**News in Brief**

Could potatoes fight disease?
A new project will investigate the potential of naturally occurring chemicals in potatoes, tomatoes and sweet potatoes to combat human diseases such as cancer and arteriosclerosis and ease the pain caused by various ailments. The DISCO project also hopes to find sustainable ways of producing these chemicals, known as bioactive compounds. The DISCO partners, which include 15 organisations from seven countries, aim to capitalise on their experience in metabolic engineering, hyper-production of high-value plant substances, and in bringing technology to the market.

Only 20 per cent of children eat vegetables
Only one in five children eats vegetables every day, and one in ten totally refrains from eating vegetables, according to a survey commissioned by Vouchercloud. The Infant & Toddler Forum (ITF) says that children need to be encouraged to try new foods and it is best to begin healthy eating habits early. It says that children need to be encouraged to try new foods and it is best to begin healthy eating habits early.

1,000-year-old plaque reveals diet and disease
Researchers have discovered that disease-causing bacteria in humans today are similar to disease-causing bacteria in 1,000-year-old teeth. The research team extracted DNA from samples of dental calculus, which preserves bacteria and microscopic particles of food on the surfaces of teeth. A German Medieval population, they discovered, the ancient human oral cavity carries numerous opportunistic pathogens and that periodontal disease is caused by the same bacteria today as in the past, despite major changes in human diet and hygiene.

First lay GDC chair to speak at BDA conference
Dr Armstrong (pictured) is a general dental practitioner in a mostly NHS practice in Castleford, West Yorkshire. He has been a member of the PEC since its inception in July 2012, having been elected to its membership by BDA members across Yorkshire and the Humber. He graduated from Newcastle Dental School in 1985. He has served on the BDA’s Representative Body and General Dental Practice Committee, and was Chair of the Conference of Local Dental Committees in 2011.

First lay GDC chair to speak at BDA conference
Dr Armstrong will give his first address as the leader of the professional association at the 2014 British Dental Conference and Exhibition, which takes place in Manchester from 10-12 April.

**New leader for the PEC to take the reins at the BDA**

The British Dental Association chooses new chair for Principal Executive Committee after dramatic few months of upheaval

Dr Mick Armstrong has been elected as the new Chair of the British Dental Association’s (BDA’s) Principal Executive Committee (PEC) following the departure of previous incumbent, Martin Fallowfield.

Dr Armstrong will give his first address as the leader of the professional association at the 2014 British Dental Conference and Exhibition, which takes place in Manchester from 10-12 April.
Water fluoridation could save NHS millions

The NHS could save at least £4 million every year on hospital admissions for the removal of rotten teeth if water fluoridation were extended to areas with high levels of tooth decay, according to research published in the British Dental Journal.

Analysis by the researchers of hospital statistics over a three-year period suggests that on average, 6,900 young people were admitted annually for dental extractions in the largely non-fluoridated North West. In the same period, that figure was just 1,100 in the West Midlands which is largely fluoridated.

Using data from 2008-9, the cost of carrying out a dental extraction under general anaesthesia was £558 or £780 depending on the complexity of the procedure, bringing the total cost of the operations to around £4 million in the North West.

Professor Damien Walmsley, the British Dental Association’s Scientific Adviser, said: “This study is a powerful reminder of how water fluoridation saves the NHS money, and how whole populations can benefit from a huge improvement in their dental health.

“It’s a shocking fact that over 25,000 young people in England last year suffered such poor dental health that they had to have teeth removed under general anaesthetic in hospital.”

Teeth found in baby’s brain tumour

Multiple fully formed teeth have been found inside a tumour mass that was growing in the brain of a four-month-old child.

The boy was initially admitted to a clinic in Baltimore after a routine paediatric visit due to an increasing head circumference. The doctors also found structures near the mass similar to those of teeth in the mandible.

Upon surgical removal of the tumour, the surgeons found a number of teeth inside the mass, which was identified as an adamantinomatous craniopharyngioma. Such tumours arise from Rathke’s pouch, an embryonic precursor to the anterior pituitary, and consist of stratified squamous epithelium and wet keratin, and may be cystic.

Gingival implant helps reduce cluster headache

A new mini-implant has been developed to help those affected by cluster headaches.

Cluster headache is one of the most severe forms of headache. It is usually unilateral and occurs mostly around the eye or in the temple, and attacks can last up to several hours.

A new clinical study published online in Cephalalgia shows that the device demonstrated clinical effectiveness in treating cluster headache, and provided significant improvement in patient quality of life and headache disability.

“Cluster headaches cause so much disability that patients are often unable to function normally,” said Professor Dr Jean Schoenen from the University of Leige in Belgium.

“Current preventive treatments are often ineffective, and even in patients acute and preventive treatments may not be tolerated or are contraindicated. This new and innovative therapy offers a way for a significant number of patients to control the debilitating pain of cluster headache.”

Call for smoking in films to be banned

Children should be banned from watching films featuring actors smoking, according to a new survey carried out by the British Dental Health Foundation.

More than two thirds (67 per cent) of those surveyed thought films which involved smoking should receive the highest classification rating, suitable only for adults. According to the British Board of Film Classification, rated-18 films currently allow scenes of drug-taking, provided ‘the work as a whole must not promote or encourage drug misuse’.

The film board makes no reference to smoking or alcohol misuse, two of the leading risk factors for mouth cancer.

Chief Executive of the British Dental Health Foundation, Dr Nigel Carter OBE, said: “The risks of smoking have been well documented for many years, yet for many young people the message still isn’t getting through. Children see movie stars as role models. If they are smoking, children are more likely to take up the habit. The same applies to sports stars, people we see on every day TV and even parents. By re-classifying films containing smoking scenes, it could lead to a drop in the number of young children taking up the habit.”

25,000 people were admitted to hospital for tooth removal last year.
Study queries sense of extracting teeth before heart surgery

Removing an infected tooth prior to cardiac surgery may increase the risk of major adverse outcomes, including risk of death prior to surgery, according to a study in the March 2014 issue of *The Annals of Thoracic Surgery*.

Dental extraction of abscessed or infected teeth is often performed to decrease the risk of infection during surgery and endocarditis (an inflammation of the inner layer of the heart) following surgery.

Cardiac surgeon Joseph A. Dearani, MD, along with anesthesiologists Mark M. Smith, MD and Kendra J. Grim, MD, and colleagues from the Mayo Clinic in Rochester, Minn., evaluated the occurrence of major adverse outcomes in 205 patients who underwent at least one dental extraction prior to planned cardiac surgery from 2003 to 2013. The median time from dental extraction to cardiac surgery was seven days (average 35 days).

“Guidelines from the American College of Cardiology and American Heart Association label dental extraction as a minor procedure, with the risk of death or non-fatal heart attack estimated to be less than one per cent,” explained Dr. Smith. “Our results, however, documented a higher rate of major adverse outcomes, suggesting physicians should evaluate individualized risk of anesthesia and surgery in this patient population.”

In this study, patients who underwent dental extraction prior to cardiac surgery experienced an eight per cent incidence of major adverse outcomes, including new heart attack, stroke, kidney failure and death. Overall, three per cent of patients died after dental extraction and before the planned cardiac surgery could be performed.

Noting the limitations of their retrospective review, Dr Dearani said: “With the information from our study we cannot make a definitive recommendation for or against dental extraction prior to cardiac surgery. We recommend an individualized analysis of the expected benefit of dental extraction prior to surgery weighed against the risk of morbidity and mortality as observed in our study.”

Editorial comment

Welcome to this month’s Dental Tribune UK edition.

As you will have seen from the front cover story, the British Dental Association has appointed a new leader of the Principal Executive Committee.

Dr Mick Armstrong, a GDP from Yorkshire, has been a member of the PEC since July 2012 and is seen by many to be the man who can steady the ship of the BDA and make the changes necessary to see the Association back on track to represent their members.

Congratulations and good luck Dr Armstrong!

On the subject of the BDA, next month sees the first BDA Annual Conference and Exhibition since the membership structure changes and the ensuing damage to finances etc. It will be interesting to feel the mood of both management and members at the event. It is being held in Manchester 10-12 April; I may see you there.

Do you have an opinion or something to say on any Dental Tribune UK article? Or would you like to write your own opinion for our guest comment page?

If so don’t hesitate to write to:

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Aggression towards NHS staff on the rise

The NHS has reported a rise of verbal and physical aggression towards health and social care staff – up 5.8 per cent to 65,199 or reported assaults in 2012/13. Now a University of Huddersfield lecturer has called for a programme of research to establish the best methods for dealing with the problem.

Various techniques known as ‘de-escalation’ have evolved in different hospital environments, but Dr Andrew Clifton says there is a lack of solid evidence to identify the most successful approaches.

In a new article entitled De-escalation: the evidence, policy and practice, Dr Clifton and his co-author Dr Pamela Inglis call for a ‘randomised controlled trial’ to be conducted. This would involve the comparison of different de-escalation techniques employed at a sample of different hospitals and settings, such as A&E departments or acute psychiatric hospitals. Evidence could then be compiled to show which the most effective methods were.

Dr Clifton points out that failed in verbal effectively with aggression is highly costly for the NHS, in terms of time and resources.

Acupuncture holds promise for treating inflammatory disease

Acupuncture holds promise for treating inflammatory disease. In an animal study involving sepsis, stimulation of one of the body’s major nerves, the vagus nerve, triggers processes in the body that reduce inflammation, so they set out to see whether a form of acupuncture that sends a small electric current through that and other nerves could reduce inflammation and organ injury in septic mice.

Ulloa explains that increasing the current magnifies the effect of needle placement, and notes that electrophysiology is already FDA-approved for treating pain in human patients.

When electroacupuncture was applied to mice with sepsis, molecules called cytokines that help limit inflammation were stimulated as predicted, and half of those mice survived for at least a week. There was zero survival among mice that did not receive acupuncture.

Ulloa and his team then probed further, to figure out exactly why the acupuncture treatments had succeeded. And they made a discovery that, on its face, was very disappointing. They found that when they removed adrenal glands – which produce hormones in the body – the electroacupuncture stopped working.

That discovery presented a big potential roadblock to use of acupuncture for sepsis in humans, because most human cases of sepsis include sharply reduced adrenal function. In theory, electroacupuncture might still help a minority of patients whose adrenal glands work well, but not many others.

So the researchers dug even deeper – to find the specific anatomical changes that occurred when electroacupuncture was performed with functioning adrenal glands. The changes included increased levels of dopamine, a substance that has important functions within the immune system. But they found that adding dopamine by itself did not curb the inflammation. They then substituted a drug called fenoldopam that mimics some of dopamine’s most positive effects, and even without acupuncture they succeeded in reducing sepsis-related deaths by 40 percent.

Ulloa considers the results a double triumph.

On the other hand, he says, this research shows physical evidence of acupuncture’s value beyond any that has been demonstrated before. His results show potential benefits, he adds, not just for sepsis, but treating other inflammatory diseases such as rheumatoid arthritis, osteoarthritis and Crohn’s disease.

On the other hand, by also establishing that a drug reduced sepsis deaths in mice, he has provided an innovative road map to forward developing potential drugs for people. That road map may be crucial, because no FDA-approved drug to treat sepsis now exists.

“I don’t even know whether in the future the best solution for sepsis will be electroacupuncture or some medicine that will mimic electroacupuncture,” Ulloa concludes. The bottom line, he says, is that this research has opened the door to both.

De-escalation techniques can be purely verbal, says Dr Clifton, or they can involve a physical intervention. “It could be the physical environment or the human environment or the psychological environment. It could be a case of having members of staff who are highly skilled and trained in the latest de-escalation techniques which are supported by evidence,” he says.

Dr Clifton points out that failed in verbal effectively with aggression is highly costly for the NHS, in terms of time and resources.

Epigenetics could play role in dental care

According to researchers at the University of Adelaide, “Our genetic code, or DNA, is like an orchestra – it contains all of the elements we need to function – but the epigenetic code is essentially the conductor, telling which instruments to play or stay silent, or how to respond at any given moment,” says Associate Professor Toby Hughes.

“This is important because, in the case of oral health, epigenetic factors may help to orchestrate healthy and unhealthy states in our mouths,” he says. “They respond to the current local environment, such as the type and level of our oral microbes, regulating which of our genes are active. This means we could use them to determine an individual’s state of health, or even influence how their genes behave.”

Professor Hughes continues: “We know that our genome plays a key role in our dental development, and in a range of oral diseases; we know that the oral microbiota also play a key role in the state of our health; we now have the potential to develop an epigenetic profile of a patient, and use all three of these factors to provide a more personalised level of care.”

“Other potential oral health targets for the study of epigenetics include the inflammation and immune responses that lead to periodontitis, which can cause tooth loss; and the development and progression of oral cancers.”

The paper has been published in the Australian Dental Journal.
Sugar tax may be introduced, says chief medical officer

A sugar tax may need to be introduced to cut down on obesity rates, chief medical officer Dame Sally Davies has said.

According to the BBC, she told a committee of MPs that the government needs to be firm with food and drink manufacturers in order for them to reformulate their products.

Dame Sally said: “We have a generation of children who, because they’re overweight and their lack of activity, may well not live as long as my generation. They will be the first generation that live less, and that is of great concern.”

She added that she believed researchers will find that sugars are addictive, and the public needed to have “a big education” over how “calorie packed” some smoothies, fruit juices and carbonated drinks were.

“People need to know one’s fine, but not lots of them,” she said. “We may need to move towards some form of sugar tax, but I hope we don’t have to.”

Terry Jones of the Food and Drink Federation said any extra tax on sugar would “hit the poorest families hardest at a time when they can least afford it,” adding that sugar content was already clearly labelled among products’ ingredients.

Dentist saves patient’s life

A woman was saved by her dentist when she suffered a heart attack on her way to work.

According to the Ilford Recorder, Catherine Forman from Barkingside got a lift from a stranger during the London Tube strike. Once in the car, Catherine experienced a pain in her chest, breathlessness and loss of vision.

The driver stopped at The Valentine Dental Health Centre in Ilford where Dr Hitesh Mody (Catherine’s dentist) used his medical kit and knowledge from a DVD on emergencies in the surgery to provide first aid. Dr Mody administered aspirin and a spray containing glyceryl trinitrate which helps the heart to pump more easily while they waited for an ambulance to arrive.

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Buying a dental practice – everything you need to know

In the second of his series on buying a practice, Jon Drysdale considers the critical issues of where to look and how to assess its value.

Much like purchasing a house, often the hardest part of buying a practice is finding one that is suitable. The mantra ‘location, location, location’ isn’t necessarily as important as with house buying because you’re not going to live there and don’t need to consider such things as where your children will go to school.

I find most dentists know the broad geographical area they’re considering. Not all regions offer the same availability of practices so the larger the area you’ll consider, the greater your likely choice.

Town or country? Our experience of selling dental practices tells us that city centre practices and those close to large centres of population are in high demand. There are a variety of reasons for this not least because highly populated areas attract large numbers of dentists and competition for practices can be fierce. Also, corporate bodies tend to favour having practices in close proximity for the sake of efficiency (transfer of staff, ease of visiting etc) and this is usually only possible in large conurbations.

It doesn’t necessarily follow that city centre practices are more profitable than rural ones. Dentists prepared to look slightly further afield than cities and large towns may be rewarded by finding a practice which is great value for money and turns a good profit. Where you live in relation to the practice is a consideration. A commute of up to an hour each way is probably the limit for most dentists – after all dentistry is a demanding job, physically and mentally.

How to search? Wherever your desired practice location, it is worth registering with all the main dental practice agents to receive details of practices coming to market. Establishing your financial position with these agents is worthwhile in order that any offer you make is taken seriously. Preparing the groundwork for this is vital and part one of this series provided details on this.

Dental practice sales agents will usually provide a prospectus outlining the main financial aspects of the practice as well as details of turnover, equipment and location. An asking price for goodwill (usually including equipment) should be stated as should the price of purchasing any freehold property, if applicable. An asking price isn’t necessarily an accurate valuation, although it should be a realistic estimate of the eventual sale price. NHS practices in built...
up areas often sell for more than the asking price due to competing buyers. In this situation the agent should set a closing date for offers.

Many practices are sold by word of mouth, so keep your ear to the ground with colleagues and friends. Often associates get first refusal on buying the practice they work at. This can be a good way to buy, although negotiations on price can be difficult between a principal and an associate or associates trying to maintain a working relationship.

**How to value?**

As mentioned, the asking price may be determined by the selling agent. Making your own assessment of the value of a practice can be difficult. The key element to this is profitability and not, as is often thought, the turnover. While asking prices are commonly expressed relative to the turnover (e.g. 100 per cent of turnover) this is not necessarily a meaningful way to arrive at a valuation. For example, two practices in similar locations with a similar turnover but different levels of profit are probably not worth the same.

A professional valuer (see www.aspd.co.uk) will be able to offer their assessment of the practice having reviewed the financial information and equipment. For associates buying a practice where they already work, a jointly instructed valuation with the principal can be a good idea. This can be a good way to buy, although negotiations on price can be difficult between a principal and an associate or associates trying to maintain a working relationship.

Practice owners are unlikely to be impressed with an offer significantly (probably 10 per cent or more) lower than their stated asking price. For practices in popular locations this approach just won’t work. If the practice is being sold through an agent, remember the agent is acting for the vendor and not you the purchaser. Agents will take note of your credentials as a buyer including your financial position and discuss this with the practice owner.

If ‘best and final offers’ are requested this usually means there are multiple offers on the table and the practice is popular. Without stating the obvious, put your best offer forward, having first checked if this is financially viable. Don’t be too disheartened if you aren’t successful. The experience will be valuable and most dentists don’t buy the first practice they look at.

In part three of this series we will look at the different ownership options including partnerships and limited companies and the financial implications of each.

**Author Bio**

Jon Drysdale is an Independent Financial Adviser for PFM Dental, specialising in arranging finance for dentists buying a practice. For further information on the issues covered in this article please contact PFM Dental on 0845 201 4480 or visit pfm-dental.co.uk.

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“Kennedy’s wound was clearly incompatible with life”

Few people are granted the opportunity to become an active part of historical events. Seventy-six-year-old Dr Don T. Curtis, a former dentist and oral surgeon from Amarillo in Texas, is one of them. As a resident in oral and maxillofacial surgery at Parkland Memorial Hospital in Dallas, he was one of the first doctors to have performed emergency treatment on US President John F. Kennedy after he was shot on 22 November 1963. DTI Group Editor Daniel Zimmermann had the opportunity to speak with him about that day and the reason he thinks that there was more to the assassination than a lone gunman.

**Dr Don T. Curtis**: I have not seen it but I have heard criticism that it paints rather a sensationalised picture of the events. I guess I would go see it if it were shown here in Amarillo.

You began working at Parkland Memorial Hospital in 1963. What was your position back then?

At that time, I was half way through my first year of residency in oral and maxillofacial surgery. Before I took a residency there, I also completed an internship. I became interested in the field while working as a surgical technican in a general hospital during my time in dental school at the Texas A & M University Baylor College of Dentistry in Waco.

Were you aware of the president being in Dallas on 22 November 1963?

I was not aware of that and was surprised when they brought him to the hospital. I had a surgery scheduled for later that day and was on my way to have lunch. The way to the lunch-room however required me to leave the building and walk across the receiving area of the emergency room.
where I noticed police cars and the presidential limousine, which had blood on it and roses that were given to the First Lady, Jacqueline Kennedy, when she arrived at the airport. When a policeman asked me whether I was a doctor, I said yes. He then replied that the president was hurt and escorted me to the trauma room where President Kennedy was.

In what condition was Kennedy when you arrived?

When I got there, it was obvious that the president was in extremis. He was breathing rapidly, but was unable to do so. Dr Charles James Carrico, a Parkland resident surgeon, had placed an endotracheal tube in an attempt at ventilation. However, that did not work because there was a blockage of the president's airway, so he decided to do a tracheostomy.

I helped the nurse to undo the president's tie and remove his shirt to prepare him for the procedure. Then Dr Malcolm Perry, a senior surgeon, came into the room and it was decided that he should do the tracheostomy. Dr Carrico assisted Dr Perry, and I performed a cut-down on the left leg to provide for intravenous replacement of blood. When I looked up later, the room was filled with the senior chiefs of all surgical departments at Parkland. There were also some people I did not know.

"Nothing that we did made a difference. Kennedy's wound was clearly incompatible with life."

Were you aware that the president had been the subject of an assassination attempt?

I was unaware of the nature of the injury to the president because his head was on a pillow and I could not see a wound. I remember the chief of neurosurgery, Dr Kemp Clark, rotating Kennedy's head to the left, revealing that the posterior part of his skull had been radically fractured. He then said, "Stop; this injury is incompatible with life."

What was the atmosphere in the room?

It became very quiet. Nobody said anything.

In your opinion, was there any chance that the president's life could have been saved?

Nothing that we did made a difference. Kennedy's wound was clearly incompatible with life.

According to eyewitnesses, discussions broke out about who was authorised to do the autopsy. Did you notice any of that?

I did not because I left the trauma room soon after the president had been pronounced dead and went back to the clinic to see my patient in the operating room. However, I found that all scheduled surgeries for that day had been cancelled and all patients had been sent back to the ward.

Only a few surgeries were under way at that time, including that of Governor John Bowden Connally, who had also been injured during the shooting.

I told my patient that her surgery had been postponed. She understood that. Since there was nothing else for me to do, I then cleared my business in the clinic and went home. There, we spent the weekend watching television and listening to the news on the radio. We were relieved that President Lyndon B. Johnson had made it safely back to Washington and that the government was uninterested. Finally on Sunday, we learned that the suspect, Lee Harvey Oswald, had been shot, which indicated that there was something going on in addition to just a lone shooter.

The majority of Americans do not believe that Oswald acted alone, as concluded by the report of the Warren Commission appointed by the government to investigate the circumstances of the assassination. Did you observe any irregularities between this official version and the events you witnessed?

The Warren Commission's report reflected what the people wanted to hear, which was that Oswald acted alone and there was no conspiracy. The
doctors of Parkland however when wiping the blood from Kennedy's neck for the tracheostomy found a single bullet hole that was apparently an entrance wound, which meant that must have been a projectile that entered the president from the front. Because of its nature, the wound on the back of Kennedy's head was an exit wound, so there must have been at least two bullets that came through the front.

While all the doctors' testimonies, including mine, were included in the report, their knowledge of the wounds did not have much influence on the Commission's overall conclusion. Why it was interpreted that way has remained a mystery for the past 50 years.

What do you believe actually happened that day? My personal belief is that there were of course multiple shooters and that Oswald did not do it alone. This would indicate however that there was in fact a conspiracy.

After the events, you stayed at Parkland Memorial Hospital for another two years. Were the events discussed by the staff in the aftermath? We actually never talked about it. This was something we just did not want to discuss. However, I left Parkland in 1965 for an exchange residency in London and Zurich, where I often discussed the events with my colleagues abroad. Particularly in England, there was much interest in US politics and the assassination.

You recently went public with your knowledge after 50 years. What were your reasons for doing so? Everything that I would say is already in the literature about the assassination but I think there needs to be general knowledge of what people who were actually involved knew.

More than six million pages of classified evidence on the Kennedy assassination are going to be released by 2017. Are you interested in this knowledge, or do you consider that chapter of your life closed? There is a great deal of speculation of what information these documents actually contain. I do not look forward to it but would be interested to know what could be learned from them.
Management of plaque related periodontal conditions

A clinical studying the assessment and management of plaque-related periodontal conditions of patients by the practitioners at a general dental practice in Hertfordshire in 2013

Abstract:
Undiagnosed and unmanaged periodontal conditions are fast becoming one of the biggest areas of litigation and complaints within the dental field. Thorough periodontal assessment is vital for diagnosis, treatment planning and monitoring the progression of periodontal disease. This is a report of a clinical audit that studied the periodontal assessment carried out at a general dental practice in Stevenage, Herts. This audit was conducted over a seven month period, analysing 50 patients for each audit cycle. A new protocol for periodontal assessment using the guidelines of the British Society of Periodontology was introduced. The results demonstrate a marked improvement in assessing the periodontal condition of patients in this general dental practice.

Clinical relevance:
Regular periodontal assessment is required to aid diagnosis, treatment planning and monitoring of disease. Without such assessment, it is possible to misdiagnose, develop incorrect treatment plans and prevent objective assessment of disease progression. With the periodontium being the scaffold for all other restorative techniques performed by dentists, this is an essential area which must not be overlooked.

Aim:
The main objective for the audit is to investigate the standard of screening and treatment patients are receiving with regards to their periodontal condition. This will be achieved by ensuring that the number of 'Unacceptable' treatments provided is minimal, meaning the majority of patients seen at the practice receive at least an 'Acceptable' level of treatment, if not the 'Gold Standard' level. In this way, the audit aims to disprove the first null hypothesis.

Null Hypotheses:
The five dental practitioners being audited would not exceed the expected percentage of 50 per cent of patients being provided with Gold Standard treatment with regards to periodontal monitoring and management.

The five dental practitioners being audited would exceed the expected percentage of less than 10 per cent of patients being provided with Unacceptable treatment with regards to periodontal monitoring and management.

'Gold Standard' level, In this way, the audit aims to disprove the first null hypothesis.

A secondary objective is that, as long as the first objective is achieved, the majority of the patients receive the 'Gold Standard' of screening and treatment with regard to surgical periodontal therapy. Specific risk factors for patients were not included, such as smoking status and medical conditions. Ten patients were chosen at random from each of the GDP’s day lists. These patients had been seen within four weeks of 17th December 2012; the start date for the audit.

Inclusion criteria for the patients were as follows:
- The patient must have been seen for an exam within the four weeks prior to the audit start date. This ruled out the possibility that the patient had attended for an emergency appointment in the last four weeks, where a full exam including a periodontal screening may not have been carried out.
- The patients must have been over 18 at the time of their most recent exam and any edentulous patients were excluded. This meant that an exam must be completed.

'Description: This audit examined sets of patient's notes kept by the five dental practitioners (GDPs) working at the practice with regards to their periodontal screening process and any follow up treatment based on this. The type of treatment investigated was the initial treatment phase of plaque related periodontal conditions which concerned patient's oral hygiene habits, and any professional and patient-based cleaning of their teeth i.e. non-

'The aim of this audit is to assess periodontal screening and subsequent non-surgical periodontal treatment for patients with plaque-related periodontal conditions at the practice compared to that suggested in guidance documents.'
include a full periodontal screening, which may not have been done for children and adolescents, or patients without their natural teeth remaining.

A flow-chart was constructed which was followed during the auditing process in order to score each set of notes based on whether sufficient periodontal screening had been carried out and whether the correct subsequent non-surgical management was recommended or carried out based on the results of the screening.

Each of the sets of notes were studied and the flowchart followed in order to grade the overall process of the monitoring and managing plaque-related periodontal disease. The flowchart is shown in Ref 1.0.

By following the flowchart, each patient’s screening and management was given a score according to the number of correct steps completed. If any step had not been correctly completed this was reflected in the scoring system and lead to a lower overall score for the patient’s treatment.

A standard BPE was accepted as an appropriate screening of periodontal health during a patient’s exam.

If a patient had been offered the correct treatment (i.e. it was recommended) according to the findings of their screening, but had refused to accept or failed to attend for treatment suggested by the GDP, the practitioner was scored according to the steps taken up to that point in the management of the patient. This was considered acceptable treatment delivered by the GDP as it was the patient’s choice not to undergo suggested procedures.

Eight patients included in the first cycle and one patient in the second cycle of audit declined treatment which was recommended to them. Two patients in the first cycle were found to be edentulous when examining the notes and so were re-selected; none were found to be edentulous in the second cycle.

Since the default recall time for patients attending this practice is six monthly, this was accepted as the intended follow-up time for a patient where no specific recall period was stated in the notes. If the patient needed to be seen before this time, it should be written in the patient's notes e.g. ‘Follow-up 5-4 months’, or modified on the computer system, which was also checked at time of audit. This would be appropriate for any patients with a BPE of 3, 4, * or with pockets ≥ 4 mm, who had undergone plaque-related periodontal treatment for this, in order to monitor healing and observe where further treatment may be necessary. Therefore if, for these patients, a recall period was not stated in their notes or modified on the computer system following treatment, this was seen as inappropriate follow-up.

Table 1.0

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Expected Percentage</th>
<th>Actual Percentage Audit Cycle 1</th>
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<td>Gold Standard</td>
<td>&gt; 50</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Acceptable</td>
<td>≤ 50*</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Unacceptable</td>
<td>&lt; 10</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Table 1.1

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Expected Percentage</th>
<th>Actual Percentage Audit Cycle 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold Standard</td>
<td>&gt; 50</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Acceptable</td>
<td>≤ 50*</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Unacceptable</td>
<td>&lt; 10</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Sources:
Features of the complete drugs kit
- Supplied in a bespoke bag for easy storage and transport
- Supplied with algorithms on management of medical emergencies
- Items can be bought individually or as part of a combination
- No intravenous access required for the drugs

¹ All drugs are only available to prescribing medical professionals
² Bag is an optional extra and will incur a charge
³ Only applies to certain products

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Results Cycle 1:
The expected and actual percentages of each category found during the first cycle of the audit are shown below.

It was expected that Gold Standard screening and treatment for plaque-related periodontal conditions should make up more than 50 per cent of the results and that Unacceptable periodontal screening and treatment should make up less than 10 per cent. If both of these criteria are satisfied, Acceptable treatments would represent anything from 0 per cent to 50 per cent, which is why the expected percentage for Acceptable treatments is stated as less than or equal to 50 per cent where Gold Standard and Unacceptable treatments are within the stated expected values. Where Gold Standard treatments do not make up more than 50 per cent, but Unacceptable treatments make up less than 10 per cent, the Acceptable treatment percentage will rise above 50 per cent.

As shown by the graph (Ref 1.1), the percentage of all treatment standards found in the first cycle of audit were outside the expected values. The Acceptable level of treatment was delivered to 56 per cent of patients included in the audit, which is above the expected 50 per cent. Due to the Unacceptable treatment being above the expected 10 per cent of patients provided this level of treatment, this meant that the Gold Standard level of treatment was delivered to less than 50 per cent of patients.

The results from the first cycle of audit prove both null hypotheses correct, and thus the aims of the audit to disprove these are not met during this cycle. Therefore changes must be implemented at the practice in order to improve the levels of treatments being provided to patients at the practice with regards to their periodontal condition and disprove the hypotheses.

In order to improve these results, the Gold Standard level of treatment provided must be increased and the Unacceptable level of treatment provided must be decreased.

When examining the raw data collected during cycle one of the audit, there are some obvious areas which needed to be improved in order to increase the level of Gold Standard treatment and decrease the level of Unacceptable treatment provided. Where treatment was Unacceptable, this was mainly because a BPE had not been performed at any examinations within the last year. Another point to note was that the majority of treatments provided within the Acceptable

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- Glucagon injection (1 mg)
- Oral glucose gel
- Midazolam 10 mg (buccal)

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Changes implemented to improve overall standard of treatment provided: As an audit, a specific pattern shown from the scores for the different practitioners, it was not deemed appropriate to speak to each individually to improve the results, but to implement a method which would improve the practice’s score as a whole for periodontal diagnoses, management and follow up. With this in mind, a sticker was designed and printed, which was to be stuck in each patient’s notes who was attending for a regular check-up, and which recorded the patient’s periodontal condition at the practice. It was found during the second cycle of audit that where the stickers were used in the patient’s notes, Gold Standard treatment was delivered or planned, resulting in the significant improvement in the findings during the second cycle.

The next step to improve the results further would be to ensure that all dentists are using the stickers during every adult patient exam, as where this wasn’t being done, some elements were still being omitted resulting in a treatment which was less than Gold Standard. In the future the monitoring and management of periodontal condition will need to be re- audited to ensure these standards are maintained and improved on where possible. The results from both cycles can be seen represented in the pie charts in Ref 1.4.

Limitations and Improvements to the Audit: There are many limitations to this audit and possible improvements which could be made to refine the results and give a much broader and more accurate representative of peri- odontal screening and treatment at the practice. Firstly, a very small sample size was considered. According to the number of patients recorded on the practice system, 50 patients make up about 0.56% of the total population of the practice. A much larger sample size would be needed to make the results of the audit more reliable.

The presence, or otherwise, of risk factors for periodontal disease was not accounted for in this audit. The aim of the audit was to determine whether the correct non-surgical plaque-related treatment was being carried out for each patient according to the screening results, regardless of the risk factors, e.g. medical conditions, medications and smoking status. It was assumed that these risk factors were observed by the GDP and discussed or investigated accordingly. Also, the precise diagnosis arrived at for each patient was not investigated. The audit only looked at the basic principles of management and follow-up for periodontal conditions. The sticker designed is shown in Ref 1.2.

Using this, each practitioner would be able to concisely and quickly identify and inform the patient regarding a periodontal condition at their exam, and would be less likely to forget to include aspects such as a diagnosis and suggested follow-up period. The sticker is designed to give the practitioner a ‘tick system’ for the management of the patient’s periodontal condition. The treatment recommended for the BPE score found during the second cycle was used. In the next extensions to the treatment options, making it easy for the GDP to tick which treatment they recommend the patient should receive according to the BPE score and diagnosis recorded above. There is also an option to circle whether the GDP will carry out the treatment or whether it is to be carried out by the hygienist working at the practice.

These stickers were distributed between the four surgeries and sometimes were also given to the receptionists. Staff, including the GDP’s, nurses and receptionists, were instructed to place the stickers in patients’ notes if they were attending for a check-up only so that this could be completed at their appointment.

Following implementation of these stickers into the patient’s notes, patients who had attended for an exam and recording the score. As shown by the table (1.2) and the graph below (Ref 1.5), the results from the second cycle of the audit were found to be within the expected values set out at the beginning of the audit, therefore disproving both the null hypotheses. The audit has therefore achieved its aim by improving the overall standard of monitoring and management of patient’s periodontal conditions at the practice. It was found during the second cycle of audit that where the stickers were used in the patient’s notes, Gold Standard treatment was delivered or planned, resulting in the significant improvement in the findings during the second cycle.

It would be hard to judge whether a practitioner had made the correct diagnosis based on retrospective investment of patients’ notes alone and without examining the patient. It is likely that more than one investigator would need to carry out the audit and inter- and intra-examiner calibration would need to be done in order for this to be reliable and valid.

This is another improvement which could be picked up on with the current audit; only one examiner carried out the audit. This person may have had different judgements on whether the notes displayed ‘correct’ or ‘appropriate treatment’ according to the chart and flowchart which were followed when carrying out the audit. Again, it would be improved by having a second examiner present when auditing the patient’s notes, giving the opportunity for discussion and in order that a more rounded decision is made if there is any query over the treatment provided.

For the patients who refused to accept or commence appropriate treatment based on their BPE score, it was assumed that the practitioner explained the risks of not having the treatment suggested to the patient, and that this was sufficient for the patient to understand. For completeness, this aspect should be checked from the notes taken on the day to ensure these patients were able to make an informed decision on the treatment they had chosen to opt out of.

It was noted by members of staff at the practice that the stickers used to improve the results were a costly way of doing so, due to the expense of purchasing the stickers and then printing the design onto them. Following a successful trial period of the stickers used in patients’ notes at the practice. It may be more cost-effective to create a stamp which includes the information on the sticker, and use this to create the same template for patients’ notes instead. With this method, staff and GDP’s at the practice would be able to use the stamp multiple times, with only the initial expense of the stamp itself and occasional cost of ink pads.

Conclusion: Periodontal disease is becoming increasingly prevalent amongst today’s population due to, amongst other factors, people living for longer and maintaining their natural teeth later into life. For this reason it is essential to identify and manage any periodontal conditions as early as possible in the disease process in order to delay the deleterious effects of the condition and prevent it progressing further. In order to do this, we as dental professionals must have simple and effective methods of recording periodontal screenings and diagnoses so that we may recommend and deliver appropriate treatment to patients for these periodontal conditions.

As demonstrated by the implementation of a simple pro-forma during a patient examination, in this case in the form of a sticker, periodontal screening and management can be greatly improved. This quick and easy method allows the practitioner to cover all relevant areas of periodontal screening and management and means it is less likely that crucial periodontal treatments will be omitted from the process. With a reliable and replicable procedure such as this in place, the periodontal condition of patients attending the practice is more likely to remain healthier for longer. This will subsequently improve the prognosis of all other dental procedures delivered by the GDP, giving the patients a better quality of care overall.

Periodontal disease is becoming increasingly prevalent amongst today’s population due to, amongst other factors, people living for longer and maintaining their natural teeth later into life. For this reason it is essential to identify and manage any periodontal conditions.

Ref 1.3 Ref 1.4 Graph showing expected ranges of each category and actual percentages for second cycle Ref 1.4 Results from Cycle 1 and 2 represented in pie charts

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Victor Gehani

Sabina Wadhwani
Perio meets implant dentistry

Author Rainer Buchmann

The preservation of the natural dentition is the prerequisite in daily patient care. In advanced periodontal disease, the successful realisation of implant therapy requires knowledge in patient expectations, clinical diagnostics, proper surgical skills and delegation of basic services to dental hygienists. Implant treatment in severe periodontitis demands a two-step, time-tested approach, evaluating the outcomes of basic periodontal therapy before implant placement.

Integrated dentistry: Success

The successful positioning of dental partnerships in the fast-growing health market implicates predictable treatment strategies to save permanent teeth. According to orthopaedic, cardiac or vascular medicine, an on-time decision-making protocol for implant therapy is recommended to counterbalance functional and aesthetic discomfort in advanced endodontic and periodontal breakdown settings. Patient's current and future expectations drive our practices into the necessity to provide synergistic periodontal and implant treatment solutions. The advantages are:

- Optimising implant success by proceeding with periodontal therapy
- Enhanced economic profit due to by-effects from delegated scaling and root planing
- Promotion of oral and body health of both dental patients and staff members

The need to preserve healthy teeth and gums, the ever-expanding influences of web, TV and magazines and an increase in low-cost implant treatment render implant dentistry internationally attractive. The transition of dental practices into the implant market is reasonable, especially for growing dental partnerships. The capital investment and running costs for a surgical implant setting are redeemed by more than 30 implants a year. Because of the economic commitment, a careful financial strategy is needed not to neglect challenges and developing concepts preserving and salvaging compromised teeth from conservative and periodontal dentistry.

Decision-making

Classical implant therapy protocols comprise must-indications resulting in an immediate treatment plan. According to patient preferences, clinical settings and insurance plans, these must-indications with an ad-hoc implant placement recommendation are, in order of precedence:

- Long-term missing bridgeworks or prosthesis, edentulous mandible
- Advanced endodontic damage
- Trauma (tooth fracture)
- Oral cancer surgery

Periodontal diseases represent can-indications. Treatment planning is running more complex. The decision-making comprises a time-tested therapeutic approach. In advanced periodontal settings of more than 50 per cent bone loss with furcation involvement level III, patients suffer from oral discomfort. The tooth prognosis becomes less positive, the frequencies of follow-up visits increase (Fig 1). Periodontal therapy 'before' implant planning is aimed at saving doubtful (not hopeless) teeth with a grace period of at least three to six months to evaluate for periodontal treatment outcomes. Thorough scaling and root planing frequently results in a mid-term improvement (two years) up to a long-term stabilisation (five years) of preliminary affected teeth.

The decision to maintain the periodontally compromised dentition undergoes the following criteria (Fig 2):

- Patients with no preferences to comfort, aesthetics and costs
- Patients willing to accept enhanced tooth mobility, occasional

Perio meets implant dentistry

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The decision to maintain the periodontally compromised dentition undergoes the following criteria (Fig 2):

- Patients with no preferences to comfort, aesthetics and costs
- Patients willing to accept enhanced tooth mobility, occasional
food impaction and frequent professional tooth cleaning.

- Individuals with chronic diseases and autoimmune disorders

The recommendation to replace affected teeth with implants is indicated in the following clinical situations and should be planned on-time after completion of periodontal therapy (three to six months):

- Patients running a demanding business striving for fixed teeth
- Enhanced masticatory and cleanclearance

- Long-term rehabilitation without input in time, effort and expenses

Currently, the items above are effective at implant placements within the local bone, minor lateral hard and soft tissue deficiencies, following sinus floor elevation, in settings with sufficient implant abutment distances of 3mm and after periodontal therapy. Extended surgical protocols enhance treatment time (Fig 5), render the case prognosis uncertain and may aggravate long-term success.

Implant therapy in advanced periodontal disease

The survival rates of teeth with severe periodontal damage published in evidence-based studies are rarely valid for patients requiring treatment in dental offices (Fig 6). Shortcomings in oral hygiene, lack in supportive care, oral dysfunctions, stress, smoking and general disorders abbreviate the function times of periodontally compromised teeth sustainability.

The advice to replace affected teeth with implants in advanced periodontal settings within the maxilla implicates on-time patient information of the second and third molar removal: implant placement and prosthetic bridge works are scheduled in the functional masticatory area until to the first molar. In the mandible, the second molars can be preserved due to their beneficial root anatomy. They should be restored, but not included in implant planning. Following the removal of the first molar in the maxilla, the implant therapy is often preceded (if the supporting bone is less than 6mm) or accompanied by a simultaneous sinus lift. The current treatment plan in periodontally compromised patients results in a reduced denition (Fig 5):

- Fixed bridge works in the maxilla and mandible up to the first molar
- Maxilla: preservation of premolars and first molars, tooth removal and implant therapy with sinus floor elevation at furcation involvement level III (Fig 6)
- Mandible: preservation of second molars, restoration, no inclusion into bridge works
- Volume thickening with free autogenous gingival grafts in initial thin biotype settings (Fig 7)

- Short implants in both esthetically and functionally less demanding situations as an alternative to surgical augmentation (Fig 8).

Low bone quality (D3/D4), lateral hard-tissue deficiencies and increased mechanical loading are contraindications for short implants. According to conventional implant rehabilitation, the horizontal width of the alveolar bone crest is the fundament for functional stabilisation, vascularisation and nutrition, thus for implant survival and clinical success (Fig 9).

Inflammation and hygiene

Clinical healthy and stable implants are completely covered within the alveolar bone by osseointegration. They also are attached to the peri-implant gingiva and thereby become functionally included into the body’s metabolism. This explains the high overall survival rates of oral implants between eight and more than 15 years. The combination of

- A thin biotype gingiva with lack of soft tissue protection
- Functional overload due to mastication and a missing frontal-vascularche canal equilibrium
- Loss of biofilm protection by periodontal diseases often causes mid-term damages (two years after functional loading) of the implant-to-bone interface. Like periodontally affected teeth with lack of hygiene access and enhanced biofilm accumulation, implants develop a potential risk of inflammation when bacteria enter the implant-to-bone interface (Fig 10). If the close hard and soft tissue scaling disappears irreversibly, foreign-body infections occur within the oral cavity, which are more harmful for the implant-supporting bone and the body health than periodontal diseases. The best protection against peri-implant inflammation is not avoiding implants: a careful implant placement strategy with concomitant thickening of the surrounding tissue and relief from functional overload precede by comprehensive periodontal therapy (Fig 11).

Summary

In advanced periodontal diseases, the network between medical progress and ever-expanding patient’s expectations requires a time-tested schedule with a grace period of three to six months to evaluate the affected dentition for periodontal treatment outcomes. If patients anticipate immediately fixed and aesthetic restorations, on-time implant therapy with minimal augmentative solutions is recommended. Preservation of periodontally compromised natural teeth is advised when patients display no preference for further comfort and aesthetics. Periodontal therapy is continued, supplemented with surgery in advanced intra-bony settings where oral hygiene is impaired. The long-term success for the natural dentition and implants similarly depends on patient’s medical and local risk factors that cannot be forecasted with any genetic or susceptibility test for sale.

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Fig. 1 Treatment of advanced periodontal disease with implants replacing the natural dentition is recommended “time tested” 1.5 months following periodontal therapy (SP).

Fig. 2 Exclusion criteria for implants with continuation of saving natural teeth after comprehensive periodontal therapy.

Fig. 3 Peri-implant perilesion chart illustrates the survival rates of teeth with advanced periodontal bone loss in daily practice down to 2-3 years.

Fig. 4 Inflamed apical areas indicate the presence of peri-implant inflammation (Photo: Kochhan)

Fig. 5 Consequences of a safe implant treatment protocol in advanced periodontal disease.

Fig. 6 The peri-surgical access to the lateral sinus is a key approach to promote implant supported bone in the maxilla. Plants are not advocated, internal lifts technique outcomes.

Fig. 7 Volume thickening with a free gingival graft in an initial thin tissue with buccal perforation.

Fig. 8 Short implants are advised in critical anatomic situations where the alveolar bone width is sufficient. Functionally, they represent an alternative to classical augmentation protocols (Photo: Kochhan)

Fig. 9 Insertion of short implants close to the alveolar nerve in the mandible with sufficient alveolar bone width (Photo: Kochhan)

Fig. 10 Implants require a comprehensive maintenance care. Peri-implant infections trigger foreign body infections that are more harmful for the body health than periodontal diseases.

Fig. 11 Peri-implant therapy lowers the inflammatory burden and promotes health while optimizing body metabolism with stimulating effects onto the vascular system.
Advancements in dental technology offer better solutions for traditional oral health problems than ever before. Technology makes dentistry as comfortable, durable, efficient and natural-looking for the patient as possible. Patient and dentist benefit from newer techniques that are less invasive and more dependable than ever before. Procedures that formerly took multiple trips to the dentist or required multiple health care providers can now often be performed in the comfort of one surgery by one qualified provider.

Technology increases efficiency significantly. With the latest generation of dental equipment, patients see exactly what you see. This creates trust and empowers them to make decisions about their own care, and not rely purely on the first advice they’re given.

Technology also helps with patient education and case acceptance. If someone is missing a tooth, the team can virtually place an implant and crown with 3D scans and show them exactly where the tooth will go. Patients can see digital X-rays and photos of their teeth blown up on flat screen monitors right in front of or above their dental chair.

Showing patients what’s going on in their mouth, versus just trying to explain it, leads to quicker understanding and fewer questions, making both dental practitioner and hygienist’s job easier.

A system that’s going to particularly appeal to hygienists is Acteon’s Air-n-Go, This is the first dual purpose – supra and perio – air polisher. No other polisher better exemplifies the possibilities of combining the beauty and health of your patients’ teeth. It speeds up treatment, maximising your time, while giving your patients the most gentle, yet powerful cleaning experience they’ve ever encountered.

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Air-n-Go is extremely versatile. The device is made up of a convertible handpiece, available in supra and perio versions, that are compatible with high performance powders, unique in that they are made from all natural components and taste great. Treatments are very gentle, which results in a significant reduction in bleeding and pain. A winning combination for patient choice.

The reason for Air-n-Go’s versatility is its convertible handpiece. This increases options for supra-gingival and sub-gingival treatments. In Supra mode, it helps you achieve perfect cosmetic results with fast, effective, painless polishing that is gentle to both the gingiva and teeth. In Perio mode, it transforms into a simple and efficient device to treat periodontal disease and peri-implantitis sub-gingivally. Just 20 seconds of maintenance is enough to treat periodontitis or peri-implantitis effectively.

The ergonomic handpiece The handpiece has been designed to create better working conditions for whoever handles it. It is fine, light-weight, well balanced, easy to manipulate and has 360° rotation, resulting in less stress and less manual fatigue. It enables smooth, fast movement, improved visibility and excellent accessibility, even in the difficult to reach posterior areas. A non-slip silicone ring on the front gives you a better grip during treatment – even with wet gloves. Manipulation of the handpiece ensures you exert less pressure, making it suitable for smaller hands and as it rests on the front gives you a better view of the treated area, but also to rinse out the interior of the device.

By pressing the ‘stop powder’ button, at the back of the tank, you cut off the powder flow, which transforms the air polisher into an air and water syringe. This feature allows you not only to clean the treated area, but also to rinse out the interior of the device.

Switching from supra mode to perio couldn’t be simpler or quicker. You select the nozzle, power and the tank – depending on the treatment – and then choose which mode you want without any need to change instrument.

This has the added benefit of needing only one direct connection to the delivery system and other convenience features include:

- Three nozzles cover a variety of applications, including prophylaxis, periodontal and implant maintenance
- Two exchangeable heads, a long and a short one, suit all hand sizes
- Two tanks – supra and perio – come with a ‘Clip-n’Go’ connector (bayonet type) and a colour coding system for identification
- Specific powders for each type of treatment: supra-gingival and sub-gingival applications
- Autoclavable (except for the tank and its lid), all parts of Air-n-Go can be cleaned, to prevent the risk of clogging and to ensure the best hygiene

In Supra mode, the indications are:

- Polishing – to finish after scaling or to prepare for bleaching
- Cleaning – interproximal areas, fissures and troughs, preparation of the tooth surface before etching and orthodontic brackets
- Removal – biofilm, plaque, stains and remnants of temporary cement

In Perio mode, the indications are:

- When combined with the action of ultra-fine glycine-based ‘Perio’ powder, the Air-n-Go is used for sub-gingival pockets of between 4-10mm, in addition to initial therapy. It provides remarkable therapeutic results, with a considerable reduction of inflammation and pocket during the phase of initial periodontal treatment. And the nozzle comes with 5.6-9mm depth markings to allow rapid assessment of the health of a patient during sub-gingival treatments. The use of this device eliminates bacteria in the pocket and prevents recurrence of the disease.

And it’s worth noting here that ‘Perio’ powder can also be used in supra mode for the prevention and control of periodontitis and peri-implantitis in just 20 seconds is now possible.

Dry air makes the polishing effect is much more effective.

The well-being approach to prophylaxis is a concept that is perfectly matched to the needs and wants of your patients. The Classic range of Air-n-Go powders are indicated for maintenance, prevention of tooth decay and improving the oral hygiene of the patient. Their abrasive properties cause no damage to the enamel, the gingiva or the root surface.

This range comes in a variety of flavours that each patient chooses, according to individual taste. There is a choice of cola, raspberry, neutral, peppermint or lemon. The fine balance between flavour and sodium saccharin concentration removes any unpleasant taste and offers a feeling of freshness.

Air-n-Go powders are indicated for supra-gingival and sub-gingival treatments. The use of this treatment is now possible.

And it’s worth noting here that ‘Perio’ powder can also be used in supra mode for the prevention and control of periodontitis and peri-implantitis in just 20 seconds is now possible.

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Air-n-Go is an ideal complement to Arston’s Newton portfolio of piezo-ultrasonic equipment too.

The reasons for Air-n-Go’s success are:

- In contact with water, micro-particles shrink slightly: the polishing effect is much more effective
- The powder dissolves gently, which avoids trauma to the delicate tissues and prevents the risk of clogging.

So what do patients think? “I have a double problem: I’m hooked on caffeine and cigarettes! So it’s not surprising my smile was not very attractive, with stained, dull teeth. The results of this treatment are really impressive and visible! I no longer have the unsightly stains on my teeth that used to stop me from smiling normally.” Stephanie, 23.

“I love being able to choose the flavour I want. For once, I can have my say at the dentists! I really liked the raspberry – it was almost as if I was actually eating some.” Mayu, 11.

“Like many people, I’m afraid of going to the dentist and I hate having my teeth polished. You have to admit that it hurts and isn’t pleasant at all. But this time, it was quite the opposite – completely different! During this session, I forgot my fear and felt no pain at all, although I’m very sensitive where my teeth are involved. It made me want to come back to my dentist!” Carlos, 31.

“The flavours I was offered are amazing. I wanted to try them all! In fact, I got carried away and tried two: peppermint and raspberry.” Rachel Kendrick, 31.

The tooth or implant may be treated without changing instruments. It also means that treating periodontitis or peri-implantitis in just 20 seconds is now possible.

Air-n-Go’s vast array of uses includes:

- Assessing and controlling periodontal diseases
- Eliminating bacteria, improving the oral hygiene
- Assisting in the treatment of tooth decay
- Preventing the recurrence of disease
- Treating root surface

Many patients think of a polishing session as an unpleasant experience, so the motivation to establish a maintenance plan fades quickly. Most sodium bicarbonate-based powders are composed of layered particles, with angular geometries which have an abrasive effect that is too aggressive on delicate tissues.

For this reason, Satale’s research and development department studied these angles and shapes to come up with a formula that is more suitable. The new powder formulation they developed specifically reduces the sensation of pain and bleeding caused by most of the others on the market.

The anti-clogging and controlled hydrophobic properties of these powders give them a dual action effect:

- Prevents periodontitis and peri-implantitis
- Reduces supragingival plaque
- Reduces subgingival plaque
- Prevents bacterial accumulation
- Improves oral hygiene
- Maintains a healthy mouth
- Provides a pleasant experience, so the motivation to establish a maintenance plan fades quickly.

The author

Rachel Kendrick is a freelance journalist with a special interest in the dental sector.

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New Advanced Defence Gum Treatment cuts gingival bleeding by 50.9% in just 4 weeks.

Introducing the latest in the professional range from LISTERINE® – a twice-daily mouthwash clinically proven to treat gum disease as an adjunct to mechanical cleaning.

Advanced Defence Gum Treatment is an alternative to chlorhexidine-based remedies. It’s formulated with unique LAE (Ethyl Lauroyl Arginate) technology that forms a physical coating on the pellicle to prevent bacteria attaching, and so interrupts biofilm formation.

When used after brushing it treats gum disease by reducing bleeding; 50.9% (p<0.001) in only 4 weeks.

In addition, Advanced Defence Gum Treatment is designed to not cause staining.

References:
1. Bleeding Index Reduction DOF 1 – 2013 (LDR8A001).
   50.9% reduction in whole-mouth mean Bleeding Index at 4 weeks.
2. DOF 2 – 2013 (LDR8P70006).
   NEC/L/13-024/0b

Advanced Defence against gum disease
In about the middle of 2013 and in a fit of post-CQC inspection guilt that I had cast aside mundane management issues for more interesting pastimes, I decided to carry out an audit on my treatment profile. I wanted to find out whether the type of cases I was treating had changed over time.

I was not really expecting to improve anything within the practice, as some audits do, but I was seeking clarification as to whether the nature of the treatments I was carrying out were becoming more complex requiring greater time and effort as I had thought, or whether I was just becoming more knackered and complaining with age!

Treatment sessions were categorised and I analysed four random months of appointments three years apart.

The result of the null hypothesis was, I have to admit, inconclusive, but as a pilot study it gave me some food for thought and what I would like to share with you was a finding that might shock (or not, depending on how much of a sceptic you are).

Above some of the more complex stratified layers of categories was, Primary Treatment, Retreatment unrelated to Primary Treatment, and Retreatment due to unsatisfactory Primary Treatment.

A staggering 45.4 per cent of my treatment time in a random period of four months, was spent treating the consequences of other dentists’ substandard work. Whether due to underfilling, under extension, missed canals, poor coronal seals, ledges, transportation, or perforation, I was spending almost half of my time sorting out the legacy of poor primary root canal treatment.

Being fair, not all retreatment work was done due to poor treatment and 21.8 per cent of my time was spent diagnosing and retreating issues probably unrelated to the quality of the root treatment, such as fracture, complex anatomy, lateral canals, and extra radicular infection.

Returning to the eye watering 43.4 per cent, this will not come as a great surprise to the hospital endodontists who are sitting on a huge mountain of never-to-be-managed ‘GP Retreat’ referrals, as they were categorised at the Eastman Dental Institute.

For those of a more cynical outlook this could be considered good news for specialist endodontists such as myself,
‘Treatment carried out correctly at the primary stage is easier, and more successful, and should be done most of the time by competent general practitioners’

...or two. Could this be the next big legal bonanza after injuries at work? Text messages reading ‘Contact us if you have had root canal treatment’? It is of course how you tell it, and most patients are very reasonable (many times too reasonable!), but the process leaves a poor impression. A patient loses confidence in the general practitioner they have had faith in for many years, and with the dental profession as a whole.

2. Treatment management. Re-treatments are more complex and time-consuming than primary treatment. This makes the process more expensive and what with deconstruction, retreatment and then a new restoration if successful, the expense will not be that far away from an extraction and implant placement.

3. Treatment prognosis. The more complex treatment is, the higher the failure rate. By-passing materials, ledges and blockages created by a previous visitor, is not always possible, bringing in the possible need for surgery to accomplish treatment objectives. Even if a technical masterpiece is achieved, our success/failure research clearly shows retreatment success lagging 10-15 per cent behind primary treatment. The reason for this is that the contaminating bacteria are no longer primarily anaerobic as in primary treatment, but more hardy and resistant facultative anaerobes.

The solution to this ever-growing mountain of iatrogenic endodontic disease and patient dissatisfaction, is education. It may be a simplistic approach but I believe that if general dental practitioners were taught how to carry out effective endodontic treatment first time around, much future grief could be avoided.

Indeed, there are political issues at the heart of this, but if dedicated practitioners truly understood the issues at hand, maybe they would not let themselves be pushed around by government agencies only interested in saving money.

Treatment carried out correctly at the primary stage is easier, and more successful, and should be done most of the time by competent general practitioners. There will be complex primary treatments, but these can be recognised and the general practitioner should have an understanding of their own capabilities. If they don’t feel confident, the patient should be referred to your friendly local endodontist or specialist hospital department. After all, 45.4 per cent of their time could now be spent twiddling their thumbs!

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forums, ensuring delegates’ success in practise. If you missed the team at the recent Inman Aligner Training Congress at the NEC, you have missed the opportunity to learn from world-renowned cosmetic orthodontic instructor Rick DePaul. Details were discussed on the advantages and limitations of each system to delegates, promoting an ethical approach to all cases both basic and complex. Delegates were able to ask questions at each presentation, of course, but it was during the open forum when Dr Nick Hall, orthodontist at Castellini and Tavom UK, shared his experience of using the new surgery. The instruction on the use of the Skema 6 Cart was straightforward and hands on with help easily available if required. Having used the new equipment for six months now I can say it has functioned perfectly, keeping the surgery running smoothly and efficiently. Overall the level of service from Castellini and Tavom UK is excellent.

5050 Disinfectant Wipes free!

This is an excellent time to try ChairSafe Heavy-Duty Microfibre wipes. Buy 2 x 250 complete tubs before the end of March and receive a free pack of two dry wipes for free! A saving of £10.00. ChairSafe wipes should be used for daily disinfection of surfaces close to the patient e.g. dental chair, door handles and work surfaces.

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As a result the tablet contains a module that highlights the aspects of CQC relevant to dental practices, helping them implement effective audits and action plans to enable them to view and evidence their compliance. It’s making a completed job much easier.

"It seemed like a perfect marriage – our CQC understanding and IT skills combined with the 3M Teausch Touch team’s dental experience and expertise,” he says.

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"It’s the module is also very scalable, so information is provided at group, regional and national level and as a collaborative platform, it offers a very useful management tool for dental co-operatives and networks.”

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Tavom UK realises that designing a high quality practice to the British dental profession behind us. It is intended to chance. Listening to the market has ensured the team provide the right service to the British dental profession to the British dental profession. "As a result the tablet contains a module that highlights the aspects of CQC relevant to dental practices, helping them implement effective audits and action plans to enhance and evidence their compliance. It’s making a difference.

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