Sound Bite
ISSUE 08

CALL OF THE WILD

Intrepid dentist Penelope Granger talks about her adventures working in the extremes of Antarctica and on the world's remotest island

ALSO INSIDE

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Welcome to your SoundBite

AS a new year rapidly approaches, I am delighted to take over the role of *SoundBite* editor and continue what have been a varied few years since I qualified. For my first role as an associate I stayed with my VT practice before taking up position as an oral and maxillofacial surgery SHO. After a period of travel, my plan now is to return to general practice while developing my technical and clinical skills with postgraduate study.

New dentists have many challenges to face and important decisions to make as we start our careers, but it's good to know there is a world of possibilities out there. Intrepid dentist Penelope Granger has practised in Antarctica and on the world's remotest island. She shares her adventures on **page 6**. Staying with career choices, we look at the opportunities in dental public health on **page 8**.

Audit might not be a priority for new dentists, but on **page 10** MDDUS dental adviser Claire Renton explains how it can improve care and make our busy lives a little easier.

For some patients, dentures may be the only available option, but they can be a source of dissatisfaction. MDDUS dental adviser Doug Hamilton offers advice on managing patient expectations on **page 12**. As we develop our skills, the last thing any dentist wants to experience is the breakage and retention of dental needles. On **page 4**, MDDUS dental adviser Mike Williams offers some advice.

Dentists are held to high professional standards, but sometimes fall short. On **page 5**, Dick Birkin offers interesting thoughts on dental ethics and the world of professional sport. And in our case study on **page 14**, we highlight the importance of record keeping in a case of retained roots.

• **Sameera Teli**
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MDDUS

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MAJORITY OF YOUNG DENTISTS IN ENGLAND ARE FEMALE

MORE than half of dentists under 35 in England are female, with overall numbers up by more than three per cent, a new report shows.

In 2012/2013 there was a total of 10,541 female dentists, a 3.4 per cent increase on the previous year. Since 2006/2007 (when the new dental contract was launched), the number of women practitioners has jumped by over a third and they now make up 45 per cent of the workforce.

Among practitioners under 35, there are currently 4,810 women (56 per cent) compared to 3,656 (51.8 per cent) in 2006/2007.

In comparison, the number of male dentists has remained stable in recent years and currently sits at 12,660. They continue to make up the vast majority of older clinicians, with more than three-quarters (76.4 per cent) of the over-55s male. This represents a drop of just 0.6 percentage points on last year.

The figures are contained in the latest *NHS Dental Statistics for England 2012/2013* from the Health & Social Care Information Centre.

INDEMNITY BENEFITS

MDDUS is reminding trainee dentists of the benefits of choosing occurrence-based indemnity rather than insurance to help protect themselves and their patients.

The GDC requires all dentists to ensure that patients can "claim any compensation they may be entitled to by making sure you are protected against claims at all times, including past periods of practice." Occurrence-based indemnity, such as that offered by MDDUS, covers dentists no matter how long after an incident a claim is made – and with no hidden extra costs.

MDDUS Head of Dental Division Aubrey Craig said most UK dentists will have indemnity. "MDDUS provide occurrence-based discretionary indemnity which means dentists are eligible for assistance for all events that occur while you are a member, regardless of when a claim is made," he said.

"You are provided with our full support even if you are no longer a member, have moved abroad, ceased clinical work or retired."

In contrast, he said insurance products usually only guarantee protection if you are insured both when the incident occurred and when the claim is made. He added: "The crucial importance of this lies in the fact that medical and dental malpractice claims can be made months or even years after the events that give rise to the claim."

DENTISTS URGED TO TWEET WITH CARE

SOCIAL media savvy dentists are urged to keep professional and personal relationships separate when using Twitter and Facebook.

This advice comes from MDDUS in light of the new GDC *Standards for the Dental Team* which for the first time includes guidance on using social media.

MDDUS Head of Dental Division Aubrey Craig said: "It is vitally important to keep professional and personal relationships separate. Dentists who interact with patients via social media risk blurring these boundaries. Before tweeting or posting on Facebook, dentists should consider any potential impact on their patients that could arise as a result of their tweet or post."

The guidance advises dentists to "think carefully before accepting friend requests from patients." Craig, however, believes the best course of action is to decline any such request. "In order to maintain appropriate professional boundaries with patients, dentists should politely refuse any friend request and explain to the patient the need to maintain professional boundaries," he said.

The GDC guidance recognises online discussions about anonymised patients and best practice can have an educational and professional benefit, but states: "If you use social media to discuss anonymised cases for the purpose of discussing best practice, you must be careful that the patient or patients cannot be identified."

Dental practitioners are also reminded that posting information under another username does not guarantee confidentiality and they should check privacy settings to control who can access tweets or posts.

UPDATED SCOPE OF PRACTICE GUIDANCE ONLINE

RECENT changes reflecting the new direct access agreement for dental care professionals have been incorporated in the GDC's revised *Scope of Practice* guidance which is now available to download.

Scope of Practice was first published in 2009 and sets out the skills and abilities which each registrant group should have on qualification, along with further skills which registrants in each group may go on to develop during the course of their careers. The updated version of the guidance takes account of recent changes in dental regulation and has been published along with the new *Standards for the Dental Team*.

Key changes reflected in the new guidance refer to DCPs such as dental nurses, hygienists, dental therapists and orthodontic therapists. The main update for dentists is the inclusion of providing non-surgical cosmetic injectables in additional skills.

The guidance reminds registrants that they must only undertake a task or type of treatment or make decisions about a patient's care if they are sure they have the necessary skills and are appropriately trained and indemnified.

Read more at **tinyurl.com/nmhluzy**

BDA CAREERS DAY 2014

TALKS on NHS and private job opportunities, a CV clinic and clinical demonstrations are some of the highlights of the BDA Careers Day 2014.

High profile speakers include chair of NHS England Sir Malcolm Grant and chief dental officer for England Barry Cockroft.

The event takes place at University of London's Senate House on Friday, February 7 and offers the chance to meet potential employers. Among the specialties discussed are oral and maxillofacial surgery, orthodontics and special care dentistry. There is also advice for those considering working abroad.

Fees start from £52 for dental students with discounts available for foundation dentists.

Find out more at at **www.bda.org/careersday**, by calling Dawn Mifsud on 0207 905 1261 or on **d.mifsud@ucl.ac.uk**

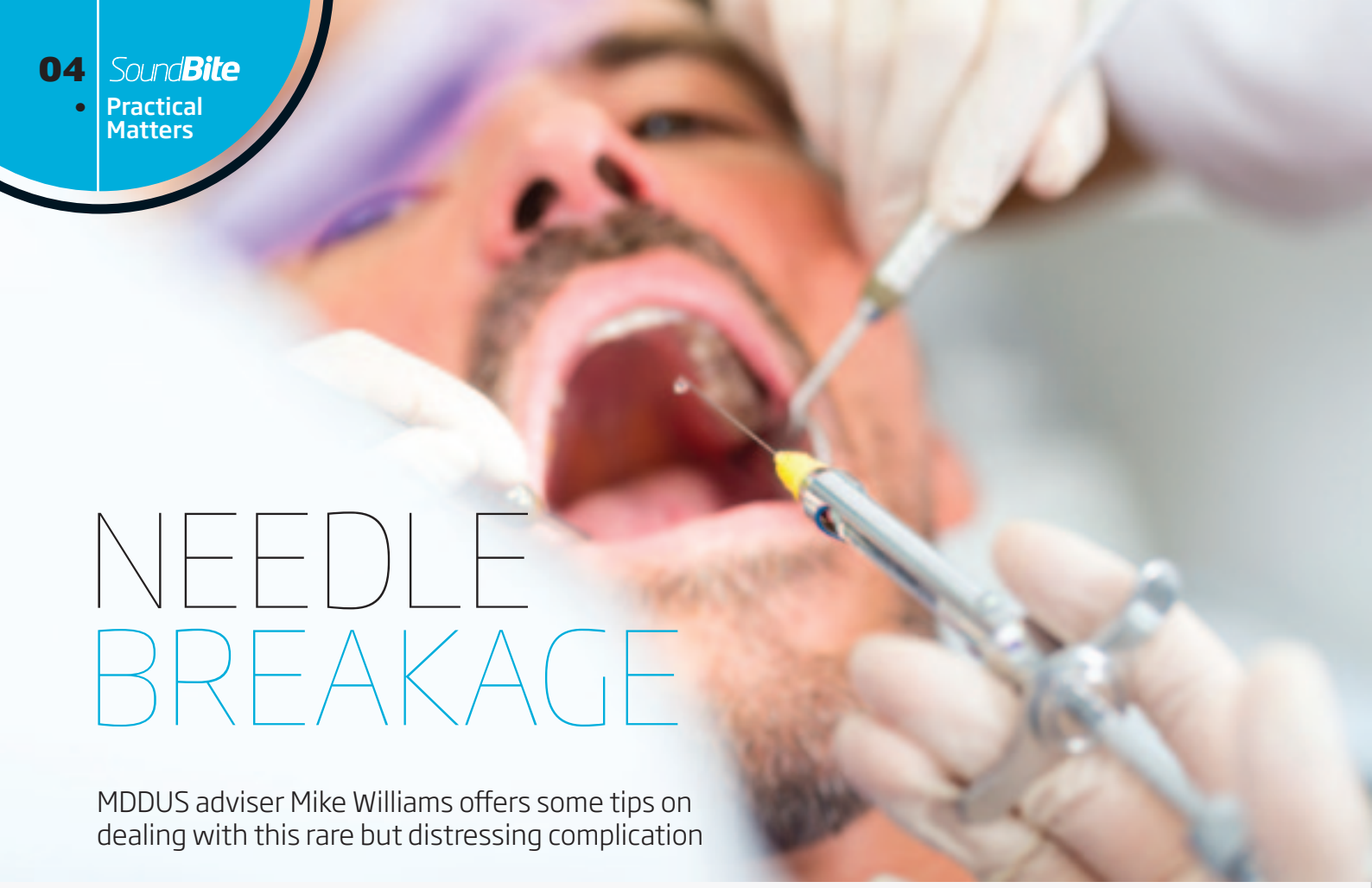
NEW STANDARDS FOR DENTAL PROFESSION

NEW GDC standards for the dental profession now in effect place a much stronger focus on patients' expectations and entitlements.

Standards for the Dental Team replaces the previous guidance *Standards for dental professionals*. Any complaint made about a dental professional in regard to their behaviour or conduct will be judged against the standards and guidance in this document.

Among new issues addressed are principles of communication and personal behaviour including a requirement to be fluent in written and spoken English. There is greater emphasis on softer skills, such as helping patients feel more comfortable, and new requirements to display indicative prices for treatment.

Standards for the Dental Team is supplemented by additional guidance on topics including advertising, prescribing, indemnity, reporting criminal proceedings and scope of practice (see news story, left).



NEEDLE BREAKAGE

MDDUS adviser Mike Williams offers some tips on dealing with this rare but distressing complication

BREAKAGE and retention of dental needles within tissues has become an extremely rare occurrence with the introduction of single-use, disposable needles made of modern, stainless steel alloys. Nevertheless, occasional reports still appear and these are stressful and upsetting events for both patient and clinician alike. They are also very likely to lead to claims of clinical negligence.

Common factors

Needles tend to break at the hub which is the most rigid portion of the needle. In most injections this is not a significant problem as any fragment of needle sticking out of the gum can be straightforwardly retrieved with a haemostat. Difficulties arise when the needle has been inserted to the hub and it breaks. Here the elasticity of the soft tissues produces a rebound and the needle can become buried. In routine dental practice, such a scenario would be most likely when giving inferior dental nerve blocks (IDBs).

Needle breakage is more likely to occur when short needles are used (as they are more likely to be inserted to the hub) and also with narrower needles (30 gauge instead of 27 or 25). It can be associated with sudden movement of the patient or changing direction of the needle when inserted into the tissues. It invariably occurs with bending the needle prior to insertion, and inserting the needle into soft tissues for its entire length.

It is worth noting that the needle is a continuous strand of metal that starts at the tip and continues into the hub to exit on the opposite side into the cartridge. They do not "separate" as often described by clinicians.

Needles that break off entirely within soft tissue cannot be readily retrieved. Usually they do not move more than a few millimetres and become encased in scar tissue. Choosing to leave a needle fragment in the tissue instead of attempting its removal has been favoured in the past as it was thought to lead to fewer problems than having an extensive surgical procedure which is reliant upon plain radiographs to identify the position of the fragment.

The use of CT scans can now provide more accurate images and the availability of helical CT scanners has made this the investigation of choice. This technology, together with legal considerations and the concerns of both patients and clinicians about the fear of needle migration, has more recently tended to favour removal of the broken fragment. The procedure is usually done under general anaesthetic and must be carried out by an experienced oral surgeon or oral and maxillofacial surgeon.

Managing the situation

When a needle breakage occurs during a procedure it is important to remain calm. Tell the patient not to move and to keep their mouth open. Keep your hand that has been retracting the soft tissues in place. If the fragment is visible, retrieve it with a haemostat.

If the fragment it is not visible DO NOT attempt any incision or probing. Tell the patient what has happened and try to reassure them. Ask the patient to avoid excessive jaw movements and arrange immediate referral to your local oral and maxillofacial surgery unit for consultation.

Make a full and contemporaneous record of what has happened and how the situation has been or will be remedied. If you manage to retrieve the needle fragment retain it for your records. Inform your defence union of the incident.

At the oral and maxillofacial surgery department, an assessment will be made of the patient and the position of the retained needle fragment. Treatment options will be discussed and arrangements made for monitoring or surgery.

No local anaesthetic injection technique used in dentistry requires the needle to be bent for the injection to be successful, and the occurrence of truly "defective" needles is considered to be so low as to not be a factor.

Mr Mike Williams is a dental adviser with MDDUS

TOP TIPS FOR PREVENTION OF NEEDLE BREAKAGE

- Use larger gauge needles if significant depths of soft tissue are involved (25 gauge needles are appropriate for IDBs).
- Use long needles for injections requiring penetration of significant depths of soft tissues (>18mm).
- Do not insert the needle to its hub (unless it is absolutely essential for the success of the technique).
- Do not bend the needle.
- Do not redirect a needle once inserted into the tissues.
- Needles should not be forced against resistance.
- Consider changing needles if multiple injections are required.

THE OLYMPIC IDEAL

Like athletes, dentists are often seen as role models in society. But are they more ethical than our sporting heroes?

LAST year's London Olympic Games placed sports stars on the front pages of newspapers, thanks in no small part to Team GB's considerable medal haul. But a number of athletes attracted media attention for less positive reasons, with many falling foul of strict anti-doping rules. Is it, therefore, fair to hold their misdeeds as being representative of society and all its imperfections?

By extending the comparison to the dental profession, we might ask ourselves whether dentists are more ethical than society as a whole or merely representative of society and its imperfections? Does the carrot of a gold medal or increased financial income influence the behaviours of each group?

The Olympic ideal was espoused by Baron de Coubertin in the late 19th century after he visited "The Much Wenlock Olympian Games" in Shropshire in 1890. He said: "The most important thing in the Olympic Games is not winning but taking part." For much of the 20th century Olympic athletes were amateur and refused to be tainted by money. But while medals remain the only prizes for winners, many athletes have third party sponsorship contracts tied to their success.

So how do dentists compare? Dentists are "professionals". The public looks up to professionals. They aspire to be a dentist. In return dentists are expected to behave differently, "to put patients' interests first" as the General Dental Council (GDC) puts it.

However, the word "professional" in sport has become tainted. Whilst it can mean hard working, well prepared and totally dedicated it can also mean taking gamesmanship to the wire as in "the professional foul" or in not admitting an offence the referee has not detected.

It is often said there is no right or wrong in an ethical viewpoint. We all hold different views based upon our genes, upbringing, culture, beliefs and experience. However, we are all bound by the laws of the land which in theory are based on ethical views. In dentistry, however, your ethical position is decided not by yourself but by a third party – the GDC. If the GDC considers you have behaved unethically it can impose sanctions including, in the most extreme cases, removing your right to work.

So let us examine some recent events in sport. At the 2012 Olympics eight badminton players who had broken no regulation were sent home for not trying. The cricketer Stuart Broad received much criticism from some Australians for not "walking" when he knew he had touched the ball with his bat and was caught out. But sometimes in sport the issues are less clear-cut. In the sailing events at last year's Olympics Ben Ainslie was leading a race. He did not attempt to race for the winning line but tacked back and forth attempting to disrupt the flow of wind from his sails into the sails of his second placed opponent (Hogh-Christensen) who was close behind. If the Dane had finished second he would have won gold not Ainslie. In the end, Hogh-Christensen finished fifth and Ben Ainslie won a fourth gold medal and is now Sir Ben Ainslie!

"Bloodgate" was a 2009 scandal involving the rugby union side Harlequins. During a match, one of their players used a fake blood capsule to feign injury allowing a tactical substitution. The subterfuge was amateurish and when off the pitch the player (Tom Williams) asked the club doctor to cut his lip. She eventually complied but the ruse was found out and the case had far reaching consequences.

"Does the carrot of increased financial income influence dentists' behaviour?"

The coach was banned for two years and the player was banned for four months. The club doctor, however, was suspended by the General Medical Council (GMC) pending an investigation into her conduct. She was eventually given a warning by the GMC and returned to practice 18 months after the incident.

It can be seen that actions outside one's normal place of work can have far-reaching consequences with our regulatory bodies. It could be argued that the doctor had valid consent and the patient's autonomy allowed this course of action. However, the inherently unethical action was considered to be a potential fitness to practise issue by the GMC.

Dentists' actions are governed by the GDC whose recently published *Standards for the dental team* states that you should "make sure your personal behaviour maintains patients' confidence in you and the dental profession". It adds that you must "be honest and act with integrity", making clear that the word 'must' is used "where the duty is compulsory".

Thus regulatory guidelines are unequivocal. Not only must you stick to the letter of the law in all your actions but you must also conduct yourself with honesty and integrity. The GDC also emphasises this applies not only within your clinical practice but also outside in your business, educational and personal lives.

The GDC's new guidelines are a must (and I do mean a "must") for all dental professionals to read. Lack of knowledge of this guidance is no defence. They are clear and easy to read. Finally if you break the letter or the spirit of this guidance this could result in the stress of a fitness to practise hearing with the possible penalty of being unable to earn your living for the next five years.

Dick Birkin is Secretary of the Dental Law and Ethics Forum and acts as an expert witness to the GDC on regulations and record keeping

CALL OF THE WILD

Intrepid dentist Penelope Granger has practised everywhere from the extremes of Antarctica to the world's remotest island in the south Atlantic

IF you were asked to describe a normal dentist's everyday job, it would be unlikely to involve braving temperatures of -20C or close encounters with wild crocodiles. Yet these are exactly the kind of challenges Penelope Granger has faced throughout much of her career.

'Home' for Penelope and her three-year-old daughter Elika is an even split between Edinburgh, Scotland and Östrand, Sweden, but her work as a dentist has taken her from the top of the globe to the bottom, and everywhere in between.

Penelope's thirst for adventure began aged 18 on her first trip abroad as an au pair in Israel before she studied dentistry at Dundee University.

Career plan

"One of the things that attracted me to dentistry was the fact that you could travel with it," she says. "It's always been my plan to take my career around the world."

After graduating in 1991, Penelope completed her VDP year as an associate in an Aberdeen city centre practice. But it wasn't long before she gave in to her itchy feet. "I did a mixture of travel and work and that was when I first started to pick up on 'interesting' places to work - mostly by accident."

Her first overseas post was in Aboriginal settlements in the Australian outback, secured after she wrote a letter addressed simply to: "The Dentist, Thursday Island, Queensland." She explains: "There was no formal application process. I think they found my interest amusing and so gave me a chance.

"They would fly me in on a Monday with all the kit and leave me in one of the settlements in what felt like the middle of nowhere. I would treat patients in a fixed dental clinic based in a medical centre which often doubled as my accommodation. It was usually routine consultations, fillings and extractions but there was at least one occasion where I lost my bed for the night to an emergency admission.

"I'd usually be picked up again on the Friday but there was one weekend stay that involved fishing for baramundi near the Gulf of Carpentaria and some rather close encounters with impressively large saltwater crocodiles. It was exciting and gave me a taste for practising dentistry in a different way."

Doing things differently

So, how do 'in the field' dentistry and 'practice-based' dentistry compare?

"It's the challenge of arriving somewhere and all the skills you've learned, you carry with you. You have to be self-reliant and confident in your clinical skills and decision-making," Penelope says.

"After a while, dentistry can become about perfecting your technique. There are rarely any huge leaps forward. For me, the challenge is ensuring I provide high quality treatment and care wherever I go.

"When I came to work in Sweden, for instance, I was worried at first about being able to keep up with the quality that everyone else maintains here. Then I remember feeling pleasantly surprised by the consistency of my work and I was fine. Working in different

places has made me appreciate the skills that I'd otherwise take for granted. Although communicating in Swedish remains a challenge!"

Into Antarctica

After Australia, Penelope returned to Scotland to undertake locum work in the Highlands and Islands before heading back to Israel for volunteer work as a dentist.

Then came Antarctica. After completing a Masters in Community Dental Health in 2001, Penelope successfully applied to work for the British Antarctic Survey (BAS) which is part of the National Environmental Research Council. She spent two years working there full-time based on the ship the RRS Ernest Shackleton, first for nine months then a second six-month posting. Patients there are mainly aged 25 to 35 and would often arrive at Penelope's treatment room by skidoo. Dental work consisted largely of routine check-ups, fillings, preventive treatments, dental health education and the occasional broken tooth – but often only after each patient had painstakingly removed several layers of bulky Antarctic warm weather gear in order to sit in the dental chair.

She says: "You work throughout the year ensuring that the scientists and support staff who will be based in the Antarctic are dentally fit. Training the over-wintering doctors on how to conduct emergency dentistry is another important part of the job. You also must make sure all the orders, supplies and equipment are on board before the ship sails from the UK."

One unique thing about this particular post – other than being able to watch the Emperor penguins in her free time – was working and living with her patients. "That was a completely different dynamic for me. If you place a questionable shade of composite, you then had to look at it over the breakfast table in the mess the next day," she says, laughing.

Penelope's work with BAS earned her the Polar Medal, presented to her by Princess Anne at Buckingham Palace in 2009, in recognition of her contribution to polar research.

Beyond the limits

Working in such remote and extreme environments has required Penelope to demonstrate more than just dental skills. "In the Antarctic, for instance, I had to learn how to assemble and wire together an X-ray machine and then take it apart again," she says. "You certainly broaden your horizons and any perceived limits around your capabilities."

Among the most memorable challenges she encountered in Antarctica were the occasions when she had to treat emergency patients who she didn't know and hadn't screened. She explains: "There were certainly cases where I was getting to the edge of my comfort zone and would have liked the reassurance of a colleague standing alongside me to check things over. But it wasn't available, so you just had to get on with it. Luckily, technology is a big help – I could email photographs and radiographs to colleagues and access support and advice so I still felt part of a network of professionals."

Travel sick

Travelling is very much in Penelope's make-up and she rarely feels home sick, always eager for the next adventure to begin. But no matter where she goes she always brings some favourite items including a "rather grotty" old insulated mug and a 1:50,000 Ordnance Survey map of Glen Coe. She says she is "drawn to wild places that are untouched by man" and loves to ski and hike.

For the last three years, Penelope has spent five weeks annually in Tristan da Cunha, a volcanic island situated 1,510 miles south of St Helena, the nearest land mass. It is the remotest inhabited island in the world and it takes 10 days to reach from St Helena by fishing boat. "When I was in Antarctica, I often stopped off at Ascension Island and loved it, so asked about opportunities for practising there. I contacted the locum on St Helena and they offered me Tristan da Cunha."

A unique island and culture, it has a population of just 267 people who share seven surnames that have changed little since Napoleonic times. Penelope and her daughter stay with the same family each year. "It's a unique place," she says. "It's amazing experiencing how islanders live."

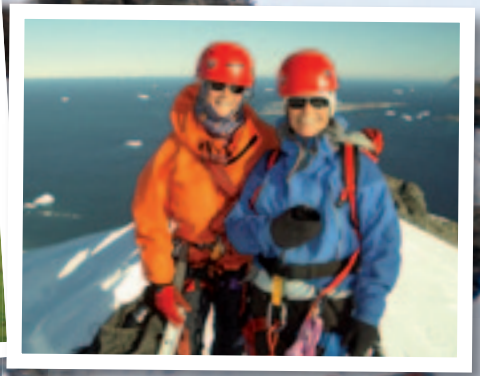
What's next?

Of all the places she's been, Penelope says Antarctica stands out due to the stunning landscape. "You feel humbled to be in a completely unspoiled part of the planet," she says.

But there are always more places to be explored. "There are bits of Scotland I'm yet to get to, like Shetland and St Kilda. Also the Galapagos Islands. And Nepal. I'm studying for a diploma in Mountain Medicine and I'd like to work somewhere like that, with people who have a similar professional skill-set but also the same motivations in terms of experiencing wild places.

"I'm always thinking about where I can go next."

Rowan Morrison is a writer based in Edinburgh



LEFT: PENELOPE (RIGHT) AND FRIEND LIZ HOMER NEAR THE BRITISH ANTARCTIC BASE. FAR LEFT: PENELOPE AND ELIKA ON TRISTAN DA CUNHA

THE PUBLIC DENTIST

Protecting and improving society's oral health is at the heart of a career in dental public health

THIS is a new era for public health. That is the bold announcement made by the Department of Health in a recent government report which promised the specialty a "higher priority and dedicated resources".

In its 2011 report, *Healthy People, Healthy Lives*, the DoH sets out its vision for the dental public health (DPH) workforce in England to "increase its focus on effective health promotion and prevention of oral disease, provision of evidence-based oral care and effective dental clinical governance."

Particular focus should be given to improving children's oral health, the report adds, with DPH specialists also called on to "make a vital contribution" to the new primary dental care contract prioritising preventive care.

Similarly, increasing prominence has been given to dental public health and preventive treatment in Scotland, reflected in national initiatives such as the Childsmile programme.

Entry and training

Dental public health is a small specialty, defined as the "science and practice of preventing oral diseases, promoting oral health and improving the quality of life through the organised efforts of society".

It is overseen by the General Dental Council and DPH specialists must be registered on its specialist list. The GDC approves the curriculum for specialist training and the award of the Certificate of Completion of Specialist Training (CCST) requires evidence of satisfactory completion of training in all the aspects of dental public health that are outlined in the curriculum.

Those entering specialty training must have at least two years' post-qualification dental foundation training. It is helpful but not essential

to hold diplomas of membership of the Joint Dental Faculties (RCS England), the Faculty of Dental Surgery (RCS Edinburgh/RCPS Glasgow) or the Faculty of Dentistry (RCS Ireland).

Full time specialty training (for those with no prior training or experience of the specialty) can be completed in four years. One of those four years consists of academic study in a recognised course, i.e. a masters in public health/dental public health, which should include an appropriate dental module. Less than full time training is an option for dentists with "well-founded individual reasons" for not pursuing full time training.

Other learning takes place in the workplace and from peers and can be undertaken principally within the NHS or on an academic training pathway.

The 2010 *Specialty training curriculum – dental public health* from the Royal College of Surgeons of England details the following key areas of good practice:

1. Oral health surveillance
2. Assessing the evidence on oral health and dental interventions, programmes and services
3. Policy and strategy development and implementation
4. Strategic leadership and collaborative working for health
5. Oral health improvement
6. Health and public protection
7. Developing and monitoring quality dental services
8. Dental public health intelligence
9. Academic dental public health
10. Appropriate decision-making and judgement
11. Appropriate attitudes, ethical understanding and legal responsibilities
12. Role within the health service
13. Personal development

The curriculum is delivered through "learning experiences in a variety of geographic locations and within various healthcare organisations". These include clinical commissioning groups (CCGs), health boards, local authorities, public health observatories and government office and university departments of dental public health/public health.

It adds: "Learning from peers will occur at dental public health and public health meetings locally, regionally and nationally. Opportunities such as journal clubs and specialty audit provide specific learning experiences and should be part of every training programme."

Dentists are assessed throughout training by various means including a personal development portfolio, workplace-based assessments and specialist examinations. They must also pass the intercollegiate specialty fellowship examination (ISFE). The curriculum emphasises that "the assessment process is initiated by the trainee" who will be expected to identify opportunities for assessment throughout their training.

Towards the end of training, trainees can undertake special interest placements which might include attachment to the DoH or British Dental Association; working with the Ministry of Defence for the Defence Dental Agency; overseas projects; or a communicable disease attachment with the Health Protection Agency and primary care organisation on-call (for those interested in a career in general public health).

Postgraduate dental deans are responsible for monitoring trainees' progress through the ARCP process and will ultimately recommend the award of the CCST to the GDC. If the GDC accepts the recommendation, it will add the dentist's name to the specialist list upon receipt of their application form and payment.

The job

Roles in DPH vary from an NHS consultant post to a university academic job and work with health charities such as the Global Child Dental Fund. They do not involve one-to-one care of individual patients. The Royal College of Surgeons of England describes it as "an applied and not just theoretical subject which should stimulate research, appraise such research and apply the findings to practice."

Most DPH consultants work in health service commissioning organisations such as CCGs or health boards. They are often asked to provide impartial advice on the many aspects of dental and oral health, on the provision of evidence-based oral and dental care and effective dental clinical governance. Objectives include tackling inequalities in oral health, ensuring public access to prevention and treatment, improving the quality of dental services and patient safety and supporting dental teaching and care services.

DPH academics focus on research and development projects that may spark debate or influence clinical practice, as well as assisting in the development of government oral health programmes.

Links:

- Royal College of Surgeons of England, 2010: *Specialty training curriculum - dental public health* **www.tinyurl.com/nhnyws8**
- RCSEng: *Career advice for dentistry: dental public health* **www.tinyurl.com/pahjst4**

Joanne Curran is an associate editor of SoundBite

Q&A

Jennifer Rodgers, consultant in dental public health with NHS Forth Valley

- **What attracted you to a career in dental public health?**

While I had always enjoyed clinical dentistry and had completed VT and spent a number of years in oral surgery, dental public health seemed very different to all the other clinical specialties. It is a non-clinical specialty and in the simplest terms, concerned with improving the dental health of populations rather than individuals. The training programme looked interesting, working across two health boards and gaining experience in many different aspects of the specialty, such as health promotion, health protection and NES. The training also gave the opportunity to study for a master's degree in public health at the University of Glasgow and to be awarded an ISFE at the end of training.

- **What do you enjoy most about the specialty?**

The specialty involves working with people from all branches of dentistry as well as the medical specialties, and other agencies such as education, local authority, councils and the Scottish Government. This is an ever-changing career where there is no time to get bored. It is a very diverse job which can differ wildly from day-to-day, and the ongoing work projects are of a very differing nature.

I work hard to continue my links with oral surgery and general practice but that is unusual within the specialty.

- **What do you find most challenging?**

It is a small specialty with few like-for-like colleagues but we have a close network and supportive working relationships.

- **Have you been surprised by any aspect of the job?**

No.

- **What personal attributes do you feel are important in dental public health?**

It is important to be a rounded person with a good understanding of all aspects of dental services and a good basis in both primary and secondary care dentistry. There is a need to empathise with dentists and the public alike. You must be approachable and engaging and able to work well with people from all walks of life.

- **What advice would you give to a student or trainee considering the specialty?**

It is a good idea that during the early training years the individual has experienced work in as many sectors of dentistry as possible.

NOT JUST AN ACADEMIC EXERCISE

Claire Renton suggests how dental audit can be more than just a box-ticking exercise

LOVE it or hate it, audit is here to stay. Since 2001 dentists in Scotland with an NHS list have been required to carry out audit as part of their terms of service.

Many of us have asked what is the purpose of audit? Is it really worth doing? Or is it something we do reluctantly because we are obliged to?

The Royal College of Surgeons of England tells us that: "The aim of clinical audit is to improve patient treatment by improving professional practice and the quality of services delivered." This is indeed a grand aspiration. To carry out a project that improves patient treatment, professional practice and services to patients really could not be faulted.

But what if the audit project also or (dare I say it) instead was designed primarily to make our busy lives easier: a project that made cash flow better within the practice, a project that ensured patients turned up for their appointments when they were supposed to, or one that organised staffing better within the practice. Well, why not? All of the above would ultimately do all the things the Royal College says are the main aims of an audit project and it seems sensible to me that if you are going to carry out an audit project then one of the best places to start is with something that annoys you about clinical practice.

Topics relevant to you

There are a few critical steps to audit. The first rather obviously is to select what you want to audit. Pick something that you would like to improve about your working day. No, a longer lie-in and extended lunch break don't count! But what about those "failed to attend" appointments that drive you mad?

We've all been there, set up for that crown prep, impression trays ready, retraction cord found, X-rays checked and... maybe she's held up in traffic or maybe she just can't get parked. But no, she's either forgotten or found something better to do but she's not turned up. What a hassle it is then, packing up all the kit, contacting the patient to rearrange another appointment not to mention that if you are an associate in this position you've not earned anything for the last hour. If you own the practice, then not only have you not earned anything but you've had the staff to pay as well as all the other overheads too.

Other concerns in this situation might include the impact this has on other patients who might have been seen had the patient phoned to cancel the appointment a few days before. So perhaps a project about patients failing to attend might just be the answer.

What about other topics? Sometimes significant event analyses (SEAs) in your practice can provide good topics for audit. NHS Education for Scotland (NES) suggests also selecting an audit topic with:

- Clear national standards and guidelines available, e.g. SDCEP guidance on problems encountered in practice
- Clear potential for improving patient care
- Areas of high volume, high risk or high cost,

Audit steps

Step 1: Select what to audit
Step 2: Define the criteria and standard
Step 3: Define data to be collected
Step 4: Submit your audit for approval
Step 5: Establish the baseline (collect initial data)
Step 6: Compare performance with criteria and standards
Step 7: Implement change
Step 8: Carry out a second round of data collection
Step 9: Analyse the data
Step 10: Produce and submit your audit report

From NES: go to **www.tinyurl.com/obe6rsm**

where improvements can be made for the benefit of the practice.

Setting standards

The next step is to define the criteria and standard. This is relatively easy to do if you chose a clinical audit. For example, we are all familiar with the idea that 70 per cent of your X-rays should ideally be grade 1, 20 per cent grade 2 and only 10 per cent grade 3. With regards to evidence of current medical history in the records you might want to aim high and say that your standard is to be 100 per cent. Set the standard for your audit project at an early stage, keeping in mind that the quality of patient care should be high for all patients but also that these high standards must be achievable.

The website Scottish Dental (**www.scottishdental.org**) provides links to a large number of standards documents, such as SDCEP and SIGN guidance.

Data collection

Next you must decide what data you are going to collect. The simplest way is to produce a spreadsheet and fill in the data as you go. If your data is being collected from dental records then staff at the practice may be willing to help here and any assistance should always be gratefully received. The data should be verifiable, so while you might wish to exclude personal data such as the patient's name, it is sensible to develop a code so that if the data needs to be checked at a later date this can be done easily. You can then submit your audit for approval (and funding).

Making the change

Next you must establish a baseline in your audit and this is achieved by collecting the initial round of data. You can then compare the baseline data to the standard you set and want to achieve. Now you are in a position to make the change.

This is the step that needs the most thought. Making the right change in the right way will make all the difference. If the change involves other staff in the practice then get them on board with your idea. Encourage them to see how practice life or patient care or preferably both will be enhanced by making the change. Then do it.

Obviously it is important to check that the change you have made has been effective and so you need to collect another round of data to prove that things have improved. It is usual to let the change you have made be in place for three months or so before you carry out this second round of data collection but this time can be varied depending on your project.

To finish...

The next process is to analyse the second round of data, pat yourself on the back for the improvements you have made to patient care, bask in the adulation of your practice colleagues for making their life that little bit easier, and don't forget you then have the unglamorous job of writing up your report.

And after all that hard work you deserve your long lie. Enjoy!

Claire Renton is a dental adviser at MDDUS

DEALING WITH DENTURES

They may not be ideal but dentures are the only option for many patients. **Doug Hamilton** offers some hints on managing expectations and more

DENTURES are not an alternative to having natural teeth. Dentures are an alternative to having no teeth. This well-worn advice reflects the fact that dentures, especially complete dentures, are normally provided when all else fails. Many patients, especially those who are experienced denture wearers, appreciate that there are bound to be limitations in terms of retention, function and aesthetics once the natural dentition is lost. Unfortunately, there are others who still look forward to a life of effortless and comfortable toffee chewing and it is this radical divergence of reality and expectation which makes for disappointment and conflict.

Obviously, the primary means of minimising such problems is to provide well-planned treatment of a good standard. Clinical advice as to how this can best be achieved is beyond the scope of this author. (In fact, if there is any reader who has discovered the secret of making "tight" full lower dentures – without resorting to implants – please feel free to drop me a postcard.)

Art of the possible

It would seem logical to assume that prosthetic excellence would always lead to patient satisfaction. But the sad truth is that, regardless of operator skill, it can be difficult to realise the hopes of edentulous patients. Therefore, before treatment commences, there must be a comprehensive consenting process, including explanation of what is actually achievable.

Experience tells us that practitioners who take the time to effectively communicate this point in the first instance will encounter fewer problems later on. Needless to say, this advice should be imparted in an empathetic, professional manner. The use of visual aids such as diagrams, together with accessible written advice upon which patients can reflect at their leisure, is often very useful and is strongly recommended by the GDC.

The doctrine of valid consent dictates that other subjects, such as treatment risks and alternatives, must also be discussed pre-operatively. This begs two obvious questions. Firstly, are there are any other risks of which the patient should be made aware when complete dentures are being considered (other than being entered into the 3 o'clock at Chepstow after the insertion stage)? In reality, denture provision is relatively safe and non-invasive. However, it would still be entirely reasonable to warn of potential complications such as traumatic ulcers or initial diction difficulties.

Secondly, where implant retention is beyond the patient's means, are there any tangible options which can be offered to

complete denture patients? It might be that a variety of materials or designs could be considered. However, the most likely choice would probably be between NHS and private standard dentures. NHS practitioners must ensure that this discussion complies with their terms of service which, amongst many other things, do not allow patients to be misled regarding the quality or availability of NHS treatment. If, having been accurately advised, the patient selects private treatment this must be recorded and signed for on a form GP17DC or equivalent.

"Many patients will have valid concerns that should be addressed through careful discussion and further treatment"

Respecting patient concerns

Regardless of the quality of treatment, consenting and management of expectations, there will inevitably be patients who are disappointed with the outcome. It is critical that any such expressions of dissatisfaction are dealt with professionally and in accordance with NHS (where appropriate) and GDC requirements.

For an example of precisely what not to do, I need to reach back several decades to my student days. During one of the prosthetic teaching clinics, my undergraduate tutor was berated by an edentulous patient whose mandibular ridge resembled a billiard table and who had returned to the clinic to complain that her lower complete denture "moved". My tutor could have re-explained that a period of perseverance and adaption would be required if the transition to this denture was going to be successful. Instead, however, he placed the offending denture on the worktop and invited the patient and the entire student group to gather round. "Watch this denture", he insisted. "Apparently, it moves". We stood for some time in respectful silence gazing upon the inert denture, finally agreeing that it must be the patient and not the denture which was moving. One simply wouldn't get away with that nowadays.

Clearly, in this instance, the complaining patient, while genuinely disappointed and deserving of a respectful explanation, was being unrealistic. However, many patients will return with concerns which are valid and require to be addressed, not only through careful discussion, but also by further treatment. For example, mucosal discomfort under new dentures may seem like quite a trivial problem, but can be severe and always requires early and careful relief of the denture. Leading on from this point, it is vital to satisfy yourself that the lesion is definitely of traumatic origin. As a rule, you should review these cases and, if the ulcer persists despite an appropriate amount of denture adjustment there should be an increased index of suspicion that it may be sinister.

Learning to recognise malignancy is a gradual process which will hopefully be expedited by the GDC's recommendation that oral cancer awareness should now form an integral part of all registrants' CPD. Even for an experienced practitioner, however, attempting to reach a definitive diagnosis without biopsy is fraught with dangers. Therefore, where there are concerns regarding any lesion, including persistent ulcers, the safest route is to make an urgent, documented referral.

Other soft tissue conditions, possibly caused by advancing years or long-term prescription medicines, are perhaps more prevalent in complete denture patients. Some, such as xerostomia, may have a profound effect on the prosthetic success. Therefore, as with every patient, scrutiny of a current, signed medical history followed by thorough examination of extra and intraoral tissues must be carried out, analysed and documented before treatment commences.

Goodbye old friend

With advancing years comes not only the increased likelihood of pathology and poly-pharmacy but also the circumstance that a patient's existing dentures will date back to circa 1970 and will therefore have acquired the familiarity and comfort of a favourite pair of slippers. Introducing new prostheses at this stage can be a thankless task and, in some instances, the best treatment is no treatment.

However, where the old denture has been worn to the point it has begun to resemble a polo mint, its replacement is probably unavoidable. While replica techniques assist this process, it is important to remember that new dentures, quite possibly with some degree of increased vertical dimension, will present enormous challenges, especially for the older wearer. Patience and empathy must be the prevailing approach.

Despite your best efforts, there may be occasions when a reproachful patient returns wearing his or her old dentures and hands you a bag containing the ones which you have lovingly constructed. Try not to be offended. Most practitioners have a small collection of orphaned dentures tucked away in some darkened recess of the surgery. It's character building.

Doug Hamilton is a dental adviser at MDDUS

RECORD KEEPING

RETAINED ROOTS

DAY ONE
A 19-year-old patient – Mr D – has a history of poor dental care and is prone to dental decay (caries). He had a permanent molar extracted at age 14 and three years later another permanent tooth removed. This day he attends his regular dentist – Miss L – and is advised that two additional teeth LL5 and LR5 are badly decayed and require extraction. Mr D is needle phobic so Miss L discusses with the patient the option of sedation. She also discusses the risk of complications inherent in the procedure including incomplete extraction of the teeth.

DAY 13
Mr D attends the dentist for the extractions accompanied by his mother. Miss L finds the teeth are brittle and during the extraction there are root fractures in both. Mr D becomes uncooperative at this stage and Miss L is unable to extract the roots. While the patient recovers from sedation the dentist explains to Mr D's mother that the roots have been left in situ. An appointment is made for Mr D to re-attend the surgery in a week's time for review and to discuss further treatment options. Miss L neglects to make a record of the retained roots in the patient's notes.

DAY 20
Mr D does not turn up for his appointment and fails to arrange or attempt to arrange an alternative appointment.

11 MONTHS LATER
Mr D makes an appointment at the surgery and sees a different dentist – Mr N. The dentist makes an extensive examination along with an OPG radiograph. He notes the retained roots and discusses treatment options. Mr D expresses his preference for surgical removal of the roots under general anaesthetic even if this means a trip to the hospital. Mr N makes no reference in the notes to an abscess or infection associated with the retained roots and no antibiotics are prescribed on this occasion. A referral letter is sent and a hospital appointment scheduled which Mr D later cancels.

ONE YEAR LATER
The patient arranges an emergency appointment at the surgery for a painful abscess in UR7. This time he sees Miss L and they discuss both the need to extract UR7 and the retained roots from LL5 and LR5. Mr D again expresses his fear of needles. He is adamant that the treatment must be carried out under a general anaesthetic in hospital. Again there is no mention of pain, infection or abscess associated with the retained roots. Another referral letter is sent to the dental hospital and two months later the roots are removed along with UR7 under a general anaesthetic.

A LETTER from solicitors representing Mr D arrives at the dental surgery six months later alleging breach of duty against Miss L. It is claimed that the dentist failed to record and inform the patient that the teeth had fractured during the extraction. It is also alleged that she failed to arrange an appointment in order to discuss treatment options for removal of the roots.

The patient also claims that within days of the failed extractions he was in considerable pain and that the extraction sockets were open and infected. Pain and infection were then intermittent from the date of the procedure until the roots were finally removed nearly two years later.

Miss L contacts MDDUS and an expert report is commissioned. The dental expert finds no breach of duty in regard to the fractured roots as such complications are sometimes unavoidable. He also accepts there could be valid reasons for not prolonging a procedure in order to extract retained roots. But he does find fault with Miss L's clinical notes. The dentist should have recorded the fact that she failed to complete the extractions along with a note of what action was to be taken as a consequence.

The expert also points out that it is normal practice to inform a patient post-procedure of any unforeseen event, such as root fracture. But he accepts that in this case that Mr D was still under sedation and in no fit position to comprehend or recall any information given at that time. In this situation it was reasonable for Miss L to arrange a follow-up appointment. Examination of the appointment book verifies a follow-up visit was scheduled despite claims by the patient and his mother to the contrary.

Had Mr D attended the follow-up the dentist would have informed the patient of the retained roots and treatment options would have been discussed along with recommended referral to the dental hospital. In regard to the pain and infection claimed by the patient, the expert can find no evidence that this was associated with the retained roots in either the records or any associated correspondence.

MDDUS lawyers and advisers give the case some further consideration – most notably how it hinges on the disputed facts regarding the patient being given an appointment for follow-up review. Given the poor record keeping by the dentist this is considered a risk should the case come to court. There is also no written evidence in the patient notes that the follow-up appointment was confirmed in writing nor any record of the patient being contacted when he did not attend.

Given these weaknesses in defending the case the decision is made to settle for a modest sum.

Key points

- Ensure that dental records include outcomes and ongoing treatment plans
- Follow-up DNAs
- Problem patients come with greater risk

OUT THERE

PEE IS THE KEY Human urine has been used to grow rudimentary teeth by scientists in China. The pee was used as a source for stem cells which were mixed with other material from a mouse and implanted into the animal. The result was a "tooth-like structure" which the team hope could pave the way for tooth regeneration.

MOUTH MEMORY Losing your teeth could make you lose your memory, according to research in the *European Journal of Oral Sciences*. The number of natural teeth was said to be "significantly" linked to performance in memory tests. One theory is that those with fewer teeth produce fewer sensory impulses to the part of the brain that forms and retrieves memories.

BEYOND TEETH People could eventually develop pufferfish-like beaks because teeth are "no longer fit for purpose", say Sheffield University scientists. As we all live longer, having a limited supply of teeth is impractical and evolving such beaks could result in more robust, self-replacing teeth.

DENTIST OF THE SEA Shrimps have been photographed cleaning other sea creatures' teeth. Italian Davide Lopresti took snaps of other fish opening wide to let the mini-dentists clear parasites and food remains.
Source: Daily Mail

PHOTO: STEVE GSCHMEISSNER/SCIENCE PHOTO LIBRARY

NAME THAT BITE

Stumped? The answer is at the bottom of the page

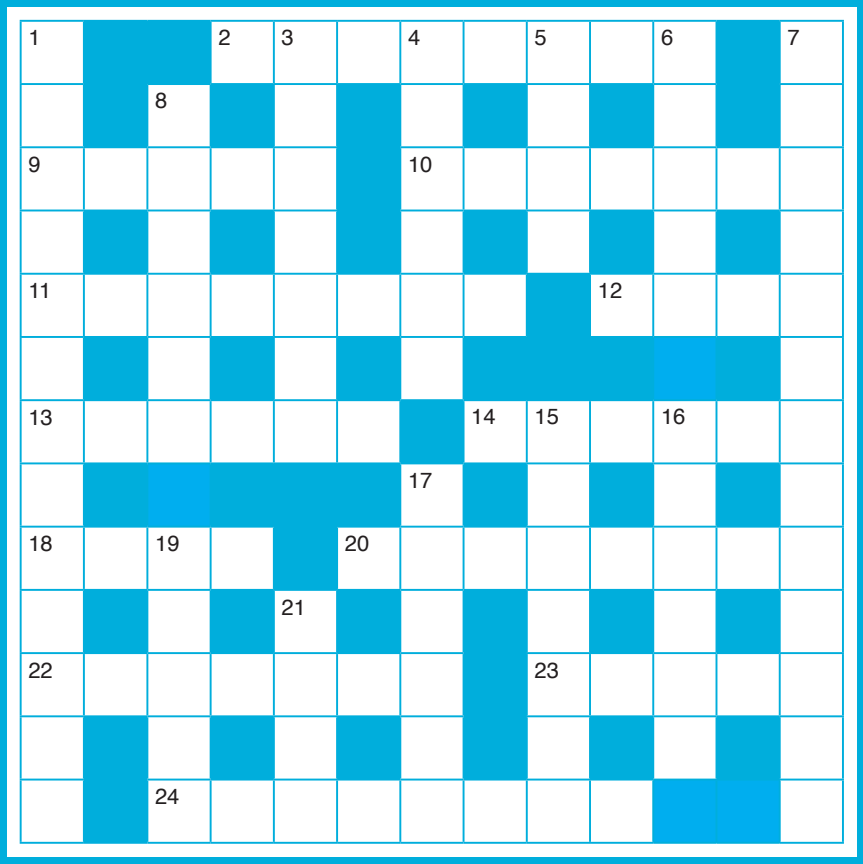
CROSSWORD

ACROSS

2. Covered with (8)
9. Indirect filling (5)
10. Tender (7)
11. Transforming (8)
12. Medication (4)
13. Holiday location (6)
14. Luting agent (6)
18. Against (4)
20. Suspension in water (7)
22. Artificial tooth (7)
23. Without company (5)
24. Disease (8)

DOWN

1. Transmigration of the soul (13)
3. NASA probe (7)
4. Loot (7)
5. Alike (4)
6. Delay (5)
7. Wisdom (not teeth) (13)
8. Brushes (6)
15. Teach (7)
16. Newspaper boss (6)
17. Skulk (7)
19. Lukewarm (5)
21. Crazes (4)



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

NAME THAT BITE: LOWER JAW OF A GECKO, SEM

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