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of dental amalgam in Ireland



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References: 1. Baysan A et al. Caries Res 2001;35:41-46. 2. Ekstrand et al. Caries Res 2013;47:391-8. 3. Schirrmester JF et al. Am J Dent 2007;20, 212-216. 4. Ekstrand et al. 2008 Gerod 2008; 25:67-75.

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Dr Ciara Scott
Honorary Editor

The power of followers

The Covid-19 crisis has presented dental professionals with difficulties they have never before faced, but we can get through this as a profession.

Our last issue's cover depicted a wrecking ball. Since then, a new wrecking ball, Covid-19, has wreaked devastation across the globe and literally stopped us in our tracks as a profession. We no longer trust the air we breathe or the aerosols we generate.

Lockdown has put us in survival mode. The phrase 'survival of the fittest' was first coined after Darwin published *On the Origin of Species*. In Darwin's theory, 'fitness', and ultimately survival, related not to physical prowess, but to the ability to adapt. We have never before been asked as a profession or as citizens to adapt so quickly or so significantly. This uncertainty can be an uncomfortable and challenging place for many dentists, who usually work within parameters of predictability and control.

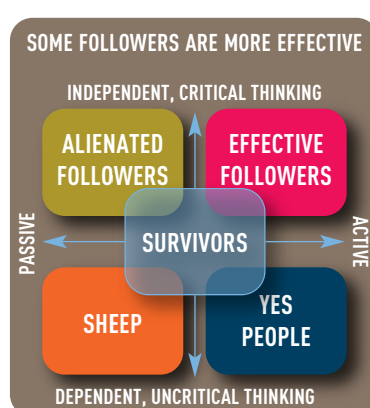
The IDA Board, staff and Quality and Patient Safety Committee (QPSC) have worked tirelessly to advocate for the dental profession and dental patients during this public health emergency, and to share information as it becomes available. IDA members have benefited from near-daily newsletters. In covering Covid-19 in this issue, we have decided not to publish advice that is likely to outdate. Instead, page 80 outlines some valuable resources to stay up to date.

Active followership

A crisis demands strong leadership, rapid decision-making and clear communication. As citizens we have seen this from our Minister for Health and the Chief Medical Officer. As a profession, we sought it from our Chief Dental Officer and Dental Council. The persistent and consistent messages about social distancing, "to come together by staying apart", to "stay home and save lives", have been powerful in building trust and empowering our actions as followers. Like the ancient proverb by Lao Tzu, "when it is done, the people will say, we did this ourselves".

Leadership matters, but less credence is sometimes given to the equal importance of followers. Kelley's followership model defined the two dimensions of how followers behave: are they dependent and looking for direction, or are they independent and self-reliant?¹ Are they passive subordinates or active participants in decision-making? Many academic papers have since discussed the important role of followers and 'bottom-up' leadership in healthcare, but it has rarely been more evident than in these last weeks.

Good followership in healthcare teams improves patient outcomes. Effective followers are actively engaged, challenge the status quo, and use independent critical thinking to contribute to decision-making. Followership is an integral part of effective leadership. Many dentists within the IDA and beyond have demonstrated their moral courage and ability to be both leaders and effective



followers in this crisis. Like so many others in our communities, dentists have willingly traded their liberty, lifestyles and livelihoods to save lives. To many, the continued provision of routine care to asymptomatic patients was counterintuitive to the general public health advice. As my friend's daughter put it, it's the Schrodinger's virus: we simultaneously have it and don't have it. We have to behave like we have it to protect others and behave like we don't to protect ourselves.

Following the evidence

Dentists are trained in evidence-based decision-making and comply with many codes of practice that regulate

and support best practice. David Sackett's original evidence-based medicine model was based on a triad that combines the evidence with clinical judgement and patient factors. The exponential spread of Covid-19 has demanded that many difficult decisions on public health measures have been made without real-time data to support them, but rather with predictive models.

Over the last two weeks, the emphasis has shifted very rapidly from whether we should continue to provide routine care during this public health emergency, to how we can safely manage dental emergencies, and how and when we can safely return to practice. Many HSE dental teams have already been retrained and redeployed, and others have answered the HSE's recruitment call.

The premise of standard precautions in infection control is to treat all patients as potentially infected to protect both patients and professionals. Section 2.4 of the Dental Council Code of Practice outlines transmission-based precautions in addition to standard precautions in cases of highly infectious diseases. Since the HIV epidemic of the 1980s, standard precautions in dentistry have evolved and developed in response to epidemics, emerging threats and new evidence. The profession will demand very specific guidelines on the risk assessment and personal protective equipment (PPE) and additional precautions for infection control in response to this new highly transmissible threat.

Like infection control, oral healthcare prioritises prevention. Public health and patient engagement strategies to flatten and reverse the prevalence of tooth decay are long standing. In this issue, both clinical papers highlight some challenges and risks in the management of dental caries.

We do not know what the coming weeks will hold. It is certain that it will take strong leadership to rebuild the confidence of the dental profession and of dental patients.

Stay safe and stay (virtually) connected.

Reference

1. Kelley, R. In praise of followers. *Harvard Business Review* 1988; 66: 142-148.

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1. Barnett ML. The rationale for the daily use of an antimicrobial mouthrinse. JADA 2006; 137: 16S-21S

2. Araujo MWB et al. Meta-analysis of the effect of an essential oil-containing mouthrinse on gingivitis and plaque. JADA 2015; 146(8): 610-622
UK/LI/20-15605



Prof. Leo Stassen
IDA President



Good advice essential

Advice that was inadequate and dangerous caused enormous problems for dentists at a time of pandemic. The correct advice – emergency treatment under precise conditions – only came after strenuous and repeated Association agitation.

Dentistry is an essential service. We all know how painful some of our dental emergencies can be and all of us agreed that there must be an emergency dental service. This care must be provided safely for everyone. Covid-19 has changed how we do that.

Dentists have always been trained to treat patients as if they or even us (asymptomatic) are potentially infected, using the appropriate PPE. Irish dentists were being asked to follow guidance received from the authorities which was different to what most dental authorities around the world were saying is required in this pandemic. Our authorities had said that we should continue to perform routine and emergency dentistry with the Dental Council minimal standard PPE precautions, which were suitable until this pandemic occurred. The information available on what is appropriate PPE, and how dentists should manage asymptomatic Covid-19 patients, caused confusion, panic, anger, aggression and even hatred.

Conflict

Professionalism needs to be maintained. We are all entitled to our opinions but not the facts. Facts are facts and we need to use the information available and use intellectual extension from other areas to make up our minds. There is no doubt that doing the right thing in a time of crisis has different rules and is more important than doing things right. Unfortunately, there has been a serious lack of trust in the information passed onto us by the Department of Health (DOH) and its advisors.

Dentistry usually involves very close contact with the patient, close contact with respiratory droplets, the oral mucosal area, and saliva. Dental treatments usually last more than 15 minutes and frequently are aerosol (droplet) generating procedures. Continuing to provide routine dental practice went against advice given by the Health Protection Surveillance Centre (HPSC) in other areas. Apparently the advice was different in dentistry because they were unable to find enough evidence in dentistry for droplet/aerosol and surface contamination risks.

Personal risk assessment

The HPSC receives its advice from the National Public Health Emergency Team (NPHE). The advice becomes the DOH's position, and the Dental Council's position. Dentistry, in the form of your Association and the National Oral Health Office (NOHO), has just succeeded in getting input and having new advice issued. (Any profession being dictated to should have been part of this advice group.)

You can get all the up-to-date information from the IDA website (www.dentist.ie) and by email as soon as it becomes available. In all instances,

we need to review the risk-benefit analysis and assess whether providing any treatment is worth the risk of contracting the disease and/or spreading the disease further into the community. It is our decision. If I, or one of my staff, or one of my patients, contracted the disease by providing routine dentistry, prior to the recently imposed emergency-only dental care, it is probable that a legal case against the DOH would follow.

The rules now

People in all walks of life are catching the disease, nobody is immune – and too many are dying. People with emergencies (medical and dental) should be seen following phone/video triage and if they need to be seen directly, only seen with the correct and appropriate PPE based on science, not simply available resources.

The Association and NOHO did influence the relevant stakeholders to consider dental input, issue clear and considered advice, and to take a sensible and 'precautionary position'. We believe this advice took too long, but at least it is out now.

Designated centres/dental schools are the NOHO and IDA's suggestion and we need to see how the HSE reacts. The centres should be for all patients but independent practitioners may have to co-ordinate the emergency dental care for non-medical adult patients. It can be done. Redeployed dental practices, independent dental hubs or mobile dental units with appropriate facilities and PPE are all possibilities. There are a large number of dental volunteers (practitioners and specialists) willing to help.

Recreminations are for later

The coming together of dentistry in Ireland has been extraordinary. If we look for blame, criticise or are disrespectful to those with different opinions, we are letting our profession, our patients and ourselves down. I cannot say that strongly enough. Recreminations, if necessary, are for after the 'war'. Yes, we can all learn but only in an open, frank and respectful debate or else we will only hear those who shout loudest.

Dentistry in the future.

We do not know. We all thought HIV could annihilate the population/dentistry. It did not. Researchers are working on medication to help treat Covid-19, on antibody production in recovered patients as a potential treatment, on vaccinations to increase immunity in the community, and importantly on 'on the spot' testing. There will be changes but dentistry has been very innovative and dealt with every crisis it faced. We will do so now too.



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Speaker Dr France Lambert.



Scientific Chair
Prof. Anton Sculean.



Conference Chair
Dr Declan Corcoran.



Dr Peter Harrison.



Dr Ronan Allen.

Perio Master Clinic comes to Dublin

A week before the Government imposed a ban on mass gatherings because of the Covid-19 outbreak, the Irish Society of Periodontology hosted the fourth European Federation of Periodontology Perio Master Clinic in the RDS, Dublin, on the topic of 'Hard- and Soft-Tissue Aesthetic Reconstructions around Teeth and Dental Implants: Current and Future Challenges'.

The conference brought together 37 world-renowned specialists from 14 countries to share their knowledge and experience. "Periodontal regeneration around teeth and dental implants is the most challenging area faced by practitioners working in this field today, and one of the most exciting too," said Dr Declan Corcoran, conference Chairman.

With travel restrictions in place, some speakers were not in a position to be physically present for the meeting. However, arrangements were made to have their lectures pre-recorded and played for the audience at the RDS. These speakers took part in the discussion via live streaming, so their contributions were not diminished in any way.

Whereas a significant number of speakers opted not to travel, the number of delegates attending only dropped by 10%, and a waiting list was opened.

Those on the waiting list were offered live streaming of the conference and this was also available for delegates who opted not to travel. "We were extremely fortunate to have the expertise of conference organisers Mondial and IT company Metafusion, who put all of the necessary arrangements in place to livestream the event at such short notice," said Declan.

"We gained invaluable experience in livestreaming an event, and this will undoubtedly stand to us going forward; it may certainly figure prominently in how we stage future events."

There was a significant Irish presence in presenters, with Dr Ronan Allen giving a presentation entitled 'Tissue Augmentation and Aesthetic Implant Placement'. Dr Peter Harrison of the Dublin Dental University Hospital (DDUH) moderated a session on socket grafting, and the final session was moderated by Dr Ioannis Polyzois of the DDUH and Dr Tiernan O'Brien of the Galway Clinic.

The staging of this event was the culmination of four years of hard and dedicated work on the part of the organising committee of the Irish Society of Periodontology. The committee was delighted to bring the leading lights in periodontal regeneration to Dublin and witness at first hand the impressive latest techniques in this most challenging aspect of dentistry.

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KCL research on sugarfree gum

King's College London report shows chewing sugarfree gum could help reduce dental caries.

A new analysis by King's College London (KCL) of all existing research relating to chewing sugarfree gum, the most comprehensive to date, has revealed the positive impact it can have on oral health. The results found evidence indicating that chewing sugarfree gum could reduce the further development of dental caries comparing favourably to other preventive interventions, such as more traditional oral health education and supervised tooth brushing alone.

The study, conducted by the world-leading Faculty of Dentistry, Oral & Craniofacial Sciences at KCL, with support from the Wrigley Oral Healthcare Programme, systematically reviewed the published

literature to date on levels of dental caries in both adults and children who chew sugarfree gum compared with those who do not chew sugarfree gum or use alternatives such as lozenges, candies, rinses and tablets.¹

Despite progress being made in recent years, dental caries remains a serious public health concern. Dental caries remains the most common of all chronic conditions in many countries and tooth decay is the most significant prevalent condition among children.² These results add to the growing body of evidence highlighting an important role for chewing sugarfree gum in improving both oral and overall health.



Dr Mike Dodds, Lead oral health scientist at Wrigley Oral Healthcare Program commented:

"This new King's College London study reinforces the important role sugarfree gum can play in improving oral health for people around the world. As our lifestyles and eating behaviors have evolved over time it is important that we look beyond brushing alone to find additional ways to protect our teeth and mouth as part of a regularly exercised oral care routine."

1 Newton JT, Banerjee A, et al. A systematic review and meta-analysis of the role of sugar-free chewing gum in dental caries. *Journal of Dental Research - Clinical & Translational Research*. November 2019. Available at: <https://journals.sagepub.com/doi/full/10.1177/2380084419887178> Last accessed November 2019.

2 BaniHani A, Deery C, Toumba J, Munyombwe T, Duggal M. The impact of dental caries and its treatment by conventional or biological approaches on the oral health-related quality of life of children and carers. *Int J Paediatr Dent*. 2018;28:266-276.

New Dean RCSI Faculty of Dentistry

Prof. Albert Leung commenced his three-year term as 19th Dean of the Faculty of Dentistry at a ceremony at the Royal College of Surgeons in Ireland (RCSI) on February 14. Dean Leung announced his top three priorities for his term:

- modernisation of the Diploma in Primary Care Dentistry assessments;
- structured post-qualification training and education for dentists; and,
- to foster and develop further collaborative relationships with RCSI colleagues at home and overseas.

Prof. Leung holds the prestigious Chair in Dental Education at University College London Eastman Dental Institute. He has been actively involved in the Faculty of Dentistry since 1999. A member of the Faculty Board since 2013, he has served as Vice Dean and was unanimously elected Dean by his fellow Faculty Board members. Dean Leung has achieved international distinction, including the Association for Dental Education in Europe (ADEE) Excellence in Dental Education Mature Career Award – one of the highest international accolades in dental education. Dean Leung paid tribute and thanks to outgoing Faculty Dean Dr John Marley for his exceptional leadership of the Faculty during a period of significant change.



Current Board, RCSI Faculty of Dentistry. Front row (from left): Dr Kieran Daly, Treasurer; Fiona Allen, Operational Manager/Registrar; Dr John Marley, Immediate Past Dean; Prof. Albert Leung, Dean; Prof. Chris Lynch, Vice Dean; and, Dr Edward Cotter, Secretary. Back row (from left): Dr John Walsh; Prof. Gerry Kearns; Dr Osama Omer; Dr Grace Kelly; Dr Mary Collins; Dr Pat Cleary; Mr Sean Sheridan; Mr Ken Halpenny; and, Dr Gerry Cleary.



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GDPs needed for JIDA

The Honorary Editor of the *Journal of the Irish Dental Association (JIDA)* invites expressions of interest from colleagues in general dental practice who are members of the Irish Dental Association to join the *Journal's* Editorial Board. The vacancies arise from the normal rotation of Board membership under the Board's governance procedures, and the usual term of office is three years. The JIDA aims to provide good-quality information to support continuing education, professional development and best practice to benefit IDA members, their patients, and the wider dental profession. An Editorial Board that represents a broad cross section of the profession is key to this aim. Two positions for general dental practitioners are available, and dentists in private or public practice are welcome to apply.



The duties of an Editorial Board member include:

- ▶ attending the meetings of the Editorial Board (three per year);
- ▶ representing the views and interests of general dental practitioners; and,
- ▶ providing information to the Board on any matters of interest in relation to general dental practitioners.

If you are interested in joining the Editorial Board, please contact us at articles@irishdentalassoc.ie.

QUIZ QUESTIONS

Submitted by Dr Rory Boyd.

Questions

The recent rise of zirconia materials in restorative dentistry has been marked. This is due to advances in material development and understanding of its correct application.

1. What applications are there of zirconia in restorative dentistry?
2. What is the flexural strength of zirconia?
3. What surface pretreatment is required for zirconia bonding?
4. Should the occlusal surface of restorations be polished or glazed?
5. What three methods of characterisation can we ask a laboratory for?
6. What is going to be the next big step in dental ceramic technology?

Answers on page 81

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Day one protection for Covid-19



John O'Connor, Managing Director of Omega Financial Management.

At the time of writing (March 18, 2020), coronavirus (Covid-19) has taken a significant hold around the world, and Ireland is working within 'delay' phase parameters. So what does that mean for Irish dentists and income protection?

Omega states that its Day One Income Protection clients are covered for coronavirus (Covid-19), as they are for any illness or injury, from the very first

day. According to the company, policy holders are covered for as long as they are unwell and cannot attend work as a result of their illness. As per the standard process, claimants must provide GP/doctor sign-off for this.

In addition, Omega states that if required, for an initial period of self-isolation, claims from policy holders with DG Mutual plans will be payable with GP/doctor sign-off.

Omega advises claimants to contact the company in the first instance when submitting a claim. As policies and providers vary extensively, the company states that it is best to contact Omega directly to discuss the process and entitlements.

Given the dynamic nature of this situation, Omega states that this is the official advice from DG as of March 18 and may be subject to review.

Expert leads Dental Protection expansion in Ireland

Dental Protection has announced that its members in Ireland will soon benefit from a more local service, which will see cases and clinical negligence claims handled within the country, and clinical negligence expert Tom Hayes appointed to head up the expansion.

According to the company, in 2019 alone the Medical Protection Society (MPS) opened more than 1,800 dental and medical cases in Ireland – ranging from complaints through to more complex issues such as claims of clinical negligence and regulatory matters.

With additional services soon to be available in Ireland, Dental Protection says that its support for members will be geographically more accessible than ever before. The move will enable Dental Protection to better understand and address the concerns of members in Ireland, and will also provide it with greater clarity on the risks and trends faced by practitioners.



Tom Hayes, Dental Protection's new Head of Service Delivery in Ireland.

Software update from Dentsply Sirona



An updated version of SureSmile software was unveiled at the SureSmile 2020 User Conference in February in San Diego. According to Dentsply Sirona, the updated software has many new features for individual treatment planning. SureSmile Software 7.6 will be rolled out in April 2020.

Dentsply Sirona states that the new version offers an easy introduction to SureSmile Aligner treatment, full control when treating cases of varying complexity, and the production of aligners in your own practice. According to the company, the platform also supports treatment options beyond aligners, such as indirect bonding of brackets, surgery planning, and patient-specific archwires.

The company states that working with SureSmile Software 7.6 opens up numerous possibilities for the user for orthodontic treatment planning, and offers many new features and options. According to Dentsply Sirona, it is now possible to treat dental malocclusions of angle class II and III with aligners, and digitally planned cut-outs enable the use of intermaxillary elastics.

Announced as Head of Service Delivery in Ireland, Tom Hayes has a remit to manage the delivery of the new services and a plan to have the office – which is likely to be situated just outside central Dublin – fully operational in the next 12 to 18 months.

Tom has an extensive background in medical law and malpractice. Since 2007, he has been based in Dublin working for Matheson, where he established their healthcare services. During his tenure with Matheson, he headed up the 140-strong litigation department and was the senior partner for MPS work. Prior to this, Tom practised clinical malpractice law in London, where he was a partner at Capsticks.

Tom commented: "Having worked alongside MPS legal teams in Ireland for many years, the opportunity to move across at a time of exciting progress and evolution was too good to turn down. The quality of service from the UK office has never been in doubt, but by providing cases and claims handling support in country, we will be able to improve the experience for members even further".

Raj Rattan, Dental Director at Dental Protection, added: "Getting closer to members wherever they are in the world is a key part of our strategy, which is designed to ensure that we are best placed to meet the increasingly diverse range of issues faced by dentists. We are thrilled to appoint someone of the calibre of Tom, and members in Ireland are going to benefit enormously from the many years of experience he has gained in the healthcare legal field".

New Vice President of sales at Quoris3D



Ken O'Brien, Vice President of sales at Quoris3D.

Quoris3D has appointed Ken O'Brien as its new Vice President of sales. Ken has worked in dentistry for 23 years and joins Quoris3D having previously managed the UK business of a dental implant supplier for over eight years. Quoris3D states that motivation of people is one of the key elements of Ken's management style and over the years, he has attended workshops with Deepak Chopra, Tony Robbins, and many more, along with being an emotional intelligence coach with RocheMartin. According to the company, this is an area Ken will bring into the Quoris3D ethos and client engagement style.

Quoris3D states that charity is a big part of Ken's life; in 2016 he cycled the length of Ireland solo for Delete Blood Cancer, and in 2019 he attempted the Camino de Santiago over 10 days, along with many other challenges over the years.

Speaking of his appointment Ken said: "I am delighted to be a part of the Quoris3D team and am very excited about sharing the benefits of Chrome Guided Smile with dentists across Ireland and the UK".

Two months' FREE MEMBERSHIP

Dental Protection has set out a package of support – equivalent to two months' free membership – for members who have experienced a significant drop in their workload and a dramatic fall in income due to Covid-19. According to the company, members are being offered subscription relief. A payment into the members' bank account would be made that is equivalent to two months' subscription. As it is unclear when normal patient activity will resume, the organisation says that it will keep the support provided by subscription relief under review. Dental Protection says it is finalising the process for issuing these subscription refunds to members and expects to start issuing payments within the next few weeks. Alternatively, members who choose to stop practising completely – even for a short period during this crisis – can instead opt to become a deferred member of Dental Protection. They will not pay a subscription during this time and may return as an active member on the same terms when they resume practice. It is important to note that while membership is deferred members will not be entitled to the benefits of membership if they carry out any clinical activity, including telephone triage for patients with urgent needs. Raj Rattan, Dental Director, said: "Above all else we want to reassure members that Dental Protection is here for them through good times and bad. We know there has never been a more important time for us to use our discretionary powers to step in and offer the assistance members need".



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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-formation 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: PA0126/294/1. 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:** October 2019. 2019/ADV/EAS/117H.

A dentigerous cyst associated with a pulpectomised primary molar: case report

A pulpectomy is a routinely performed procedure in carious primary teeth. While adverse effects are not common, these can include a dentigerous cyst. A dentigerous cyst is an odontogenic cyst that surrounds the crown of an unerupted tooth, and is caused by a fluid accumulation between the reduced enamel epithelium (REE) and the enamel surface. Residual periapical inflammation from an endodontically treated primary tooth may lead to the development of an inflammatory dentigerous cyst in the unerupted permanent successor. This case report illustrates an infected dentigerous cyst in a seven-and-a-half-year-old female child related to the mandibular left second primary molar, which had been pulpectomised two years earlier. In general, the incidence of dentigerous cysts associated with pulpectomised primary teeth is extremely low. While there is no single factor that can be attributed to cystic transformation, it is prudent that teeth receiving pulp therapy should be observed periodically, and radiographs should be taken at regular intervals.

Keywords: Dentigerous cyst, pulpectomy, zinc oxide eugenol.

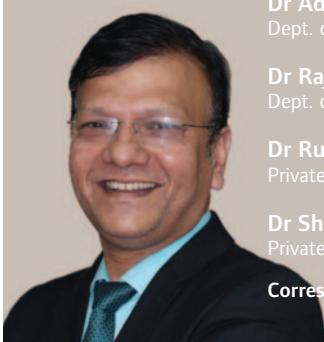
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Introduction

The primary dentition plays a pivotal role in mastication, speech and aesthetics. It guides the eruption of permanent teeth. Dental caries is one of the most common causes of premature loss of primary teeth. Preservation of primary teeth should be the objective of dentists as they maintain space for the permanent teeth. Space maintainers may be required when primary teeth are extracted. Paediatric endodontic procedures have become more frequent and are generally the treatment of choice in recent times. A pulpectomy is considered a safe procedure in primary teeth, although several deleterious effects, such as the arrest of development of permanent teeth, enamel opacities of successor teeth, deflection of the permanent tooth bud, and foreign body reaction, have been reported. Another sequela to pulpectomised

primary molars is the formation of a dentigerous cyst in the periapical region of the primary molar.^{1,2} A dentigerous cyst is an odontogenic cyst that surrounds the crown of an unerupted tooth, caused by fluid accumulation between the reduced enamel epithelium (REE) and the enamel surface. Although dentigerous cysts are considered to be developmental in origin, Main has described an inflammatory variant of a dentigerous cyst that develops as a result of the intrafollicular spread of periapical inflammation from an overlying diseased primary tooth.³

Cysts in relation to pulpectomised primary molars are uncommon, and their aetiology remains unclear. This report describes one such case of an infected dentigerous cyst in relation to a pulpectomised primary molar, while also discussing the probable aetiopathology.



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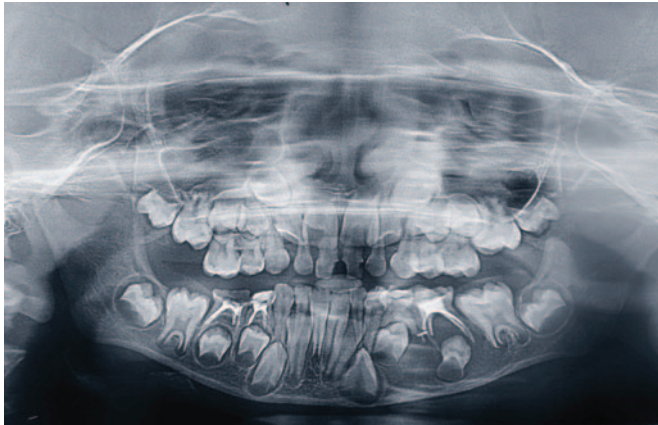


FIGURE 1: Orthopantomogram showing unilocular, well-defined, radiolucent lesion involving an unerupted mandibular left second premolar.

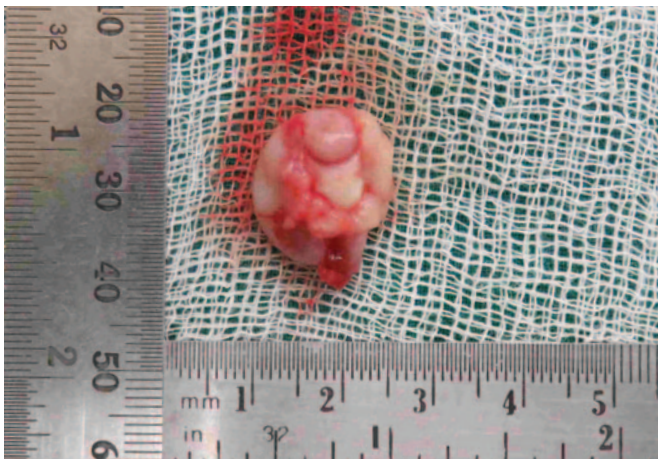


FIGURE 3: The enucleated dentigerous cyst around the neck of the second premolar.

Case report

A seven-and-a-half-year-old girl reported to the Department of Paediatric and Preventive Dentistry with a chief complaint of an extra-oral swelling on the left side of the lower jaw, which gradually increased in size over three months. Previous dental records revealed that pulpectomies were performed in the mandibular right primary molars and the left second molar using zinc oxide eugenol (ZOE) as the obturating material, 20 months previously. On extra-oral examination, a firm swelling was noted on the lower left side of the face. Intra-orally, a dislodged temporary restoration with secondary caries in relation to the mandibular left second primary molar was observed. A well-defined swelling, measuring approximately 1x1.5cm², obliterating the buccal vestibule in the region of the mandibular left primary molars, was identified.

Radiographic examination

An orthopantomogram (OPG) showed a well-rounded, unilocular radiolucency with radiopaque borders below the roots of the mandibular left second primary molar, extending from the mesial margins of the mandibular left first primary molar to the mesial root of the left first permanent molar (Figure 1). A radiopaque mass was evident in the periapical region surrounding the



FIGURE 2: Cystic lining with exudate seen in relation to the unerupted mandibular second premolar.

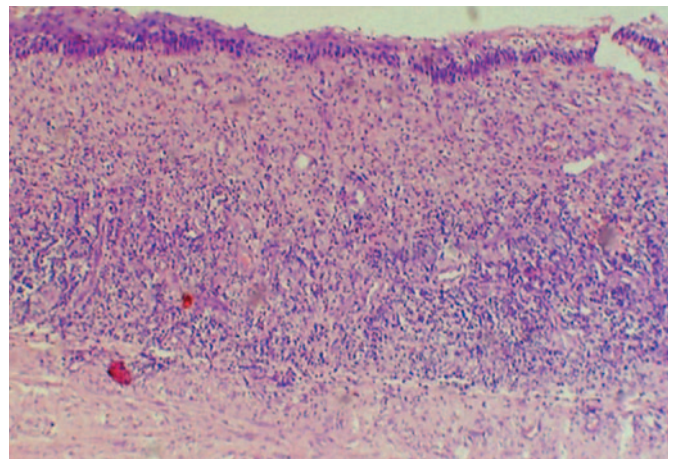


FIGURE 4: Histopathological image of the cystic lining at 10x (haematoxylin-eosin stain).

mandibular left second primary molar. The tooth germ of the mandibular left second premolar was observed to be displaced towards the lower border of the mandible. The mandibular right primary molars also showed radiopaque root canal filling material with no apparent radiographic changes.

Surgical excision

The clinical and radiographic findings were suggestive of a dentigerous cyst associated with the mandibular left second premolar. Favourably positioned premolars can erupt normally following marsupialisation of the cyst. The impacted premolar in this case was assessed to be in an unfavourable position. The proposed treatment plan was cystic enucleation of the lesion along with removal of the second premolar under local anaesthesia. A full thickness mucoperiosteal flap was reflected to expose the cyst (Figure 2). Enucleation of the cyst was performed, and the flap was approximated using 3-0 Mersilk. The cystic lining was then sent for histopathological evaluation (Figure 3).

Microscopic findings

Microscopic examination demonstrated that the cystic lumen was lined by thin non-keratinised, stratified squamous epithelium resembling REE. The

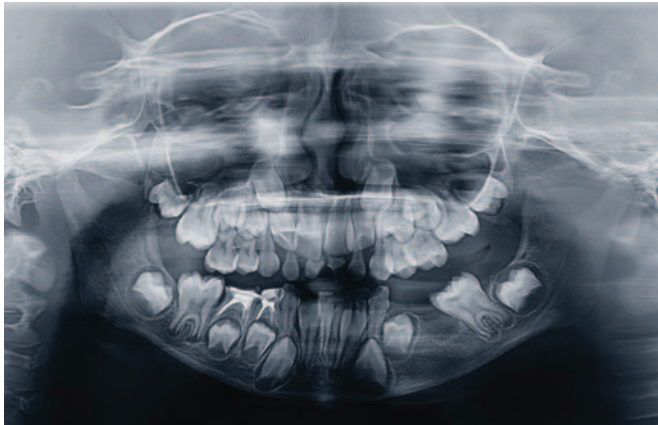


FIGURE 5: Six-month follow-up orthopantomogram.

underlying mature fibroconnective tissue showed mild, chronic inflammatory cell infiltrate. The overall histopathological features were suggestive of an infected dentigerous cyst (**Figure 4**). A comprehensive dental treatment plan for the remaining carious teeth comprising extractions, restorations and preventive treatment was planned for the patient. Unfortunately, the patient did not keep her appointments for comprehensive care but reported six months later for review, when an OPG was taken. The radiograph demonstrated satisfactory healing (**Figure 5**).

Discussion

A dentigerous cyst is the most common type of developmental odontogenic cyst, constituting around 20% of all epithelium-lined cysts. A developmental dentigerous cyst is induced by fluid accumulation either between the REE and the crown of an unerupted tooth, or between the layers of the enamel organ, and grows by the expansion of the follicle, while it is still attached to the neck of the tooth.⁴ Incidences of the development of radicular cysts following pulp therapy of primary teeth are well documented.^{1,5,6} However, the development of dentigerous cysts in relation to endodontically treated primary molars with persistent inflammation has been studied by only a few authors. Asián-González reported a case of a dentigerous cyst arising from a pulpectomised primary molar, while Nagaveni *et al.* documented a case of an inflammatory dentigerous cyst arising from a pulpectomised primary molar.^{7,8} While the pathogenesis of these inflammatory cysts is still unclear, Benn and Altini, in their study on dentigerous cysts arising as a result of an inflammatory cause, have proposed three possible mechanisms of histogenesis of these cysts. A permanent successor may erupt into a radicular cyst that has formed at the apex of a nonvital primary tooth and results in a dentigerous cyst that is extrafollicular in origin. Periapical inflammation from a nonvital primary tooth may secondarily infect a developmental dentigerous cyst, or may spread to involve the follicle of the permanent successor, resulting in dentigerous cyst formation.⁹ We propose that the chronic inflammation caused due to the extruded ZOE cement could act as a factor resulting in a dentigerous cyst. Materials used for the endodontic treatment of primary molars have also been implicated in the pathogenesis of such cystic transformations.¹⁰ Accidental periapical extrusion of root canal filling material frequently ensues during the obturation of primary teeth. Sometimes, it is beyond the control of the

operator to prevent the extrusion of the material beyond the apex, especially in cases of large apical foramen and strip perforations.¹¹ Whether this extruded material aids in the healing of periapical pathoses or acts as an antigenic stimulus for the development of the dentigerous cyst remains uncertain.¹⁰ The effect of this foreign body on the periapical tissues has been extensively studied. Although described as a resorbable material, ZOE has been documented to cause deleterious effects on the permanent successor, so particular caution should be taken to prevent overfilling with ZOE in teeth with large apical foramen.¹¹ It is also known to act as an irritant for the periapical tissues, resulting in necrosis of bone and cementum.¹² When employed as an endodontic obturating material in primary teeth, a difference between the rate of resorption of ZOE cement and root structure has been noted, which leads to retention of the paste in the periapical region. The retained paste has been found to induce a foreign body reaction or an inflammatory reaction (ranging from subacute to chronic) in the dental follicle of the permanent successor.¹³ Histopathological evaluation of root canal filling materials in dogs by Silva *et al.* demonstrated an adverse tissue response such as the presence of inflammatory cells, oedema, and severely thickened periodontal ligament when ZOE comes in contact with periapical tissues.¹⁴ Initially, ZOE was the only material recommended in the clinical guidelines of the American Academy of Pediatric Dentistry (AAPD), but since 2009, based on studies recently published, the AAPD advises iodoform-based pastes as suitable alternatives to ZOE.^{15,16}

There is no definite consensus that the obturating material used in endodontic treatment forms the aetiology for such inflammatory cysts. As hypothesised by Savage, the material used in pulp therapy may cause antigenic stimulation, which could lead to the development of a cystic lesion in the periapical region.¹⁰ However, this hypothesis cannot be directly applied to the present case as the patient had a history of bilateral pulpectomies using ZOE, and the development of the dentigerous cyst was found only on the left side. Clinical and radiographic examination of the right mandibular primary molars revealed healthy tissues; the supporting tissues also appeared to be normal.

No single determinant can be attributed for the aetiopathogenesis of dentigerous cysts. Some causative factors such as infection resulting from the non-vital primary tooth, the material used for pulpectomy, and the host tissue response could all play a significant role in its pathophysiology. Thus, a relationship may exist between the pulpectomy procedure, inflammation of the periapical tissues, and the development of the dentigerous cyst involving the permanent successor. Nagaveni *et al.* and Chakraborty *et al.* have documented cases of the development of dentigerous cysts following pulpectomy of primary teeth; however, the obturating material used has not been reported.^{8,17}

Conclusion

Dentigerous cysts associated with primary teeth that have had a pulpectomy are very rare. While there is no single factor that can be held responsible for the cystic transformation, a tooth receiving pulp therapy must be observed periodically, both clinically and radiographically, to detect any pathological changes in the periapical region. Even though endodontic treatment can successfully preserve carious primary teeth, there may be complications.

Acknowledgement

We would like to acknowledge the staff nurses, Surekha Dalvi and Molly Chowdhury, for their assistance.

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CPD questions

To claim CPD points, go to the MEMBERS' SECTION of www.dentist.ie and answer the following questions:



CPD

1. The most common type of developmental odontogenic cyst is:

- ☐ A: Radicular cyst
- ☐ B: Dentigerous cyst
- ☐ C: Odontogenic keratocyst
- ☐ D: Residual cyst

2. The treatment for a dentigerous cyst involving an unerupted permanent tooth bud in an unfavourable position is:

- ☐ A: Enucleation of cyst with extraction of unerupted tooth
- ☐ B: Prolonged antibiotic therapy
- ☐ C: Marsupialisation
- ☐ D: Incision and drainage

3. Zinc oxide eugenol used as an obturating material in primary teeth resorbs at a rate:

- ☐ A: Slower than the physiologic root resorption
- ☐ B: Faster than the physiologic root resorption
- ☐ C: The same as that of physiologic root resorption
- ☐ D: Does not resorb.

Dentists' attitudes towards the phase-down of dental amalgam in Ireland

Précis

This paper identified training and remuneration as the two main barriers to a future total phase-out of dental amalgam in the Republic of Ireland.

Abstract

Aim: This study aimed to explore the attitudes of dentists in Ireland towards the phase-down of dental amalgam in relation to the Minamata Convention on Mercury.

Methods: A cross-sectional survey design was adopted using a quantitative 53-question survey piloted and distributed to dentists working in general dental practice.

Results: The study had a response rate of 11.8% (n=285). The study found a high level of awareness regarding recommended guidelines concerning the Minamata Convention on Mercury, with 96% of participants reporting that they were aware of the recommendations. Over half of the participants (61%) reported that they felt the phase-down was a good idea.

Conclusions: Training and remuneration were identified as the main barriers to a total phase-out of dental amalgam in Ireland in the future.

Journal of the Irish Dental Association 2020; 66 (2): 75-79.

Introduction

The management of caries is and will continue to be a large proportion of the day-to-day treatment carried out by dental practitioners.¹ Globally, dental caries prevalence is high and accounts for the largest proportion of the oral disease burden.² Dental amalgam has been used successfully for more than 165 years in the treatment of carious lesions.^{1,3} A combination of liquid mercury and a metal alloy, dental amalgam was the most commonly used material in restorative dentistry until relatively recently.^{4,5} Since the 1980s new materials and techniques have been developed and mastered, which have been slowly replacing dental amalgam. Resin composite, which has been used for many years in the restoration of anterior teeth, has been increasingly used in the restoration of posterior teeth. Following the introduction of the acid-etch technique and

methacrylate monomers, composites have continued to develop since the 1950s.⁶

The Minamata Convention on Mercury is an internationally binding treaty concerned with the protection of human health and the environment from emissions of mercury. The use of dental amalgam is one of the areas the Minamata Convention seeks to address.⁷ Measures aimed at reducing mercury emissions have been set out in relation to the area of dental practice and came into effect in July 2018. Since that date dentists have not been permitted to place amalgam in deciduous teeth, in permanent teeth in children 15 years and under, and in pregnant and breastfeeding women, unless medically necessary and with patient consent. Further changes were introduced in January 2019



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with the compulsory fitting of amalgam separators at dental practices and a prohibition on the use of bulk mercury.⁸

The changes in line with the Minamata Convention have the potential to have a significant impact on the practice of dentistry in Ireland. Some of the potential barriers faced in the phase-down of dental amalgam in Ireland relate to concerns around dentists' technical ability and training. There were also some concerns regarding the physical limitations of mercury-free alternatives. Financial implications relating to the use of mercury-free alternatives were also raised, and also negative experiences of the patient when placing mercury-free alternatives. The phase-down and phase-out of dental amalgam have been successfully introduced in European countries including Sweden, Norway, Finland, Denmark, and the Netherlands. Phase-down of dental amalgam relates to restrictions placed on its use, with phase-out meaning a total ban on dental amalgam use. Sweden began phasing out amalgam in the 1980s in a voluntary capacity; however, not having achieved the desired reduction during the 1990s the Swedish Parliament ceased to reimburse amalgam restorations. Sweden introduced a ban on mercury, including dental amalgam, in 2009. The phase-down began in Norway more than 15 years ago with a recommendation that dental amalgam not be the first choice for dental restorations. Dental amalgam was permitted in special cases during a temporary exemption period, leading to a total ban in 2011. Denmark, Finland, and the Netherlands have also successfully phased down dental amalgam to 1-5%.^{9,10}

This study aimed to explore the attitudes expressed by dentists in relation to the placement of restorations, both amalgam and mercury-free alternatives, and the phase-down of dental amalgam in the Republic of Ireland.

Methods

Study design

The study adopted a cross-sectional survey design. This involved distributing a survey aimed at a nationally representative sample of dentists. Ethical approval was provided by the Social Research Ethics Committee (SREC) in UCC (Log 2018-108). Informed consent was obtained from each participant; a consent form was included in the mailing to each dentist and completing the form was considered as the participant giving their informed consent to participate in the study.

Survey instrument

The survey instrument was modelled on a previous survey, 'No more amalgams', designed by Prof. Chris Lynch and used in a similar study in Wales.¹² The survey was adapted for use in the Irish context and, prior to distribution, was piloted locally by dentists in private practice and staff at Cork University Dental School and Hospital (CUDSH). The survey instrument had a total of 53 questions, with most of the questions adopting a tick box response. The survey instrument consisted of both fixed-choice and open-ended item questions and was laid out over six distinct sections: current practice; waste management; knowledge of phase-down; attitudes; training; and, demographics.

Sampling frame

The sampling frame used for the recruitment of participants into the study was the Dental Register. All dentists practising dentistry in Ireland must be listed on the Dental Register. The register (comprising the names of 3,124 dentists at the time of receipt in June 2018) was requested from the Dental Council of Ireland and all specialist dentists were removed from the sample. Others removed from the register were those with registered addresses outside of Ireland. The 2,400

remaining dentists on the register were used as the sampling frame and all were invited to participate.

A mailing company was used for distribution of the surveys and returns were forwarded to investigators in the CUDSH. Unique identifiers were assigned to each envelope (but not questionnaire) to enable follow-up of non-responders and to preserve anonymity. A stamped addressed envelope was provided in the mailing to increase participation, along with an information leaflet describing the nature of the study, a consent form and contact information of investigators. At follow-up, non-responders who were contacted were offered to have the survey posted again or emailed to them. Follow-up was made via telephone where the participants could be identified. The Dental Register addresses supplied by dentists include either practice or home addresses; all dentists followed up were found via internet search and contacted at their practices as the register does not provide phone numbers or email addresses.

Survey instrument distribution

The survey was distributed via post from September to December 2018 across three waves. Wave 1 (750 surveys) was distributed in September, Wave 2 (600 surveys) in November, and Wave 3 (1,050 surveys) in December. Postal distribution was the method of choice as it was agreed by investigators that dentists were more likely to complete a hard copy form rather than an online form following consultation with dentists in the CUDSH. Convenience sampling was also adopted at several key events including dental conferences, meetings and study groups, to maximise participation levels. At events, dentists in attendance were asked to fill in the questionnaires and put the completed questionnaires in boxes before leaving. Follow-up was also conducted following the distribution of Wave 1 and Wave 2 of the survey to maximise participation.

Data entry and analysis

Data entry was performed by a data management company, Seefin Data Management, Seefin DM Head Office, Seefin House, Listowel, Co. Kerry, V31 AK27, and uploaded in an Excel format. The Excel file was cleaned by investigators at the CUDSH and uploaded to IBM SPSS software for data analysis. The data were analysed using IBM SPSS statistics version 24 for Windows at IBM House, Shelbourne Road, Ballsbridge, Dublin 4. Quantitative analysis of survey data using frequencies was performed. Frequency tables were used to calculate minimum, maximum and means, and were also used to calculate proportions for relevant variables. Tables and graphs were used to display the results where appropriate.

Results

The response rate to the survey was 11.8%, with 285 dentists agreeing to participate. The participants were 41% (n=118) female and 59% (n=166) male. The overall age profile of respondents to the survey is displayed in **Table 1**. The practice location of participants was 45% city, 45% town and 10% rural. The participants who were the principal within the practice accounted for 56% and associates accounted for 44%. The proportion of patients that participants reported treating privately was 47%, the proportion treated under the Dental Treatment Services Scheme (DTSS) was 28%, and those treated under the Dental Treatment Benefit Scheme (DTBS) was 34%. Respondents did not always complete all sections and questions; thus, percentages do not always reflect all 285 participants. The results are based on responses from participants and not observed activity.

Table 1: Overall age profile of all respondents to the survey.

Age categories	Under 35	35-45	46-55	56-65	Over 65
Number	58	83	74	54	14
(%)*	(20%)	(29%)	(26%)	(19%)	(5%)

* Percentages do not always reflect all 285 respondents, but those who answered the question.

Table 2: Feelings and attitudes of dentists towards the phase-down of dental amalgam.

	Agree	Disagree	Neither
The phase-down of amalgam is a good idea	169 (60%)*	66 (24%)	44 (16%)
The phase-down of amalgam will be a major disruption to my practice	68 (25%)	145 (53%)	62 (22%)
The phase-down of amalgam does not cause me concern	121 (44%)	96 (35%)	56 (21%)

* Percentages do not always reflect all 285 respondents, but those who answered the question.

Knowledge of phase down

A total of 96% (n=268) of dentists were aware of the recommended guidelines relating to the phase-down in the use of dental amalgam.

Attitudes towards phase down

Dentists were asked a series of questions relating to their attitudes towards the phase-down of dental amalgam. Their responses are outlined in **Table 2**. They were also asked what they felt was the most appropriate timeline to introduce a complete phase-out of dental amalgam (**Table 3**).

Potential barriers – concerns about technical abilities and training

Table 4 outlines respondents' attitudes towards the placement of the various restorative materials when compared to each other.

A large proportion of dentists (84%) reported that they felt confident in their technical ability to use posterior composites for restoring unretentive cavities, 5% did not feel confident and 7% did not feel strongly either way. Some 80% felt that they had sufficient training to allow them to place posterior composites properly, while 11% did not feel that they had sufficient training. In relation to current techniques and practices relating to the placement of composite, 84% of dentists felt up to date, while 67% felt up to date with the placement of glass-ionomer cement (GIC) and 62% felt up to date with the placement of resin-modified glass-ionomer cement (RMGIC). Some 14% did not feel up to date with GIC placement and 19% did not feel up to date with RMGIC placement.

A large proportion of dentists (91%) reported having attended continuing professional development (CPD) courses about the placement of posterior composite restorations. Of these, 19% were didactic, 8% were hands-on and

Table 3: Timeframe in which respondents reported they believed a total phase-out could be achieved.

Years	under 5	5-9	10-29	over 30
Timeframe for a complete phase-out (i.e., total ban)	93 (34%*)	76 (28%)	54 (20%)	47 (17%)

*Percentages do not always reflect all 285 respondents, but those who answered the question.

Table 4: Dentists' attitudes towards the placement of various restorative materials.

	Agree	Disagree	Neither
I feel more confident placing an amalgam restoration than a composite restoration	71 (25%*)	75 (27%)	135 (48%)
I feel more confident placing a composite restoration than a GIC restoration	141 (50%)	94 (34%)	46 (16%)
I feel more confident placing a GIC restoration than a RMGIC restoration	50 (18%)	148 (53%)	79 (29%)

* Percentages do not always reflect all 285 respondents, but those who answered the question.

73% were a combination of both. Furthermore, 61% of dentists reported having plans to attend CPD on the topic. Hands-on courses or a combination of hands-on and either lectures or seminars were reported as the most suitable type of CPD required.

Potential barriers – concerns about physical limitations of mercury-free alternatives

The prognosis of restorations if composite alone was permitted in all posterior restorations concerned 48% of those surveyed, and 42% said that they would not be concerned. Just under half (44%) said that they would not be confident placing resin composite in a cavity with a subgingival margin, and 38% would be confident using composite in this scenario. In the case of a deep cavity that was close to the pulp, 21% of participants would not be confident placing composite, while 69% disagreed with this statement and would be confident in placing resin composite in a deep cavity. GIC would be considered as a "temporary" restorative material rather than a permanent one by 65%, and 45% would consider RMGIC restorations as "temporary" restorations.

Potential barriers – financial implications

In the restoration of posterior teeth, 21% of dentists believed that having to place composite routinely instead of amalgam could have negative financial implications for their practice, and 52% disagreed. Providing posterior composites in DTSS-funded treatment was considered too expensive by 72% of dentists surveyed. Some 12% of dentists said that they would place a composite restoration for the current DTSS fee for an amalgam filling, while 88% said that they would not be willing to provide the treatment for this fee. When dentists were

asked what they felt would be an appropriate fee to place a composite filling in a back tooth on the DTSS, the mean fee was €94 (minimum €50, maximum €160). In their current fee structure for private patients, 77% of dentists have a different fee for a posterior composite and a posterior amalgam, while 23% charge the same fee regardless of filling material.

Potential barriers – negative patient experience

To restore a moderately deep two-surface mesio-occlusal cavity in a lower first molar with amalgam, the average number of minutes estimated was 21 (min. 1 minute, max. 60 minutes). To restore the same sized cavity with a composite it would take 30 minutes on average (min. 3 minutes, max. 60 minutes). When asked if they felt that routinely placing posterior composites would cause appointment delays in the practice, 38% agreed and 50% disagreed.

In relation to postoperative sensitivity, 36% of respondents believed that patients experience less following an amalgam compared to a composite restoration. When asked if they believe that patients are more likely to experience food packing following a composite restoration, 37% agreed and 38% disagreed, with the remainder being unsure or expressing no difference. Dentists were also asked if they believed that their patients experience fewer postoperative restorative fractures with amalgam and 15% agreed, while 55% believed that composite restorations were less likely to fracture.

Discussion

There was a low response to the survey, which may have an impact on the generalisability of the results and introduce bias to the findings. Overall there was a high level of awareness and support of the Minamata Convention on Mercury among dentists in Ireland who participated in the study. Many of the guidelines to ratify the Minamata Convention have already been implemented and most dentists (96%) have heard about these guidelines, with a large proportion (61%) reporting that they felt it was a good idea. For comparison, a study in Wales reported that 65% of dentists had heard about the phase-down of dental amalgam.¹² The largest proportion of dentists surveyed, 34%, felt that a total ban could be implemented in less than five years, but a smaller proportion of dentists felt that this should not happen for more than 30 years. Despite this, there appear to be potential barriers to the phase-down of dental amalgam. Some of the potential barriers reported include: concerns about the dentist's own technical abilities and training; concerns about the physical limitations of mercury free-alternatives; financial implications; and, concerns relating to negative patient experience with mercury-free alternatives.

A small proportion of the dentists surveyed expressed concern in their technical ability and previous training in relation to posterior composite placement. Supporting dentists by providing CPD in posterior composite placement may be required to enable Ireland to make the transition towards a total phase-out of dental amalgam in the future. Some dentists also reported not having received clinical training in posterior composite placement as part of their dental school training, and this cohort should also be provided with the opportunity to obtain accessible CPD in posterior composite placement. This could bridge a gap in knowledge that may exist for some dentists who may not have received clinical training, and those who are less confident in composite placement compared to amalgam placement.

Concerns were raised by dentists regarding the physical limitations of mercury-free alternatives relating to the placement of composite in posterior teeth, and concerns around the temporary nature of some of the mercury-free alternatives

such as GIC and RMGIC. Almost half (48%) of dentists reported concerns with prognosis if they had to replace all posterior restorations with composite. A large proportion of dentists (65%) consider GIC as a temporary material, while 45% consider RMGIC restorations as temporary. Some of these concerns around physical limitations were mirrored in an Australian study.¹³ Providing continuing updates on existing materials, and advances on new and emerging materials, particularly mercury-free alternatives, could help to address this issue. Investing in research in the development and improvement of mercury-free alternatives may be required to continue to offer both dentists and patients the optimum dental care.

Many of the dentists surveyed raised concerns regarding the financial implications of mercury-free alternatives, with 21% citing negative financial implications for their practice and a large proportion (77%) charging different fees for amalgam and composite restorations. The placement of composite material is more time-consuming on average than the placement of amalgam. Remuneration under the publicly funded DTSS was also cited as a financial issue, with 88% of dentists unwilling to place a composite restoration for the current DTSS fee for an amalgam restoration. Currently, the DTSS fee for a posterior amalgam is €50.06 and dentists under the scheme are not permitted to place composite restorations on posterior teeth. They are, however, permitted under the scheme to place composite restorations in anterior teeth.¹⁴

Patient-related factors were also found to be a potential barrier to the phase-down of dental amalgam. The average time taken to place a posterior composite is longer than that of placing a posterior amalgam, which may lead to patient delays. Over one-third of dentists also believed that postoperative sensitivity is more likely to be experienced following composite placement compared to amalgam. Dentists also believed that food packing was a more frequent complication following a composite restoration compared to an amalgam restoration. This could also pose issues for patients, generating return appointments or, if untreated, causing gingival inflammation.¹⁵ Training may be of benefit to bridge any potential gaps in knowledge, particularly in relation to new products and techniques.

Limitations

This study, as with all survey-based studies, is not without its limitations. The response rate was low and there was an issue with self-selection bias of the participants. Self-selection bias was the main issue discovered during the follow-up of potential participants. The main reasons cited for non-participation included: being an 'amalgam-free' practice; not having a HSE contract; and, working in a small practice. Information regarding non-participation was collected during follow-up of non-responders. Investigators at the CUDSH followed up non-responders by finding contact details via an internet search. Those who were contacted during follow-up were asked by investigators their reason for non-participation and their responses were recorded. Despite the low response rate, the study had a similar number of participants as a study in the UK (n=270) that had a 40% response rate,¹² while another study conducting similar research in Australia had a response rate of just over 3%.¹⁶ Healthcare professionals typically have poor response rates to survey-based studies.¹⁷ As a result, the sample may not be nationally representative. Perhaps those who participate in survey-based studies are more likely to be motivated and engaged, and more likely to attend CPD. The Dental Register also had some inherent flaws for use as a sampling frame for a survey-based study. The results of this study should be interpreted with caution.

Recommendations

To enable Ireland to achieve a total phase-out of dental amalgam in the future, further measures will need to be taken. As discussed, dentists will need to be supported, particularly in the areas of training and remuneration. Accessible CPD for those who do not feel they have received adequate training in the past, or require updating on current methods, is warranted. Remuneration was a potential barrier, particularly in DTSS-funded dentistry, but also in private care where dentists mostly charge different fees for composite and amalgam. Further research in the continuing development of mercury-free alternatives is desirable.

Acknowledgements

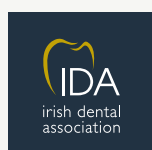
The authors would like to acknowledge the Environmental Protection Agency (EPA), which provided funding for this project under the EPA Research Programme 2014-2020 grant number 2017-RE-MS-8. The views expressed in this article are solely those of the authors and not necessarily those of the EPA. The authors would also like to acknowledge the dentists who gave their time to participate in this study.

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CPD questions

To claim CPD points, go to the MEMBERS' SECTION of www.dentist.ie and answer the following questions:



CPD

1. The questionnaire was modelled on a similar study conducted in:

- ☐ A: USA
- ☐ B: Wales
- ☐ C: Australia

2. The proportion of dentists who were aware of the Minamata Convention on Mercury was:

- ☐ A: 100%
- ☐ B: 70%
- ☐ C: 96%

3. The biggest limitation of the study was:

- ☐ A: Low response rate
- ☐ B: Access to participants
- ☐ C: Measurement bias

Covid-19: keeping up to date

Many publishers have removed pay walls to allow free access to articles and editorials on Covid-19 during this global public health emergency. Publishers and the international scientific community understand the paramount importance of rapid access to information about this new virus, the patients and communities affected, and the response. Open access allows openness and transparency, wider scrutiny, and the scope for further research. Many articles are available online ahead of print. Good quality evidence takes time and money. The exponential spread of Covid-19 has demanded that many difficult decisions on public health measures have been based on predictive data and models. An editorial on March 18, 2020, in *Lancet Global Health* highlighted the need to do this in the absence of real-time data being available on key surveillance indicators.¹ Here are some ways to stay up to date with the emerging evidence and the latest evidence-based advice and guidelines.

Irish Dental Association	Provides members with almost daily bulletins. The updated homepage guides dental professionals and dental patients to the latest updates and resources on Covid-19. There is open access to a number of documents developed by IDA House and the IDA's Quality and Patient Safety Committee (QPSC), and these will be updated as new information becomes available
Publishers	Elsevier: www.sciencedirect.com/ Oxford University Press: https://global.oup.com/?cc=ie Wiley: www.onlinelibrary.wiley.com Sage: https://journals.sagepub.com/
Journal websites	In addition to studies, access to a number of editorials and expert opinion pieces: <i>Journal of Dental Research</i> : https://journals.sagepub.com/home/jdr <i>The Lancet</i> : www.thelancet.com <i>British Medical Journal</i> : www.bmj.com/coronavirus <i>New England Journal of Medicine</i> : www.nejm.org <i>Nature</i> : www.nature.com/articles <i>Journal of the American Medical Association</i> : www.jamanetwork.com/journals/jama/pages/coronavirus-alert
Guidelines in Ireland	Department of Health and National Public Health Emergency Team (NPHET): www.Gov.ie Health Protection Surveillance Centre: www.hpsc.ie Dental Council of Ireland: www.dentalcouncil.ie Evidence Synthesis Ireland: https://evidencesynthesisireland.ie/covid-19-evidence-synthesis-resources/

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1. **Lazzerini, M., Putoto, G.** COVID-19 in Italy: momentous decisions and many uncertainties. *Lancet Global Health* 2020 [epub ahead of print].

Breadth of concomitant immune responses prior to patient recovery: a case report of non-severe Covid-19

Thevarajan, I., Nguyen, T.H.O., Koutsakos, M., Druce, J., Caly, L., van de Sandt, C.E., et al.

To the Editor – We report the kinetics of immune responses in relation to clinical and virological features of a patient with mild-to-moderate coronavirus disease 2019 (Covid-19) that required hospitalisation. Increased antibody-secreting cells (ASCs), follicular helper T cells (TFH cells), activated CD4+ T cells and CD8+ T cells, and immunoglobulin M (IgM) and IgG antibodies that bound the Covid-19-causing coronavirus SARS-CoV-2 were detected in blood before symptomatic recovery. These immunological changes persisted for at least seven days following full resolution of symptoms.

Nature Medicine 2020. Available from: <https://doi.org/10.1038/s41591-020-0819-2>.

Transmission routes of 2019-nCoV and controls in dental practice

Peng, X., Xu, X., Li, Y., Cheng, L., Zhou, X., Ren, B.

A novel β -coronavirus (2019-nCoV) causing severe and even fatal pneumonia exploded in a seafood market of Wuhan city, Hubei province, China, and rapidly spread to other provinces of China and other countries. The 2019-nCoV was different from SARS-CoV, but shared the same host receptor: the human angiotensin-converting enzyme 2 (ACE2). The natural host of 2019-nCoV may be the bat *Rhinolophus affinis*, as 2019-nCoV showed 96.2% of whole-genome identity to BatCoV RaTG13. The person-to-person transmission routes of 2019-nCoV included direct transmission, such as cough, sneeze and droplet inhalation transmission, and

contact transmission, such as contact with oral, nasal and eye mucous membranes. 2019-nCoV can also be transmitted through the saliva, and the faecal-oral route may also be a potential person-to-person transmission route. The participants in dental practice are exposed to tremendous risk of 2019-nCoV infection due to face-to-face communication and exposure to saliva, blood, and other body fluids, and the handling of sharp instruments. Dental professionals play great roles in preventing the transmission of 2019-nCoV. Here we recommend the infection control measures during dental practice to block the person-to-person transmission routes in dental clinics and hospitals.

International Journal of Oral Science 2020; 12 (1): 9.

High expression of ACE2 receptor of 2019-nCoV on the epithelial cells of oral mucosa

Xu, H., Zhong, L., Deng, J., Peng, J., Dan, H., Zeng, X., et al.

It has been reported that ACE2 is the main host cell receptor of 2019-nCoV and plays a crucial role in the entry of virus into the cell to cause the final infection. To investigate the potential route of 2019-nCoV infection on the mucosa of the oral cavity, bulk RNA-seq profiles from two public databases, including The Cancer Genome Atlas (TCGA) and Functional Annotation of The Mammalian Genome Cap Analysis of Gene Expression (FANTOM5 CAGE) dataset, were collected. RNA-seq profiling data of 13 organ types with para-carcinoma normal tissues from TCGA and 14 organ types with normal tissues from FANTOM5 CAGE were analysed in order to explore and validate the expression of ACE2 on the mucosa of the oral cavity. Further, single-cell transcriptomes from an independent data generated in house were used to identify and confirm the ACE2-expressing cell composition and proportion in the oral cavity. The results demonstrated that the ACE2 expressed on the mucosa of the oral cavity. Interestingly, this receptor was highly enriched in the epithelial cells of tongue. Preliminarily, those findings have explained the basic mechanism that the oral cavity is a potentially high risk for 2019-nCoV infectious susceptibility, and provided a piece of evidence for the future prevention strategy in dental clinical practice as well as daily life.

International Journal of Oral Science 2020; 12: 8.

Coronavirus disease 2019 (Covid-19): emerging and future challenges for dental and oral medicine

Meng, L., Hua, F., Bian, Z.

The epidemic of coronavirus disease 2019 (Covid-19), originating in Wuhan, China, has become a major public health challenge for not only China but also countries around the world. The World Health Organization announced that the outbreaks of the novel coronavirus have constituted a public health emergency of international concern. As of February 26, 2020, Covid-19 has been recognised in 34 countries, with a total of 80,239 laboratory-confirmed cases and 2,700 deaths. Infection control measures are necessary to prevent the virus from further spreading and to help control the epidemic situation. Due to the characteristics of dental settings, the risk of cross-infection can be high between patients and dental practitioners. For dental practices and hospitals in areas that are (potentially) affected with Covid-19, strict and effective infection control protocols are urgently needed. This article, based on our

experience and relevant guidelines and research, introduces essential knowledge about Covid-19 and nosocomial infection in dental settings, and provides recommended management protocols for dental practitioners and students in (potentially) affected areas.

Journal of Dental Research 2020: DOI: 10.1177/0022034520914246 [epub ahead of print].

QUIZ ANSWERS

Questions on page 66

1. Zirconia ceramic can be used for the following:

- crown restorations;
- conventional anterior fixed dental prosthesis (bridge);
- conventional posterior fixed dental prosthesis (bridge); and,
- implant abutments and frameworks.

2. 600-1,200Mpa

Early zirconia materials had an extremely high flexural strength of approximately 1,200Mpa. This material is now limited to use as copings or frameworks due to poor optical properties. The evolution of more translucent zirconia materials has enabled monolithic or microlayered restorations. The current literature shows this type of restoration to have excellent clinical and aesthetic outcomes. The more translucent zirconia has greater cubic phase in its structure, which in turn lowers the flexural strength of the material. It is therefore of paramount importance to understand that not all zirconia exhibits the same physical properties.

3. Air abrasion – 40-60µm alumina oxide particles <1 bar pressure

Prime – MDP containing primer

Cement – resin composite cement that complements the primer used
Zirconia bonding to tooth structure is still a somewhat contentious topic. Much of the more recent literature supports the use of the APC concept described above; however, it also shows bond strengths that are less than those of glass ceramics and are less predictable. Therefore, caution should be used if utilising resin bonding as a primary form of retention (i.e., veneer/onlay and resin-bonded bridges).

4. Polished

Wear of opposing tooth structure has often been quoted as a detrimental characteristic of zirconia. However, recent literature has shown that if the zirconia surface is highly polished and not glazed the wear characteristics are similar to enamel. It is thought that if glazed, the surface glaze will wear off, exposing the unpolished zirconia surface and accelerating the wear of opposing tooth structure.

5. Monolithic – pre-sinter stained

Monolithic – post-sinter stained

Coping with layering porcelain

6. 3D printing zirconia

Numerous articles have been published in the last two years reporting extremely impressive results both in accuracy and strength of 3D printed zirconia. Although further research is required in this area, it appears that 3D printing of dental ceramics could be the next big step in dental ceramic technology.

SITUATIONS VACANT

Associates

Associate required to cover maternity leave in Co. Cork town starting end of March with a view to long-term position to cover semi-retired dentist working in long-established practice with experienced support staff. Contact 086-385 0186 or email ballinvoher96@gmail.com.

Associate dentist with some experience required for two-surgery rural practice in Carndonagh, Co. Donegal. Full-time for right person. Beautiful area with beaches nearby. Ideal for someone who likes fishing, sailing or golf. Derry only 25 minutes away. Email donegaldental@yahoo.ie.

Experienced associate wanted for fully private general practice in south county Dublin. Part-time initially, fully computerised, on-site CEREC, full clinical, nursing and admin support. Email your CV and cover letter to dentalassociate2020@gmail.com.

Ambitious associate required, part-time basis, flexible days/hours, to join our growing multidisciplinary team at Frazer Dental, Implants and Orthodontics. We're located on the Cavan/Meath/Monaghan/Louth borders and only one hour from north Dublin. Supportive clinical environment and great team. Email frazerdental@gmail.com.

Full/part-time dental associate required for a very busy, established practice in Cavan Town, 70 minutes' drive from Dublin. Brand new, custom-built surgery coming summer 2020. Excellent remuneration and very friendly, supportive working environment. Immediate start available. Email frances@railwaydentalsurgery.com.

Gorey, Co. Wexford. Associate wanted. Part-time with a view to full-time. Modern digital practice. Reply to goreydentaljob@gmail.com.

Associate general dentist required for Limerick city centre practice. Experience and broad skillset required. Email: info@no8clinic.ie.

We are seeking a motivated, caring dental associate for a part-time position for our busy, modern Dublin 12 clinic. Experience in endodontics and basic prosthodontics preferred. Email CV to info@cleardentalcare.ie.

Advertisements will only be accepted in writing via fax (01-295 0092), letter or email (liz@irishdentalassoc.ie). Non-members must pre-pay for advertisements, which must arrive no later than **Friday, May 15, 2020**. 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
26 to 40 words	€95	€190

The maximum number of words for classified ads is 40.

If the advert exceeds 40 words, then please contact:

Think Media, The Malthouse, 537 North Circular Road, Dublin 1.

Tel: 01-856 1166 Fax: 01-856 1169 Email: paul@thinkmedia.ie

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

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

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

Associate required with established group practice for departing colleague. Excellent remuneration and training available with our multidisciplinary team, including orthodontist, periodontist, implantologist, oral surgeons and master technician. Integrated digital workforce including multiple Cerecs, Primescan and CBCT. Email deirdre@thejamesclinic.com.

Boutique practice near Grafton St in Dublin, private only, looking for friendly and conscientious part-time associate with experience and a great attitude! Email anneslanedental@gmail.com.

Experienced, friendly and motivated associate required for modern south Dublin practice for two to three days/week including Saturdays. Ideal candidate should have a broad skillset including endo, extractions and prosthetics. Email CV to job@crowndental.ie.

Associate required for busy, mixed practice in Callan, Co. Kilkenny. Position is to replace departing colleague who is relocating, full book immediately. Mainly private and PRSI, very limited GMS. Modern, computerised practice with excellent support staff and visiting specialists. Email careers@dentalcareireland.ie.

We are seeking an experienced, committed, part-time associate to join our modern, independent, general dental practice in Drogheda, two to three days per week. Broad skillset and attention to detail required. Email CV to info@angelakearney.ie for consideration.

Associate required to provide high-quality care in newly refurbished busy clinic. All digital, CBCT, Cerec, specialists, hygienists. Huge earnings potential. Email reception@rfdentalclinic.com.

Full-time associate position available in Gorey. Full books. Busy mixed practice. Full qualified support staff. Hygienist service. Email adecdental365@gmail.com.

Full-time dental associate required for Alexandra Dental Clinic in Shannon, Clare. All mod cons, great support team, and full-time marketing employee to bring you lots of private and cosmetic work. Please forward CVs to jobs@alexandrardental.ie.

Dental associate required for modern, busy city practice. Immediate start. Cosmetic experience of injectables useful. Contact colintobinenterprises@gmail.com.

Dublin 9/11. Associate needed, immediate start, full mixed book. 50% remuneration. Solid two to three days. Very busy. Please apply to dublin11dental@gmail.com.

Experienced associate dentist required for busy, newly refurbished private practice in Galway City. Part-time with a view to a full-time position. Fully computerised. OPG/CBCT. Please email CV to aoife@renmoredental.ie.

Associate required to replace departing colleague in Carlow town. Full book guaranteed. Be part of a great multidisciplinary team with many visiting specialists. Excellent backroom support. Cerec, in-house laboratory, digital scanner, CBCT. Suit experienced colleague. Please send CV to Bpm.gmedical@gmail.com.

Ambitious associate required. Part-time with a view to going full-time. Bright, new, modern practice, computerised with OPG/CBCT. Excellent support staff and management structure. Please email CVs to pauline@clondalkindental.ie.

Experienced associate required for full-time position in busy, modern, expanding, fully computerised practice in north east, 45 minutes from Dublin. Implant experience helpful but not essential. Great opportunity for enthusiastic and ambitious dentist. CVs to dentistnortheast01@gmail.com.

Full-time associate required to begin August 2020 in Riverside Dental Practice, Celbridge, Co. Kildare. Position replaces a busy associate relocating to the west. 90% private, modern, busy, computerised, air-conditioned, four-surgery practice. Enquiries to Paul at poboylerriverside@hotmail.com.

Associate/general dentist, Balbriggan Co. Dublin. Flexible start date, ideally immediate. Dentist required two to three days per week. Excellent earning potential. Rapidly expanding private practice. General dentistry. Cosmetic dentistry. Endodontics. Excellent development opportunities. Practice located 30 minute commute from Dublin. Contact brianjpagni@hotmail.com.

Dentists

Experienced part-time dentist required for busy general practice, Dublin northside. Fully computerised, excellent support staff. Please reply with CV to dublinnorthdental@gmail.com.

Full-time dentist required for Rathdrum Dental, Co. Wicklow. Busy clinic. Friendly individual with a broad skillset would be an ideal fit. Please send your CV to the address provided. Email james.turner@centricdental.ie.

Full-time position in busy clinic in Mayo, with established list. Good support team, digital X-rays, intra-oral camera. Email CVs to dentistmayo@gmail.com.

Dentists Dublin north and south, Galway, Laois, Offaly, Wicklow. Full-time/part-time. Primary care setting commencing asap. Email unagaster@gmail.com, or contact Una at 087-917 4831.

We are looking for an experienced dentist for well-established, busy, two-surgery, modern practice. Must be IDC registered and available immediately. Email: northdublinclinic1@gmail.com.

Busy, fully equipped clinic with CT scanner/lab/Piezosurgery needs skilled dentist

to take over existing lucrative implant book. People skills important. Contact: Ed@seapointclinic.ie.

We are looking for an experienced dentist to join our team in Dublin. Must be IDC registered. Part-time. Email Contact@freedomdental.ie.

Experienced dentist aesthetic clinic injector required for a well-established book in modern Killarney clinic. Part-time position with view to full-time. Fully computerised clinic, with excellent support team and fantastic culture. IDC registration required. Email elaine@eden-medical.ie.

Experienced dentist required for busy, recently renovated, established Midlands practice, may suit those wishing to commute from Dublin or Galway. Full book, ideally full-time but part-time considered. 50% remuneration. Apply to bddentalassociate@gmail.com.

Experienced dentist aesthetic injector required for a well-established book in a busy facial aesthetics Cork clinic. Part-time position available, one to two days weekly. Clinic located in Douglas. Fully computerised clinic, with friendly staff. IDC registration is required. Contact info@celeste-medical.ie.

Specialist/limited practice

MyDental is looking for a dentist to provide implants and periodontal care to join its thriving private practice in Cherrywood, south Dublin. We have a full-time associate contract position available. Annual remuneration is very competitive. Email: keith@mydental.ie.

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Locums

Locum dentist required two days per week for busy, modern practice in north Co. Dublin. Flexibility available. CVs to Maria at info@castmeildental.ie.

Locum associate with experience required for part-time position covering maternity leave for seven months starting June in busy, modern general practice in Celbridge, Co. Kildare. Favourable private/public mix. Email replies with CV to brian.corcoran26@gmail.com.

Dublin 9. Locum dental associate wanted for three and a half days per week. Mixed book, modern family practice, on-site orthodontist, ideally an interest in surgery and/or aesthetics is useful but not required. Immediate start until July. Contact: Orthosull@gmail.com.

Part-time/locum dentist required for busy practice in Dublin 13. Monday, Tuesday and Saturday practices available. Panel number essential. Apply recruitment@smartdentalcare.co.uk.

Dental nurses/managers/receptionists

Swords Dental seeks a full-time receptionist for our modern, busy practice. We're looking for a hard working and organised candidate, ideally with some experience in dental nursing. Email: hello@swords-dental.ie.

Experienced part-time/full-time nurse required for busy north Co. Dublin practice. Role will involve clinical and administrative duties. Excellent remuneration for the right candidate. Email CV to lyndseymctavish@hotmail.com.

Exciting opportunity in a corporate practice, Cork City. Motivated individual to join our large team. Fully supported management structure. Nursing qualification essential. A positive outlook and the ability to work in a team are required. Email ciaramagner@thenationalimplantcentre.ie.

Exciting opportunity for a nurse in a busy private practice in Limerick. We are looking for a motivated individual to join our team. Candidates should have dental nursing experience. CV to jobs@shieldsdentalclinic.ie.

Galway Dental Clinic. Dr Niall Cronin is offering an exciting opportunity for an enthusiastic, motivated individual to join our rapidly growing practice. Fully computerised, implant surgery, endodontics, CBCT, cosmetic and general dentistry. ST/PT dental nurse required. Contact info@galwaydentalclinic.ie.

Dental nurse required for full/part-time position in a busy, state-of-the-art, modern specialist practice in Limerick City. Experience preferred and computer skills essential. Email CV to dnapp999@gmail.com.

Dental surgery assistant required for our team. Boutique private practice off Grafton St. Ideal candidate is experienced, friendly and conscientious, with a great attitude! Email anneslanedental@gmail.com.

Orthodontic practice in Dundrum seeks clinical assistant. DSA qualified or previous experience in orthodontics or hospitality an advantage. Value placed on communication and IT skills, good work ethic and a sense of humour. CV to defangle@gmail.com.

Busy specialist dental practice requires a full-time, friendly and motivated dental nurse to work as part of our expanding team. Contact mags@ncdental.ie.

Hygienists

The James Clinic is accepting applications for a full-time dental hygienist to join our existing, driven and fun team of dental hygienists and dentists. Motivated patients and a helpful, supportive dental team. Email deirdre@thejamesclinic.com.

Hygienist required for busy, newly refurbished private practice in Galway City. Part-time with a view to potential full-time position. Fully computerised. Please email CV to aoife@renmoredental.ie.

Ormond Orthodontics Kilkenny requires a dental hygienist two to four days per week. Email application to reception@kylemoreclinic.ie.

Hygienist required to replace retiring colleague. Lovely position, state-of-the-art clinic in Co. Kildare. Every possible aid. I/O camera, TV screens in surgery, air polisher. Strong team with visiting specialists. Good remuneration. Email reception@rfdentalclinic.com.

Hygienist position available Monday and Friday. Busy mixed practice. Fully qualified support staff. Gorey, Co. Wexford. Email adec dental365@gmail.com.

Kind, qualified hygienist, passionate about providing high-quality care, invited to join friendly, supportive team. Part-time position. New, dedicated hygiene treatment room. Computerised. Contact niamh@drumcondravillagedental.ie.

Friendly practice requires hygienist to cover maternity leave, full/part-time, in Waterford City. Call 087-771 8078 after 6.30pm or email info@waterforddentist.ie.

Cork City practice requires hygienist to cover maternity leave. All day Friday and Saturday morning. Immediate start. Contact corkcityassociate@gmail.com.

We are a small independent dental practice based in Drogheda, Co. Louth, and are seeking a locum dental hygienist one day per week for three to six months. Immediate start. Email CV to angelam Kearney@gmail.com.

Friendly dental hygienist required for one to three days at Frazer Dental, Implants & Orthodontics, located on Cavan/Meath/Louth/Monaghan border. Join our multidisciplinary team! Contact frazerdental@gmail.com.

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North Leinster: multiple-surgery practice, good location, excellent modern equipment, hygienist, OPG, computerised, digitalised, 5% GMS. Very low overheads. Very high new patient numbers. Visiting specialists. Transition period available. Good practice profits. Email: niall@innovativedental.com.

South Dublin. Two surgeries, flexible, superb location, leasehold practice. Very busy, private, well established. Large passing traffic. Excellent profits. Room to expand space/services. Ample free parking on site. High visibility. Principal retiring. Email niall@innovativedental.com.

Co. Mayo. Leasehold, low rent, active two-surgery practice. Long-established. Strong new patient numbers. Hygienist service. Reasonable equipment. Priced to sell. Superb potential for growth. Excellent profits. Principal available for transition. Email niall@innovativedental.com.

South Dublin. Nursing home entry/contracts available to purchase. Significant figures/profits already in place. Very large potential for growth. Minimal overheads. All portable equipment included. Transition period available. Realistic price. Contact niall@innovativedental.com.

Dublin City Centre. Active, busy two-surgery practice – ready to go, room to

expand. Excellently equipped. Well established in the area, good footfall. Fully private. Surrounded by schools. Priced to sell. Large potential for growth. Principal available for transition. Contact niall@innovativedental.com.

South east. Major town. Long-established, busy general practice with up to six surgeries. Fully equipped, inclusive of OPG. Large catchment area and room to expand further if required. Keenly priced. Email roger@horganbarrett.ie.

Co. Donegal. Three modern surgeries, long-established leasehold. Walkinable. Low rent. Good, modern equipment. Computerised. Very busy, large footfall – excellent location. Strong new patient numbers. Well-established hygienist. Excellent profits. Practice currently experiencing strong growth. Contact niall@innovativedental.com.

Co. Tipperary. Excellent value, two-surgery, busy practice in a good location. Reasonably modern equipment. Low GMS with good practice profits. Everything negotiable. Dentist retiring. Good potential for growth. Price greatly reduced to facilitate speedy transaction. Contact niall@innovativedental.com.

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COVID-19 and remote consultations

Teledentistry, if practised within appropriate guidelines, can be an effective way to treat patients during the Covid-19 pandemic.

The dental profession is now facing one of the toughest challenges in recent decades as a result of the spread of Covid-19. The coronavirus pandemic has created an unprecedented number of challenges and some guidance has been offered to prevent the spread of the virus. This guidance seems to revolve around self-isolation and social distancing. While guidance for dentists continues to evolve, and more information is needed regarding under what circumstances consultations and treatment can be provided, dentists are faced with having to consider limiting most patient interactions. A way to do so is to use remote consultations.

Dental Protection has received calls from members regarding the safety and suitability of remote consulting, i.e., teledentistry, and this article outlines our advice and guidance. This is an extremely challenging time for all healthcare professionals and Dental Protection is here to support you. The treatment of patients is of paramount importance and we want you to be able to deliver this in a safe and effective way.

If you are undertaking a remote consultation

When considering a remote consultation, dentists should weigh up whether they can adequately assess the patient remotely. If in doubt then they should recommend the most appropriate route for the patient to seek dental care, in accordance with local public health and Government guidance.

If a dentist decides to carry out a remote consultation, they should document the fact that they have taken into consideration that the patient could be adequately assessed in their clinical records. Unless there are exceptional circumstances, it is preferable that remote consultations will relate to patients already known to the dentist, or cases in which the clinician has access to the patient's current dental records. During any remote consultation, both dentist and patient should be able to reliably identify each other. The dentist should also explain to the patient why a face-to-face consultation is not possible. In cases of emergency, patients should be encouraged to seek assistance via the recommended route, in accordance with the most recent Government and public health guidance. The Irish Dental Association has publicly advocated for emergency-only treatment amid the Covid-19 crisis.

Dr Raj Rattan

MBE BDS MFGDP(UK) PgDip MDE FFGDP(UK) FICD

Raj is Dental Director of Dental Protection



Remote consultation with an existing patient in another country

Dentists may be presented with another difficulty: existing patients whose records are held by the practice but who may be out of the country and unable to return for quarantine or restricted travel reasons. In these cases, the dentist

should recommend to the patient that they follow the most appropriate alternative route for assistance, which may involve seeking local dental care or advice wherever they are if it is safe and necessary to do so. If the patient is contacting the dentist in relation to a known dental problem, and the dentist feels able to provide advice, dentists should make a reasoned decision as to whether this is the safest course of action for the patient before doing so. Any advice may be very limited and there should be a low threshold for advising patients to seek advice from local dental services.

Remote consultation with a new patient in the same country as you

Dentists may also be asked to undertake a remote consultation with a patient whom they have not treated before. In this case, dentists need to consider whether they can obtain enough clinical and medical information in order to assess the patient and provide any advice remotely. If they cannot adequately assess the patient, then they should recommend the most appropriate route for the patient to seek dental care, in accordance with local public health and Government guidance.

Remote prescribing

Remote prescribing should only be considered if local regulation guidance permits this and it is clinically justified. The prescription must be the most appropriate treatment option and before any prescription is considered, dentists must be satisfied that they have all the necessary information about the patient's medical history and have been able to fully assess the patient's dental problem. Evidence to support this must be recorded in the patient's dental records.

Practising safely and your indemnity position

In all remote consultation situations, it is the dentist's responsibility to ensure that they continue to practise in accordance with any applicable laws, guidance and regulations around the diagnosis, treatment, prescription and provision of medication to patients – both within the country in which you practise and, if applicable, within the country in which an existing patient is based at the time of the consultation. Where dentists depart from their usual practice, they will remain accountable for their actions.

Guidelines may be frequently updated during the Covid-19 crisis; it is advisable to record in the clinical notes that the most recent and relevant guidance has been followed. This guidance should be referred to by name with the exact publication date in parenthesis. If the patient's records are reviewed for any reason at a later date, then it will be clear that you have adhered to the guidance in place at the time of the remote consultation.



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Support when you need it most

For over 100 years we have supported members in Ireland through both the good times and the bad.

In the current Covid-19 crisis, your health and welfare are our top concerns. Above all else, we want to reassure you that Dental Protection is here for you. This is why our counselling service has been extended for members who are experiencing work-related stress or stress that could impact their practice. Contact details can be found on our website.

We also recognise that there are financial challenges, and we have taken steps to provide support to members by offering subscription relief during these unprecedented times.

We will continue to monitor the current situation and update you about the ways in which we are able to help.

As a mutual organisation, we know there has never been a more important time for us to use our discretion and offer the flexibility and protection members need.

Stay safe, support each other and we will get through this together.

Raj Rattan Dental Director

For updates, advice and more information visit
dentalprotection.org/ireland