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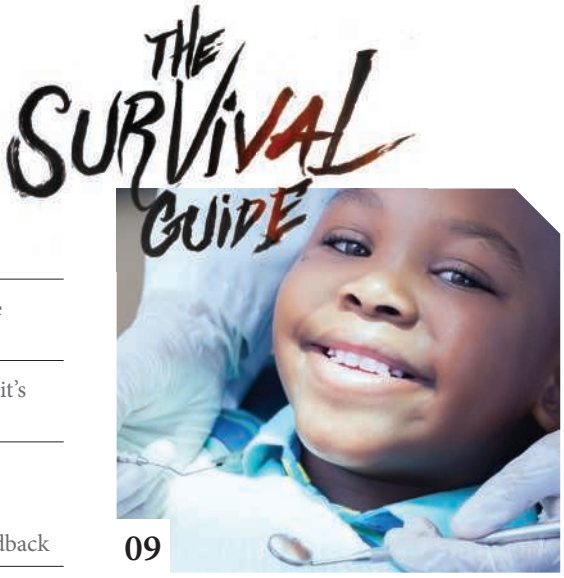
BDJ Student

the British Dental Association's official magazine for students and first year graduates

AUTUMN 2015



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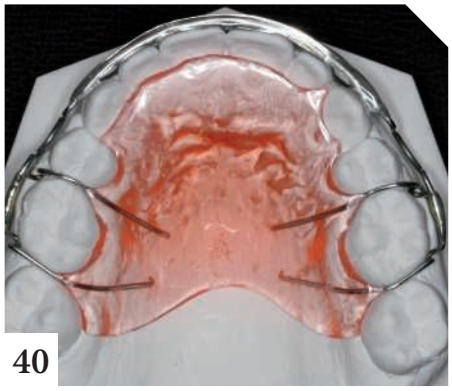

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UPFRONT

PROFESSIONAL

BRIEFING

CLINICAL LIFE

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EDITORIAL

Julie Ferry,
BDJ Student
editor

Anish Patel,
BDJ Student,
student editor

So, it's the beginning of another academic year. Good intentions are in and bad habits are but a distant memory. For those of you completely new to university and dentistry, welcome to *BDJ Student*. We are here to guide you through the twists and turns of dental school and beyond. To educate, advise, inform and occasionally, cajole. In short, to be the very best sort of companion right through your student years.

In this issue we also welcome Anish Patel, our new student editor. Anish takes over from the very capable previous incumbent, Bex Stockton, and we're confident he will bring his unique perspective to the job and represent your interests throughout these pages. We also head to UCLan to find out what it's like to study and work there from those best placed to describe this relative newcomer to the dental scene. We are treated to the final column from our resident SHO, Nasar Mahmood, who is always ready to regale us with tales from the front line. Paul Tipton tells us what you can expect if you decide to go into dental training and Annie Pallett reports on a special award for Peninsula Dental School.

With all this and more we are beginning the year as we mean to go on, jam-packed and ready to learn. Our good intentions are (for the moment) intact. Are yours?

Julie Ferry

Hello and welcome to *BDJ Student*. I'm Anish, a third-year student at King's, and your proud new student editor. Following the stellar work of our previous student editor Bex Stockton, I've now been passed the baton. Hopefully I can build on *BDJ Student*'s strong foundations since its transition from *Launchpad*.

I hope you've had a refreshing summer break and are now easing yourself into the daily rigours of the new academic year. It is well accepted that the undergraduate course is demanding and challenging. As a result, a key focus of *BDJ Student* is to function as an adjunct to the university curriculum and help support your studies. Throughout the academic year we hope to be able to offer a further insight into the dental industry and life after dental school. Our aim is to help increase your awareness of the different opportunities available as part of your future careers – focusing on different specialties, academic routes and supporting the transition between the final year and DF1.

The BDA exists to represent its members' opinions and voice their concerns. Therefore, if there are any issues, topics or experiences you believe would be beneficial to share with the dental community, then I definitely encourage you to contact us. Writing articles can be a great chance to further your knowledge about topics and explore potential areas of new personal interest!

During my tenure as student editor I hope to be able to contribute to the magazine as much as possible and hope you feel the content is helpful and informative. Any comments, feedback and involvement are highly appreciated. Enjoy the read and best of luck for the upcoming academic year. Hopefully see you at the BDSA Sports Day in Leeds!

Anish Patel

BDA CONFERENCE

A YOUNG DENTIST TELLS ALL

Lily Duffy, a Longitudinal Dental Foundation Trainee in the Yorkshire and Humber Deanery, reviews the recent British Dental Conference and Exhibition in Manchester.

This year I attended my second BDA conference. I had my first experience at the conference during my VT year and enjoyed it so much that I decided to sign up again. Looking back at my undergraduate training I think attending the conference as a student would have been a real advantage because it has so much to offer young dentists in training.

The event this year was held at Manchester's Central Convention Complex over three days and was packed full of lectures, presentations, a vibrant trade exhibition and many other sessions.

'I found many lectures highlighted important guidelines relevant to different specialties and provided useful tips to help resolve common problems.'

The exhibition

On entering the conference you are surrounded by a huge number of exhibition stands. These cover every aspect of the profession from equipment to indemnity. Many of my friends purchased loupes while at university and, since purchasing my own, I wish I had done the same. The conference is a great place to discuss different loupes with various company representatives and try them out before you invest in a set.

As a student you probably have certain issues you want guidance on and this is a great place to discuss these with the relevant professionals. For example, I talked directly with an adviser at the Dental Protection stand and at the TePe stand I discussed the best way to use their products and advise my patients.

Although it may be tempting to try and collect as many freebies as possible, I would suggest focusing more time on informative sessions that will be useful to you and popping round the exhibition in between these.

Lectures and presentations

The lectures and presentations cover several topics with an impressive line-up of speakers. Many are leading names in their specialty and will have contributed to text books and guidelines you have read. I would suggest noting down the lectures you are really interested before the conference. Try to arrive at them early, particularly if they are current hot subjects, as some are based on a first-come, first-served basis.

I would also recommend being proactive about future exams and career plans as you really can learn a lot from the lectures available. For example, I found many lectures highlighted important guidelines relevant to different specialties and provided useful tips to help resolve common problems. These would be particularly applicable in *vivas* and patient-based exams.

For young dentists

The organisers of the conference really catered to the needs of young dentists. For example, the hands-on sessions such as suturing and clinical photography are very popular with students. The CV-advice zone allows you to book a 15-minute slot with one of their advisers who can help you organise and improve your CV. This is useful in highlighting areas you can develop while an undergraduate and is invaluable before leaving university.

Socialising

One of the best things about the conference is that it has a big focus on social activity, and is a great way to start networking with other professionals! See you there next year!

Lily Duffy ■

VOX POPS

Where do you see yourself in ten years' time?

Name: Divya Pathak
Dental school: King's
"As a cleft palate patient, dentistry truly changed my life, restoring confidence and happiness in a way I never thought possible. In ten years, I hope I'll be doing the same thing for others."

Name: Lauren McKirdy
Dental school: Dundee
"Starring in a Colgate TV commercial selling the dream of the latest sensitivity toothpaste."

Name: Deshvir Nandra
Dental school: King's
"I see myself as being happy and successful. I'd like to be in a position where I can inspire people and give back to the community."

Name: Rhydian King
Dental school: Liverpool
"In touch with my friends from university, live back at home in Wales and grow a majestic beard, although the latter is unlikely to happen!"

ARE YOU PLANNING TO MOVE HOUSE?

WORKING FOR YOU

The BDA has over 30 committees, each dealing with a wide range of issues. From general practice and the community dental service to salary levels and regulatory requirements, they are at the forefront of dental politics, representing BDA members on key issues that affect their careers. In this regular column, *BDJ Student finds* out more about what really happens at the heart of your trade union. This issue we ask **Henrik Overgaard-Nielsen**, chair of the General Dental Practice Committee, to explain a little about its role.

The recent general election has meant that although things have changed, they have more or less, stayed the same. This also rings true for the dental profession right now. Our profession is under constant pressure from government to keep doing more for less and from the regulators to keep doing it better. But as the belts tighten, and power is devolved, we need to make sure we stand strong together and get our voice heard.

The BDA's General Dental Practice Committee looks out for the interests of all dentists working in general practice. Our Committee has representatives across the UK, who regularly give up their time to come to meetings, put across their constituents' views and debate the big issues facing us as a profession. This all helps to inform us on what we need to do next. We lobby and negotiate on a wide range of issues from contract reform, through pay, to training and education, and beyond. The BDA also has a Young Dentists Committee, which champions the needs of newly qualified and young dentists through policy making, political lobbying, and improving the quality of working life.

I'm sure you didn't miss the debacle created by the General Dental Council (GDC) last year and our campaign to stop them from putting an unjustified (and unexplained) fee hike on the profession. The ever-encroaching tide of professional regulation means we must be vigilant and stand up for dentistry. The UK Committee of Postgraduate Dental Deans and Directors (COPDEND) recently consulted on satisfactory completion of the DFT process and we submitted a thorough and thoughtful response. We have lots of concerns about the proposals, particularly the cost implications and effect on the workload of trainers, and we will keep sticking up for your trainers and for your future careers.

When it comes to postgraduate training, each year the BDA calls for enough DFT places to be available for all UK graduates. In 2014, we were satisfied that there were no eligible UK applicants without a place, but this did not happen easily and the stress and anxiety felt by the 76 applicants who didn't get placed in the first round, and who were left waiting while trying to concentrate on their finals, is just not on. So we will keep lobbying the Department of Health (DH) to ensure our students' futures aren't left hanging by a thread.

And you can't have missed the fact that the NHS budget appears to have a gaping hole in it. According to some estimates, NHS England will have to make £22 billion 'efficiency savings' (i.e. cuts) by 2020. Last year, the threat of a reduction in DFT pay loomed and the BDA fought to ensure this didn't happen. However, the DH still has future cuts in its sights, so we continue to collect evidence that will make the case for defending the existing pay rate.

By becoming a BDA member you are not just doing it because most of your mates are, you are doing it because it's your key to a more successful and sustainable career. Stay with us and get engaged in your local BDA branch/sections' events: it will help you to network with colleagues, as well as find out what's happening in the wider world of dental politics. The BDA can help you lay a solid foundation for your future career in these difficult times because we really are there for you, every step of the way. **Henrik Overgaard-Nielsen** ■

Name: Vishal Baron
Dental school: Barts
"A couple of practices here and there and maybe the most influential person in dentistry – who knows!"

Name: Beth Crookham
Dental school: Liverpool
"I hope to be a successful dentist and a proud owner of a pug… or three!"

Name: James Matthew
Dental school: Sheffield
"I want to be loving what I do and where I do it, building relationships, having fun and enjoying the journey."

Name: Neha Kansagra
Dental school: Barts
"Hopefully still feeling like I'm 21 even ten years down the line! Enjoying both work and family life, wherever the wind takes me."

Name: Jack Stanley
Dental school: Sheffield
"In ten years from now I don't want to see myself disappointed with the things I didn't do in the ten years gone by. Embracing every opportunity thrown at me, happy and successful!"

Don't forget to keep us up to date with your contact details to make sure you maintain full access to your BDA student member benefits package. It's easy to do this: just call 020 7563 4550 or email membership@bda.org with your new contact details.

BRITISH UNDERGRADUATE DENTAL RESEARCH CONFERENCE 2015

Last year at the beginning of my fourth year here at Manchester, I decided to commit to what seemed like an ambitious idea. Day after day it gradually grew beyond just an idea and eventually manifested itself in the first British Undergraduate Dental Research Conference, which took place on the 7 March 2015. After setting up a committee of my fellow colleagues and with invaluable support from Manchester School of Dentistry, the conference was held at Manchester University Place. 250 dental students from more than ten UK dental schools were in attendance. There were inspirational research talks by respected speakers including Professor Kevin O'Brien (Orthodontics), Professor Helen Worthington (Cochrane Database of Systematic Reviews), and the Dean of Manchester School of Dentistry, Professor Paul Coulthard (Oral Maxillofacial Surgery).

I particularly enjoyed organising the conference workshops such as *Composite Masterclass*, *Suturing* and *BDS and beyond*, which all included lots of top tips. My composite restorations have definitely been receiving higher marks since the conference!

The feedback from the delegates exceeded our expectations with over 80% scoring the day as "excellent". Following this success there will now be an annual *British Undergraduate Dental Research Conference (BUDRC)*, so look out for BUDRC 2016 at the University Of Manchester School Of Dentistry. **Mohammad Jaberansari, fourth-year dental student, Manchester Dental School and founder of BUDRC** ■

REVIEWS: FACEBOOK GROUP

Dental Roots

Back in March I was invited to join a Facebook group, called *Dental Roots: Connecting Dental Students & Dentists*, by one of my fellow students, Jon Benton. There were about 200 members then: now there are nearly 5000, comprising dentists of all abilities from dental students to specialists at the top of their game. So what makes this group so popular, and why should you join? I spoke to Jon to find out more.

"The group was set up by committee members of the Make a Dentist charity, which I'm involved with as a Student Ambassador," he says. "We wanted to create a community of practising dentists and dental students, with furthering education as the main aim."

The committee invited friends from the dental community through Facebook and introduced the new group by posting on other related Facebook pages In just a few short weeks, the group had expanded exponentially, with dentists and students alike posting almost every day.

"I would encourage anyone with an interest in dentistry to join," says Jon. "It's a great way to connect with experienced members of the dental community." The group boasts members from all specialties from prosthodontists to cosmetic gurus. Dentists, doctors, technicians, hygienists, therapists and dental nurses are all welcome.

"There's a huge variety of topics raised from useful clinical resources, including the most important guidelines to follow, advice about dental equipment like loupes, and reviews of materials such as new-age composites. We often have dentists posting anonymous case photographs and inviting discussions about treatment planning."

There's no cost to joining as it's all on Facebook and you can be involved as much or as little as you like. To find out more or to join the group simply search for *Dental Roots: Connecting Dental Students & Dentists* on your Facebook search bar or visit makeadentist.com. **Bex Stockton, fourth-year dental student, Manchester** ■

The Association of Dental Groups 2016 Bursary Awards

Following the success of its 2015 Bursary Awards, the Association of Dental Groups (ADG) would like to announce that applications for 2016 are now open.

Each year, ADG seeks to find the most innovative and inspirational voluntary projects from young dental professionals in the UK through its annual bursary competition. Divided into separate categories for postgraduate and undergraduate entries, all submissions will be judged anonymously by an expert panel, with cash prizes awarded to the winning applicants.

Orna Ni Choileain and Niall McGoldrick won the 2015 Postgraduate Award. Orna says: "When I found out we won the bursary, I had the perfect mixture of shock and excitement. It feels like a great achievement to have our work setting up the 'Let's Talk About Mouth Cancer' charity recognised by other professionals on a national level."

The awards give young dental professionals the opportunity to be recognised for a specific project or for their own pioneering ideas. Amardeep Singh Dhadwal won the 2015 Undergraduate (Professionalism) Gold Award. He says: "I would definitely recommend other students to enter the competition next year; it is a great opportunity to discuss and consider what dentistry means to you and what you aspire to as a dental professional."

> 'The awards give young dental professionals the opportunity to be recognised'

Applications for the 2016 Bursary Awards are now open and entries can be completed using the forms available via the ADG website, www.dentalgroups.co.uk.

FOCUS ON FINAL YEARS

BDA 'Interview Skills' lecture and *Getting your first job guide*

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To help final-year students prepare for the upcoming Dental Foundation Training and Vocational Training interviews, the BDA provides a helpful lecture in your dental school and guide book, which includes:

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- Longitudinal scheme interviews
- Advice from last year's interviewees
- Plus much more.

Check your dental school lecture date at www.bda.org/finalyearlectures

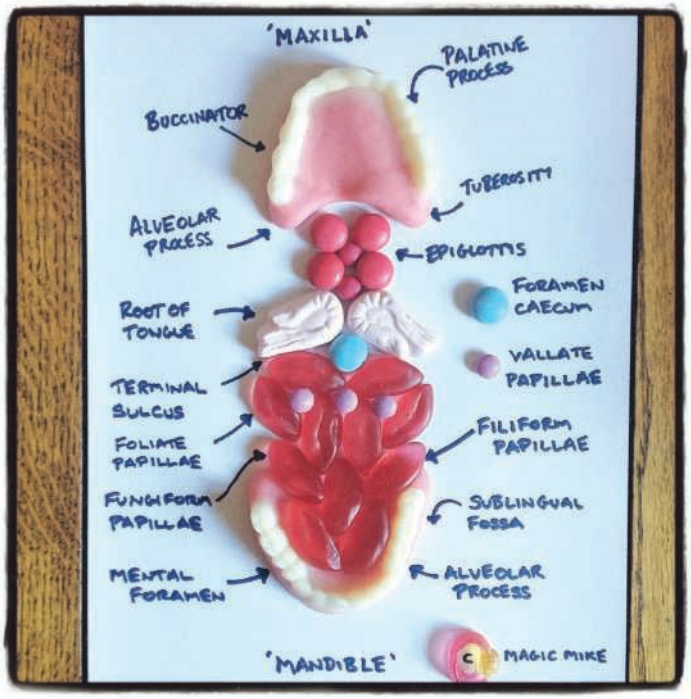
Student members can pick up their copy of *Getting your first job guide* at the BDA lecture. Preview the guide at **www.bda.org/firstjob**

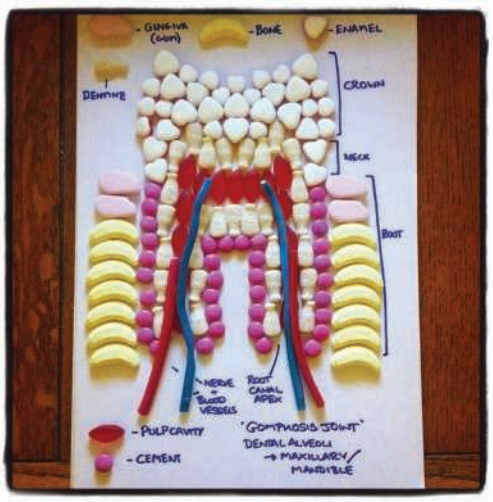
CANDY ANATOMY

Michael McCormick, a second year medical student at the University of Glasgow explains his unique revision resource, Candy Anatomy

What is Candy Anatomy? Candy Anatomy is a bright, edible and alternative revision resource for medical, dental and life science students. The highly contrasting delicious images provide a new way of looking at anatomical structures and cellular mechanisms without the blood and guts that normally accompany it. This also makes it ideal for teaching kids, as I have heard many schools have been doing in the UK.

How did you come up with the idea? After several years out of academia since graduating from my previous degree in physiology at the University of Edinburgh, I knew learning the content of a medical degree was going to be hard work. As a result I attempted to absorb as much information about anatomy as I could, comparing it to objects I found in the environment. In restaurants, like a child, I would ask for something to colour in and adapt an ice cream sundae into a shoulder joint. Or a picture of a stacked burger into a column of vertebrae. When I realised that fried egg sweets were an obvious choice of nucleated cell, Candy Anatomy was born and I've been finding new appropriate sweets ever since.





Why do you include dental images? I am the son of two dentists, so I have always been surrounded by dentistry. Also in the first few weeks of Candy Anatomy it was brought to my attention that dental students at Glasgow were also following my work. We had a week of special senses in the first semester including taste and I therefore decided to produce the basic anatomy of the tongue. Following this, as a favour to a few dental student friends, I decided to make the tooth, as a crossover with our recent study of joint types.

What has the response been like? The response has been totally unexpected, what started as a simple hobby to amuse my friends about how nerdy I was becoming, has spiralled out of control. My Instagram account has surpassed 14,000 followers as a result of articles about Candy Anatomy across the globe. I've received offers of book deals from New York and been published in magazines in America, Britain, France and Australia. I still think my idea is very childish but I am amazed by the following I have received and I will continue to make more.

What next? I have finally decided to upgrade from my iPhone quality pictures and get myself a new Digital SLR. So from now on all of the images will be much higher resolution and I plan to make them much larger and more detailed. Now I have covered a fair number of systems I will probably move onto more microstructure and pathology. Over the next few weeks I will also begin experimenting with 3D structures and see what happens! **Follow Candy Anatomy on Twitter @candyanatomy and Instagram candy anatomy** ■

FOCUS ON FINAL YEARS

DFT INTERVIEW SKILLS WORKSHOPS

BOOK EARLY! SPACES LIMITED

To polish up your interview technique, we will be running two Dental Foundation Training (DFT) interview skills workshops in London and Manchester. The events will have a practical focus and will cover interview technique, give you the opportunity to practise interview questions and sit a mock Situational Judgement Test (SJT) exam. The cost to attend one of the workshops is £65 each.

Manchester: **Saturday 7 November**
London: **Saturday 31 October**

Places sold out quickly last year, so book early to secure your place. Go to www.bda.org/dftworkshops for more details.

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If you have any news, views or issues you'd like to see covered, tell the team at *BDJ Student* all about it.

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Tweet us: @theBDA

EXPERIENCE

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In the second of our regular series on dental-student experiences, Kalpesh Prajapat describes his experience of treating paediatric patients

"The moment had finally arrived – I was going to treat my first paediatric patient. With memories of my first childhood dental visit in my mind, I was conscious of the importance of this encounter on the child's long-term attitude towards dentistry.

From the moment I arrived on clinic - an anxiety-driven 40 minutes early - I felt a mixture of excitement and nerves as I prepared the unit for my first restoration. Setting up the dental dam for the LL6 composite-resin restoration seemed more unnerving than I had previously imagined.

Planning was a vital component for success. Ensuring the appointment was booked, allowing appointment details to be sent through the post and following this up with a phone call to the patient's parents undoubtedly reduced the chance of patient non-attendance. Familiarising myself with the patient notes, educational materials and discussing the case with tutors prepared me mentally for the visit. Finally, a dental setup with all equipment, materials and relevant radiographs at hand showed a professional approach to treatment. However, no matter how much you prepare, it is only natural to feel apprehensive about treating your first patient!

Building relationships

At the first consultation, I arranged a structured but very informal preventive appointment. The patient's diet diary was explored and the correct brushing technique was demonstrated with toy models, followed by the application of six resin-based fissure sealants and fluoride varnish.

It's important to stay organised and take a systematic approach to treatment, whether it is delivering oral-hygiene advice or restoring a carious cavity. Also, the paediatric patient can be relentlessly energetic, so I learned that working in a timely manor can favour the clinician and the child.

Behaviour-management techniques

The clinical skills needed for paediatric and adult dentistry are not that dissimilar. However, the fundamental difference is the approach to behaviour control – this is crucial for the success of treatment. Appropriate verbal communication, voice control and body language can reassure even the most anxious of patients. The use of systemic desensitisation can also be adopted. This technique involves introducing the child to increasing 'fear-producing' stimuli as they mature with further treatment experience. For instance, providing a fluoride varnish then, at a subsequent appointment, fissure sealants. The patient is effectively progressing up the hierarchy of invasive treatment but only when they feel ready.

'For instance, providing a fluoride varnish then, at a subsequent appointment, fissure sealants. The patient is effectively progressing up the hierarchy of invasive treatment but only when they feel ready.'

I implemented a tell-show-do technique – using a life-sized model mouth I was able to convey information in a fun, relaxed and informative style. Both parent and patient were aware of what was going to be done and why. Also, throughout treatment the patient always felt in control. The use of 'stop signals', such as a raised hand, allowed trust to be established. Positive reinforcement during and after treatment helped to boost patient confidence. Finishing the visit with a well-deserved sticker also reaped benefits!

This is a brief summary of what I gained from the treatment of my first paediatric patient. I am now embarking on the journey of further restorations followed by extractions on this patient." **Kalpesh Prajapat** ■

YOUR BDA STUDENT TEAM

Here at the BDA we have a dedicated team of people working to promote your interests. Laura Assassa, BDA Student Marketing Executive, gives you the low down.

Professor Nairn Wilson CBE, BDA President

As former Dean of King's College London Dental Institute and Manchester Dental School, Professor Wilson has plenty of experience with students. Professor Wilson will be touring UK dental schools this year, so look out for his lecture at your dental school soon.

Judith Husband, Chair of the BDA Education Group

As Chair of our Education, Ethics and the Dental Team Working Group, Judith is the BDA officer responsible for education. Having originally started out on the BDA Student Committee while studying at Liverpool Dental School, Judith is particularly aware of the challenges facing young dentists today. Follow Judith on Twitter @Judith_Husband

Paul Blaylock, Chair of the BDA Student Committee

Paul Blaylock, the Chair of the BDA Student Committee, is the Training Programme Director for the North East dental foundation GPT scheme and an Associate Clinical Lecturer at Newcastle Dental School. Paul fights strongly for dental student interests and has been a driving force behind the Student Committee's recent successes.

Laura Assassa, BDA Student Marketing

The main contact for dental students across the UK, Laura regularly visits the schools and is your first port of call for any queries.

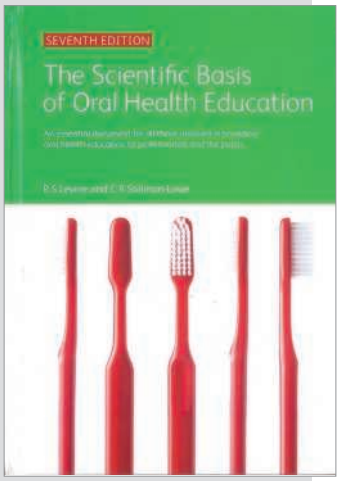
Dominic Price, BDSA President and Vice Chair of the BDA Student Committee

Dominic Price is a mature student at Liverpool Dental School. Voted in at the spring BDSA Annual Conference, Dominic is your national student representative and speaks on behalf of all UK dental students.

You can get in contact with any of the team at students@bda.org Add them as a friend on Facebook at 'British Dental Association – students' and on our social networking site, BDA Connect, https://bdaconnect.bda.org

REVIEWS: BOOK

The Scientific Basis of Oral Health Education (7th ed), Cathy Stillman-Lowe and Ronnie Levine, BDA, 2014



Many will remember with affection the "little green book" – a slim pamphlet that was the first edition of the *Scientific Basis of Dental Health Education*. It was a valued document, which clarified and standardised the advice given by dental health professionals.

The recently published seventh edition (*BDJ Books*) is a substantive, elegant and even more useful document, which has developed the basic concept of the green book into a document that every oral-health professional should have on their shelves… and in their mind. The book cleverly includes the recently published NICE guidelines to local authorities on oral-health promotion, although unfortunately its publication predates the NICE guidelines for oral-health practitioners, which are due to be published.

The book gives an excellent outline of what health education is, and should be, and then carefully presents the evidence underpinning the advice that should be given to patients and public on caries, diet, periodontal disease, oral hygiene, erosion, oral cancer and other oral diseases. It also offers guidance about specifically targeted oral-health education, such as that which should be given to small children and the elderly. The authors have also included information about the frequency of dental visiting and first aid for dental trauma. Five very helpful appendices ensure that everything that someone needs to know about dental-health education can be found in this one superb resource.

Cathy Stillman-Lowe and Ronnie Levine should be congratulated. Not just for the quality and comprehensiveness of their five-star document, but also for their tenacity in ensuring for 38 years that the essentials of dental health education have been, and still are, set out in a way that everyone can understand. To order, call 020 7563 4555. **Professor Elizabeth Kay, Foundation Dean, Peninsular Dental School** ■

IN SESSION

One dentist answers *BDJ Student's* questions about his trip to Tanzania with Bridge2Aid

Name: Kostadin Todorov
Age: 46
Qualified: Medical University of Plovdiv, Bulgaria

BDJ Student: *Where are you working now?*
Kostadin Todorov: I am based at Whitecross Dental Care, Swindon.

BS: *Why did you decide to go on the Bridge2Aid trip?*
KT: I wanted to experience the way of life in Tanzania and help train and provide dental care to people in the country. I was driven to meet and assist clinical officers working to help provide care to patients who were suffering from dental pain and may not have seen a dentist for many years. I was thrilled when I found out that I had been chosen through IDH's partnership with Bridge2Aid.

BS: *What were your main duties?*
KT: The overall objective of the trip was to educate the clinical officers on the ground on how best to recognise and diagnose dental diseases, administer injections, remove teeth and provide effective aftercare for their patients.

BS: *Best bit?*
KT: It was great to see the tangible difference you are making and to see the clinical officers take on board all you have taught them. The overall experience is one I would recommend to anyone

BS: *And the worst?*
KT: You can't help but notice the prevalence of diseases like malaria and lack of basic amenities that we would take for granted. For example, we came across a patient who has been living with dental pain for eight years, which is almost unthinkable in Europe.

TWEET IT

Questions about life after graduation?

The BDA will be hosting a Twitter Q&A at the end of September to discuss careers, starting out and going into practice. Look out for #AskBDA or follow @TheBDA to find out more

Meet your BDSA President

Ay up! I'm Dominic Price, a third-year dental student at the University of Liverpool. I'm your new BDSA President and Vice-Chair of the BDA Student Committee.

I have been a member of the BDSA and the BDA Student Committee for two years and have served at the same time as a committee member of Liverpool University Dental Students Society.

My key goal this year is to improve student awareness of the wider world of dentistry. I believe that increasing student membership of the BDA is a vital step to achieving this. I want all dental students to have access to BDSA events and make use of the funding available to be part of the wider dental community.

I am a married man and a mature student with a background in plumbing and engineering. I'm not your typical dental student, but I hope my experiences will help me to make good decisions and work well as a team player in the new committee.

The BDSA Sports Day will be hosted by Leeds this year and the BDSA Conference 2016 will be hosted by Liverpool, so get your tickets and let us welcome you to the North!

Find out more at www.bda.org/bdsa **Dominic Price**

STUDENT

Priya Mistry *is in her second year (3BDS) on the graduate-entry* dentistry programme

"I did my undergrad studies at the University of Liverpool and I have a first-class BSc (Hons) in genetics. I chose UCLan Dental School as it offered a graduate-entry programme. The main thing that stood out for me was the primary-care emphasis from day one. I also really liked the small staff-student ratio, which means we get a lot of support from the staff.

'UCLan students treat patients for their three clinical years in "state of the art" DECs in a primary-care setting. They have a holistic approach to dentistry right from the start with very close clinical supervision and support.'

My experience on this course so far has been fantastic. After 11 months of intense training on phantom heads in year one and a countless number of exams, it was time for me to move on from the dental school and to start practising dentistry in the real world. The opportunity to work in primary care from day one is what makes UCLan a unique dental school and I know I will be well prepared for DF1.

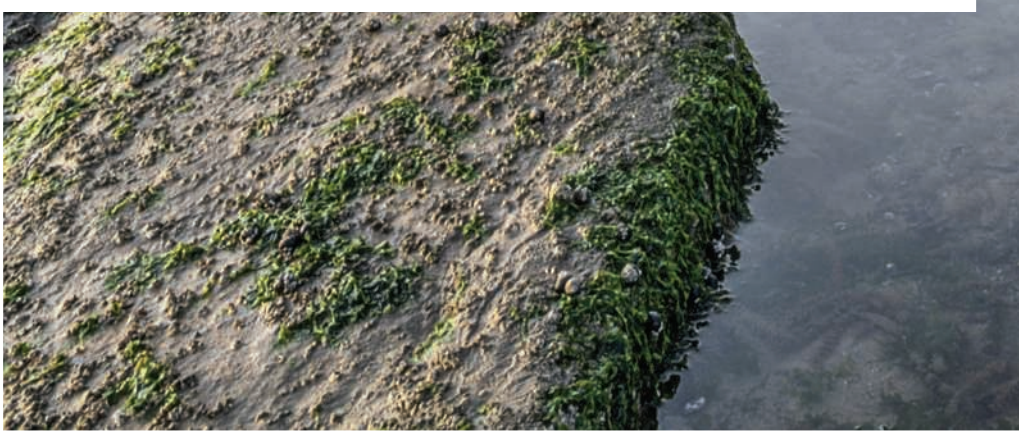
Though this might sound a little strange to other dental students, at UCLan we are split at the end of year one and sent to one of four Dental Educational Centres (which are Accrington, Blackpool, Morecambe and Carlisle). I am based in Blackpool, where I work in primary-care dentistry.

I have been on clinics for seven months now and so far the experience has been overwhelming, challenging but extremely exciting at the same time. Blackpool is a very socially deprived area of the North West and, with a high caries rate in this area, I am not short of patients. I see patients with complex medical histories from learning disabilities to lifelong medical problems and this collectively is an aspect of special- care dentistry which I have been exposed to from day one.

I attend to patients of all ages from very young children to the frail and elderly, who require a lot of assistance when coming to the dentist. It has really helped me to strengthen my communication skills when interacting with patients of different ages. The reality here is that you do not know what is going to come through the door and I guess this keeps the excitement going.

Unlike traditional dental schools, there are no restorative, endodontic and periodontics clinics to which you can refer, so instead I am responsible for undertaking all the necessary treatment and I will see the patient through till the end of the treatment. This is brilliant because I do feel like a real dentist and on the final appointment the patient and I can compare the before and after photos. It's a great feeling knowing that you did that and a simple thank you from the patient makes the months of hard work worth while.

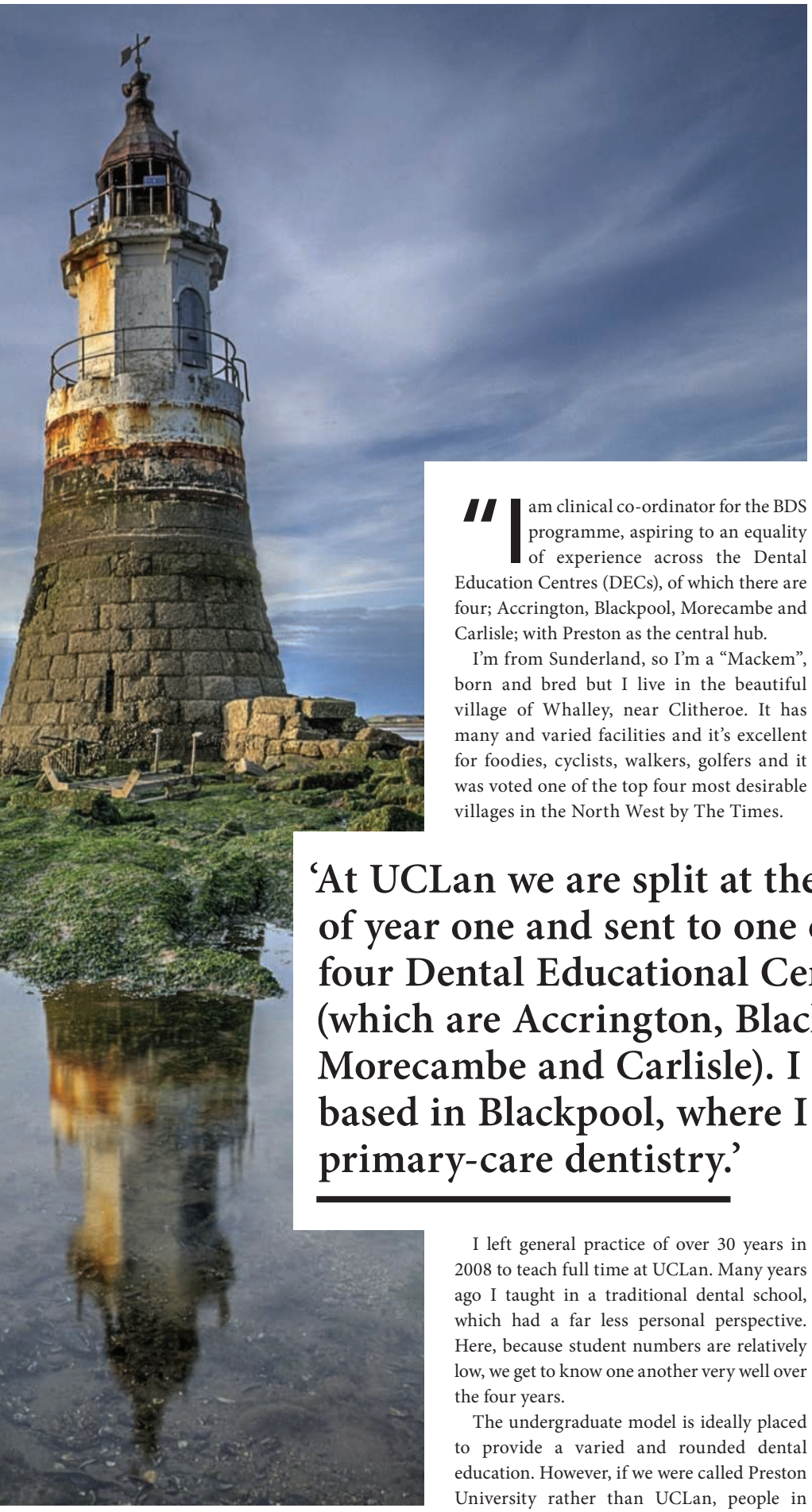
Priya Mistry



STUDENT VS STAFF

UCLAN

Hazel Davis discovers what it's like to study and work at UCLan School of Medicine and Dentistry, by talking to those on both sides of the academic spectrum



STAFF

➤ Ian J Burn, *Clinical Teacher in General Dentistry and Lead in Clinical Periodontology*

"I am clinical co-ordinator for the BDS programme, aspiring to an equality of experience across the Dental Education Centres (DECs), of which there are four; Accrington, Blackpool, Morecambe and Carlisle; with Preston as the central hub.

I'm from Sunderland, so I'm a "Mackem", born and bred but I live in the beautiful village of Whalley, near Clitheroe. It has many and varied facilities and it's excellent for foodies, cyclists, walkers, golfers and it was voted one of the top four most desirable villages in the North West by The Times.

'At UCLan we are split at the end of year one and sent to one of four Dental Educational Centres (which are Accrington, Blackpool, Morecambe and Carlisle). I am based in Blackpool, where I work in primary-care dentistry.'

I left general practice of over 30 years in 2008 to teach full time at UCLan. Many years ago I taught in a traditional dental school, which had a far less personal perspective. Here, because student numbers are relatively low, we get to know one another very well over the four years.

The undergraduate model is ideally placed to provide a varied and rounded dental education. However, if we were called Preston University rather than UCLan, people in London might know where we are….

UCLan students treat patients for their three clinical years in "state of the art" DECs in a primary-care setting. They have a holistic approach to dentistry right from the start with very close clinical supervision and support. Traditional schools tend to teach dentistry in a secondary or even tertiary departmental setting, seldom treating the patient as a whole.

Though the Dental Clinic is largely used for the many postgraduate MSc courses held at UCLan, there are plans to integrate some of the first-year undergraduate teaching in the future.

The UCLan Dental Student Society is run entirely by the students, who organise their own elections for society officials and representatives. Many of the events are centred on students, however many staff join in (especially when food is involved). It would be rather unwise to risk the sports days. I have been known to bake (rather well) and "dad dance" at the ball (rather badly)! The DEC Christmas parties are always excellent fun and the Leavers' Dinner is always a highlight.

I like to think that our pastoral support is second to none, providing advice and support for any problems, great or small, academic or personal. We adopt an open-door policy and, again, because of our small groups a senior clinical teacher is always close to hand."

Ian J Burn

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References:
1. Bleeding Index Reduction DOF 1 – 2013 (LAEBBA0001), 50.9% reduction in whole-mouth mean Bleeding Index at 4 weeks.
2. DOF 2 – 2013 (UNKPLT0006).

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Advanced Defence against gum disease

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ETHICAL DILEMMA

The Dental Defence Union(DDU) explains how to deal with a negative review of treatment online

I was involved in the treatment of a patient who seemed satisfied at the time but later posted a negative review online. As they had seemed happy at the time I was surprised to hear about the review. What should I do?

It is always disappointing to read negative comments, particularly when they can be seen by colleagues and other patients online. Some practices have taken the step of replying positively to posts on sites such as the NHS Choices websites - thanking patients for their comments, apologising if they are not happy with the service or treatment they have received, and encouraging them to get in touch to discuss any concerns so the practice can try to improve their services. This is in line with the NHS complaints procedure which emphasises that practices must be open and honest with complainants and learn lessons from complaints which can be used to further improve services. It's important to remember your duty of confidentiality when replying to posts.

'There is always a risk that trying to have a post removed may further inflame the situation and may even prompt the person to re-post their comments on another site.'

If you are concerned that a post on the NHS Choices site is 'offensive or unsuitable', you can report it to the site moderators using the link provided. NHS Choices does not promise to remove such comments but says it will investigate as soon as possible. However, in complaining about a post, you must avoid disclosing any information about the patient. There is always a risk that trying to have a post removed may further inflame the situation and may even prompt the person to re-post their comments on another site. The understandable desire to have an unflattering or inaccurate post removed needs to be balanced against recognition that achieving this may not be the end of the matter and may itself attract unfavourable comment

While the website is specifically meant for patients to comment on NHS services, the DDU is aware of cases in which patients have also commented on private treatment provided by dental practices providing a mixture of both NHS and private services.

NHS Choice's policy is to allow patients to comment on any practice listed on the website as providing NHS services, even if the treatment in question was provided privately as these comments may be relevant to patients thinking of joining that practice.

THE SURVIVAL GUIDE

Starting clinics can be a daunting experience. However, armed with these top tips from **Ajay Metha**, a fourth-year dental student at King's, you'll be prepared for anything

So the day has finally arrived! Put your name badge on, button up that tunic, place your pen in your pocket and you're ready for your first day treating patients. After all those hours completing work experience, it's finally your turn to be the dentist! Excited? Nervous? Think you're not quite there yet? My first experience treating patients encompassed myriad feelings, making it a day that I will not forget for the rest of my practising career. However, I've learned a few things along the way and here are my top tips for surviving clinics:

Be confident

Inevitably you will come across scenarios on clinics where you will not feel 100 per cent confident. A nervous patient can make you anxious and if the patient notices this then it will make them even more nervous. Many patients will not know your clinical experience at dental school so it is important to be confident to increase their faith in you. When it comes to your first few patients even calling out your patient's name can feel daunting as a sea of faces look up at you in expectation. However, first impressions count, so from the

moment you call out their name you are being (quite rightly) judged. Don't exacerbate any feelings of anxiety but rather take it in your stride and be professional.

Reflect on your mistakes

One of the most important things I learnt when I began seeing patients is that you're going to make mistakes. Making mistakes is common among dental students, especially at the beginning, so don't be too disheartened. If anything does go wrong, don`t panic, consult your clinical tutor and learn from it. Of course, as dental professionals we should all strive for perfection and pay attention to detail. Self-reflection is extremely important, so I would recommend keeping a clinic diary for the first few weeks to record any mistakes and what you've learned.

'Arrive early on clinic and make sure you set everything up, so when the patient is in the chair you or your partner don't have to hunt around for materials.'

Show your personality

One of the things I love most about dentistry is its interactive quality. Being in charge of your own patient list can be a huge, unnerving responsibility. Your patients will come from all walks of life and it's important to be able to communicate effectively with all of them. This can be achieved by spending time at the beginning of each appointment building a rapport with your patient. The walk from the waiting-room to the chair is a great time to do this.

Learn from your tutors

Your clinical tutors will become your most valuable educational tool during clinics. Dentistry could be described as an apprenticeship as you learn on the job. It's one thing reading about extracting a tooth but, of course, another thing entirely actually having to do it, as you're putting your knowledge into practice. Ask older students for help and advice; they have been in your position too! Be wary of the fact that different tutors have different perspectives, so try to embrace as much advice as possible. You will become a better clinician if you experience new techniques because it will hone your skills.

Be organised

Know what you have booked in beforehand by keeping a separate diary for your patients. This sounds simple but is an invaluable piece of advice. If you have booked in a root canal filling on a Monday morning, spend the night before reading up on it. Arrive early on clinic and make sure you set everything up, so when the patient is in the chair you or your partner don't have to hunt around for materials. It will make the whole appointment less stressful for you and the patient. Do things 'by the book'. This sounds boring but try not to do anything innovative especially when you are just beginning clinics. This means always putting on a rubber dam for a composite.

Get loupes (and a light!)

I bought my own set of loupes during my year-two phantom-head work and they made a huge difference to the quality of my work and my posture. When I first started clinics I found myself hunching over as I was keen to make a good impression and wanted to put the patient's interests first. I did experience some back pain during the first few weeks and so I have since adjusted my posture. Loupes do take some time to get used to but they are an investment. A light is also necessary as it provides a direct and focused beam.

Your clinical partner

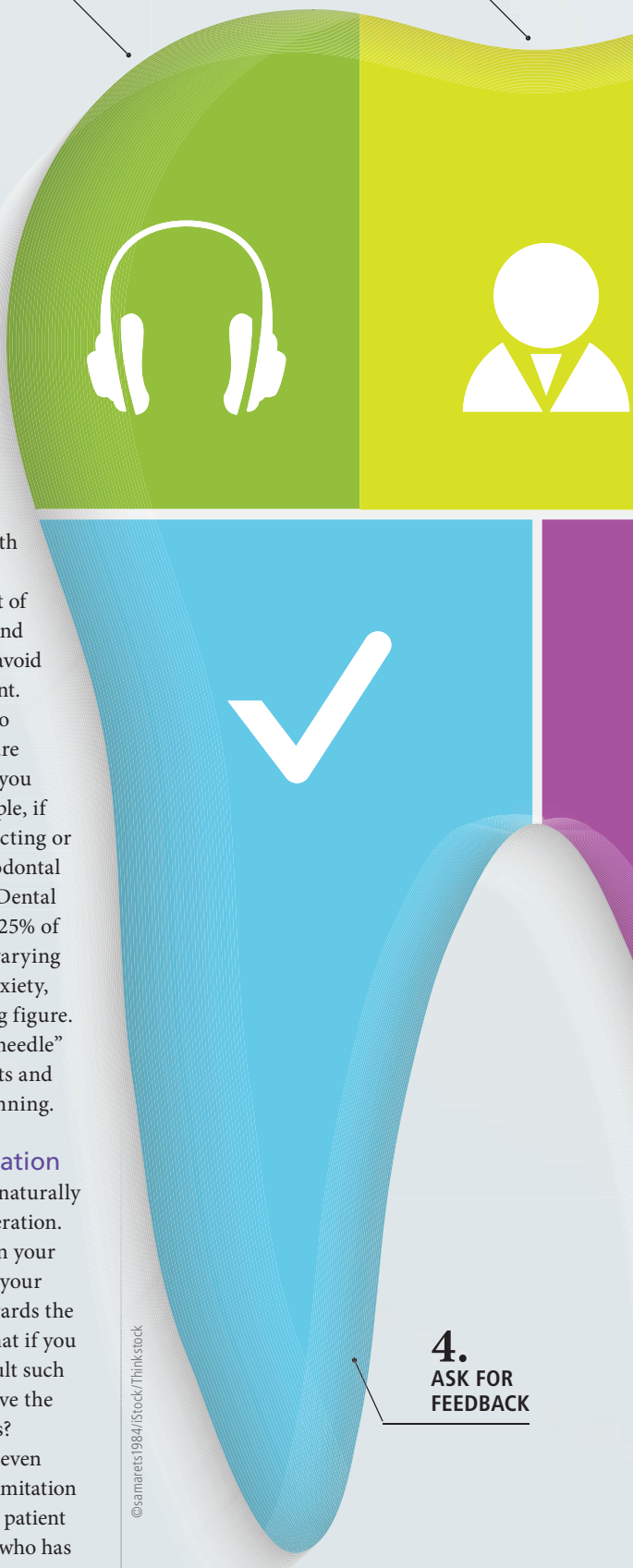
One of the most memorable moments during the clinical years is finding out who your clinical partner is! Whoever it is, close friend or not, it is important to develop a good professional relationship with them. Support and encourage each other and know what you both have booked in. Be enthusiastic, proactive and positive as these attributes will stand you in good stead for being a better dentist.

Finally, the most important tip is enjoy yourself. Being on clinics is the reason most of you chose to study dentistry. I really loved the course as soon as I started seeing patients and putting into practice what I had learnt. Good luck! **Ajay Metha** ■

THE SURVIVAL GUIDE

IT'S GOOD TO TALK

Communicating with patients is key to being a good dentist, advises foundation dentist **Natalie Bradley**



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It's easy to get caught up to the minutiae of the technical skills that are involved in dentistry: how to cut a crown prep; and how to get a 90 degree cavo-surface angle. But working on how you communicate with patients is equally as important. Indeed, it is one of the General Dental Council's (GDC) standards says communicating effectively is central to providing a good standard of care. According to Dental Protection, 70% of litigation is a result of poor communication between the dentist and the patient and dentists who appear rushed, disinterested or unwilling to listen are more likely to receive complaints (see also *'Be nice to avoid complaints'*, page 33)

'Some patients have very high expectations when it comes to treatment and trying to manage those expectations can be challenging.'

High expectations

There are certain situations where communicating with patients can be more difficult than usual. Some patients have very high expectations when it comes to treatment and trying to manage those expectations can be challenging. I learnt this first hand when I treated a particularly demanding patient who needed some anterior composite work. She wasn't happy with the treatment I provided initially but with the help of my trainer, I was able to explain that her natural teeth were never going to look the same as the prosthetic crowns in the rest of her mouth. I think it's best to try and identify these patients early on to avoid distress for both you and the patient.

It can also be equally difficult to communicate with patients who are anxious. This is especially true if you have to break bad news: for example, if an unrestorable tooth needs extracting or if a patient has undiagnosed periodontal disease. According to the British Dental Association (BDA), 25% of people suffer from varying degrees of dental anxiety, which is a staggering figure. Mention the word "needle" around these patients and you'll send them running.

Special consideration

Other patients may naturally need special consideration. If you have a child in your chair, do you direct your communication towards the child, their parent or both? Or what if you have to deal with a vulnerable adult such as a dementia patient? Do they have the capacity to consent for themselves?

All these situations can become even more troublesome if you add the limitation of time into the recipe. Throw in a patient who doesn't speak English well or who has dementia and it seems virtually impossible to examine them, diagnose disease, and explain the treatment options and costs within the average NHS check-up time of 15 minutes!

With all this in mind, here are five top tips for improving your communication with patients.

3. KNOW WHEN TO ASK FOR HELP

5. TALK TO YOUR COLLEAGUES

1. Use active listening
This may be obvious but it's surprising how bad we can be at it! How many times do you interrupt your patient during an appointment? Ask your nurse to count this during your next patient – you'll be shocked by the results. Show that you're listening with non-verbal signals; make eye contact and nod every so often. Your body language and tone of voice are important as well, so make sure you speak with the patient on the same level. This will reassure the patient that you're actually listening to them and will help build trust.

2. Put yourself in the patient's shoes
Take yourself back to before you began dental school. Would you understand what a root canal is? While some people might have used Google to research their dental problems, using technical jargon can be off-putting to patients if they don't understand what you mean.

> 'Always read instructions or forms out to patients to clarify if they understand and ask them to summarise the main points back to you.'

An effective way to help patients understand their options and the treatment they need is by mutually agreeing to a treatment plan. Explain all the options to the patient in a simple and easy-to-understand way and invite the patient to ask questions. Using an option grid is a novel way to help patients make informed decisions about their treatment: for example, whether to choose a root canal treatment or an extraction.

So how do you decide whether or not the patient needs any more information? Ask them to summarise what treatment they are going to receive and on which teeth. This can really help clarify whether they understand or not.

3. Know when to ask for help
Don't struggle solo when there is help out there. This takes the pressure off your shoulders and ensures you act in the best interests of your patients.

If patients have trouble understanding English, book an interpreter, use a telephone interpretation service or find someone in your practice who can speak their language. Try not to use relatives or friends to translate because you can't be certain of what they are actually saying.

Always read instructions or forms out to patients to clarify if they understand and ask them to summarise the main points back to you. You could also consider using large-print instruction sheets to help the visually impaired.

If communication is particularly difficult because the patient suffers from a condition like dementia, you could consider referring them to the Community Dental Services or for domiciliary care. They may be more equipped to treat these patients and offer services to help assess if they have capacity according to the Mental Capacity Act (2005).

4. Ask for feedback
This is something dental professionals shy away from, especially if feedback comes in the form of a complaint, but how else can you assess how well you communicate with your patients? Patients will be in the best position to tell you, so why not ask them? If you do receive a complaint it is important not to take it to heart but to see it as an important source of feedback and communicate your thanks to patients for bringing their problems to your attention. Patients will also generally be honest if you allow them to give anonymous feedback in the form of patient surveys.

You can also ask the other staff with whom you work with to evaluate your performances – your dental nurse is a valuable source of feedback, as is your receptionist, who is often the first person your patient will come into contact with once they leave your surgery.

5. Talk to your colleagues
Similarly, it's easy to forget about communication within the dental team as we often like to focus on the dentist and patient interaction. It's vital to communicate effectively not only with the staff in your practice, but also with other dental professionals to whom you may refer patients. We've all seen shocking referral letters that omit medical histories, which don't include radiographs or aren't even legible! You have a duty of care to your patients to work with colleagues in a way that is in the patient's best interest and it is a GDC standard to communicate clearly and effectively with other team members and colleagues.

It takes time and effort to learn how to communicate effectively but the more patients you see the better you will become. It is important to reflect on your skills and to be honest with yourself about your abilities. As one of my mentors once said to me: "If you're nice to your patients, are honest with them and don't smell, you'll make a great dentist!" **Natalie Bradley** ■

Natalie Bradley is a foundation dentist in and writes her own blog, www.atoothgerm.blogspot.co.uk

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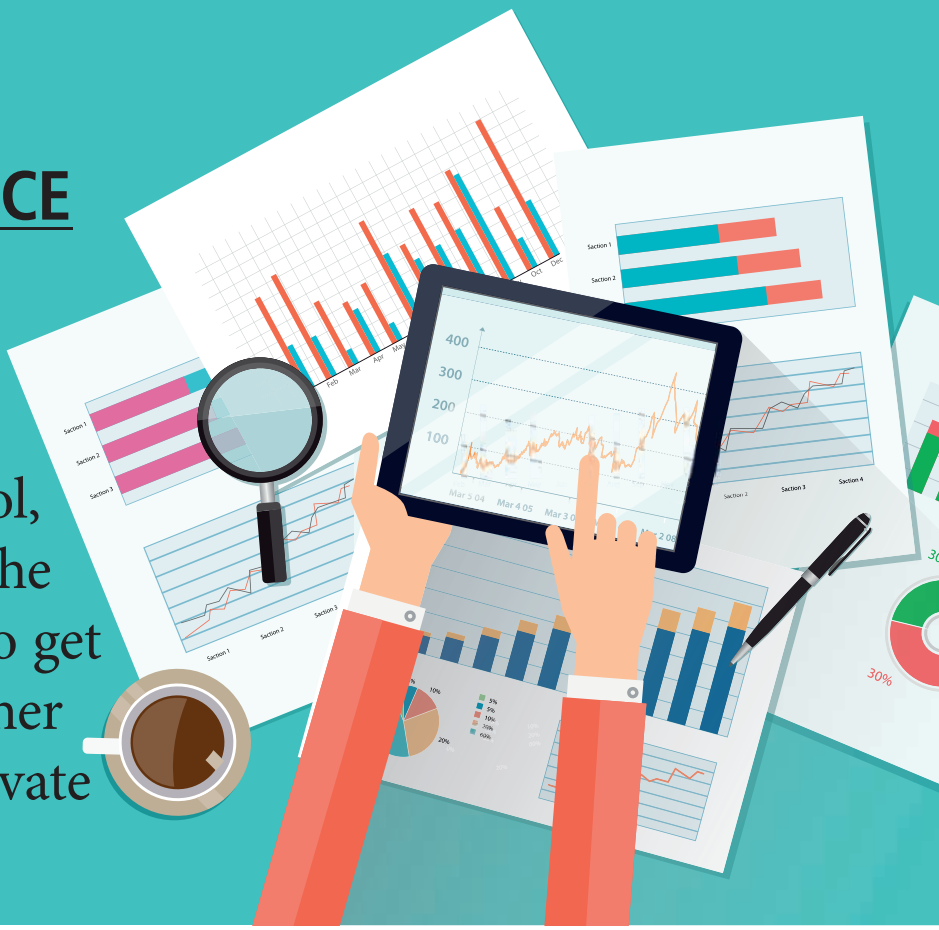
THE SURVIVAL GUIDE

GOING INTO PRACTICE

Sarah Barnard looks beyond the knowledge, skills and competences acquired at dental school, and considers some of the business skills needed to get ahead in practice, whether it is within an NHS, private or mixed practice



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In my view, the early years of a dentist's career offer so many great opportunities – not only to build on the clinical knowledge you learned at university, but also to develop those invaluable business skills needed either to work in or run a successful NHS, private or mixed practice.

You may wonder why you need to think about business skills at this stage in your career. The truth is that developing such acumen now provides useful insight into which area of dentistry might best suit you at the earliest possible opportunity, thereby allowing you to plan effectively for the future.

Sarah Barnard

Sarah Barnard is Practice Plan's Regional Support Manager for the South East. With over 25 years of experience in the dental industry and having worked in practice, Sarah has the all-round knowledge and understanding of how to run an effective private dental business. She's been with Practice Plan for 11 years and has helped many practices move from NHS to private practice, working with business owners as well as practice teams to ensure a smooth and effective transition.

For example, will working within the NHS framework allow you to achieve want you want both professionally and in terms of the type of care you want to deliver to your patients? Or might you see yourself offering some level of private treatment, using newly developed business strategies to introduce a greater variety of care options?

'What you want is to be working towards something that's positive and achievable, rather than having vague goals and targets

With all of this in mind, setting goals is one of most valuable business skills to begin developing now, to help you see whether NHS, mixed or private practice is most likely to fulfil your professional aspirations.

Setting goals

In terms of setting goals, you need to create a plan that is realistic and measurable. So, if you are interested in implantology, you might want to start with: 'By the end of this year, I will have attended a course that will enable me to acquire the knowledge and skills I need to perform simple treatment under the supervision of a mentor and complete a case'.

What you want is to be working towards something that's positive and achievable, rather than having vague goals and targets. This is important whether you're working in, or looking to work in, NHS, private or mixed practice.

Time management

Poor time management is an issue that I have seen affect so many dental practices. There's no denying that it is a challenge to do everything that is required of the dental team within the hours allotted. So, if you can acquire time-management skills you are likely to reap the benefits for years to come.

A good starting point is to prioritise what you need to do. Tasks can be grouped into four categories:

- Urgent and important
- Not urgent but important
- Urgent but not important
- Neither urgent nor important.

Thinking once again about goal-setting within a clinical setting, we can see how this might work in reality. A child patient with toothache and who is crying has needs that are clearly urgent and important; you don't need me to tell you that! But where on this scale, for example, might goal-setting sit? In my opinion, goal-setting is very important but admittedly not urgent. It needs to be done to improve productivity and crystallise your vision for the future but it doesn't have to be done right now. Thinking about each of your tasks in this manner can provide significant insight into how to manage your day and thereby help to maximise your time.

'It is a good idea to be able to read a balance sheet, and profit-and-loss sheets, as well as to perform some basic book-keeping, to help you understand the business reality of the clinical choices you make.'

Also worthy of note is the time needed to meet regulatory requirements. All practices have to achieve Care Quality Commission (CQC) standards and then there's the Dental Quality and Outcomes Framework (DQOF), which is currently part of the prototype NHS contracts. It would seem, therefore, that it is likely that NHS dentists will need to meet a greater number of regulations than will private dentists in the future, in which case time management will become even more important for NHS dentists and those working in a mixed practice.

Delegation

I've experienced for myself how difficult it can be to delegate, especially when you're on the first rung of the ladder. In addition, for those of us who like to stay in control, letting go is a real challenge. However, the truth is that you are part of a team and you have colleagues who, in all probability, would be very happy to take on some of what you are doing and are ideally placed to do so. Consider, for example, a dental hygienist teaching a child how to brush their teeth effectively or a dental nurse ordering the infection-control products you need.

Within private dentistry there are slightly different opportunities for delegation, such as a suitably trained, competent and indemnified dental hygienist performing tooth whitening to your prescription.

You simply cannot do everything yourself and you are surrounded by talented people. Put in those terms, how can you resist making the most of your resources?

Financial understanding

Everyone in the practice, from the receptionist to the principal, has a role to play in the financial success of the business. In the early years of your career you're extremely unlikely to be sat down in front of the accounts but clearly what you do is going to affect the bottom line. From which restorative material you choose to use to the amount of time the handpiece is being used – it all eats money. As such, it is a good idea to be able to read a balance sheet, and profit-and-loss sheets, as well as to do some basic book-keeping, to help you understand the business reality of the clinical choices you make.

This knowledge can stand you in good stead for the future as well as now. For example, if the practice you work in is currently focused on NHS dentistry but you or your principal think there may be scope for expansion into private dentistry, this is going to need some careful planning in the form of number crunching. You will need to consider how many of your patients pay for subsidised NHS treatment and how many receive it free. Factor in any investment that might be needed on your part, ranging from necessary training, equipment and extra staff to enhancing the image of the practice, and what it would take to recoup that money. Combining the objective data with subjective perception is likely to give you a good idea of what will and won't work going forwards.

Marketing know-how

You may well wonder why you need to consider learning about marketing a dental practice. It's true that a purely NHS practice may not need to be marketed but early on in your career, before you have made any decisions about where your future lies, marketing is a worthwhile business skill to develop.

If your practice offers any level of private treatment, encouraging patient attendance through marketing can make a big difference to the bottom line. It can be as simple as having posters and brochures readily available in the waiting-room, as well as an attention-grabbing click-through on the practice's home page on the Internet. Marketing obviously also encompasses external promotion.

Acquiring marketing aptitude now means that you can decide if this is a business skill that you want to make use of in your future career, offering added guidance to whether NHS, mixed or private practice is for you.

Opportunities abound

Although it is not yet time for you to make that big decision between NHS, mixed and private dentistry, experience has taught me that business skills are nonetheless fundamental to the success of a practice. Therefore, the earlier you can begin to hone your business acumen the better it will be for you, your team and your patients.

Each area of dentistry allows you to exercise different business management skills and should you choose to manage your own practice in the future, you will undoubtedly develop these further.

As dentistry advances, patients' knowledge and expectations grow, so developing your business acumen to complement your clinical skills will become more significant and valuable than ever before.

Sarah Barnard

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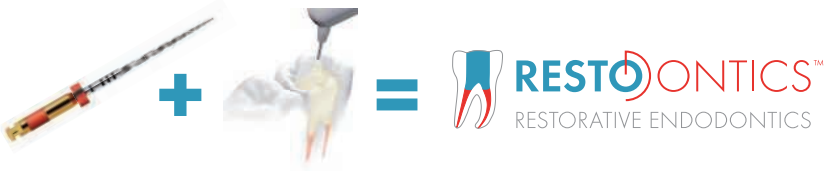

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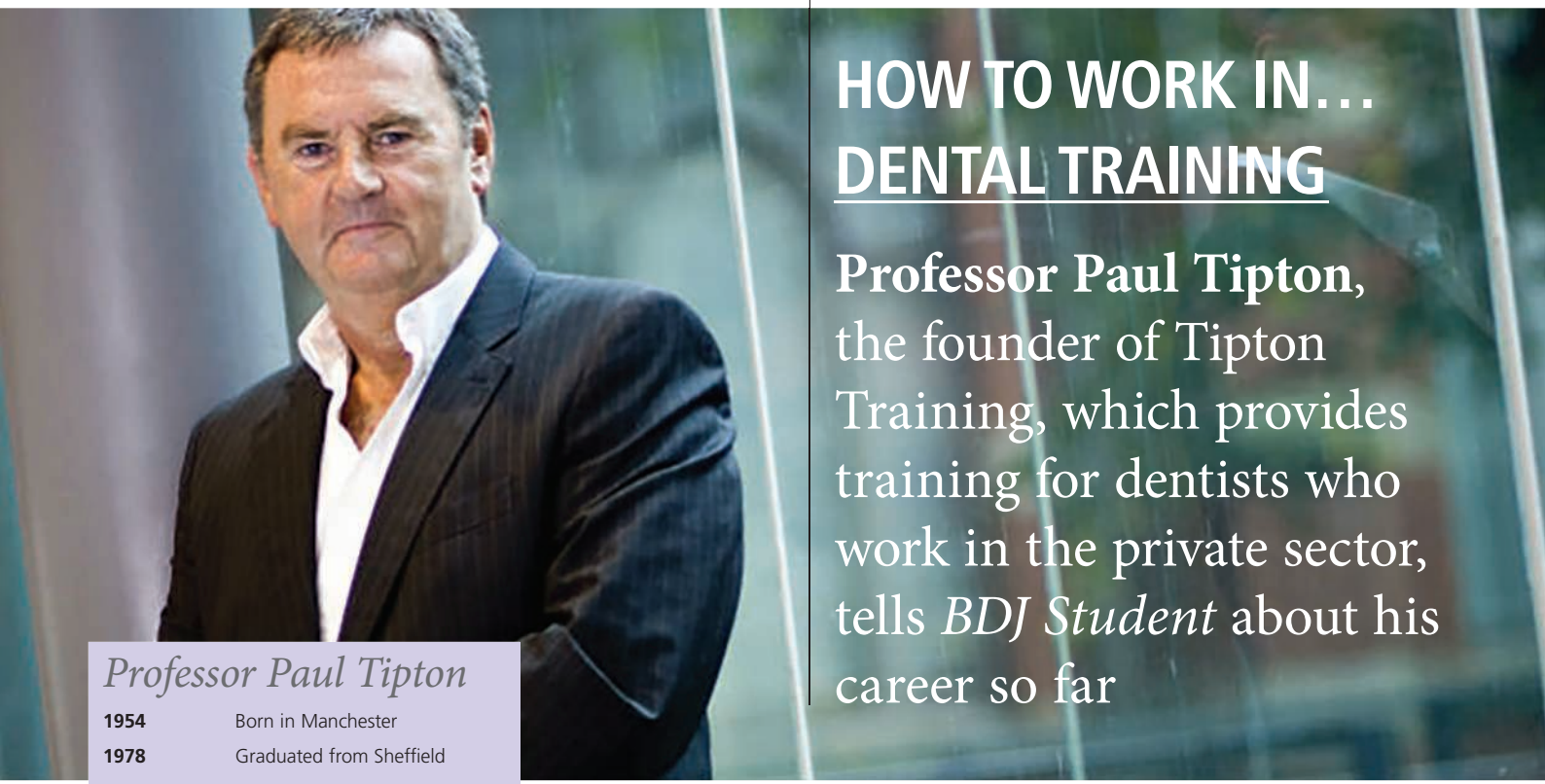

HOW TO WORK IN… DENTAL TRAINING

Professor Paul Tipton, the founder of Tipton Training, which provides training for dentists who work in the private sector, tells *BDJ Student* about his career so far

Professor Paul Tipton

1954	Born in Manchester
1978	Graduated from Sheffield
1978-1981	Worked at several NHS practices around the Doncaster area including Bawtry, Rossington, Haworth, Bentley, Maltby and Doncaster
1981-1987	Worked at mixed practice (1981-1983 for Elliott Berman in Manchester, before buying the practice in 1983 and selling it in 1987)
1989	Graduated from Eastman Dental Institute with MSc in Conservative Dentistry
1989-2007	St Ann's Dental Clinic, private specialist referral practice
1990	Started Tipton Training courses in the UK
1992	Awarded Honorary Diploma in General Dental Practice from the Royal College of Surgeons of England
1999	Awarded Specialist in Prosthodontics by the GDC
2009	Founded teaching academy in Peter House, Manchester
2010	***President of the British Academy of Restorative Dentistry***
2012	Moved to current premises at Denhill House
2014	Launched training courses in Australia and Dubai.
2014	***Visiting Professor of Restorative and Cosmetic Dentistry***, City of London Dental School

BDJ Student: *Where do you work?*
Professor Paul Tipton: I teach at our TTL academies in Manchester, London, Dublin and Edinburgh. I also do my clinical work in Manchester and London.

BS: *Can you explain your current job?*
PT: At the moment, I'm spending half of my time seeing private patients on referral. I spend the other half of my week teaching postgraduate courses in Restorative Dentistry, Cosmetic Dentistry and Implantology.

BS: *Can you tell us about your career pathway?*
PT: My first career was professional cricket with Lancashire Cricket Club. Cricket has been my passion throughout my life. My dental career started by working within the NHS for three years and then I moved into private practice in the centre of Manchester for six years before going to the Eastman to do my MSc. I took my MSc at the Eastman Dental Hospital in London from 1987-1989, where I obtained a Masters degree in Conservative Dentistry. During this time, I developed a purely private specialist referral practice and built that up into six surgeries and multiple specialists. In 1992 I was awarded an Honorary Diploma in General Dental Practice from the Royal College of Surgeons of England. In 1999, I was awarded Specialist in Prosthodontics status by the General Dental Council (GDC). We moved premises several years ago into our own teaching academy, which now has 24 phantom heads, a lecture theatre and seminar rooms for between 20 and 120 people, 12 clinical chairs and three private dental suites. Then in 2014 I was made visiting Professor of Restorative and Cosmetic Dentistry at the City of London Dental School. I lecture all around the world, as well as doing clinical work two days a week.

BS: *What are the best aspects of the job?*
PT: I really enjoy being able to do difficult clinical work really well, using the best materials and taking as much time as is needed to get a patient's treatment done to the highest standard. I also love teaching other aspiring dentists how to do Restorative, Cosmetic, Occlusion and Implant dentistry correctly. I know how dentists can benefit from going into private practice with these skills - and I want others to benefit like I have. I also really enjoy being able to travel around the world to teach my courses.

BS: *And the worst?*
PT: I sometimes do feel occasional tiredness from all the travelling, however the positives from being able to travel to so many amazing places outweigh the negatives. My health regime also keeps me in good stead.

BS: *What advice would you give someone who is interested in your area of work?*
PT: They just need to work hard and go for it and keep up to date with developments in the industry. The best dentists are the ones who continuously update their knowledge by attending courses. Another great way to help improve your training is to get a mentor - just like I did with Mike Wise. They can help you understand the business, and help you learn from their experiences. Research as much as you can but always make sure you take out a little time for yourself to relax, so you don't become over stressed.

BS: *What can dental students do to put themselves in a better position for a career in training?*
PT: Make sure you stick to it and work hard, set yourself a goal and make sure you do everything in your power to achieve it. I'd also recommend going on a Tipton Training course, so I can mentor you in the same way I was mentored by Mike Wise.

BS: *What are your career aspirations for the future?*
PT: I would really like to take my teaching to the Middle East and Asia and continuing to treat patients. I want to expand on the services of BARD Medical and its teaching. I also want to highlight the importance of quality dentistry and make it more accessible for dentists. Take occlusion for example: it gets taught really badly at most universities, if at all. As a result, dentistry in the UK is laughed at. We really are offering a second-class service to patients if we continue to ignore this. However, what I really want is to change the way government thinks about the NHS dentistry and to help more patients and dentists world wide.

BS: *Any regrets?*
PT: I feel like I may have made a few mistakes on my way to my dentistry career. However, I do not dwell on them. Life is full of lessons and sometimes they have to be learned the hard way. I always pick myself up and start again. Never give up, as I believe there is always a silver lining.

BS: *Do you have somebody you look up to in the profession?*
PT: I believe that everybody should have someone to look up to. This helps with motivation. The people I look up to are Mike Wise and Derrek Setchell.

LIFE AS A DCT-1 – Toy phones, medical folk and final thoughts

In his third column about life as a Maxillofacial and Oral Surgery Trainee, **Nasar Mahmood**, a DCT-1 at Mid Yorkshire Hospital looks back at his training year.

It has been 11 months now in the Oral and Maxillofacial Department and things have started to become routine. I arrive at 7.30am, check who is admitted, complete a ward round with the seniors followed by clinics, local procedure lists or theatre, ending the day by driving home singing an Adele song out of tune on the M62 heading west (apologies fellow drivers).

Writing this final column of the series has been the hardest so far because all future trainees will, within a few months, get the gist of the job and we really don't need the third column to talk about that. So sitting here (at 3am) opposite a General Surgery Trainee who can't stop giggling after a spelling mistake he has made in his notes, I have realised that medical/dental folk are an odd bunch. We weren't always like this - I promise you - but sometimes smiling at the small stuff is what it takes to make the day go by.

After my colleague had got over his spelling mistake and I had stopped humming another Adele song, we started talking about the patients we had seen over the year. The conversation slowly turned to reflections and we began discussing cases that had been tricky and how over time our practice had changed. I don't think you could put any two medical or dental trainees on the same table and not expect them to talk about cases. It's one of the best ways to learn, or more importantly, avoid mistakes.

So in this final column I decided to list seven things I have learnt in the past 11 months, I hope future trainees find them useful.

- 1. Always work in the patient's best interest. That's a given and always rule number one.
- 2. Getting a full patient history is very, very important because sometimes patients can leave out information that they think isn't important. Recently I saw a patient in A&E with a suspected dental abscess who was in "some pain". I asked him if he had taken anything for the pain and he pulled out empty packets from his bag. He had taken 40 paracetomol and 35 ibuprofen in 48 hours. He was subsequently admitted under medics.
- 3. Keep a journal. It can be brief or a few lines a day but it'll help you keep track of the progress you make weekly or monthly. Also, ensure you fill out your online e-log book.
- 4. Never say the "Q" word ("quiet") when you're on call - you might get rugby tackled by an A&E consultant. You've been warned.
- 5. Always remember ABCDE! (Airway, Breathing, Circulation Disability, Exposure/Examination). Medical emergencies can occur quickly in a hospital and can come as a shock. The quickest way to regain control is remembering ABCDE (refer to British resuscitation guidelines) and get help ASAP.
- 6. If your kid patient hands you a toy phone you answer it. No ifs or buts. For bonus points, tell the child the (imaginary) person on the phone told you to check their mouth. It works more often than you think, provided you stay on the phone.
- 7. Understand the "Swiss Cheese" model. It'll help you realise how often small things can have big consequences.

To end this final column I want to say thank you to *BDJ Student* for running this column - it's been fun writing them! To all the staff at Pinderfields Hospital- thank you for your support and for being a great bunch. This is Nasar, signing out.

Nasar Mahmood ■

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GIVING BACK

With the news that Peninsula Dental School has received a prestigious prize for their community work, **Annie Pallett**, a fourth-year student at Peninsula, finds out how the scheme works in practice.

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The Peninsula Dental School was established in 2006 with the aim of increasing dental-student numbers and simultaneously improving access to dental care in Devon and Cornwall. The school has undergone major transitions since its humble beginnings, most notably the change from a four-year postgraduate course to a five-year undergraduate programme, and leaving the affiliation with Exeter University to become the Plymouth University Peninsula Dental School. At the centre of the success of Peninsula is the Peninsula Dental Social Enterprise (PDSE) – a Community Interest Company (CIC) that has remained a constant throughout the changing face of our institution.

CICs are limited companies set up to conduct business, or any other activity, for community benefit and are not for private advantage. The PDSE is responsible for the clinical aspect of student training, a separate entity entirely from academic activities. PDSE helps to recruit patients to the dental school through its collaborations with local communities, educates students through inter-professional engagement projects, and runs renowned community-outreach projects for less advantaged communities in the South West.

"The Social Enterprise is essentially three strands woven together", explains Wendy Smith, Strategic Lead for Community Engagement. "We bring together patient recruitment, student education and community outreach." This enterprising

system seamlessly integrates student education with community engagement, and puts a strong focus on continuity of care. "I am really passionate that we don't just use community groups for education needs – it is a partnership, a collaboration. So even if there is not a student project going on, the community engagement team will still develop and maintain contacts." This ethos ensures vulnerable communities are not exploited for the purpose of education, but rather, benefit from it.

'From *Big Issue* vendors and Shekinah Mission (an organisation for recovering addicts and ex-offenders) to the Alzheimer's society to local community schools, PDSE offers support to people from all areas of society.'

The communities that 'collaborate' with PDSE include some of the most vulnerable adults and children in Devon and Cornwall. From *Big Issue* vendors and Shekinah Mission (an organisation for recovering addicts and ex-offenders) to the Alzheimer's society to local community schools, PDSE offers support to people from all areas of society. "We aim to target the more disadvantaged communities," says Wendy. "We work with vulnerable adults: the homeless, those with addiction problems, learning difficulties. We also support the family- nurse partnership, which supports young teenage mums and their families." Of course, one of the key priorities of PDSE is to raise awareness of oral health and to recruit patients to the school. But PDSE has helped in other ways too. For example, they sponsor Big Issue vendors and supplied them with new tabards with the slogan, "Oral health is a big issue, look after yours". This has been a hugely positive change for the vendors, whose previous tabards were sponsored by a wine company – a message the vendors were not proud of because they believed this undermined their personal achievements.

The social enterprise has received much accolade and praise, most recently winning the *Guardian University Award for Social Engagement and Community Impact*. This represents a huge achievement for Peninsula, helping to establish a good reputation for the school and affirming the positive impact the dental school has had in the local area. The positive feedback from people who have experienced support from PDSE and the dental school consolidates the brilliant work of the enterprise.

Peter, a substance misuser, was referred to the school for dental treatment by PDSE. He had been living drug free for ten years, but was still suffering from a neglected dentition and from the repercussions this had on his confidence. Peter attended many appointments at the school, receiving restorative treatments, hygiene and eventually a set of partial dentures. "The treatments were all extremely good," he said. "It [having new teeth] has made me feel more normal. I never used to like dentists, but I was delighted with the way I was looked after throughout my treatment." For Peter, the intervention from PDSE and his subsequent treatment at the school has given him confidence and the ability to smile without embarrassment.

Peter's story is not unique, and demonstrates the importance of oral health and the drastic lifestyle changes that can be accomplished with renewed self-confidence. It also shows the crucial role of the PDSE team in establishing contact with such individuals, and providing them with the support they need to help turn their lives around.

But what about the benefits to the dental students? Perhaps it is obvious. Bringing patients with high levels of treatment need into the dental school allows students to develop complex-treatment-planning skills and gain experience of clinical procedures. While this is very much the case, the role of PDSE in student education runs much deeper then this. It helps students to learn and maintain an attitude of 'decency' towards people from all walks of life – an ethos key to the work of PDSE. Students are exposed to communities they may have little experience with, allowing them to enhance their communication skills and develop an holistic and patient-centred approach to care. Every year, students undertake an Inter-Professional Engagement Project (IPE), in which groups of students engage with a particular community and develop targeted healthcare interventions. These projects are incredibly rewarding for both the students and communities they engage with, and importantly, encourage students to treat the patient as a 'whole'.

As a dental student it is all too easy to see the patient come through the door with a mouth full of gold crowns, or a molar endo; our eyes lighting up with the notion of ticking off some elusive targets. But, as we usher the patients to the chair, it is important to remember that we are not just there in the entity of a 'dental student', eager to practice what we have read in our textbooks, but to realise that we are training to become primary-healthcare providers. That a mouth full of decay does not only represent an 'exit case', or 'targets', but also is the manifestation of a social history; a medical history; the history of a human being. The community-engagement projects we take part in as students play a huge role in helping us to understand the wider picture of a patient's life and how we can serve to enhance it.

The Peninsula Dental Social Enterprise is an innovative and award winning organisation. Its strong ethos of 'decency' is community centred and seamlessly weaves together student education and community support. Wendy and her team have made it clear that the benefit of oral hygiene awareness does not end at a healthy mouth: "It gives people confidence when they go to job interviews, they feel happier abut engaging in situations…they just stand prouder." And for the future dentists of the world: "It can help to change their perceptions, challenge their views of what is normal, and realise that there are people from all walks of life." For many of the communities collaborating with PDSE, they have received much more then a free toothbrush: they have been given hope. **Annie Pallett** ■

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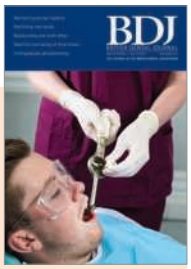
BDJ UPDATE

Stephen Hancocks OBE, Editor-in-Chief of the *BDJ*, chooses his article highlights from recent issues of this highly respected journal.



Published twice a month, the *BDJ* is the leading dental journal in the UK and is, in addition, widely read internationally. It is available in hard copy with 20,000 readers an issue (included in BDA Student Membership for 3rd, 4th and 5th year students) and online at **www.bdj.co.uk** (available to all BDA Student members) where it receives in excess of 100,000 unique visitors a month. It includes news, opinion, research, articles on dental practice and education.

BDJ launches new online journal – *BDJ Open*

Publishing has undergone several significant transitions in recent years to the extent that the landscape has changed to be all but unrecognisable. In the 1980s we saw a move towards standardisation of paper sizes so that A4 became the norm: in the case of the *BDJ* changing it from a smaller format to one that felt a lot more modern and of its time. Colour printing became much cheaper thanks to major advances in technology and machinery meaning that illustrations, especially for us clinical images, became much more real, plentiful and of far more value.

The next giant leap forward came with the arrival of desktop publishing and computer software such as *Pagemaker*. These programs provided not only more efficient ways of designing and laying out pages, but also radically altered the entire process. Page layout could be originated and changed quickly and in-office, making the whole process much more personal and responsive.

Mapped onto this revolution came the Internet and online publications. Doing away this time not with typesetters but with paper, it is a previously unthinkable revolution, which has already seen major changes and which will continue to define our relationship with reading methods and materials for years to come.

The *BDJ* has been keen to keep abreast of such changes and in terms of electronic delivery moved to publishing research papers in full online-only in 2006. Combined with advanced publication this meant not only more convenient access, but also substantially reduced the time between acceptance of a paper and its publication. Previously such waits had been up to one year but are now in the region of two to three months, which is far more acceptable for all concerned.

One of the consequences of online publication has been the advent of universal access to information through the Internet. No longer has this been confined to the delivery of paper copies and what has dawned has been the realisation that research can be shared more widely than ever before. In turn, this opens the possibility of making speedier advances in science and medicine by connecting researchers, their work and their findings for the benefit of mankind. However, there are also drawbacks. One fundamental problem is veracity. How can we maintain quality? The peer-review function of journals safeguards this as far as is possible and the answer has been to extend this to the development of open-access journals. Here the premise is that the cost of the publishing process is borne by the author and not by the reader. But this is not 'vanity' publishing, at least certainly not as far as reputable journals are concerned, because the author's work is only accepted and published after the same established process of peer review. It is not a question that merely being prepared to pay gets you published.

BDJ Open

This is why we have launched a new online-only open-access journal entitled *BDJ Open*. The world of dental research is very wide and using only a conventional format means the *BDJ* is constrained in the amount of content and number of papers it can publish. *BDJ Open* will have no such constraints and is open, as the name suggests, to research papers across the dental field, full details being available at www.nature.com/bdjopen To put this in context, we currently receive more than 900 submissions a year to the *BDJ* yet we have the capacity to publish only about 150. Our new ability to offer a possible route to publication for many of these papers means that we no longer have to divert them to other journals: we can instead keep them in the *BDJ's* portfolio of knowledge.

The launch of *BDJ Open* is an exciting new development for the BDA, our publishing partners Nature Publishing Group and, we earnestly believe, for the dental world and outside world in general. With open access fast becoming recognised and validated we believe that this is of great benefit, is best practice in publishing and is a vital next step in the rapid development of a continuing and fascinating journey.

Orthodontic themed issue

We have published another in the *BDJ*'s series of themed issues, this time the subject matter is orthodontics and has resulted in the largest single issue of the *BDJ* ever (BDJ 2015; 214: 3). One of the papers looked at current orthodontic education and how it might change in the future.[1]

The authors believe that the way forward is to move from considering a young person as a 'paediatric' or 'orthodontic' patient to the more holistic approach of considering them as someone with a dental problem relevant to their development. This can be achieved by developing courses with no barriers between specialty staff. For example, there could be a core course in 'child dental health and development' with some components being delivered by all staff. While students are unlikely to gain experience in adjusting appliances, they will gain competencies that are relevant to their entry to foundation training. If they wish to obtain additional skills this could be achieved post qualification.

Formal training that enables a dentist to become a Dentist with a Special Interest in Orthodontics (DwSI) is available for primary-care practitioners who treat a caseload of patients, but who are not specialists. Importantly, they can be recognised by commissioners as being able to provide an orthodontic service, providing they work within their competencies. Dentists with a special interest may attain these skills in several ways.

A popular method has been the three-year part-time training programme run by the British Orthodontic Society and the Faculty of General Dental Practice, leading to the Diploma in Primary Care Orthodontics. While this has been successful for several intakes, it was disappointing to find that the course did not have an intake recently because of a lack of suitable applicants. This may be a reflection of some uncertainty over whether or not commissioners will contract with DwSIs to deliver primary-care orthodontics, rather than specialists. In addition to this training programme several universities have begun, or are beginning, training programmes in additional orthodontic skills. These are part-time courses that run over 2-3 years leading to a university qualification. As with the Diploma in Primary Care Orthodontics, completion of the training does not satisfy the requirements for entry onto the General Dental Council (GDC) specialist list. It is unfortunate that if a dentist with a special interest wants to undergo further training to become a specialist, the only option is for them to attend a full-time three-year formal training programme. This is an anomaly, as one would expect that prior training should be recognised towards specialisation.

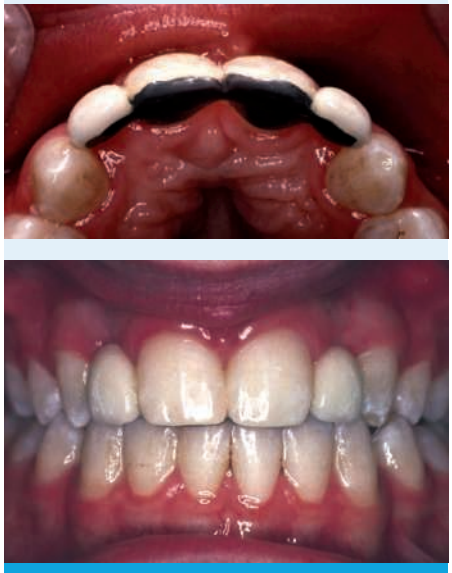
> 'At present there are over 1,000 orthodontic specialists registered with the GDC making it the largest speciality in the UK.'

One of the main purposes of specialist lists is to inform, and hence protect, the public by indicating which registrants have the competencies expected of a specialist. The GDC established Specialists Lists in 1998 and for a dentist to use the title 'specialist' they must be on a GDC Specialist List. To become a specialist in the UK you must complete a training programme approved by the GDC.

At present there are over 1,000 orthodontic specialists registered with the GDC making it the largest specialty in the UK. Orthodontics is one of the two specialisms in dentistry recognised in Europe and to be recognised as a specialist an individual must undergo three years or equivalent full-time training. The GDC is currently reviewing the need for specialist lists, from the point of view of public protection. As a result, there may be further changes in specialist training.

Resin stickability

In another of our papers of direct clinical relevance, data regarding 1,000 consecutive resin-retained bridges provided at Bristol Dental Hospital and School were recorded.[2] Data were available for 805 patients at the time of the study and, following invitation, 621 patients attended for a review appointment. The five-year and ten-year survival rates estimated by the life-table method are 80.8% and 80.4% respectively. Analysis of clinical variables influencing survival revealed that design of the restoration and experience of the operator providing the restoration were significant factors. Resin-retained bridges made with minimal tooth preparation are shown to be superior in terms of longevity than those for which other types of tooth preparation is made. Patient satisfaction with their treatment was high.



Double cantilever resin-retained bridge replacing teeth 12 and 22 with 11 and 12 as the abutment units

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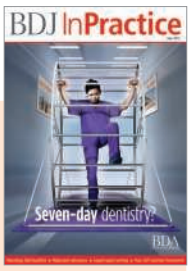
1. O'Brien K, Spencer J. A viewpoint on the current status of UK orthodontic education and the challenges for the future. *Br Dent J* 2015; **218:** 181-183.
2. King PA, Foster LV, Yates RJ, Newcombe RG, Garrett MJ. Survival characteristics of 771 resin-retained bridges provided at a UK dental teaching hospital. *Br Dent J* 2015; **218:** 423-428.

Stephen Hancocks

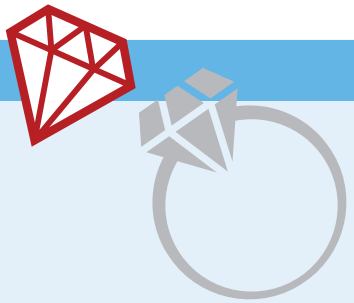
BDJ IN PRACTICE UPDATE

Selected by **Graeme Jackson**, *BDJ In Practice* editor



BDJ In Practice is the BDA's membership magazine and covers a range of business-focused topics. The articles below featured in a recent issue of *BDJ In Practice*. While they are aimed at established dentists, they are also relevant to young dentists preparing for their future careers.

Be that diamond in the rough



One of the first things a potential employer will look for in a CV when trying to find their elusive *diamond in the rough* are presentation, consistency and attention to detail, according to Dental Elite recruitment-manager Luke Arnold.

Typographical errors and simple and easily avoidable grammatical and spelling mistakes can be the first warning signs of someone who perhaps rushes through things and does not spend the time needed to check for quality, he says.

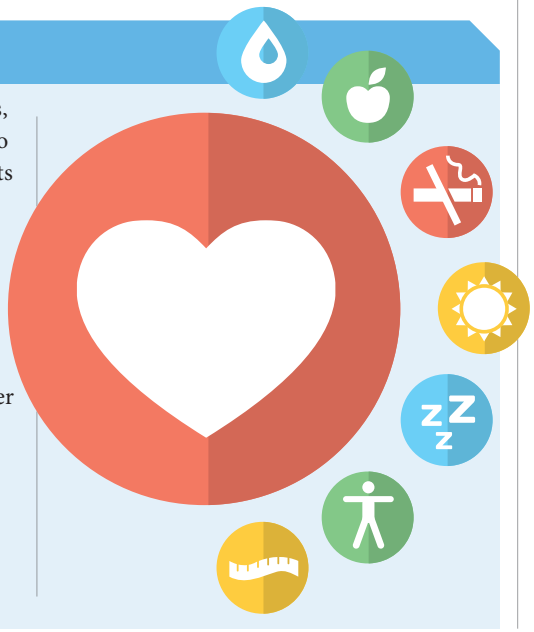
Secondly, succinctness is important. If a candidate cannot sell themselves in fewer than two pages, this should set alarm bells ringing, he advises. An applicant who keeps their CV brief but full of detail is showing a far greater respect for a potential employer's time.

Employers are also urged to keep a keen eye out for any unexplained periods of unemployment or gaps in work history and to make a note to ask about such periods at interview.

When interviewing, questions should be aimed at gleaning a clear idea of a candidate's professional approach, by asking them to describe their style of dentistry and any special interests they might have, for example, Arnold says. And employers should prepare a "killer" question. This should be something that the candidate is not expecting: for example, do you see yourself as an employer or employee?

There is not necessarily a right or wrong answer to a killer question, only that the responses will tell an employer how the candidate thinks on their feet, Arnold says.

We're in good health



Most dentists, especially younger dentists, say they enjoy "good" health, according to a survey by the BDA. It found that dentists are just as likely to rate their health as "good" as the wider adult population.

Four out of five general dental practitioners say they enjoy "good" or "very good" health. This compares with three out of four community dentists, who say they enjoy "good health". Younger dentists (under 35 years old) rate their health most highly.

The BDA research report is available at: https://www.bda.org/dentists/policycampaignsresearch/workforce-finance/gp/dentists-health

Be nice to avoid complaints

Poor communication lies at the heart of many complaints reaching the Parliamentary Health Service Ombudsman (PHSO), according to one of its two dental advisors, Philip Martin.

"If something has gone wrong it is best to be honest and straightforward about it. It will help to resolve the problem if you explain," Martin, a general dental practitioner, who owns two dental practices in Leicester, says.

A key element is managing patient expectations. Here, following the guidance of the General Dental Council, explaining the risks and benefits of treatment, can help.

"But when doing this the dentist has to be aware of their tone of voice and their body language. It is not just the information you give them but how you present it," Philip Martin said. "We need to give clear and concise explanations and avoid talking in dental jargon.

Projecting the right attitude is important, too.

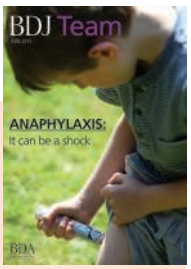
"Patients are far less likely to complain if the dentist comes across as sympathetic and approachable – if they like the dentist," Philip Martin said. "We find that patients are more likely to complain about a dentist they don't like, even if the dentist has done a good job.

"Avoiding complaints is about the way you treat your patients as people. And the key to preventing and resolving complaints is attitude and about the tone of voice and body language. If you get that right, issues can be resolved internally and that goes for the whole dental team, from the receptionist through the dental care professionals to the dentists," Philip Martin concluded.

Graeme Jackson ■

BDJ TEAM UPDATE

By **David Westgarth**, *BDJ Team* editor



BDJ Team is aimed at dental care professionals (DCPs) and is published online only. In 2015, it will be published every month except August and December. To fulfil its goal of informing, educating and entertaining DCPs, *BDJ Team* provides one hour of verifiable continuing professional development (CPD) in each issue.

What makes an award-winning practice?

An interesting question posed and answered by organisational psychologist and founder of Esteem Consulting Aida Mujan, who asked:

- What does the business need?
- How can you provide a better service?
- What improvements can you make to staff and patients?
- Who are your patients and who would you like to be your patients?
- What kind of leader should the business owner be?
- How can the whole practice be involved in the practice?

Linda described how 'collaboration with all the dental team will inspire a more positive reaction from staff, and is the first step in genuine employee engagement where staff feel fully involved and listened to in creating a shared vision of where the practice is going, and how it will get there'. She provides examples of the positive leadership and key characteristics that includes, and looks at why performance appraisals are important facets of the business and some top tips for holding them successfully.

To read on, go to www.nature.com/articles/bdjteam201552

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Creating something from nothing

Dental nurse Zeritu Holmes works at three dental practices across Wiltshire. She also assists at implant training courses for dental nurses in Bradford-upon-Avon, and in April's *BDJ Team* Zeritu told us how she learned on the job and worked hard on getting the right balance between work and play. Perhaps the most revealing aspect of the interview was her career progression and the steps she took to get to where she is today. Valuable life lessons indeed.

To read the full article, go to www.nature.com/articles/bdjteam201551

Rules for shared parental leave

Parents are now legally entitled to share statutory leave following the birth or adoption of a child. It allows employees to break their absence from work into separate blocks and to share some of the leave with their spouse or partner. Potentially, eligible parents, in the first year of a child's birth or adoption, will be able to dip in and out of their job, taking time off to provide care for the child.

To coincide with this, Alan Pitcaithley runs through the essential things you need to know. His article focuses on who can share the leave, the notice of entitlement, rules on shared parental pay and sharing adoption leave. For further details and to read Alan's thoughts, visit www.nature.com/articles/bdjteam201535 or see www.bda.org/advice.

Radiography and responsibility

Specialist radiographer Barbara Lamb took us on a journey to highlight the importance of the dental nurse as part of the IRMER team. Perhaps the biggest area Barbara highlighted was the 'Radiation Protection File', which every dental practice should have. The article covered some of the contents of that folder and their importance to maintaining standards and safety in practice. She broke down the team and their responsibilities and reminded us that:

- The lower the age the higher the risk (of contracting a radiation-induced malignancy)
- We must have justification for every film
- We must all limit the dose to the patient for every exposure and this is achieved by good technique, high quality assurance and correct selection criteria.

You can read about good radiography practice by going to www.nature.com/articles/bdjteam201553.

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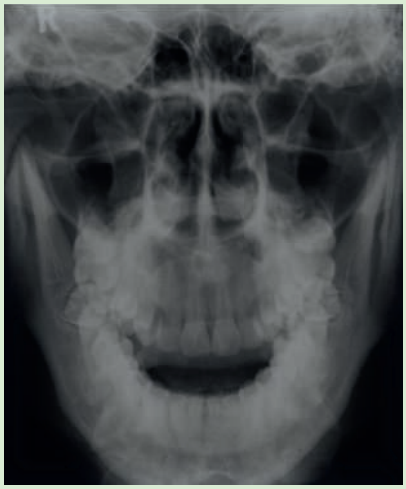
David Westgarth

Question 1



This is a radiograph taken of Mr John Smith (date of birth 14 February 1988) on 27 March 2013.

A. What radiographic view is this? How is it taken?

B. Please describe the radiograph.

Question 3

You are examining a patient in the dental chair and when they protrude their tongue it deviates to the right. Which nerve is failing to function?

A. Accessory nerve

B. Facial nerve

C. Glossopharyngeal nerve

D. Hypoglossal nerve

E. Trigeminal nerve

Question 4

In which oral disease are Wickham's striae the cutaneous component?

A. Bullous pemphigoid

B. Bullous pemphigus

C. Lichen planus

D. Lichenoid reaction

E. Lupus erythematous

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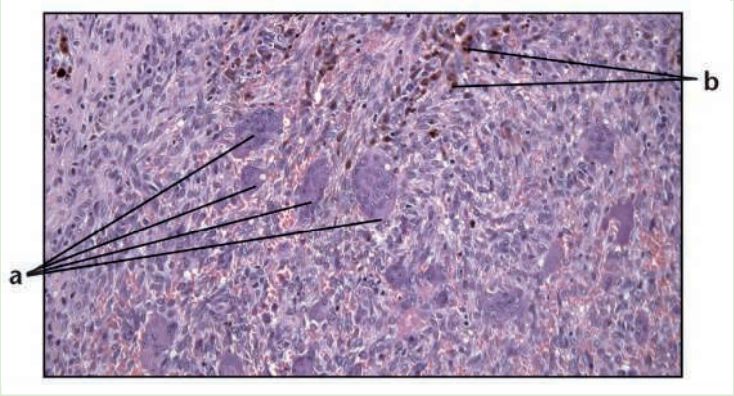
REVISION

Test your knowledge with the following questions from **PasTest**

Answers are on page 39

Question 2



This photomicrograph is from a biopsy of a well-defined unilocular radiolucency in the body of the mandible.

A. Name the cells labelled 'A'.

B. What is the likely cause of the pigmented area labelled 'B'?

C. Please give a differential diagnosis.

D. What other information is required to reach a definitive diagnosis?

UK students spend over £1000 per year on books*

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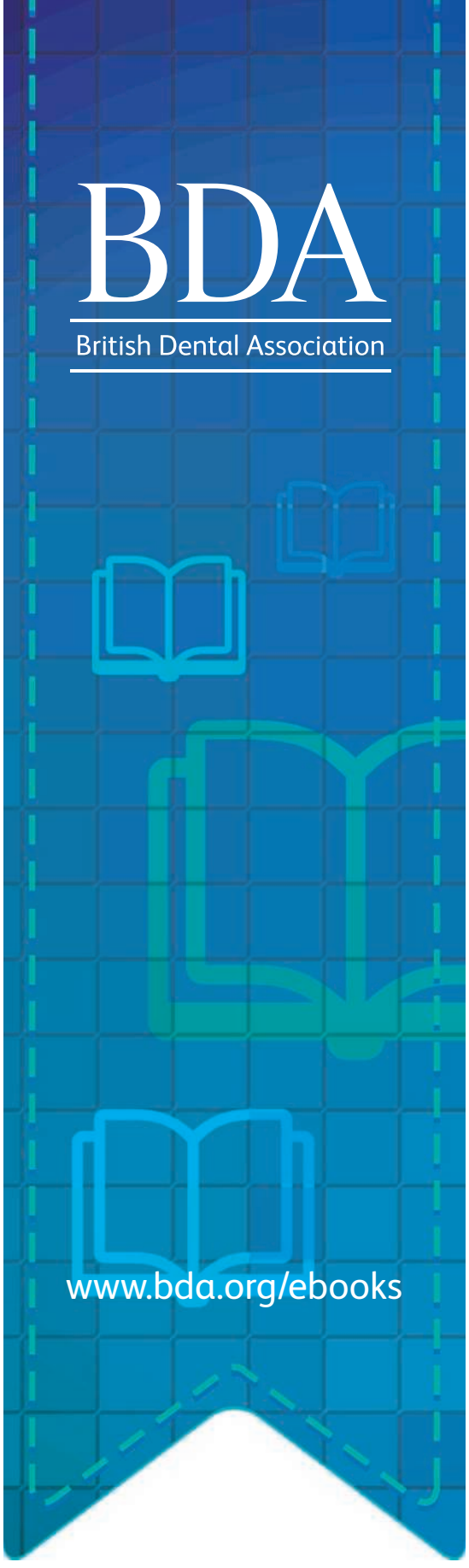

*Source: National Union of Students, 2012/13:
http://www.nus.org.uk/en/advice/money-and-funding/info-and-advice/average-costs-of-living-and-study

HOW TO: DO A BIOPSY

In a guest article for *BDJ Student*, **Lydia Harris** and **Rachel Perry** discuss how to perform a biopsy

The first weeks in a new SHO position are always daunting and overwhelming. When under such stress, it is easy to overcomplicate scenarios with which you are presented. However, when getting to grips with new clinical skills, such as taking a biopsy, it is best to take a step back and review foundation principles and apply them to the situation in hand. Many similarities can be found between biopsies and the steps carried out during minor oral surgery. From this it is possible to generate the logical and step-by-step approach outlined below.

The definition of a biopsy is: The removal of cells or tissues for examination by a pathologist[1]. In practice, this means the removal of tissue for the purpose of diagnostic examination to discover the presence, cause or extent of disease.

1 Information

Discuss the procedure with the patient. A lot of patients will be very nervous so it is important at this stage to allay any concerns they may have. It is also useful to recap on the patient's understanding of the history of the lesion and any previous appointments they have attended. This will help you gauge their awareness of why the procedure is necessary and what the sample will be used for. Explain everything in layman's terms and discuss the risks of the procedure. Ensure their understanding of future steps (review appointments, histopathology etc).

2 Medical History

This is important when undertaking a biopsy. Look out for haematological disorders, anti-coagulants, systemic medications, immunocompromised patients and those prone to medical emergencies. If a patient is taking anti-coagulants or has other medical co-morbidities, it may be worth running it through with a senior colleague. Plan ahead – if they are likely to bleed the use of silver nitrate or diathermy may be indicated. The new anti-coagulants are discussed in Box 1.

3 Consent

It is imperative to obtain valid, informed consent for the procedure. Although some clinicians prefer verbal consent alone, written consent provides a framework on which to base this conversation and medico-legally can be beneficial. Things you might want to consider consenting for include: pain, swelling, bleeding, infection, bruising, stitches, scarring, numbness/altered sensation, recurrence, non-diagnostic specimen, need for further treatment, gingival recession and then warnings very specific to local anatomy: eg, damage to salivary glands/ducts, damage to local nerves/arteries etc.

4 Scrub

Ensure you have your personal protective equipment on (mask, goggles or visor and apron) and scrub as for any surgical procedure. If you haven't scrubbed before, this involves ensuring you are bare from the elbow down, removing rings, jewellery etc. Wash your hands twice using Chlorhexidine, Betadine or an equivalent and follow the 10-step handwashing protocol (a poster of this should be available to see), including scrubbing underneath the nails. Ensure that you do this twice.

5 Local Anaesthetic

Anaesthetic is placed very locally as a general rule for biopsy procedures. Infiltrate closely to the area to be biopsied, ensuring that the local anaesthetic does not disrupt the tissue to be sampled and its margins because this distortion could prevent accurate diagnosis by a pathologist. Several infiltrations may be needed. Regional-block techniques can be used where appropriate.

6 Biopsy (Incisional versus excisional)

Planning of the biopsy beforehand helps to ensure it is successful. Common

'If you are taking a sample of what appears to be oral lichen planus in the buccal mucosa, aim for the most erythematous area, along with some "normal" adjacent mucosa.'

Box 1 - Newer Anti-coagulants

- Rivaroxaban, dabigatran, apixaban are new anti-coagulants which are less widely known. These newer anticoagulants are often used in an out-patient scenario as they can be given at a fixed dose and require less monitoring than warfarin.
- Dabigatran (often used under the trade name Pradaxa) is a potent, orally active, direct inhibitor of free thrombin, fibrin-bound thrombin and thrombin-induced platelet aggregation.
- Apixaban (Eliquis) and rivaroxaban (Xarelto) are direct, highly selective, orally active inhibitors of activated factor X (factor Xa).
- Their uses are mainly for prevention of venous thromboembolisms in adults who have had major joint replacement surgery, for example total hip or knee and for prevention of stroke or systemic embolism in patients with multiple cardiovascular risk factors.

Box 2 - Indications for Biopsy Types

- Incisional Biopsy – anything with an unsure diagnosis: eg, SCC or anything widespread for example lichen planus
- Excisional Biopsy – where diagnosis is very certain from clinical examination: eg, fibroepithelial polyp.

Box 3 - Instruments Required

- Dental mirror
- Toothed tissue forceps
- Needle holding forceps
- Sutures
- Gauze
- Scissors
- Curved clip
- Scalpel (No 15 blade or personal preference)
- Sterile gloves and drapes
- Cheek retractor

problems and errors such as inadequate sample size or over handling and damage to the specimen can be overcome by ensuring time is taken to consider the position of surgical incisions before their placement. Ensure the area is numb with toothed tissue forceps. The indications for an incisional and excisional biopsy are in Box 2.

The key instruments needed for performing the biopsy are listed in Box 3. Various types and brands of instruments can be used and are generally down to personal preference.

Incisional: Take a pie-slice sample of some "normal" and some "abnormal" mucosa, and aim to include some of the most irregular-looking area. For example, if you are taking a sample of what appears to be oral lichen planus in the buccal mucosa, aim for the most erythematous area, along with some "normal" adjacent mucosa.

A punch biopsy can also be used for incisional biopsies. This is a circular blade that

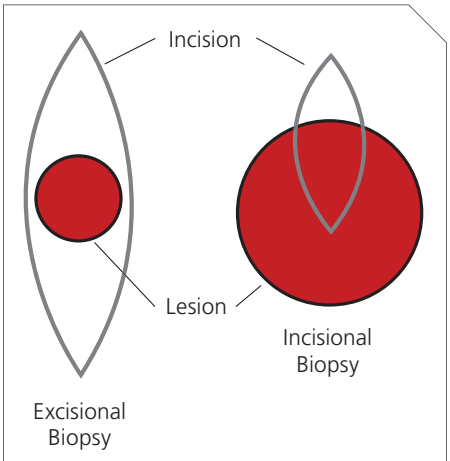

Fig. 1

comes in a range of sizes and just needs to be rotated to cut into the mucosa. The circle of tissue can then be lifted with toothed tissue forceps (taking care not to traumatise the mucosa) and a scalpel used to free the tissue for mounting.

Excisional: If the lesion is a swelling (eg, a fibroepithelial polyp), sometimes it can be easier if a "stay suture" is placed. This is a suture through the lesion itself that's can be pulled so the lesion is placed under tension to enable better access to the base of the lesion. Ensure you excise around the base of the lesion.

7 Suture

Use resorbable materials intra-orally on mucosa (eg, Polysorb 4.0) and generally non-resorbable materials extra-orally (on skin). In most cases simple interrupted sutures will be adequate, although a horizontal mattress suture can be used to close some wounds together nicely. Always try to adopt a no-touch technique and get used to handling the sharp appropriately.

8 Haemostasis

Apply firm pressure using sterile gauze. Adjuncts to haemostasis such as silver nitrate or diathermy may be used if the clinician is familiar with their use and believes they would be beneficial. Once haemostasis has been achieved, inspection of the final incision should be done: it should be a straight line with even levelled margins to aid rapid healing and reduce scarring.

9 Pathology

Usually, the sample needs to go in 10% formal saline. If it needs to go for direct immunofluorescence it needs to be non-fixed and local protocol for this should be followed. Occasionally samples are sent to the lab dry.

Make sure you fill in the clinical biopsy request form adequately as this helps the pathologist ensure the correct diagnosis is reached. Include the following information: patient name, DOB, hospital number, presenting symptoms, clinical exam, differential diagnosis, relevant medical/social/dental history, relevant radiological investigations, previous histology, diagram, your name and contact. Lastly, but essentially, ensure you label if the sample is urgent or routine.

10 Post-Operative Instructions

These instructions are identical in principle to those given following a surgical extraction.

Bleeding – Give the patient some gauze to take home and reassure that slight oozing from the lesion is normal for the first 24 hours. Provide the patient with emergency contact details should the bleeding continues (the number for the department where they were seen is sensible, or out-of-hours services or A&E).

Pain relief - Advise the patient to take regular paracetamol, plus or minus ibuprofen providing there is no medical contra-indication.

Oral Hygiene – Warm salty mouth washes should be begun the day after the biopsy and continued for the next week. A few times a day, generally after eating and before bed is advisable. Advise the patient to brush their teeth as usual but obviously to be careful around the biopsy site.

Stitches – If these are resorbable they should dissolve within two to three weeks. On occasion they may dissolve or come out before this time, particularly with the tongue as this is very muscular.

Diet – A soft diet is advisable during the initial stages of healing and can stop breakdown of the clot as well as being easier for the patient

11 Review with results

It is important to review the patient to deliver the results of the biopsy and to ensure healing is complete. Further intervention or treatment including referral may be necessary depending upon this result. It may also be advisable to send a copy of the results to the patient's GP or any other healthcare professional whom the patient sees routinely.

References

1. National Cancer Institute, National Institute of Health, USA

Lydia Harris and Rachel Perry

Question 1

This is a radiograph taken of Mr John Smith (date of birth 14 February 1988) on 27 March 2013.

A. What radiographic view is this? How is it taken?

B. Please describe the radiograph.

ANSWER

A. This is a postero-anterior view of the mandible (PA mandible). It is taken by positioning the patient so that the line from the outer canthus of the eye to the external auditory meatus is horizontal, and their forehead and tip of the nose touch the film. The tube head is positioned horizontally. The beam is centred on the cervical spine so as to pass between the rami of the mandible.

B. This is a postero-anterior view of the mandible (PA mandible), quality rating 1, taken on 27 March 2013 of Mr John Smith, aged 25, a fully dentate patient. It shows the whole of the mandible and the mid-face. Clearly visible is a displaced fracture of the right mandibular condyle with significant shortening of ramus height. The fractured segment is minimally angulated. Another fracture is visible in the right parasymphyseal region.

Question 3

You are examining a patient in the dental chair and when they protrude their tongue it deviates to the right. Which nerve is failing to function?

A. Accessory nerve

B. Facial nerve

C. Glossopharyngeal nerve

D. Hypoglossal nerve

E. Trigeminal nerve

ANSWER

D. Hypoglossal nerve. Disorders of the 12th cranial nerve (hypoglossal nerve), which is responsible for moving the tongue, cause weakness and/or atrophy (wasting) of the tongue on the affected side. Causes of loss of function of the hypoglossal nerve include: a tumour or bone abnormality at the base of the skull; a stroke; infection of the brainstem; or an injury to the neck. As a result of the weakness and/or atrophy of the tongue, individuals with this disorder have difficulty speaking, chewing and swallowing.

REVISION

Answers for revision questions from **PasTest**

Questions are on page 35

Question 4

In which oral disease are Wickham's striae the cutaneous component?

A. Bullous pemphigoid

B. Bullous pemphigus

C. Lichen planus

D. Lichenoid reaction

E. Lupus erythematous

ANSWER

C. Lichen planus. Classical lichen planus is characterised by the presence of firm, shiny, flat-topped papules that range from pinpoint size to more than 1cm in diameter. They may be close together or widespread, or grouped in lines (linear lichen planus) or rings (annular lichen planus). Although sometimes there are no symptoms, the condition is often very itchy.

Question 2

This photomicrograph is from a biopsy of a well-defined unilocular radiolucency in the body of the mandible.

A. Name the cells labelled 'A'.

B. What is the likely cause of the pigmented area labelled 'B'?

C. Please give a differential diagnosis.

D. What other information is required to reach a definitive diagnosis?

ANSWER

A. The cells labelled 'A' are osteoclast-like giant cells.

B. The pigment in the area labelled 'B' is haemosiderin. Note the prominent vascular stroma and the dense population of erythrocytes in the background.

C. This is a giant-cell lesion and therefore the differential diagnosis will include:

- Central giant-cell granuloma
- Brown tumour of hyperparathyroidism
- Cherubism
- Aneurysmal bone cyst
- Other giant-cell lesions

D. To reach a definitive diagnosis, more information would be needed, including:

- The age, sex and ethnic background of the patient
- The distribution of the lesion
- The radiological appearance
- Results of the biochemical investigations

Comment

This OSCE highlights the necessity of considering the combination of clinical, radiological and histological features before reaching a definitive diagnosis.

IN BRIEF

- Describes the factors that influence stability following orthodontic treatment.
- Explains the rationale and evidence for orthodontic retention and the various types of orthodontic retainers.
- Outlines how general dental practitioners can support their patients wearing orthodontic retainers.

RETENTION IN ORTHODONTICS

C. D. Johnston*[1] and S. J. Littlewood[2]

Retention is necessary following orthodontic treatment to prevent relapse of the final occlusal outcome. Relapse can occur as a result of forces from the periodontal fibres around the teeth which tend to pull the teeth back towards their pre-treatment positions, and also from deflecting occlusal contacts if the final occlusion is less than ideal. Age changes, in the form of ongoing dentofacial growth, as well as changes in the surrounding soft tissues, can also affect the stability of the orthodontic outcome. It is therefore essential that orthodontists, patients and their general dental practitioners understand the importance of wearing retainers after orthodontic treatment. This article will update the reader on the different types of removable and fixed retainers, including their indications, duration of wear, and how they should be managed in order to minimise any unwanted effects on oral health and orthodontic outcomes. The key roles that the general dental practitioner can play in supporting their patients wearing orthodontic retainers are also emphasised.

Introduction

Orthodontic retention is the final stage of orthodontic treatment and aims to maintain the teeth in their corrected positions after the completion of orthodontic tooth movement. Teeth have a tendency to return towards their initial positions due to tension in periodontal fibres, particularly those around the necks of the teeth (inter-dental and dento-gingival fibres). The quality of the final occlusion will also affect the stability of the orthodontic outcome, with unwanted displacing occlusal contacts potentially leading to unfavourable changes in tooth position. Sound orthodontic treatment planning and the achievement of appropriate occlusal and soft tissue treatment goals can help to minimise orthodontic relapse. Nevertheless, some degree of relapse is almost inevitable unless a suitable retention protocol is put in place following removal of active appliances. Unfortunately, patient compliance often decreases as orthodontic treatment progresses[1] and poor compliance with retention appliances can often undermine the improvements achieved during treatment. An experimental study has shown significant deterioration in corrected tooth rotations, lower incisor alignment and overjet in only four weeks when retention appliances were not used following orthodontic movement.[2]

Unwanted tooth movements after treatment can also occur as a result of normal age changes, even in patients who have not had orthodontic treatment. This deterioration in the alignment of their teeth is due to changes in the soft tissue pressures and skeletal structures around the dentition. These soft tissue changes and minor ongoing growth can be regarded as a part of the normal ageing process and are unpredictable. Retainers are therefore indicated not only to resist the tendency of teeth to return to their pre-treatment positions following orthodontic tooth movement, but also to resist unwanted long-term age changes.

In most orthodontic cases, retainers are therefore an essential part of orthodontic treatment. There is no evidence to suggest that the retention regimen for adults should differ from that used for adolescent patients, providing the periodontal supporting tissues are normal. Post-retention outcomes in adults have been shown to be at least as stable as those in adolescents in relation to midline alignment, overjet, overbite, molar relationship and incisor alignment.[3,4] There are a small number of occlusal problems for which retention is not required. For example, after correction of posterior and

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*Correspondence to: Chris Johnston
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- Informing potential orthodontic patients that wearing retainers after orthodontics is an essential part of orthodontic treatment.
- Reinforcing the need for patients to wear their retainers as advised and how to look after them.
- At dental 'check-up' appointments, ensuring that patients are adhering to their retention regime.
- Adjustment, repair or replacement of removable retainers and ensuring that they still fit well. (Responsibility for the replacement or repair may depend on whether the patient remains under care of the orthodontist who completed the treatment).
- For patients wearing bonded retainers, checking that retainers are still intact, bonded and that the patient is maintaining good oral hygiene around them. Fractured or de-bonded retainers should be repaired (with appropriate advice if required).

Fig. 1 Roles of the general dental practitioner in orthodontic retention

anterior crossbites, the incisor overbite and posterior intercuspation may be adequate for maintaining the correction, and as a result no retention is necessary.[5]

The general dental practitioner (GDP) has an important role to play in reinforcing the importance of good retainer wear for patients who have completed orthodontic treatment. By supporting the advice given by the orthodontist, the GDP can help ensure that their patients achieve maximum gain from their treatment. The GDP also has a key role in helping the patient to maintain good dental health while wearing retainers (Fig. 1). If retainers are to be worn on a long-term basis then the patient will benefit from input from both the orthodontist who fitted the retainers, and the patient's GDP.

What the patient needs to know

It is important that as part of the informed consent process, patients are made aware of the limitations of orthodontic treatment and the need for retention. Relapse is unpredictable but likely, and patients should only undergo orthodontics if they are willing and capable of following the prescribed retention regimen following active treatment.

The orthodontist should explain the patient's long-term responsibilities for the retention phase of their treatment, and the patient must be prepared to accept these responsibilities. Written information is often helpful when working through these issues with patients.

Types of retainers

Retainers can be broadly classified as either fixed or removable. As their name suggests, removable retainers can be removed by patients allowing them to clean fully around the teeth and to wear them on a part-time basis if indicated. However, there are some situations when retainers are required 24 hours a day every day to reduce the chances of relapse and in these situations a fixed retainer is usually required (Fig. 2). These situations will be discussed in more detail later in the article.

Removable vacuum formed retainers

Vacuum formed retainers (VFRs) are relatively inexpensive and can be quickly fabricated on the same day as appliance removal (Fig. 3). They are the retainers most commonly used by orthodontists in the UK and Ireland[6] and are also becoming more popular in the USA.[7] VFRs are discreet and are well accepted by patients from an aesthetic and comfort perspective.[8–11] There is also evidence that VFRs are more cost-effective and better at retaining the alignment of the anterior teeth than Hawley-type retainers although the sizes of the differences are small.[8,12] They can be modified to produce minor active tooth movements if required and prosthetic teeth can be incorporated in cases with hypodontia. Full posterior occlusal coverage, including the most distal molars, is advisable in order to reduce the risk of over-eruption of these teeth during retention.[13] It is important to remind patients not to eat or drink with the vacuum-formed retainers in place. This is a particular concern if the patient drinks cariogenic drinks with the vacuum-formed retainer in place (Fig. 4).

'Retainers can be broadly classified as either fixed or removable. As their name suggests, removable retainers can be removed by patients allowing them to clean fully around the teeth and to wear them on a part-time basis if indicated.'

Removable retainers with a wire labial bow (Hawley and Begg type retainers)

These types of retainers are robust and, unlike VFRs, Begg and Hawley retainers can be worn when eating without becoming damaged. Hawley retainers (Fig. 5) have the advantage of facilitating posterior occlusal settling during retention.[14] However this is of less importance if good posterior intercuspation has been established by the time of appliance removal. The labial bow

- After orthodontic space closure in spaced dentitions.
- After substantial changes in the anteroposterior position of the lower labial segment.
- After alignment of severely rotated teeth.
- After alignment of teeth with compromised periodontal support.
- After correction of an increased overjet, but when the lips remain incompetent.
- Where orthodontics has resulted in improved aesthetics, but with a compromised occlusion.

Fig. 2 Indications for fixed (bonded) retainers

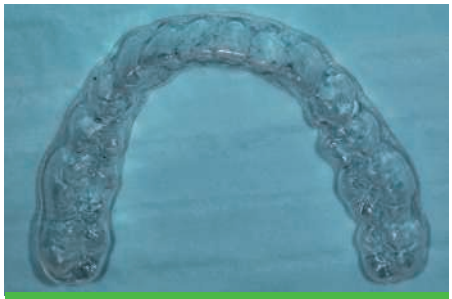

Fig. 3 A vacuum-formed retainer. Coverage of the most distal molars is essential to prevent over-eruption

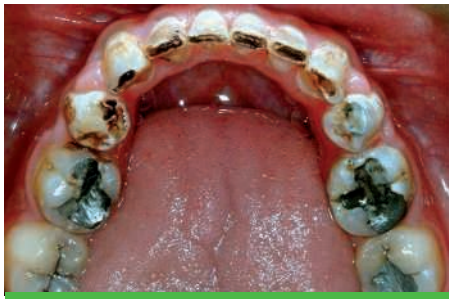

Fig. 4 Extensive damage to the dentition in a patient with a high cariogenic drink intake when wearing a vacuum-form

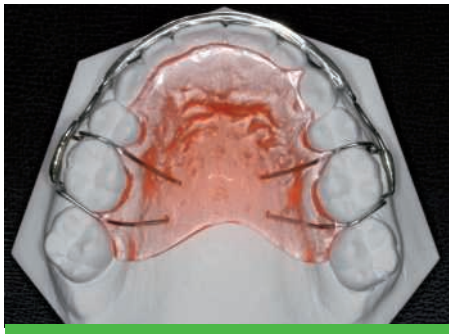

Fig. 5 Upper and lower Hawley retainers

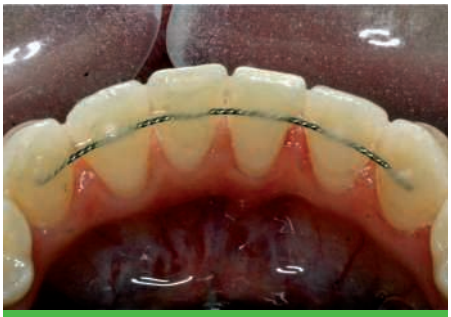

Fig. 6 Multi-strand wire lower bonded retainer

Fig. 7 Using SuperFloss to clean inter-dentally with a bonded retainer

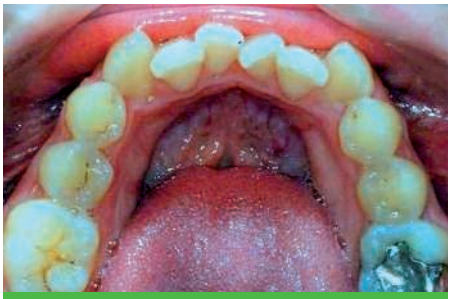

Fig. 8 Lower incisor relapse

can be modified to accomplish simple active tooth movements if required and an anterior bite plane can be incorporated to help retain corrected deep overbites.

Fixed bonded retainers (smooth wire, flexible spiral/multi-strand wire)

There are several designs of fixed retainer. A multi-strand wire bonded to all six anterior teeth or a sandblasted round stainless steel wire bonded only to the canines is the most commonly used (Fig. 6). Fixed retainers are discreet and reduce the demands on patient compliance. However, they are associated with a significant long-term failure rate. One study reported that a third of patients experienced retainer failure within 30 months[15] with de-bonding from at least one tooth in 22% of patients, and 17% having total retainer loss. Fracture of the retainer wire was uncommon, with less than 1% of patients having this type of failure. Particular care is required when placing upper bonded retainers to minimise occlusal contacts with the opposing lower teeth as such contacts have been shown to increase failure rates. A composite with high filler content is preferred to improve resistance to wear.

Calculus and plaque deposition is greater than with removable retainers[16] and concerns exist about the impact of fixed bonded retainers on long-term dental health. However, a review reported that studies completed up to 8.5 years after fixed retainers were placed have found no deleterious effect on the adjacent hard and soft tissues.[17] Nevertheless, meticulous attention to detail is required when placing fixed retainers to avoid contact with the gingival tissues by the bonding material. Figure 6 shows an example of a bonded retainer demonstrating that the composite should be placed to cover the wire, but ensuring there is no interference in the inter-dental space to allow cleaning. Any excess composite should be removed with a tungsten carbide bur. It is important to show patients how to look after their bonded retainers and to maintain excellent oral hygiene around them. The use of small inter-dental brushes or superfloss may be a useful adjunct to tooth brushing to help maintain excellent oral hygiene around bonded retainers (Fig. 7).

Since some patients wearing fixed retainers will be required to wear them indefinitely, the GDP has an important role to play in ensuring that the dental tissues adjacent to the fixed retainers remain healthy. When patients attend for their regular dental check-ups with their GDP, their fixed retainers should be carefully inspected, particularly the integrity of the composite attachment to the enamel surface. Repair of most bonded retainer failures can readily be achieved by the GDP using conventional light cured composite and bonding agent. In order to obtain ideal bonding conditions for re-bonding fixed retainers, it is recommended that the bonding site is clean and dry but also free of old composite remnants.[18] It is also important to remove any pellicle on the teeth before etching. This can be achieved using a tungsten carbide bur or intra-oral sandblaster. In cases where the wire has fractured, the retainer has completely de-bonded, or where relapse has occurred, advice should be sought from the patient's orthodontist as a decision will need to be made on whether to replace or remove the retainer.

Dual retention

Some orthodontists will prescribe 'dual retention', when a patient wears bonded retainers with the addition of removable retainers overnight. If the bonded retainer fails, the teeth can be held in position by the removable retainer until the bonded retainer can either be replaced or repaired.

Duration of orthodontic retention

In current orthodontic practice, considerable variation exists in the duration of the retention period used. This reflects a number of factors including the preference of the orthodontist, the variability of occlusal, skeletal and soft tissue relationships, as well as the paucity of well-controlled scientific studies.[19] A survey carried out in the UK during the 1990s found that the most commonly used retention period was 12 months.[20] This approach appears reasonable in the light of histological studies which have shown that the supra-crestal periodontal fibres remain stretched and displaced for more than seven months after the cessation of orthodontic tooth movement.[21,22] However, even with retention periods exceeding this duration, changes in tooth position frequently occur in the long term.[23,24] Nevertheless, it is known that variations in the duration and intensity of removable retainer wear are clinically acceptable. Although a Cochrane review carried out in 2006 concluded that there was insufficient research data on which to base clinical practice on retention,[25] further randomised clinical trials have been published since then. Two studies examining the use of vacuum formed retainers[26,27] and one study with Hawley retainers[28] have found that part-time wear for a year is as effective in maintaining the treatment outcome as a combination of full time followed by part-time wear.

In view of the practical and ethical barriers to carrying out randomised studies of all of the possible retention regimens, it is unlikely that an accepted definitive recommended duration for retention will be established. Furthermore, the wide variation in the severity and complexity of patients' malocclusions and their orthodontic treatment also militate against establishing a 'one size fits all' approach to retention.

Current good orthodontic practice is that a patient's individual retention regimen should be based on an assessment of the specific factors which are known to be more likely to relapse. In particular, the decision to recommend prolonged or indefinite retention (usually with fixed retainers) is based on consideration of the factors detailed below.

Lower incisor alignment

Increases in lower incisor irregularity are common following orthodontic treatment (Fig. 8). Similar changes occur in untreated subjects and are now accepted to be normal rather than exceptional occurrences. A number of studies have confirmed that lower incisor irregularity usually increases during the second, third and fourth decades of life in untreated subjects as well as those who have had previous orthodontic treatment followed by retention.[23,24] The greatest changes in untreated occlusions occur before the age of 18 years and it is known that most change will have taken place by the middle of the third decade.[29–31] This period corresponds to the age-range during which most orthodontic treatment is carried out and further complicates the planning of retention.

As the supra-crestal periodontal fibres take the longest amount of time to reorganise, prolonged retention of corrected tooth rotations can be helpful in reducing relapse. Crowded incisor teeth often have rotations before treatment, and retention of these teeth should be planned for towards the end of the active appliance phase of treatment.

Long-term or indefinite retention may reduce the risk of developing lower incisor irregularity following orthodontic treatment. Nevertheless, it is unclear what duration of retention is adequate to prevent lower incisor crowding. However, retention period in excess of eight years with fixed bonded retainers have been shown to result in better maintenance of lower incisor alignment than other studies which reported shorter retention times.[17]

An important factor to consider when planning retention is the patient's expectations of the stability of their lower incisor alignment. If a patient is unwilling to accept the risk of deterioration in lower incisor alignment following orthodontic treatment then long-term retention should be considered.

Changes in the antero-posterior position of the lower incisors during orthodontic treatment

Changes in the antero-posterior position of the lower incisors during orthodontic treatment are known to be unstable with a tendency for the lower incisors to return towards their pre-treatment position after retention is discontinued. This can result in deterioration of the alignment of lower incisors. Many orthodontists therefore work to the principle of avoiding proclination or advancement of the lower incisors during treatment if at all possible, although small changes of 1–2 mm may be stable.[32] It has been recommended that long-term or indefinite retention should be used following any intentional or unintentional antero-posterior change in lower incisor position of more than this small amount. However, a significant clinical concern is the use of fixed retainers in situations where teeth have been moved to unstable positions due to poor treatment planning.

Patients with a history of periodontal disease or root resorption

Orthodontic patients with previously treated severe periodontal disease and those with root resorption or crestal bone loss have an increased risk of deterioration of tooth alignment following treatment.[33] Permanent retention is advisable in these cases. For those with previous minimum to moderate severity periodontal disease, a more routine retention protocol can be used.[34]

Spaced dentitions

Permanent retention is recommended following orthodontic closure of generalised spacing or a midline diastema in an otherwise normal occlusion.[35]

Compromised orthodontic outcomes

As part of the informed consent process, patients may be offered orthodontic treatment aimed at achieving a compromised result. This approach, which may address the patient's key aesthetic complaints without achieving a perfect occlusion, has recently been referred to as 'short-term' orthodontics.[36] Although this may reduce the length of treatment and the financial and treatment demands on the patient, final occlusal outcomes can be less than ideal, the relapse potential greater, and fixed retainers may therefore be indicated.

Adjunctive techniques

These are soft additional soft tissue or hard tissue procedures that can be undertaken to reduce the risk of relapse.

Pericision, sometimes called supra-crestal circumferential fibreotomy, is a soft tissue procedure that aims to cut the periodontal fibres around the neck of the teeth (dento-gingival and inter-dental fibres). These fibres have the tendency to pull the teeth back towards their original position, particularly teeth that were initially rotated.[37] It is a simple procedure undertaken under local anaesthetic and requires no periodontal dressing after the procedure.

Interproximal reduction, sometimes known as re-proximation, is a hard tissue procedure that aims to remove small amounts of enamel mesio-distally. This can help to reduce the likelihood of relapse.[38] It is not clear why it reduces the relapse, but it may be due to flattening of inter-dental contacts, increasing the stability between adjacent teeth.

Conclusions

- Long-term age changes in skeletal and soft tissues surrounding the teeth mean that relapse after orthodontic treatment is unpredictable, but likely.
- As it is difficult to predict which cases will relapse, every case should be treated on the basis that it has the potential to relapse and long-term or life-long retention may be required.
- Patients should only proceed with orthodontic treatment if they are prepared to wear retainers.
- Removable retainers allow the patient to remove them to maintain oral hygiene, but their success depends on long-term compliance.
- In some situations bonded retainers are required as full-time retention is necessary. The patient must maintain excellent oral hygiene around the bonded retainers to reduce the chance of dental disease.
- The GDP has important roles in orthodontic retention. These include informing patients that they will need to wear retainers after orthodontic treatment; motivating patients to continue wearing their retainers during the retention period; monitoring and if necessary replacing or repairing retainers; and liaising with the orthodontist as required.
- There remains a need for further randomised clinical trials to evaluate the use of different types of retainers and retention protocols.

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QUESTION CLINIC

BDJ Student's new column lets you ask the questions. Here, we introduce our new columnist **Dr Adam Patel** and find out how he intends to help you

Dr Adam Patel is a young dentist who regularly contributes to dental publications, lectures, mentors and practises in several clinics. He aims to provide candid and honest advice on a plethora of dental subjects, so if you have any burning questions you want answered by somebody who was in your shoes not so long ago, email them to bdjstudent@bda.org.

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BS: *Why did you choose a career in dentistry?*

AP: While studying for my A-levels at the City of Leicester College in Leicester, I made a concerted effort to seek a career path that would reflect my interests and core values. I wanted a career path that was diverse and all encompassing – one that blended my passion for science with art – a profession where I could express myself, while genuinely making a difference to people's lives. Pursuing a career in dentistry seemed a natural choice.

BS: *What advice do you have for young dentists?*

AP: You are in control of your own destiny. If you can make it through five years at dental school then you certainly possess the array of qualities needed to succeed. Grasp every opportunity, knock down every hurdle that stands between you and success. The only thing that will stop you is yourself. Seek out people that you admire and learn from them. Remember, you may get knocked down once or twice, but it will only make you grow stronger.

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