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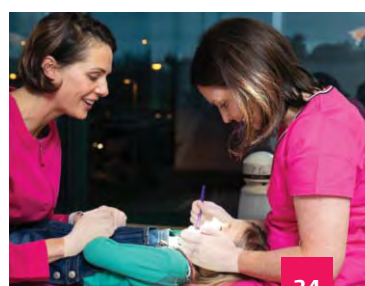
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Dr Michael Crowe

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Dr Ciara Scott
Honorary Editor

Navigating the future

New technology, new research, new techniques and sensitive patients all present challenges for dentists to navigate.

I'm no stranger to navigation; in 1996, following my graduation, I raced around the world in the BT Global Challenge. BT used the race to demonstrate the global capability of Inmarsat. GPS was developed in the 1980s, originally for military use, and by the mid 1990s was being expanded into commercial and civilian functions. It allowed the race office to automatically track our position and we were able to receive weather data to navigate and to communicate with our race office, sponsors and supporters.

When Irish Olympian Annalise Murphy joined 'Turn the Tide on Plastic', racing around the world in 2017, advances in the use of GPS not only improved transmission to and from the fleet, but allowed us to follow trackers, blogs, videos and live updates on mobile devices.

The technology not only makes ocean racing more accessible but also safer. The same is true in dentistry. It doesn't stop evolving the day we graduate and we don't stop learning and developing on our career journey. Our CPD providers and the trade support us to navigate this passage over time, in going faster or knowing when to change direction. Technology used in the right way can help us to achieve better, safer outcomes and more efficient services.

Industry not only supports research and drives development of new innovations, but also supports the IDA in providing education by financially supporting our conferences, events, and advertising in this publication. In this issue, I'm delighted that some of the speakers at our Annual Conference, and our advertisers, have shared their thoughts about navigating the future in our profession, sharing valuable insights into what will be new at this year's conference. I look forward to seeing many of you there.

Sustainability

While Turn the Tide on Plastic raised global awareness of the health of our oceans, in this issue, Mary Diffley and her colleagues inform us about awareness of sustainability closer to home, within the dental profession. They found that the majority of dentists are interested in learning more about sustainability in their practice. With this in mind, Drs Brett Duane and Darshini Ramasubbu from the Dublin Dental School, together with colleagues, have recently co-authored Sustainable Dentistry: How-to Guide for Dental Practices: <https://sustainablehealthcare.org.uk/dental-guide>.

ASD and oral healthcare

By definition, autism spectrum disorder (ASD) can affect children's ability to cope with dental visits and home oral care in a whole range of ways. Children may be non-verbal or may struggle with being examined, or with tastes, lights or noises in the dental setting. We thank Jennifer Collins and Abigail Moore for providing us with an excellent clinical feature to guide us in this relationship.

Our animated patient resource is just one example of how the profession can support patient education and engagement, if we provide dental information in a way that is meaningful and accessible to patients and carers. www.brushmyteeth.ie was launched last month with IDA support, and is another excellent resource for patients with special needs.

We'd also like to thank Michael Crowe for taking the time to tell us about his PhD studies using the Growing Up in Ireland data in this issue. His work highlights both the benefits and the limitations of using big data to understand diet and dental health, and the value of using meaningful data to advocate for better services.

Two dental assessments – not enough

The HSE dental service hit the headlines in January in an RTÉ news piece, featured on p12. The HSE response stated that in excess of 95% of children are screened and offered follow-up treatment and that children are targeted in second and sixth class. While this figure is given to sound reassuring, it means that in many areas, schoolchildren are only being offered two dental assessments, at intervals of four or more years. As clinicians, we know that this does not meet any national or international standard for dental assessments in children to prevent and manage dental disease or to assess the developing dentition for orthodontic problems, creating many challenges for patients, parents and clinicians.

Dentistry also featured on the cover page of *New Scientist* last week, in a special report on the links between oral health and *Porphyromonas gingivalis* and Alzheimer's disease, once again highlighting the importance of oral health care in improving general health.

Let's hope that as a profession we can use technology, resources and better information to navigate into a safer harbour in the future.

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Nothing is permanent but change

In our professional lives we are constantly adapting to change, and the Association and Union are working hard to serve the changing needs of our members.



The past year has been one of the most exciting, busy and stimulating of my professional career. I feel privileged to have had the opportunity to serve as IDA President and represent the Association at home and abroad. I have met the entire spectrum of colleagues, from those just beginning to those enjoying retirement. I have been struck by the sense of optimism combined with a pride in our profession that we have. I have also noted the determination that we have to deliver care that is appropriate and of a contemporary, evidence-based standard. It is not just clinical techniques but the regulatory environment that continues to change, and the Association is there to support our members' changing needs.

Oral health policy

At the time of writing (as I have written in the previous edition of the President's News) we still await publication of the oral health policy by the Department of Health. This policy may see a change in priorities by the Department. We again seek a change in the relationship between the Department and Ireland's dentists to one based on mutual respect.

Successful branch officers' day

Our first branch officers' day took place on February 15 and was an interactive day for branch officers and committee members to develop their skills to help strengthen our branches. We have clear feedback that the way branch committees meet may not be practical in all regions due to changes in working hours, travel times, etc., and we are available to assist in organising meetings by teleconference, Zoom, etc.

For the continued success of the organisation we need more members to volunteer to join our various committees. Committees produce the next generation of leaders and I would encourage anybody with an interest to contact any member of any committee, Fintan Hourihan or Elaine Hughes. Greater involvement of members will make the Association more unified, diverse and stronger to face the challenges and opportunities ahead.

Governance change proposals

The work of the governance review committee has progressed further. The governance review committee has looked at structures from branches, to committees, Board, Council and executive committee. Changes in governance are important to make us more contemporary and it is hoped that the introduction of non-executive directors to the Board will broaden the diversity and skill mix of the Board. It is hoped that the work will be concluded soon.

IDA Annual Conference, Galway, April 4-6

I encourage all members to attend our Annual Conference, 'Navigating Our Future', at the Galmont Hotel, Galway, from April 4-6. There is a great line-up of Irish and international speakers, as well as exciting pre-Conference courses, the GP meeting, golf competition, President's dinner and nurses' programme.

Thank you

I wish to thank my predecessor Dr Robin Foyle for his wise counsel while I was President Elect and this year. I wish to thank the extremely talented Board of Directors this year for their leadership in managing this chapter of change for the Association. Dr Eamon Croke, Dr Michaela Dalton, Dr Robin Foyle and Dr John Nolan step down from the Board in April. The Association has benefitted immensely from their service. This year's Council members have been very diligent in executing their roles and I thank all for their hard work. I also thank the members of all committees for their generosity in giving their time.

I wish to thank the entire team at IDA House for their support to me, the Board and Council. In particular I wish to thank Fintan Hourihan and Elaine Hughes for their expertise, availability and support to me in the last two years. I wish to thank my brother, Dr Patrick O'Connor, and our staff, who have kept the practice afloat during my absences. My thanks to each one of you for everything you did to make my year so memorable and for helping to make our profession the best it can be. In conclusion I wish my successor Prof. Leo Stassen every success in his year as President. His passion for everything that our profession encompasses will serve us well in navigating our future.



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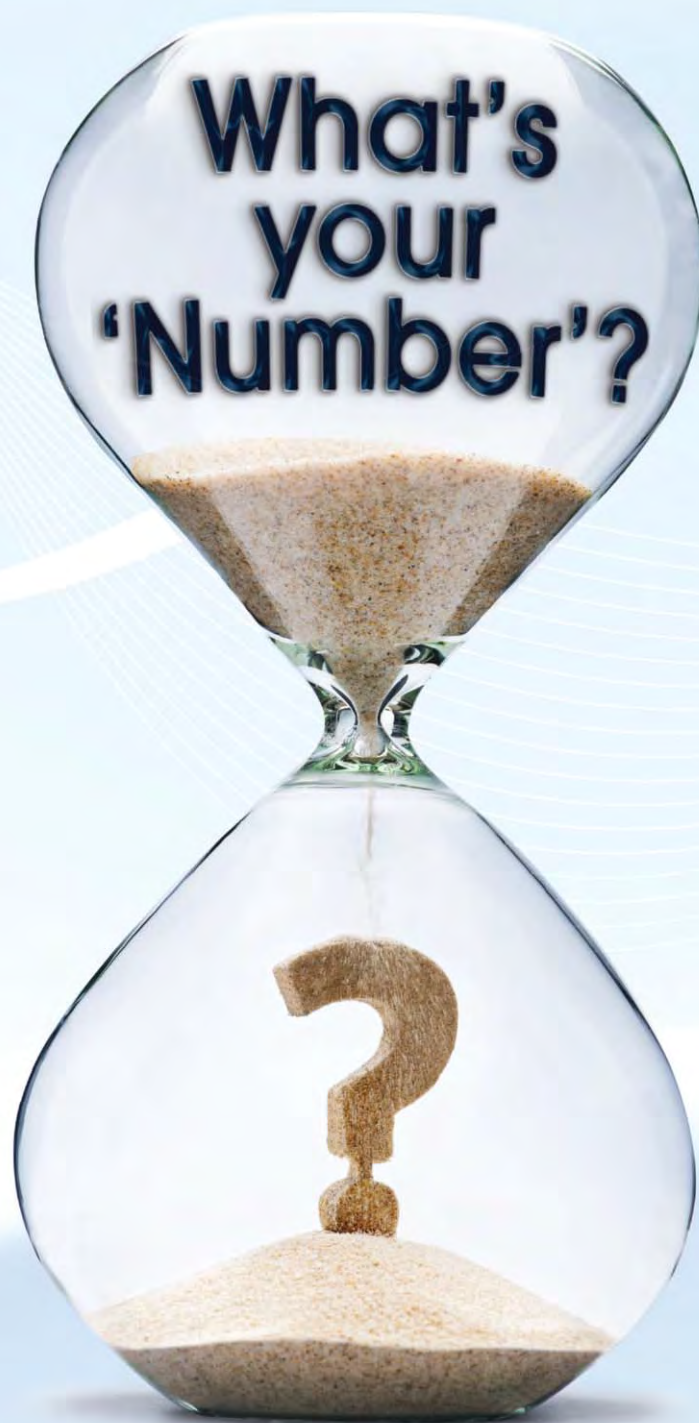
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Irish dentist elected IADT head

Irish dentist Dr Anne O'Connell (left) has been elected President of the International Association of Dental Traumatology (IADT). Anne took up the role in January 2019. Having an Irish dentist as head of an international organisation will raise the profile of Irish dentistry around the world.

The IADT is a professional organisation with global representation and its mission

is to promote optimal prevention, diagnosis, treatment and follow-up services for all individuals who suffer a traumatic dental injury.

Anne is Head of Paediatric Dentistry and Director of the Post-Graduate Paediatric Dentistry Programme in Trinity College Dublin. Her areas of interest have always included dental trauma, especially in the growing child.

The IADT seeks to engage the public, sporting organisations, and dental and medical colleagues to educate and prevent injuries where possible. It also seeks to update and educate professionals on recent developments within dental traumatology (www.iadt-dentaltrauma.org). The next congress will take place in Lisbon in June 2020.

Irish Endodontic Society ASM



Dr Kerstin Galler

Dr Josette Camilleri

Prof. Wolfgang Buchalla

The Irish Endodontic Society Annual Scientific Meeting was held in the Charlemont Hilton, Dublin, on January 24 and 25, 2019, and featured excellent presentations from Dr Kerstin Galler (Regensburg, Germany), Dr Josette Camilleri (Birmingham, UK), and Prof. Wolfgang Buchalla (Regensburg, Germany).

At the meeting, Irish Endodontic Society President Dr Síle Lennon presented the prizes for the undergraduate essay competition, which is sponsored by the Irish Endodontic Society. The winning essay, by Basma Salem, a fourth-year undergraduate in dental science at Queen's University Belfast, was entitled 'Discuss the evidence base to support the effect systemic disease could have on endodontic treatment outcomes'. The runner-up was Usman Hussain, a fifth-year undergraduate in dental science at Trinity College Dublin. Entries were received from the three dental schools and the quality was exceptional.


South East Branch ASM

The South East Branch will hold its ASM on Friday, March 1 next at Waterford Castle. An interesting line-up of speakers will include Dr Owen Crotty, who will present on digital orthodontics, plastic surgeon Dr Dylan Murray, who will present on complex craniofacial cases, and prosthodontist Dr Rory Boyd, who will lecture on digital dentistry. Local medical GP Dr Mark Rowe will cover the area of work-life balance, and the final speaker of the day is Dr Anne Gunderman, who will present on smile design. A full trade show will also take place. Registration with lunch is €100 for IDA members. To book, log on to www.dentist.ie.

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DCI opens in Claregalway



At the opening were (from left): Orla McGrath; Niamh Garrett; Clodagh Costello; Anna Gormally; Dr Darragh Byrne; Dental Care Ireland CEO, Colm Davitt; Dr Martin McCarthy; Joan Quinn; Dr Laura Kennedy; Leanne Hession; Dr Grainne Hurley; Dr Sinead Cooney; Laura Burke; and, Christina Fahy.

Dental Care Ireland recently opened its newly renovated Claregalway practice. Formerly Claregalway Dental Surgery, Dental Care Ireland Claregalway is the

group's first practice in Galway. It continues to be led by previous owner and principal dentist Dr Martin McCarthy, along with Dr Sinead Cooney, Dr Laura Kennedy, Dr Darragh Byrne, Dr Grainne Hurley and Dr Niamh O'Mahony.

The practice has recently been upgraded to provide new facilities and technology, including a children's play area.

Speaking at the opening, Colm Davitt, co-founder and chief executive, Dental Care Ireland, said: "As we enter a new phase of expansion in 2019, our vision is to continue delivering the highest levels of care and professionalism for patients of all ages, both here in Galway and throughout Ireland".

HSE Seminar – dates for your diary

The HSE Dental Surgeons Annual Seminar will this year return to the popular venue of the Midlands Park Hotel, Portlaoise, for a second year. The event will take place on October 10 and 11 next.



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Metro Branch ASM

Saturday February 23 will see the Metro Branch ASM take place in the luxurious setting of the Marker Hotel, Grand Canal Square, Dublin.

The day will commence with practical/hands-on courses. The first course – covering composites with Dr Paddy Crotty – is SOLD OUT, but places are available for the second course, which is on medical emergencies with Safe Hands. The conference commences at 2.00pm and will include presentations on the biologically oriented preparation technique (BOPT) – tissue management and implants, compliance issues, adhesion, temporomandibular joint dysfunction, and social media in healthcare.

A trade show will also be present on the day. The day will conclude with dinner at 7.30pm – all welcome. To book, please log on to www.dentist.ie.



Thousands of children on dental waiting lists

New figures published by RTÉ indicate that approximately 84,000 children and teenagers are awaiting dental assessment or treatment in Ireland. The IDA says the shocking figures underestimate the scale of the problem and calls for the appointment of 100 new dentists over the next two years.

According to the HSE figures, the regions with the longest waiting lists are the south east, the border region and the midlands.

Dr Gillian Smith, spokesperson for the IDA, said that due to delays in assessments children are ending up in pain, with swelling and infection, being put on repeated courses of antibiotics, needing operations under general anaesthetic, and missing school.

IDA Chief Executive Fintan Hourihan said that while the figures are a disgrace, they probably underestimate the scale of the problem: “The waiting lists

provided by the HSE focus mainly on the young people waiting for treatment after they have been assessed. However, there are thousands more waiting to be assessed for possible dental treatment. These figures won’t come as a surprise to anyone who is aware of the lack of resources the public dental service has been forced to contend with. While the number of children eligible for treatment has increased by 20% over the past decade, the numbers of dentists employed by the HSE has fallen by 20%. As a result, waiting lists have just got longer and longer, and children are being put through unnecessary pain and distress, while the State has to pay the cost of remedial treatment. Very often this is seven to eight times higher than preventive care.

“We are calling for the appointment of 100 extra public dental surgeons over a two-year timeframe to tackle these lists and the immediate publication by the Department of Health of a new oral health strategy – a strategy which the Department refused to consult with us on”.

Quiz questions

Submitted by Dr Peter Harrison.



The radiograph above is an orthopantomogram of a systemically healthy 28-year-old female non-smoker who attended the dental clinic complaining of bleeding gums. Periodontal examination reveals:

- multiple pockets of $\geq 6\text{mm}$ distributed throughout the mouth, with associated clinical attachment loss (CAL) of $\geq 5\text{mm}$;
- plaque score 25%;
- bleeding on probing at 60% of sites;
- furcations: Grade III – 16; Grade II – 26, 36, 37, 47; and,
- no clinical tooth mobility present.

Questions

1. Based on the 1999 (Armitage *et al.*) classification system,¹ what periodontal diagnosis would you make for this patient?
2. Based on the 2017 classification system,² what periodontal diagnosis would you make for this patient?
3. What are the key changes affecting cases of this type in the new classification?
4. Will the change in diagnostic terminology change the treatment approach in this type of case?

Answers on page 49.

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3. **Papapanou, P.N., Sanz, M., Buduneli, N., et al.** Periodontitis: Consensus report of workgroup 2 of the 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions. *J Clin Periodontol* 2018; 45 (Suppl. 20): S162-S170.

Diary of events

FEBRUARY

21 IDA North West Branch meeting
Clayton Hotel, Sligo

23 IDA Metro Branch Annual Scientific Meeting
Marker Hotel, Grand Canal Square, Dublin

MARCH

21 IDA Metro Branch meeting and AGM
Davenport Hotel, Dublin 2

APRIL

4-6 IDA Annual Conference
Galmont Hotel, Galway

MAY

16 Irish Society of Dentistry for Children – Annual Scientific Meeting
Midlands Park Hotel, Portlaoise

International Dental Show


One of the largest dental shows in the world, the International Dental Show (IDS), takes place in Cologne, Germany, from March 12-16. Most of the big names from the dental industry will be there showing off their latest gadgets and materials.

The IDS is held every two years and last time in 2017 attracted 2,305 exhibitors and 155,000 visitors. For more information on the event, visit <http://english.ids-cologne.de/>.

Sleep apnoea and snoring course




GDP Dr Roy Dookun (inset) will give a hands-on course on the topic of sleep apnoea and snoring devices in Dublin on Friday, September 27 next. Places will be limited, and booking will open in May. See www.dentist.ie for further details.



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Successful students will be awarded a Diploma in Dental Nursing (level 7) by the University College Cork or Trinity College Dublin – depending on which governing centre the student is registered.

Application forms are available from k.hennessy@ucc.ie for the Cork, Waterford, Limerick and Tralee centres and from www.ucc.ie/en/dipdentnurs/ and from www.dentalhospital.ie/education/undergraduate-programmes/dental-nursing/national-dental-nurse-training-programme-of-ireland for the Dublin and Galway centres.

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- Superior reduction of bacteria
on 100% of mouth surfaces
(teeth, tongue, cheeks and gums),
12 hours after brushing^{1,*}
- Weakens to control bacteria
- Creates a protective barrier on hard
and soft tissue to protect against
bacterial regrowth

For better oral health outcomes,^{2,†} advise
your patients about **New Colgate Total®**

Breakfast Session



IDA Annual Conference

The Galmont Hotel | Galway | Saturday 6th April 2019

You are invited to a breakfast session:

9.00am – 9.50am

Saturday, 6th April 2019

The Galmont Hotel, Galway

The oral microbiome in health and disease - an ecological perspective

Presented by

Professor Phil Marsh, University of Leeds

Breakfast will be provided

Attendees will receive a Colgate® gift bag*

*subject to availability



New Technology Briefing: New Colgate Total®

The next generation toothpaste for Whole Mouth Health - pathway to everyday prevention

Colgate® announces the launch of its next generation Colgate Total® toothpaste designed to proactively protect hard and soft oral tissues - tongue, teeth, cheeks and gums - against the most prevalent oral diseases: gingivitis and caries.

Periodontal disease and caries are both preventable in their early stages (Gingivitis and White Spot Lesions, respectively). Yet, despite the efforts of the dental profession to improve oral hygiene, these diseases continue to be a public health concern, with up to 50% of the global population estimated to be affected.^{1,2} Moreover, patients are looking for guidance and support from their dentist to make sure they are being as proactive as possible for better oral health.

Reducing periodontal disease and caries offers societal benefits

Reducing the incidence and prevalence of caries and periodontal disease has the potential not only to improve health and wellbeing in the general population, but also to reduce the growing financial pressure on publicly funded healthcare systems.³

The economic burden of these untreated diseases is likely to increase due to population longevity which is an important aspect to policy makers.^{3,4} Attention has focused on controlling bacteria in dental plaque, while the value of Whole Mouth Health has been underestimated.

Whole Mouth Health and the role of dental biofilm

The concept of Whole Mouth Health is based on the importance of achieving more than just healthy teeth - all oral tissues need to be healthy. Teeth, the hard tissue, account for only 20% of oral structures, while the soft tissue, tongue, cheeks and gums represent the 80% majority. To retain a healthy mouth, protection of all surfaces is needed.

Disrupting the cycle

Bacteria can colonise on the teeth, initiating the formation of dental biofilm, but they also adhere to soft tissues in the mouth. From here they recolonise on the surface of teeth that have been brushed, rebuilding the dental biofilm causing diseases to reoccur. Protecting the soft tissues prevents adherence of bacterial biofilm and so protects the soft tissue and hard surfaces from bacterial colonisation.

Regular fluoride toothpaste* is not enough to achieve Whole Mouth Health - it only protects hard surfaces with fluoride. Regular fluoride toothpaste* does not protect the hard surfaces from repopulating with bacteria harbored in the soft tissues.

Whole Mouth Health as the new paradigm for prevention

The route to improving Whole Mouth Health is to prevent the build-up of oral biofilm and achieve good bacterial control on all oral surfaces, both hard and soft tissues.

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- Weakening to control bacteria by interfering in bacteria metabolism and reducing their nutrient uptake
- Slowing bacterial growth
- Enhancing soft tissue's natural defense with a protective barrier that adheres to tongue, teeth, cheeks and gums
- Limiting bacterial adherence to hard and soft tissues for 12 hour protection^{6,7}

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Studies show that new Colgate Total® reduces bacteria on teeth, tongue, cheeks, and gums (TTCG) by up to **38.3%** on Teeth, **39.7%** on Tongue, **35.4%** on Cheeks, and **25.9%** on Gums.^{6,7*}

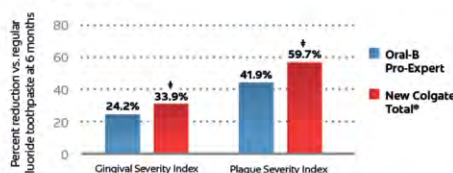
Clinically proven to reduce plaque and gingivitis

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Superior[†] plaque and gingivitis reductions compared to Oral-B Pro-Expert

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- Prevents tooth decay/ cavities and helps repair weakened enamel⁹
- Superior plaque reduction^{7,†}
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- Fights bacteria to keep breath fresh¹⁰
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- Superior reduction of tartar^{12,†}
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- Long lasting freshness¹⁵
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* defined as non-antibacterial toothpaste

** after 4 weeks use, 12 hours after brushing

† statistically significant ($p < 0.05$) differences between Colgate Total® and Oral-B Pro-Expert toothpastes (only relevant data shown in the graph, comparison to Oral-B Pro-Expert stannous fluoride, sodium hexametaphosphate and zinc lactate formula, available in UK)

† vs ordinary non-anti-bacterial fluoride toothpaste

with continuous use, after 3 weeks

\$ in vitro data

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Setting sail for Galway

The IDA Annual Conference makes its way to Galway on April 4-6 under the theme of 'Navigating our Future'.

Speakers from all over the world will use the IDA Annual Conference to highlight what they see as the future of dentistry, while the dental trade will exhibit the tools and materials that will enable dentists to embrace this future.

Conference highlights

The Conference will again be split into a Pre-Conference Programme on Thursday and the Conference proper on Friday and Saturday.

Trade show

Having great sponsors is part of the reason the Annual Conference can attract top-class speakers year after year. The trade show will take place just outside the two conference rooms and all exhibitors will be showcasing their top products, which may be just what you need to take your practice to the next level.

When the talking's done...

...it's time for dinner and dancing. The Annual President's Dinner 2019 starts at 7.00pm on Friday evening with a drinks reception. Tickets for this event are €85. Another highlight of the social programme is the President's Golf Competition, which will take place in Galway Bay Golf Resort on Thursday.

The future is looking bright

'Navigating our Future' is the theme, so we spoke to five of this year's speakers about their views on the future of dentistry.



DR CIARA DOHERTY

Ciara qualified from UCD in 2003 with a bachelor's degree in medicine and medical science. After an internship in the Mater Hospital, she completed the

specialist training programme in general practice in UCD. She also has postgraduate diplomas in women's health and child health, a higher diploma in dermatology, and a licentiate in occupational medicine.

After working in Waterford for two years as a GP, Ciara returned to Dublin when her husband, Dr Maurice Fitzgerald, opened his prosthodontic practice, and she began work in the Sheehan medical practice in Dun Laoghaire, where she is a partner.

With her interest in occupational medicine, Ciara deals with a large and growing amount of work-related stress cases and this has focused her interest in this area.

What will you be speaking about at this year's conference?

My talk is titled 'Approaches to challenging consultations'. I hope to provide some practical guidance on how to approach difficult or challenging clinician/patient interactions, and how, by using a structured approach, the outcomes of these interactions can be more positive, less stressful and generally more rewarding. I will also touch on work-related stress and self-care for the clinician, as I think these two topics are inextricably linked.

What do you see as the big issues for the future of dentistry?

As a GP, I work in a complex mixture of private and public practice, and primary care is ever evolving. In our own practice we have been fully computerised since 2004 and this is an area of great progress for general practice.

I think technology will have a massive impact on the future of general practice. My colleagues and myself all use various phone apps in day-to-day clinical work, which really improves diagnosis and patient care. I have an app on my phone to do ECGs, we communicate using a fantastic app called 'SLACK' and I use lots of online risk calculators for disease prevention.

I think technology has completely changed how we all learn and work. Information is so accessible. On the other hand, technology has also added to GP stress with the introduction of 'Dr Google'.

I think in the future, clinicians will work for longer, in ever-busier practices, with higher patient expectations and more complex problems. We need to use the available technology to help us become more efficient, improve patient outcomes and manage our own stress.



DR BRIAN FRANKS

Brian qualified in dentistry from University College Hospital, London. His career has encompassed the NHS, private and corporate sectors, the latter as Clinical Director of Dentistry at Bupa for almost 14 years. While working with Bupa in London, he noted that less restorative care was required at some dental sites due to the younger age profile of patients. He felt that this was a sign that dentistry was changing, and another direction was needed. Thus began his interest in facial aesthetics, as a natural progression from dentistry.

Attending many training courses in this field, he found that the quality of training varied considerably, and this inspired him to develop his own courses for medical professionals. Brian wanted the training he offered to be better and different, and aligned with a recognised, externally accredited qualification. Over the past four years he has been co-producing an MSc in the Specialist Practice of Clinical Aesthetic Non-Surgical Interventions delivered in collaboration with the City of London Dental School and awarded by the University of Bolton, which, although approved, is awaiting final validation.

As well as running his courses, Brian treats patients at clinics in London and Surrey, works as an expert witness, and is an Associate of the General Dental Council.

What will you be speaking about at this year's conference?

My presentation will focus on botulinum toxin, including a live demonstration on the upper face, this being the most commonly treated area. In the afternoon, the focus will be on the more specific injection techniques for dentistry, including the use of botulinum toxin in treating bruxism and gummy smiles. I want to excite everyone about the prospect of providing facial aesthetics treatments and I expect lots of audience participation! Dental professionals' detailed knowledge of head and neck anatomy, allied to their excellent injection skills, make them ideal for carrying out facial aesthetics treatments.

What do you see as the big issues for the future of dentistry?

Over time, I believe that the general dentistry workload will diminish in certain areas, with the emerging 'fluoride' and 'preventive dentistry' generations playing a large part in this (although there will still be those patients who suffer from decay and periodontal problems and will require 'traditional' dentistry). A very serious issue is that of increasing stress levels among dentists, brought about significantly by escalating (and fear of) litigation and regulation/legislation. A recent study reported in the *BDJ* (January 2019) showed that nearly 50% of dentists in this sample said they could not cope with the level of stress in their job. With the above in mind, welcome to the joyous, relatively stress-free world of non-permanent, 'reversible', non-surgical facial aesthetics!



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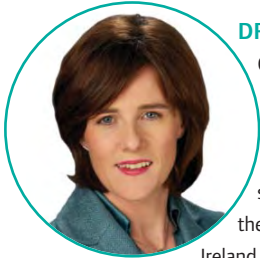
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DR CLAIRE HEALY

Claire qualified in dentistry from Trinity College Dublin, and after a couple of years working as an NCHD in the Dublin Dental University Hospital (DDUH) she went to the UK, where she worked in the Royal London Hospital. While there, she completed a PhD, and then returned to Ireland, where she qualified in medicine, and then

completed oral medicine specialist training in the DDUH. She is currently Consultant/Associate Professor in Oral Medicine at the Division of Oral and Maxillofacial Surgery, Oral Medicine and Oral Pathology at the DDUH. Her role encompasses patient care, undergraduate and postgraduate education, and research. Her main area of research is head and neck cancer, and the possible role of the oral microbiome in leukoplakias and erythroplakias.

What will you be speaking about at this year's conference?

Oral mucosal disease is a key focus of oral medicine. We get a lot of referrals for this – most of which are appropriate but some are not. My presentation will talk about how to identify what needs to be referred, and what can be managed by the general dental practitioner (GDP). Of course, the most important diagnosis is oral cancer, so the oral presentations of potentially malignant oral disease, and

oral cancer itself, will be an emphasis of the talk. Oral medicine services are under-resourced, with only three oral medicine consultants in Ireland – two in Dublin and one in Cork – so, in the interests of patients, we need referrals to be appropriate. Increasingly, we make a diagnosis, get a condition under control and then hand over ongoing care to the GDP.

What do you see as the big issues for the future of dentistry?

In healthcare as a whole, there is certainly more awareness that we're all giving the same message, and that lots of diseases, whether dental, oral or systemic, have the same underlying risk factors – such as tobacco, alcohol and sugar. But the message is slightly fragmented. We need a more unified message and support for prevention of disease. At an educational level there is now an increased emphasis on interdisciplinary learning, and hopefully this will translate into the real world. Also, unfortunately, we are seeing an increase in the incidence of oral cancer and, along with better prevention, I would like to see earlier detection. The prognosis for oral cancer is still very poor in overall terms, but if a patient is diagnosed early they can do extremely well. The GDP and dental hygienist have a really important role to play here. There are exciting advances in immunotherapy and targeted cancer treatments, but early detection will have a much greater impact on how patients do. It will add years to a patient's life, as opposed to the months they might gain from new therapies.



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DR FRANK LOBBEZOO

Frank graduated as a dentist from the University of Utrecht in 1988 and then began a PhD project there on jaw reflexes and temporomandibular disorders (TMD). Now bitten by the research virus, he obtained a grant from the Canadian Medical Research Council, which enabled him to complete postdoctoral research in Montréal. He spent three years there, being thoroughly trained by Prof. Gilles Lavigne (University of Montréal) in dental sleep disorders, notably sleep bruxism and obstructive sleep apnoea. In 1996, he returned to The Netherlands, to the department of oral function at the Academic Centre for Dentistry Amsterdam (ACTA). Since 2005, he has been a full professor in orofacial pain and dysfunction, with a research focus on TMD, orofacial pain, dental sleep disorders, and oral movement disorders. He studies those topics in otherwise healthy adults, but also in adolescents and children, as well as in the presence of comorbid conditions like dementia, impaired cognition, Parkinson's disease, rheumatoid arthritis, and other generalised and systemic disorders and diseases. He also sees patients who suffer from the conditions that he studies, and teaches on those conditions at undergraduate, graduate, and postgraduate levels.

What will you be speaking about at this year's conference?

I will speak on two topics during the IDA Annual Conference. First, I will introduce the dental discipline 'dental sleep medicine'. I will clarify that – unlike the common practice worldwide – there is more to dental sleep medicine than obstructive sleep apnoea alone. I will highlight the important role of dentists in this otherwise medical domain. In addition, I will present the current insights into bruxism. Where bruxism is traditionally considered the 'enemy' of patients and dentists, causing problems like TMD, tooth wear and fracture, and failure of dental restorations and even of implants, nowadays evidence is growing that bruxism can also be considered a patient's friend. It has, for example, been associated with maintaining the patency of the upper airway, thus preventing collapse and thereby obstructive sleep apnoea. In short, an exciting paradigm shift around bruxism beliefs will be presented.

What do you see as the big issues for the future of dentistry?

Staying close to my own domain, I foresee an increasing 'merger' with the medical field. Orofacial pain and dysfunction acts at the borders of dentistry. Dental education will become increasingly medical, and dentists will grow away from mainly using their hands towards mainly using their brains. Technical procedures in dentistry can be automated or delegated to others, but for the brain this is impossible.



DR SHANE WHITE

Shane grew up in Howth in Dublin, attended dental school at Trinity College Dublin, and practised as a general dentist with Andrew and Spencer Woolfe in Harcourt St for a few years before going to the University of California, Los Angeles (UCLA) for a prosthodontic residency. With a love of learning, he kept going back to school, and moved to

the United States, where he completed an MS in oral biology at UCLA, a PhD in craniofacial biology at the University of California (USC) and an endodontic residency at UCLA. He has greatly enjoyed an academic career as a professor with teaching, research and service responsibilities. Over the last decade, he has participated in university governance, progressing to hold one of the most senior leadership positions in the 10-campus, \$35bn annual budget, University of California system, the world's pre-eminent public research university. His research interests have been to elucidate the link between specific genes and the function of tooth enamel, and to understand patient-based clinical outcomes.

What will you be speaking about at this year's conference?

I have graciously been invited to give two quite different lectures: 'Tooth enamel: of mice and men' and 'Psychosocial value of root canal treatment'. I will discuss how enamel is put together, how it works, how it comes apart, the importance of its preservation, and how we can best use it in restorative dentistry and avoid man's grief and pain. The second lecture describes how saving teeth through root canal treatment relieves pain and impacts patients' lives.

What do you see as the big issues for the future of dentistry?

My home Division at the UCLA School of Dentistry is called Constitutive and Regenerative Sciences. Regeneration and engineering natural tooth structure is the gold at the end of my rainbow. In the meantime, we will work to be as conservative, minimally invasive, and effective in patient outcomes as possible.

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Stormy waters ahead?

The dental trade looks ahead to the next year for the dental industry as an uncertain Brexit looms on what is otherwise an optimistic and well-performing economy.



PETER MORRIS
Director, Morris Dental

Over the past five years, Peter has seen consumer confidence rise out of the recession: "We've seen a marked increase in the number of new surgeries that we've installed, both as new

practices setting up and existing practices expanding".

Like technology in many other areas, the world of dentistry has seen a technological transformation: "There has been quite a number of technological innovations, which are trying to make all the new technologies more user friendly. There have been huge improvements in both digital radiography and 3D imaging".

New technology has had a positive effect on Peter's business: "It's opened up new areas in dentistry. Dentists have to reinvest in the latest technology, which has a positive effect on the business".

A rise in bureaucracy is affecting the dental trade: "It puts an extra burden on the running of the business. It's another hurdle that we have to overcome but as a company, last October we celebrated 50 years in business and we're looking forward to enjoying embracing everything and enjoying another 50 years".

With Brexit coming, Peter says Morris Dental sources most of its equipment from mainland Europe or the US and it doesn't pass through the UK: "I think Brexit is going to have quite an effect on every citizen in Ireland and it has to, therefore, have a knock-on effect on dentistry".

However, Peter is still optimistic for the year ahead: "Once we know what the Brexit situation is going to be ultimately, we will overcome it and move on. I'm very positive for 2019".

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PAT O'BRIEN
Chief Executive, DMI

Pat believes the most significant development in dentistry over the past five years has been the growth of complex dental procedures such as implants: "General dentists now have specialist equipment and digital tools to allow them to perform these procedures with a high level of confidence".

Other big changes have included advances in dental materials, such as composites replacing amalgam, the increase in corporate dentistry, and an increase in regulation, which Pat says have all been very positive for DMI: "We

are a full service provider offering a broad range of equipment, consumables and after-sales technical services to the dental profession, and we work closely with our customers to make sure they keep up to date with emerging trends". Pat believes the outlook for the dental trade is very positive: "Through education, the public are becoming more aware of the importance of good oral hygiene and are more willing to invest in their oral health".

DMI has invested in its staff and systems to ensure it can supply dentists: "We now have a nationwide team of 55 trained and experienced staff who are focused on delivering a high-quality service to our customers".

Many dentists have moved more towards online purchasing and are unlikely to change back: "DMI has invested heavily in our webshop and we see this as a major growth opportunity in the years ahead".

With regards to Brexit, Pat says the company is well positioned to deal with it. He states that DMI has facilities on both sides of the border to fulfil next-day deliveries to anywhere on the island of Ireland: "Over the past year we have made changes to our supply chain so that most of our products come from mainland Europe. We have also increased the size of our warehouse and increased our stock levels to guard against any delays at ports".

Pat says he is looking forward to the year ahead: "DMI is now the largest independently owned dental distributor in Ireland and we are excited about the prospects for 2019 and beyond".

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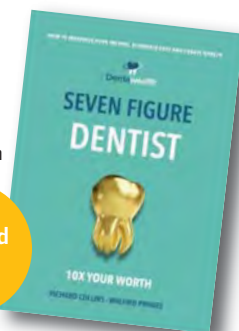
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New book on wealth management

Dentawealth will soon launch its new publication, 'The Seven Figure Dentist'. This new book is a follow-up to 'Wealth Development for Dental Professionals'.

Commenting on the 'The Seven Figure Dentist', author and Managing Director of Dentawealth, Richard Collins, said: "This new book gives dental

See us
on stand
S1



professionals an insight into how engaging in a centralised wealth management system can potentially aid dental professionals to reach financial stability by transforming their current wealth situation into a seven-figure status. As a fee-for-service wealth management company, we aim to help dental professionals create a process to generate income and engage in financial planning strategies that will move them towards more favourable tax thresholds".

Let your inner artist out!

There's an opportunity for delegates with hidden artistic talent to share it with your colleagues at this year's IDA Annual Conference in Galway.

All delegates are invited to submit a piece of art for display in the Galmont Hotel on Friday afternoon, April 5. Pieces are invited from all disciplines, from painting and photography, to sculpture, woodwork, textiles, etc. Artworks will be displayed for exhibition purposes and adjudicated, and an overall prize will be announced at the Annual Dinner.

Please email elaine@irishdentalassoc.ie and see the conference programme for further details.

Wrigley Oral Health Grants

The Irish Dental Association, in conjunction with the Wrigley Company Foundation, is delighted to announce year four of grant aid towards worthy oral healthcare projects around the country.

Dental support grants are available to help fund specific community service projects with a focus on improving oral health and educating participants in this area. Up to six projects across the country will be funded, with one project receiving funding of €11,800, three receiving €2,400 and two receiving €1,000. The scheme is open to all IDA members. Application forms will be sent to all members and will be available to download from www.dentist.ie.

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According to research done by KBC Bank Ireland, as many as one in four Irish SMEs expect to switch banks this year. KBC states that it is looking to add real value to businesses with its new business banking offering, which specialises in professional SMEs, including the dental industry. Co-designed with input from the dental sector, KBC states that it offers business customers a full-service banking proposition and digital banking platform. According to the bank, customers will have a dedicated KBC business partner and support team with tailored competitive products. This means that customers will have the same direct point of contact with KBC each time they get in touch. KBC states that it appreciates that professionals in the dental industry work outside normal business hours and will meet them outside of these.

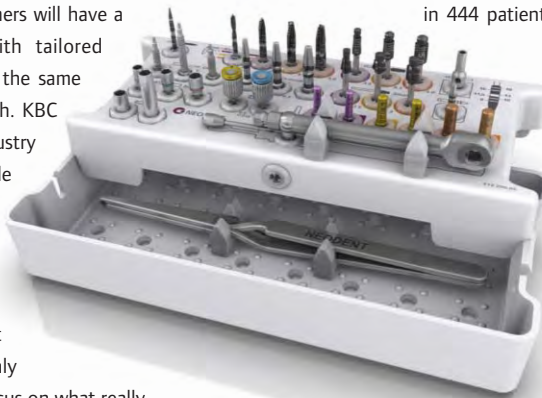
With digital banking and new technologies a key focus for SMEs, the company believes it is leading the way in this field, providing a solution that is simple to use and fully compatible across devices. KBC states that it is clear that digital banking that's tailored to customers' needs will only continue to grow in importance for SMEs, leaving them to focus on what really matters, growing or even starting their business.

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Neodent offering is one prosthetic platform and kit. Quintess states that all Neodent Grand Morse implants feature the 3mm Grand Morse connection, regardless of the implant diameter. According to the company, Grand Morse implants can be placed using one surgical kit, the Neo Screwdriver. The company states that there are more than 1.6 million Neodent implants placed globally each year.



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Name: Pat Mullins

Position: Equipment & Digital Sales Manager

Hello, my name is Pat Mullins, I started my journey in the dental world almost 3 years ago. I am most excited by the new technological advances that are coming down the road for the dental industry.

I feel my experience in equipment and the ongoing technical training I complete positions me well to help our existing and new clients. I look forward to meeting you all over the coming months.

As part of my role I am available to help you redesign your existing practice looking at the workflow and advising on the equipment that best suits your budget, I will work closely with your builders, plumbers and electricians and all other service providers to make sure your project, however big or small is completed to your satisfaction.

Tel: +353 (0) 86 791 3041

Email: pmullins@bfmulholland.com

Pat
Mullins



Name: Barry McAleer

Position: Senior Dental Engineer

Hi, I'm Barry McAleer and I am the Team Leader of the Service Department at BF Mulholland. I am factory trained on various dental equipment including validation. As part of my role I have gained a vast knowledge of the installation, maintenance and repair of dental equipment. I joined BF Mulholland in 2006 and prior to this I worked as an electrician for over 7 years.

Throughout my career at BF Mulholland I have developed an excellent working relationship with customers and suppliers and providing exceptional customer service is paramount within my role.

Outside of work I enjoy spending time with my family and friends and completing DIY tasks around the house. I am a keen sports enthusiast and enjoy watching and playing football in my spare time.

Tel: +44 (0) 7843 633 319

Email: barry@bfmulholland.com

Barry
McAleer



Name: Darren Bowers

Position: Senior Dental Engineer

My Name is Darren Bowers and I am currently living in Co. Meath.

I am a qualified electrician and I have 12 years' experience in the Dental Industry, primarily in equipment repair, servicing, new installations and digital imaging.

I'm delighted to have joined BF Mulholland as their first ROI based engineer as the team expands to cover the entire island. I will be there to support and advise in any way I can and will be focused on customer relationships going forward.

Tel: +353 (0) 86 7966 868

Email: dbowers@bfmulholland.com

Darren
Bowers



Langarve Dental, 58 Glenavy Road, Crumlin, Co. Antrim BT29 4LA

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Effective infection prevention from Dentsply

The importance of infection prevention in dentistry is growing. Dentsply Sirona states that it has solutions for the entire hygiene process chain in dental practices and clinics. The company presented its range of co-ordinated products for manual and automatic reprocessing at the World Sterilization Congress in Mexico City in 2018. According to the company, with its co-ordinated products for manual and mechanical reprocessing, it is committed to preventing infection in dentistry in different regions around the world.



New intraoral scanner

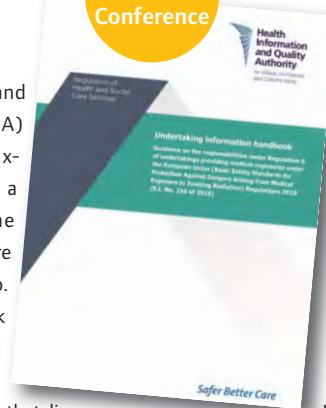
The company has also launched a new intraoral scanner, the Primescan. Dentsply states that the new scanner is more accurate than previously possible and enables high-precision digital impressions to be taken of the entire jaw. According to the company, Primescan was designed for various digital workflows, and scans teeth with high-resolution sensors and shortwave light, capturing up to one million 3D data points per second. Dentsply states that the new scanner enables digital impressions for subgingival or particularly deep preparations.

New radiation regulation

The Health Information and Quality Authority (HIQA) recently wrote to each dental x-ray licence holder regarding a significant change in the regulation of medical exposure to ionising radiation (S.I. No. 256 of 2018), which took effect on January 8, 2019.

Dr Jane Renehan of Dental Compliance Ltd recommends that licence holders (known in the regulations as "undertaking") promptly familiarise themselves with the letter's detail. The correspondence states that each undertaking must declare their existence to HIQA on or before April 8, 2019.

Meet
Jane at the
Conference



The coming months will see further communications from HIQA outlining how the Authority will enforce the new regulations. This includes radiation inspections of dental practices.

In summary, Dr Renehan refers dentists to www.hiqa.ie where they can:

1. Find HIQA's 'Undertaking information handbook'.
2. Complete, download and return the declaration form – NF200.

In addition, she advises that it would be prudent for dentists to review their ionising radiation documentary evidence of compliance. This includes radiation audit folders, staff radiation training records, and radiation operating procedures.

NEW

DUAL ACTION PAIN RELIEF



IN ONE TABLET

A new analgesic brand that is clinically proven to provide
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30% MORE EFFECTIVE FOR YOUR PATIENTS

References: 1. Merry A, et al. AFT-MX-1, a prospective parallel group, double-blind comparison of the analgesic effect of a combination of paracetamol and ibuprofen, paracetamol alone, or ibuprofen alone in patients with post-operative pain. Department of Anaesthesiology, University of Auckland, New Zealand 2008. *compared with the same daily dose of standard paracetamol or ibuprofen alone.

Easolief Duo 500 mg/150 mg film-coated tablets Each tablet contains paracetamol 500 mg and ibuprofen 150 mg.
Presentation: A White, capsule shaped tablet with breakline on one side and plain on the other side. **Indications:** Short-term symptomatic treatment of mild to moderate pain. **Dosage: Adults/elderly:** The usual dosage is one to two tablets taken every six hours up to a maximum of six tablets in 24 hours. **Children:** Easolief Duo is contraindicated in children under 18 years. **Contraindications:** Severe heart failure, known hypersensitivity to paracetamol, ibuprofen, other NSAIDs or to any of the excipients, active alcoholism, asthma, urticaria, or allergic-type reactions after taking acetylsalicylic acid or other NSAIDs, history of gastrointestinal bleeding or perforation related to previous NSAID therapy, active or history of recurrent peptic ulceration/haemorrhage, severe hepatic failure or severe renal failure, cerebrovascular or other active bleeding, blood-forming disturbances, during the third trimester of pregnancy. **Warnings and precautions:** This medicine is for short term use and is not recommended for use beyond 3 days. Clinical studies suggest that use of ibuprofen, particularly at a high dose may be associated with a small increased risk of arterial thrombotic events. Patients with uncontrolled hypertension, congestive heart failure, established ischaemic heart disease, peripheral arterial disease and/or cerebrovascular disease should only be treated with ibuprofen after careful consideration and high doses should be avoided. Careful consideration should be exercised before initiating long-term treatment of patients with risk factors for cardiovascular events. The use of paracetamol at higher than recommended doses can lead to hepatotoxicity, hepatic failure and death. Patients with impaired liver function or a history of liver disease or who are on long term ibuprofen or paracetamol therapy should have hepatic function monitored at regular intervals. Severe hepatic reactions, including jaundice and cases of fatal hepatitis, though rare, have been reported with ibuprofen. Paracetamol can be used in patients with chronic renal disease without dosage adjustment. There is minimal risk of paracetamol toxicity in patients with moderate to severe renal failure. Caution should be used when initiating treatment with ibuprofen in patients with dehydration. The use of an ACE

inhibiting drug, an anti-inflammatory drug and thiazide diuretic at the same time increases the risk of renal impairment. Blood dyscrasias have been rarely reported. Patients on long-term therapy with ibuprofen should have regular haematological monitoring. Like other NSAIDs, ibuprofen can inhibit platelet aggregation. GI bleeding, ulceration or perforation, which can be fatal, has been reported with all NSAIDs at anytime during treatment. Combination therapy with protective agents (e.g. misoprostol or proton pump inhibitors) should be considered. Use with concomitant NSAIDs including cyclooxygenase-2 selective inhibitors should be avoided. NSAIDs may lead to onset of new hypertension or worsening of pre-existing hypertension and patients taking antihypertensive medicines with NSAIDs may have an impaired anti-hypertensive response. Fluid retention and oedema have been observed in some patients taking NSAIDs. NSAIDs may very rarely cause serious cutaneous adverse events such as exfoliative dermatitis, toxic epidermal necrolysis and Stevens-Johnson syndrome. Products containing ibuprofen should not be administered to patients with acetylsalicylic acid sensitive asthma and should be used with caution in patients with pre-existing asthma. Adverse ophthalmological effects have been observed with NSAIDs. For products containing ibuprofen aseptic meningitis has been reported only rarely. NSAIDs may mask symptoms of infection and fever. **Interactions:** Warfarin, medicines to treat epilepsy, chloramphenicol, probenecid, zidovudine, medicines used to treat tuberculosis such as isoniazid, acetylsalicylic acid, other NSAIDs, medicines to treat high blood pressure or other heart conditions, diuretics, lithium, methotrexate, corticosteroids. Refer to summary of product characteristics for other interactions. **Fertility, pregnancy and lactation:** Easolief Duo is contraindicated during the third trimester of pregnancy. **Driving and operation of machinery:** Dizziness, drowsiness, fatigue and visual disturbances are possible after taking NSAIDs. If affected patients should not drive or operate machinery. **Undesirable effects:** Dizziness, headache, nervousness, tinnitus, oedema, fluid retention, abdominal pain, diarrhoea, dyspepsia, nausea, stomach discomfort, vomiting, flatulence, constipation, slight gastrointestinal blood loss, rash, pruritus, alanine aminotransferase increased, gamma-glutamyltransferase increased, abnormal liver function tests, blood creatinine increased and blood urea increased. Refer to Summary of Product Characteristics for other adverse effects. **Pack size:** 24 tablets. **Marketing authorisation holder:** Clonmel Healthcare Ltd., Clonmel, Co. Tipperary. Marketing authorisation number: PA0126/2947. Medicinal product not subject to medical prescription. For retail sale through pharmacy only. A copy of the summary of product characteristics is available upon request. **Date prepared:** March 2018. 2018/ADV/EAS/036H.

THIS IS A STORY
ABOUT
DAVID
GOING TO THE
DENTIST



David and his Mum are going to the dentist in the village. They press the bell and they go in the door.



David and his Mum go into the clinic and meet the dentist and the dental nurse. They are very friendly and are very happy to see David.



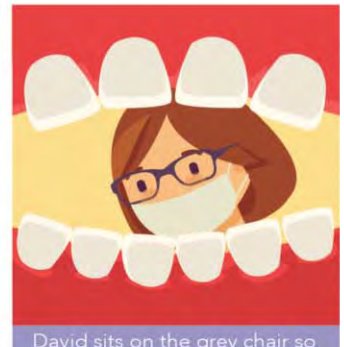
They bring David and his Mum into the room.



They are very nice to David and give him glasses for his eyes. He sits up onto the grey chair.



The dentist and the nurse wear gloves on their hands and masks on their faces.



David sits on the grey chair so the dentist can look in his mouth and check his teeth.



The dentist turns on the big light. David puts his hands on his tummy and takes big breaths in and out.



The dentist talks to the dental nurse and checks David's teeth with a small mirror.



The dentist is now finished and David sits up in the chair. David gives the glasses back to the dental nurse.



The dentist and dental nurse are very happy with David and give him a sticker.



David says goodbye. David leaves the clinic with his Mum.



David really likes going to the dentist and will come back again soon.

Managing the child with autism in the dental setting: a practical guide

With one in 59 children in Ireland being diagnosed with autism spectrum disorder, it is more important than ever that dentists are able to examine and assess the child with autism in their care.

A routine dental appointment for the child with autism can be a very challenging experience for everyone – the child, the parents or carers, and even the dental team! This article provides an overview of techniques that can be used to help empower and educate the dentist to help in examining the child with autism in a primary care setting.

Challenges

Autism spectrum disorder (ASD) is a disability in development that affects how a person communicates and relates to people around them. Children and adults with autism have difficulties with social interaction in their everyday life. Many are non-verbal, and have sensory and dietary issues, and developmental delays, all of which can contribute to challenges with their dental management.

Every child with autism is different and every day is different for the child with autism. It is vital that dentists use their patience, empathy and knowledge to examine, assess and possibly treat these children within a primary care setting, as well as supporting their oral health now and into the future.

Sensory issues for children with autism mean that everything about a dental appointment can be distressing: from the smells, to the lights, to the sounds. Sensitive management of parents and carers is crucial, as many are overwhelmed and stressed at the extra needs their child with autism may have. Also, as children with autism very often have disturbed sleep patterns, their parents and carers can be weary and sleep deprived, which leads to heightened anxiety levels, especially in a new, potentially stressful situation.

It is essential that the dental practice has a good system in place to ensure that the initial appointment for the child with autism is overall a positive experience.

Key factors are:

- pre-visit communication;
- pre-clinical management;
- surgery set-up;
- effective clinical examination; and,
- communication during the visit.

Pre-visit communication

- Effective management of the child with autism commences from the first phone call. Every effort should be made to reassure the parent/carer and



FIGURE 1: The waiting room should be child friendly and free of clutter.

child that they will be dealt with by all members of the dental team in a kind and empathetic manner. It is important that parents/carers are reassured that the team will try to understand their child's specific needs. It is ideal if a note can be left on the chart about how the child communicates, any particular likes/dislikes, such as radio, favourite colours or special interests, e.g., dinosaurs! This is key in helping to prepare the surgery and dental team for the visit, and to help eliminate unpleasant triggering factors for the child. It will also gauge the best approach to the child's management while in the dental surgery.

- Parents/carers should be contacted by phone or email the day before the appointment to run through the visit plan and prepare them for what to expect during the visit. Clinical staff can then be reminded about the visit ahead and the necessary modifications can be made to the preparations needed.
- A social or visual story (see **Appendix 1** opposite) can be very helpful to prepare the child. Information letters and advice on your practice website are also useful.
- A good map and directions to the practice are essential so parents/carers can plan the journey and parking to reduce the potential anxiety of lateness.

Pre-clinical management

- The family should be greeted by name by a friendly face on entering the surgery – positive first contact is essential.
- The waiting room must be child friendly and free of clutter. Avoid having loud music or very strong smells such as air fresheners (**Figure 1**).
- Waiting time in the surgery should be kept to a minimum. This may mean an appointment first thing in the morning or first thing after lunch. The less



Dr Jennifer Collins
BDS MFDS

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BDentSc MFD DChDent (UDubl)



FIGURE 2: Ideally, the dentist should greet the child in the waiting room and bring them into the surgery.



FIGURE 3: All dental equipment should be kept out of sight of the child.

time the child is waiting before the appointment, the better. If waiting time is unavoidable, a quiet secluded waiting area should be offered.

- Every effort should be made to facilitate a quick progression through the reception desk into the dental surgery.
- It is ideal for the dentist to greet the child in the waiting room and bring them into the surgery to ensure that a relationship begins to develop outside the surgery (Figure 2).

Surgery set-up

- Remove any sound sources from the surgery, i.e., turn off any music/radio if the child does not like these. Alternatively, they may have a particular favourite song that could be played – everyone can benefit from some good tunes! Ensure that the dental team is respectful of your patient's needs, and request that noise levels and unnecessary conversations are kept to an absolute minimum.
- Try to ensure that the child is treated by the same dentist/dental nurse at each appointment. Familiar faces will help to reduce anxiety for the child.
- A modified dental surgery set-up is ideal. All dental equipment should be kept out of sight of the child (Figure 3). Only a plastic mirror, a Dr Barman's toothbrush, fluoride varnish, a mouth prop, unflavoured toothpaste and a finger guard should be placed on your dental tray. These may all be used during the initial appointment so are important to have on hand (Figure 4).

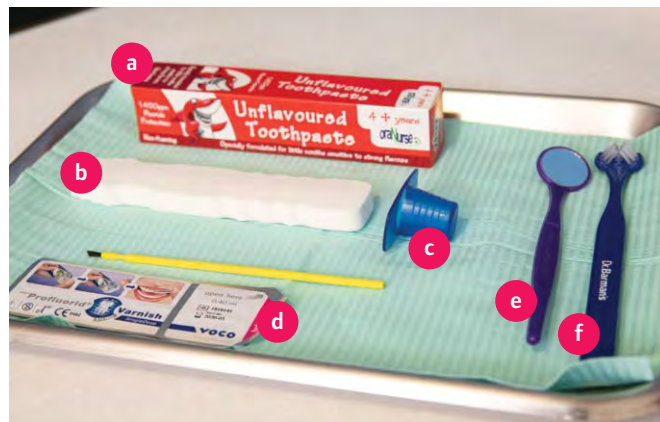


FIGURE 4: Only a plastic mirror, a Dr Barman's toothbrush, fluoride varnish, a mouth prop, unflavoured toothpaste, and a finger guard should be placed on your dental tray: a. unflavoured toothpaste; b. mouth prop; c. finger guard; d. fluoride varnish; e. plastic mirror; and, f. Dr Barman's toothbrush.



FIGURE 5a and FIGURE 5b: The dental examination can take place anywhere; it does not have to be in the dental chair.



FIGURE 6: A brief look with a plastic mirror around all surfaces of the teeth may be all that is required.



FIGURE 7: Positive reinforcement is essential. Oral health and dietary advice should be given to the child and their parent/carer.



FIGURE 8: Do not initiate first contact without warning the child that you are about to do so and explaining what you are about to do.

Effective clinical examination

- The dental examination can take place anywhere; it does not have to be in the dental chair. A look into the mouth with the child on the floor, a chair or an adult's knee may be adequate to get a visual assessment of teeth and gums (Figures 5a and 5b). The dental assistant should be ready to angle the chair light or an external light source to help the dentist.
- A mouth prop or finger guard can be gently used to help keep the mouth open during the examination. A brief look with a plastic mirror around all surfaces of the teeth may be all that is required to assess the teeth and soft tissues to establish the presence or absence of disease and help plan a suitable dental path for the child (Figure 6).
- Positive reinforcement is essential. Oral health and dietary advice should be given to the child and their parent/carer. Establish any barriers to oral health that are being experienced. A flavour-free fluoridated toothpaste (e.g., Oranurse) can be suggested if toothpaste is an issue. The three-sided Dr Barman's toothbrushes are fantastic to assist efficient brushing of teeth while providing support for children to bite on also.
- If a radiographic exam is indicated, bitewing x-rays can be taken using a special setting on an OPG machine where intraoral bitewings cannot be tolerated.
- Help parents and carers to understand that if they can be relaxed, it will help their child to relax. Reassure and advise that questions can be asked and answered after the appointment. Positive reinforcement for the child, their parents and their carers is essential (Figure 7).

Communication during the visit (Table 1)

- Establish with the parent/carer the best approach to communication with your patient. Communicate with the child in plain language that the child can understand, even if they do not appear to be listening. Many understand everything that is being said, even if they do not appear to do so.
- Do not initiate first contact without warning the child that you are about to do so and explaining what you are about to do (Figure 8).
- Recognise that children with autism may not make eye contact, may ignore verbal communication and may exhibit unusual behaviours.
- Be aware that expressive language may not match the age or behaviour of the child.
- Acknowledge that repetitive behaviours (stimming/flapping of hands) may be used by the child to reduce anxiety and distress in the dental surgery and should not be stopped.
- Praise the child and reward good behaviour. Rewards can be verbal praise or a sticker or toy (Figure 9).



FIGURE 9: Praise the child and reward good behaviour.

Conclusion

Children with autism face many problems in the dental setting. Many have very restricted diets and can become fixated on certain foods, colours and textures. Dietary limitations can mean excessive consumption of high-sugar, processed foods, which leads to increased risk of caries. Sensory issues can make dentistry intolerable, with the unfamiliar sounds and smells of a dental surgery making for a distressing experience.

With this practical guide, we hope dentists will be better equipped and empowered to manage the child with autism in their dental setting.

It is important to treat the parents and carers of these children with the utmost respect and compassion, and every effort should be made to reassure them that dental caries is not their fault. Help guide them as much as possible through their child's dental journey and be available for support at every stage. Oral health is just one of many challenges these families face on a daily basis, and it is important that the dental team makes the entire dental experience as pleasant as possible. Understanding and empathising with parents and carers and their efforts, and encouraging them at every opportunity, is essential to help support the child with autism and their parents and carers.



Providing for children with autism and integrating them into your dental practice can be an enriching and rewarding experience. By developing certain skillsets and adapting the workplace environment, all members of the dental team can ensure that a dental visit for the child with autism is a fun and positive experience for all.

As dentists, we have a duty of care to help these children navigate their dental journey, and guide them and their families now and into the future.

References and useful websites

www.autismireland.ie
www.autism.ie
www.autism.org.uk/dentist
www.dentalhealth.ie/specialneeds
www.asiam.ie
www.theplaydoctors.co.uk
www.cmft.nhs.uk/childrens-hospitals/our-services/services-for-children-with-autism

TABLE 1: Communication dos and don'ts for people with autism spectrum disorder

 Dos	 Don'ts
Obtain as much information as possible from the child's family or carers, who know best their needs and the most suitable approach.	Make assumptions about the child's likes or dislikes, or sensory preferences.
Explain why and how you need to touch him/her. Use pictures, diagrams and social stories to complement the verbal.	Initiate physical contact without first warning them or explaining what you plan to do.
Minimise waiting times and facilitate progression through reception quickly. If waiting is unavoidable, find a quiet secluded waiting area.	Make the child with ASD and their families or carers endure prolonged waiting times unless there is no alternative.
Be aware that expressive language may not match age or behaviour.	Forget that it may be frightening if the child either doesn't understand what is being said or takes everything said literally.
Discuss with the child what you are about to do during the dental appointment, even if he/she does not appear to be listening.	Assume that because the child doesn't speak, that he/she doesn't understand what is being said.
Recognise that the child may not make eye contact, may ignore verbal communication and may exhibit unusual behaviours.	Ignore the child and exclude them from conversations with their families or carers and force eye contact.
Understand that repetitive behaviours are used to reduce anxiety and distress, and to calm, especially in unfamiliar environments.	Stop the child from repetitive behaviours such as flapping, stimming and spinning.
Ascertain what food preferences the child has and advise them, their families and carers on what are the best foods within their preferences to help avoid dental caries.	Advise the child to eat food that may be different in presentation, colour, texture and flavour to what they are used to.
Treat families and carers with empathy and compassion. Understand that even getting the child as far as the dental surgery may have been a feat in itself!	Vilify and criticise the parent and carer for their child not behaving appropriately during the appointment and having a restricted diet.
Give clear and concise instructions to the child and their families and carers on diet and oral hygiene. Support any information given with written information.	Ignore questions from parents or carers, and neglect to inform them of the dental plan for their child.
Develop a treatment plan for the child and encourage regular dental appointments.	Organise return visits only when it is thought that the child is in distress.

How important is sustainability to the dental profession in Ireland?

Précis

A survey of 735 dental professionals (dentists, dental nurses, practice managers, hygienists, receptionists, specialists and other) found that 69% of respondents were interested in environmental sustainability.

Abstract

Objectives: To find out how important environmental sustainability is to the dental profession in Ireland. The extent of the dental profession's interest in and knowledge of sustainability is unclear.

Materials and methods: A total of 735 questionnaires were distributed to dental practices and at dental conferences in Co. Dublin. The questionnaires sought information from the members of the dental team on their interest in sustainability, their understanding of it, their interest in learning more, and whether they consider sustainable energy use, travel, waste disposal, goods and services, and costs. It also sought to find out if they measure their carbon footprint and if they think sustainability should be a HSE priority.

Results: A total of 735 questionnaires were distributed. A total of 69% of the respondents stated that they are interested in sustainability, and 68% think it should be a HSE priority. However, only 31% of dental professionals consider sustainable travel and 43% consider sustainable energy use, while 58% consider sustainable waste disposal practices. Over half of the sample said they fully understand what environmental sustainability means, with 64% of people interested in learning more about it. Of the respondents, 34% think sustainable practices would decrease costs, while 20% measure their practice's carbon footprint.

Conclusions: The dental profession in Ireland cares about environmental sustainability, but more research and policies should be introduced in Ireland to increase awareness of how sustainable practices can improve within dentistry.

Journal of the Irish Dental Association February/March 2019; 65 (1): 39-43.

Introduction

Environmental sustainability is defined as "meeting the resource and services needs of current and future generations without compromising the health of the ecosystems that provide them".¹

Environmental sustainability is important. Climate change is a threat that is placing global health at risk. Human activity is said to be the main cause of this observed warming since the mid twentieth century.² The Environmental Protection Agency (EPA) compiles the greenhouse gas (GHG) emissions figures

for Ireland. The most recent emissions figures compiled in 2009 show that, in Ireland, agriculture is the single largest contributor to overall GHG emissions, at 29.2% of the national total, followed closely by energy and transport.³

Global energy demands are met by burning greater amounts of fossil fuels, which release GHGs into the atmosphere in amounts greater than can be neutralised by the natural ecosystems of Earth.² GHGs in the atmosphere act like a mirror and reflect part of the heat radiation back to the Earth. The higher the concentration of GHGs in the atmosphere, the more heat energy is being



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reflected back to the Earth.⁴ The effects of this are evident. Analysis of the meteorological records show that there was a trend in temperature rise in Ireland of 0.4°C during the period 1980–2008, the equivalent of 0.14°C per decade.³ An increase in global temperatures causes rises in sea levels and extreme weather conditions such as droughts and floods.⁵ Climate change is an issue that requires tackling and GHG emissions need to be reduced substantially to ensure a healthier environment for our future. By 2030, the EU expects Ireland to have reduced its carbon emissions by up to 30% compared to 2005 levels.⁶

In dentistry, while ‘environmental sustainability’ and ‘eco-friendly’ are known terms, ‘environmentally sustainable practice’ is a new concept. Although the impact of mercury in amalgam restorations has been a topical issue since the Minamata Bay disaster in the 1950s and 1960s, other aspects of dentistry contribute to the degradation of the environment, both directly and indirectly, and have been of less interest.^{7–9} One of the aims of the dental profession is to enhance quality of life and general well-being through oral

health; to do so while not considering the environmental effects of dental practice would be difficult to reconcile. It is essential to find out what efforts are made in the dental profession to promote sustainable practice.

In Ireland, the HSE has devised an action plan, The Sustainability Strategy for Health, to achieve a more sustainable health system and maintain a low carbon footprint. The HSE Sustainability Strategy for Health outlines 33 key actions under seven pillars of sustainability: (i) communications and engagement; (ii) energy efficiency; (iii) water conservation; (iv) waste prevention; (v) sustainable transport; (vi) green procurement; and, (vii) designing the built environment (Figure 1 above).¹⁰

In the UK, similar guidelines exist. The Sustainable Development Strategy for the Health, Public Health and Social Care System 2014–2020 focuses on eight key areas for implementing sustainability in healthcare: i) carbon hotspots; ii) commissioning and procurement; iii) sustainable clinical and care models; iv) healthy, sustainable and resilient communities; v) metrics; vi) innovation, technology and R&D; vii) creating social value; and, viii) leadership, engagement and development.¹¹

Despite these guidelines, there is limited research, particularly in Ireland, on the dental profession’s influence on climate change.

Public Health England analysed the carbon footprint of dental services in England from 2013–2014.¹² A carbon footprint is defined as: “The total amount of greenhouse gases produced to directly and indirectly support human activities, usually expressed in equivalent tons of carbon dioxide (CO₂)”.⁵

This report found that the total GHG emissions of NHS dental services in England made up 3% of the overall carbon footprint of the NHS in England. Travel made up almost two-thirds of the total carbon footprint of dental services in England.¹²

In Scotland, Duane *et al.* (2012) combined a top-down approach, using input-output analysis for indirect carbon emissions (procurement), and a process analysis (bottom-up) approach for direct emissions (building energy, travel, waste and water). The authors found that travel was the greatest source of carbon emissions (45.1%), followed by procurement (35.9%) and building energy (18.3%). They concluded that Scotland’s NHS dental service annually generates 4% of the total Scottish NHS carbon footprint.¹³

In 2014 a further study was carried out in Scotland, which found that by halving patient travel, the carbon emissions of the Community Dental Service (CDS) could be reduced by 10.85%.¹⁴

In Ireland, the research is limited with regard to environmental sustainability in dentistry. It is important to discover the attitudes of dental professionals towards environmental sustainability so that the Irish dental profession can improve on its role in reducing carbon emissions and protecting the environment. The primary aim of this research project is to discover these attitudes, while also examining current sustainability strategies, their effectiveness, and how they can be improved to achieve the highest quality dental services in a sustainable fashion.

Materials and methods

The sampling was undertaken by fourth-year dental students from Trinity College Dublin. Data was collected by visiting dental practices in Co. Dublin, as well as attending dental conferences and branch meetings in Co. Dublin during the data collection period. The data collection period was from the end of September 2017 to the beginning of January 2018. This sampling method was carried out with the approval of the Dublin Dental University Hospital ethics committee. The dental practices in Co. Dublin were notified by email that a student would be visiting the practice to distribute questionnaires to members of the dental team. Participants were informed that fourth-year dental science students from Dublin Dental University Hospital were carrying out a research project to investigate the attitudes of the dental professionals of Ireland towards sustainability in the dental profession.

All members of the dental team (dentists, dental nurses, hygienists, practice managers, other) were invited to complete a questionnaire individually (Appendix 1). If the practice wished to be involved in the study, the practice manager or dental team (as appropriate) were given hard copies of the questionnaire. The practice had the opportunity to decline participation in our survey. The participants were asked to place their completed questionnaires in the collection box provided, which was then collected 30 minutes after distribution. If it was not possible for the dental professionals to complete the questionnaires at that time, an addressed envelope was supplied for return by post anonymously.

Attendees at conferences held in Co. Dublin and Irish Dental Association branch meetings were also targeted to participate. The chairpersons of the conferences and branch meetings were contacted via email to request permission to attend and distribute the questionnaire (Appendix 2). A collection box was used to collect the completed questionnaires to preserve anonymity. The collection box was left in the conference room and collected 30 minutes after the conference was over.

TABLE 1: Analysis of answers to the 10 questions in the questionnaire in percentages.

	Yes	No	Neutral
Dental professionals interested in sustainability	69%	12%	19%
Dental professionals who think sustainability should be a HSE priority	68%	9%	23%
Dental professionals who consider sustainable travel	31%	27%	42%
Dental professionals who consider sustainable energy use	43%	25%	32%
Dental professionals who consider sustainability when buying goods and services	37%	30%	33%
Dental professionals who consider sustainability when managing waste	58%	19%	23%
Dental professionals who fully understand sustainability	53%	20%	27%
Dental professionals who think sustainability would decrease costs	34%	33%	33%
Dental professionals who measure their practice's carbon footprint	20%	80%	
Dental professionals interested in further learning about sustainability	64%	36%	

The results were analysed using Chi-squared tests and a Fisher's exact test. Comparisons were made to understand the differences in dental professionals' responses between the following variables: (1) their interest in sustainability; (2) whether they think sustainability should be a HSE priority; (3) their consideration of sustainable travel; (4) their consideration of sustainable goods and services; (5) their sustainable waste disposal practices; (6) their understanding of sustainability; (7) their opinion on sustainability decreasing costs; (8) whether or not they measure their carbon footprint; and, (9) their interest in learning more about sustainability. These variables were also analysed with regard to whether the professionals' gender, role, area of work and year of graduation impacted their response.

Results

In total, 735 questionnaires were distributed and 333 responses were received, which was a 45% return rate. In the responses, 69% were females and 31% were males.

TABLE 4: Dental professionals' interest in sustainability (%)

Gender	Males	Females
	63	72
Location of work	Rural	Urban
	75	68
Sector	HSE	Private practice
	74	67
Role	Dentist	Nurse
	69	79
	Hygienist	Specialist
	55	57
	Manager	Other
	63	75

TABLE 2: Number and percentage of responses across the dental team.

Role	No. of responses	% of total responses
Dentist	118	36%
Nurse	87	26%
Hygienist	31	9%
Specialist	21	6%
Receptionist	64	19%
Manager	8	3%
other	4	1%

TABLE 3: The professionals' decade of graduation and their interest in sustainability.

Total number of dental professionals % of those interested in sustainability	Yes	No	Neutral	Total number of dental professionals who responded to questionnaire
Graduated in 1970s	100%	0%	0%	2
Graduated in 1980s	57%	32%	11%	28
Graduated in 1990s	64%	11%	25%	91
Graduated in 2000s	66%	12%	22%	117
Graduated in 2010s	83%	7%	10%	58

Table 1 shows the response to the ten questions. It can be concluded from this table that the majority of dental professionals (69%) in the study are interested in environmental sustainability and think it should be a HSE priority (68%). It can be deduced from the above table that 31% of dental professionals consider sustainable travel, and 43% consider sustainable energy use, while 58% consider sustainable waste disposal practices. In terms of the professionals' understanding of sustainability, over half of the sample said they fully understand what environmental sustainability means, with 64% interested in learning more about it. Only 34% of dental professionals thought sustainable practices would decrease costs. Of the professionals who responded, 20% stated that they measured their carbon footprint.

Table 2 shows the number of responses by team members. The greatest response was from dentists, at 36% of the total sample. This was followed by nurses at 26% and receptionists at 19%. Hygienists represented 9% of the sample, with the lowest responses being from specialists (6%), managers (3%) and other (1%).

Table 3 shows that the graduation year of the professional had an effect on their interest. There was a significant difference between those who graduated in the 70s or 80s and those who graduated after that (95% confidence interval: <0.05; Chi-squared value 7.3388; p=0.067). Out of those who graduated in the 1970s, 100% were interested in sustainability. The 1980s graduates were less interested in sustainability (57%). The 1990s and 2000s graduates had very similar levels of interest, with 64% and 66% being interested, respectively. The professionals who graduated in the current decade had a high level of interest in sustainability at 83%.

Of the males who answered the questionnaires, 63% were interested in sustainability and 72% of females were interested in sustainability (**Table 4**). This was not statistically significant (confidence interval 95%: <0.5; p=0.1327). The location of the dental practice had no effect on the dental professional's interest in sustainability. There was a very similar level of interest in

sustainability from people who work in rural areas (75%) and those who work in urban areas (68%). The sector the professional worked in (HSE or private) and the role of the dental professional also made no difference to their interest in sustainability.

Discussion

This study looked at dental professionals' opinions when it came to environmental sustainability. It can be extrapolated from the results that the dental profession in Ireland is interested in environmental sustainability, with 69% of the population in the study stating they were interested. There are 3,053 registered dentists in Ireland as of August 2017. The sample of 118 dentists is representative of the population at 3-4% of the total. There are 245 registered specialists in Ireland as of June 2018.¹⁵ A total of 21 specialists responded, which is also representative of the population. However, it is difficult to assess whether the number of dental nurses, receptionists and managers are representative of the population, as registration is not obligatory in these roles. Given that, on estimation, there are more dental nurses than dentists in Ireland, and there were fewer responses from dental nurses (87) than dentists (118) in this study, the sample is probably not representative in terms of dental nurses. There was no statistically significant difference in male and female interest, or between the different roles of the professionals, as mentioned previously in the results.

The age of the dental professional (which was assumed from the year of graduation) had an impact on their interest in environmental sustainability (Table 3). Graduates from the 1980s had less interest (57%) than those who graduated in the 2010s (83%). This is in contrast to previous studies, which display that there is little to no relationship between age, and attitudes and behaviours towards environmental sustainability.¹⁶

Another limitation of this study was that only 16% of the responses were from rural areas. This does not reflect the true population of Ireland, where the ratio of urban to rural population is approximately 2:1.¹⁷ If we apply this to the dental profession, the sample in the study needs to be considered more representative of people living in Dublin than the entire country. Another limitation of the study was that the dental professional had to self-identify as to whether they worked in an urban or rural practice. For example, a professional may work on the outskirts of a big city and consider themselves as working in a rural practice. This must be taken into consideration when analysing the results.

The opinion on whether practising sustainability would decrease costs had a varied response across the dental team. This could be due to the lack of clear evidence as to whether carrying out environmental sustainability practices decreases costs. Practitioners may also find it difficult to gauge the efficacy of long-term environmentally sustainable practices such as sourcing energy from renewable sources. However, the addition of low initial cost interventions such as the use of LED lightbulbs can have a large impact.

There is an increased awareness of safe waste disposal practices in the dental profession in Ireland. All clinical waste handling and disposal procedures in Ireland must comply with regulations: The Environmental Protection Act 1990 (including the Duty of Care Regulations); The Controlled Waste Regulations 2012; The Hazardous Waste Directive 2011; and, The Carriage of Dangerous Goods Regulations.¹⁸ In addition, EU waste policy has evolved over the last 30 years. The Waste Framework Directive introduced a five-step waste hierarchy recently where prevention is the best option, followed by re-use, recycling and

other forms of recovery, with disposal such as landfill as the last resort.¹⁹

There was an interesting response to the question of whether people consider sustainable waste disposal, with 53% of people saying that they do while only 31% consider sustainable travel (Table 1). While it is known that travel and transport form 13% of the health, public health and social care carbon footprint, and is the most significant factor in environmental sustainability, there was a general consensus from this study that waste disposal was more important.²⁰ Most people are familiar with the mantra 'reduce, re-use, recycle' and employ such sustainable measures at home, so the fact that they carry out similar waste disposal methods in their profession is not surprising.

There is perhaps a lack of awareness of the impact travel has on environmental sustainability as there are currently no regulations on sustainable travel in Ireland. McGain and Naylor (2014) looked at the extent to which hospital environmental sustainability had been studied, and suggested that an improvement in sustainable travel is dependent on three factors:

- technical changes: improvements in vehicle technology and altered health service infrastructure to reduce travel times and distances;
- financial incentives: promotion of active and public transport to increase the numbers of staff and patients who are using more environmentally sustainable methods of travelling to the practice, and de-incentivise personal car use; and,
- social and cultural factors: cultural and societal norms have a large influence on methods of transport used by the public – increased convenience of public transport has been shown to result in increased public transport use.²¹

While McGain and Naylor (2014) looked at healthcare services only, and dental practices are not located by centralised decision as hospitals are, the factors involved in sustainable travel still apply. Due to these multiple factors, members of the dental team may find it easier to enact sustainable waste and energy management. This could explain why significantly fewer members of the dental team consider sustainable travel, compared to sustainable waste and energy management.²¹

Employing simple changes like increasing sustainable travel to work by cycling, walking, carpooling or opting for public transport, switching over to vehicles that reduce fossil fuel usage or using a 3D scanner instead of shipping physical counterparts to a laboratory could all help to reduce travel-associated carbon emissions.²

Conclusion

This study illustrates that the dental profession in Ireland generally does care about environmental sustainability, and is interested in learning more about it. It is evident that a larger sample, particularly in the case of dental nurses, would have improved the study and its representation of the population. It is imperative that more research is carried out on this topic in Ireland to find out how the dental profession can put better measures in place to protect our planet.

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Appendix 1

Questionnaire distributed to dental professionals.

Dublin Dental Hospital is keen to gather views from the dental team about environmental sustainability. Please take a few moments to complete the survey questionnaire. Your responses will remain completely anonymous.

Please tick your choice:

Gender: Male ☐ Female ☐ Other ☐

Role: Dentist ☐ Specialist ☐ Dental nurse ☐
Hygienist ☐ Receptionist ☐ Practice manager ☐ Other ☐

Work predominantly in: HSE ☐ Private ☐

Location: Urban ☐ Rural ☐ Year of graduation:

Please ☒ tick the most appropriate response to the following statements:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I am interested in sustainability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sustainability should be a high priority in the HSE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our practice always considers sustainable travel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our practice always considers sustainable energy use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our practice always thinks about sustainability when buying goods and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our practice always thinks about sustainability when it manages general waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I fully understand what sustainability means in the context of my practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making our practice sustainable would decrease costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our practice measures and monitors its carbon footprint		Yes <input type="checkbox"/>	No <input type="checkbox"/>		
I would be interested in learning more about sustainability in dentistry		Yes <input type="checkbox"/>	No <input type="checkbox"/>		

Would you be interested in participating in further research in sustainability? If yes, please email: Brett.Duane@dental.tcd.ie

Thank you for your participation.

Appendix 2

Conferences attended in the Republic of Ireland

- October 19, 2017: IDA Metro Branch Meeting – Alexandra Hotel, Dublin
- October 23, 2017: IDNA Scientific Lecture – Considerations for Diet and Oral Health in our communities: What have we learned? – Dublin Dental University Hospital
- November 28, 2017: RAMI odontology lecture – Prosthodontic Practice – New Technology Interfaces – Dublin Dental University Hospital

Periodontal diagnosis in the context of the 2017 classification system of periodontal diseases and conditions – implementation in clinical practice

Dietrich, T., Ower, P., Tank, M., West, N.X., Walter, C., Needleman, I., et al., on behalf of the British Society of Periodontology

The 2017 World Workshop Classification system for periodontal and peri-implant diseases and conditions was developed in order to accommodate advances in knowledge derived from both biological and clinical research, that have emerged since the 1999 International Classification of Periodontal Diseases. Importantly, it defines clinical health for the first time, and distinguishes an intact and a reduced periodontium throughout. The term ‘aggressive periodontitis’ was removed, creating a staging and grading system for periodontitis that is based primarily upon attachment and bone loss, and classifies the disease into four stages based on severity (I, II, III or IV) and three grades based on disease susceptibility (A, B or C). The British Society of Periodontology (BSP) convened an implementation group to develop guidance on how the new classification system should be implemented in clinical practice. A particular focus was to describe how the new classification system integrates with established diagnostic parameters and pathways, such as the basic periodontal examination (BPE). This implementation plan focuses on clinical practice; for research, readers are advised to follow the international classification system. In this paper we describe a diagnostic pathway for plaque-induced periodontal diseases that is consistent with established guidance and accommodates the novel 2017 classification system, as recommended by the BSP implementation group. Subsequent case reports will provide examples of the application of this guidance in clinical practice.

British Dental Journal 2018; 226: 16-22.

Randomised controlled clinical trial of all-ceramic single-tooth implant reconstructions using modified zirconia abutments: results at five years after loading

Laass, A., Sailer, I., Husler, J.H.F., Hämmerle, C.H.F., Thoma, D.S.

The objective of this trial study was to assess whether submucosal veneering of internally connected zirconia abutments influences clinical, radiographic, and technical outcomes of single-tooth implant-borne reconstructions at five years after loading. A total of 20 patients with 20 single-tooth implants in the anterior or premolar area of the maxilla or mandible were included. The implants were randomly restored with fixed single-tooth reconstructions using either pink-veneered customised zirconia abutments (test group = 10) or non-veneered customised zirconia abutments (control group = 10). All reconstructions were adhesively cemented with all-ceramic crowns. Follow-up examinations were performed at baseline (seven to 10 days after crown insertion) and at one, three, and five years after loading, at which points the following were assessed: periodontal parameters such as probing depth (PD); bleeding on probing (BOP); and, marginal bone levels, as well as technical outcomes using the modified United States Public Health Service

(USPHS) criteria. Statistical comparisons were based on the Wilcoxon-Mann-Whitney test. Sixteen patients attended the five-year follow-up. At five years, the implant survival rate was 100% and the prosthetic survival rate was 94.1% (one abutment fracture in the test group). Veneering of the submucosal part of zirconia abutments resulted in significantly higher mean PD values: $3.6 \pm 0.4\text{mm}$ (test group) and $3.0 \pm 0.5\text{mm}$ (control group), $P=0.042$. Marginal bone levels at five years and changes up to five years were not significantly different between groups ($P>0.05$). One crown exhibited an abutment fracture and two crowns a minor chipping (17.6% overall technical complication rate). Limited by a small sample size, veneering of the submucosal part of internally connected zirconia abutments led to outcomes that were less favourable biologically (PD, BOP, and KM), but similar to non-veneered abutments radiographically and technically.

The International Journal of Periodontics and Restorative Dentistry 2019; 39: 17-27.

Impact of crestal bone resorption on quality of life and professional maintenance with conventional dentures or Locator-retained mandibular implant overdentures

Matthys, C., Vervaeke, S., Jacquet, W., De Bruyn, H.

Statement of problem: The influence of the mandibular resorption profile on clinical outcome after converting a conventional complete denture into a Locator-retained implant overdenture is unknown.

Purpose: The purpose of this prospective study was to assess the oral health-related quality of life (OHRQoL) and prosthetic maintenance of mandibular overdentures on two Locator abutments in relation to the resorption degree of the edentulous mandible.

Material and methods: Twenty-five participants were treated and classified according to the Cawood and Howell (CAW-H) resorption classification for the resorption profile of the mandible, CAW-H group III-IV ($n=14$) and CAW-H group V ($n=11$). Participants received conventional complete dentures (CDs) before implant placement and immediate non-functional loading on Locators with a resilient liner. After three months, the attachments were functionally activated. Assessments were made using the Oral Health Impact Profile 14 (OHIP-14) questionnaires with existing CDs and new CDs at one, three, and 15 months after loading. Prosthetic maintenance (repairs, rebasings, replacement of retention parts) and biological prosthetic aftercare were assessed. For comparison between groups, the Kruskal-Wallis and Mann-Whitney U tests were applied for continuous and ordinal variables and the chi-square test for cross-tabulations. To analyse repeated OHIP-14 scores, the Friedman test was used for ordered alternatives to test whether the measurements differed (overall significance level $\alpha=0.05$). Then the Wilcoxon signed rank test was conducted to detect specific differences ($\alpha=0.05$).

Results: OHIP-14 scores decreased significantly after implant placement and functional connection for the whole population ($P<0.001$) and for both sub-groups, the CAW-H group III-IV ($P<0.001$) and the CAW-H group V ($P=0.013$). CAW-H group V participants needed more retention inserts than

CAW-H group III-IV participants (26 versus 3, respectively; $P=0.006$). The incidence of repair and rebasing was limited for both groups, and biological aftercare and pain relief were comparable.

Conclusions: Changing a CD to an overdenture significantly improved ORLQoL regardless of the resorption degree, but heavily resorbed mandibles require more replacements of retention inserts.

Journal of Prosthetic Dentistry 2018; 120: 886-894.

Tooth loss predicts myocardial infarction, heart failure, stroke, and death

Lee, H.J., Choi, E.K., Park, J.B., Han, K.D., Oh, S.

We investigated whether oral health, represented by missing teeth, was associated with an increased risk of cardiovascular disease, including myocardial infarction (MI), heart failure (HF), stroke, and all-cause mortality. Subjects who underwent routine dental examinations and health check-ups provided by the Korean National Health Insurance from 2007 to 2008 ($n=4,440,970$) were followed up for incident MI, HF, stroke, and death

until 2016. During follow-up of 7.56 years, 68,063 (1.5%) subjects died, and 31,868 (0.7%) were admitted for MI, 22,637 (0.5%) for HF, and 30,941 (0.7%) for stroke. Cardiovascular events and mortality increased in proportion to tooth loss. Tooth loss was an independent risk factor for cardiovascular events after multivariable analysis adjusted for cardiovascular risk, behavioural, and income factors. Each missing tooth was associated with an approximately 1% increase in MI (HR, 1.010; 95% CI, 1.007-1.014), 1.5% increase in HF (HR, 1.016; 95% CI, 1.013-1.019), and stroke (HR, 1.015; 95% CI, 1.012-1.018), and 2% increase in mortality (HR, 1.022; 95% CI, 1.020-1.023). Having ≥ 5 missing teeth substantially increased risk for cardiovascular outcomes, and even a small number of missing teeth (one to four) was associated with an increased risk for MI, stroke, and death. This association was consistent in subgroup analyses and especially strong among the younger subjects (age <65 years) and those with periodontitis. In this large Korean nationwide cohort study, we found that tooth loss showed a dose-dependent association with incident MI, HF, ischemic stroke, and all-cause death, and was a good predictor of cardiovascular outcome. In clinical practice, the number of missing teeth can aid physicians in discriminating patients with a higher cardiovascular risk.

Journal of Dental Research 2019; 98: 164-170.



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Experienced dentist (20+ years Ireland, Germany and UK) seeking associate position between Dundalk and north Dublin for three days a week. Anti-wrinkle injection treatments and dermal fillers optional. Immediate start possible. Email dentist.available.ne@gmail.com.

Trustworthy and enthusiastic dentist with 16 years of experience seeking part-time/full-time associate role in Dublin and suburbs. Available on Saturdays. Email dentistaa@ymail.com.

SITUATIONS VACANT

Associates

Letterkenny, Co. Donegal: associate dentist required full or part time – busy surgery, crown and bridge experience preferable. Digital x-rays. Email adrian.millen@icloud.com.

Cork: Friendly, full-time associate wanted in east Cork practice – 40 minutes easy commute of the city. Replacing departing colleague, full book, fully computerised, etc. Email youghaldentist@gmail.com.

Associate wanted (maternity cover). Hardworking, enthusiastic associate dentist required for busy thriving practice in Co. Tipperary. Minimum two years' experience. Computerised practice, digital x-ray, modern fully equipped surgery with excellent support team. For further information contact Linda at 087-228 1282 or lindaryan001@gmail.com.

Dental associate position available one day per week. Suit experienced dentist. Private and PRSI only. Gorey, Co. Wexford. Email adecdental365@gmail.com.

Associate dentist required for two to three days a week. Some experience required.

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 **Friday, March 8, 2019**. Classified ads placed in the *Journal* are also published on our website www.dentist.ie for 12 weeks. **Please note that all adverts are subject to VAT at 23%.**

Advert size	Members	Non-members
up to 25 words	€80	€160
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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:

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Associate required, Leinster. Dynamic, flexible, empathetic associate required, immediate start. Top-class equipment. Computerised. digitalised. OPG, separate decontamination room. Full-time, car owner crucial. Excellent support staff. Suitable for recently qualified, but some experience beneficial. Email with CV and personal profile to niall@innovativedental.com.

Citywest: associate dentist required – busy surgery, strong book, excellent support team, four days per week. Minimum two years' experience preferable. Immediate start. Must be IDC registered. Email CV to cegan@centrichealth.ie.

Terenure, Dublin 6w: associate required for Wednesdays (including evening) and one Saturday per month. Experience, good interpersonal skills and interest in implants and endodontics a plus. Contact Olivia.plunkett@gmail.com.

West Dublin. Associate dentist position available. Full-time in busy, modern, computerised practice to replace departing colleague. General practice experience desirable. Email tullyhouse@gmail.com.

Experienced associate required to provide full- or part-time dental services in a busy practice within one hour of Dublin. Modern, computerised practice with excellent support staff and a very busy book. Expected start March 2019. Email careers@dentalcareireland.ie.

Associate needed in busy Athlone practice two to three days per week on an established book. Experience necessary. Full support and good terms available. Email campbelldental@yahoo.ie.

Co. Meath. Experienced, talented associate required for part-time position at high-end multi-surgery private general/specialist clinic, 40 mins Dublin. Two days (negotiable). CVs to kellsdentaljob@gmail.com.

Associate dentist required, part-time, one to two days per week. North county Dublin, PRSI/private. Experience required. Email pdsvacancy@gmail.com.

South east: experienced, part-time dental associate required to replace departing colleague for busy, well-established practice. Immediate start. Please email southeastdentpractice@gmail.com.

County Donegal. Experienced dental associate required part-time to replace departing colleague. Busy, modern family practice with mix of PRSI/GMS/private patients. Email info@dungloedental.ie.

Dental associate required, Ballincollig, Co. Cork, three to four days per week, two-surgery, established, computerised practice. Email info@ballincolligdental.ie.

Dentists

General dentist required to provide part-time maternity cover for a practice in Co. Mayo. Excellent support staff. Expected start date March 2019 for a period of six months. If interested, please send CV to careers@dentalcareireland.ie.

Part-time general dentist required for busy Dublin city centre practice. Two to three years' experience is required. Computerised practice with digital x-ray. Email contact@freedomdental.ie.

General dentist required for well-established clinic in Co. Mayo, 40k north of Galway. Please send CV to jobs@alexandrardental.ie.

Position available for trustworthy self-employed general dentist in northeast. Days negotiable. CV to mbcarr06@gmail.com.

Dentist required, Dublin 7 in private clinic. Computerised, digital OPG/intra-oral, to replace colleague departing for further education. Minimum two years' experience. Email hygieneplacement@gmail.com.

Exciting opportunity to join award-winning practice in north east: Frazer Dental and

orthodontics, 30 minutes from Navan, Drogheda, Dundalk; one hour from Dublin. Full list, 75% private. Two to four days available. For more info contact rachaelfrazer@gmail.com.

Limerick City. Shields Dental and Implant Clinic seeks experienced colleague with advanced restorative skill set to join our expansive team. Those with special interest skill set are encouraged to apply. Send CV to Jobs@shieldsdentalclinic.ie, or Tel: Conor on 085-751 1529.

Dentist required for three days a week in Carndonagh, Co. Donegal. Some experience required, possible full-time or partnership for the right person. Must be IDC registered. Email donegaldental@yahoo.ie.

Dentist required to join our great team at Kingscourt Dental. One hour north of Dublin, a modern, fully digital, energetic practice! Come meet us and you will want to be a part of this team! Email kingscourtdentalpractice@gmail.com.

Limerick – Smiles Dental is looking for an enthusiastic general dentist to join our private, modern, well-equipped, well-established practice in Limerick. Position initially offers three days per week with potential to increase if desired. Email joanne.bonfield@smiles.co.uk.

Drogheda – Smiles Dental is looking for a passionate dentist to join our well-established, busy Drogheda practice in Co. Louth. Practice offers an established book, modern facilities and is fully computerised. Must be IDC registered. Five days per week. Email joanne.bonfield@smiles.co.uk.

Dublin – Smiles Dental is looking for a passionate dentist to join our well-established, state-of-the-art practice in Grand Canal Square, Dublin 2. Candidates will ideally have a special interest/post-grad qualification. Three to four days per week. Email joanne.bonfield@smiles.co.uk.

Cork – Smiles Dental is looking for a passionate dentist to join our well-established, state-of-the-art practice in Cork. Candidates will ideally have a special interest/post-grad qualification. Days required are Tuesday, Thursday and Saturday. Email joanne.bonfield@smiles.co.uk.

Full-time general dentist required to replace outgoing associate in busy mixed practice in Co. Galway. Modern computerised practice, excellent support staff and a busy book. CVs to be emailed to charles@irishdentist.com.

From June/July/August. Full-time experienced dentist required, full book of PRSI/medical card/private patients. Experience in endo and crown work desirable. Substantial gross. Early subsequent lease purchase available. Practice located in north west – accommodation available. Email dentaljob1066@gmail.com.

Ennis. Dentist required. Two to three days per week currently. Busy practice. Full support. Experience necessary. Email mahonydentaltd@gmail.com.

General dentist required to provide part-time maternity cover for busy practice in Co. Mayo (minimum three years' experience). Modern, computerised practice with excellent support staff. Expected start date March 2019. Email careers@dentalcareireland.ie.

Dunboyne. Dentist required for maternity cover from April 1, 2019; preferably Mondays/Wednesdays; PRSI/HSE/private patients; excellent support staff; experience necessary. Email CV to dublinmeath@gmail.com.

Dentist and hygienist required for busy south Dublin clinic. Full-time maternity cover six months at least. Days can be flexible. Contact alex@whitesmile.dental.ie.

Dentists Galway/Laois/Offaly/Westmeath full-time/part-time for primary care setting commencing ASAP. Email CV to unagaster@gmail.com or call Una on 087-917 4831.

Wexford – Smiles Dental is looking for a passionate dentist to join our state-of-the-art, well-established, busy practice in Wexford. Practice offers an established book, modern facilities and is fully computerised. Four to five days per week. Email joanne.bonfield@smiles.co.uk.

Experienced general and restorative dentist required, south Dublin. Dentist required (minimum one year's experience) to work in a busy, state-of-the-art dental clinic alongside a great multidisciplinary team. Onsite digital lab, photography suite, TCOs, Cerec. Excellent remuneration. Ongoing training. Email shauna@3dental.ie.

General dentist (minimum two years' experience) required to provide full- or part-time dental services in busy practice in Co. Meath. Located 40 minutes' drive from M50. Modern, computerised practice with excellent, experienced support staff. Expected start March 2019. Email careers@dentalcareireland.ie.

Experienced dentist required for two days a week in modern busy practice 30 minutes from M50. General dentistry with support of well-trained staff and hygienist. All applications to apply to kildarepractice@gmail.com.

Specialist/limited practice

Docklands Dental is looking for a periodontist to join our team for one to two sessions per week. Candidates ideally will have experience working in a multi-disciplinary practice and integrated treatment planning. Highly trained staff, surgical and digital set-up. Email gregg@docklandsdental.ie.

Limerick City. Shields Dental and Implant Clinic. Specialist orthodontist required for two days a week to add to our advanced restorative practice and specialist team. Tel: Conor on 085-751 1529 or email CV to Jobs@shieldsdentalclinic.ie.

Periodontist/oral surgeon required to replace departing periodontist from July 2019 in busy general practice in Dundrum. Periodontist currently attends two days per month, and provides surgical implant placement, surgical and non-surgical periodontal treatments, and surgical extractions. Please reply to dr.moroney@dentalclinic.ie.

Seapoint Clinic is looking for an experienced periodontist. Flexible, part-time position. The working environment is modern, fully equipped, and supported by a well-trained professional team. We offer a competitive associate package with shared lab fees/bonuses. Email info@seapointclinic.ie.

Limerick City. Shields Dental and Implant Clinic seeks experienced restorative colleague in crown and bridge work to join our high-end multidisciplinary practice on a full-time basis. Send CV to Jobs@shieldsdentalclinic.ie or telephone Conor at 085-751 1529.

Part-time orthodontist required for a modern, progressive west Limerick dental practice to take over an existing patient list, one to two days per week. Practice has an in-house prosthodontist and visiting periodontist. Please apply to info@mullanedental.ie.

Endodontist – Smiles Dental is looking for an experienced, motivated endodontist with a postgraduate qualification in endodontics to join our well-established, modern, state-of-the-art practices in Dublin and Wexford. Flexibility with days. Email joanne.bonfield@smiles.co.uk.

Oral surgeon required to replace departing colleague in friendly, well-organised private practice in Portobello, for two sessions per month for surgery, and two shorter sessions for assessments/reviews. Treatments include extraction of wisdom teeth, surgical extractions and biopsies. Email helen@portobellodental.com.

Dental nurses/managers/receptionists

Dental nurse required for a busy, modern, computerised practice in north Cork. Thirty hours a week. Looking for a friendly, positive individual with excellent work ethic to become part of our progressive team. Email nualacagney@gmail.com.

Full-time qualified dental nurse required for Kilkenny/Thurles orthodontic practice. We are seeking a warm, friendly person with good communication and computer skills. Email application to reception@kylemoreclinic.ie.

Qualified dental nurse required for a very friendly practice in Nenagh, Co. Tipperary. Full-time, Monday to Friday. Tel. 087-6866180 or email jacqueslumbroso23@gmail.com.

Experienced full-time dental receptionist required to join our general and specialist clinic in Dublin city centre. The ideal candidate will be confident, friendly and have an excellent work ethic. Monday to Friday hours with remuneration based on experience. Email info@harcourtclinical.ie.

Full-time, permanent dental nurse position for January 2019 start. Modern, private, four-surgery practice in Celbridge, Co. Kildare. Existing nurses over 10 years at Riverside. Dr Paul O'Boyle principal. Full details at <https://1drv.ms/p/s!Au2G9pTl1owEqgEp5HCw1CjYAaCe>. Email poboyleriverside@hotmail.com.

Full-time qualified dental nurse with good IT and communication skills wanted for modern, private Dublin 4 dental practice. Immediate start. Email CV to noel.dunne@centrichealth.ie.

Dublin – Looking for a receptionist for every Saturday and a dental nurse for one or two Saturdays a month. Email dr.erika.barta@crowndental.ie.

Full-time experienced dental nurse-receptionist for modern, computerised practice in Dublin 9. Excellent communication, organisational and IT skills, friendly and enthusiastic approach required. Fluent spoken and excellent written English essential. Exact SOE knowledge advantageous. Email with CV to niamh@drumcondravillagedental.ie.

Part-time dental nurse/receptionist required for chair side assistance and reception support in Dunboyne; two to three days with some late evenings and occasional Saturdays. Email dublinmeath@gmail.com. Exciting opportunity for a full-time, experienced dental nurse to join our prestigious, private, modern practice with specialist multidisciplinary team in Dublin 18. First-class communication and exceptional patient care skills required. Fluent spoken and excellent written English essential. Email admin@cdpractice.com.

Exciting opportunities, full-time/part-time, for experienced/qualified dental nurses in Dublin and Newbridge practices. Modern practices, full support teams. Excellent communication and organisational skills, friendly approach required. Email CV to cegan@centrichealth.ie.

Experienced dental nurse required full/part-time in Westmeath. Dynamic, organised, modern environment. Available to start in January 2019. Must be friendly, enthusiastic team player with great communication and organisation skills. Please forward CV and cover letter to info@kinnegaddental.ie.

Friendly and enthusiastic dental nurse with great communication skills required for our fabulous surgery located on the seaside in Malahide. Flexible working hours (part-time with a possibility of full-time). Email CV to info@bespokedental.ie.

We are looking for an experienced and enthusiastic dental nurse for a vibrant specialist practice. This position would suit a candidate looking to expand knowledge in assisting with orthodontics, dental implants and oral surgery. Email deirdre@thejamesclinic.com.

Experienced full-time dental receptionist/administrator for busy Dublin 6 practice. Forward CV to alex@beechwooddental.ie.

Lovely, modern, friendly practice requires a part-time dental nurse. We are based in the Knocklyon/Ballycullen area. Duties would include nursing and reception duties. Applicant must be friendly, professional and a team player. Excellent remuneration for the right candidate. Email nursedentaldublin@gmail.com.

Newbridge Dental is recruiting a full-time, qualified dental nurse. The successful candidate will be friendly, enthusiastic, have excellent communication skills and be a good team player. Please reply with your CV to heidi.lane@centrichealth.ie.

Hygienists

Part-time hygienist required for busy Galway dental practice. Send CV to devonparkdental@hotmail.com.

Kells, Co. Meath – 40 mins Dublin – we are seeking an experienced dental hygienist for maternity leave cover (Wednesday to Friday) from February to September 2019. Multi-surgery private-only general/specialist practice with visiting periodontist. Full book. Excellent terms. CVs to kellsdentaljob@gmail.com.

Dental hygienist required for part-time work at both our Galway and Castlebar offices. Please email CV to reception@keenorthodontics.com.

Dublin – exciting opportunity for an enthusiastic hygienist to join our modern, well-equipped, well-established Smiles Dental practice in Waterloo Road, Dublin. Days available Tuesdays and bi-weekly Saturdays. Candidates must be IDC registered. Email joanne.bonfield@smiles.co.uk.

Part-time dental hygienist required to join our great team in Barna, Galway. Email CV to barnadentalpractice@gmail.com.

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New services offered at Northbrook X ray department.

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Walk in service with referral letter for OPG and Ceph. CT by appointment, usually available within 24 hours.

For more information please contact Northbrook Clinic at 01-4967111 or by email at northbrookxraydepartment@gmail.com.

Friendly dental hygienist required – award-winning dental practice in north east – Frazer Dental and orthodontics. Great team! 30 minutes from Navan, Dundalk, Drogheda, 45 minutes from Cavan. Two to three sessions p/wk ideally. Email CV to rachaelfraser@gmail.com.

Waterford City. Hygienist required to cover maternity leave from March 2019. Four days per week. Excellent staff and conditions. CV to info@waterforddentist.ie.

Limerick City. Shields Dental and Implant Clinic seeks part/full-time hygienist. Tel: Conor on 085-751 1529 or email CV to Jobs@shieldsdentalclinic.ie.

Hygienist required to replace well-established hygienist position in modern family practice based in Sandymount, Dublin 4. Position available for Mondays. Please forward CVs to dr.elizabeth.melvin@gmail.com.

Experienced hygienist required for immediate start in busy multi-surgery practice in Ballina, Co. Mayo. Please contact Dr Paul Dunne on 087-918 9808 or email bernardtwomeydental@gmail.com.

Experienced hygienist required for immediate start in busy, award-winning dental practice. Two/three days per week. Please contact Ruth on 086-198 4592, or email info@gracefielddental.ie.

Part-time dental hygienist position available for immediate start. Riverside Dental Practice, Celbridge. Busy primary care centre. Full details at <https://1drv.ms/p/s!Au2G9pTl1owEqhvJXeO7gf79-rbV>. Contact Paul O'Boyle at 01-610 2222 or email poboylerriverside@hotmail.com.

Hygienist required one day per week in a busy Co. Limerick clinic. The candidate must be friendly, enthusiastic, motivated, with good clinical skills. Please forward CVs to jennifer.bowedental@gmail.com.

Eyre Square Dental requires a full-time hygienist to join their team. Brand new dental chair, new Cavitron, excellent support staff. Please email paula@eyresquaredental.ie or call 091-562 932 for more information on the position.

Dentist and hygienist required for busy south Dublin clinic. Full-time maternity cover six months at least. Days can be flexible. Contact alex@whitesmiledental.ie.

Facial aesthetics

Part-time facial aesthetics injector needed to work in clinics in Cork, Dublin, Killarney and Limerick. Positions available at all locations. Please send CVs to info@eden-medical.ie.

PRACTICES FOR SALE/TO LET

Mid-west practice for sale. Long-established with multiple surgeries in a large catchment area, low overheads, high turnover, high profits, full books. Great potential for growth. Principal retiring. Suit ambitious dentist or couple. Contact dentalpracticesaleireland@gmail.com.

Modern surgery in prestigious medical centre building. Well-established GP practice and pharmacy. Luxury apartments. Centrally located. Private car parking. First floor with lift. Email ahanna@eircom.net.

Practice for sale – Dublin city centre. Private, two surgeries, modern equipment – HSE standards. Very busy, long-established, strong passing trade. Digitalised/computerised. Good new patient numbers. Excellent lease terms. Ample room to expand hours and service. Principal available for transition. Email niall@innovativedental.com.

Practice for sale – midlands. Excellently maintained, busy, well-established, leasehold three-surgery, with room to expand practice. Superb opportunity, modern equipment. Computerised, digitalised. Great staff support. Low medical card. Strong new patient numbers. Ample free parking. Dentist retiring. Contact niall@innovativedental.com.

Specialist dental clinic in Galway city has a surgery to rent. Daily rate available, digital x-ray, OPC, free parking. Call Pat on 086-323 6405, or email patwbusiness@gmail.com.

South-west Dublin/Kildare. Two surgeries, freehold, fully equipped, very busy, long-established, good footfall. Strong new patient numbers. Low medical card. Excellent figures. Ample space to expand hours/service. Principal retiring, available for transition. Email niall@innovativedental.com.

Long-established leasehold practice for sale in Galway city centre. Two surgeries, owner retiring. Email Galway_dentist@outlook.com.

Quiz answers

Questions on page 12.



1. Generalised aggressive periodontitis.
2. Generalised Stage III, Grade C periodontitis.
3. (a) Consensus opinion of the 2017 classification workshop³ participants was that variations in clinical presentation are insufficient to conclude that chronic periodontitis and aggressive periodontitis are different diseases. Thereby, all such cases are now grouped under a single term – 'periodontitis'.
- (b) A staging and grading system has been developed to characterise periodontitis. *Stage* is characterised primarily on the severity of disease

(based on CAL, with additional evidence in practice obtained from radiographic bone loss), but also reflects the predicted complexity of treatment. *Stage* may be seen as the main component of the diagnosis. *Grade* provides additional information relating to (rate of existing/risk of future) disease progression and is modified by the presence of certain risk factors.

4. The fact that there is a new diagnostic terminology will not impact on the treatment approach in this case. However, the use of a staging and grading approach may help to identify cases that require more intensive treatment/maintenance.

References

1. **Armitage, G.C.** Development of a classification system for periodontal diseases and conditions. *Ann Periodontol* 1999; 4: 1-6.
2. **Caton, J.G., Armitage, G., Berglundh, T., et al.** A new classification scheme for periodontal and peri-implant diseases and conditions – introduction and key changes from the 1999 classification. *J Clin Periodontol* 2018; 45 (Suppl. 20): S1-S8.
3. **Papapanou, P.N., Sanz, M., Buduneli, N., et al.** Periodontitis: Consensus report of workgroup 2 of the 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions. *J Clin Periodontol* 2018; 45 (Suppl. 20): S162-S170.

The data behind decay

Dr MICHAEL CROWE talks about his involvement with the IDA, as well as his PhD on diet and other dental risk factors in Irish preschool children, and how he learned that bad habits start young.

What has your participation in the Irish Dental Association meant to you and what is its biggest benefit?

The dental profession is quite an isolated one, even if you're in more than a single-dentist practice. The biggest advantage of the IDA is realising all that is going on outside of your own domain. It exposes you to things that you otherwise wouldn't be aware of, particularly in relation to lobbying for policy change or advocacy.

You become more aware of what the IDA is doing. If you're only on the periphery as a member, you don't really know. You can read information that is sent out but it's only when you get involved with a sub-group or committee or work group that it really opens your eyes to the amount of work that goes on behind the scenes, by both the permanent staff in the IDA and the volunteers.

What was the subject of your PhD?

We looked at the Growing Up in Ireland study, which is the largest children's study ever undertaken in Ireland, and we looked at the preschool cohort of that. My research focused primarily on diet and other risk indicators that are associated with dental problems in preschool children. We focused on diet specifically because it's such a risk factor for dental caries for children. This led into dietary assessments, data science, data analytics and looking at alternative ways of analysing and visualising data.

What were the findings of your research and their implications?

The main finding is that even at preschool age, children consume an excess of free sugars. Even at that young age, there is a recommendation from the WHO that free sugars should only constitute 5-10% of total energy intake. The 10% is the recommended level and 5% is what you might aspire to. Basically, 96% of three year olds are exceeding the 5% level and three-quarters are exceeding the 10% level. So only 25% of preschoolers meet that recommendation. We did a calculation and if you even just reduce snacks like sugary drinks, juices, confectionery and so on, you double the amount of people that would be within the guideline. We used a particular type of data-mining technique, and realised that there were lots of subgroups of children with dental problems. You found most problems among overweight children of overweight parents. But also, interestingly, there was a cohort that was underweight that also had a high prevalence of dental problems.

What future studies would the subject benefit from?

We haven't had a National Oral Health Study since 2002. This is unlike the UK, where they also have separate national nutrition surveys. They can link both their surveys if they wish to. We can't do any of that because while we have national nutrition surveys, we have no national oral health surveys. This is a big problem because then you can only do small-scale surveys that are not nationally representative. That's the biggest deficit in trying to analyse data like that.

How can research like yours help dentists and the Association?

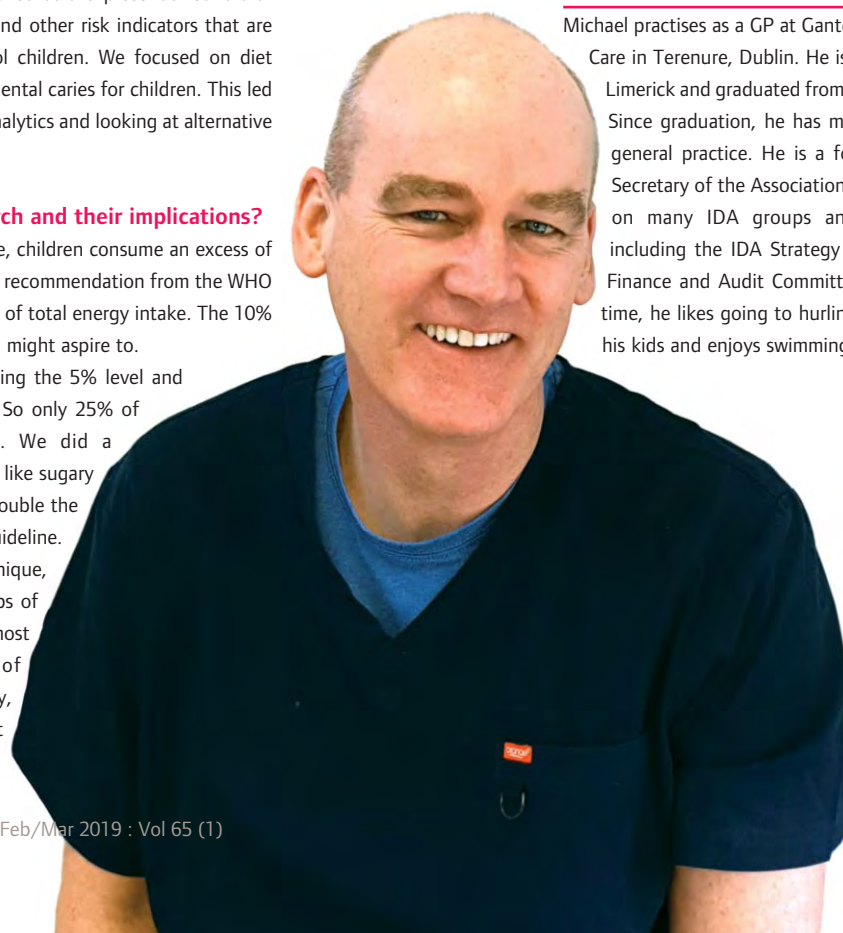
We have limited data and are trying to maximise the datasets that are out there. Growing Up in Ireland and the national nutrition surveys were the ones that we targeted, because they hadn't been analysed previously for dental findings.

In terms of helping, it's just a case of trying to get as much information out there about the oral health status of children, because the biggest problem is we don't have very good data. There are small-scale surveys or regional surveys but we haven't had published national oral health survey data for nearly 20 years.

This research at least gives you some indication of what prevalence of dietary problems there are that contribute to dental caries and dental problems. In terms of the IDA, that information can then be used to lobby and to advocate for better oral health services.

What are the challenges of running a practice and studying?

The obvious challenge is time. You have to be time efficient and maximise how much you have. It's just juggling the two. A PhD takes up a lot of time so you have to work on it at weekends and things like that.



Michael practises as a GP at Ganter Crowe Dental Care in Terenure, Dublin. He is originally from Limerick and graduated from Trinity in 1997. Since graduation, he has mainly worked in general practice. He is a former Honorary Secretary of the Association and has served on many IDA groups and committees, including the IDA Strategy Group and the Finance and Audit Committee. In his spare time, he likes going to hurling matches with his kids and enjoys swimming.



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