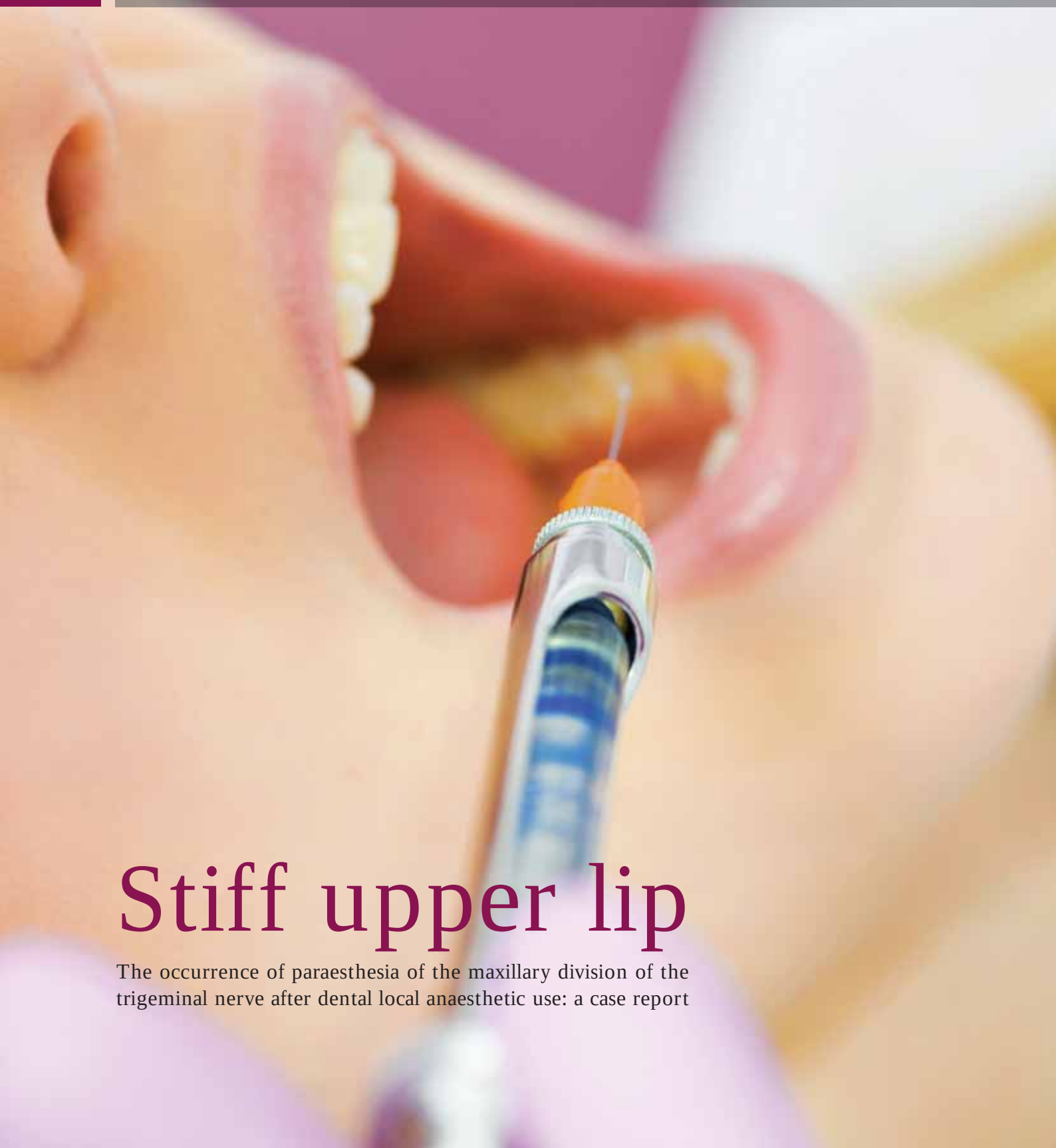
Volume 61 Number 1
February/March 2015

JIDA

Journal of the Irish Dental Association
Iris Cumainn Déadach na hÉireann

IDA
irish dental association



Stiff upper lip

The occurrence of paraesthesia of the maxillary division of the trigeminal nerve after dental local anaesthetic use: a case report

Professional and practice development

Digital planning

Regenerative solutions

Implants

Restorations

STEPPS™ SIMPLANT® SYMBIOS® ANKYLOS® ATLANTIS™

ASTRA TECH IMPLANT SYSTEM

XiVE®

Comprehensive solutions for all phases of implant dentistry

Deliver lasting patient-specific outcomes with premium solutions designed for long-term function and optimum aesthetics

Want to get started in implant dentistry?
Learn to restore dental implants through a local implant partner or a 'R£LAX' event near you. Visit:

Why not join us?

☎ UK: 0845 450 0586

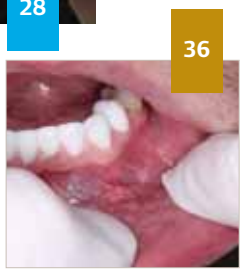
☎ Ireland: 00 44 845 450 0586

www.dentsplyimplants.co.uk

implants.uk@dentsply.com

DENTSPLY IMPLANTS

CONTENTS



JIDA Official journal for IRELAND'S DENTAL PROFESSIONALS

The *Journal of the Irish Dental Association* is the official publication of the Irish Dental Association. The opinions expressed in the Journal are, however, those of the authors and cannot be construed as reflecting the Association's views. The editor reserves the right to edit all copy submitted to the Journal. Publication of an advertisement does not necessarily imply that the IDA agrees with or supports the claims therein.

For advice to authors, please see: www.dentist.ie/resources/jida/authors.jsp

Published on behalf of the IDA by Think Media, 537 NCR, Dublin 1
T: +353 1 856 1166 www.thinkmedia.ie

EDITORIAL **Ann-Marie Hardiman, Paul O'Grady**

DESIGN/LAYOUT **Tony Byrne, Tom Cullen, Ruth O'Sullivan**

ADVERTISING **Paul O'Grady** paul@thinkmedia.ie

Irish Dental Association Unit 2 Leopardstown Office Park, Sandyford, Dublin 18.
Tel: +353 1 295 0072 Fax: +353 1 295 0092 www.dentist.ie
Follow us on Facebook (Irish Dental Association) and Twitter (IrishDentists).

Magazines Ireland | IDTA | abc

Total average net circulation 01/01/13 to 31/12/13: **3,506 copies** per issue.
Circulated to all registered dentists in the Republic of Ireland and Northern Ireland.

More effective caries prevention than a regular fluoride toothpaste

76% reduction in root carious lesions[1]

Prescribe Colgate® Duraphat® Fluoride Toothpaste

Colgate Duraphat® Proven caries protection

Colgate YOUR PARTNER IN ORAL HEALTH

www.colgateprofessional.ie

Name of the medicinal product: Duraphat® 5000 ppm Fluoride Toothpaste. **Active ingredient:** Sodium Fluoride 1.1 %w/w (5000ppm F). **Indications:** For the prevention of dental caries in adolescents and adults, particularly amongst patients at risk from multiple caries (coronal and/or root caries). **Dosage and administration:** Brush carefully on a daily basis applying a 2 cm ribbon onto the toothbrush for each brushing, 3 times daily, after each meal. **Contraindications:** This medicinal product must not be used in cases of hypersensitivity to the active substance or to any of the excipients. **Special warnings and precautions for use:** An increased number of potential fluoride sources may lead to fluorosis. Before using fluoride medicines such as Duraphat, an assessment of overall fluoride intake (i.e. drinking water, fluoridated salt, other fluoride medicines - tablets, drops, gum or toothpaste) should be done. Fluoride tablets, drops, chewing gum, gels or varnishes and fluoridated water or salt should be avoided during use of Duraphat Toothpaste. When carrying out overall calculations of the recommended fluoride ion intake, which is 0.05 mg/kg per day from all sources, not exceeding 1 mg per day, allowance must be made for possible ingestion of toothpaste (each tube of Duraphat 500 mg/100 g Toothpaste contains 255 mg of fluoride ions). This product contains Sodium Benzoate. Sodium Benzoate is a mild irritant to the skin, eyes and mucous membrane. **Undesirable effects:** Gastrointestinal disorders: Frequency not known (cannot be estimated from the available data): burning oral sensation. Immune system disorders: Rare (≥1/10,000 to <1/1,000): Hypersensitivity reactions. **Legal classification:** POM. **Marketing authorisation number:** PA 0320/008/002. **Marketing authorisation holder:** Colgate-Palmolive (U.K.) Ltd. Guildford Business Park, Midleton Road, Guildford, Surrey, GU2 8JZ. **Recommended retail price:** €8.99 (51g tube). **Date of revision of text:** July 2012.

Reference: 1. Baysan A, Lynch E, Ellwood R et al. Caries Res 2001;35:41-46.

Prof. Leo F. A. Stassen
Honorary Editor

Gritting (or should that be baring?) our teeth

There was much frustration and anger directed by members of the profession at the Chief Dental Officer at the recent meeting in Croke Park.

There is much to point readers to in this edition. The report of the Association's annual practice management seminar, which took place in Croke Park, is in our members' only section. It contained fascinating presentations, but perhaps the most significant element was the frustration evident in the comments from the members to the Chief Dental Officer, Dr Dympna Kavanagh. Drs McAlister, Garvey, Holohan and O'Toole, among others, made it clear that the actions of the Department of Health and the HSE have resulted in sub-standard care for our patients. Dr Garvey spoke on all our behalves when she spoke of the anger we feel at the failure of the State to properly provide for the care of our children and our elderly. Dr McAlister identified the removal of the scale and polish "at the stroke of a pen" as a particularly retrograde step, leading to what Dr Holohan termed the dentistry of 50 years ago – extraction and dentures. Surely we can do better. As the economy lifts, patients can reasonably expect better treatment. The Chief Dental Officer has power and influence and she should act now to use it for the good of our citizens. The next speaker after the comments, as it happens, was our Chief Executive, Fintan Hourihan, who said he regretted the apparent lack of trust between the HSE and the dental profession, and observed that while the Association prefers to work with the HSE and the Department, it was just as happy to work against them where necessary.

Peer reviewed

The *Journal* is grateful to Dr Abigail Moore for her excellent clinical article on management of the anxious child in the dental setting (pp30-32). Dr Moore provides a step-by-step approach, which will be of great practical use to dentists in their efforts to treat children.

The occurrence of paraesthesia after dental local anaesthetic use is a rare event in general dental practice. However, we have a case study of a 38-year-old Caucasian female with persistent numbness in her upper left lip following use of 2% lidocaine with 1:80,000 epinephrine. The report is from Dr Advan Moorthy and can be read on pp34-35. We also have an excellent paper on adverse reactions to facial dermal fillers – it's another case report. It's from Dr Elaine Kehily and her colleagues.

The advent of the new Dental Act will make continuing professional education compulsory and so a study of dentists' requirement for same is welcome and timely. It can be read on pp40-44.

Concern at fluoride debate

Bad Science author and epidemiologist Bed Goldacre will speak at the IDA's Annual Conference in Cork in April. He is interviewed in this edition, and our journalist Ann-Marie Hardiman asked him for a comment on the fluoride debate. Interestingly, he was not aware of the current debate in Ireland. We are, though, and we need to be aware of it.

Can I appeal to dentists to watch for debates in the local councils? If there is a debate coming up in your area, please contact the IDA office for any information you might want to bring to the attention of councillors before any votes are taken.

Refreshing design

This, as you will already have noticed, is a new-look *Journal*. It's a fresh approach to a successful formula – one that you, our readers, have consistently told us that you appreciate. We are always open to your views and we welcome letters, articles, quizzes, scientific papers, reviews of literature, case studies, clinical articles, and practice management articles from you. Whether you contribute or not, it's still your *Journal* and we hope you like the new look.

The new Sirona **INTEGO** available from Henry Schein Ireland for as little as €70 per week*

sirona
The Dental Company

INTEGO.
PERFORMANCE YOU CAN RELY ON.

INTEGO is quite simply the best treatment center in its class. Its ergonomic design perfectly combines appearance and functionality, while its outstanding "Made in Germany" quality doesn't just satisfy – it impresses. The two designs, INTEGO and INTEGO pro, can be flexibly configured foryou're your requirements. Whether you select the whip arm or the hanging hoses design, every option delivers optimal performance at a fair price – offering great value in every respect.
Enjoy every day. With Sirona.

*Prices quoted exclude VAT

For details please contact: Jim Way 086 8123519 or Richard Kenny 086 6069628

Dublin: 01 456 5288 • Cork: 021 429 7818
• Email: iesales@henryschein.ie • Online: henryschein.ie
• HenrySchein.ie • HenryScheinIE

HENRY SCHEIN®
IRELAND LIMITED

PRESIDENT'S NEWS

Dr Peter Gannon
IDA President

Will NOHP be toothless?

Practice management, and political and governance issues are, as ever, to the fore for the Association.

This year's practice management seminar in Croke Park began with a presentation by the Chief Dental Officer on the progress to date in the development of a new National Oral Health Policy, followed by questions from the floor. As it is a work in progress, there was little specific detail as yet. An Academic Reference Group is researching the state of oral health in Ireland and assessing the merits of various types of State-funded oral healthcare provision. There will be input sought from dentists very soon and it is important that we as individuals and as an Association express our views. It was suggested by the Chief Dental Officer that a "fee per item" scheme may not be appropriate in the future and that there may be a range of different contracts for services. Our dependence and our patients' dependence on fragile dental schemes has cost us dearly in recent years, and this was clearly voiced by many members at the meeting. We must ensure that whatever dental scheme is proposed meets our patients' needs and also allows us, financially, to continue to provide top quality treatment.

The second part of the day entailed some very entertaining and thought-provoking discussions on the nature of how dental practice might look in the future. There is a detailed report elsewhere in this edition. I can see that working as an employee in a corporate dental firm may be a good career choice for some dentists where the company handles much of the day-to-day administrative burden. However, I was pleased and reassured by the presentations of Ryan Hennessey, Garry Heavey and Raj Rattan, in particular, that there still is and will be a place for smaller dental practices.

Fluoridation

We await the publication of the Health Research Board's report on fluoridation in the coming weeks with considerable interest. As you know, some local councils have passed motions calling on the Government to end the fluoridation of public water supplies. At a time when the Government provides almost no support for the oral health of our citizens, and when the Public Dental Service is severely strained because of cutbacks and the moratorium on recruitment, the removal of fluoride would seem to be a retrograde step.

The Association will consider the report carefully and set out its position once the report is published. We hope that all parties with an interest in this debate will focus on the findings of this peer-reviewed study with an open mind and rely on reliable supporting evidence.

Mentoring

A number of members have already availed of our new mentoring scheme, which aims to provide younger dentists with the opportunity to discuss any professional issues they might have with a more experienced colleague, confidentially. I would encourage members to consider making contact with Fintan in IDA House if you wish to participate or to learn more.

Governance

The Association and Union both benefit from the level of engagement by ordinary members. Many members give their time on behalf of their colleagues on the various committees and groups that make up and contribute to the running of the organisation. However, we are bound by the rules and laws that govern corporate and charitable organisations and these change over time. It is important, therefore, that we review our structures, policies and procedures to ensure that we operate to the highest standard of corporate governance expected of us. In order to do this we have commissioned some expert advisers to help us review our governance arrangements. Any significant changes proposed will be put to members at a general meeting in accordance with our existing rules.

New officers

The Council of the IDA unanimously endorsed the nomination by the Metro Branch of Dr PJ Byrne as President-elect to follow my own successor Dr Anne Twomey. The nomination of Dr Byrne will be placed before our AGM for ratification. The AGM will also be asked to appoint a new Honorary Secretary Designate and I would encourage members who might be interested to contact me or indeed any other colleague to discuss the great benefit as well as the privilege of serving the profession.

Lengthy peer review times: What can be done?

Dear Sir,

The peer review process holds the most important place, when it comes to publication of a manuscript, and is directed towards facilitating the journal editor in making a decision. Publishing research results in a high impact journal is every investigator's goal. Unfortunately, the time period occurring between submission of manuscript and receiving an editorial decision, is typically very long. According to a recent survey report of 3,040 authors who had published their research in *Web of Science* (Thomson Reuters, Philadelphia, US), 38% were displeased with the peer review processing time of their manuscripts.[1] These prolonged processing times have a negative influence on the research results (especially in the case of original discoveries) as they can make them outdated, if rejected completely by a few journals on the basis of suitability to an individual journal's aim and objectives. Delay in publication not only negatively effects the research potential of individual authors contending for acknowledgment, but also defers the publication of new knowledge, which is a loss to the scientific community as a whole.[2]

Reviewership is generally a voluntary (unpaid) job; therefore, it is understandable that the reviewers remain busy with their respective jobs and their efforts in finding time to review the manuscripts are always appreciated. Still, an attempt to accelerate the reviewing process must be made by individual journals. One possible proposal is to offer the reviewers a financial incentive based on the timely return of their review report. Of course, there are constraints around generating those finances and a possible negative effect of hastiness on the reviewing process; nonetheless, it could result in publishing of suitable manuscripts within appropriate times. Other strategies to shorten the reviewing times include training of reviewers and removal of reviewers from the journal's reviewer panel in the event of unsatisfactory performance.

The peer review process has its benefits and flaws. Therefore, an attempt should be made to make it more efficient by taking measures to reduce long peer review times and to ensure well-timed publication of research.

Imran Farooq BDS MSc Oral Biology (UK)
Department of Biomedical Dental Sciences,
University of Dammam, Saudi Arabia

References

1. **Publishing Research Consortium**. Peer review in scholarly journals: perspective of the scholarly community – an international study. Publishing Research Consortium, Bristol, UK, 2008.
2. **Bornmann, L., Danielab, H-D**. How long is the peer review process for journal manuscripts? A case study on *Angewandte Chemie* International Edition. CHIMIA 2010; 64: 72-77.

Reply from the Honorary Editor

Our correspondent is making a global point about publication delays and their impact on the availability of knowledge. His point is well made and prompted us to examine the time involved in the peer review process in the *Journal*.

Based on the random selection of 15 papers received between April 28 and December 11, 2014, we can say that 13 of those 15 had been sent out to review within six days of receipt. The two other papers were received while one or more key people were on holidays but were dealt with promptly on return. Reviewers in Ireland work quickly and the average response time was 18 days. Those reviews have to be collated for dispatch to the author, and therefore can only be sent after the last review has come back to the *Journal*. Despite this, we communicated back to the authors within an average of a further 29 days. For the record, of the 15 papers, two have been accepted already, and six authors are making changes and resubmitting, while seven have been rejected. There is, of course, a further issue in having the necessary space available for publication in the print edition of the *Journal*. We cleared a backlog of papers 15 months ago through the generous provision by the IDA of additional pages in the *Journal*. We are currently exploring the possibility of, and it is our intention to implement, immediate electronic publication on acceptance, to be followed by publication in print as normal at a later date.

We encourage all dentists to submit research papers, reviews of literature, case studies and clinical articles to us – it makes our *Journal* relevant and improves knowledge for all the profession in Ireland.

Professor Leo F.A. Stassen
Honorary Editor

Every breath you take

The Association recently urged anyone who suffers from halitosis or chronic bad breath to take preventive action by visiting ther dentist.

Some 25% of the population suffers from this condition, which affects men and women equally. However, women are likely to seek treatment for the condition more quickly than men.

Dublin dentist Dr Rachel Doody said that usually the condition is easily treatable once people realise they have it.

"Often people are not aware that they are suffering from this condition, and of course, if that is the case, they don't seek treatment. Not only can it cause major embarrassment for people, but it can also be a sign of gum disease.

"If you think that this may be the case for a friend or family member, you should mention it to them privately. You will be doing them a favour dentally and socially," she said.

In 85% of cases, the origin of the malodour is the oral cavity. One of the warning signs of gum disease is persistent bad breath or a bad taste in the mouth. Periodontal disease (gum disease) is caused by plaque, the sticky, colourless film of bacteria that constantly forms on teeth. The bacteria create toxins that irritate the gums.

Dentists believe that new newer dietary habits, and the fact that people are retaining their natural teeth for longer, are two of the factors contributing to an increase in the incidence of halitosis. Dr Doody says that maintaining a good oral health regimen is key to preventing bad breath.

"People should brush their teeth twice a day, floss once a day, drink plenty of water, use mouth rinse, and avoid trigger foods such as garlic and onions. Smoking is clearly bad for your health but also for your breath, as are alcohol and coffee.

"If the problem persists, visit your dentist, as halitosis can sometimes be a sign of a more serious underlying condition. Some 80% of all Irish adults qualify for a free annual examination, so if you are concerned, just make an appointment with your dentist," she concluded.

Listerine® Advanced Defence Gum Treatment cuts gingival bleeding by 50.9% in just 4 weeks[1]

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.[1]

In addition, Advanced Defence Gum Treatment is **designed to not cause staining.**[2]

PART OF THE
LISTERINE®
ADVANCED DEFENCE RANGE

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

IRE/LI/15-1170

Advanced Defence against gum disease

Irish Dental Council Bench Test

A three-and-a-half-day preparatory, hands-on programme will be held in the Dublin Dental University Hospital from April 13-16, 2015. Interested persons should contact Catherine Creagh at: 01-612 7354, or catherine.creagh@dental.tcd.ie for further details.

Closing date for applications: 5.00pm on Friday February 20. Programme fee: €2,000 per participant.

Following in their fathers' footsteps

Past Presidents of the IDA Metropolitan Branch, with this year's President, taken at the Metropolitan AGM on March 6, 2014. From left: Dr George Loomes; Dr Adrian Loomes; Dr Joe Houlihan; Dr Laura Houlihan (current President); Dr Brian Kavanagh; and, Dr Dermot Kavanagh.

Alumni Event 2014: A Look Back, A Look Forward

TCD School of Dental Science and the Dublin Dental University Hospital (DDUH) were delighted to welcome over 120 alumni to the DDUH for their second annual alumni event, which was held on October 10, 2014. The theme, 'A Look Back, A Look Forward', provided the opportunity to reflect on times past and share aspirations for the future.

The evening commenced informally, with alumni being treated to an exhibition of old pictures of the building and dental equipment used in the DDUH. An array of old class photos, with many familiar and distinguished faces, was also on display. This was followed by the more formal proceedings of the evening, with invited speakers Professor Stephen Flint and Dr Martin McAleese. Both Professor Flint and Dr McAleese were very warmly received.

Professor Flint commenced with an informative talk addressing the development and advancement of the understanding of HIV/AIDS in Ireland in general, and with particular reference to dentistry over the last three decades. Professor Flint also presented on the significant contributions to the global advancement in knowledge of the disease by many Irish researchers.

The event continued with Dr Paul Dowling in conversation with Dr Martin McAleese. Looking back at his life growing up in Belfast at the height of the troubles, Dr McAleese recounted many interesting and insightful perspectives. He spoke of the importance of taking responsibility for your own life, career and development. He also highlighted the importance of having to set aside your own beliefs from time to time to make meaningful compromise in negotiations and for the advancement of the greater good.

The formal lectures were followed by the annual teaching awards ceremony. This year the Perpetual Teaching Award was presented to Dr Barry Harrington and The Ena Brooks Memorial Award for Outstanding Part-Time Teacher to Dr Paddy Beausang. The evening concluded with a reception where the alumni got the opportunity to socialise with their classmates.

Our annual alumni event offers staff, alumni and friends a valuable opportunity to gain CPD points and catch up with classmates and colleagues. To ensure that you are informed of future events please keep in touch with us via alumni@dental.tcd.ie.

Drs Orla McEvoy and Catriona McCool Keeling.

Dr Frank Houston presented the Ena Brooks Memorial Trophy to Dr Paddy Beausang.

Professor June Nunn.

Fom left: Drs Paddy Fleming, Barry Harrington and Gerry Gavin.

Biodentine™

The first and only dentine substitute in a capsule

As the first all-in-one biocompatible and bioactive dentine substitute, Biodentine™ fully replaces dentine wherever it is damaged.

Biodentine™ helps the remineralization of dentine, preserves the pulp vitality and promotes pulp healing. It replaces dentine with similar biological and mechanical properties.

Improving on Biodentine™ clinical implementations, you can now bond the composite onto Biodentine™ in the same visit and perform the full restoration in a single session.

To enjoy the clinical benefits of the first and only dentine substitute in a capsule, ask your dental distributor for Biodentine™.

www.septodont.ie

Tel: +44 (0)1622 695520

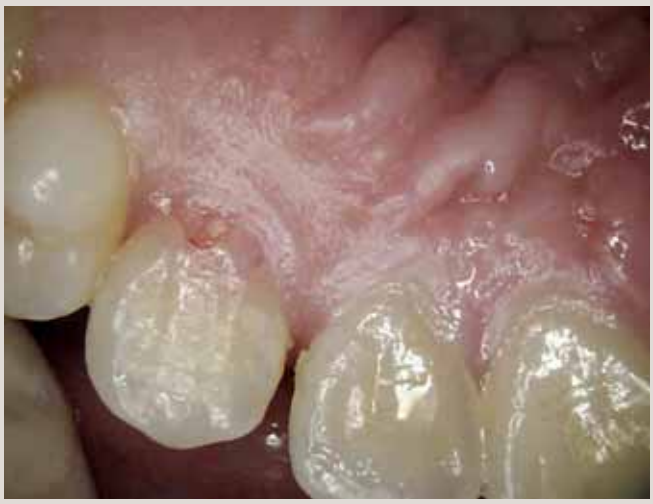
To arrange a demonstration contact Gerry Lavery on: +44 (0)7836255274

septodont

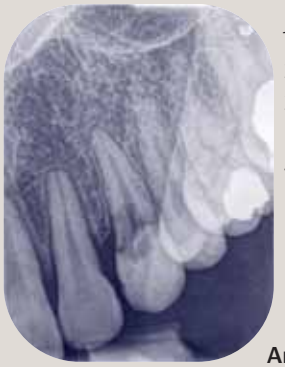
Anaesthetics • Endodontics • Restorative Dentistry • Dental Surgery • Prosthetic Dentistry • Disinfection & Hygiene

Quiz

Submitted by Dr Alastair Woods.



A 19-year-old female presented at the surgery for a check-up. She recently finished orthodontic treatment. Oral hygiene was fair. Examination revealed a pinkish appearance on the palatal surface of UL3. The tooth was asymptomatic and the patient was unaware of its presence.



1. What is the diagnosis?
2. What causes the pink colour?
3. What are the potential aetiological factors?
4. What are the treatment options?

Answers on page 47

A healthy mouth means healthy savings

The Association has called on the Government to tackle the high incidence of gum disease in this country by reintroducing the scale and polish procedure which was previously available free of charge on the Medical Card and PRSI dental schemes. A major US study shows that patients with chronic conditions and pregnant women who underwent periodontal (gum) treatment cut their medical bills by thousands of dollars. According to the most recent national oral health survey, 80% of Irish people have some form of gum disease.

The US study examined the experience of hundreds of thousands of patients with chronic conditions (stroke, heart disease, type 2 diabetes) who also had gum disease. Also included in the study were women who were pregnant during the same time period.

The study by Dr Marjorie Jeffcoat, Professor of Periodontology and Dean Emeritus at the University of Pennsylvania School of Dentistry found impressive medical cost savings and significant reductions in hospitalisations for those patients who completed treatment for gum disease versus those who did not.

For those patients with cerebral vascular disease (stroke) who completed gum treatment and maintenance, the annual medical costs saving was $5,681 (€5,000 approx.), while the reduction in the level of hospitalisation for this group was 21%. The reduction in costs for patients with diabetes was $2,840 (€2,500 approx.), with a corresponding fall in hospitalisations of 39%. For pregnant women the reduction in medical costs was $2,433 (€2,150 approx.).

The President of the Association, Dr Peter Gannon, said the study was highly significant as it was the first one to quantify the benefit of periodontal (gum) treatment. "Signs of gum disease include tender swollen gums, red or bleeding gums, loosening of teeth or bad breath. Routine oral care helps prevent and tackle these problems early on before they develop into complex and more expensive ones. Given the high incidence of gum disease in Ireland it's important that everyone brushes their teeth twice a day and visits their dentist on a regular basis," he said.

Dr Gannon warned that this was especially important for people in susceptible groups, for example people with diabetes who are much more prone to gum disease and tooth loss.

"This study shows the folly of doing away with the scale and polish procedure and treatment of periodontal (gum) disease. When this was available on the Medical Card and PRSI schemes, dentists were able to treat patients with the condition in a very cost-effective way. In fact, both schemes provided an early warning system, which saved lots of money for patients and our health system. The Government should reintroduce these treatments immediately. As the study shows, it will be money well spent," Dr Gannon concluded.

The American Study is a white paper entitled 'The Mouth – The Missing Piece to Overall Wellness and Lower Medical Costs'. The research was conducted by Dr Marjorie Jeffcoat, Professor of Periodontology and Dean Emeritus at the University of Pennsylvania School Of Dentistry. The results of the study – which is based on medical claims from Highmark Health Inc and United Concordia dental plans – were presented by Dr Jeffcoat at the American Association of Dental Research last year.

Letter published in *The Irish Times*

February 9, 2015

Re: Fluoridation of water in Ireland

Sir,

There is currently a strong anti-fluoridation campaign targeting city and county councillors throughout the Republic of Ireland. This campaign seeks to have motions passed calling for the fluoridation of water to end in the area of the relevant council.

The benefits for oral health of adding fluoride to water are well established in peer-reviewed scientific research. There is no scientific evidence that fluoride, at the rate at which it is added to Irish water, is a threat to any aspect of the health of our citizens.

We are asking councillors to review the published scientific information before supporting a motion, which if implemented by Government, would damage the Irish people's oral health for years. We welcome healthy debate and discussion but are concerned that the current debates are based on poor information.

For the record, we have specific Irish research on this topic. The 2002 North South Survey of Children's Oral Health showed measurable benefits in oral health among five-year-olds and 15-year-olds in areas with fluoridated water in the Republic of Ireland when measured against the oral health of children in Northern Ireland where the water is not fluoridated. The only negative demonstrated by the research was a slight increase in mild discolouration of teeth, which resulted in a decrease from 0.9 parts per million to 0.7 parts per million in the rate of fluoridation.

The evidence is clear. If you remove fluoride from water, even allowing for the presence of fluoride in toothpastes, our citizens will suffer from increases in tooth decay with all its associated pain and financial cost. At a time when the Government provides almost no support for the oral health of our citizens and when the public dental service is severely strained because of cutbacks and the moratorium on recruitment, the removal of fluoride would be a retrograde step.

Representatives of all our citizens should take note.

Yours sincerely,

Dr Peter Gannon
President, Irish Dental Association

Professor Leo F.A. Stassen
Honorary Editor, *Journal of the Irish Dental Association*

Mr Fintan Hourihan
Chief Executive, Irish Dental Association

Holiday of a lifetime for Sensodyne Sensitive Dentist Award nominator

Mary Hallis, centre, was the winning nominator in the Sensodyne Sensitive Dentist of the Year Awards. She nominated her dentist, Dr James Turner of Rathdrum (left), who spotted her throat cancer, for which she has since received treatment. Mary received her prize (a cheque for the holiday of a lifetime) from Eilís Tobin, Marketing Manager – Oral Care for GSK, makers of Sensodyne.

Voco at IDS

VOCO will present several innovations at the IDS in Cologne in March, including Admira Fusion, the world's first restorative material to combine Ormocer with nanohybrid technology. In this case, both the fillers and the matrix are based on silicon oxide. Thanks to this "pure silicate technology", Admira Fusion boasts excellent biocompatibility, extremely low shrinkage, optimal colour stability and a high filler content. The new filling system is complemented by Admira Fusion x-tra, which allows increments of up to 4mm while displaying the same physical properties.

Further new products include the fast-setting glass ionomer material IonoStar Plus and Clip Flow, a flowable restorative material for temporary restorations. Developed especially for the prophylaxis sector, Voco is introducing the protective dental cream Remin Pro forte, adding ginger to the range of flavours available in the Remin Pro product range. In addition to these innovations, Voco will also be exhibiting a whole host of offers at bargain prices in its highlights. The Dental Education Centre is set to be a special attraction at the newly-designed Voco trade fair stand, hosting short presentations by renowned speakers from different countries and hands-on courses covering the latest topics in the field of dentistry. These include modern composite technology methods, highly aesthetic restorations, post-endodontic treatments and aspects of light polymerisation. Participants in these events will have the chance to acquire new insights and exchange experiences with other professionals. Any Irish visitor can visit Voco at the IDS 2015 in Hall 10.2, on stands R008/009 and P010.

Voco's Dental Education Centre on their stand at IDS will host short presentations by renowned speakers and hands-on courses covering the latest topics in the field of dentistry.

Business in brief

Dr Jennifer Dunne, Anne's Lane Dental practice, Dublin 2. Jennifer qualified five years ago and has owned the practice for three years.

What is special about your practice?

The staff. We are a very team-oriented group. This provides a positive working environment with clear communication and minimal stress, and this shines through when treating our patients, which leads to long-term relationships being created.

What distinguishes you from your competitors?

Our approach is to have the highest standards in customer service. All of our staff understand the significance of excellent customer service and the quality of care we have from the first phone call onwards.

What is the biggest challenge you have had to face in business?

Learning how to run a business! Committing the time away from patients was a challenge initially, but I have learned that this time is almost as valuable as chair time.

What has been your biggest mistake to date?

Initially, not recognising the need to take a break or holidays from the business. When I do, it gives me a fresh impetus and allows me to maintain our high standards.

What has been your biggest success to date?

Surviving the first two years! Seeing the practice thrive after significant changes is hugely encouraging.

Whom do you most admire in business and why?

Mary Donohoe, director of The Rose Project. Her courage to make the unpopular decisions ensured survival. She adjusts her decision making appropriately through every economic challenge she faces by maintaining focus on her goals.

What piece of advice would you give the Government to stimulate the economy/improve dental health?

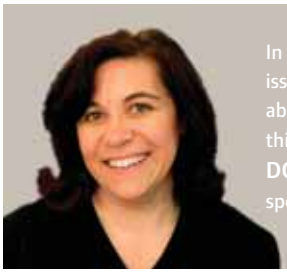
Invest in employment. The most motivated patients I meet are those rejoining the workforce. It is difficult for anyone to prioritise their dental health when they are battling to secure employment. I fear that dental health promotion would fall on deaf ears when people do not feel financially secure.

Are the banks open to lending to SMEs?

Like any business, banks lend when it is advantageous to them to do so. I find they are open to lending, but on their terms. I face high repayments under a short lending term, which is challenging.

What is your business worth and would you sell it?

I would not sell the business. I have a fantastic team and I believe the potential for growth is great.



In a new feature for the *JIDA*, each issue we will include a short interview about the business of dentistry. For this edition, dental hygienist **DONNA PATON** spoke to Dr Jennifer Dunne.

The role of saliva in promoting oral health

Hugh McGrory, third year dental undergraduate, School of Dental Science and Dublin Dental University Hospital, Trinity College Dublin.

Abstract of winning essay from inaugural WOHP dental undergraduate 2014 essay competition.

Oral health is inherent and essential to general health and undoubtedly forms part of the foundations for a good quality of life.[1] The Ottawa Charter for Health Promotion concluded that: "Oral health is a human right and essential to general health and quality of life". Approximately 500,000 people are diagnosed with head and neck cancer worldwide each year. Studies show that there were oral complications in 100% of the patients that received radiation therapy, due to loss of salivary gland function.[2] These results show how imperative an adequate volume of saliva is in maintaining oral health.

Saliva is a complex mixed glandular secretion. Normal flow rates are 0.3-0.4ml/min when unstimulated and 1.5-2.0ml/min when stimulated. Stimulated saliva, secreted in response to masticatory or gustatory stimulation, contributes to approximately 50% of daily saliva production. During sleep, flow rate is negligible, which is a significant contributing factor in the progression of oral disease due to a decrease in concentration of many of its protective constituents.[3]

Saliva assists in digestion, dilution and clearing of dietary carbohydrates as well as buffering acidic by-products from bacterial metabolism of carbohydrates. The calcium and phosphate content and, most importantly, the pH of the saliva determine if enamel will dissolve leading to dental caries.[4] After ingestion of fermentable carbohydrates acids are formed, which result in a drop in pH. When the pH is lowered, the concentration of the ions needed for saturation increases, allowing teeth to demineralise, initiating caries. In the recovery phase, plaque gradually becomes saturated and later supersaturated with hydroxyapatite due to increased salivary flow rate.[3] The increased saliva flow provides accelerated results in enhanced clearance of remaining sugars and influx of phosphate ions, removing acids from solution. Patients should be educated on the time needed to buffer saliva after carbohydrate consumption to avoid progression of caries during this 15- to 40-minute post-ingestion period.[4]

Saliva also functions in the removal of microorganisms from the mouth. However, there are other anti-microbial constituents such as histatins, lactoferrin, lysozyme, and IgA proteins. There are four main interactions between salivary antimicrobial agents and oral microorganisms. These include agglutination, inhibition of adherence, bacteriostatic activity and interference with nutrition.[3]

The importance of saliva is clearly seen when its flow is reduced. The immediate effect of hyposalivation is an uncomfortable dry mouth, frequently with a burning sensation, making it uncomfortable to swallow, chew, speak and taste. Long-term consequences include demineralisation of enamel, leading to progression of dental caries and risk of opportunistic infections.[5] Increasing saliva flow is essential to reduce oral complaints and should be used more frequently by dental professionals in the prevention of oral disease. Masticatory stimulation with non-foodstuffs such as sugar-free chewing gum provides an increase in the total amount of proteins, calcium and phosphorous ions in the saiva, due to the increased flow. When a sweetener or flavour such as sorbitol or xylitol is added to the chewing gum, saliva flow increases three-fold with peak flow rates 10-12 times higher than the unstimulated flow rate.[6] The acidogenic challenge that the oral cavity encounters for up to 40 minutes after carbohydrate consumption may be counteracted by increased saliva flow resulting from masticatory and gustatory stimulation as a result of using chewing gum with polyols.

Unfortunately, as Sreebny has noted,[7] few dental practitioners ask the necessary questions to determine if there is a degree in hyposalivation in their patients. Dentists should be more aware of their patients' salivary function and include more disciplined preventive practices to deter the negative effects of reduced salivary flow. It is imperative that salivary functions related to oral health be described in the literature for oral health promotion. "The Scientific Basis of Oral Health Education" is noted as an essential document for oral health education. It has four key points: diet, tooth brushing, fluoride and dental attendance. It fails to mention the numerous advantageous functions saliva exhibits for the maintenance of adequate oral health. Awareness and understanding of salivary functions are important to the prevention, early diagnosis and treatment of many oral conditions and most importantly in promoting oral health.

References:

1. **Brosky, M.E.** The role of saliva in oral health: strategies for prevention and management of xerostomia. *The Journal of Supportive Oncology* May 2007.
2. **Warnakulasuriya, S.** Global epidemiology of oral and oropharyngeal caner. *Oral Oncology 2009; 40: 309-316.*
3. **ten Cate, B.** The role of saliva in mineral equilibria – caries, erosion and calculus formation. In: **Edgar, W.M., Dawes, C., O'Mullane, D.** *Saliva and Oral Health.* (4th ed.). Stephen Hancocks Limited, 2012: 135-150.
4. **Fejerskov, O., Kidd, E., (eds).** Dental Caries: The Disease and its Clinical Management. Oxford; Blackwell Munksgard, 2003.
5. **Dawes, C.** How much saliva is enough for avoidance of xerostomia? *Caries Res 2004: 38 (3): 236-240.*
6. **Itthagarun, A., Wei, S.H.** Chewing gum and saliva in oral health. *J Clin Dent. 1997; 8 (6): 159-162.*
7. **Sreenby, L.M.** Saliva in health an dusease: an appraisal and update. *International Dental Journal* 2000; 50: 140-61.
8. **Dawes C., MacPherson L.M.** Effects of nine different chewing-gums and lozengers on salivary flow rate and pH. *Caries Res 1992; 26: 176-182.*

Doing the business in Croke Park

There was a great turnout for the Association's practice management seminar in Croke Park. There is a full report in the members' only section (pp 26 and 27), but here are some photos of the attendance.

At the Business of Dentistry Seminar in Croke Park (all captions from left): Speakers Dr Raj Rattan, Dr Ryan Hennessy, Dr Garry Heavey, Anton Savage, Fintan Hourihan, Dr Eddie Coyle and Dr Keith Redmond.

Drs Nicola Zammit, Saoirse O'Toole and Brian Byrne.

Drs Dympna Daly, Bernie Courtney and Dermot Canavan.

Association President Dr Peter Gannon and Dr Kieran O'Connor.

Drs Tom O'Connor and Niall McDonagh.

Drs Donal Daly, Roger Ryan, Gerry Kaar, and Ken Rogers.

SCDlab.co.uk

Implant Bundle

Genuine Biomet 3i Components

Everything together.
One price, one provider.

Enjoy certainty of price with our new all-inclusive Biomet 3i Implant Bundle

Biomet 3i Implant Bundle

£299 or €359

Includes:

- ✓ Screw or Cement-retained crown (Porcelain fused to metal**)
- ✓ Customised Biomet 3i UCLA Abutment
- ✓ Biomet 3i Gold Tite screw
- ✓ Biomet 3i analog and soft tissue model

Please quote 3iBUNDLE on the lab sheet in order to receive the bundle price.
** Terms and conditions apply. **Semi or high precious alloy extra*

Southern Cross Dental

To find out more information call us today on (ROI) 048 8772 7100 or (NI) 028 8772 7100 or email us at ireland@scdlab.com

You're in it together

The dentist-patient relationship is built on trust, so when developing treatment plans it's important to combine the patient's needs and preferences with the best available scientific evidence.

Shared decision-making has been defined as: "An approach where clinicians and patients share the best available evidence when faced with the task of making decisions, and where patients are supported to consider options, to achieve informed preferences".
Sharing Decisions with People; NHS Wales, 2014.

Patients' interests first

It is not surprising that the Dental Council, which promotes high standards of professional conduct, expects the dental profession to act in their patients' best interests at all times.

To mitigate the risks, it is important to reassess the clinical decision process to ensure that patients are fully informed, knowledgeable and wholly involved in their care. This is achieved through a process of shared decision-making.

Positive effect

In general terms, the more complex the intervention, the more in-depth the discussions required to be sure a patient is able to give valid consent. Studies show that shared decision-making has a positive effect on satisfaction and the perceived quality of outcomes (**Figure 1**). A review of our past cases reveals that the existence of so-called predisposing factors such as rudeness, poor interpersonal relationships, inadequate communication and inattentiveness will often motivate patients to sue or complain when there are precipitating events such as patient harm, adverse outcome or iatrogenic injury during clinical procedures.

Four key components of shared decision-making

1. The use of professional judgement.
2. The use of current information sources (evidence).
3. Choices are made about what, who, where, when and why things are done (options), and these choices are evaluated (selection).
4. Accountability for those decisions.

   Plus, we can add a fifth component that applies in a general practice setting – cost!

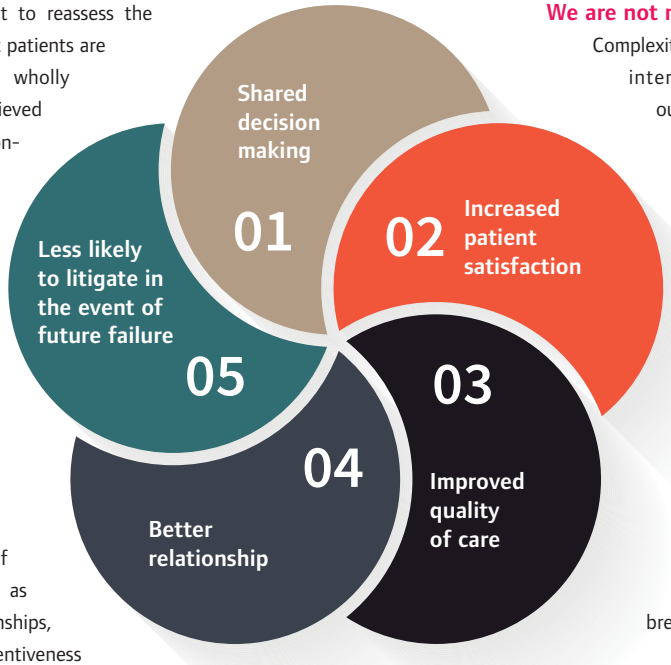


FIGURE 1: Shared decision-making.

We are not machines

Complexity – in the clinical sense – relies on known interventions that mostly lead to known outcomes. That said, experience tells us that the biological response to treatment is not always predictable – and so things do not always work out as we may have hoped. A dentist today has to manage the clinical complexity associated with caring for the patient and the complex adaptive elements within the environment, all of which are inter-connected. It is a common finding in complaints – or claims for compensation – that an intervention is questioned or challenged by a patient on grounds of cost rather than clinical effectiveness. Further inquiry or investigation may then reveal ethical breaches in the decision-making process.

Identify

Providing high quality dentistry for a patient can be simple or complicated, and both simple and complicated care take place in a complex environment that has a significant impact on clinical decision-making. Patient involvement in the process is important to ensure that care is delivered in a way patients know to be in their best interests. The complexities of working in a third-party payment system, personal bias, constraints that may be imposed by the business, patient demands, choice and availability of resources, and varying competencies among clinicians, all create an interdependency that can significantly lead to suboptimal care. By identifying – and then controlling – the factors, and adopting an ethics-led approach to care, we can control and manage that risk.

Dr Raj Rattan
MBE BDS MFGDP(UK) FFGDP(UK) PgDip MDE

Raj combines his work in general dental practice with his role of Associate Dean in the London Deanery. He is also a Senior Dento-Legal Consultant for Dental Protection and has worked with them since 1993.

SENSODYNE®

IRISH DENTAL ASSOCIATION APPROVED

SENSODYNE SENSITIVE DENTIST OF THE YEAR AWARDS 2014

The Sensodyne Sensitive Dentist of the Year 2014 is Dr James Turner who was nominated by his patient Mary Hallis for detecting her throat cancer. She said: "I just wouldn't be here without him".

IDA
journal of the irish dental association
Iris Cumainn Déadach na hÉireann

DENTAL CARE IRELAND

Your Local Practice

Join Ireland's Newest Dental Practice Network

Established in October 2014, Dental Care Ireland is a new and exciting network of dental practices in Ireland. We are actively investing in and partnering with well-established dental practices to create a network of modern and professional dental practices across the country.

With increased competition and compliance requirements, we understand the pressure that dentists in Ireland are under to service their patients to a high standard while at the same time operating profitable practices. By joining Dental Care Ireland, we can ensure that dentists can focus on treating patients while we will carry the financial and administrative burden. At the same time we will ensure that each of our practices will deliver the highest standards of care at all times.

Our team has an expertise in dentistry and a proven track record in building successful healthcare organisations in Ireland. Prior to the establishment of Dental Care Ireland, its Chief Executive, Colm Davitt led the growth and development of Euromedic in Ireland.

Dentist and Dental Care Ireland's Group Clinical Advisor, Dr Kieran Davitt, BDentSc, has been practising as a dentist in County Galway for over 15 years and will oversee the highest level of clinical standards in Dental Care Ireland.

Our team also includes experienced professionals in clinical operations, healthcare marketing, human resources and finance.

We passionately believe in building an organisation that values each individual and provides the support and encouragement to help people and practices reach their full potential.

If you are interested in learning more about Dental Care Ireland or if you would like to become part of the Dental Care Ireland team, please contact us.

DENTAL CARE IRELAND

Your Local Practice

Colm Davitt, Chief Executive
M: 087 914 9814 | T: 01 853 7810
E: colm.davitt@dentalcareireland.ie

Kieran Davitt, Group Clinical Advisor
E: kieran.davitt@dentalcareireland.ie

www.dentalcareireland.ie

www.ted.com Ben Goldacre: Battling bad science

Big Bad Ben

Ahead of his talk at this year's Annual Conference in Cork BEN GOLDACRE shares his views on epidemiological research, the power of the internet, public engagement with science, and – Ireland's own particular problem with bad science – fluoride.

Over the past decade, Ben Goldacre has gained a reputation as the scourge of charlatanism, big pharma and lazy journalism. He has achieved this firstly through his 'Bad Science' column in the *Guardian*, then through the book of the same name, which has sold upwards of half a million copies. More recently, he turned his attention to lack of transparency in pharmaceutical research in *Bad Pharma*, and he has just published a collection of his selected writing, *I think you'll find it's a bit more complicated than that*.

Better than nothing?

While exposing shady practices and misinformed journalists could well be a full-time job in itself, Ben's day job is actually as a doctor, and Research Fellow in Epidemiology at the London School of Hygiene and Tropical Medicine. He originally studied medicine in Oxford and London, but soon began to see flaws in the system.

"My shift to evidence-based medicine – and shouting about what's wrong with evidence-based medicine – was partly driven by seeing how a lot of decisions we made in clinical practice were pretty arbitrary. We've become satisfied with the idea that what we do is better than nothing, when we should be focusing on the idea that we give the best currently available treatment in every situation for every patient.

"Delivering that requires that we gather really high quality evidence, in much larger numbers of patients, and that requires that we drive down the cost of doing trials. So we have to become much more efficient about how we gather and use evidence in everyday clinical practice."

He points out that, for all sorts of reasons, people are very interested in health information, but that this thirst for information can be misdirected.

"Unfortunately, it all gets sublimated into silly stories – like the *Daily Mail*'s ongoing philosophical project to divide all the inanimate objects in the world into the ones that either cause or prevent cancer! What I've tried to do is make it easier for the general public to access good quality information: not so much about what works, but more about how we know what works, about the methods."

Ann-Marie Hardiman
Journalist and sub-editor with Think Media who has a special interest in science communication – both good and bad.

Relevant to how we live our lives

Ben is, unsurprisingly, passionate about his subject, and about explaining to the public why it matters.

"I co-authored a paper in the *Lancet* about two years ago on how we should have a GCSE in epidemiology [in the UK]. The basics of what a cohort study or a case control study looks like, what the strengths and weaknesses are, bias, randomised trials, what a systematic review is, what a meta-analysis is: that is ultimately the science behind probably a majority of health stories in the newspapers. People fall over themselves trying to find ways of making science relevant and applicable to our everyday lives, and this is an open goal. Epidemiology is immediately relevant to your own life, to your own interests, preoccupations and anxieties, to the decisions that you make for yourself about how to live. 'This vegetable's good for you', or 'that kind of alcohol is particularly bad for you': all of that fundamentally is epidemiology research."

So why aren't we learning about this?

"A lot of teachers and scientists think that epidemiology is obvious – just the application of basic common sense and rationality. They think that if you understand the principle of a control in a chemistry experiment, then you'll understand how controls should be used in case control studies or any kind of observational epidemiology paper, and actually that's not the case. There are specific pitfalls in interpreting observational data about human populations

that are the meat and drink of epidemiology and if you've never thought of them you wouldn't spontaneously invent them, just from having a good common sense approach to science and evidence. That's why I think epidemiology really suffers.

"You often come across research scientists in medicine who know an awful lot about some transporter in the surface of a cell, and they produce groundbreaking work on it, but when it comes to interpreting a bit of evidence about whether an intervention actually works or not – or whether a trial of an intervention in their field was a fair test or whether it was flawed by design – they flounder. It's because, again, they think that interpreting trials and observational research is common sense and doesn't require any extra pointers. That's arrogance, and it's dangerous."

Journalism

A lot of what Ben does is to debunk poor journalism/science stories in the media, but his own journalism career began in quite unspectacular fashion.

"I just rang the *Guardian* up one day! I said what I did and what I'd like to write about and they said ok."

He has a characteristically uncompromising attitude to writing.

"Editors have intermittently said: 'That's a bit too nerdy. Do you think you could tone it down for a general audience?' and I've always said 'no'. It's ok to have a wide range in newspapers. There are things that are dumbed down but there is also a space to offer more detail, for people who happen to want that."

He admits that having more than one string to your bow certainly helps.

"There's a certain power that comes from having two parallel careers. This way, when someone asks me to write something I don't want to write I can say no."

He accepts that many journalists are under pressure to produce copy, but feels that that's no excuse for poor science or lack of research.

"I don't think I've ever been particularly unfair or unkind about individual journalists, even those who have written dangerously misleading articles, but I have used them as examples to explain how journalists mislead the public.

"I happened to read a story in the newspapers yesterday – it was maybe 1,200

Dental Insurance from the Dental Experts

DeCare Dental

DeCare introduces new payment option for members

At DeCare Dental, we have been processing member claims in Ireland since 2004 and our priority is to make this process as fast and simple for our members as possible, while ensuring the security of their information.

We are now offering two flexible claiming options:

Option 1: Direct Pay

- DeCare now offers a direct pay facility with participating dental practices.
- DeCare pays the dentist directly for the costs covered by the member's policy, meaning they have less out-of-pocket expense.
- Where this service is available, it is operated using advanced technology ensuring secure transmission of patient information.

Option 2: Pay and Claim

- Members can also attend any dentist listed on our Dental Directory, pay the dentist as normal and then claim back the costs covered by their policy.
- Claims are processed within ten working days and members can be assured of accurate claims assessment thanks to DeCare's expertise in this area.

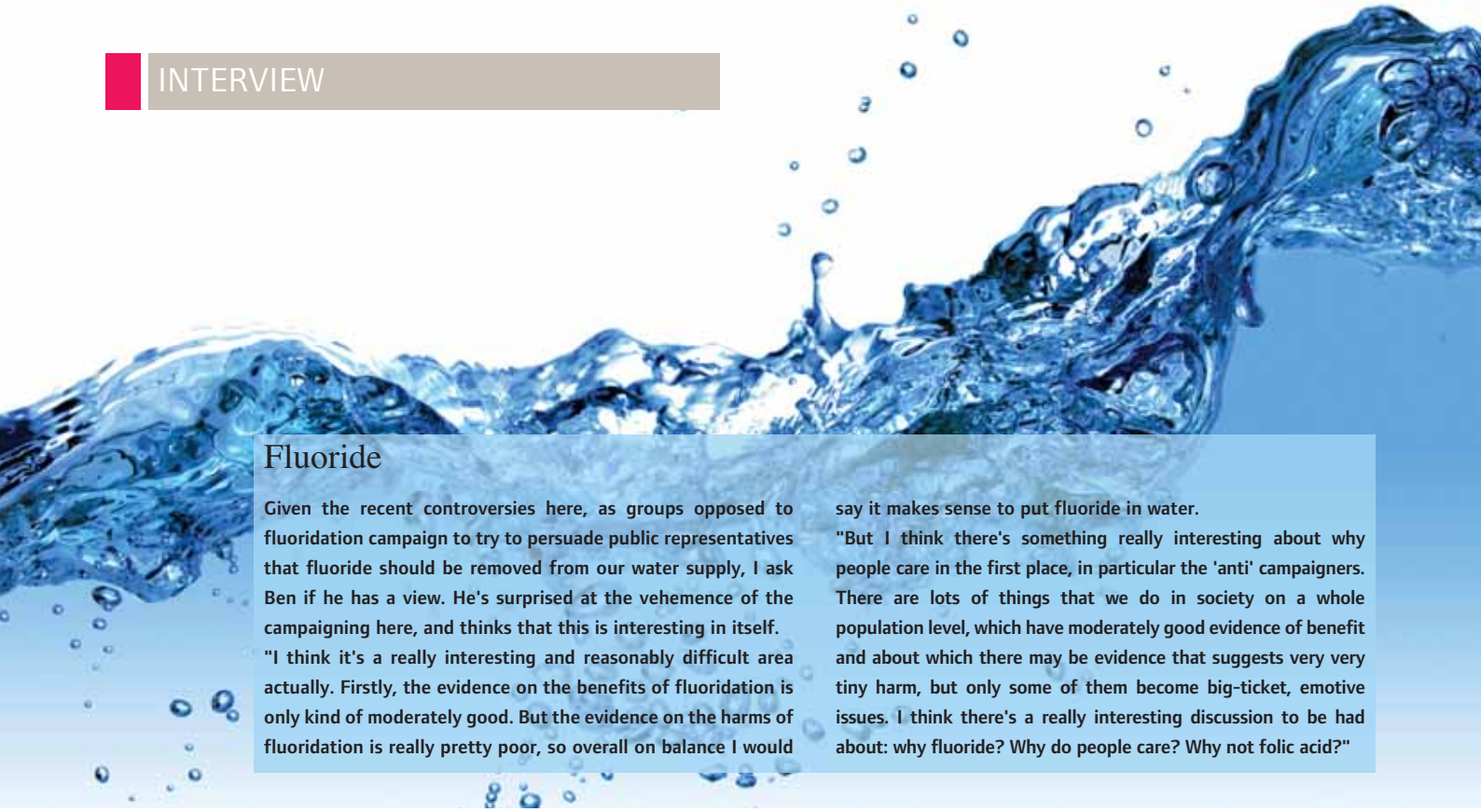
Check your details on our Dental Directory

DeCare Dental's Dental Directory is an online directory listing dentists throughout Ireland that are happy to provide our members with the relevant information they need for their claim form.

Queries?

Contact: Regina Brady

☎ 094 9372277 ✉ rbrady@decare.com



Fluoride

Given the recent controversies here, as groups opposed to fluoridation campaign to try to persuade public representatives that fluoride should be removed from our water supply, I ask Ben if he has a view. He's surprised at the vehemence of the campaigning here, and thinks that this is interesting in itself.

"I think it's a really interesting and reasonably difficult area actually. Firstly, the evidence on the benefits of fluoridation is only kind of moderately good. But the evidence on the harms of fluoridation is really pretty poor, so overall on balance I would say it makes sense to put fluoride in water.

"But I think there's something really interesting about why people care in the first place, in particular the 'anti' campaigners. There are lots of things that we do in society on a whole population level, which have moderately good evidence of benefit and about which there may be evidence that suggests very very tiny harm, but only some of them become big-ticket, emotive issues. I think there's a really interesting discussion to be had about: why fluoride? Why do people care? Why not folic acid?"

words long, saying new research had shown a negative effect of iPad use among toddlers – and it was impossible to establish from reading this article even what type of research had been done, and that wasn't for a lack of space. That was for a lack of will, a lack of belief that readers would care and perhaps, for all I know, they were deliberately obfuscating the fact that it was very weak evidence because they didn't want to undermine their story. One of the really dangerous things about the routine misuse of evidence by journalists is that you can get into a kind of 'boy who cries wolf' situation: because it may well be that somebody's just found some amazingly important new finding, about the harms of technology, that I really need to know about ... but it's got to the point where you just read and think, 'well, I wouldn't believe that anyway'."

Something for everyone

In recent times we've seen a glut of popular science programmes on television, from *Stargazing Live* to *Mythbusters*. I ask Ben if he thinks popular science is having a 'moment'. He's not convinced, but is very excited, on the other hand, about the role of the internet.

"I used to get very annoyed when I first started writing about these kinds of things, because I felt the mainstream media dumbs down science, so it deprives the public of access to good quality information, and by that I mean reliable information about health and stuff, but also interesting fun, cool, stimulating stuff about how stuff works. I'm much more relaxed about that now, because it's not the only show in town anymore. If you're somebody who wants to find out how stuff works there is so much online. You will find styles of content for every age, for every level of ability and for every character type – very serious, straight-faced stuff, and funny, irreverent stuff, and it's just beautiful, rich and diverse, and easy to find."

He feels that encouraging people to look online for stimulating science is more productive than some of the government-funded projects designed to inspire public engagement with science.

"I'm really not convinced that they deliver value for money, or that they deliver people into the arms of interesting nerdy stuff online in anything like a cost-effective or effective way. The public engagement with science community is infected with some very dangerous, self-serving ideologies. For example, they're obsessed with the idea of 'engagement' rather than what they call the 'deficit model' of public science, so they say that giving people information is wrong and disempowering and not what they're interested in. They want scientists to listen to the public. Now that sounds great and sometimes it's appropriate but often it means that huge amounts of money are pumped into projects which are really just methodologically very poor. For example, instead of funding somebody to explain to the public how we use medical data to find out what works and what doesn't, they'll have a meeting with 12 members of the public – who are hugely self-selecting and unrepresentative – and then interact with them for three hours to try and find out what they think. That's a particular kind of research called social science research and it's great if it's done rigorously, but they're generally doing it in a rather amateurish way, under the rubric of public engagement, and that doesn't make sense."

AllTrials

Aside from his writing (and the small matter of a day job), Ben has worked in recent years to improve transparency in the way pharmaceutical companies release trial data (*Big Pharma* deals with this subject in detail). He is co-founder of AllTrials, a campaign by doctors, academics, funders, pharmacists, professional bodies, patients and the public, to prevent trial results being withheld. I ask how things are progressing.

"We've not had any more sign-ups from pharma companies [GSK has signed up to the campaign], but we are just about to launch a really interesting new project. We're going to start building something called a trials transparency index, so we're going to be assessing the public statements and commitments, but also the actions, of all the major drug companies. We're going to turn that into a basic points system, publish it as an index and update it once a year. I think it will be really interesting, because audit is one of the simplest tools in medicine and we know that it helps drive up standards. You need to know where you are and how you're doing, in order to understand where there's room for improvement.

"One of the most interesting findings so far, which I had hoped for all along, is that pretty much all of the things that we say companies should be doing on becoming more transparent – everything good – are done by at least one company. So when people say it's not possible, that's clearly wrong."

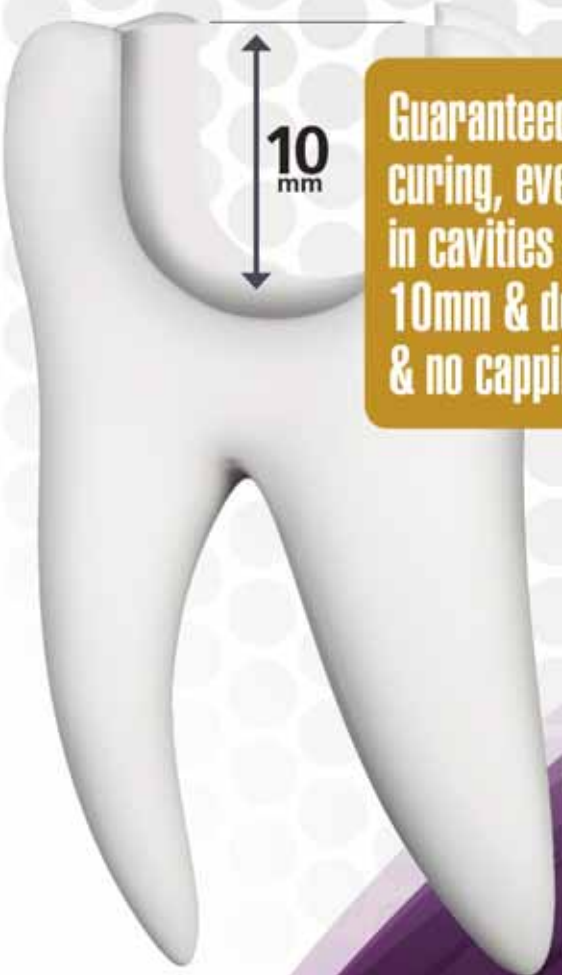
We look forward to further updates at the IDA Annual Conference in April.

A real alternative to amalgam has arrived...

DUAL CURED COMPOSITE!

Fill-Up!™

Deep. Fast. Perfect.



Guaranteed curing, even in cavities 10mm & deeper & no capping

DEEP
- Up to 10mm guaranteed curing

FAST
- Light cures in seconds
- Chemical cure in 3mins

PERFECT
- Minimal shrinkage due to dual cure
- Perfect marginal seal

Suitable for all posterior restorations

20-25 Restorations per kit

Intro Kit
Art No. 6001 9342
Kit includes:
2 x 4.5g Fill-Up! Universal
1 x 2.5g Etchant Gel S
2 x 3ml Parabont Adhesive A+B
6 x Mixing Tips Short SF, 8 x Mixing Tips Short F

To book a demonstration, order a kit or for further information please call the Fill-Up! hotline

For further information, call the **Fill-Up!** hotline:
+44 (0)1444 235486 Ext. 223 Julie or 224 Chris
info.uk@coltene.com | www.coltene.com

COLTENE

WWW.FACEBOOK.COM/COLTENE.UK @COLTENEUKLTD Follow us on Dentinal tubules

Management of an anxious child in the dental setting – a step-by-step approach

One of the most challenging situations for all dentists is the arrival of an anxious child into the waiting room. The key aims for the dentist are to recognise and acknowledge the anxiety. We then need to gain the trust and confidence of our young patients in order to achieve the co-operation we require to provide high quality dentistry while instilling a positive attitude to oral health. This is an overview of the techniques available, but each child is different, so part of our skill is to tailor individual management strategies for each patient.

FIGURE 1: Encouraging the reading of child-friendly books about going to the dentist is beneficial.

FIGURE 2: To help relieve a child's anxiety, a pleasant, colourful waiting area with suitable distractions is important.

Pre-visit communication

The management of an anxious child begins the minute an appointment for a new patient is made. The more prepared parents and children are the more we can expect from a first consultation. A friendly, reassuring voice on the phone, and pre-visit information letters/website section have been shown to reduce parental anxiety, which is key. Also, encouraging the reading of child-friendly books about going to the dentist is beneficial (**Figure 1**).

Dental environment

The dental surgery is full of strange sights, smells and sounds. Gradual supervised exposure can decrease fearful responses. Child-friendly staff and a pleasant, colourful waiting area with suitable distractions are important (**Figure 2**). Children respond best to professional, smartly dressed medical personnel.

Dr Abigail Moore
BDentSc DChDent MFD (RCSI)

Abigail's practice is limited to paediatrics and is based in both the Burlington Dental Clinic, Dublin 4 and the Hermitage Medical Clinic, Dublin 20. She can be contacted at moorea@burlingtondentalclinic.com

Initial meeting

The initial meeting is a key aspect in the development of a relationship with both parent and child. It is best to have the initial meeting away from the surgery (no matter how busy your day is). Going out to the waiting room to say hi and have a chat is very reassuring for patients. It is a useful opportunity to gauge the anxiety level of both child and parent, and also to explain what will happen in the visit ahead – including a time frame and what is expected of patient and parents (**Figure 3**).

Recognising an anxious child

Children display anxiety differently – they can seem more irrational and less restrained than adults. Signs of anxiety in a child can include:

- hiding behind parent/furniture;
- thumb sucking;
- nail biting;
- nose picking;
- no eye contact;
- silence;
- baby language;
- claiming to have a 'sore tummy';
- crying;
- using delay tactics, e.g., repeated visits to the bathroom; and,
- disruptive behaviour.

FIGURE 3: It is a good idea to have the first meeting take place outside the treatment room.

FIGURE 4: The initial consultation and clinical examination does not have to be in the dental chair.

FIGURE 5: Listen actively to children if they look worried, ask what they are worried about.

FIGURE 6: Establish a 'stop' signal, such as a raised hand, to reassure the child.

FIGURE 7: Tell-show-do: first show the child the stimulus.

FIGURE 8: Tell-show-do: then, if the child is willing, introduce the stimulus gradually.

Entering the surgery

The initial consultation and clinical examination does not have to be in the dental chair. If a child is happier on mum's or dad's knee then that's fine while they relax and get used to the surroundings. Always have another place to sit in the surgery for parents. The child can be distracted brushing model teeth or playing while the medical history and presenting complaint are discussed (**Figure 4**). Often a child who entered the surgery clinging to their parent for dear life is sufficiently bored and curious after a while to try the chair.

Communication with an anxious child:

Use age-appropriate language at all times. Listen actively to children when they tell you things – if they look worried acknowledge this: ask what they are worried about. Strong feelings do not disappear if ignored (**Figure 5**).
Try and find a common ground for discussion and establish a rapport before getting down to the tooth chat. Lay out the framework for a visit clearly so everyone knows what is next and how long is left. If you promised not to do treatment that day try to stick to your word.

Communication during examination/treatment:

Descriptive praise

- This should be immediate and specific to a desired behaviour, e.g., "you are opening so wide – that's brilliant", as opposed to blanket statements such as "you're doing great".

Stop signals

- Feeling out of control is a big worry, so establish a method of communication allowing perceived control, e.g., "raise your hand if you need me to stop" (**Figure 6**).

Choices

- These enhance the feeling of being involved and important, e.g., "which side of the chair are you getting up on?", or "Which tooth will I polish first – top or bottom?"

Tell-show-do

- This is a tried and tested technique. Talk about the stimulus, show the child and then introduce it gradually (**Figures 7 and 8**).

Voice control

- The tone of what we say is more meaningful than the words, especially accompanied by body language and facial expression.
- A firm tone can get attention and establish authority, but as soon as behaviour is corrected, your tone should go back to normal.

Positive reinforcement

- If a behaviour is rewarded it is likely to be repeated.
- Rewards can be verbal praise or a sticker or toy.

FIGURE 9: Allowing children to role play 'at the dentist' can be a great way to relax and explore the surgery.

- If a behaviour is not rewarded it is less likely to be repeated: ignore bad behaviour where possible.

Distraction

- Shift attention away from anxiety-producing stimulus – play games, wiggle toes/fingers.
- Allowing children to role play 'at the dentist' can be a great way to help them relax (**Figure 9**).

Modelling

- Use a child of the same gender and similar age.
- Show the child entering and leaving the surgery.
- Show treatment completion.
- Show rewards received for good behaviour.
- Show that the model is anxious initially but copes.

Parental role

There is a strong correlation between parents who have dental anxiety and their children. It is very important that parents are put at ease and well informed from the very first contact with your surgery. It is a good idea for parents to be present in the dental surgery during treatment, but only as a comforting presence not as a participant! Encouraging parents to read a magazine quietly in the corner provides reassurance for the child while allowing the dentist to take the lead.

At end of treatment

When treatment is completed, give a final reward and use encouraging descriptive words. Explain what will happen at the next visit and what is expected of the child. Try to give a time frame for the number of treatments left and the work left to do.

Concluding remarks

As clinicians, if we can recognise an anxious child and guide them through their dental visit with kindness and empathy we are more likely to be successful. Once children feel trust and confidence in their dentist, even the most anxious child can become a positive and committed dental patient.

Colgate
Sensitive Pro-Relief

The only† sensitivity toothpaste that delivers...

Bring it on!

Now you can treat dentine hypersensitivity without compromise. Colgate® Sensitive Pro-Relief™ toothpaste works instantly for on the spot relief;* delivers long-lasting results for ongoing sensitivity relief and contains 1450ppm fluoride for maintaining healthy teeth.

Three benefits all at once

† Available in the UK and Ireland. *When toothpaste is directly applied to each sensitive tooth for one minute.

The occurrence of paraesthesia of the maxillary division of the trigeminal nerve after dental local anaesthetic use: a case report

Abstract

Paraesthesia can be a complication of surgical intervention. Its occurrence after dental local anaesthetic use is a rare event in general dental practice. Reported cases have mainly described its presentation for the mandibular division of the trigeminal nerve with very few reports for the maxillary division of this nerve. This report describes a case of paraesthesia in the maxillary region following local anaesthetic use prior to removal of an upper molar tooth.

Journal of the Irish Dental Association | February/March 2015 : Vol 61 (1) 34 - 35

Introduction

Local anaesthetics are usually safe, effective and indispensable drugs used routinely in dentistry. Local anaesthetics allow dentistry to be practised in a pain-free environment. However, their use may involve complications. Paraesthesia can be defined as persistent anaesthesia (anaesthesia well beyond the expected duration) or as an altered sensation (tingling or itching).[1-3] It is the result of damage to a nerve and the occurrence of paraesthesia following the use of local anaesthesia in dentistry represents a rare but important side effect, which is often under-reported[4-8] and is important in medico-legal practice. To date, there have been very few recorded incidences or published cases of maxillary nerve paraesthesia following the use of dental local anaesthetic for a routine extraction.

Case report

The patient, a 38-year-old Caucasian female, was referred for a maxillofacial opinion regarding persistent numbness present in her upper left lip from the midline to the commissure, together with numbness of the gingiva in the upper left anterior region of the maxilla. The numbness had developed following removal of an upper left first molar tooth. The tooth was removed due to localised periapical infection and, according to the patient, was a straightforward extraction and did not require surgical intervention. The patient recalls having local anaesthetic administered on the buccal and palatal aspects of the tooth involved. She reported that shortly after having the procedure completed she developed itchiness on her left nostril and that the effects of the local anaesthesia in the region of her upper left lip and buccal, palatal gingiva of the associated tooth never wore off. She reported the absence of any associated pain, or relieving or aggravating factors, and complained of occasional drooling from her mouth. Her symptoms were static throughout. Unfortunately, information regarding the type of local anaesthetic used was initially unavailable but was confirmed later as 2% lidocaine with 1:80,000 epinephrine.

Medically, the patient was fit and healthy but was quite distressed by the longstanding paraesthesia. She smoked 15 cigarettes daily and consumed alcohol socially.

Advan Moorthy BA BDentSc
NCHD, Dublin Dental University Hospital
Lincoln Place, Trinity College Dublin, Dublin 2, Ireland

Leo FA Stassen FRCS (Ed) FDS RCS MA FTCD FFSEM (UK) FFD RCSI FICD
Professor of Oral and Maxillofacial Surgery,
Trinity College Dublin, Dublin 2, Ireland

Corresponding author:
Dr Advan Moorthy
NCHD
Dublin Dental University Hospital, Lincoln Place, Dublin 2, Ireland
T: 01-612 7316
F: 01-671 1255
E: advanm@gmail.com

Clinical examination identified decreased sensation to light, sharp touch, two-point discrimination and temperature in the cutaneous areas of the upper left lip, when compared to the right side. This reduced sensation was also evident in the gingiva in the buccal aspect of the left anterior maxilla from the central incisor to the second premolar tooth. The wound site of the extracted upper left first molar tooth had healed completely. All cranial nerves were intact.

Plain radiographs were non-contributory. Routine blood tests were normal. Axial computerised tomography (CT) imaging of the brain, cranial base and maxillae was assessed to rule out any organic cause for the described reduction in sensation. The CT scan was normal.

The patient attended for review. The reduced sensation had been present for a total of seven months. At this stage it was decided to undertake a magnetic resonance imaging (MRI) scan to rule out any demyelinating disease or any other cranial nerve pathology. The MRI scan was normal. A course of pregabalin, 100mg three times daily, was prescribed as an attempt to help the patient cope with her symptoms but was unsuccessful.

In view of the absence of any organic cause clinically, the negative results of all scans performed, the relatively straightforward nature of the dental procedure, and the long-standing nature of the patient's symptoms, a diagnosis of paraesthesia after dental local anaesthetic use was reached. No active treatment was undertaken. The patient has been discharged but advised to contact the maxillofacial clinic if there are any changes in her symptoms and to inform the hospital if the nerve sensation returns to normal.

Discussion

The spectrum of altered sensations considered as paraesthesia includes perceived numbness, swelling, tingling, itching, oral dysfunction and, occasionally, pain.[4-7] The pathogenesis underlying non-surgical paraesthesia is unknown. Pogrel *et al.* in 2000 conducted a study where patients with paraesthesia secondary to local anaesthetic use underwent surgical exploration of their affected sites. All cases showed that there was no evidence of damage to the affected nerve caused by the anaesthetic needle shank.[6] Mechanical trauma alone appears to be an unlikely cause and nerve damage itself has been hypothesised to be caused by neurotoxicity of the local anaesthetic in combination with a minor trauma created by the needle.[4,8]

Paraesthesia associated with local anaesthetic used as part of routine dental treatment is an infrequent event. Many dentists and patients are not aware of this potential problem. Its occurrence can be quite alarming and to date has mainly been described for the mandibular division of the trigeminal nerve,[7-9] with very few reports for the maxillary division of this nerve.[9] If paraesthesia occurs after tooth extraction in general dental practice and the sensibility disorder persists unaltered for an extended length of time (>3 weeks), referral to an oral and maxillofacial surgeon to evaluate the situation and discuss possible management is advisable.

References

1. **Malamed, S.F.** *Handbook of Local Anesthesia (5th ed.).* St Louis; Mosby, 2004: 288-289.
2. **Haas, D.A.** Localised complications from local anesthesia. *J Calif Dent Assoc* 1998; 26 (9): 677-682.
3. **Haas, D.A.** Articaine and paresthesia: epidemiological studies. *J Am Coll Dent* 2006; 73 (3): 5-10.
4. **Haas, D.A., Lennon, D.** A 21-year retrospective study of reports of paresthesia following local anesthetic administration. *J Can Dent Assoc* 1995; 61 (4): 319-320, 323-326, 329-330.
5. **Miller, P.A., Haas, D.A.** Incidence of local anesthetic-induced neuropathies in Ontario from 1994-1998 (abstract 3869). *J Dent Res* 2000; 79 (special issue): 627.
6. **Pogrel, M.A., Thamby, S.** Permanent nerve damage involvement resulting from inferior alveolar nerve blocks. *JADA* 2000; 131 (7): 901-907.
7. **Dower, J.S. Jr.** A review of paresthesia in association with administration of local anesthesia. *Dent Today* 2003; 131 (7): 901-907.
8. **Hillerup, S., Jenson, R.** Nerve injury caused by mandibular block analgesia. *Int J Oral Maxillofac Surg* 2006; 35 (5): 437-443.
9. **Garisto, G.A., Gaffen, A.S., Lawrence, H.P., Tenenbaum, H.C., Haas, D.A.** Occurrence of paresthesia after dental local anesthetic administration in the United States. *J Am Dent Assoc* 2010; 141 (7): 836-844.

Adverse reactions to facial dermal fillers: a case report

Précis

The aim of this paper is to describe a case of an adverse reaction following the injection of facial dermal filler in the context of current legislation and research, and introduce fillers as a possibility in the differential diagnosis of a lower lip swelling.

Abstract

Aim: To describe an early-onset adverse reaction following the injection of facial fillers, and to summarise the current legislation and research regarding cosmetic dermal fillers. To emphasise that dermal fillers should be considered as part of a general dental practitioner's differential diagnosis for lower lip swelling.

Objectives: 1. To describe the types of adverse reactions associated with dermal fillers in the literature; 2. to summarise the current European and Irish legislation and guidance regarding the use of these products; and, 3. to present a case study of an early-onset adverse reaction.

Conclusion: Dentists should question patients regarding the use of cosmetic dermal fillers as part of the differential diagnosis of any intra-oral painless swelling where other pathology cannot be identified.

Journal of the Irish Dental Association | February/March 2015 : Vol 61 (1) 36- 39

Introduction

Our current social and cultural environment places great importance on our appearance. Collagen, the major structural component of the dermis, serves to strengthen and support the skin. As we get older, decreased production of collagen by fibroblasts occurs, leading to loss of tissue bulk and elasticity.[1] As a result, deep folds, wrinkles and rhytides can develop. Injectable soft tissue fillers (ISTFs) provide an attractive option in facial rejuvenation.

ISTFs can be categorised into biodegradable and non-biodegradable substances. Biodegradable fillers (such as bovine collagen and hyaluronic acid) are safer to use; however, they have a relatively short lifespan (three to 12 months).[2] Non-biodegradable fillers (such as silicone) have a longer tissue presence but cause more adverse reactions than the biodegradable fillers.[3] ISTFs are usually injected into the deep dermis or the dermal-subdermal junction (**Figure 1**).[4]

The ideal filler should be easy to use, safe, cost-effective and well tolerated by the tissue, as well as non-toxic, non-antigenic, and not carcinogenic or teratogenic.[5] Although a variety of agents are available, the ideal filler has not yet been discovered and adverse reactions such as pain, oedema, ulceration, itching, scarring and migration of the injected filler may occur in orofacial tissues.[6] Occasionally, more severe reactions have occurred with some materials, such as skin allergic reactions, anaphylaxis, migration, scars, necrosis, ulceration, arthralgia, myalgia, headache, nausea, retinal artery thrombosis, paralysis of the upper lip, face and forehead, persistent discolouration, and even renal failure.[7] Complications can be attributed to the product's properties, method of delivery, and reaction of the recipient's immune system.[8] Immediate complications are usually related to poor delivery technique.[9] These include palpable filler material from overly superficial injection, uneven distribution, over or under-correction, and hypersensitivity reaction.[10]

Elaine Kehily BDS MFDS
Senior House Officer, Oral Surgery, University College Cork

Martina Hayes BDS MFDS
Clinical Research Fellow, Restorative Dentistry, University College Cork

Christine McCreary BDentSc MB BCH BAO FDS FFD MD
Senior Lecturer/Consultant Oral Medicine, University College Cork

Corresponding author:
Elaine Kehily
Oral Surgery
UCC Dental School and Hospital,
Wilton, Cork, Ireland
T: 021-490 5000
F: 021-454 5539
E: ekehily@ucc.ie

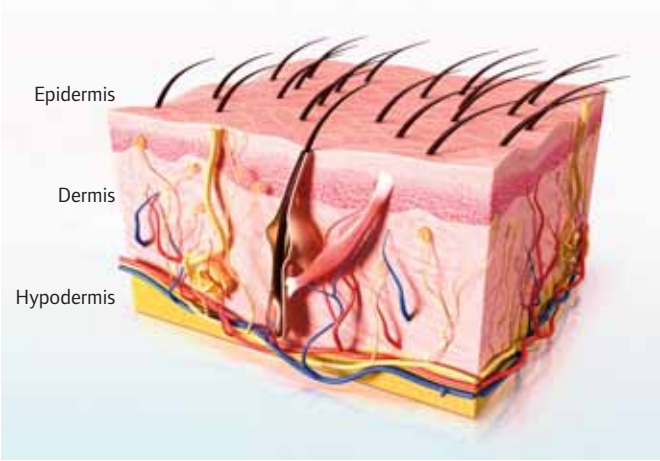


FIGURE 1: Layers of the skin.[30]

Early-onset complications appear within a few weeks after injection, usually presenting as non-inflammatory nodules (localised accumulations of filler). Late (up to one year) or delayed (longer than one year) complications usually present as nodules or sub-dermal masses.[11] An immune response to filler material or chronic infection can lead to the formation of granulomas.[12] Late hypersensitivity and granulomatous reactions have been reported with both bovine collagen and hyaluronic acid fillers.[13]

Legislation

Dermal fillers that claim a medical purpose, as assigned by the manufacturer, and whose primary mode of action is physical, are regulated as surgically invasive medical devices for the "replacement or modification of the anatomy", under Regulation 1 of Statutory Instrument S.I. 252 of 1994 concerning medical devices, which transposes European Directive 93/42/EEC.[14]

Examples of medical purposes would include the replacement of lipo-atrophy in HIV patients, or to augment or contour tissue in patients with cancer of the face, *etc*.

It is not possible for a dermal filler to be regulated as a cosmetic in the EU, on the basis that it is an injectable product. The dermal fillers we have encountered would almost invariably be regulated as medical devices, Class IIb or III.[15]

According to the Irish Medicines Board the term 'medical device' covers all products, except medicines, used in healthcare for the diagnosis, prevention, monitoring or treatment of illness or disability.[16]

The Irish Dental Council also published a Code of Practice for Dental Practitioners relating to non-surgical cosmetic procedures in March 2013.[17] It is the view of the Dental Council that the use of botulinum toxins and dermal fillers for cosmetic treatments is not the practice of dentistry. The Dental Council acknowledges that the use of botulinum toxins or dermal fillers may be justified in exceptional circumstances, for example in the treatment of temporomandibular joint disorder/dysfunction or the management of chronic pain. It is expected that in this context the treatment will only be undertaken by dentists with the appropriate education, training and competence, and the treatment must be for an anticipated health gain. Only products authorised by the Irish Medicines Board can be used, even if the indication for which they are to be used is not authorised. The general conditions of use set out in the Summary of Product Characteristics including contraindications, warnings, precautions and monitoring requirements should be complied with in so far as they are relevant to the proposed use. The view of the Dental Council is not determinative in the context of law generally or fitness to practise.

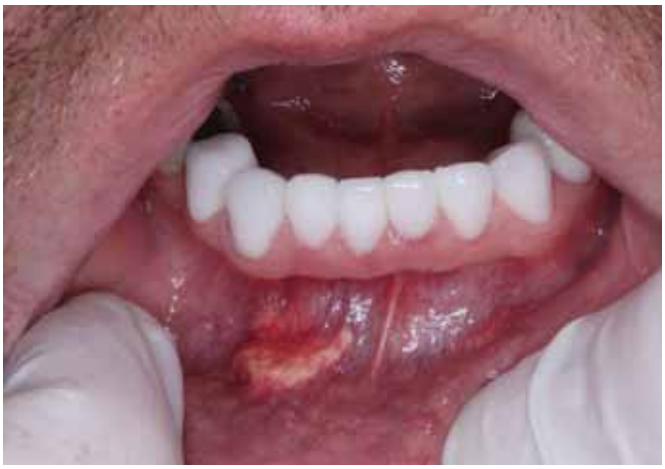


FIGURE 2: Swelling in the lower labial sulcus on the right hand side. Note the full coverage crowns on all anterior teeth.

FIGURE 3: Similar swelling of smaller size in left lower labial sulcus.

Case report

A 33-year-old man presented to Cork University Dental School and Hospital complaining of a painless swelling on the inside of his lower lip. The swelling had been present for approximately one week and the patient did not believe that it had increased in size since presentation. The patient was fit and well, did not take any medications and did not have any known allergies. Extra-orally there was no evidence of swelling or asymmetry, and there were no enlarged lymph nodes on palpation. His temperature was taken and was normal. Intra-orally there was a swelling evident in the lower labial sulcus in the region of his 43, 42 and 41 (**Figure 2**). It measured approximately 7mm x 7mm, and was non-fluctuant and painless to palpation. It was not evenly raised across its surface and had a 'lumpy' appearance. The swelling appeared quite superficial and had a yellow colour. On closer examination, a smaller discrete swelling of similar appearance was noted in the labial sulcus adjacent to the 33 (**Figure 3**).

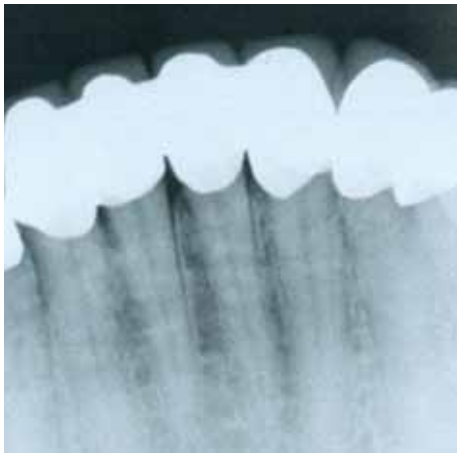


FIGURE 4: Periapical radiograph of lower anterior teeth.

The patient had undergone an extensive course of dental treatment two years previously during which all of his upper and lower incisors, canines and first premolars had full coverage all-ceramic crowns placed. The patient reported that this had been done for cosmetic reasons, as he had been unhappy with the colour of his teeth. All of the lower teeth gave a positive response when vitality was tested and none were tender to percussion. There was no tenderness when the swellings were palpated. A periapical radiograph of the lower teeth did not show any pathology, nor did a radiograph of the soft tissues (**Figure 4**).

On further questioning, the patient informed us that he had attended a beauty salon 12 days previously and was injected with dermal fillers to improve the appearance of 'marionette lines' (lines that run downward from the commissure of the mouth). He was unsure what type of filler had been injected but he reported that he had had fillers injected previously without any side effects. The appearance of both lesions was consistent with that of displaced filler material as described in the literature. Due to the risk of numbness of the lower lip it was not deemed necessary at that time to biopsy and the patient was asked to attend for review in three months. The patient was satisfied with this and was given instructions to contact the Dental Hospital if he noticed any changes before his review appointment. The authors noted no change in presentation at three-month review.

Discussion

Cosmetic dermal fillers are known to cause foreign body granulomatous responses.[12,13,18-22] A granuloma is defined as a mass of granulation tissue, typically produced in response to infection, inflammation, or the presence of a foreign substance. The foreign body granuloma that results consists of many macrophages acting to phagocytose the filler.[23] Acute inflammation can develop years after the formation of a granuloma because of a possible infectious component, another injection, dental surgery, trauma, or for no known reason.[24] Hypersensitivity has also been suggested as a causative factor in the activation of a granuloma.[25] This represents a state of altered sensitivity in which the body responds, by way of an exaggerated immune response, to a foreign body.

All injectable fillers are capable of inducing a foreign body reaction. The reaction can be unilateral, even if the fillers are placed bilaterally.[26] Most semi-permanent and permanent fillers have produced occasional cases of delayed granulomas and abscesses.[20-22] The qualities of hydrogels being nontoxic, highly biocompatible and easily penetrable for nutrients and waste products make them excellent growth media for bacteria.[8] The development of delayed complications has been attributed to biofilms.[27] A biofilm is a structured community of microorganisms encapsulated within a self-developed polymeric matrix and irreversibly adherent to a living or inert surface. Once the biofilm has been activated, it leads to acute purulent infection. The active infection can be controlled with antibiotic therapy; however, the underlying biofilm can persist and generate recurrences. When a filler becomes infected, antibiotic treatment can only mitigate the inflammatory process, and sooner or later, after discontinuation of the medication, recurrence is inevitable.[8] Therefore, it is necessary to remove all infected material.

The most common complications are minor and include bruising, erythema, and pain at the treatment site. More serious complications can include granuloma formation, tissue necrosis and blindness.[28]

Early onset complications appear between two to three days and a few weeks after injection. Early non-inflammatory nodules are localised accumulations of filler material, in particular, collagen or hyaluronic acid derivatives.[29] These complications can often be managed by gentle massage.[11] Late (several weeks to one year) or delayed (longer than one year) complications usually present as nodules or subdermal masses. A variety of therapeutic drugs are available to suppress the acute inflammation that can occur with fillers in the presence of a pre-existing granuloma. Local intra-lesional or systemic steroids have been used successfully.[28] Minocycline is advocated as a modulator of the immune response.[6] Cyclosporine and tacrolimus both inhibit calcineurin and thus modulate the T-cell response.[6] Surgery is only successful if the inflamed nodule is localised and circumscribed. Injection of the enzyme hyaluronidase may be of some value in diffusing the inflammatory response. Spontaneous resolution is always a possibility. Regardless, recurrences should be expected.[8]

In this case, the appearance of the lesion is most likely consistent with a calcium hydroxyapatite filler as reported in the literature.[7] The swollen region may be an accumulation of the filler itself, or may be a granulomatous reaction to the filler as described above.

Due to the surge in the use of dermal fillers, general dental practitioners should be aware of the possible risks and complications associated with these products. They may also experience pressure to provide their patients with non-surgical cosmetic procedures. It would be advisable to familiarise themselves with the common presentation and relevant symptoms that they are likely to encounter should any complications arise following treatment with dermal fillers.

Conclusion

It is the view of the Dental Council that the use of botulinum toxins and dermal fillers for cosmetic treatments is not the practice of dentistry. Injectable soft tissue fillers, when used in the right way and in expert hands, can achieve predictable and effective results. This case has shown, however, that there is room for error and the effects can be difficult to correct and distressing for patients when things go wrong. It is imperative that those performing non-surgical cosmetic procedures are appropriately trained and competent.

This case also demonstrates that dermal fillers should be considered as part of a general dental practitioner's differential diagnosis for a lower lip swelling.

Acknowledgements

The authors wish to express their gratitude to Dr Donal O'Keeffe for his assistance with this case report.

References

1. **Jenkins, G.** Molecular mechanisms of skin ageing. *Mechanisms of Ageing and Development* 2002; 123 (7): 801-810.
2. **Rohrich, R.J., Ghavami, A., Crosby, M.A.** The role of hyaluronic acid fillers (Restylane) in facial cosmetic surgery: review and technical considerations. *Plastic and Reconstructive Surgery* 2007; 120 (6S): 41S-54S.
3. **Rzany, B., Zielke, H.** Overview of injectable fillers. In: *Injectable Fillers in Aesthetic Medicine*. Springer, 2006: 1-9.
4. **Lemperle, G., *et al.*** ArteFill® permanent injectable for soft tissue augmentation: I. Mechanism of action and injection techniques. *Aesthetic Plastic Surgery* 2010; 34 (3): 264-272.
5. **Coleman, S.R.** Structural fat grafts: the ideal filler? *Clinics in Plastic Surgery* 2001; 28 (1): 111-119.
6. **De Boulle, K.** Management of complications after implantation of fillers. *Journal of Cosmetic Dermatology* 2004; 3 (1): 2-15.
7. **Daley, T.L., Damm, D.D., Haden, J.A., Kolodychak, M.T.** Oral lesions associated with injected hydroxyapatite cosmetic filler. *Oral Surg Oral Med Oral Pathol Oral Radiol* 2012; 114 (1): 107-11.
8. **Schütz, P., *et al.*** Infected facial tissue fillers: case series and review of the literature. *Journal of Oral and Maxillofacial Surgery* 2012; 70 (10): 2403-2412.
9. **Hexsel, D.M., Hexsel, C.L., Iyengar, V.** Liquid injectable silicone: history, mechanism of action, indications, technique, and complications. In: *Seminars in Cutaneous Medicine and Surgery*. Elsevier, 2003.
10. **Saylan, Z.** Facial fillers and their complications. *Aesthetic Surgery Journal* 2003; 23 (3): 221-224.
11. **Sclafani, A.P., Fagien, S.** Treatment of injectable soft tissue filler complications. *Dermatologic Surgery* 2009; 35 (s2): 1672-1680.
12. **Lombardi, T., *et al.*** Orofacial granulomas after injection of cosmetic fillers. Histopathologic and clinical study of 11 cases. *Journal of Oral Pathology & Medicine* 2004; 33 (2): 115-120.
13. **Lowe, N.J., Maxwell, C.A., Patnaik, R.** Adverse reactions to dermal fillers: review. *Dermatologic Surgery* 2005; 31 (s4): 26-1633.
14. **European Union.** Directive, E.15/EC of the European Parliament and of the Council of 27 February 2003 amending Council Directive 76/768/EEC on the approximation of the laws of the Member States relating to cosmetic products. *Off J Eur Union* 2003; 66: 26-35.
15. **De Groot, R., Brekelmans, P., Meulenbelt, J.** Implications of the new EU legislation on chemicals for poisons centres. *Clinical Toxicology* 2011; 49 (9): 794-798.
16. **Irish Medicines Board.** Available from: http://www.imb.ie/EN/Medical-Devices.aspx.
17. **Irish Dental Council.** Code of Practice regarding Non Surgical Cosmetic Procedures. Available from http://www.dentalcouncil.ie/nonsurgicalcosmetics.php.
18. **Lemperle, G., *et al.*** Foreign body granulomas after all injectable dermal fillers: part 1. Possible causes. *Plastic and Reconstructive Surgery* 2009; 123 (6): 1842-1863.
19. **Lemperle, G., Morhenn, V., Charrier, U.** Human histology and persistence of various injectable filler substances for soft tissue augmentation. *Aesthetic Plastic Surgery* 2003; 27 (5): 354-366.
20. **da Costa Miguel, M., *et al.*** Oral foreign body granuloma: unusual presentation of a rare adverse reaction to permanent injectable cosmetic filler. *International Journal of Oral and Maxillofacial Surgery* 2009; 38 (4): 385-387.
21. **Jham, B.C., *et al.*** Granulomatous foreign-body reaction involving oral and perioral tissues after injection of biomaterials: a series of 7 cases and review of the literature. *Journal of Oral and Maxillofacial Surgery* 2009; 67 (2): 280-285.
22. **Sanchis-Bielsa, J.M., *et al.*** Foreign body granulomatous reactions to cosmetic fillers: a clinical study of 15 cases. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology* 2009; 108 (2): 237-241.
23. **Coleman, D., King, R., Andrade, J.** The foreign body reaction: a chronic inflammatory response. *Journal of Biomedical Materials Research* 1974; 8 (5): 199-211.
24. **Nel, A., *et al.*** Toxic potential of materials at the nanolevel. *Science* 2006; 311 (5761): 622-627.
25. **Williams, G., Williams, W.J.** Granulomatous inflammation – a review. *Journal of Clinical Pathology* 1983; 36 (7): 723-733.
26. **Requena, L., *et al.*** Adverse reactions to injectable soft tissue fillers. *Journal of the American Academy of Dermatology* 2011; 64 (1): 1-34.
27. **Rohrich, R.J., *et al.*** Soft-tissue filler complications: the important role of biofilms. *Plastic and Reconstructive Surgery* 2010; 125 (4): 1250-1256.
28. **Lemperle, G., Rullan, P.P., Gauthier-Hazan, N.** Avoiding and treating dermal filler complications. *Plastic and Reconstructive Surgery* 2006; 118 (3S): 92S-107S.
29. **Grunebaum, L.D., *et al.*** The risk of alar necrosis associated with dermal filler injection. *Dermatologic Surgery* 2009; 35 (s2): 1635-1640.
30. http://www.healthcentral.com/skin-cancer/000425.html (Accessed" 23/04/2014).

Dentists' requirements for continuing professional development in Ireland. A pilot study conducted at University College Cork

Keywords: Dental continuing professional development, CPD, postgraduate dental education.

Précis: Dentists valued CPD topics they perceived as having a direct clinical application. Topics recommended by the Dental Council as core CPD were prioritised by participants.

Abstract

Aims: To determine the self-assessed continuing professional development (CPD) needs of dental practitioners and identify how each discipline can best be served by a dental CPD programme. To set findings in the context of the available literature and contribute to the development of CPD programmes.

Method: Topics were arranged into eight disciplines: practice management; paediatric dentistry; preventive dentistry; orthodontics; behaviour management; dentistry for people with a disability; oral medicine and surgery; and, restorative dentistry. A web-based questionnaire was constructed and administered using a MarkClass 2.21 online survey tool.

Results: Fifty-six self-reported assessment responses were received, with three-quarters of participants having graduated within the past 10 years. Topics in oral medicine and surgery attracted consistently high levels of interest. A tendency to favour topics with a perceived direct clinical application was observed. Topics recommended by the Dental Council as core areas for CPD were given a high level of priority by respondents.

Conclusions: Traditional lectures remain a valued mode of CPD participation. Practical courses were valued across all dental topics offered. A varied approach to determining the requirements of dentists is essential to appropriately support the practitioner.

Journal of the Irish Dental Association | February/March 2015 : Vol 61 (1) 40 - 44

Introduction

This research was a pilot study of the ways in which the continuing professional development (CPD) needs of dentists could be provided. A web-based questionnaire facility was used to enable dental practitioners to register their level of interest in a range of clinical topics presented as CPD lectures and practical courses to provide hands-on experience. The findings were reviewed with reference to the available literature on dental CPD. The study sought to inform development of dental CPD programmes.

Aims

1. To determine the self-assessed CPD needs of dental practitioners and identify how each discipline can best be served by a dental CPD programme.
2. To rank topics within each discipline in order of dentists' highest preferences and to contribute to the development of CPD programmes in the context of available literature.

Method

Eight disciplines representing aspects of the practise of dentistry were identified using literature and information sourced from previous dental CPD course providers: practice management; paediatric dentistry; preventive dentistry; orthodontics; behaviour management; dentistry for people with a

Dr Christopher Stewart
University College Cork

Professor Martin Kinirons
University College Cork

Corresponding author:
Dr Christopher Stewart
Department of Oral Health and Development
Cork University Dental School and Hospital
Wilton, Cork, Ireland
T: 021-490110
E: c.stewart@ucc.ie

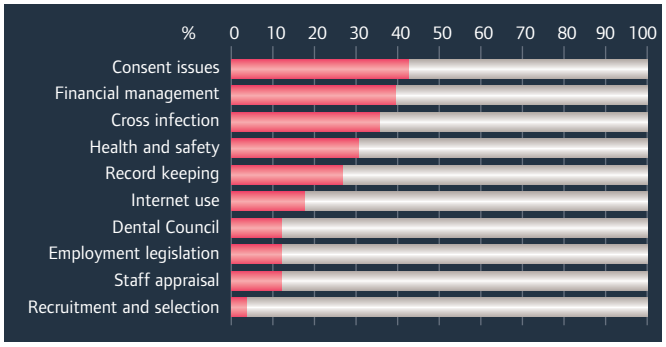


FIGURE 1: Practice management topics: proportion with stated high interest.

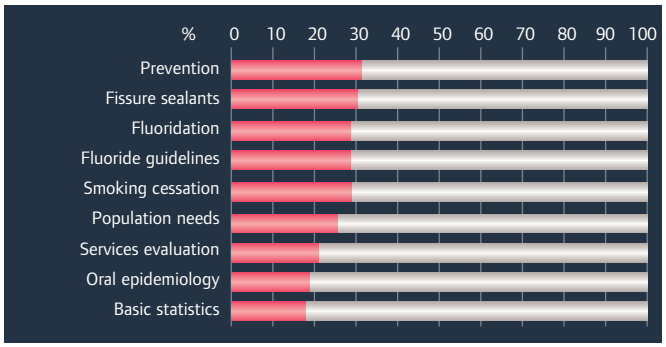


FIGURE 3: Preventive dentistry topics: proportion with stated high interest.

disability; oral medicine and surgery; and, restorative dentistry. A series of appropriate topics was arranged within each discipline. A web-based questionnaire was constructed and administered using a MarkClass 2.21 online survey tool. An url and covering letter explaining the purpose of the questionnaire was made available and posted on the Dental School website. Responses were compiled and presented within each discipline. Topics offered were those that could be readily delivered at a dental school with lecture and operative techniques laboratory facilities. Practical courses were identified across the disciplines as appropriate. A programme comprising evening lectures and a series of practical courses was created to utilise available facilities outside normal hours so as not to interfere with the commitments of busy practitioners. Concise aims and objectives were drawn up for each course and accreditation by the Dental Council was obtained.

Results

Responses were received from dentists working across the spectrum of dental services. Of the 56 respondents, the majority (76.8%) had qualified within the past 10 years. The results for lecture topics offered in each of the disciplines identified are presented.

Figure 1 represents the findings in relating to practice management. The topics dealing with consent, cross-infection control and financial issues attracted the highest level of interest. Lower proportions of respondents reported interest in administrative topics, including employment issues.

In paediatric dentistry (**Figure 2**), responses indicated that the highest levels of interest were in the topic of dental trauma. Other common clinical aspects, including open apex endodontics and behaviour management, resulted in expressions of high interest. **Figure 3** shows the equivalent data for preventive dentistry. In orthodontics (**Figure 4**) the topics were non-specialist in nature.

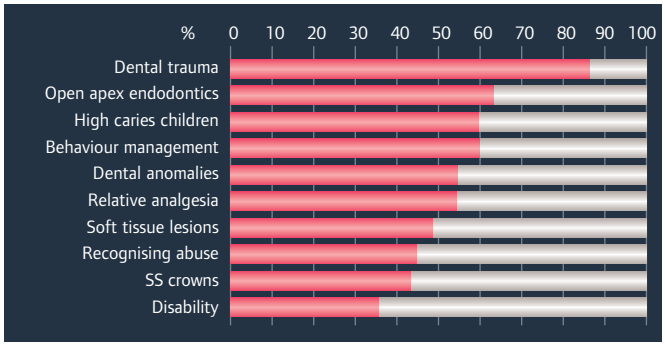


FIGURE 2: Paediatric dentistry topics: proportion with stated high interest.

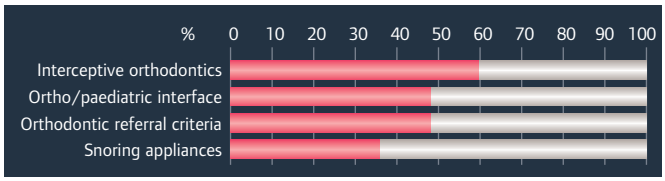


FIGURE 4: Orthodontic topics: proportion with stated high interest.

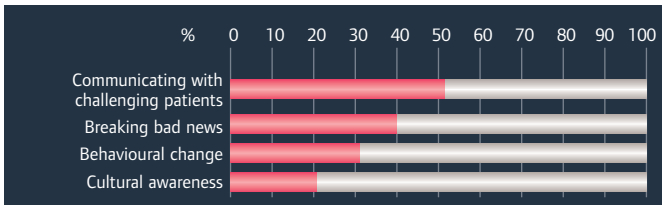


FIGURE 5: Behavioural sciences topics: proportion with stated high interest.

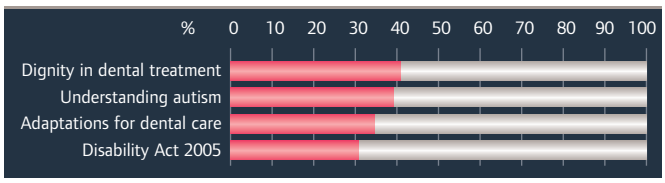


FIGURE 6: Dentistry for people with a disability: proportion with stated high interest.

Some 60% of respondents expressed a high level of interest in interceptive orthodontics, while the referral criteria for orthodontic treatment was cited by 47%. A further 47% were very interested in the paediatric and orthodontic interface.

In behavioural science, 53% of dentists expressed a high level of interest in the issue of communicating with challenging patients, while 40% cited the breaking of bad news (SPIKES model). Some 33% rated behavioural change highly, as did 22% for the topic of cultural awareness. Topics were confined to those having application in all disciplines (**Figure 5**).

Considering dentistry for people with a disability, the topic of 'dignity and dental treatment for people with a disability' drew the highest expressions of interest (42%). Within this discipline, 38% reported a high level of interest in 'understanding autism'. Some 36% were interested in adaptations to facilitate dental care for people with a disability, while information on the dentist's responsibility under the Disability Act 2005 was sought by 33%. The results for this discipline are presented in **Figure 6**.

In the discipline of oral medicine and surgery, topics consistently resulted in

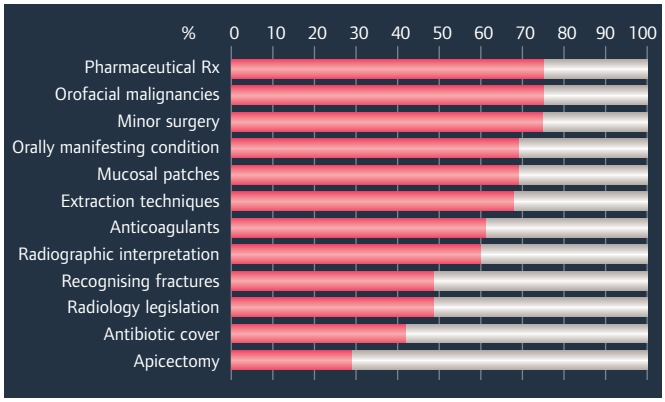


FIGURE 7: Oral medicine/surgery topics: proportion with stated high interest.

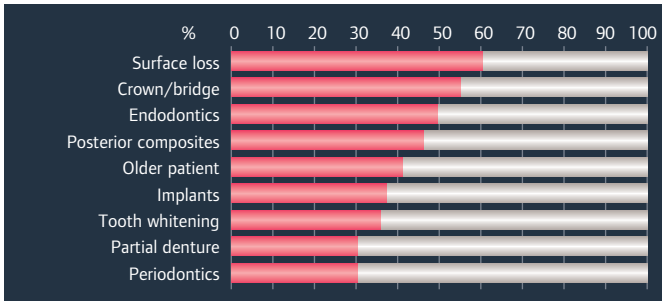


FIGURE 8: Restorative dentistry topics: proportion with stated high interest.

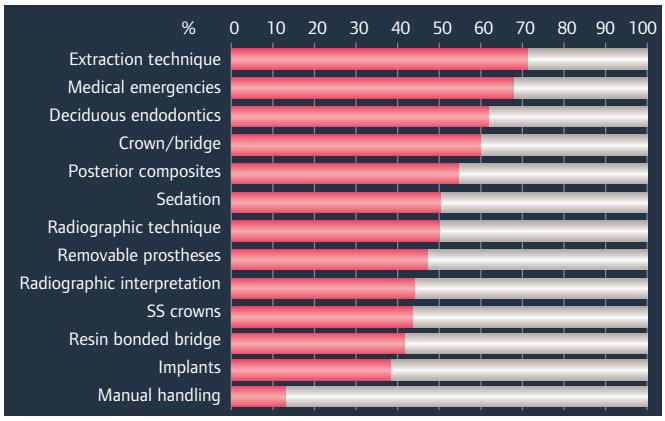


FIGURE 9: Practical course topics (all disciplines): proportion with stated high interest.

expressions of high interest and the findings are represented in **Figure 7**. In restorative dentistry, high levels of interest in the management of tooth surface loss were reported. Lower proportions expressed interest in the topics of partial dentures and periodontics. The responses for restorative dentistry are represented in **Figure 8**. The levels of interest in topics offered as CPD practical courses, across all disciplines, are represented in **Figure 9**, with extraction technique most commonly cited. Medical emergencies as a practical course was given a high priority by two-thirds of dentists in this study. In general, dentists were very interested in these clinical topics.

Discussion

The current work served as a pilot evaluation and sought to explore the self-assessed postgraduate educational needs of dentists. This has been used to inform and guide provision of CPD courses at the Cork University Dental School and Hospital. Bullock *et al.* (2013),[1] reporting on essential CPD provision in Europe, noted that university dental schools and professional associations were the most common providers of CPD. The need to preserve the integrity of postgraduate dental education free from commercial interests has been identified.[2] In Ireland, participation in dental CPD activities is expected to become mandatory when the current review of the Dentist Act is completed. In seeking to assess dentists' CPD preferences, this study follows similar studies elsewhere, although the outcomes reflect local operating conditions. Barnes (2012)[3] suggested that such studies serve to identify topics that dentists *want* to study rather than topics that may be essential.

Irish dentistry has played a prominent role within Europe in developing dental education and identifying the priorities for the profession.[4] Shanley *et al.* (2002),[4] reviewing undergraduate dental education in Europe, considered the areas of practice that had resulted in significant dental errors: cross-infection control; radiation protection; and, care of patients with medical conditions and their management. In common with regulatory bodies in other jurisdictions, the Dental Council[5] recommends ongoing CPD in these areas. In addition to these core areas, the Dental Council recommends that dentists carry out CPD relating to all aspects of clinical practice and suggests further topics: law and ethics; complaints; business planning; communications; evidence-based dentistry; child protection; and, clinical audit.

In a recent review of the literature on CPD for dentists, Barnes *et al.* (2012)[3] reported that lectures were considered to be a cost-efficient modality of CPD provision, but expressed concern regarding the passive nature of the learning involved. Nevertheless, lectures remain one of the most popular CPD modalities. The value of lectures as a useful method of disseminating information is acknowledged. Dentists repeatedly cite their value as a means of meeting up with colleagues. Chan *et al.* (2006),[6] surveying 514 dentists attending the Asia Pacific Conference, found that the didactic mode was highly valued. Leggate and Russell,[7] considering attitudes and trends in CPD in Scotland, noted the continued preference for the formal lecture. An additional benefit cited is that it allows colleagues to access the expertise of an acknowledged expert. Hamilton,[8] commenting on the results of that same survey in Scotland in 2002, highlighted the differing requirements and attitudes of dentists depending on age, experience and circumstances. The dental profession is not a uniform group in terms of clinical experience, expertise, and professional or educational interests. Accordingly, there is no one size fits all formula for delivering dental CPD, with different modalities being valued by different groups.

When setting up a programme of dental CPD, it is acknowledged that there is concern as to the effectiveness of all CPD programmes worldwide.[9] Although it might be expected that the benefits of postgraduate dental education have been well established, difficulties in measuring clear outcomes mean that there is limited definitive evidence supporting such a thesis. In a study looking at cost–benefit analysis of dental CPD for general dental practitioners, Belfield *et al.*[10] cited a paucity of literature on the subject.

In a recent UK study, Firmstone *et al.*[11] drew together their findings from the existing literature in support of dental CPD. The effectiveness of different types of dental CPD are considered, the relevance to the individual, the barriers, and the requirement of support for a personal development plan for the clinician are discussed. Ireland *et al.*[12] described the structure and potential benefits of using a personal development plan in dentistry. Barnes *et al.*[3] considered the difficulties

in relating dental CPD activity to improvement in clinical outcomes. While many studies focus on the volume of CPD undertaken, and on CPD preferences, there continue to be few studies demonstrating measurable improvement in patient care outcomes.

Overall, in the present study, it can be seen that there is a preference for topics of a clinical or operative nature. This might be anticipated given the operative nature of a dentist's work.[13] For the discipline of practice management, the responses received showed a higher preference for topics related to clinical aspects. The organisational aspects of practice, staff and HR topics attracted lower levels of interest. It may be that these aspects are adequately covered by other providers, or that the perception of the dental hospital is that clinical aspects are the main focus. Chan (2006)[6] observed that interest in practice management among practitioners varied depending on the jurisdiction in which they practised. This may be influenced by prevailing legislative provisions in different countries.

In the present study considering preventive dentistry, topics with clinical connotation were again favoured over topics such as statistics. In the Asia Pacific study,[6] 14% of participants reported interest in the wider topic of dental public health. This is consistent with the observation that clinicians tend to favour direct clinical topics. Promoting the benefits of taking a more strategic view of the overall development of dentistry might be something that a postgraduate dental education programme could achieve.

The high levels of interest in trauma in paediatric dentistry in the current study are unsurprising, as it is a presentation that dentists are likely to encounter. However, they may encounter it insufficiently often to be confident about management.[14] It has been suggested that CPD has a role to play in raising confidence. The potential role for CPD in increasing the clinician's knowledge in child protection has been acknowledged.[15] More than half the participants in the DentCPD project[16] considered that child protection should be a core topic for dental CPD across Europe.

In the Asia Pacific Conference study, Chan *et al.*[6] reported that orthodontics was the most popular subject choice if offered as a specialist postgraduate degree programme. That work found that orthodontics was ranked lower as a continuing education subject. In the current study interceptive orthodontics was a topic attracting high levels of interest. The challenges associated with implementing any programme of interceptive orthodontics in general dental practice have been described.[17] Almost half of the participants in our study expressed high levels of interest in criteria for orthodontic referral. Jackson *et al.* (2009),[18] studying orthodontic referral behaviour of practitioners in the UK, concluded that there was a need for postgraduate training or guidance in orthodontic referral.

In behaviour management, the high level of interest shown in the present study is consistent with findings elsewhere. The importance of improving communication skills in relation to clinical practice has been recognised in recent years. Bailey *et al.*[16] reported that 41% of participants considered that communication skills training should be compulsory. Behavioural science has recently been integrated into the dental undergraduate curriculum in University College Cork and includes motivational interviewing (MI) to enhance graduates' communication and interpersonal skills, and support behavioural change in relation to oral health,[19] moving the profession beyond the traditionally perceived skillset of 'ask, advise and refer'.[20] The benefits of delivering such programmes as part of dental CPD are clear.

In the discipline of dentistry for people with a disability, dentists expressed interest in the topic of dignity and dental treatment. A study of dental care provision for special care patients in the Republic of Ireland[21] cites the established evidence of inequalities in oral health provisions for people with a disability internationally. It is suggested that barriers to care may include lack of education, training and facilities. It was proposed that some of the barriers identified could be adequately addressed through continuing education. Dougall and Fiske[22] advocate a model where a well-developed network of special care dentistry in primary and secondary care would allow seamless movement of patients between services at appropriate times.

Oral medicine and surgery topics were the most highly requested in the current study. The topics favoured included topics that might be considered the cornerstones of dental care provision. This is in keeping with the ethos that continuing dental education should enhance dental care for all patients, not only the ones who can afford more advanced treatments.[2] The high levels of interest expressed in topics relating to patients taking medication including anticoagulants, to oral manifestations of systemic disease and to mucosal patches is consistent with the recommendations that high priority in education be afforded to management of medical conditions.[4] Bailey *et al.*[16] reported that 71% of European dental educators considered that this should be a core CPD topic for dentists. The responses in the current study show a clear recognition by practitioners of the need for ongoing education in this ever-changing area. Medical emergencies courses were offered as a practical course in this programme.

In the discipline of oral medicine and surgery, extraction technique and operative aspects of minor oral surgery drew high levels of interest. Cowpe *et al.* (2010) considered the essential capabilities that a graduating dentist should have, and listed these topics among the 17 'major competences' identified for dental graduates.[23] That document acknowledged the importance of CPD and lifelong learning. With improvements in dental health the frequency of extractions by dentists has declined and the high proportion of respondents in the present study showing interest in the practical course on dental extraction could indicate a desire to maintain these skills.

In restorative dentistry, again the fundamental topics were prioritised in responses in this study. The interest in tooth surface loss and care of the older patient may reflect the needs of the population. Chan *et al.*,[6] reporting on the survey of the 26th Asia Pacific Congress in 2006 on the CPD choices of 385 general dental practitioners, found variation in CPD preferences according to the regions, with more urban regions showing strong interest in advanced procedures, notably oral implantology. Endodontic treatment had a consistently strong following in that work, as it did in our own study.

In other countries, where the CPD agenda in dentistry has evolved further, various supports and structures have been put in place with the goal of assuring good practice. A report commissioned by the General Dental Council (GDC) in the UK to evaluate the supporting evidence for revalidation[24] outlined the many challenges of such an approach. Challenges include the need for a fair and meaningful process and the use of multiple inputs, for example: quality improvement (QI) activities such as CPD participation, personal development planning, case assessment and complaints monitoring; or, dentist assessment utilising multi-source feedback, patient feedback and direct observation. That report outlines how other data might be utilised in dentist revalidation. This could include data gathered for administrative pruposes, e g., by the NHS. The burden of administration and cost of implementing such processes are also acknowledged. Christensen[2] envisaged a centre where dentists would have educational needs assessed and benefit from programmes to fulfill any

deficiencies identified. A study commissioned by the UK Committee of Postgraduate Dental Deans and Directors (COPDEND)[25] aimed to produce a framework for good practice for the educators in postgraduate dental education. All of these endeavours converge towards organisation of postgraduate dental education as part of a QI agenda in patient care.

While it is accepted that there is little hard evidence that lectures and practical courses lead directly to improved outcomes for patients, they provide a basis for a developing CPD programme.

Limitations

This study set out to inform and aid development of the CPD programme, and as such can be regarded as a pilot. The use of electronic media alone is likely to have influenced the numbers participating and the age profile of respondents. Chumbler *et al.* (2007),[26] reviewing an online CPD programme at the University of Florida, cite an earlier work of Clark (2003),[27] proposing that younger dentists were most likely to participate in online CPD activities. Although it might reasonably be expected that this effect will diminish with time, it is acknowledged that the methodology in the current pilot will have resulted in some skewing of the sample. Following the introduction of mandatory CPD in Ireland, further definitive study using a stratified sampling method would be warranted.

Conclusion

Practitioners who participated in the survey expressed the highest levels of interest in topics they perceived as having direct clinical application. Topics recommended by the Dental Council as core areas for CPD, in accordance with Association of Dental Education in Europe guidance, were given high levels of priority by the participants. Traditional lectures remain a valued mode of CPD participation, and practical courses are also highly valued across all disciplines. Topics with a direct clinical application were favoured, and there was a high level of interest in clinical and practical courses. A varied approach to meeting dentists' requirements is essential to appropriately support the practitioner.

References

1. **Bullock, A., Bailey, S., Cowpe, J., *et al*.** Continuing professional development systems and requirements for graduate dentists in the EU: survey results from the DentCPD project. *Eur J Dent Educ* 2013; 17 (1): e77-81.
2. **Christensen, G.J.** The new direction in dental continuing education. *J Esthet Restor Dent* 2007; 19 (3): 127-128.
3. **Barnes, E., Bullock, A.D., Bailey, S.E., Cowpe, J.G., Karaharju-Suvanto, T.** A review of continuing professional development for dentists in Europe. *Eur J Dent Educ* 2012; 16 (3): 166-178.
4. **Shanley, D.B., Dowling, P.A., Claffey, N., Nattestad, A**. European convergence towards higher standards in dental education: the DentEd Thematic Network Project. *Medical Education* 2002; 36 (2): 186-192.
5. **Dental Council.** Continued Professional Development (CPD) Scheme. March 2010. Available from: http://www. http://www.dentalcouncil.ie/files/CPD%20-%20Scheme%20-%2020100401.pdf.
6. **Chan, W.C., Ng, C.H., Yiu, B.K., *et al***. A survey on the preference for continuing professional dental education amongst general dental practitioners who attended the 26th Asia Pacific Dental Congress. *Eur J Dent Educ* 2006; 10 (4): 210-216.
7. **Leggate, M., Russell, E.** Attitudes and trends of primary care dentists to continuing professional development: a report from the Scottish dental practitioners survey 2000. *Br Dent J* 2002; 193 (8): 465-469, discussion 456.
8. **Hamilton, R**. Research summary: Attitudes to CPD in Scotland. *Br Dent J* 2002; 193 (8): 456.
9. **Best, H.A., Eaton, K.A., Plasschaert, A, *et al***. Continuing professional development – global perspectives: synopsis of a workshop held during the International Association of Dental Research meeting in Gothenburg, Sweden, 2003. Part 2: regulatory and accreditation systems and evidence for improving the performance of the dental team. *Eur J Dent Educ* 2005; 9 (2): 66-72.
10. **Belfield, C.R., Morris, Z.S., Bullock, A.D., Frame, J.W.** The benefits and costs of continuing professional development (CPD) for general dental practice: a discussion. *Eur J Dent Educ* 2001; 5 (2): 47-52.
11. **Firmstone, V.R., Bullock, A.D., Jackson, D., Manning, R., Davies-Slowik, J., Frame, J.W.** Using evaluation to enhance educational support for dental teams in the UK. *J Dent Educ* 2010; 74 (8): 892-901.
12. **Ireland, B., Cure, R., Hopkins, L**. Perfecting your personal development plan. *Vital* 2009; 6 (2): 40-41.
13. **den Boer, J.C., Bruers, J.J., van Dam, B.A.** [Dentists on continuing dental education]. *Ned Tijdschr Tandheelkd* 2006; 113 (9): 346-350.
14. **Yeng, T., Parashos, P**. Dentists' management of dental injuries and dental trauma in Australia: a review. *Dental Traumatology* 2008; 24 (3): 268-271.
15. **Al-Habsi, S., Roberts, G., Attari, N., Parekh, S.** A survey of attitudes, knowledge and practice of dentists in London towards child protection. Are children receiving dental treatment at the Eastman Dental Hospital likely to be on the child protection register? *British Dental Journal* 2009; 206 (4): E7-E7.
16. **Bailey, S., Bullock, A., Cowpe, J., *et al.*** Core continuing professional development (CPD) topics for the European dentist. *Eur J Dent Educ* 2013; 17 (1): e82-87.
17. **Borrie, F.** Interceptive orthodontics: the evidence, current general dental practice, and way forwards in the UK (PhD thesis). University of Dundee, Dundee, UK, 2013.
18. **Jackson, O.A., Cunningham, S.J., Moles, D.R., Clark, J.R**. Orthodontic referral behaviour of West Sussex dentists. *Br Dent J* 2009; 207 (9): E18; discussion 430-431.
19. **Bailey, S., Bullock, A., Cowpe, J., *et al.*** Core continuing professional development (CPD) topics for the European dentist. *European Journal of Dental Education* 2013; 17 (s1): 23-28.
20. **Davis, J.M., Ramseier, C.A., Mattheos, N., *et al*.** Education of tobacco use prevention and cessation for dental professionals – a paradigm shift. *International Dental Journal* 2010; 60 (1): 60-72.
21. **Smith, G., Rooney, Y., Nunn, J.** Provision of dental care for special care patients: the view of Irish dentists in the Republic of Ireland. *Journal of the Irish Dental Association* 2010; 56 (2): 80-84.
22. **Dougall, A., Fiske, J.** Access to special care dentistry, part 1. Access. *Br Dent J* 2008; 204 (11): 605-616.
23. **Cowpe, J., Plasschaert, A., Harzer, W., Vinkka-Puhakka, H., Walmsley, A.D**. Profile and competences for the graduating European dentist – update 2009. *Eur J Dent Educ* 2010; 14 (4): 193-202.
24. **Chisholm, A., Shipway, J., Tong, R.** Evaluation of Supporting Evidence Types for Revalidation Stage 1. Picker Institute Europe, 2012: 1-97.
25. **Bullock, A.D., Firmstone, V.R., Falcon, H.C.** Developing guidelines for postgraduate dental educators in the UK. *Br Dent J* 2010; 208 (1): 19-23.
26. **Chumbler, N.R., Cohen, D.M., Bhattacharyya, I., Sweitzer, J., Dolan, T.A.** University of Florida College of Dentistry's "Case of the Month": Evaluating a web-based continuing dental education course for clinical oral pathology. *J Dent Educ* 2007; 71 (2): 260-268.
27. **Clark, G.T.** Web-based continuing dental education in California. *J Calif Dent Assoc* 2003; 31 (8): 611-619.

EVIDENTALY

Annual Conference, Rochestown Park Hotel, Cork, April 16-18, 2015.
Contact Dario at 01 295 0072

A randomised clinical trial investigating the performance of two commercially available posterior paediatric pre-veneered stainless steel crowns: a continuation study

Kratunova, E., O'Connell, A.C.

Purpose: This study aimed to compare the clinical and radiographic success of pre-veneered posterior NuSmile® and Kinder Krowns® over one year, and to assess the level of parental satisfaction with their aesthetics.

Methods: Three trained operators placed 120 crowns in a split-mouth design with a random allocation for 36 participants (mean age: 5.8 years) who received two, four, six, or eight crowns. Blind assessment of the clinical and radiographic performance of the restorations was performed by four calibrated examiners after one year. Results were analysed by Fisher's exact test and McNemar test. Examiner reliability was determined by Cohen's kappa score. Visual analogue scale (VAS) was used to assess the level of parental satisfaction.

Results: All crowns but one were retained, and the majority (83%) had no facing fractures. Parental satisfaction was high (9.4/10 on the VAS). Primary maxillary first molar crowns had more occlusal facing fractures than their mandibular counterparts (p=0.02). Primary mandibular second molar crowns showed more facing fractures than their maxillary counterparts (p=0.008). Both types showed no statistical difference in most categories, but Kinder Krowns had more facing fractures (p<0.02).

Conclusion: Posterior pre-veneered crowns have predictable durability at 12 months while offering natural appearance to restored teeth.

Pediatr Dent 2014; 36 (7): 494-498.

The direct cytotoxic effects of medicaments used in endodontic regeneration on human dental pulp cells

Labban, N., Ghaeth, H., Yassen, L., Windsor, J., Platt, J.A.

Aim: The purpose of this *in vitro* study was to evaluate the effects of intracanal medicaments commonly used in endodontic regeneration on the survival of human dental pulp cells (DPCs).

Methods: DPCs were cultured and exposed to either no medicament treatment or low concentrations (0.3-5mg/ml^{-1}) of calcium hydroxide [$Ca(OH)_2$], triple antibiotic paste (TAP), or double antibiotic paste (DAP) for three days. After that, toxicity to the DPCs was determined by lactate dehydrogenase activity assays (LDH) and cell proliferation was measured by colorimetric assays (WST-1). Two-way ANOVA followed by Fisher's protected least significant differences was used for statistical analyses (α=0.05).

Results: The group-by-concentration interactions were significant for the LDH and WST-1 assays (p<0.0001). For the LDH assays, only the highest tested concentration (5mg/ml^{-1}) of $Ca(OH)_2$ and TAP caused significant toxicity to the DPCs compared with the untreated control, while four tested concentrations of DAP (0.5, 1, 2.5, and 5mg/ml^{-1}) caused significant toxicity to the DPCs compared with the untreated control. For the WST-1 assays, the highest concentrations that did not negatively affect the proliferation rate of DAP, TAP and $Ca(OH)_2$ were 0.3, 2, and 2.5mg/ml^{-1}, respectively.

Conclusion: The low concentrations of intracanal medicaments tested in this study were not cytotoxic in cultured cells. However, these concentrations are much lower than the concentrations that have been advocated in endodontic regeneration. Furthermore, the negative effects of TAP on DPCs were detected at lower concentrations by using the WST-1 assays than by measuring the LDH release.

Dental Traumatology 2014; 30 (6): 429-434.

Effect of repeated screw joint closing and opening cycles on implant prosthetic screw reverse torque and implant and screw thread morphology

Guzaitis, K.L., Knoernschild, K.L., Viana, M.A.

Statement of problem: Clinicians must know if a new screw can predictably increase reverse torque after multiple screw insertion cycles.

Purpose: The purpose of this study was: (1) to compare the effect of multiple implant prosthetic screw insertion and removal cycles on reverse torque; (2) to determine whether a new screw, after multiple screw insertion cycles, affects reverse torque; and, (3) to assess implant and prosthetic screw thread surface morphology with scanning electron microscopy (SEM).

Material and methods: One primary screw was paired with an implant (MT Osseospeed) and inserted to 25Ncm torque 9, 19, 29, or 39 times (n=10). Primary screw reverse torque values were recorded after each insertion. A second, reference screw was then paired with each implant for a final screw insertion, and reverse torque was measured. Maximum, minimum, median, and mean values (P(max), P(min), P(median), and P(mean)) were identified for primary screws. A 1-way ANOVA and Tukey HSD *post hoc* analysis assessed the influence of multiple screw insertion cycles on P(max), P(min), P(median), and P(mean) values (α=0.05). Confidence intervals were used to test differences between reference (REF) screw data and corresponding DMAX and DMIN

(DMAX=P(max)-REF; DMIN=P(min)-REF). The surface topography of an unused implant and screw and of one implant and screw from each group was evaluated with SEM.

Results: Pairwise comparisons showed that nine or fewer insertion cycles resulted in significantly greater mean reverse torque (20.9±0.5Ncm; $p<0.01$). After 19, 29, or 39 cycles, the second, reference screw achieved significantly greater reverse torque than the minimum recorded values ($p<0.05$). Implant thread surface morphology changes occurred primarily during the first 10 insertions.

Conclusions: After 10 screw insertion cycles, a new prosthetic screw should be used with the implant system tested to maximise screw reverse torque and maintain preload when an abutment is definitively placed.

J Prosthet Dent 2011; 106 (3): 159-169.

Localised aggressive periodontitis treatment response in primary and permanent dentitions

Merchant, S.N., Vovk, A., Kalash, D., Hovencamp, N., Aukhil, I., Harrison, P., et al.

Background: The comparative treatment response of children and young adults with localised aggressive periodontitis treatment (LAgP) affecting primary and permanent dentition is unknown. The objective of this study is to evaluate the influence of non-surgical periodontal therapy with adjunctive systemic antibiotics on the clinical outcome of children and young adults with primary versus permanent dentition affected by LAgP.

Methods: A cohort of 97 African American participants aged five to 21 years (30 males and 67 females; 22 primary and 75 permanent dentitions affected) diagnosed with LAgP were included. Patients presented with no significant medical history. All patients underwent periodontal therapy, which consisted of full-mouth mechanical debridement at baseline and the three-, six-, and 12-month appointments. Additionally, all patients were prescribed a one-week regimen of systemic antibiotics at the initial appointment. Clinical parameters were analysed, including probing depth, clinical attachment level (CAL), bleeding on probing, and percentage of visible plaque.

Results: Overall, periodontal therapy was found to be effective in improving the clinical outcomes of both primary and permanent dentitions. Although baseline CALs were similar between the groups, the reduction in mean CAL at three, six, and 12 months, and reduction in percentage plaque at three months, were significantly greater in primary dentition compared with permanent dentition.

Conclusions: Non-surgical therapy with systemic antibiotics is effective for LAgP in both primary and permanent dentitions. A greater reduction in CAL in LAgP of primary dentition may suggest that younger children may carry a greater propensity for positive treatment outcomes and healing potential compared with children/young adults with permanent dentition.

Journal of Periodontology 2014; 85 (12): 1722-1729.

Quiz answers

(Questions on page 12)

1. External cervical root resorption.
2. Granulation tissue visible through the translucent enamel.
3. Orthodontic tooth movement; orthognathic or dento-alveolar surgery; trauma; bruxism; potentially tooth whitening; and, developmental defects.
4. Root canal treatment with surgical debridement of the lesion and restoration; extraction; or, implant or bridge placement or removable prosthesis.

CLASSIFIEDS

SITUATIONS WANTED

Ambitious, hardworking, dynamic, experienced associate is looking for a part/full-time position in South Dublin area. Please reply by email to dentissima@outlook.com.

Experienced associate dentist, just returned from the UK, available immediately for full-time, part-time or locum work in Cork and surrounding areas. Email: dentalassociate2015@yahoo.ie.

Highly experienced dentist (BDS MGDS) available for locum/part-time work from mid February 2015 – Munster/South Leinster area. Contact John, Tel: 089-418 5763, or Email: johnt750@gmail.com.

Available to work three days a week – Monday to Thursday – in Kildare area. Dentist with 10+ years' experience. Tel: 085-716 4331.

Female dentist with three years' experience seeking locum work in the Cork area for Mondays, Tuesdays, Wednesdays and Saturdays. Excellent references available. Email: corklocumdentist@gmail.com.

Position wanted. Very experienced 'people person'. Irish dentist, Cork graduate, available for locum work. Available to work full-time/part-time in April/May 2015. All areas considered. Flexibility on remuneration. Replies to: niall@innovativedental.com, or Tel: 086-807 5273.

SITUATIONS VACANT

Full-time associate to cover maternity leave from March 11, 2015, to August 31, 2015. Contact Karen, Tel: 061-315352.

Full-time associate with experience required for multidisciplinary award-winning practice in Carlow Town. Full book guaranteed. Excellent facilities and back-up provided. Long-term view required. Please Tel: 087-2666524, or send CV to southeastdental46@gmail.com.

Advertisements will only be accepted in writing via fax (01- 295 0092), letter or email (fionnuala@irishdentalassoc.ie). Non-members must pre-pay for advertisements, which must arrive no later than March 6, 2015, by cheque made payable to the Irish Dental Association. If a box number is required, please indicate this at the end of the ad (replies to box number X). Classified ads placed in the Journal are also published on our website www.dentist.ie for 12 weeks.

Advert size	Members	Non-members
up to 25 words	€75	€150
26 to 40 words	€90	€180

The maximum number of words for classified ads is 40.

If the advert exceeds 40 words, then please contact:
Think Media, The Malthouse, 537 North Circular Road, Dublin 1.
Tel: 01-856 1166 Fax: 01-856 1169 Email: paul@thinkmedia.ie

Please note that all classified adverts MUST come under one of the following headings:

- Positions Wanted
- Positions Vacant
- Practices for Sale/To Let
- Practices Wanted
- Equipment for Sale/To Let

Classified adverts must not be of a commercial nature. Commercial adverts can be arranged by contacting Paul O'Grady at Think Media.

Associate required for Essex, UK. Full-time position (Monday to Friday). Long-established (NHS) – full book. Non-corporate. Good UDA rate. Experience desirable. Forty minutes from London. Apply via email to dockroaddental@gmail.com.

Dental associate sought for modern, computerised dental practice in the Midlands. Good opportunity for a young dentist. Email: midlandsdentaljob@gmail.com.

Galway/Mayo – Dynamic, flexible, experienced associate required. Immediate start. Full week. Self-employed status confirmed. Busy modern practice. Well equipped. Computerised. Knowledgeable supportive staff. Excellent figures. Great long-term remuneration. Email CV and personal profile to: niall@innovativedental.com.

Locum experienced associate required to cover maternity leave starting at the end of March for five months in busy, modern family practice in Celbridge, Co. Kildare. Four-day week. Good private/public mix. Replies by email to brian.corcoran26@gmail.com.

Associate wanted in Waterford City to work Fridays and Saturdays. May lead to more days long term. Full back-up and great facilities. Please send CV to Southeastdental46@gmail.com.

Associate dentist required by Central Dental Clinic Lucan. Two years' experience required. Candidate must be enthusiastic with good chair side manner. Please send applications with CV to office@centraldentalclinic.ie.

Full-time associate required for busy Waterford practice. Candidate must be experienced, warm, friendly with good people skills. Modern facilities, fully computerised and excellently equipped. Candidate must have strong general private and public experience. Email: waterforddentist@hotmail.com.

Associate dentist required for Co. Mayo. Full-time position available. Busy modern practice with excellent facilities and good experienced support staff. Please email CV to dentalcareassociate@outlook.com.

Dublin practice looking for a warm friendly dentist to join our team. Position involves carrying out dental work in nursing homes; surgery sessions also available. Min. five years' experience required. Send CV and cover letter to info@elitedental.ie.

Part-time dentist required for busy, well-equipped practice in Westport, Co. Mayo. Two days, possibility of developing more. Good support staff, loyal patients. Tel: 087-138 8489.

Dentist required August to December 2015 (five months) with possible longer term potential. One hour 15 minutes north of Dublin. Must be registered with IDC and have three years' experience. Experience working in the medical card and PPS scheme preferable. Reply with CV, or Tel: 083-174 0845.

Friendly, dynamic dentist wanted for busy, modern practice in Kinnegad. Experience with private/public dentistry essential. Part-time cover will become full-time maternity cover from June for three to four months. Email CV, cover letter to info@kinnegaddental.ie.

Wanted – experienced dentist for three months' maternity leave, from mid May to early September. To cover Mondays, Wednesdays and Thursdays. Occasional Saturday work available. Busy private, PRSI and Medical Card practice in Dublin 15. Apply to ongar.dental@gmail.com.

Experienced dentist with implant experience required for full-time position in south Dublin suburb. Full book with current turnover of €1m. Starting April 2015. Email CVs to Dentistdublinrecruit@gmail.com.

Dublin – exciting opportunity for a strong, enthusiastic general dentist to join our busy Smiles O'Connell Street practice in Dublin 1. Five days per week. Candidates must have strong general private and public experience and be IDC registered. Email: joanne@smiles.co.uk.

Dundalk – Smiles Dental is looking for an enthusiastic, passionate dentist to join our well-established Dundalk Dental Practice. Candidates must have strong general private and public experience and be IDC registered. Working days required: five days per week. Email: joanne@smiles.co.uk.

Smiles Dundrum Dental Practice in Dublin 16 is looking for an experienced general private and public dentist to join the team on a full-time basis Monday to Friday and occasional Saturdays. Candidates must be IDC registered. Email: joanne@smiles.co.uk.

Clonshaugh – Smiles Dental is looking for an enthusiastic, passionate dentist to join our well-established Smiles Clonshaugh Dental Practice in Dublin 17. Candidates must have general public and private experience and be IDC registered. Full-time and part-time available. Email: joanne@smiles.co.uk.

Enniskillen – full-time dentist vacancy available now in Enniskillen, Northern Ireland. We boast well-established patient lists along with modern facilities that are fully computerised, equipped with digital x-rays, apex locators and intra-oral cameras. Email: ellen.coyle@oasisdentalcare.com.

Strabane – full-time dentist vacancy available now in Strabane, Northern Ireland. We have well-established patient lists with modern facilities that are fully computerised, equipped with digital x-rays, apex locators and intra-oral cameras. Email: ellen.coyle@oasisdentalcare.com.

Senior dentist role in Australia – visa sponsorship available. Seeking an AHPRA regis. sr Dentist to co-own and lead a busy practice in regional NSW. Excellent pay, great location, work–life balance, and visa sponsorship. Business partnership available. Email: anna@konnecting.com or log on to http://www.konnecting.com/dentist/jobs/1480/154.

Experienced, ambitious principal dentist needed for Cavan/Monaghan practice. Excellently equipped clinic with great growth potential. Profit-sharing partnership available. Email: illuminatedentistry@gmail.com.

Part-time positions have become available in the Meath/Dublin area for IDC-registered dentist with experience. Also positions for orthodontist and implantologist. Applicants must be willing to work Saturdays/weekends. Email: mdl@inbox.com.

Existing periodontal specialist practice in South West Dublin, close to M50, looking for further specialist to expand services – good referral base in local area. Preference to an endodontist and an orthodontist to join. Fully fitted practice, digital radiography. Tel: 01-424 2048.

Leinster/Midlands. Part-time self-employed specialist orthodontist required. Series of locations, some with existing ortho services. Flexibility offered for suitable candidate. Excellent facilities and back-up staff. CV and personal profile required. References important. Email: niall@innovativedental.com.

Endodontist required. Fully qualified endodontist required for a multi-specialist practice in Dublin City Centre. One session per week initially. Contact Susan, Tel: 01-475 1313.

Dental hygienist required for six-month contract from mid February. Experience preferred but not essential. Wednesday and Thursday 9.00am-6.00pm. Saturday 9.00am-3.00pm. Please send cover letter and CV to surgerydental24@gmail.com.

Skilled, professional hygienist required for busy private practice in Dublin 14. Two days per week with potential to increase. Must have excellent clinical skills, work well within a team and have great patient communication. Please Email: associadental@gmail.com.

Dental hygienist required for very busy private clinic in Sligo town, four to five days p/w. Full book of patients. Applicant must be a good communicator, knowledgable and highly skilled. Email CVs to sligodentaljob@gmail.com.

An exciting part-time role for a dental hygienist has become available at our expanding, newly refurbished practice in South County Dublin. Must be available to work Wednesdays and late evenings. Please forward cover letter and CV by email to deborahgough@gmail.com.

Dental hygienist required for six-month contract in busy North Dublin practice. Starting beginning of April 2015, two days per week. Please email CV to Suttoncrossdental@gmail.com.

Hygienist with dental nursing skills required two days per week. Newly qualified welcome. Reply with references to drpeterdwyer@gmail.com.

Full-time dental nurse/receptionist required for general dental practice in Dun Laoghaire. Applicant must have good communication and computer skills. Email: info@dunlaoghairedental.ie.

Temporary, experienced dental nurse required for general practice in Dundrum for an immediate start. Applicants must have good communication and computer skills. Must be flexible, including some evenings/Saturdays. Please contact the practice, Tel: 01-298 0843.

Full-time qualified dental nurse required for busy private dental practice in Churchtown, Dublin 14. Positive happy attitude required. Email: tfbc16@gmail.com.

Full-time dental nurse required to cover maternity leave in specialist and general dental practice in Dublin 2. To be confirmed – would need to be available from third week in February 2015. Contact: info@harcourtdentalclinic.ie (Ref: Susan).

Qualified dental nurse required for full-time multidisciplinary dental practice Dublin 4. Please submit your CV to Ann Marie, Email: appts@visiondental.ie, or call 01-269 2442.

Experienced dental assistant required for specialist restorative practice in Clontarf. Part-time commencing mid January. Previous experience necessary. CVs to info@clontarfaestheticdentistry.com.

PRACTICES FOR SALE/TO LET

Practice for sale – Limerick area. Long-established, two surgeries, freehold, leasehold flexible, full planning permission. Modern, well-equipped, walkinable. Excellent loyal staff. Immediate profits. Very low overheads. Huge catchment close by. Great potential for growth. Principal retiring. Suit ambitious associate. Tel: 086-807 5273, or Email: niall@innovativedental.com.

Dental practice for lease in Co. Kildare. Single surgery with room for expansion. Email: practicelease252@gmail.com.

For Sale – east Galway market town. Freehold dental surgery. Upstairs apartment included. Modern equipment. Wheelchair friendly. Recently renovated. Separate sterilisation room. Great potential for growth. Principal retiring. Suit ambitious associate. Tel: 087-155 3784, or Email: dentalsurgerygalway@gmail.com.

Practice in Nerja, Costa del Sol, for sale. Information on www.practiceincostadelsol.eu. Email: nerjadentalclinic@gmail.com.

Freehold dental practice for sale in Donegal Town. Two surgeries and no costs for goodwill. Tel: 086-104 2828 after 6.00pm. **Continued overleaf >>>**

CLASSIFIEDS

<<< Continued from overleaf

EQUIPMENT FOR SALE/TO LET

For sale: Statum 2000s with two trays. Halogen curing lamp. Diagnodent caries detector. Amalgam mixing ultramat2. Intra-oral camera, and zoom bleaching lamp. Any reasonable offers accepted. Email: mayberrydentalcare@gmail.com.

Nobel Biocare implants at reduced cost! A range of 70 Internal rp Nobel Active implants for sale at 75% of list price. Contact Victoria for full details of price/size. Email: victoria@seapointclinic.ie.

For sale. Kodak RVG 6100 intra-oral digital s-ray sensor. Size 1. Works on PC or Mac. Highest resolution on the market. PWO. €3,500. Email: joe@gums.ie.

DATES FOR YOUR DIARY

FEBRUARY

20 Faithlegg House Hotel, Waterford
Southeastern Branch IDA – Annual Scientific Meeting and AGM

20 Hampton Dental, 70 Lower Baggot St — IDA MEMBERS ONLY
Hands-on course in implants This course is fully booked out

21 Hampton Dental, 70 Lower Baggot St — IDA MEMBERS ONLY
Hands-on course in implants

21 Bewleys Hotel, Dublin Airport
Cardiac first response advanced course Dublin

21 Clayton Hotel, Galway — IDA MEMBERS ONLY
CPD Roadshow Galway

28 Strand Hotel, Limerick — IDA MEMBERS ONLY
CPD Roadshow Limerick

28 Rochestown Park Hotel, Cork
Cardiac first response advanced course Cork

MARCH

6-7 Alexander Hotel, Dublin 2
Metropolitan Branch IDA – Annual Scientific Meeting

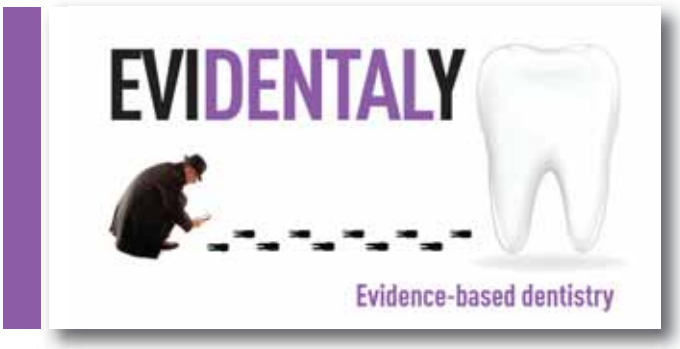
7 Rochestown Park Hotel, Cork — IDA MEMBERS ONLY
CPD Roadshow Cork

7 Sheraton Hotel, Athlone
Cardiac first response advanced course Athlone

21 Lyrath House Hotel, Kilkenny — IDA MEMBERS ONLY
CPD Roadshow Kilkenny

21 Radisson Hotel, Dublin Airport — IDA MEMBERS ONLY
CPD Roadshow Dublin

APRIL



16-18 Rochestown Park Hotel, Cork
IDA Annual Scientific Conference 2015

MAY

14 Louis Fitzgerald Hotel, Dublin
Irish Society of Dentistry for Children – Get Ready – dental and medical emergencies in children

16 Radisson Blu Hotel, Golden Lane, Dublin 8
Irish Dental Nurses Association – Summer Scientific Conference and Annual General Meeting
For further information, contact Tina Gorman, Tel: 086-676 7500, or via contact@idna.ie, or log on to www.idna.ie.

SEPTEMBER

22-25 Bangkok, Thailand
FDI 2015 Bangkok. For information contact www.fdi2015bangkok.org

I am multi-talented!

Total-, Selective-, Self-Etch: I don't mind!

I can do so much more than conventional adhesives!

My content is sufficient for more than 250 applications!

EVERY DROP IS PROFIT

Futurabond M+

A flexible and reliable solution for every bonding situation

- Can be applied with or without phosphoric acid etching
- Excellently suitable for direct or indirect restorations
- Secure adhesion to various materials such as metals, zirconium or aluminium oxide, as well as silicate ceramics, without additional primer
- Applied in one layer - only 35 seconds total working time

MADE IN GERMANY 100%

For more information please contact:
Tel. 085 725 6078 or +44 758 420 0138 · info@voco.com

VOCO THE DENTALISTS

Sensodyne® with NovaMin®

Advanced technology for your patients with dentine hypersensitivity

Clinically proven sensitivity relief

NovaMin® builds a hydroxyapatite-like layer over and within exposed dentine tubules,[1-5] **repairing your patients' dentine, to provide clinically proven sensitivity relief.***

Ongoing protection

The robust NovaMin® layer binds firmly to collagen in dentine[3,6], and resists daily physical and chemical oral challenges,[1,3,5,7,8] **helping to protect against the future pain of dentine hypersensitivity.**

Recommend Sensodyne® with NovaMin® for specialist expertise in dentine hypersensitivity care

*with twice daily brushing

References: 1. Burwell A et al. J Clin Dent 2010; 21 (Spec Iss): 66-71. **2.** LaTorre G, Greenspan DC. J Clin Dent 2010; 21 (Spec Iss): 72-76. **3.** West NX et al. J Clin Dent 2011; 22 (Spec Iss): 82-89. **4.** Earl JS et al. J Clin Dent 2011; 22 (Spec Iss): 62-67. **5.** Earl JS et al. J Clin Dent 2011; 22 (Spec Iss): 68-73. **6.** Effandt SE et al. J Mater Sci: Mater Med 2002; 13 (6): 557-565. **7.** Parkinson CR & Willson RJ. J Clin Dent 2011; 22 (Spec Iss): 74-81. **8.** Wang Z et al. S Dent 2010; 38: 400-410.

SENSODYNE®

CHGBI/CHSENO/0038/14(1)