, although this has proved a contentious issue.

Counter measures

One measure introduced in 2006 to increase equality was the UK Clinical Aptitude Test (UKCAT) which forms part of the undergraduate application procedure for most dental schools. It aims to assess a candidate's mental abilities, attitudes and professional behaviour (rather than solely academic or other factors) to achieve "greater fairness in selection to medicine and dentistry and to the widening participation in medical and dental training of under-represented social groups."

Having work experience in a dental environment remains an important part of the undergraduate application process, but currently there is no national system in place to ensure fair and equal access. Such opportunities are found on an individual basis, and often through support structures within the school or through the professional networks of family and friends. Applicants from poorer socioeconomic backgrounds may not have the same support and access to work experience as those from wealthier backgrounds whose parents or friends may be well connected within the professions.

Although some dental hospitals and universities offer work experience placements, stronger links between schools and local dental facilities could open up opportunities and encourage students who otherwise may have never considered a dental career.

Fair funding

There are a number of UK organisations and initiatives designed to improve access to the profession. The Sutton Trust work to "combat inequality and prevent subsequent waste of talent" by supporting fair access to work experience, as well as funding other programmes to reduce inequality.

The Russell Group of universities have also pledged to spend £235 million in 2015-2016 "supporting students from less advantaged backgrounds", offering scholarships, fee waivers and bursaries. The Access to Dentistry scheme at Queen Mary, University of London aims to "raise aspirations and awareness of dentistry as a career pathway among students from groups that are significantly under-represented within the profession." A similar, two-year scheme also operates in the University of Sheffield.

But the Group have called for more to be done, saying: "School attainment, advice and aspirations must all be dramatically improved if we are to remove the real barriers to fair access."

Practical financial help is also available. Since the rise in tuition fees, there has been a rise in the number of grants awarded to students from low income households. Most universities offer hardship funds while some offer scholarships to students who fit certain criteria (for example, if they are the first in their family to go to university). Prospective dental students can also apply for NHS financial support, including grants, loans or bursaries depending on living circumstances and household income.

Dentistry remains an attractive prospect for young people but the stalling of social mobility is still an issue. And while there are many measures in place to make dentistry more accessible, more needs to be done to open up the profession to all, regardless of background.

Sameera Teli is a dentist and editor of SoundBite

FIRST-TIME RISKS OF DENTAL PRACTICE

Dentist and VT adviser **Billy Cameron** highlights key risk areas for new dentists

WHATEVER the outlook of a dentist entering general practice for the first time, there are clearly both risks and benefits associated with taking this step.

Any sensible risk management strategy starts by trying to identify the potential risks involved in the activity. Experience and case studies suggest some recurring risk themes for those new to practice, often relating to:

- unfamiliarity with NHS regulations
- communication
- knowing your limits.

These factors can interact to multiply the risks involved. Imagine, for example, a scenario where a patient requires removal of an impacted lower third molar. The VDP correctly identifies the indications for removal and explains the procedure and risks to the patient who verbally consents. However, the trainee is unaware of the fees involved and does not provide a written estimate. What if they also decide that verbal consent seems clear enough and do not obtain written consent specifying the associated risks? What if they have not discussed the procedure with their nurse beforehand and are unaware that the nurse has no surgical experience? What if they then decide to go ahead and remove the tooth because, after all, they have 30 minutes free until their next patient arrives and they have assisted with a few cases like this as a student?

There are numerous strategies available to minimise the chances of this kind of nightmarish situation and they largely relate to the bullet points above.

Firstly, I would encourage new dentists to study the *Statement of Dental Remuneration* (*SDR*) until they are fully conversant with its Byzantine details. I advise this with a heavy heart as it is never something I have read myself with any degree of enjoyment. I have, however, appreciated the feeling of relaxation – while discussing treatment plans, estimates and the need for prior approval with patients – that comes from having put in the spade-work of learning the regulations. For those students who haven't yet heard of the *SDR* – don't worry – you will be introduced to its delights soon enough.

In my opinion, and admittedly it cannot be proved either way, the most effective way of staying out of trouble is through open and honest communication. Patients are human beings who quite reasonably want to know if there are different options for their treatment, what procedures are involved in providing it and how much it is going to cost. On this last point, when, during the VT year, patients are asked to assess how the VDP has communicated with them, one factor that often comes up is that they would rather be clearly told how much their treatment is likely to cost. So VDPs should make a point of giving cost estimates from day one as this could help significantly minimise complaints.

The importance of communicating clearly extends to interactions with colleagues and, for VDPs, the key players are the trainer and the nurse, as well as the VT adviser. All of these people are best regarded as colleagues as opposed to bosses. Each has their own perspective on the challenges VDPs face and can provide their own brand of advice and support on clinical and non-clinical matters. This support team is unique to the first year in general practice and so it is hugely important to take maximum benefit from it.

When it comes to knowing your limits, graduates entering general practice should consider the Dunning Kruger Effect (go look it up!). Put simply, this psychological phenomenon means that if you think you're really, really good then you may well be a dumpling. (Think about some of the auditions on *Britain's Got Talent*...) One strong countermeasure is to seek out and welcome feedback from others and there are plenty of opportunities for this during VT.

Similar risks exist for those entering associateships for the first time – and the solutions are also unsurprisingly similar. For example, dentists at this stage in their career may have had overly supportive training practices that sheltered them from the realities of NHS "paperwork" and so some revision here could be beneficial. Remember also that "independent practice" does not mean "alone" and it is important to keep communication and peer-review active within the practice as well as through CPD, memberships of societies and so on.

If all this talk of risks seems a bit daunting, bear in mind that figures show VDPs and dentists up to five years qualified are relatively low risk in terms of complaints and claims reaching the defence union. It is also reassuring to know that MDDUS is an excellent source of informal advice for managing any minor issues as they arise – and yes, I know that is true from personal experience and do not just say it here for diplomatic purposes.

In summary, dentists embarking on their adventures in general practice should be aware that they are relatively unlikely to encounter major problems. They should communicate openly with colleagues and patients, and should be aware of the many sources of support available to them. In other words, relax and enjoy it.

Billy Cameron is a dentist and VT adviser based in the west of Scotland

ARE YOU A CHATTY DENTIST?

Speaking with colleagues during treatment can be an unexpected source of patient complaints

THERE are many risk areas for new dentists to consider, but holding a conversation may not be among the most obvious. However, analysis of a recent MDDUS complaint file suggests that it is worth highlighting.

In this case, a patient had taken umbrage that, during her consultation, her dentist had conducted an entire conversation in Spanish with his dental nurse. While you may forgive someone for having an opportunistic shot at brushing up on their foreign language skills, it transpired that both the dentist and the nurse were in fact Spanish.

The case raises an interesting point about exactly what patients think in general about their dentists chatting with their dental nurses while administering their treatment. You may think that most people would take a rather dim view of the practice but, after a quick search on Google, it appears opinion in this area is more of a mixed bag.

The internet chat forum, *Digital Spy*, threw up the following comments:

- "ANYTHING to take my mind off what's going on in my mouth!"
- "Some people will see it as rude and unprofessional, while other people might actually find it a bit comforting, as it will 'humanise' the dentist a bit more."
- "Personally, if the dentist does a good job on your tooth and isn't talking about anything they shouldn't be (e.g. other patients) then I don't see the problem."
- "I don't mind it when they chat to the nurse, but I hate it when they talk to me while working on my teeth, and all I can do is grunt in reply!"
- "It's completely wrong and totally unprofessional, and I'm sure it's not part of their training at dental school."
- "What about inappropriate conversation with the patient? I went to one a number of years ago who, referring to something he was glancing at in a magazine as I walked in, told me that he had once let out his dental room in South Africa to a liposuction clinic, and some woman had died on 'his' chair there through bleeding to death. All this as I was about to have an extraction."

Putting aside the rather extreme nature of the last post, the comments do seem to suggest that a lot of patients will either not mind at all, or even find some comfort and reassurance in the spontaneous banter. So is there a line that should not be crossed and, if so, where do the risks lie?

Complaint generation would seem to be the obvious risk, especially if the patient perceives that they are being ignored or simply treated as a unit of income. MDDUS case files in this respect show that it's not only the initial complaint that becomes problematic for the dentist, but also in the way that it is subsequently handled and responded to. Especially if the dentist does not recognise or accept any issue or harm in what took place.

Other cases MDDUS has responded to include frankly inappropriate and offensive comments being passed between the dentist and the dental nurse. What might seem like a bit of harmless banter and fun might cause a lot of offence if taken out of context (or sometimes even literally).

We dealt with one such case recently where a patient accused the male dentist of making sexually offensive remarks to his nurse, even though the nurse made no complaint and seemed to have taken no offence. This one found its way to the General Dental Council and resulted in a severe censure for the dentist.

Another risk involves the inadvertent disclosure of third-party identification or breach of another patient's confidentiality, either through thoughtless social chat, or specific discussion about another patient's treatment. And, believe it or not, it does happen.

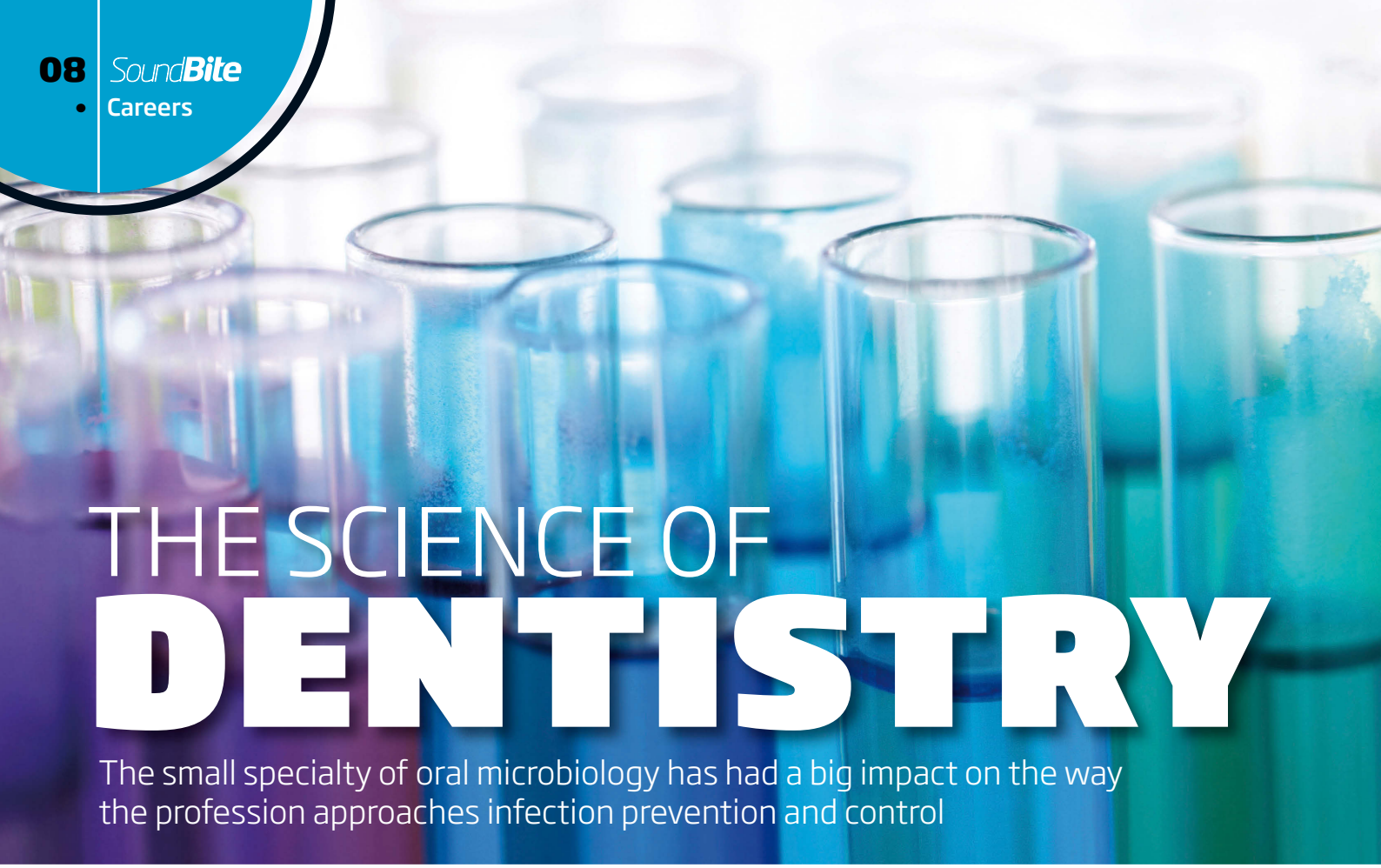
A further area of concern could revolve around the actual treatment the patient receives. If it can be shown that the dentist was distracted by unnecessary conversation leading to sub-standard treatment, then compensation may indeed be due.

So far, I've only mentioned the dynamics between the dentist and their patient, but when you consider the ramifications of the Equality Act 2010, and employment law in general, then the consequences for employers' liability also comes into play.

So, where does this all leave us? Taking some of the posted comments at face value, some of your patients would appear to welcome and even embrace a light-hearted conversation taking place over the top of them.

I would suspect that the majority of supportive comments have been posted by individuals working from a rational state of mind, however once you factor in anxiety and even pain to the mix then emotionally motivated individuals may not be as receptive to a throwaway remark, even one made with humorous intent.

Alan Frame is a risk adviser at MDDUS



THE SCIENCE OF DENTISTRY

The small specialty of oral microbiology has had a big impact on the way the profession approaches infection prevention and control

IT may be the smallest dental specialty in terms of the number of practitioners on the General Dental Council specialist list, but its impact on everyday clinical practice has been huge.

The field of oral microbiology offers a fascinating and varied career that goes well beyond the expectations of many dental graduates, combining both the clinical and academic spheres. The results of the work carried out by specialists can be seen in practices across the country – a prime example being the major overhaul of dental decontamination procedures in 2009.

The Royal College of Surgeons of England describes oral microbiology as a clinical dental specialty, undertaken by laboratory-based personnel, which is concerned with the diagnosis and assessment of diseases of the oral and maxillofacial region. It is a branch of medical microbiology and, in common with medical microbiologists, oral microbiologists provide reports, advice and clinical liaison based on interpretation of microbiological samples.

Most specialists are senior academics with honorary consultant status based in dental schools and these are the posts most trainees will be competing for. As such, trainees will be required, for their academic advancement, to obtain higher academic degrees related to proficiency in research (PhD), as well as specialist training in oral microbiology.

Entry and training

Dental graduates looking to develop their career in this specialty must have at least two years general professional training in dentistry – including a period of training in secondary care – and have obtained the FDS, MFDS or equivalent. Clinical training lasts for five years and competition for places can be fierce.

Specialty trainees must pass the fellowship examination of the Royal College of Pathologists (RCPath) in medical microbiology – part one of the FRCPath can be taken after a minimum of 18 months training. On completion of part one, further training is required in medical microbiology before being eligible to sit part two – usually after approximately four years. As there is no specific RCPath examination in oral microbiology, specialty trainees will need to obtain adequate experience in a specialist oral microbiology facility.

A certificate of completion of specialist training (CCST) in oral microbiology is awarded by the GDC on the recommendation of the local postgraduate dental dean following evidence of satisfactory completion of the FRCPath examination and the oral microbiology curriculum. In accordance with other specialties, trainees must also achieve a successful outcome in the annual review of competence progression (ARCP) process as outlined in *A Guide to Postgraduate Dental Specialty Training in the UK* (Dental Gold Guide).

In recent years, training programmes have been based in Glasgow and London: these must have the approval of the RCPath and the Specialty Advisory Committee (SAC) for the Additional Dental Specialties.

The skills trainees are expected to develop over the five years include:

- Specialised factual knowledge of the natural history of the infections underpinning medical and oral microbiology
- Interpretative skills so that a clinically useful opinion can be derived from laboratory data
- Antimicrobial stewardship and advice
- Research and development experience
- Technical knowledge gained from close acquaintance with laboratory personnel, so that methodology appropriate to a clinical problem can be chosen, and so that quality control and quality assurance procedures can be implemented.

It should be noted that specialty trainees without a higher research degree will be expected to apply to the deanery to undertake three years out-of-programme research experience and enrol for a PhD.

The GDC maintains a specialist list for oral microbiology and anyone wishing to practise as a specialist in this field must be registered on this list. Those with academic aspirations will also be required to provide leadership for the training of undergraduates and postgraduates in the key disciplines of Infection prevention and antimicrobial stewardship.

The job

Excellent communication skills and the ability to liaise with a range of healthcare professionals are key to the job of a microbiologist. The move from clinical dentistry to oral microbiology has been described

as something of a culture shock. It is often said to suit those of a more intellectual nature who have a clear interest in infection and enjoy investigative work.

Training is broadly similar across the country although regional variations can occur – some trainees may form close ties with oral medicine while others come to work closely with medical microbiologists (sometimes even finding themselves on the hospital's on-call rota).

Typical days can be hard to define – especially in the event of an impending outbreak (such as the 2010 anthrax outbreak in Glasgow) or perhaps some kind of exciting experimental breakthrough.

For a clinical microbiologist, the day might start with a handover meeting summarising the overnight developments with the on-call microbiologist. Later, authorisation of laboratory reports including the request of any relevant additional tests by considering the clinical picture of patients and liaising with laboratory staff. Urgent results and updates will be telephoned, e.g. positive blood cultures from patients with suspected septicaemia.

You may also be responsible for taking incoming calls from clinicians and/or preparing for a ward round by ensuring all laboratory results are updated. In the afternoon, there will be consultant-led ward rounds where individual patients are discussed; the microbiological results and management communicated with the relevant teams, e.g. intensive care, maxillofacial or orthopaedics. Alternatively, there may be journal clubs or teaching duties. Those working as the on-call microbiologist would not want to venture too far from the telephone. With new and emerging infections popping up every year (SARS and Ebola as examples), it's the hottest specialty on the GDC specialist list. We hope to one day see a consultant oral microbiologist in every dental school.

Useful links:

- The Royal College of Pathologists - **www.rcpath.org**
- The curriculum for specialty training in oral microbiology - **tinyurl.com/q6zeqs4**

Professor Andrew Smith is a consultant microbiologist based at the University of Glasgow. Dr Deborah Lockhart is a specialist registrar in microbiology and MRC clinical research fellow based at the University of Dundee

Q&A
Dr Deborah Lockhart, specialist registrar in microbiology and MRC clinical research fellow

• What attracted you to a career in oral microbiology?
I was taught by some inspiring clinical oral microbiologists at the University of Glasgow and thought their job sounded incredibly exciting. Stories of flesh-eating superbugs completely captivated me although I was a little bewildered that a degree in dentistry could lead to involvement with such cases. Looking back I was incredibly naïve, but I loved my intercalated BSc in microbiology and thereafter sought every opportunity to get involved in small projects and to find out more about the specialty. It was the combination of research and behind the scenes patient management that I found enticing.

• What do you enjoy most about the specialty?
Microbiology infiltrates all specialties and disciplines so no two days are the same. For example, I can be discussing a MRSA wound infection with a GP, visiting the intensive care unit and teaching dental students, all in the space of a few hours. Another exciting aspect is identifying clinical problems and taking these to the laboratory to find solutions. This led me to join a group of talented scientists to evaluate new targets for antifungal drugs during my PhD. I am also very pleased to have recently been awarded a Wellcome Trust clinical postdoctoral research fellowship.

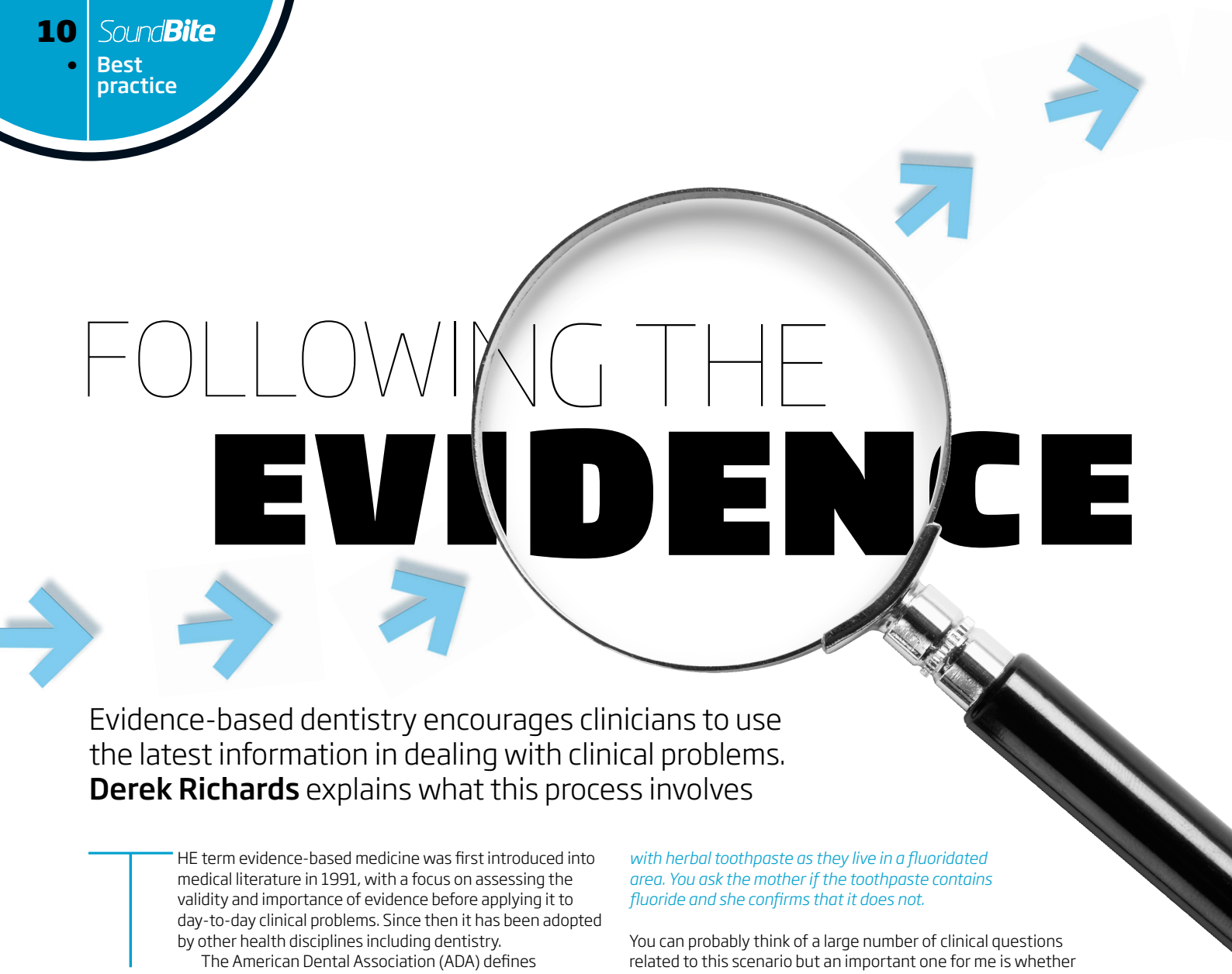
• What do you find most challenging?
One of the biggest challenges is that many people are unaware the specialty even exists. This could reflect the fact that there are only eight registrants on the oral microbiology GDC specialist list. Consequently there are no clearly defined career pathways following completion of specialty training. NHS consultant posts in oral microbiology are non-existent at present (discussions are ongoing with the NHS commissioning groups). This, however, can be turned into an advantage as it affords the flexibility to create your own niche area provided you can convince someone to fund your ideas.

• Have you been surprised by any aspect of the job?
When I was initially appointed as a specialty trainee I had not fully comprehended that the oral microbiology curriculum covered the entire spectrum of medical microbiology. I never thought I would be providing antimicrobial advice for patients with endocarditis or attending outbreak meetings.

• What personal attributes do you feel are important in oral microbiology?
This is a very challenging training pathway but hard work and perseverance will provide an intellectually stimulating and rewarding career. I think it is important for prospective trainees to demonstrate strong resilience, an ability to adapt to new working environments, multitask and liaise with a range of healthcare professionals.

• What advice would you give to a student or trainee considering the specialty?
Dental graduates with an interest in infection might consider pursuing a PhD as a pre-requisite given the current scarcity of specialty training posts. In the last 10 years only three oral microbiology posts were available in the UK (two in London and the one I was appointed to in Glasgow). In addition, changes to the medical microbiology curriculum may impact future training of dentally qualified candidates. I would strongly advise prospective oral microbiologists to contact someone on the specialist list for specific advice. We are a friendly group and would be delighted to hear from you.

FOLLOWING THE EVIDENCE



Evidence-based dentistry encourages clinicians to use the latest information in dealing with clinical problems. **Derek Richards** explains what this process involves

THE term evidence-based medicine was first introduced into medical literature in 1991, with a focus on assessing the validity and importance of evidence before applying it to day-to-day clinical problems. Since then it has been adopted by other health disciplines including dentistry.

The American Dental Association (ADA) defines evidence-based dentistry (EBD) as "an approach to oral healthcare that requires the judicious integration of systematic assessments of clinically relevant scientific evidence, relating to the patient's oral and medical condition and history, with the dentist's clinical expertise and the patient's treatment needs and preferences."

Putting this simply it means bringing together the best available evidence on a topic with the dentist's expertise and the patient's needs and wishes **(Figure 1)** in order to deliver the right treatment in the right way at the right time and at the right place. While the best clinicians have always sought to practise in this manner, the explosion of information available and the pace of development mean that keeping up-to-date is increasingly challenging. Adopting an evidence-based approach helps manage this information overload.

Evidence-based practice is a systematic approach for dealing with this vast amount of information by providing methods for aggregating, distilling and delivering the best clinical evidence. The five stages have been referred to as the five As:

1. ASK - ask answerable questions
2. ACQUIRE - find the best evidence
3. APPRAISE - critically appraise the evidence
4. APPLY - apply the evidence
5. ASSESS - assess the outcome

Ask

Consider the following scenario:

A family attends for a routine check-up on your first day in a new practice. When you examine the mouths of the two young children you diagnose caries in some teeth. On questioning to establish possible risk factors, the mother indicates that they brush their teeth twice a day with herbal toothpaste as they live in a fluoridated area. You ask the mother if the toothpaste contains fluoride and she confirms that it does not.

You can probably think of a large number of clinical questions related to this scenario but an important one for me is whether changing to fluoridated toothpaste would be beneficial. To help develop clear questions to aid searching for evidence a format called PICO has been developed[1]. This stands for problem, intervention, comparison and outcome. For the scenario above we could derive the following question: For a child living in a fluoridated area would fluoride toothpaste, compared with a non-fluoride paste, provide additional caries reduction? Armed with a clear question we can then look for the best evidence to answer it.

Acquire

Before looking for evidence it is important to realise that not all evidence is of equal value. Essentially you are looking for the research that is best designed to suit the question you are trying to answer[2]. For a question seeking to find out if one treatment is better than another, a systematic review of randomised controlled studies is the highest level of evidence, and this decreases based on the potential for bias within the study design as shown in **Table 2**. (More information on levels of evidence is available on the Centre for Evidence-based Medicine website at: **www.cebm.net/ocebm-levels-of-evidence**)

In an ideal world we would conduct our own systematic review of the evidence but this is unrealistic. The simplest approach is to look for some form of pre-appraised evidence. This can come in a number of different formats[3] as shown in **Table 3**.

While a formal search of evidence using the resources noted in the table would be best practice (and a useful skill to develop), from a practical perspective good evidence-based guidelines such as those prepared by the Scottish Dental Clinical Effectiveness programme (SDCEP) and Scottish Intercollegiate Guidelines Network (SIGN) and journals and blog sites that produce summaries of good quality articles such as the *Evidence-based Dentistry* journal (of which I am editor) and the Dental Elf blog **(www.thedentalelf.net)** are good starting points

when looking for evidence. Another time-saving approach is to use the TRIP database **(www.tripdatabase.com).** This is a meta-search engine that automatically searches a range of the resources noted in **Table 3** and allows you to select a particular type of resource.

Searching is a key skill to support the evidence-based approach. Without a good search for information to answer your question there is a temptation to use the first available piece of evidence to support an approach to treatment and claim that this is "evidence-based" when in fact it is neither good evidence nor the only treatment approach available.

Appraise

Once you have found your evidence you need to appraise it. There are a range of appraisal tools and checklists to help with this element. The most useful of these are produced by the Critical Appraisal Skills Programme **(www.casp-uk.net)** which has checklists for a range of different study designs. Regardless of the study design, there are essentially three core questions to address:

- Is the study valid?
- What are the results?
- Are the results relevant to my patients?

When appraising most studies the validity or correct methodology is key and most people can assess this for themselves most times.

Apply and assess

So once you have identified the evidence and have assessed it as sound and relevant to your patient you need to discuss it with your patient. This is particularly important if there are options for care, as the evidence-based approach also includes taking the patient's needs and values into consideration. Finally, once the treatment has been delivered you should assess whether your experience with the treatment is the same as the evidence on which you based your decision-making in order to complete the loop.

Talking of completing the loop, in relation to the question we asked at the outset, probably the best evidence comes from a Cochrane review by Marinho et al[4], which found that fluoride toothpaste provides about a 24 per cent reduction in dental decay, and that this effect was increased with higher disease levels, high toothpaste fluoride concentration, higher frequency of use and supervised tooth brushing, but not influenced by exposure to water fluoridation.

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4. Marinho VC, Higgins JP, Sheiham A, Logan S. Fluoride toothpastes for preventing dental caries in children and adolescents. Cochrane Database Syst Rev. 2003; Issue 1. Art. No.: CD002278. DOI: 10.1002/14651858. CD002278.

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Figure 1
Components of evidence-based practice

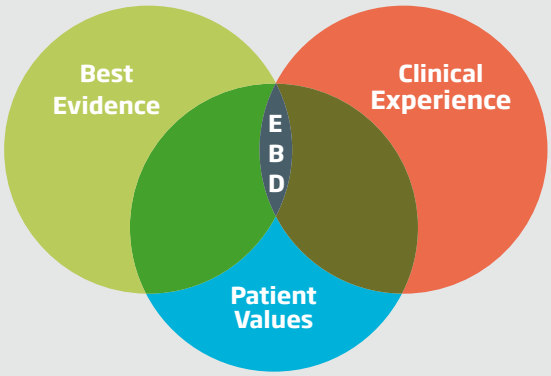


Table 1
The PICO question

P: Problem	A child living in a fluoridated area
I: Intervention	Fluoride toothpaste
C: Comparison	Non-fluoride toothpaste
O: Outcome	Additional caries reduction

Table 2
Levels of evidence

Evidence level	Study type
1	Systematic review (e.g. Cochrane review) and randomised controlled trials
2	Cohort
3	Case-control
4	Case series
5	Narrative review, editorial
N/A	Case report, epidemiology, animal studies

Table 3
Pre-appraised evidence- the 6S Model

	Type of resource	Examples
Systems	Evidence-based computerised decision support systems	
Summaries	Evidence-based guidelines, textbooks	SDCEP, SIGN, NICE
Synopsis of synthesis	Journals, website, blogs	*Evidence-based Dentistry*, Dental Elf
Synthesis	Systematic reviews	Cochrane Reviews
Synopsis of studies	Journals, website, blogs	*Evidence-based Dentistry*, Dental Elf
Studies	Database, journals	PubMed, Embase

SPEAKING

Raising concerns about a colleague's behaviour is difficult for any dentist, but it can be especially challenging for trainees. MDDUS dental adviser **Claire Renton** offers some advice

WHEN it comes to the complex matter of raising concerns, the General Dental Council has a clear message for all dentists.

The regulator's core guidance, *Standards for the Dental Team*, reminds us that we "must put patients' interests first and act to protect them. If you fail to do so by not raising a concern, your own registration could be at risk." Scary stuff indeed, but what does this really mean for the dental profession? What should you do if you feel a colleague is under-performing or has health issues that put the care of their patients at risk?

Most dental treatment is carried out to a good standard but we all have off days, don't we? Perhaps it's just me but, despite our best efforts, not every treatment is perfect every time, not every root canal treatment is precisely at the apex and sometimes we break teeth during what should be a simple extraction.

Such mistakes tend to return to our surgery when we are given an opportunity to rectify any problems. These experiences often present a unique chance to identify areas of weakness in our knowledge and skills. And by reflecting on our patient care we can use this knowledge to discuss difficult cases with our colleagues and also to inform our decisions on what CPD to do in the future.

Recognising problems

In real life, however, it's sometimes hard to recognise our own failings. It's a real effort to constantly keep an eye on our own performance and occasionally a head in the sand approach kicks in.

It's easy to see how this approach could in time lead to a dentist underperforming. MDDUS has received many calls from members concerned about a colleague's behaviour and the threat it poses to patient safety. Often they contact us after having noticed warning signs such as alcohol on their breath, signs of medication overuse (drowsiness or detachment), frequently arriving late to practice, lack of care with their appearance or taking too long to complete routine tasks.

It may be that a number of patient complaints have been made about the dentist, perhaps they haven't completed part of their work or colleagues have found them unusually short-tempered or slow to respond to requests for assistance.

"Your colleague may smell of alcohol or be frequently late"

Stepping up

So what are you to do if you are working in a practice and you believe a colleague is providing substandard care? Where do your responsibilities lie? Should you send the GDC a dossier of your evidence at the first sign of a mistake? Or is there a better approach to take?

Clearly you are under an obligation to do something. Once you feel a colleague is struggling you just have to step up to the mark. Be in no doubt, this will not be easy. However, we are at our most professional when we support a colleague in need.

There are, of course, several ways of doing this and it's up to you how you approach it. Firstly, ask yourself if you are considering the matter objectively and be sure your concerns are not influenced by other factors, such as your personal feelings towards the dentist. Remember the key consideration should be whether this dentist's behaviour could risk patient safety.

You might consider taking time out to discuss the matter directly with your colleague. Over a coffee, lunch or even a pint at the end of the day are all possibilities but it's a good idea to find a time and place where you won't be disturbed and are not under any time pressure.

A quiet word is hopefully all that's necessary: an indication that you've noticed they're having difficulties and an offer of support and assistance might be very welcome. Hopefully that's it, your colleague will admit they have problems and take the necessary steps to get the help they need. But often it's much more difficult than that.

Your workmate might not be aware of any failings and feel you are over-stepping the mark in raising concerns about them. This can be particularly true if you, as a trainee, are raising an issue with a more senior team member (perhaps even your boss). This is where it is useful to discuss the matter with others in the practice to see if they share any of your concerns. A fellow associate, the hygienist or practice nurse can all be good allies. Keep the discussion focused on your specific concerns, what can be done to help and then perhaps consider approaching the dentist to discuss the matter as a group.

OUT

If that doesn't work, give us a ring at MDDUS. By now you will need support and we can chat through other options that might include discussing things with a practice adviser or another experienced colleague. Ultimately, it might be necessary in some cases to refer the matter to the GDC. Dentists must always bear in mind that the duty set out by the regulator to report serious concerns overrides any personal and professional loyalties.

Professional duty

There are, of course, many issues that might be causing problems for dentists. Health problems, addiction and stress cause misery to the one suffering but have a huge impact on family life, colleagues and patients alike. Regardless of the reasons, our professional duty lies with patients and if they are at risk we must do all we can to prevent harm. This might mean having some difficult conversations with workmates and working with the practice team (and possibly the dentist's family) to ensure they get the medical care they need.

Raising concerns and supporting each other are basic tenets of dental professionalism and it is vital action is taken in good faith and for the right reasons. And while protecting patient safety is crucial, we are unfortunately seeing an increasing number of immediate referrals to the GDC by "concerned colleagues" based on what appears to be little evidence. One can only hope that such concerns are not being influenced by other, more personal or cynical motivations.

If you find yourself in a situation where a colleague is struggling, feel free to give us a call. We are always happy to advise and support you and guide you through the various stages.

Claire Renton is a dental adviser at MDDUS

CONSENT

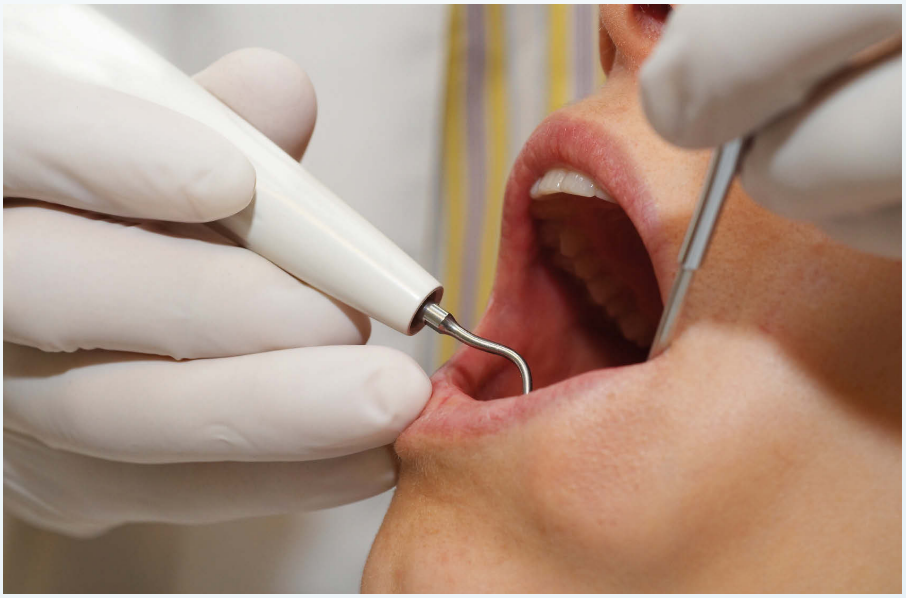
A DISPUTED EXTRACTION

DAY ONE
Mrs S attends her dentist, Mr G, complaining of considerable pain in her upper left 6 molar. Mr G examines the tooth and diagnoses an infection, advising that the tooth will likely need to be extracted but that antibiotics should first be prescribed to clear the infection.

DAY TEN
Mrs S returns to Mr G with continuing pain in her UL6. Mr G prescribes a further course of antibiotics and advises a hot salt water mouthwash. He schedules a follow-up appointment for the following week.

DAY FOURTEEN
The pain in UL6 worsens but when Mrs S attends her practice she finds it is closed. She knows there is another dental practice nearby and attends there, requesting an emergency appointment. She sees Mr R and tells him she is in a lot of pain, but fails to mention the treatment she has recently received from Mr G. Mr R examines the tooth and recommends immediate extraction. He administers anaesthetic and asks Mrs S to wait for it to take effect. When she returns, Mr R removes the tooth, but not without some trouble as the molar fractures half-way through. He eventually completes the extraction and Mrs S is sent home with post-operative instructions on how to minimise complications and aid healing.

LATER THAT DAY
The pain worsens and Mrs S experiences some bleeding. She seeks treatment at her local dental hospital where small fragments of bone are removed from the socket. She states that she is unhappy with the care provided by Mr R.



ONE year later Mr R receives a letter of claim from solicitors representing Mrs S. It alleges that Mr R's treatment was negligent in that he failed to carry out any investigation (i.e. radiographs or vitality testing) to determine the cause of the pain. It is claimed he also did not sufficiently examine the tooth to see if alternative treatment options were available and failed to sufficiently numb her mouth before extraction. Bone fragments were left in the socket, a flap of skin was left loose next to the extraction site and the patient was sent home while still bleeding heavily. Because of the lack of investigation, it is alleged the extraction was carried out without informed consent.

Mrs S is seeking damages for avoidable pain and suffering and claims she would have chosen an alternative treatment had it been offered.

MDDUS advisers and solicitors review the claim and commission an expert report. Having consulted dental records from Mr G, Mr R and the dental hospital, the expert is largely supportive of Mr R's treatment, although his record keeping is poor. The expert believes the extraction was most likely justified as both Mr G and Mr R agreed that it was indicated. In light of this, the expert believes consent was informed.

However, there is no note showing the extent to which Mr R examined the tooth and whether he had discussed other treatment options with Mrs S.

The dental hospital notes support the claim that bone fragments were left in the socket, but not that there was heavy bleeding, nor a loose flap of skin following Mr R's extraction. Mr R refutes the claim that the patient's mouth was not sufficiently numbed and states that she would only have been sent home once the bleeding had stopped. He said the patient had made no mention of wanting to save the tooth and seemed happy to proceed with extraction. However, there are no notes to support this.

While the extraction did appear to be justified, due to Mr R's poor record keeping and apparent lack of investigation, MDDUS believes the case could be difficult to defend in court. The matter is closed with a small settlement.

Key points

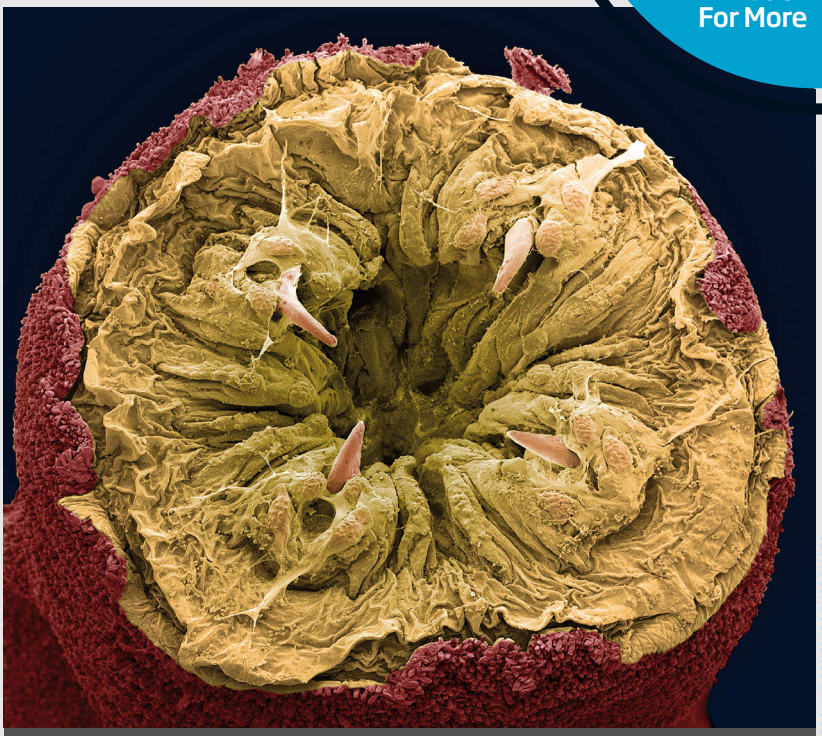
- Ensure full and contemporaneous records are kept of the treatment given and of discussions with patients.
- Consider all alternative treatment options and discuss these with patients to ensure consent is valid.

OUT THERE

ROMAN ROT A study of 303 skulls from a Dorset burial site dating back to Roman times (c. 200-400 AD) found far fewer cases of moderate to severe periodontitis compared to today. Our forebears appeared to enjoy improved dental health with about five per cent of 20 to 60-year-olds suffering gum disease. The findings point to the role played by risk factors like smoking and diabetes in determining susceptibility to progressive periodontitis in modern populations.

NANO TEETH Tiny nanodiamonds invisible to the naked eye could be used as an improved treatment for the jaw disease osteonecrosis. US and Japanese researchers say the tiny spherical gems could promote bone growth and improve the durability of dental implants by delivering proteins into the mouth.

TOXIC BREATH Research shows remedies for bad breath to be notoriously varied, including the 18th century favourite child's urine. Mass market mouthwashes appeared in the 1880s with some doubling as burns treatments, antiseptics, dandruff cures and even floor cleaner. Source: ***BDJ***



NAME THAT BITE

Stumped? The answer is at the bottom of the page

PHOTO: STEVE GSCHMEISSNER/SCIENCE PHOTO

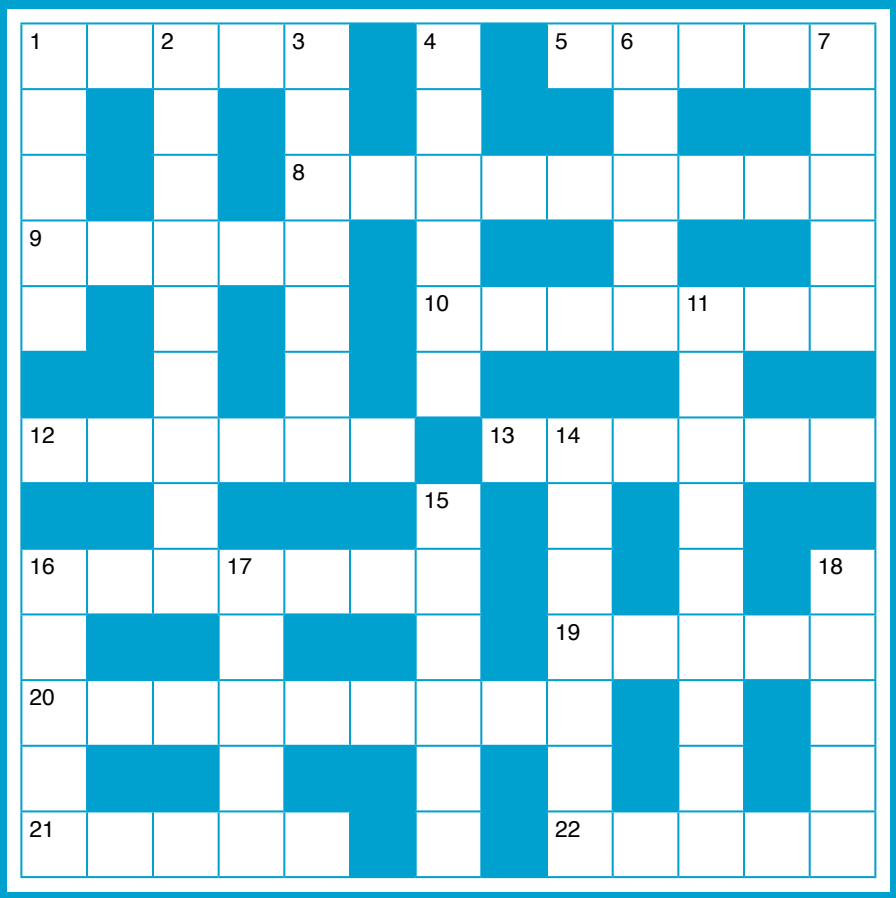
CROSSWORD

ACROSS

1. Rapier (5)
5. Large body of water (5)
8. Water storage facility (9)
9. Thin silk net (5)
10. Stir to react (7)
12. Pretends (6)
13. Auto workshop (6)
16. Forfeit (7)
19. Applaud (5)
20. Make law (9)
21. In photography, _____ point (5)
22. Blind (5)

DOWN

1. St Nicholas of Myra (colloq.) (5)
2. Position of teeth with closed jaws (9)
3. Brand name luting cement (7)
4. Most distant end (6)
6. Brand name temporary filling material (5)
7. Fibre sending sense data (5)
11. Relief from pain (9)
14. Collection of pus within tissue (7)
15. Brand name compomer restorative (6)
16. Brand name dental cement (4-1)
17. Neuroscience drug, loses pound from direction of root tip (5)
18. Orthodontic device (5)



See answers online at **www.mddus.com**. Go to the Notice Board page under News and Events.

NAME THAT BITE? *SEM of ragworm mouth*

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