

Journal of the Irish Dental Association

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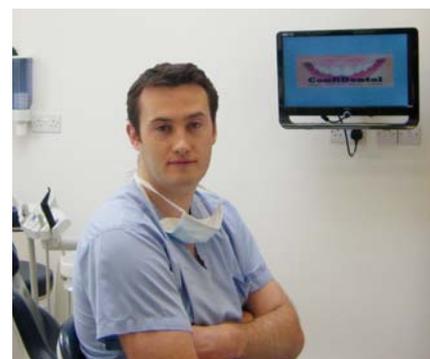
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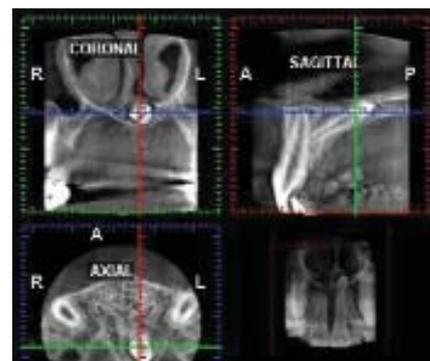
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journal of the irish dental association
Iris Cumainn Déadach na hÉireann



Build health or produce disease

That's the stark message to Government from the Irish Dental Association.

There is no doubt that all the parties to Mouth Cancer Awareness Day are due great praise for their combined activities. Particular praise has to go to the 770 dentists who volunteered their time to provide free oral cancer checks. As you will read in this edition (p236), over 10,000 members of the public availed of this opportunity. Dentists don't often get the opportunity to stress the importance of oral health to the public and Mouth Cancer Awareness Day should be counted a major success in that respect also.

Chief Executive Fintan Hourihan takes that point on strongly in his summary for readers of the Association's Pre-Budget Submission on pp241-243. He makes the point that maintaining good dental health is easy, but that dental health problems do not get better, or go away, without treatment. The Association is calling for a restoration of benefits under the PRSI Scheme and of preventive treatments for all medical card holders. The message to the Government is stark: build health or produce disease. Fintan's article makes for uncomfortable reading but perhaps I could highlight two awful facts, which he pulled from the recent IDA survey:

- 99.5% of dentists reported that cutbacks are causing patients to leave tooth decay and gum disease untreated; and,
 - 82% of dentists reported an increase in patients presenting in pain.
- Government decisions do matter and do, in these instances, cause physical pain.

Staying with the theme of dentist/patient interaction, the development of a new dispute resolution service by the Irish Dental Association is to be welcomed. Coming into force on December 1, it is to be hoped that this service will help to reduce the number of complaints made to the Dental Council by resolving the matters in question to the satisfaction of both the patient and the dentist (p231). Congrats to the nurses, hygienists and others graduating from both Cork and Dublin, as featured on pp238-239.

The reciprocal arrangement with our prestigious sister Association's publication, the *Journal of the American Dental Association (JADA)*, is a timely and worthwhile arrangement (p233). Access to the *JADA* will be for IDA members only.

Well done to those brave souls who have succeeded in setting up new practices in this difficult business environment (pp245-250). Their comments and observations are hugely valuable to anyone in practice or considering setting up their own practice.

Probity figures scrutinised

Dr Liam Lynch has done excellent work in scrutinising a Department of Health and Children report on the status of probity assurance within the dental sector. That report had concluded that "at least 10% of payments are likely to be inappropriate". Dr Lynch's paper (pp252-255) compares other studies of the same topic, highlighting that authors would not make an estimate "due to the perceived lack of pertinent data in the DTSS". Dr Lynch's conclusion is both prudent and modest: his own paper in 2009 estimated a potential problem of a scale of less than 5%. He also makes the important point that "any future estimate of the level of inappropriate payments to dentists in the DTSS should be based on statistically valid sampling procedures or other accepted scientific techniques".

Cone beam computed tomography (CBCT) was developed for dental use in 1998. Dr Brendan Fanning states in his paper (pp256-261) that a review of recent literature showed that a CBCT scan gives the potential for an improved diagnosis for the patient and has a great range of clinical applications.

In our fact file on articaine vs. lidocaine (pp265-267), Dr Monika Daubländer concludes that there is no compelling need for substituting articaine for lidocaine but that articaine does present some opportunities. We are grateful to Drs Angus Burns and Simon Wolstencroft for enlightening us on uses of the internet for education, social media and dental practice (pp268-271). Remember the *Journal of the Irish Dental Association* is always available on the Irish Dental Association's website – www.dentist.ie – which is about to be significantly upgraded.

As always, your comments and views on the *Journal* are welcome.



Leo F. A. Stassen

Prof. Leo F. A. Stassen
Honorary Editor

A resounding success

IDA President DR CONOR McALISTER celebrates the success of MCAD 2011 and looks forward to some upcoming events.

I hope you all had a good summer and that the batteries are recharged for the rest of the year.

Mouth Cancer Awareness Day 2011

I am delighted to say that MCAD 2011 was a great success and surpassed all our expectations. It was a great example of what can be achieved when everybody pulls together. Not many people will be able to say that they've never heard of mouth cancer as a result of all our efforts. It is a great tribute to the dental profession in this country that, on the day, over 770 dentists in practice participated, in addition to our colleagues in the two dental schools. We still await the final figures as to how many free examinations for mouth cancer were carried out on the day and how many cancers were detected. However, I think it is safe to say that awareness of mouth cancer in the dental profession and in the general public has been greatly increased as a result of MCAD 2011.

I would like to thank a number of people who helped to make the day so successful. First and foremost, a big thank you to the cancer survivor group (Mouth, Head and Neck Cancer Ireland), who initiated the idea for an awareness day. This group, led by Lia Mills, made a terrific contribution to the media launch, and on the day itself in the two dental schools. I have nothing but admiration for their selfless work in promoting awareness about this disease and the importance of prevention and early detection.

Secondly, I would like to thank the staff of both the Cork and Dublin University Dental Hospitals who held successful awareness days but also provided the necessary back up by agreeing to accept referrals from participating dentists. The oral medicine departments in both schools are already seriously overloaded and will be dealing with these referrals, in addition to their onerous workload, for some time to come. In particular, our thanks are due to Dr Eleanor O'Sullivan in Cork and Dr Denise MacCarthy in Dublin, who put a huge amount of work into the planning of this event.

In preparation for the day, lectures were held in Sligo, Galway, Limerick, Cork, Kerry, Waterford and Dublin. All of these lectures were attended by record numbers and I would like to thank all of our speakers. In particular, I would like to thank Professor Saman Warnakulasuriya for his personal encouragement and for coming from London to give the lecture in Dublin. As ever, great thanks is due to the staff in IDA House who worked tirelessly in assisting and preparing for MCAD and the branch meetings. The media response to the day was exceptional and contributed a huge amount to increasing awareness in the general public. Our thanks are due to our media advisers (Gordon MRM) and in particular Kieran Garry. Sincere thanks also to our *Journal* publishers, Think Media, for providing

the dedicated website – www.mouthcancerawareness.ie – free of charge to the Association.

Finally, I would like to thank the Dental Health Foundation and the Irish Cancer Society, who contributed significantly to the planning and success of this very worthwhile venture. When it comes to mouth cancer, I think Ireland has shown the lead in the same way that we did when fluoridation of our water supply was introduced 50 years ago.

HSE Dental Surgeons Group Seminar

Turning to the events in the months ahead, I am looking forward to the Annual Seminar of the HSE Dental Surgeons Group. This will take place in the Sheraton Hotel, Athlone, from October 12 to 14. An excellent programme has been put together by Dr Jim McCafferty, President Elect of the HSE Group. I would recommend this event to HSE dental surgeons and general practitioners alike. Best wishes to Jim and to outgoing President Dr Andrew Bolas. Andrew is not off the hook yet as he becomes President of our Association in May 2012.

Establishment of the Irish Dental Union

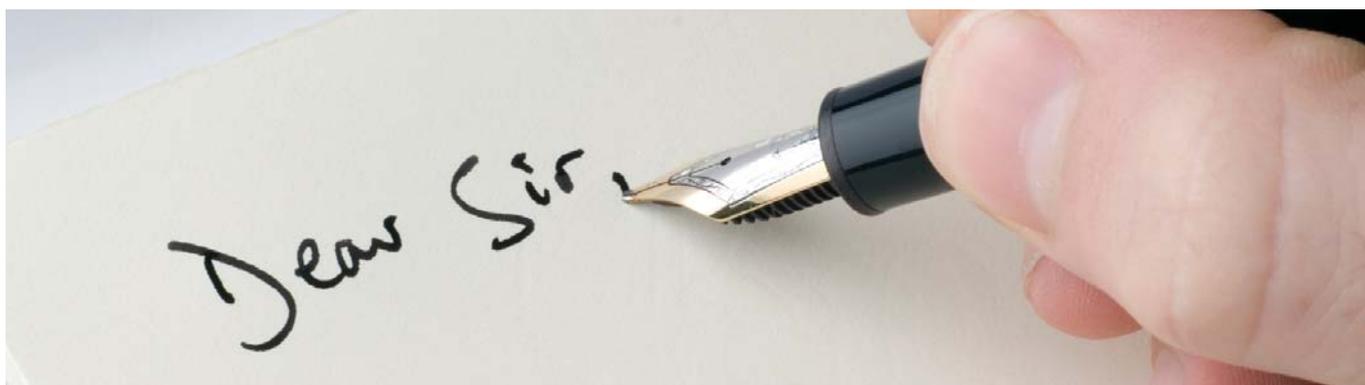
Finally I welcome the establishment of the Irish Dental Union. This represents the realisation of a long-standing goal for dentists. It also shows further proof of our continued commitment to defending and representing dentists at a time when we need to stand 'shoulder to shoulder' in protecting patients and dentists.



Dr Conor McAlister
IDA President

IDA launches dispute resolution service

From December 1, the IDA will offer a new complaints resolution service for dentists and patients, writes Association CEO FINTAN HOURIHAN.



The Association is delighted to announce this important new initiative, which we hope you agree will make an important contribution to enhancing loyalty among your patients, as well as saving you considerable time and expense.

The IDA's new dispute resolution service, which will be launched on December 1, will be independent of the Dental Council. It will respect dentists' confidentiality and treat dentists fairly.

The service will be provided free of charge to patients and to members of the Association. It is also open to dentists not in membership of the Association subject to an annual administration fee of €95.

Why set up a dispute resolution service?

In establishing this service, we are conscious that complaints are on the increase, and in the absence of any system to resolve these complaints, many relatively minor grievances are being referred to the Dental Council, the small claims court or other civil courts.

For dentists, this can involve considerable time, cost and distress, even though the vast majority of claims contain no evidence of malpractice, but instead tend to reflect concerns, whether justified or not, in regard to:

- receiving the wrong or poor treatment;
- mistakes in diagnosis or treatment;
- communication problems;
- when it has not been made clear how much treatment will cost;
- not offering to put things right when something has gone wrong;
- faulty procedures, or failing to follow correct procedures;
- unfairness, bias or prejudice;
- giving advice that is misleading or inadequate; and,
- rudeness and not apologising for mistakes.

The new system is not intended to deal with complaints in regard to schemes that are administered by State agencies/third parties, or with internal practice disputes such as employment or staff grievances.

Helping dentists

In conjunction with Dental Protection, the IDA is also committed to offering dentists assistance in how best to handle complaints within the practice.

Dental Protection has welcomed what it describes as "a responsible and timely initiative on the part of the IDA to assist its members in the resolution of patient complaints and dissatisfaction".

Brian Edlin, who has operational responsibility for Dental Protection's members in Ireland, added: "At a time when complaints (including those investigated by the Dental Council) and litigation are increasing rapidly, it makes sense for dental practices to take greater control of events by becoming more proactive in the area of complaints handling, so that minor issues are not allowed to escalate unnecessarily. Here at Dental Protection we will do everything we can to support the IDA and our members by providing staff training and other resources, drawing from our experience of similar schemes in many other countries around the world. Hopefully by working together we can turn the recent tide".

Information for patients

The IDA will be issuing leaflets and other materials to dentists who participate in the scheme so that these can be provided to patients in your practice. Patients will be advised as to what types of complaints can be heard and how they will be investigated in the event that they cannot be resolved within the practice.

The complaints resolution system will engage a trained facilitator to liaise with the parties to seek a resolution to the problem on a voluntary basis. Should the facilitator be unable to broker an agreement, it will then be possible to convene a panel comprising members of the public and dentists to offer assistance to the parties. In the coming weeks, we will be communicating further with you to offer more information and an update on the progress in preparing to launch the scheme.

Several representations to Health Minister

In recent months, the IDA has been in contact with the Minister for Health, Dr James Reilly TD, regarding a number of issues relating to dentistry and oral health.

UN Summit on Non-communicable Diseases

In July, the Association wrote to the Minister and to the Chief Medical Officer to discuss the vital role oral health should play in the United Nations General Assembly's Non-communicable Diseases (NCD) Summit in September. The letter pointed out the links between oral health and the 'big four' chronic conditions being addressed at the Summit: cardiovascular disease; diabetes mellitus; cancer; and, chronic respiratory diseases. The letter also pointed out that oral diseases are relevant to the Summit in their own right, and emphasised that oral health professionals should be an integral part of the solution for prevention, early diagnosis and treatment of these conditions.

EC position on mercury

The Association also contacted the Minister to offer assistance in the formulation of an official response to the European Commission's (EC) study on the environmental impact of mercury in dental amalgam. The EC is currently reviewing the issue of mercury pollution, and has contracted BIO Intelligence Service (BIOIS) to carry out a study of the life cycle of dental amalgam. BIOIS is seeking direct input from

Member States via a questionnaire.

The letter points out that research over many decades has failed to show any significant health risk posed by dental amalgam either to patients, dental staff or to the public, and states that European dentists, represented by the Council of European Dentists (CED), have called on EU Member States to ensure the full implementation and enforcement of EU waste laws, and fully supports examination into whether this is happening.

Tooth whitening regulations

The Association wrote to the Minister regarding the proposal to amend Directive 76/768/EEC, concerning cosmetic products, for the purpose of regulating the use of tooth whitening products. The Association pointed out that the proposal was strongly supported by the dental profession and requested that the Minister would vote in favour of it.

The Commission has recently announced that this proposal has been accepted (see news item on page 237).

HSE Dental Surgeons Group of the IDA Annual Seminar

This year's Annual Seminar of the HSE Dental Surgeons Group of the IDA takes place in the Sheraton Hotel, Athlone, from Wednesday to Friday, October 12-14, 2011.

Please note that the Seminar is not confined to those employed by the HSE: a wide variety of scientific speakers will discuss topics that will also be of interest to those in private practice, including presentations on paediatric treatment, tobacco control, restorative dentistry, endodontics, oral health promotion, blood-borne viruses, special care dentistry and medical emergencies, which is one of the core CPD areas. The fee of €120 for IDA members for the entire three-day conference represents excellent value for money.

On the political side of things, the AGM takes place on Wednesday evening. We also welcome Dr Dymphna Kavanagh, who will give a presentation on the HSE's Dental Service Reform Plan on Wednesday morning.

The annual team day takes place on Thursday October 13 this year, when all members of the dental team are invited to attend.

A full trade show will also be present on Thursday, and as always thanks to our trade sponsors for supporting the event.



As ever, the social side of things will also be busy, with the Annual Dinner taking place on Thursday evening.

CPR refresher courses will also take place during the conference on Thursday October 13, provided by Skills4Life. Bookings can be made at the registration desk and all delegates are welcome to attend.

Following on from the development of a new IDA best practice standard on the decontamination of dental instruments, Dr Nick Armstrong will conduct workshops on the subject on Thursday October 13. Again, bookings will be taken at the registration desk. To book your place for this year's seminar, please contact IDA House. All hotel bookings should be made directly with the Sheraton Hotel, Tel: 0906-6451000.

Trade union status now fully secured

The new trade union for members of the Association has now been formally approved by the Registrar of Friendly Societies. The Irish Dental Union will provide representation for members, while the Irish Dental Association will continue to assume responsibility for education, information and professional development for the profession.



The absence of trade union status heretofore meant that dentists were not afforded the same protections available to all other health professionals (such as doctors, pharmacists, etc.), who can rely on important safeguards for members, either individually or collectively, particularly where trade disputes arise. The protections that have now been acquired in establishing a trade union will offer significant benefits for all dentists regardless of their employment status.

At the 2009 Association AGM, there was unanimous support for all steps to be taken to secure trade union status as soon as possible. Huge efforts have been made to achieve this, and we are fortunate to have benefited from the advice of O'Connor Solicitors. All existing IDA members are automatically admitted as a member of the Irish Dental Union. In future, dentists will apply for membership of the Irish Dental Union, which will also entitle them to become a member of the IDA. Provision is made for the establishment of an Executive Committee to oversee the union on a similar basis to the role of the Association's Board of Directors. Dr Conor McAlister is the inaugural President of the newly approved union and Fintan Hourihan is Chief Executive. The Council will meet at least four times a year, again in a manner equivalent to that previously provided by the Council of the IDA. Drs Martin Holohan, Garrett McGann and Jane Renehan have been appointed as the inaugural Trustees to the union. The property and investments of the Association will be held in the name of the Trustees.

Fintan Hourihan commented: "This is a historic development in securing appropriate representation for Irish dentists at a time of unprecedented change and following a sustained assault on their incomes, employment and contractual rights. Given the educational and financial benefits associated with membership and now with the added security of trade union membership, I would encourage dentists not in membership to apply to become a member of the union, and therefore the Association, as a priority. We are stronger together".

RAMI odontological section re-activated

The Royal Academy of Medicine in Ireland was founded in 1882 to accommodate exchange of ideas and research across all medical faculties, including the odontology (dental) section. This section has been re-activated recently with David Ryan as President. Professor Rose Anne Kenny will give a lecture about T.I.L.D.A. (The Irish Longitudinal Study on Ageing) and the needs of the older population on Wednesday evening, October 19 in Frederick House, South Frederick Street, Dublin 2. Time to be confirmed.

Free access to *JADA* for IDA members

The IDA has announced a new collaborative arrangement with the American Dental Association (ADA), which will afford a number of significant benefits exclusively to IDA members.

The collaboration arises from a meeting that took place at ADA headquarters in Chicago earlier this year, where the Association was represented by then President, Dr Billy Davis, and Association Chief Executive Fintan Hourihan.

In the next few weeks we will be advising IDA members how they will be able to get free online access to the prestigious *Journal of the American Dental Association (JADA)*.

A monthly publication, the *JADA* offers a wide range of information for dentists:

- peer-reviewed research on current and developing topics in dentistry;
- clinical information in such areas as biomaterials, pharmacology, and cosmetic and aesthetic dentistry, as well as general dental practice;
- reports on the increasingly important relationship between dental health and overall health;
- news and views on the issues of the day;
- explorations of practice building and legal topics; and,
- a continuing education programme.

"Marking a new chapter in the ADA's drive to embark on new and creative initiatives with prestigious national dental associations, we are thrilled to be working with the Irish Dental Association to deliver the *JADA*'s exceptional scientific content, editorials and latest industry news to IDA members. We are confident that *JADA* access for IDA members will only be the beginning of a closer, more collaborative relationship with the IDA," says Kathleen T O'Loughlin DMD MPH. Both organisations are also exploring the possibility of other initiatives that would provide significant scientific, education and patient publications and other services/products exclusively to IDA members. Watch this space for further information.



UCD study re feminisation of dentistry: issues, challenges and recommendations

The IDA has commissioned Masters research on the issue of the feminisation of dentistry in Ireland. The study will take one year to complete, and will report on issues affecting female dentists and their needs, and provide recommendations on how the Irish Dental Association and the Irish Dental Union can enhance their roles in assisting and representing dentists.

Seeking equity in dental healthcare

The IDA recently made a submission to the Department of Health with regard to the Department's Statement of Strategy for 2011-2013. The IDA's high level goal is "The realisation of oral health gain in accordance with best evidence and epidemiological research consistent with the provisions of Global Goals for Oral Health by 2020 as agreed by the FDI (World Dental Federation), the World Health Organisation (WHO) and the International Association for Dental Research (IADR)."

The objectives of this goal are to:

1. Ensure equity in access to and provision of dental healthcare and treatment.
2. Build capacity for the delivery of dental health in an efficient and cost-effective manner.
3. Develop orderly and appropriate regulation.
4. Provide policy direction and ensure orderly planning of oral health gain.
5. Introduce systems and processes of quality assurance.

Among the goals are: renegotiate the DTSS; review funding levels; agree clinical care pathways; reduce costs of delivery to service providers; appoint a Chief Dental Officer; publish the Oral Health Strategy; and effect an oral health promotion action plan.

Eastern Branch meeting

The Eastern Branch will host a branch meeting on Tuesday October 11 at the Riverside Hotel, Enniscorthy, at 8.00pm. Presentations will include:

- (i) Restoration of the endodontically treated tooth: Dr Maurice Fitzgerald, prosthodontist
- (ii) Complex medical histories and oral surgery: Dr Seamus Rogers, oral surgeon
- (iii) Implant treatment planning – the prosthetically driven approach: Dr Maurice Fitzgerald and Dr Seamus Rogers

All IDA members are welcome.

Kin progressive whitening toothpaste

According to its distributors Pamex, new generation Kin whitening toothpaste is the most advanced professional standard toothpaste. They say that it gently and gradually whitens teeth without any bleach or chemical stain removers. Kin whitening toothpaste works as a result of its combination of micro-powdered sodium bicarbonate, sodium pyrophosphate, antibacterial agents and anti-stain polishers to whiten and protect teeth. In a statement, Pamex says: "Compared to costly dental treatments, and ineffective over-the-counter whitening kits, Kin whitening toothpaste restores a brilliant white beam, and its price tag of €7.95 for 75ml is something to smile about too".

Formulated by dental professionals, Kin whitening toothpaste is part of a comprehensive range of innovative, high quality, dentist recommended and endorsed oral care products.

IDA and Wrigleys at the Ploughing 2011



Pictured at the IDA stand were (from left): Clare Dowling, IDA Employment/Communications Officer; Minister for Agriculture, Simon Coveney TD; IDA Assistant CEO Elaine Hughes; and, Dr Anne-Marie Lynch.

The IDA was well represented at the 80th Ploughing Championships in Cardenton, Athy, Co. Kildare in September. In conjunction with Wrigleys, the Association met thousands of attendees at the three-day event, and positive oral healthcare messages, samples of Wrigleys chewing gum, and opportunities to enter free competitions were the order of the day at this year's stand.

The Association is grateful to Drs Richenda Bailey, Ena Brennan, Gerard Cleary, John Holland, Maria Jennings, Anne-Marie Lynch, Conor McAlister, Ray McCarthy, Seton Menton and Anne Twomey for their assistance at the stand.

Rights Commissioner hearings

The IDA recently represented a number of HSE members before the Rights Commissioner. The members had been 'acting up' in the HSE for a number of years. 'Acting up' arrangements are intended as a temporary measure to fill a vacancy while a permanent appointment is being made to ensure that the provision of services is not affected. In these cases, the members had been acting up for several years and the HSE claimed that because of the moratorium on recruitment the posts could not be filled permanently.

The Rights Commissioner has recommended that the HSE discuss the matter with the IDA and remarked that the HSE's arrangements for 'acting up' were never intended to cover exceptional circumstances such as those experienced by the claimants. The Rights Commissioner also added that in doing so the claimants have facilitated the HSE in having a senior and important post, with statutory functions that could not be carried out by a lower grade, filled without impacting on the services provided to the public.

Pre-Budget lobbying campaign



At the recent meeting between Minister of State with responsibility for Primary Care Roisin Shortall TD and an IDA delegation were: Back row (from left): Dr Anne Twomey, IDA General Practitioner Group; Dr Ryan Hennessy, IDA General Practitioner Group; Dr Michael Crowe, Honorary Treasurer, IDA; Dr Andrew Bolas, President, IDA HSE Group; Fintan Hourihan, IDA CEO; and, Clare Dowling, IDA Employment/Communications Officer. Seated: Dr Conor McAlister, IDA President; and, Minister of State Roisin Shortall TD.

The IDA has embarked on its Pre-Budget lobbying campaign. Having met already with the Minister for Health, Dr James Reilly, and the Minister for Social Protection, Joan Burton, last May, the IDA also arranged a meeting with the Minister for Primary Care, Roisin Shortall. Further meetings with health and social protection representatives are being arranged. The IDA held an information day on October 5 prior to the Budget to inform all TDs and Senators of the effects of the cutbacks on dentistry.

Munster Branch Annual Scientific Meeting: 'The Changing Face of Dentistry'

The Munster Branch will hold its Annual Scientific Meeting on November 18 in Fota Island Hotel, Co. Cork. Speakers include:

- Professor David Bartlett, Head of Prosthodontics at Kings College London Dental Institute;
- Professor Tim Newton, Professor of Psychology as Applied to Dentistry, Kings College London Dental Institute;
- Dr Tom Houlihan, orthodontist;
- Dr Donal Blackwell, practice limited to fixed prosthodontics and implant dentistry; and,
- Leanne Papaioannou, international marketing consultant.

For further information, see www.dentist.ie or call IDA House.

ICD meets in Vienna



Pictured at the recent ICD meeting are (from left): Mary and Ken Halpenny; Tom and Joan Feeney; and, Frank and Mary Ormsby.

The 56th Annual Meeting of the European Section of the International College of Dentists (ICD) was recently held in Vienna, with the Austrian District organising the event. New Irish Fellows inducted at the meeting were Dr Frank Ormsby and Mr Ken Halpenny.



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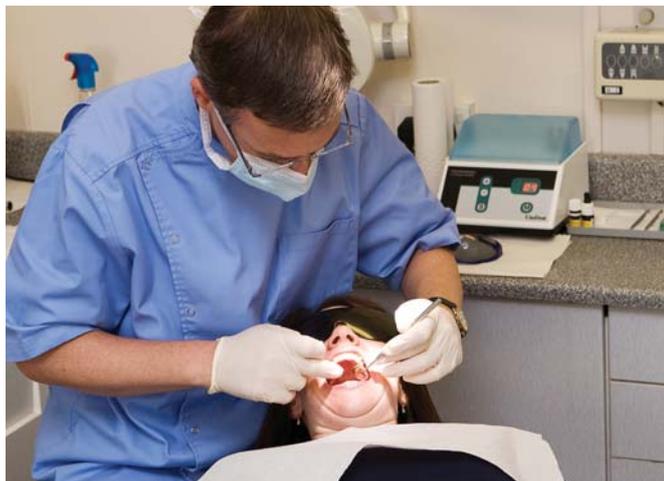
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Mouth Cancer Awareness Day 2011



Dr Martin Vaughan of Phibsborough in Dublin providing a free oral cancer screening on Mouth Cancer Awareness Day.



Dr Karl Cassidy of Shelbourne Clinic with a patient in for the oral cancer screening.

Over 770 dentists around the country, including staff at the Dublin and Cork University Dental Schools and Hospitals, provided free examinations to over 10,000 members of the public during Mouth Cancer Awareness Day, September 21.

Six people were diagnosed with mouth cancer last year when 3,000 examinations were carried out in the Cork and Dublin Hospitals. Many cases of pre-cancer were also detected and have since been treated. The success of last year's event led to the decision to expand to dental practices nationwide this year, and over 770 dentists signed up to participate on www.mouthcancerawareness.ie.

The Irish Dental Association fully supported this initiative, and in the run-up to September 21, the event was featured in the national media on several occasions, including items in the *Irish Times*, *Irish*

Independent, and *Irish Examiner*, and on radio and national television. IDA President Dr Conor McAlister, said: "We are delighted with the response from dentists and the public to this year's Mouth Cancer Awareness Day. Roughly 50% of all mouth cancers in Ireland are diagnosed at an advanced stage, which can result in more complex treatment with a greater impact on quality of life and overall survival. The more people who attend their dentist for an examination, the more likely we are to catch this disease early. We would like to thank all of the dentists who gave their time to make the day such a success. We would also like to thank our partners in this initiative – the Irish Cancer Society, Dublin Dental University Hospital, Cork Dental University Hospital, the Dental Health Foundation and Mouth, Head and Neck Cancer Awareness Ireland".

Ombudsman: HSE fails to meet obligations to medical card patients

In a recent address, the Ombudsman made the following comments in relation to medical card holders' rights to dental care:

"The Health Act 1970 says unequivocally at section 67: 'A health board (now the HSE) shall make dental, ophthalmic and aural treatment and dental, optical and aural appliances available for persons with full eligibility'. So, on this basis, medical card holders are entitled to be provided with dental treatment and dental appliances (not to mention ophthalmic and aural treatment) by the HSE and, furthermore, there can be no charge for this treatment. There is no time to deal with this in detail, but it is safe to say that neither the health boards nor the HSE have ever come close to meeting their obligations under section 67 of

the Health Act 1970. And in present financial circumstances, the likelihood of the HSE meeting its section 67 obligations is more remote than ever.

The point I am most anxious to make here is this: it is wrong, and undermining of our society in an insidious way, to have policies and laws which in practice are disregarded".

These comments follow an investigation by the Ombudsman, which looked at the refusal of the HSE to allow a medical card holder to receive more than two fillings that were clinically required. Her investigation into this complaint received special mention in the Ombudsman's Annual Report for 2010.

EU decision on tooth whitening finally made

The Council of European Dentists (CED) has welcomed the adoption by the Council of the European Union on September 21 of the Council Directive amending Directive 76/768/EEC regarding cosmetic products. This firmly places tooth whitening procedures under the responsibility of a dentist, a development for which the CED has called repeatedly in recent years. It places regulation of tooth whitening products at EU level in line with the advice from the European Scientific Committee on Consumer Safety. Following the Council's decision, the following is the position:

1. Tooth whitening products containing up to 0.1% hydrogen peroxide will continue to be freely available to consumers.
2. For products containing between 0.1% and 6% hydrogen peroxide, clinical examination and first treatment by a dentist will be required, after which the patient will be able to continue the treatment by him or herself. The use of these products by persons younger than 18 years will not be allowed.
3. Tooth whitening products containing more than 6% hydrogen peroxide will continue to be prohibited.

Member States will have 12 months to transpose the Directive into

national legislation after its publication in the *Official Journal of the European Union*.

The CED believes that these changes will enhance patient safety by ensuring that patients can only access appropriate products via a qualified and regulated dental professional. The CED considers the Council decision to be a very important step towards ensuring patient safety and removing any uncertainty as to how and by whom tooth whitening should be performed in the EU.

The IDA issued a press release in August warning patients of the dangers of unsupervised tooth whitening and the levels of hydrogen peroxide in some products, which received significant press coverage: it featured on the RTÉ TV news, and was picked up by national and regional newspapers. Our thanks to Dr Tom Feeney, who acted as spokesperson on the issue.

The Association also wrote to Minister for Health Dr James Reilly on the matter, and the Minister assured the Association of his support for this Proposal.

The full text of the decision is available at: <http://register.consilium.europa.eu/pdf/en/11/st12/st12123.en11.pdf>.



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National Dental Nurse Training Programme graduates – Dublin



National Dental Nurse Training Programme graduates 2011. Back row: Katie Kavanagh; Siobhan Mulqueen; Roslyn Gavin; and, Katja Rost. Middle row: Michaela Simpson; Graham Mooney; Paula Price; Nicola Rogers; Louise McCluskey; Andrea Grimes; Michelle Murphy; Jennifer McElheron; Aine Watchorne; Mary Rabbitte; Moira Keating; Grainne Morris; Agnieszka Stolarczyk; Susan Deane; and, Jennifer Carmody. Front row: Niamh Purcell; Julita Angier; Professor June Nunn, Dean of the School of Dental Sciences; Helen Phipps, Dental Nurse Tutor; Claire Hession; Lorna Collier; Beverly Dawson; Lilly Halpin; Alison Swan; Roisin Fitzgerald; Emma Corless; Daniela Cerceja; Adina Cretu; Djahan Ghalehei Miandoab; Gillian Keogh; Elizabeth Watts; Irene Cusack; Wendy Byrne; Michelle Coleman; Beatriz Rubio Moreno; Alyson Kelly; Karen Dinneen, Acting Dental Nurse Tutor; and, Tina Gorman, Director of Nursing.

Postgraduate Diploma in Conscious Sedation in Dentistry 2010/2011



Back row (from left): Dr Gillian Smith; Dr Eileen McCarthy; Prof. Leo Stassen, Course Director; Dr Salah Al-Mandhari; Dr Marie O'Neill; and, Catherine Creagh, Course Administrator. Front row (from left): Prof. June Nunn, Dean of the School of Dental Sciences; Dr Michelle Brady; Dr Danielle Quinlivan; Dr Sinead Webb; and, Dr Mary Clarke, Course Co-ordinator. Dr Dermot Canavan was absent on the day.

Full-time diploma in Dental Nursing – Dublin



Full-Time Diploma in Dental Nursing graduates 2011. Back row: Niamh McSweeney; Phoebe Kearns; Emma Furey; Emma Jane Bedford; Emer McCrum; Shauna O'Malley; Hannah Dolan; Hayley Baugh; and, Karen Dinneen, Acting Dental Nurse Tutor. Front row: Professor June Nunn, Dean of the School of Dental Sciences; Claire Brett; Kim Buckley; Sarah Lawler; Delia Maierean; Hafsat Gambo; Ruth Duffy; Joanne Mohammed; Helen Phipps, Dental Nurse Tutor; and, Tina Gorman, Director of Nursing.

Cork dental nursing graduates



Dental Nursing Class 2010/2011 at their graduation in University College Cork: Hazel Anderson; Kelly Blake; Laura Buckley; Annita Cahill; Catherine Clifford; Megan Coughlan; Caitriona Cullinan; Patrice Cummins; Joanne Dalton; Denise Foley; Emma Harty; Elena Hutanu; Claire Lester; Sarah Lucey; Caroline Lynch; Debbie Magee; Mairead Malone; Brita McCartan; Ciara Moloney; Tara Murphy; Alice O'Connor; Antoinette O'Gorman; Denise O'Leary; Eleanor Noelle O'Leary; Aoife O'Mahony; Elaine O'Meara Madden; Grainne O'Toole; Michelle Seward; Gillian Shannon; Jenny Slattery; Orla Spillane; Ellen Wharton; and, Kelly Anne Young. Front row: Dr Patricia McDermott; Mary Harrington; Siobhan Shakeshaft; Professor Finbarr Allen, Dean of the Cork Dental School; Dr Noel Ray; Sharon Curtin; and, Mary Moloney.

Dental hygiene graduates – Dublin



Back row (from left): Laura Kearns; Evelyn Lawless; Jessie Boyle; Catherine Waldron, Lecturer; Aisling Connolly; and, Sheena Barry. Front row (from left): Maria Lawlor; Naoise McGrath; Kelly Smyth; and, Helena Daly.

Cork dental hygienists



Back row (from left): Graduates Aisling Coughlan; Emma Cosgrove; Aoife Burke; Ciara Drummond; Nora Clifford; Donna Dunleavy; and, Liz Byrne. Third row (from left): Graduates Sharon Kenny; Denise Looby; Helen Loomes; Anita Horgan; Louise Meehan; and, Claire O'Sullivan. Second row (from left): Clare Murphy; Martina Collins; Helen Nwokoeye; Anne Holohan; Dr Donal McDonnell; Prof. Helen Whelton; and, Anne O'Keeffe. Front row (from left): Dr Hassan Ziada; Dr Sharon Curtin; Prof. Finbarr Allen; Prof. John Higgins; Dr Noel Ray; and, Dr Orla Barry.

The Molars roll on!



The Molar Rollers, the Dublin Dental University Hospital cycling group of staff, students and friends, have just completed a nine-day, 600km charity bike ride to London, finishing at St Thomas' Hospital, Westminster.

The 31 riders, accompanied by support vehicles and personnel, travelled to Rosslare and then on through Wales and England, staying at university residences along the way. Intensive fundraising before, during and after the event raised almost €50,000, which will be allocated to mouth cancer-related projects as identified by the Molar Rollers Board of Trustees.

Concurrent with the ride, three stationary bikes were situated in the foyer of DDUH. These were used by staff and students to match the distances of the 'roadies', which were displayed by a live tracker on a plasma screen. This was also very successful and enjoyable, with almost all available staff and students participating.

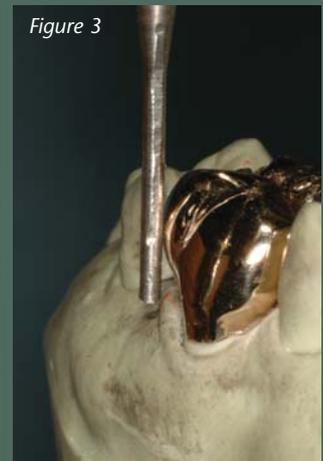
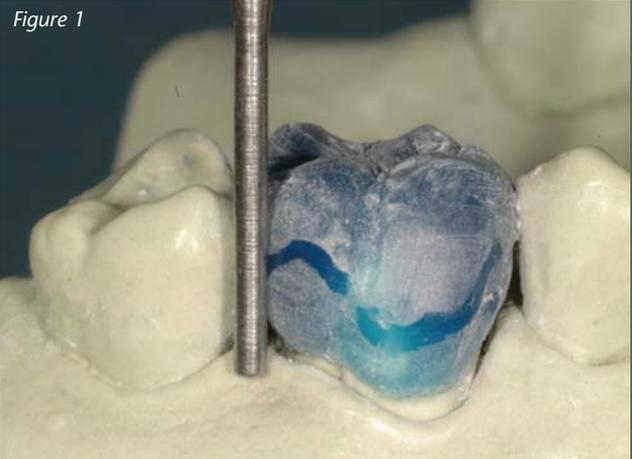
New IDA website – Find A Dentist

The redevelopment of the IDA website is finally nearing completion. The new website will have an enhanced 'Find a Dentist' link where each member will have an individual profile page that is Google-searchable. It is important that you ensure that the information we have for you on the Find a Dentist section is correct. You can check your details on our current website (these will be transferred to the new site). If you wish to change these details, please contact Dario in IDA House.

Quiz questions

Answers on page 262

Submitted by Dr Seamus Sharkey.



1. What is the name of the line shown on this waxed-up full gold crown (Figure 1) and what is the name of the device used to assess it?
2. What is the significance of this line?
3. What element of the partial denture should be designed around this line, and name the components of this element and where they are situated relative to the line (Figures 2 and 3)?
4. How can this line be modified or created?

IDA branch meetings

Don't forget that your local IDA branch is a great place to pick up some CPD points during the year. Notices of branch meetings are sent to members regularly from IDA House.



IDA
irish dental association

Why oral health matters

Prior to the Budget, the Association is making a forceful case on the effects of recent cuts to the State dental schemes and calling for a reinstatement of preventive treatment for patients. Chief Executive Fintan Hourihan outlines the points he will be putting to the decision makers.



Key messages for good oral health

- Maintaining good dental health is easy.
- Dental problems do not get better, or go away, without treatment.
- Dental check-ups also include oral cancer screenings.
- Gum (periodontal) disease affects your overall health.
- Dental cleanings and check-ups are extremely important.

Oral health is of vital importance to well-being and general health. Diseases of the mouth and oral cavity have a significant impact in terms of pain, suffering, impairment of function and reduced quality of life. To a large extent, these diseases are entirely preventable. Yet

when they occur, they can be among the most expensive to treat or cure. Preventive treatment and early treatment substantially reduce the costs to both the State and the patient.

The mouth is a gateway to the body and is an early warning system for health practitioners. Signs in the mouth indicate trouble in other parts of the body. An oral examination can reveal diseases, general health status, and habits such as tobacco and drug use. Oral diseases share common risk factors with chronic diseases such as obesity and diabetes. The Government has stated that tackling these diseases is a priority. The evidence to date highlights the need for the greater integration of oral health preventive programmes with general health

Cost of dental neglect

It is a well-established principle in dentistry that an ounce of prevention costs less than a pound of cure. Good dental care begins with a periodic, comprehensive oral examination. A lack of preventive dental care can lead to costly stop-gap emergency treatment, which typically provides only temporary pain relief through medication and, in some acute cases, surgical care or hospitalisation.

A recent US study by the California Healthcare Foundation looked at the cost of dental neglect and found that the 'ounce of prevention', by way of an oral examination, is outweighed by a 'pound of cure' (emergency dental visit with hospitalisation) as much as 123 times.

Several studies have shown that treatment of gum disease results in a 10-12% lower medical cost for patients with diabetes.²

With treatments now being denied to patients under the DTSS and DTBS, patients and the State can expect to pay up to ten times the cost of preventive treatments where dental health is neglected and teeth that might have been filled are ultimately extracted, dentures fitted and other treatments necessary. This bill, and of course the decline in dental health, can emerge within 12 to 18 months in some instances. Aside from the direct financial costs, there is also the pain burden that is borne by patients, leading to a loss of wellbeing and a loss of productivity.

promotion. Dentists are well placed in the community to offer patients advice on reducing the risk factors and diagnosing health problems.

What is the state of our oral health?

The National Survey of Oral Health in Irish Adults 2000–2002¹ revealed considerable improvements in the level of oral health among Irish adults over the previous 20 years. This reflects the investment in the provision of oral health services for adults during that period and the very real benefits of fluoride use and oral health promotion. Unfortunately, we are now beginning to see a rapid reversal of these advances because of draconian cuts in State support for dental patients. There are two dental treatment schemes – one for insured (PRSI) workers called the Dental Treatment Benefit Scheme (DTBS), and another for medical card holders, called the Dental Treatment Services Scheme (DTSS).

“Maintaining good dental health is easy but dental problems do not get better, or go away, without treatment.”

PRSI Scheme

There are 1.7 million taxpayers and dependants who qualify for treatment under the DTBS arising from their PRSI contributions. This scheme is managed by the Department of Social Protection, which contracts individual dentists to provide the treatment in their own dental practice.

Up to December 2009, this cohort of taxpayers could avail of the following treatments as part of their PRSI insurance entitlements:

- prophylactic treatment (scale and polish) free of charge every six months; and,
- financial contributions towards the cost of basic dental treatment such as fillings, extractions, root canal therapy and dentures.

However, following cutbacks in Budget 2010, the treatment available was restricted to just one item – the annual oral examination.

Medical card holders

There are 1.2 million medical card holders who are entitled to treatment under the DTSS. This scheme is operated by the HSE. Similar to the DTBS, the treatment is delivered by individual private dentists operating in their own dental practice.

Until the cuts of two years ago, medical card holders were entitled to scale and polish, extended gum cleaning, fillings, extractions, root canal treatment, x-rays, dentures and denture repairs. Today treatment is restricted to emergencies only, e.g., two fillings per year, extractions, etc. Preventive treatment such as gum cleaning has been suspended.

The scale of the crisis

Impact of Budget cuts – PRSI patients

Patient attendance has dramatically reduced. Patients who cannot afford private treatment are delaying treatment, or opting for cheaper treatment (e.g., opting for an extraction rather than saving a tooth with root canal therapy).

In 2010 there was a 52% decrease in expenditure and a 47% decrease in the number of treatments provided under the PRSI Scheme compared to 2009. A cost-benefit examination of the Scheme undertaken by Dr Brenda Gannon of NUI Galway on behalf of the Irish Dental Association confirmed that there is a €2.85 benefit for every €1 spent on the Scheme. Clearly, these cuts represent a case of being 'penny wise, pound foolish'.

Budget 2010 cuts – medical card patients

In 2010 the Government placed a cap on expenditure at €63 million. Given the increase in the numbers of medical card holders, this allocation has fallen far short of the demand on the Scheme and we estimate that the spend on the DTSS should in fact be 40% higher to keep pace with the increase in eligible patients retaining the agreed

Discrimination against dentistry

Dentists in Ireland do not receive any State support whatsoever, unlike their medical counterparts.

State supports towards capacity and infrastructure (excluding salaries and professional fees)	Amount of support
Acute hospital services	€3.2bn ³
General medical practitioners	€124m
Irish dentists	NIL

State support for dentistry in the Republic versus Northern Ireland

The professional fees charged in this State are often unfairly compared with the cost of dental treatment in Northern Ireland. Dentists in Northern Ireland receive an average annual practice allowance of €34,000 per dentist.⁴

Scheme benefits. According to the HSE, in 2011 so far there has been a 56% decrease in the number of treatments provided under the Scheme compared to 2010, and dentists all around the country are reporting poorer levels of oral health among medical card holders. In her Annual Report for 2010, the Ombudsman included a complaint from a medical card patient who was refused dental treatment. She described the situation as “a sad reflection on a system where a person with decaying teeth, who has no resources to fund private treatment, has to put up with decaying teeth until his annual entitlements recommence”.

*“Gum disease affects your overall health.”***Effect on patients**

Earlier this year the Association carried out a survey on the impact of these cutbacks on dental care in Ireland. It found that:

- 99.5% of dentists reported that the cutbacks are causing patients to leave tooth decay and gum disease untreated;
- 82% of dentists reported an increase in patients presenting in pain;
- 74% of dentists reported an increase in gum disease;
- 74% of dentists reported an increase in patients presenting with loose teeth;
- 56% of dentists reported an increase in patients presenting with broken dentures; and,
- 11.5% of dentists reported that patients are aware of their entitlements under the DTSS.

Effect on health services

- 67% of dentists reported that they are referring more patients to hospitals as a direct result of the patient being unable to obtain treatment.

Effect on dental practices

- 64% of dentists reduced the number of staff in the practice; and,

- 74% of dentists reduced the working hours of staff.

About 1,200 dentists are involved in treating patients under the PRSI Scheme throughout the country. Each of these dental practices formerly employed just under four full-time and three part-time members of staff on average, including dentists, dental nurses, hygienists, secretaries, practice managers and administrative staff, etc. We estimate there have been 1,000 job losses in the dental profession since April 2010.

What needs to be done?**IDA Key Demand 1**

The IDA seeks the restoration of scale and polish treatments under the Dental Treatment Benefit Scheme (PRSI Scheme) to ensure that the improvements in oral health in Ireland can be maintained.

IDA Key Demand 2

The IDA seeks an increase in the budget for the Dental Treatment Services Scheme (Medical Card Scheme) from €63 million to €80 million to meet the demands on the Scheme, and the restoration of preventive treatments for all medical card holders.

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Setting up a dental practice

Starting your own business is perhaps the biggest professional challenge of a lifetime. The *Journal* spoke to dentists in three practices who have done just that in recent times.

Dr Ryan Hennessy, GDP, Cahir, Co. Tipperary

Ryan Hennessy started his practice from scratch in Cahir, Co. Tipperary in July 2010, amidst the ravages of recession. "Many people suggested that I had a screw loose at the time and I may yet prove them right!"

It's a one-person practice but he hopes to employ an associate or hygienist in the next 12 months. He provides general dental practitioner services to private patients and to DTSS and DTBS scheme patients.

His practice is in a mid-terrace three-storey building on a main shopping street in the town. The building dates back a few hundred years and the entire street is listed as an area of architectural preservation due to its proximity to scenic Cahir Castle 50 metres away.

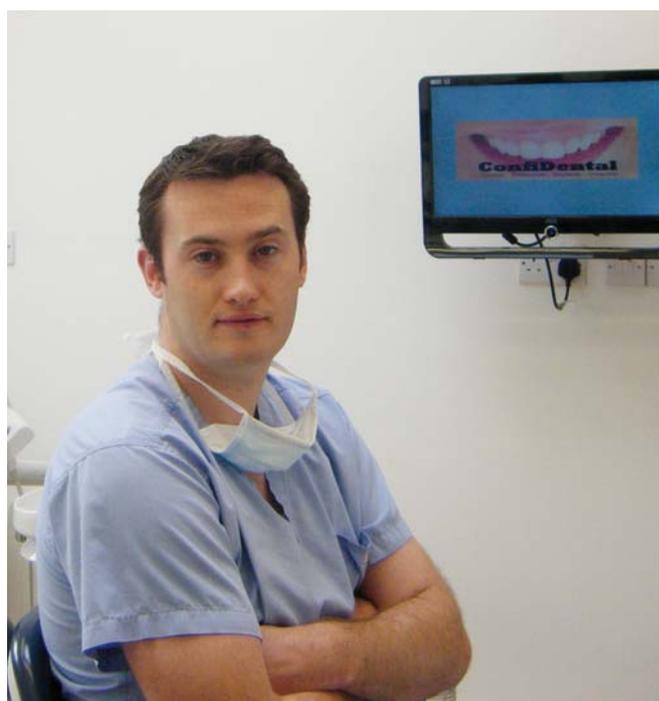
"The most difficult part of setting up was dealing with planning authorities, delays, banks, builders, staff – it was all bloody stressful!"

Ryan says he sourced suppliers by contacting companies from Irish Dental Association events and from Google. "I equipped the surgery with a lease over five years from DMI. I do try to buy as many 'made in Ireland' products as possible – for example masks made in Limerick – but they can be very difficult to find. I am always disappointed that to save a few cents most dental materials are manufactured in Asia where sometimes employee rights don't exist, while Irish jobs are disappearing. I would really support a genuine Irish dental supplies manufacturing company if anyone can show me one."

Funding was difficult. "The banks say they want your business and then make you jump through hoops for even the smallest of loans/credit. You'd swear it was their own money they were lending! I had never had to form or present a business plan before, let alone estimate turnover, etc., and was dependent on my accountant for help."

What mistakes did he make? "Everyone makes mistakes – for me it was purchasing a building near the peak of the boom and some minor design errors in the layout of my surgery. Also, I had a single objector to my building plans that delayed me by a full 12 months after An Bord Pleanála was involved."

His advice to prospective dental start-ups is to do it now while everything is cheap and to choose your location carefully. "Talk to someone who has done it recently and forget about holidays for a while..."



Little preparation

Dr Hennessy has a strong view on the education of dentists: "I've always believed that basic business management should be something that is taught in dental schools. Graduates are expected to function as self-employed individuals with very little training in business. It's very difficult for some people to then make the leap of faith and start their own practice. I was lucky – I have a brother who has established several small businesses and am from a farming background. In terms of dentistry as a profession, there is no business start-up assistance. I would hope at some stage to offer my experience to the dental hospitals."

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Drs Barry Dace and Rachel Doody, practice limited to periodontics, Booterstown, Blackrock, Co. Dublin

Drs Barry Dace and Rachel Doody started their referral practice limited to periodontics and implant dentistry on June 21, 2010, in Booterstown, Co. Dublin. The practice property is a partial conversion of a residential house. It includes three operatories, all at ground floor level, and there is a designated patient car park at the front.

Barry says that the most difficult challenge in setting up the practice was trying to keep working a normal day while also having to make so many difficult decisions while the practice was under construction. Asked how did they equip the practice, Barry replies: "Expensively! We equipped the practice with state-of-the-art radiological and clinical equipment. The dental chairs, radiological equipment and IT set-up were the main items of capital expenditure. Equipping our central sterilisation room with a washer disinfector, dual autoclaves and RO water purification unit also added to the cost. We also had the building refurbishment costs, which were significant".



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Barry and Rachel spent a considerable amount of time and effort meeting with the different dental supply companies. They had a clear idea of what they wanted with regard to chairs (A-Dec from DMI) and surgical equipment, but there was much more choice available for the surgery consumables and small equipment. "We wanted to keep our custom locally where possible, and ended up using most of the local dental supply companies."

Funding was a difficulty. "We met with several lenders. While they all appeared positive in meetings, firm offers of funding were few. In the end, we got good solid backing from AIB, who were as good as their word."

In the early days, Barry and Rachel had to ensure that the refurbishment costs were kept to a minimum and that took some very difficult decisions to ensure that they kept their vision, but on budget. Later on, they had to decide on the best fit of staff for the practice, as they reported having had such good people at interview. Did they make mistakes? "Not as many as we thought we would! We were delighted with the result. It really is in keeping with our

original vision of a modern, clean, state-of-the-art practice. It's a warm, bright and welcoming location in a nice leafy residential area. But, as you can imagine, there were many many nights of planning. Planning is so important, as is talking with others who have done it recently."

Have a good team

What advice would you give to any dentist setting up a practice? "If you have a refurbishment or building requirement as part of your project, make sure that you have a good team of builders, and preferably a 'dentally aware' architect in your camp. It made the world of difference to us, as we had a fantastic team around us. That left us free to deal with the myriad of other issues and matters at hand in the set-up phase. Also, it's important to keep your original vision in mind, as it's easy to get distracted and accepting of changes given the mountain of matters you find yourself faced with. It's worth sticking to your plan, as, hopefully, you'll only pass this way once."



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POWERED BY ZENO

Drs Liam and John Kane, GDPs, Blanchardstown, Dublin 15

Twins Drs Liam and John Kane opened their expense-sharing practice in October 2008 in Blanchardstown village in Dublin 15. They provide all aspects of family dentistry, but decided against providing services under the Medical Card (DTSS) Scheme. "We felt it wasn't a good scheme to operate when you are building a practice."

The practice is based in a dormer bungalow behind the main street running through Blanchardstown village. Finding a property was the biggest challenge that the Kanes faced in their quest to set up a practice. They had been looking for some time and had come very close to buying an existing practice in Dublin. That fell through and they eventually found the property that they are using through the website daft.ie. The landlord secured planning permission for medical use and the Kanes got into it in July 2008. With great help from their father who is a painter and decorator – and several of his friends – the property was converted into a practice with two surgeries.

The Kanes also had a good idea of what equipment they wanted for their surgeries. They settled on Belmont chairs and equipped one surgery from a sale of second-hand equipment (less than two-years old). The other surgery was equipped with identical new equipment, which was arranged through Morris Dental, with whom Liam says they have a good relationship. When both the autoclave and compressor, which had been purchased second hand, broke down, new equipment was provided by Morris Dental very quickly to enable the surgery to continue practising without an undue delay.

While they had some savings, they also took out a three-year lease for equipping the practice. "In 2008, funding wasn't really a problem. As John and myself were ten years out of college as opposed to the usual three or four years, we had a bit more savings and a bit more experience to bring to the business. And our dad was a huge help as there was a lot of plumbing and electrical work, together with fire regulation work, which he looked after very well for us."

Asked what was the most difficult aspect, Liam says that everything was hard: "Making decisions about what to do and then how to sort out the building while we were still working elsewhere before we opened was very difficult." However, they seemed to have managed well as the only real mistake they feel they made was in a choice of supplier for telecoms material. "It worked out being about a third more expensive than we think it should have been."



Good advice – talk!

They have several pieces of advice for anyone thinking of setting up their own surgery. Talking to dentists who have been through the process is the most important thing. Liam observes that dentists are very generous in giving advice and that John and himself would feel the same about providing advice to anyone that asked them. "It's also important to have some savings and to keep a part-time job. This is possible where you have a partnership arrangement and allows income to be maintained at some level before a wage can be drawn from the new practice." Liam also advises to get a reasonably well-personalised website – and to put fees on it.

Support from IDA House

The Irish Dental Association provides a comprehensive professional advice service which is free to members on all aspects of setting up a new dental practice. It provides advice and help on contracts, negotiations, and particularly in the buying and selling of practices. Pro forma documents are available and other supports include advice on recruitment and especially employment law. Additionally, the Association always recommends that dentists buying, selling or setting up a practice should avail of the services of a solicitor with appropriate experience.

Advice on working capital

Steven Lynch of MedAccount, a specialist accountancy business for dentists and doctors, has seen many start-up dental practices. He says the biggest pitfall is ensuring that the practice has enough working capital. Typically, he advises, a dentist should ensure that they have arranged an overdraft in the region of €20,000 to €30,000 to ensure that they have enough money to meet the monthly bills. And, he cautions, in today's business climate, it takes five to six years in practice to break even.

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A review of assessments of inappropriate payments in the DTSS

Précis

This paper reviews a recent Department of Health and Children report relating to inappropriate payments in the Dental Treatment Services Scheme in the context of previous research.

Abstract

A recent report, produced for the Department of Health and Children, suggested that inappropriate payments in the Dental Treatment Services Scheme may be above 10%.

Aims

To review past publications on the topic of inappropriate payments in the DTSS and compare their conclusions and methodologies to that of the recent report.

Methods

A literature search (including grey literature) was carried out.

Results

Two studies and three reports were identified as fulfilling the search criteria. The conclusions and methodologies were assessed and compared to the recent report.

Conclusions

There are a number of contrasts between the recent report and previous research. These include: (a) unlike previous research, the recent report does not describe the methodology used to arrive at its estimate; and, (b) the estimate made by the recent report is larger, by a factor of more than two, compared to the sole other estimate made in the previous literature.

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Introduction

In 2009, UK-based Oral Care Consulting Ltd (OCC) was asked by the Department of Health and Children (DoHC) to produce a short report on the current status of probity assurance within the dental sector as undertaken by the Health Service Executive (HSE). The resulting report, entitled 'A Report on Probity Assurance Within the Dental Care Sector'¹ (the recent report) was the latest of a series undertaken by this consulting firm (or a director) concerning public dental services in Ireland, with a particular emphasis on probity assurance in the Dental Treatment Services Scheme (DTSS). The recent report was submitted to the DoHC in February 2009 and issued in November 2009.

In the recent report, OCC states:

"Based on work in alternative care systems, OCC estimates at least 10% of payments are likely to be inappropriate".

OCC further states:

"It is difficult to assess the amount at risk in such circumstances but work in England and Wales suggests that, after operating a probity system for many years the raw risk (that is, before checks) of inappropriate payments being made is at least 8% of the total expenditure. In a system with few if any checks, such as that operated by the HSE, and boosted by apparent changes in the attitude of the authorities to such issues, a much higher rate, probably in excess of 10%, would be expected".

However, in the body of the recent report, OCC states: "We have not been supplied with any information except that which infers that a sum in the region of €60k [was] recovered, but not in more recent years".

It is difficult to reconcile the recent report's assertion of a more than 10% level of inappropriate payments and the comments in relation to the €60k, which represents only a fraction of 1% of the DTSS' annual budget. Unfortunately, OCC does not give a reference for the "work in England and Wales", making it impossible to assess the methodology used and its relevance, if any, to the DTSS. This paper will compare the recent report to previous research on probity of payments in the DTSS.

Aim

The purpose of this paper is to compare the recent report's estimated size of inappropriate payments in the DTSS to estimates made, if any, in previous studies of the DTSS and to compare and evaluate the methodologies used.

Terminology: The recent report does not define what is meant by the term 'inappropriate payments'. It is therefore unclear whether the term is intended to include 'honest' mistakes on the D claim forms, such as transcription errors, clerical errors or misinterpretations. Alternately, the term, as used in the recent report, may be intended to mean provider fraudulent payments. Commentators² have interpreted the term in this manner. The term 'inappropriate payments' as used in this paper refers to payments other than those made for services provided based on need.

Methods

The literature (including the grey literature) was searched for research on inappropriate payments in the DTSS. The search term was initially that used in the recent report, that is, "inappropriate payments". Subsequently, further terms were added as research was reviewed. The final search terms were: inappropriate payments; unexplained payments; probity assurance; fraudulent claims; provider fraudulent claims; misappropriated claims; and, supplier-induced demand (AND) the DTSS. The reference period was 1994 to the present. Databases searched were MEDLINE, CINAHL, LENUS, GOOGLE, and the document archives of the HSE and DoHC. Searches were carried out on October 21 and 28, 2009, and November 4, 2009. Reference lists of published works were checked to identify additional studies not identified in the search. Published authors were consulted and requested to suggest any relevant research for inclusion. Searches were limited to the English language.

Results

The literature search identified two published studies. The first, by Woods, is a PhD dissertation published in 2005 entitled 'Aligning Treatment Provided with Epidemiologically Predicted Need for Oral Health Services by GMS Recipients in the Republic of Ireland'.³ The author compared the epidemiologically predicted need with the level of treatments actually provided in the DTSS. He found that it is not possible to be definitive on the issue of supplier inducement, i.e.,

demand that exists beyond what the well-informed patient would have chosen. However, he believes that the structure of the DTSS certainly provides the opportunity. The author concludes that the patterns of service provision suggested that supplier inducement may exist in the DTSS, but we cannot reasonably assess its scale or even be conclusive as to its existence. The methodology is fully described and its sources referenced in this study.

The second study, by Lynch, was published in 2009 in the *Journal of the Irish Dental Association* and entitled 'Results of a peer review process: the distribution of codes by examining dentists in the Republic of Ireland 2006-2007' (*JIDA* 2009; 55 (1): 38).⁴ The author analysed the distribution of codes assigned in 2,991 reports made by examining dentists in the DTSS between 2006 and 2007. He found that a minority of reports (4.8%) where there was a significant disagreement, related to a small number of dentists (3.9% of contracting dentists). The term 'significant disagreement' was the term used in the report coding instructions issued to the examining dentists and may be partially synonymous with the term 'inappropriate payments' used in the recent report. The methodology is fully described and its sources referenced in this study.

The literature search also identified three relevant reports. The first, by Batchelor and Stirling, was commissioned by the DoHC and produced in 2002, entitled 'Final Report on the Probity Arrangements within the DTSS'.⁵ The authors found that shortcomings in the definition of standards in both clinical and non-clinical areas were apparent, accountability within the system was poor and the arrangements that existed to deal with perceived breaches in probity were inadequate. This presented difficulties when making judgments on the extent of any deviation from acceptable practice. The authors concluded that there was a lack of information on the magnitude of existing problems in the DTSS arrangements. The methodology was described and sources were referenced.

The second report, commissioned by the DoHC, was written by OCC and submitted in 2007, and was entitled 'An assessment of the progress of probity assurance arrangements within the DTSS'.⁶ This report (for clarity it will be termed the 'assessment report') concluded that the HSE had made considerable progress in implementing the recommendations of Batchelor and Stirling regarding probity arrangements. In particular, many of the structural elements of a probity assurance system had been introduced, including the establishment of an examining dentist scheme. The assessment report identified a number of areas where further progress should be made over and above current performance. These included a valid database that would provide timely opportunities for relevant analyses over an extended period, a trained and calibrated examining dentist team, and good collaborative working between the payments agency, contracting agency and the probity unit. However, the assessment report did not estimate the extent of inappropriate payments. The methodology was described and sources were referenced.

The third report was commissioned by the DoHC and submitted in 2009 by OCC. Its title was 'An analysis and evaluation of the Public Dental Service of the HSE'⁷ (for clarity it will be termed the 'evaluation

Table 1: Previous research.

Author Type and year of publication	Was methodology described?	Summary of conclusion(s)
Woods PhD thesis, 2005	Yes	The patterns of service provision suggested that supplier inducement may exist in the DTSS but we cannot reasonably assess its scale or even be conclusive as to its existence.
Lynch Scientific paper, 2009	Yes	Of 1,229 patient examinations by examining dentists in 2006/7, 4.8% were assigned a code indicating significant disagreement. A total of 47 contracting dentists (3.9% of contracting dentists) received such reports.
Batchelor and Stirling Report, 2002	Yes	There was a lack of information on the magnitude of the then existing problems in the DTSS arrangements, making quantification of the problem impossible.
Oral Care Consulting Report, 2007 ('assessment report')	Yes	No conclusion was made as to the magnitude of inappropriate payments.
Oral Care Consulting Report 2009 ('evaluation report')	Yes	Any current estimate of inappropriate payments in the DTSS would be inaccurate without a substantial improvement in data handling.

report'). In the evaluation report, OCC states that any assessment of the qualities of care, including assessments of the efficiency, equity or value for money, will require a substantial improvement in data handling and probity matters in general. These statements were based on an assessment of the current activities of the Public Dental Service, which play a key role in undertaking probity assurance through the monitoring of reports provided by the Primary Care Reimbursement Service. The evaluation report infers that any current estimate of inappropriate payments in the DTSS would be inaccurate without the substantial improvement in data handling mentioned. The methodology was described in this report and sources were referenced. A summary of results is presented in **Table 1**.

Discussion

Inappropriate payments has been described as a pervasive problem affecting the healthcare sector internationally.⁸ Examination of disciplinary cases heard by dental regulatory authorities in, for example, the UK, indicates that dental care delivery systems are not immune from this problem.⁹ The challenge lies in quantifying the problem. Tanzi puts it neatly: "If (it) could be measured, it could probably be eliminated".¹⁰ The major difficulty in measurement is the fact that provider inappropriate payments are non self-revealing. The provider is unlikely to announce involvement, the patient may be unaware or indifferent, and there may be little incentive for management to draw attention to its own perceived failings. Unfortunately, common international practice seems to be that data regarding inappropriate payments involving dentistry per se are not maintained by government agencies. Typically, dentists are grouped with healthcare professionals, such as physicians, pharmacists, opticians and others, when such data are compiled.¹¹ Therefore, the onus lies with researchers, seeking to quantify inappropriate payments made specifically to dentists, to use statistically valid

sampling procedures or other accepted scientific techniques. Otherwise they are simply giving an opinion, albeit perhaps an expert opinion. Expert opinion is ranked lowest in the hierarchy of study types adopted by the Agency for Health Care Policy and Research.¹² There is a danger that such an opinion, as given in the recent report, would be misinterpreted and deemed an established fact. This would have serious implications for contracting dentists, and indeed patients, in a publicly funded delivery system such as the DTSS.

Conclusions

The recent report differs from previous research in a number of ways. Firstly, the estimate of inappropriate payments made in the recent report was larger, by a factor of more than two, than the sole estimate made in previous publications. Secondly, the methodology (how OCC arrived at the figure) is not stated in the recent report, unlike previous research where the methodology was generally well described. Thirdly, the source mentioned ("work done in England and Wales") is not referenced, unlike previous research. Fourthly, although the recent report repeatedly stresses the lack of available data ("although few data exist"; "it is difficult to assess the amount at risk in such circumstances"; "the detailed Risk Assessment to guide further probity measures has not been actioned") OCC is not inhibited in making an estimate. This is in contrast to previous research where authors did not make an estimate due to the perceived lack of pertinent data in the DTSS.

Implications for future policy

The design of a probity assurance system depends largely on the level of risk. The author of this review suggests that any future estimate of the level of inappropriate payments to dentists in the DTSS should be based on statistically valid sampling procedures or other accepted scientific techniques. Future policy of the HSE concerning the type of probity assurance system proposed for the

DTSS should be guided by a risk analysis that is evidence based with a sound methodological foundation.

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CBCT – the justification process, audit and review of the recent literature

Abstract

As part of the quality assurance programme in a dental radiology referral centre, the reasons for taking cone beam CT (CBCT) images were analysed and the volume sizes of the field of view (FOV) were noted. Eighty CBCT scans were carried out in the period examined. Implant planning accounted for 40% of the scans, 26% were for assessment of lesions of endodontic origin, 19% for assessing impactions and 10% for pathology. A review of the recent literature showed that a CBCT scan gives the potential for an improved diagnosis for the patient and has a great range of clinical applications. The effective dose for some of the more common scans was estimated to enable an assessment of the net benefit of the scan to the patient, and to help in developing a scanning protocol.

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Introduction

Cone beam computed tomography (CBCT) was developed for dental use in 1998.¹ Kau *et al.*, in a recent review of the market, found 23 different CBCT machines, each with its own software.²

A typical scan takes approximately 20 seconds, in which the machine orbits the patient and images a cylindrical volume or field of view (FOV).³ Typical sizes in smaller FOV machines are: 8cm diameter x 8cm height for imaging the dentate area of the maxilla and mandible; 8cm x 5cm for either jaw alone; and, 4cm x 5cm for small areas. Larger FOV machines have volumes up to 20cm in diameter.

The reconstruction server and computer work station collate the approximately 300 individual x-rays into small cubes or voxels, which vary in size from 0.12mm³ (high resolution) to 0.4mm³ (low dose). A typical scan can contain 100 million voxels. Secondary reconstruction allows the computer software to organise the voxels into the various planes and the 3D rendering that we see on the screen (Figure 1).

The reconstruction allows for the creation

of a pseudo-panoramic image, cross-sectional images and plotting the course of a nerve, as in Figure 2. Simulated implant placement is another very useful function (Figure 3).

When the Dental Council published its criteria for a clinical audit in radiology (see www.dentalcouncil.ie/ionisingradiation), 'justification' was one of the criteria. An x-ray examination is justified if there is a net gain to the patient. This gain may be diagnostic, an alteration of the treatment plan, or increased confidence for the surgeon contemplating a surgical procedure. This gain has to be balanced against the increased radiation dose; therefore, the dose has to be assessed. The European Commission's Euratom framework has financed a collaborative project to develop a scientific base for the use of CBCT. This SEDENTEXCT (Safety and Efficacy of a New and Emerging Dental X-Ray Modality) project has produced provisional principles for CBCT use.^{4,5} There are 20 principles in all. The first and second principles deal with justification, stating that: "CBCT examinations should potentially add new information to aid the patient's

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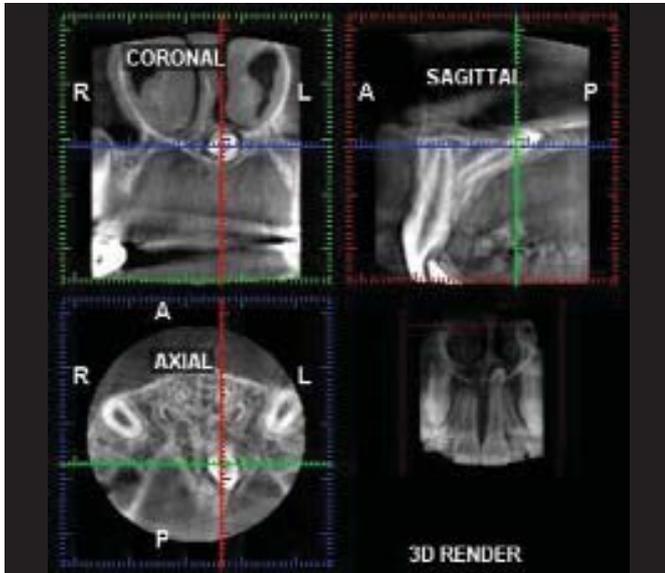


FIGURE 1: Typical screen view.

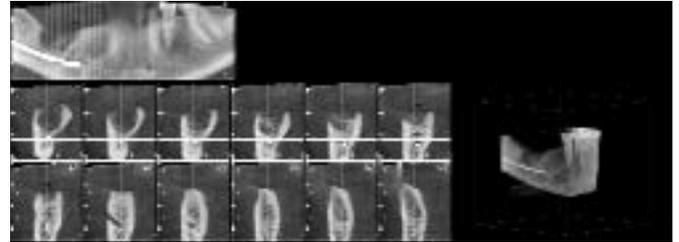


FIGURE 2: Pseudo-panoramic, cross-sections and 3D with ID nerve.

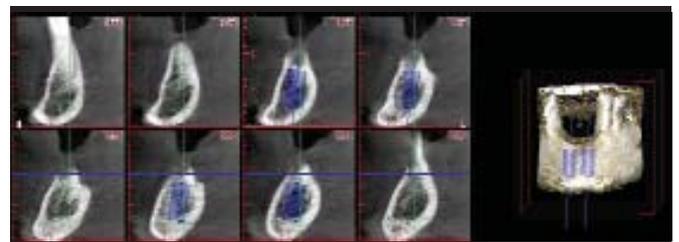


FIGURE 3: Implant planning.

management". Principles 9 and 10 deal with 'optimisation' and state that, when machines offer a choice, the smallest FOV and lowest resolution should always be used. Principles 19 and 20 deal with the radiological report in FOVs outside the dentate area, and state that these reports should be made by a specially trained dento-maxillofacial (DMF) radiologist or by a medical radiologist.

This audit is carried out in a dental radiology referral centre where the CBCT practitioner is a dentist with an advanced degree in dental radiology. The referring dentist must supply sufficient clinical information to aid the justification process. In all cases, the referring dentist did not get the required information from conventional dental x-ray imaging and felt that additional information would be available from a CBCT scan. Using the ALARP (as low as reasonably practicable) principle, CBCT should only be used when the information that is required is not available from conventional imaging because of the increased radiation dose to the patient undergoing a CBCT examination.

In conventional radiography, selection criteria aid the practitioner in assessing the net benefit to the patient and thereby help in the justification process. However, there are currently no selection criteria for the use of CBCT. The SEDENTEXCT project hope to have CBCT selection criteria guidelines published in the near future; however, in their absence, a review of the recent literature helps to outline the main uses of CBCT.

Some images are used to illustrate observations. This review has an emphasis on justification and on the net value of the scan to the patient. The dose received from a CBCT scan will then be reviewed in order to assess the net benefit to the patient.

Implant placement

Worthington *et al.* outlined the benefits of CBCT in implant planning.⁶ They conclude that CBCT provides the anatomical data that can generate a collaborative treatment plan to achieve optimal results for the dentist and patient. This conclusion is derived from the following advantages. The dentist has an improved visualisation and comprehension of the patient's anatomy. Reconstructed images can be measured directly on the screen. The prosthodontic plan can be transferred to the scan using a fabricated radiographic guide (or stent) where a radio-opaque marker indicates the desired placement position of the implant, allowing the dentist to evaluate the anatomy directly under the marker. The information can be used to form a surgical guide or template.

To get full value from the CBCT scan, the dentist contemplating placing implants should work out what information they actually require beforehand, e.g., bone height, bone width, bone quality, condition of previously placed graft material, and whether any pathology is present. Specific queries in a mandibular scan would be the position of the inferior dental nerve canal, the anterior portion of the mental nerve, and the presence of mandibular concavities, while maxillary considerations would include the maxillary antrum.

When looking at or deciding to request a CBCT scan for implant assessment, Scarfe and Farman outlined some limitations.⁷ Bone quality assessment is unreliable, as greyscale values (improperly called Hounsfield units in CBCT) vary greatly for specific tissues and thereby invalidate their use. Artefacts including 'stars', photon starvation and 'pseudo' fracture of alveolar bone occur adjacent to

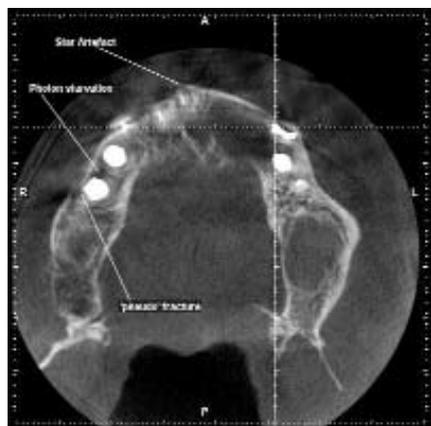


FIGURE 4: Common artefacts.

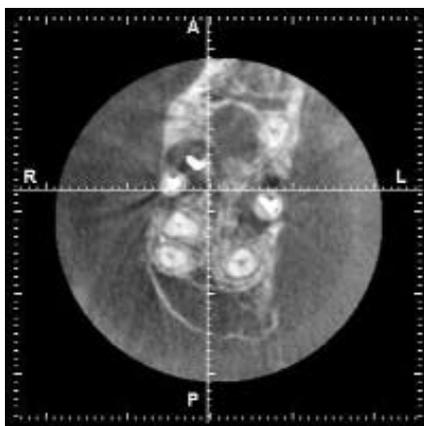


FIGURE 5: Removal of 'anatomical noise'.

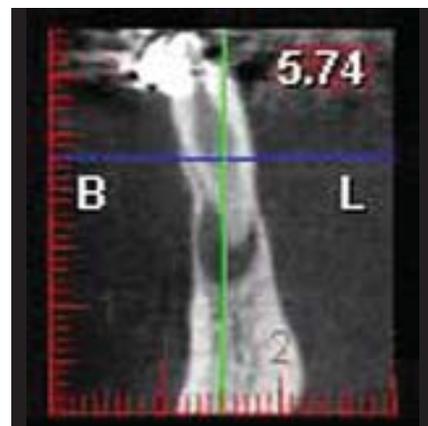


FIGURE 6: Root canal anatomy.

deep metallic restorations like implants or root canal fillings, as in **Figure 4**.

Patient motion during the scan may produce double contours. Another inherent problem is partial volume averaging, where the structure being imaged is smaller than the voxel size or falls between voxels and is washed out of the image. This is important in that gains made in dose reduction by choosing a larger voxel (low-dose) scan may be lost by losing some narrow structures like a thin cortical plate of bone.

Endodontic assessment

Patel and Horner posed the question: "What potential additional relevant information can a CBCT scan yield over and above conventional radiography, which may ultimately improve the management of the potential endodontic problem?"⁸ Patel outlined the following uses for CBCT in endodontics:⁹

1. CBCT is better at the detection of apical periodontitis than conventional radiography, especially in maxillary and mandibular second molars. This may be due to the elimination of 'anatomical noise' – the superimposing roots or the zygomatic arch, as in **Figure 5**.
2. An earlier diagnosis results in a better treatment result. This also means that CBCT is very useful in determining the outcome of treatment. The resolution of a peri-apical radiograph is greater than that of a CBCT image. Newer CBCT machines with a higher resolution and designed specifically for endodontics are now on the market.
3. Pre-surgical planning is greatly facilitated, as CBCT allows the anatomical relationship of apices to anatomic structures to be assessed. The true size and extent of pathology is appreciated, as well as the root to which the pathology is associated.
4. The sagittal plane examination is very useful in assessing dental trauma. CBCT obviates the need for taking images at different angles when checking for a fracture.
5. CBCT is very useful at assessing root canal anatomy, as in **Figure 6**, and in the management of resorption cases.

Patel noted limitations with CBCT, namely that image resolution fell well

short of conventional radiology and that artefacts result in areas with minimal diagnostic value adjacent to highly radio-opaque restorations. Scarfe *et al.*, in their analysis, concluded that: "The usefulness of CBCT can no longer be disputed – CBCT is a useful task-specific imaging modality ... in a comprehensive endodontic evaluation".¹⁰ While outlining similar uses and limitations to those mentioned by Patel, they also showed one intra-operative case where CBCT was used to correct the access preparation.

Orthodontic uses

The British Orthodontic Society introduced guidelines for CBCT use, where Isaacson *et al.* only recommend the use of CBCT in "highly selected cases where conventional radiography cannot supply satisfactory diagnostic information". These may include CP cases, assessment of unerupted tooth (and supernumerary) position, root resorption and planning orthognathic surgery.¹¹ Kapila *et al.*, in their review of CBCT use in orthodontics, illustrate the same protocols as Isaacson *et al.* and include the evaluation of "boundary conditions".¹² They also state that the American Association of Orthodontics passed a resolution that CBCT technology "is not routinely required for orthodontic radiography". Merrett *et al.* have illustrated some of the situations (ectopic eruption with resultant resorption, odontome presence), where the use of CBCT in the treatment plan helped to plan the surgery and altered the treatment outcome.¹³

Relationship of lower wisdom tooth roots to the inferior dental nerve

While CBCT did not help to predict whether the patient would suffer nerve damage or not, Ghaiminia *et al.* found that, compared to a pantomogram, CBCT gave a better bucco-lingual appreciation of the nerve canal and aided in planning the surgical approach, when the nerve was lingually placed.¹⁴

CBCT dose

The Radiation Protection Institute of Ireland (RPII) has estimated the average per capita overall radiation dose as 3,950 μ Sv (microSieverts),

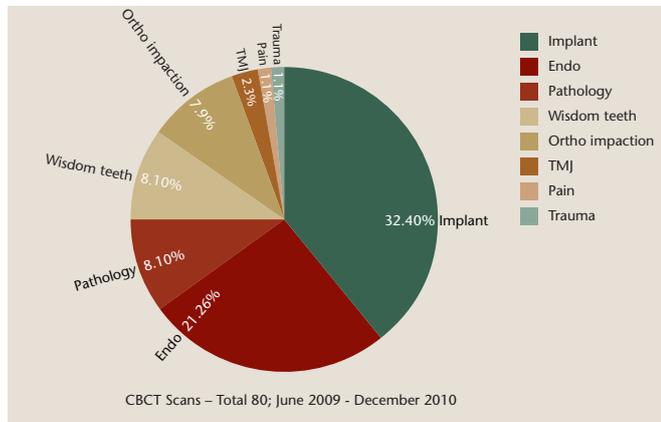


FIGURE 7: Scan analysis.

or approximately 4mSv (milliSieverts).¹⁵ This is made up from various sources of radiation, the largest in Ireland being exposure to radon gas. Other contributions come from background, cosmic and medical radiation. Diagnostic x-rays form the greater part of medical radiation and are carefully monitored by the RPII and governed by the HSE. The main tenets of radiation protection are justification and optimisation.¹⁶ The justification principle is satisfied if the radiological examination produces a positive net benefit. The optimisation component is based on the ALARP principle of keeping the dose as low as reasonably practicable. Therefore, CBCT should not be considered if the necessary information can be obtained from conventional radiography. There is a risk of increased cancer in a population from the combined population radiation dose. This risk is considered stochastic, where there is no threshold dose and risk increases as dose increases. This risk has been estimated by the International Commission on Radiological Protection (ICRP) as 0.055 events per Sievert (Sv).¹⁷ The 'effective dose' is still accepted as the most suitable to measure the radiation risk for patients.¹⁸

Pauwels et al. estimated the effective dose from a wide range of CBCT scanners. The results ranged from 19 to 265 μ Sv. They concluded that a single average effective dose is not a concept that should be used with CBCT. Based on this, scans should have an exposure protocol that leads to an acceptable image for their specific indication.¹⁸

Qu *et al.* also noted significant reported differences in dose for different CBCT machines, and also differences in dose for different examinations or techniques with the same unit. They investigated the effect of different dental application protocols on the dose from the same CBCT machine – the Promax 3D (Planmeca, Helsinki).¹⁹ The results and extrapolation of the results of their study are used in this audit (as a similar machine is used) to estimate the dose from the different scan settings of combinations of patient size, volume size and image resolution. These doses are detailed in the results section. Justification and optimisation are inextricably linked, as the dose is reduced by choosing a small FOV and a lower resolution; by reducing the dose, the net benefit to the patient increases.

Patel used the cosmic radiation dose from a return flight from Paris to Tokyo to compare with the effective dose of 150 μ Sv from a 12cm FOV iCat exposure.⁹ It is a crude comparison and is used in this study to help to quantify the dose of ionising radiation for the purpose of risk assessment.

Materials and methods

As part of the quality assurance programme, the database was searched for all the scans taken in the period of June 1, 2009, to December 21, 2010. All the scans were carried out using the Promax 3D. A total of 80 scans were identified. The scans were collated with the request letters and viewed. Each scan was sorted under the category of the request, of which there were eight in total. The volume size of each scan was noted, and in the case of the smallest volume (4cm x 5cm) the location was recorded.

The doses of the most common scans were estimated using the results and extrapolations of the study by Qu *et al.*¹⁴ There are approximately 45 combinations of settings of patient size, resolution and volume size in the Promax machine, not to mention the dose variations in the various parts of the dentate area that can be scanned in the smallest volume. Qu *et al.* covered 12 settings, and their findings, listed below, were used to extrapolate volume settings commonly used in the audit but not calculated by Qu *et al.*:

- There are five preset patient sizes in the Promax settings. As the tube current increases with patient size, the effective dose rises proportionally.
- The effective dose for a maxillary scan is 44% of the dose for both jaws.
- The effective dose for a mandibular scan is 57% of the dose for a full 8cm x 8cm scan.
- The anterior 4cm diameter FOV scan of the maxilla is 42% of the effective dose of the whole maxilla; an upper molar scan is 66% of the dose of the 8cm maxillary scan.
- The effective dose for all patient sizes is similar for low dose scans, as exposure factors do not greatly increase.

Doses were calculated to help devise a scanning protocol in the radiology centre. For the purpose of comparison to the more common scans, doses of cosmic radiation received on airline flights were calculated using examples from the RPII study.¹⁸

Results

Implant planning accounted for 40% of the scans taken. The second most common request (26%) was for the assessment of lesions of endodontic origin. Impactions made up 19% in total, approximately half of which were for the relationship of wisdom teeth to the ID canal; the other scans were for supernumerary position, palatally impacted canines and lower premolars. There were eight scans (10%) to image pathological lesions and two for TMJ assessment. The results are represented graphically in Figure 7.

The most common scan size, of which there were 39, was the 8cm x 5cm volume, which images the dentate portion of one jaw. The next most used volume size was the smallest FOV (4cm x 5cm), of which

Table 1. Approximate effective dose in μSv (microSieverts) for selected scans.

Patient Size	Full Mx+Md 8x8		Maxilla 8cmx 5cm		Mandible 8cmx5cm		Ant maxilla 4x5cm		Post mx 4cmx5cm	
	High res	Low dose	High res	Low dose	High res	Low dose	High res	Low dose	High res	Low dose
1	102	30	45	13	58	17	19	6	30	9
2	169	30	75	13	96	17	32	6	50	9
3	216	30	95	13	123	17	40	6	63	9
4	272	30	120	13	155	17	50	6	79	9
5	298	30	131	13	171	17	55	6	86	9

Table 2: Comparison of CBCT dose with cosmic radiation.

Area	Patient size	Resolution	Effective dose (μSv)	Destination
Full 8x8	2	High	169	Los Angeles
Maxilla	3	High	95	New York
Ant. maxilla	2	Low	6	London
Post. maxilla	2	High	50	Cyprus
Mandible	4	High	155	Sydney

there were 31 images, and there were 10 of the largest scan size (8cm x 8cm). These choices are illustrated in **Figure 8**.

The most common region of interest for the smallest volume scan was the upper molar area followed by the upper incisor area.

The effective dose in microSieverts was estimated for the most common exposures in the audit and any relevant figures from *Qu et al.*'s study are included in **Table 1** in red. Extrapolated figures are in italics.

Selected exposures are compared to the cosmic radiation doses on return flights from Dublin to the named destination for the relevant scan in **Table 2**. These comparisons may help in assessing the net benefit to the patient.

Discussion

It is not surprising that the majority of scan requests were for implant planning, where the potential for new and additional information is very high. Apart from the accurate measurements and the simulation of implant placement, the shape of the ridge and the bone quality are important considerations best assessed by CBCT. **Figure 9** shows a cross-section of a mandibular ridge. The thin width of the ridge would not be visible using conventional radiography.

Figures 1 and **6** demonstrate the advantages to the surgeon in having a three-dimensional view of the site prior to surgery.

Dental Protection, in their recent publication, leave one to conclude that a pre-operative scan will become the standard of care in implant planning.²⁰ It is important to highlight that there must be a clinical indication rather than a medico-legal reason for scanning.

From reading the literature, it is obvious that there are a myriad of uses for CBCT. There is an equal variation in the doses for the various machines, FOV size and image resolution. When the region of interest is close to the glandular tissues of the thyroid, parotids and the sub-mandibular glands, then the dose rises. This explains why the mandibular dose is greater than the maxillary dose.^{17,18,19} *Pauwels et al.* conclude that dose optimisation should ensure that patient scans are

made using an exposure protocol that leads to an acceptable image for the specific indication.¹⁸ An example of marrying the technical dose information to the clinical evaluation would be the selection of the smallest FOV at the lowest dose for the assessment of a supernumerary or impacted canine position in a child, as in this case the resolution of the image is not of the utmost importance and a child is potentially more sensitive to the risk of ionising radiation than an adult. It is also important to stress that if there is any possibility that the region of interest is potentially larger than initially estimated, then the smallest FOV should not be chosen. Audit and evaluation of image quality help in the development of a protocol in the absence of selection criteria.

Conclusion

CBCT has a great range of clinical applications. The 3D information from a CBCT scan gives the potential for an improved diagnosis for the patient and must do so to justify the higher dose than that used in conventional radiology. The dose can be optimised by using a lower resolution and as small a volume as possible. The quality assurance programme will be used to develop a protocol for the optimisation of dose.

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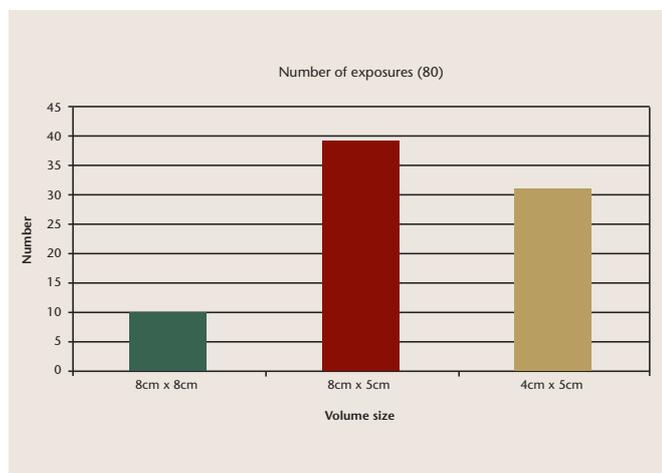


FIGURE 8: Choice of volume size.

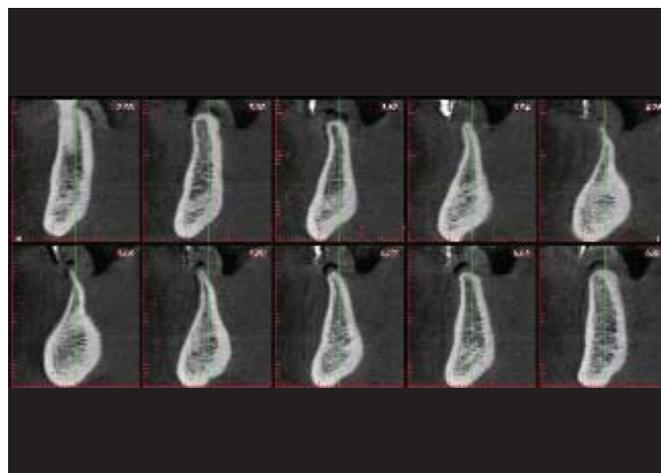


FIGURE 9: Thin mandibular ridge.

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Quiz answers

(questions on page 240)

1. The line illustrated is a survey line and a surveyor is used to assess it.
2. The survey line separates the infrabulge portion of the tooth from the suprabulge portion. It therefore illustrates the presence and location of an undercut. The extent of this undercut is assessed with a different surveying tool called an undercut gauge.
3. The clasp arm should be designed around this line. The shoulder and mid-section of a suprabulge or occlusally approaching clasp should usually lie above the survey line (Figure 2). This rigid portion can then remain passive during seating and should also be positioned low enough to avoid occlusal interference. This sometimes requires modification of the location of the survey line. The tip/terminus of the clasp should be positioned below the survey line (Figure 3) to allow it to effectively engage the undercut and provide sufficient retention. The exact position of this tip will depend on the extent of the undercut, the length and width of the clasp arm, and the material it is made from.
4. The survey line can be produced in a number of ways, including: being naturally present on a tooth due to its contour (this should be assessed with a surveyor); enameloplasty to raise/lower a survey line or increase/decrease the extent of an undercut; composite assition to reshape the buccal portion of a tooth; and, full or partial coverage restorations to allow complete control of the position of the survey line.

Effect of socket preservation therapies following tooth extraction in non-molar regions in humans: a systematic review

Ten Heggeler, J.M.A.G., Slot, D.E., Van der Weijden, G.A.

Objective: To assess, based on the existing literature, the benefit of socket preservation therapies in patients with a tooth extraction in the anterior or premolar region as compared with no additional treatment with respect to bone level.

Material and methods: MEDLINE-PubMed and the Cochrane Central Register of controlled trials (CENTRAL) were searched till June 2010 for appropriate studies, which reported data concerning the dimensional changes in alveolar height and width after tooth extraction with or without additional treatment like bonefillers, collagen, growth factors or membranes.

Results: Independent screening of the titles and abstracts of 1,918 MEDLINE-PubMed and 163 Cochrane papers resulted in nine publications that met the eligibility criteria. In natural healing after extraction, a reduction in width ranging between 2.6 and 4.6mm, and in height between 0.4 and 3.9mm was observed. With respect to socket preservation, the freeze-dried bone allograft group performed best with a gain in height; however, this was concurrent with a loss in width of 1.2mm.

Conclusion: Data concerning socket preservation therapies in humans are scarce, which does not allow any firm conclusions. Socket preservation may aid in reducing the bone dimensional changes following tooth extraction. However, they do not prevent bone resorption because, depending on the technique, on the basis of the included papers one may still expect a loss in width and in height.

Clinical Oral Implants Research 2011; 22 (8): 779-788.

Subgingival debridement of periodontal pockets by air polishing in comparison with ultrasonic instrumentation during maintenance therapy

Wennström, J.L., Dahlén, G., Ramberg, P.

Aim: The objective was to determine clinical and microbiological effects and perceived treatment discomfort of root debridement by subgingival air polishing compared with ultrasonic instrumentation during supportive periodontal therapy (SPT).

Material and methods: The trial was conducted as a split-mouth designed study of two-month duration including 20 recall patients previously treated for chronic periodontitis. Sites with probing pocket depth (PPD) of 5-8mm and bleeding on probing (BoP+) in two quadrants were randomly assigned to subgingival debridement by: (i) glycine powder/air polishing applied with a specially designed nozzle; or, (ii) ultrasonic instrumentation. Clinical variables were recorded at baseline, 14 and 60 days post treatment. Primary clinical efficacy variable was PPD reduction. Microbiological analysis of subgingival samples was performed immediately before and after debridement, two and 14 days post treatment.

Results: Both treatment procedures resulted in significant reductions of periodontitis-associated bacterial species immediately and two days after treatment, and in significant reduction in BoP, PPD and relative attachment level at two months. There were no statistically significant differences between the treatment procedures at any of the examination intervals. Perceived treatment discomfort was lower for air polishing than ultrasonic debridement.

Conclusion: This short-term study revealed no pertinent differences in clinical or microbiological outcomes between subgingival air polishing and ultrasonic debridement of moderate deep pockets in SPT patients.

Journal of Clinical Periodontology 2011; 38 (9): 820-827.

A review of the relationship between alcohol and oral cancer

Reidy, J., McHugh, E., Stassen, L.F.

This paper aims to review the current literature regarding the association between alcohol consumption and oral cancer. The authors have discussed the constituents of alcohol-containing beverages, the metabolism of ethanol and its effect on the oral

microflora. The local and systemic carcinogenic effects of alcohol have been detailed. The beneficial effects of alcohol consumption on general health have also been considered. A possible relationship between alcohol-containing mouthrinses and oral cancer has been suggested in the literature. The authors conclude that this relationship has not yet been firmly established. However, the use of alcohol-containing mouthrinses in high-risk populations should be restricted, pending the outcome of further research.

Surgeon 2011; 9 (5): 278-283.

A clinical study evaluating success of two commercially available preveneered primary molar stainless steel crowns

Leith, R., O'Connell, A.C.

Purpose: To evaluate the success of posterior NuSmile® and Kinder™Krown and to determine the level of parental satisfaction with this treatment option.

Methods: Forty-eight crowns were placed in 18 children with a

mean age of five years. A split mouth design was used. Each participant randomly received each crown type on two or four pair matched molars. Two trained operators completed all treatments. Two additional trained and calibrated clinicians blindly re-evaluated crowns according to specified variables. A visual analogue scale was used to determine parental satisfaction. Examiner reliability was determined by Cohen's kappa scores and results were analysed statistically using Fisher's exact test.

Results: All crowns were retained after 12 months with no statistical difference in the clinical and radiographic success of posterior NuSmile® and Kinder™Krowns. Overall success was high, with 81% of facings intact and 83% free of gingival inflammation after 12 months. Radiographically, 81% were successful. Veneer facing wear was significantly more likely to occur with opposing crowns ($p=0.02$). Parental satisfaction was excellent with a mean score of 9.3 out of 10.

Conclusions: These crowns combine the durability of conventional stainless steel crowns with improved aesthetics and are proposed as a suitable alternative where aesthetic demand is increased.

Pediatric Dentistry 2011; 33 (4): 300-306.



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Need for a change? Articaine vs. lidocaine

DR MONIKA M DAUBLANDER presents a review of a presentation given at the 2009 IFDAS congress in Australia.

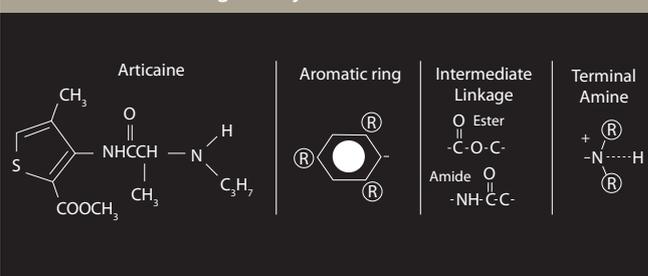
When Guido Fischer, a German dentistry professor, wrote his first textbook on dental local anaesthesia in 1910, he described the combination of procaine, the first ester type synthetic local anaesthetic, the glass and metal syringe delivery system and the method of administration, particularly infiltration and block anaesthesia, as the gold standard.¹ The first dental local anaesthesia, an inferior alveolar nerve block (IANB), had been performed several decades before by the US surgeon William Halsted with cocaine in 1884. Further developments proceeded very slowly. In 1942 the first amide (lidocaine) was synthesised in Scandinavia and in 1972 Muschaweck and Rippel, two German chemists, developed articaine.²

Articaine

Articaine has been used clinically since 1974, primarily in Germany and Austria, and more globally during the last decade. Pharmacological key data of the drug are listed in **Table 1**.³ Articaine is an amide with an ester linkage.⁴ Initial and principal metabolism of articaine is by non-specific esterase hydrolysis in tissues and plasma. The resulting metabolite, articainic acid, is chemically inactive. It reaches maximum concentration ~45 minutes after injection and has a half-life of 60 to 80 minutes. Up to 95% of the articaine is eliminated in the urine. Another metabolic pathway in the liver (the principal pathway of amides like lidocaine) is less important. Local metabolism results in a very short plasma half-life of 20 to 30 minutes (cf. lidocaine ~90 minutes). Consequently, the clinical advantages include low plasma levels of articaine per se, especially with re-injection and fractionated injection when treating different sites (administering injections when needed).

Plasma protein binding is very high (~95%) compared with lidocaine (64%) and is comparable to bupivacaine (**Table 2**). The absorbed unhydrolysed local anaesthetic has a high affinity for plasma proteins and, once bound, does not pass the blood brain and placental barrier. Accordingly, cerebral toxicity is low and only 25% of the articaine dose reaches the foetus.⁵

Table 1: Pharmacological key data of articaine.^{3,4}



Articaine

- 1972: developed by Muschaweck and Rippel.
- 1974: approval by the Federal drug authority in Germany.
- First name: carticaine.
- Thiophene ring instead of a Phenyl ring.
 - Amide with an ester linkage. Main metabolic pathway: hydrolysis by non-specific esterases in tissue and blood to
- Articainic acid: maximum concentration ~45min after injection, half-life 60 to 80min, urinary excretion (60 to 95% of the articaine dose).

Table 2: Characteristics of relevant local anaesthetics.⁵

	Analgesic potency (relation: procaine =1)	Molecular weight (Daltons)	pKa (25°C)	Partition coefficient	Protein binding	Systemic toxicity (relation: procaine =1)
Lidocaine	4.0	234	7.91	2.9	64	2.0
Mepivacaine	3.5	245	7.76	0.8	77	2.0
Bupivacaine	16.0	288	8.16	27.5	96	8.0
Articaine	5.0	284	7.80	0.04	95	1.5

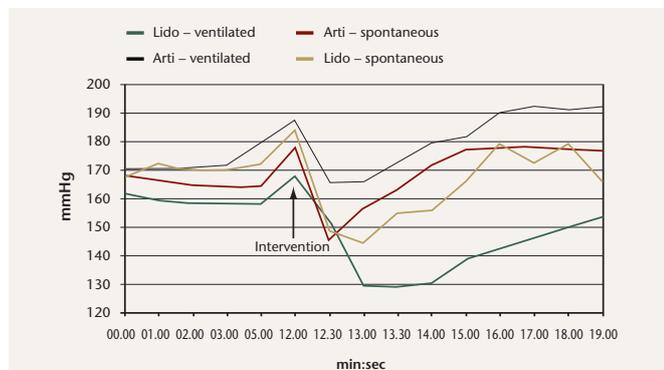


FIGURE 1: Systolic blood pressure after i.v. application of articaine (4%) or lidocaine (2%) in anesthetised baboons.¹³

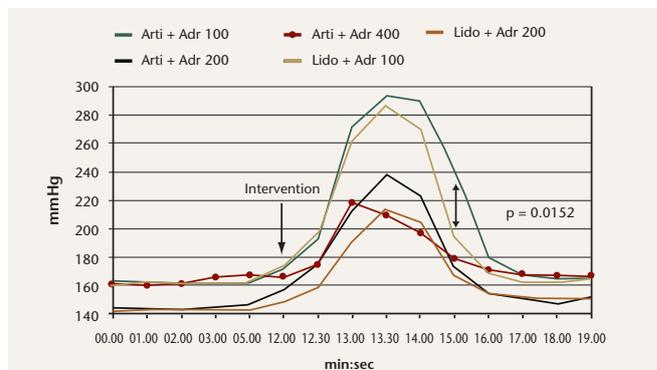


FIGURE 2: Systolic blood pressure after i.v. application of articaine (4%) or lidocaine (2%) with different concentrations of adrenaline in anaesthetised baboons.¹³ Articaine + adrenaline 1:100.000; articaine + adrenaline 1:200.000; articaine + adrenaline 1:400.000; lidocaine + adrenaline 1:100.000; lidocaine + adrenaline 1:200.000.

Articaine’s rapid metabolism and high plasma protein binding results in low overall systemic toxicity. This allows its use in dentistry in the form of a 4% solution.⁶ In anaesthesiology, only lower concentrations of articaine in solution are used in regional anaesthesia methods such as intravenous regional anaesthesia, regional blocks and epidurals, for example.⁷ The high concentration of drug makes it possible to also reduce the administered volume. The possibility of reducing the injection volume is an advantage, particularly in paediatric dentistry and when using local methods like infiltration, but especially for periodontal (PDL) and intraosseous injections.

Other advantages of articaine

Other advantages include articaine’s high lipid solubility and its enhanced tissue penetration. Compared with lidocaine, the articaine level in the alveolar blood following extraction was comparable in the maxilla but significantly higher in the mandible.⁸ A number of clinical studies in recent years have demonstrated articaine’s superiority for infiltration anaesthesia, particularly in the mandible.^{9,10} In virtue of the sufficient depth of anaesthesia, even after infiltration anaesthesia in the region of the mandibular lateral dentition, the IANB can be eliminated in the treatment of premolars and first molars, particularly in children. Moreover, using additional vestibular infiltration, the anaesthesia in insufficient analgesia post IANB can be improved.

Articaine is less cardio-depressant and vasodilative than lidocaine (Figures 1 and 2) and therefore can and should be combined with a lower epinephrine concentration (1:200.000 or lower) in routine dental procedures. The solution with the higher epinephrine concentration is beneficial for use in special indications (painful, protracted procedures) since there is a dose-dependent response rate in duration and depth of articaine anaesthesia, especially after infiltration anaesthesia (Figure 3). In general, the advantages of epinephrine include: higher success rate, longer duration and deeper anaesthesia; lower systemic plasma levels due to slower and reduced diffusion of the injected solution; and, reduction of bleeding. A vasoconstrictor should be used to reduce this

absorption, particularly when used in body regions having high absorption rates such as the head and neck area.

Possible adverse effects

The probability of adverse effects increases in proportion to injected epinephrine dose.¹¹ The positive aspects when using epinephrine as a vasoconstrictor are reversed when the substance reaches the systemic circulation in the case of enhanced absorption or intravascular injection at higher concentrations. Epinephrine then induces specific adverse effects such as hypertension, tachycardia and sweating, for example, and results in an increase in the cerebral toxicity of the local anaesthetic.¹² The complication rate in dental local anaesthesia in the subtoxic range is caused primarily by the epinephrine concentration in the injected solution (Table 3).¹³ Therefore, the added epinephrine dose should be kept as low as possible. When used in combination with articaine this means 1:200.000 or even lower (1:400.000). In conclusion and considering the benefits and risks associated with vasoconstrictors, epinephrine can be used as frequently as possible (taking into account the few absolute contraindications), but in the lowest concentration that produces the desired results.

Although articaine is reliable and safe, there are a number of noteworthy drawbacks. There is the very rare patient who does not respond to the drug. It is assumed that a genetic endowment is the reason for this (plasma cholinesterase metabolism). These patients do not perceive the expected numbness following the articaine injection. The only alternative for achieving sufficient pain control is substituting another drug (e.g., lidocaine). There is concern regarding a putatively increased rate of sensory disorders associated with the use of articaine with IANB. These reports stem from Canada, Great Britain and Denmark, but have not been confirmed in the 30-year experience using the drug in Germany,^{14,15,16,17} or by the critical safety reports from the three major pharmaceutical companies manufacturing the drug worldwide.¹⁸ At present the problem seems to be multifactorial, possibly a combination of direct mechanical trauma to the nerve or to the surrounding tissues,

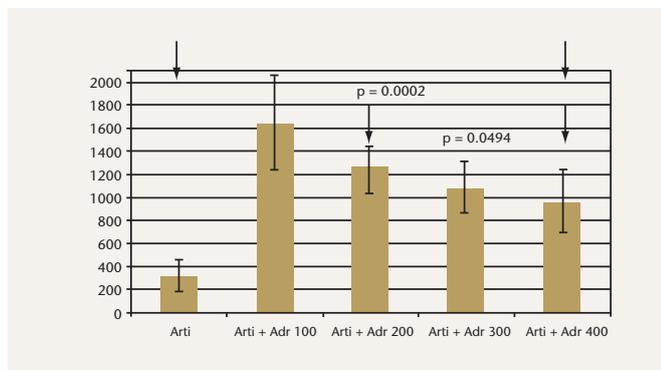


FIGURE 3: Anaesthetic effect of infiltration anaesthesia in the maxilla of young healthy adults in correlation to the adrenaline concentration. The columns show the area under the curve: the function of intensity and duration of anaesthesia.¹³

high pressure during intrafascicular administration, ischaemia and neurotoxicity of the local anaesthetic. But the scientific evidence is insufficient to prove one of these hypotheses. Further research is needed in this respect.

Conclusion

In conclusion, there is no compelling need for substituting articaine for lidocaine, but there are opportunities in virtue of articaine's well-known and proven pharmacological advantages that represent clear benefits for the patient. The possibility of using alternative concentrations of epinephrine in combination with articaine provides the dentist with the flexibility to practise differentiated local anaesthesia; this translates to pain management that responds to patient requirements and is appropriate for the planned treatment.

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Table 3: Incidence of side effects – in correlation to the adrenaline concentration (n = 1,024 patients).¹³

Observed symptom	Arti + Epi 100	Arti + Epi 100	Arti + Epi 100
Nausea		1	1
Restlessness	4		
Dizziness	5		
Tremor	2		
Hypotonia	2		1
Hypertonia	1	1	3
Bradycardia	1		
Tachycardia	2	1	

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Dr Monika Daubländer

Associate Professor, Department of Oral Surgery, Mainz University Medical Centre.

The internet: education, social media and dental practice

ANGUS BURNS and SIMON WOLSTENCROFT offer advice to dentists about various uses of the internet, including accessing dental literature, keeping informed about events for dental professionals, and communicating with patients.



Introduction

The rapid growth of the internet for business and personal use has been witnessed over the past decade and in 2010 it was estimated that approximately two billion people worldwide have access to the internet,¹ representing about 29% of the world's population. This article explores the implications of the internet for the practice of dentistry in Ireland. Areas of interest include the use of electronic media for education and continuing professional development (CPD), the quality of information available to patients online, advertising on the web, and the use of social networking as a means of practice building and oral health promotion.

Education

The internet has allowed dental journals and educational resources to be published online – some subscription based and some free to the user. The major advantage of this is the ability to access articles of interest remotely, i.e., from home or the dental practice, via your own computer and internet connection, rather than visiting a library to access paper journals. It also facilitates journal searches and reduces the burden of journal storage. The internet opens up access to a greater variety of journals outside of a traditional collection and the ability to search for articles electronically through a journal's own web page or through a suitable scientific search engine is invaluable if you are researching a particular subject. Examples of popular search engines included PubMed, Scopus and Google Scholar (Table 1). It has never been easier to locate an article of interest from a vast

database, view the material and be directed to similar articles. The results may show a consensus on a particular issue, or may alert the reader to the fact that controversy exists with regard to a new concept, new methods of treatment or new materials. In the era of evidenced-based treatment, these resources are invaluable.

As mentioned earlier, this information is not always free. Most journals have electronic subscriptions and if an article is to be purchased as a 'once off', it can be expensive. Undergraduate and postgraduate students can access a wide variety of material through university subscriptions, and many journals allow material to be viewed for free through their publishers online. These include the *Journal of Dental Research*, *Angle Orthodontist* and the *Cochrane Database*. Some restrictions can apply, such as only publishing back issues that are more than one year old (as in the case of the *Journal of Dental Research*). For journals that do not have free access, it is generally possible to access the abstract of any recent article for free through the above search engines.

Table 1: Useful search engines.

PubMed (or Medline) –	
Site of the US National Library of Medicine	www.ncbi.nlm.nih.gov/
Google Scholar	www.scholar.google.com
Science Direct	www.sciencedirect.com
NHS Evidence	www.evidence.nhs.uk

Currently, the Irish Faculty of Primary Dental Care, The Royal College of Surgeons of Edinburgh and the HSE provide access to online resources (otherwise requiring subscription) to their employees, members and fellows via an 'Athens' online database. This is an economical way for the practising dentist to access a broad range of online journal articles and an increasing number of healthcare organisations now offer this service (Tables 2 and 3).

Articles are generally downloaded in portable document format (PDF). Once downloaded, these electronic files can be saved in the standard fashion to your computer to allow quick access in the future. If you are downloading large numbers of articles, there is software available to manage your own 'library'. For Mac users, 'Papers' is a very handy software package, which allows you to sort your downloaded articles not unlike the way music files can be organised on Apple iTunes. A particularly helpful tool to catalogue article details for the purposes of referencing is 'EndNote'. This software is invaluable for anybody engaged in scientific writing at any level, as it takes the nuisance and tedium out of arranging a bibliography and also allows the user to 'cite' an article in their library quickly. EndNote is designed to work in tandem with Microsoft Word.

Continuing professional development

Since the disbandment of the Post Graduate Medical and Dental Board, the responsibility for overseeing CPD in dentistry in Ireland lies with the Dental Council. It was the hope and intention of the last Council to introduce mandatory CPD for practising dentists. Dentists would be obliged to complete a set number of verifiable and non-verifiable hours of education during a five-year period. This will not now become mandatory until the passing of the next Dentist Act by the Government. It is likely that in the future a certain amount of the hours could be accounted for by completing online courses or even simply having certain subscriptions. A similar system is currently operated by the General Dental Council in the UK. The advantage of having CPD material available to complete online is of course the flexibility; practitioners can learn in their own time and are not restricted to set conferences and talks.

More casual online learning and discussion forums can be found at the Dental Town website. This large site includes a great deal of information (mostly provided by general dentists in the US) about everything and anything in dentistry. Online video presentations provide demonstrations of clinical procedures. There is the option to take online courses, which are recognised for part fulfilment of US CPD requirements. Membership is free and a browse of the site is recommended, but it should be noted that most of the information appears to be in the form of clinical opinion rather than evidence-based data, and caution is required!

Journal/study clubs, data sharing and 'cloud computing'

Many postgraduate students operate journal clubs to ensure that they are fully updated on relevant subject matter. Many students supply abstracts and critiques to each other for group discussion. This has traditionally been done in a paper format but more recently is being

Table 2: Some free* online journals and resources.

<i>The Cochrane Database of Systematic Reviews</i>	www.thecochranelibrary.com
<i>The Angle Orthodontist</i>	www.angle.org
<i>Journal of the Irish Dental Association (JIDA)</i>	www.dentist.ie/resources/jida/
<i>Journal of Dental Research</i>	http://jdr.sagepub.com/

*Note limitations may apply.

Table 3: Comprehensive lists of free online journals.

PubMed Central	www.ncbi.nlm.nih.gov/pmc/journals/
BDA Library Listings	www.bda.org/library/Free-online-journals.aspx
Highwire (Stanford University)	http://highwire.stanford.edu/lists/freeart.dtl

Table 4: Dental associations and societies in Ireland and abroad.

Irish Dental Association	www.dentist.ie
Orthodontic Society of Ireland	www.orthodontics.ie
Irish Endodontic Society	www.irishendodonticsociety.com/
Irish Society for Disability and Oral Health	www.isdh.ie/
British Dental Association	www.bda.org/
Irish Faculty of Primary Dental Care	www.ifpdc.ie/
Dental Town	www.dentaltown.com
Links to more societies	www.dentist.ie/links/

done online in virtual learning spaces made easily accessible through 'cloud computing'. The form of cloud computing most familiar to people is web-based email (e.g., Gmail, Hotmail, etc.). In a nutshell, cloud computing allows users to access a common data storage site from any computer with an internet connection. The journal/study club buys storage space online and can access their personal cloud space via a password (additional privacy settings are often available to make the site secure) to share documents and presentations.

The potential of the internet for dental education is vast, and there is also great potential for communication within a dental team. Clinical records can be gathered by one clinician for a case that requires multidisciplinary treatment, so that all the clinicians potentially involved can access the material and give their input towards the treatment plan and its completion. In addition to multi-site access, cloud computing offers security against loss of information by equipment theft or damage to clinic facilities. The additional cost of cloud facilities can be weighed against the reduced need for processing power and memory of the computers being used to view the information along with potentially less back-up cost.

In practice, data protection issues could arise when patient details are held online and the security of the site would need to be very dependable. Most sites provide full encryption for security. Dentists working for institutions such as the HSE or the dental hospitals would need to ensure that this practice did not breach local data protection protocols. An example of a website that allows easy access to cloud computing is MobileMe (www.me.com). This is an Apple Macintosh

product but will shortly be replaced and upgraded with their latest cloud computing product iCloud, which offers a free expanded service to users. There are many companies now offering cloud computing sites and the cost is dependent on the size of the storage capacity, but costs are likely to fall as more competition enters the global market. Companies also provide cloud facilities specifically for the purpose of keeping medical and dental records with the ability to view digital radiographs through interfaces such as "Cloud-based PACS" (EBM technologies).

Dental associations and professional bodies

Websites are a means of keeping members informed of developments within the association or society, and in the profession as a whole. They can also act as a source of reliable information for the public. The Irish Dental Association's website includes a wide range of information. There is a classified section for the profession, and a general section on dentistry for the public. The 'find a dentist' section is a means for the public to locate a local dentist easily; this section provides contact details for the IDA member's practice, and a link to the practice website, should one exist. Smaller societies such as the Orthodontic Society of Ireland have similar information related to orthodontics on their websites (Table 4).

Information for patients online

Our patients can research dentistry like never before, and there is now a wealth of information available to anyone who takes an interest. However, there are concerns regarding the quality of the information available to the public. The internet is an open platform and anyone can post information, which is often not subject to peer review. Dentists and healthcare providers need to be aware of this problem and to educate patients accordingly, especially where misplaced expectations of patient care have been developed by online research.

Research examining the quality of patient information about common procedures such as tonsillectomies² and orthodontic extractions³ both found information to be very varied. It was also noted that the most popular sites were not usually the most accurate sources of information. It is a very worthwhile exercise to carry out online searches of common dental issues and see what kind of information is available to patients. Advertising and business interests clearly have a huge effect on the order in which information is available via search engines. It would seem logical for the medical and dental professions to be proactive in directing patients to good sources of online information. This is merely a natural evolution of the patient information leaflet concept to reinforce patient education and awareness.

Social media

The past decade has seen an explosion in the amount of social networking activity. By far the biggest worldwide social networking sites are Facebook and Twitter, but YouTube is becoming a powerful site where the public can view videos on a huge range of subjects.

Facebook

Facebook has 600 million users worldwide⁴ and had approximately 1.6 million active users in Ireland⁵ by last year. The site allows users to easily

build a personal web page, to display photos and share their thoughts (blogging), and to send messages to other users. It also allows users to set up and join interest groups for just about anything. Businesses can take advantage of the service by setting up their own Facebook page to communicate with clients and potential clients. Users are encouraged to become 'friends' of the business and are encouraged to select the 'like' button to endorse the content of the site and, by implication, the business. This allows the business to both keep their customers updated with current news, developments and sales offers, and also to reach anyone who happens to look at the customer profile page. In essence it's a 'virtual' word of mouth and allows you to reach a wide audience for free. Facebook makes a profit from the online advertising space it sells on the pages. This advertising is cleverly tailored to the individual by using information gathered from their profile. Advertisers select the location, age group and interests of their target audience. Many dental practices and companies are starting to use Facebook as an adjunct to their website, and dental advertisements can be targeted at a particular demographic of potential patients.

Twitter

Twitter is a short messaging and micro blogging service, which companies, celebrities and individuals can use to keep customers or 'followers' informed of developments. Its operation is ideal for the smartphone market as followers can be reached instantly. Facebook can also be accessed via smartphone, but was originally designed for computers. Again, Twitter can be used by dental practices to spread information quickly to their patients, assuming the patients subscribe to be 'followers' of the practice.

YouTube

YouTube is a video blogging site that allows individuals and companies to post videos onto the internet. There is a huge amount of content on YouTube, from instructions and demonstrations on how to assemble flat-packed furniture, to comedians hoping to find new audiences. From a dental perspective, our patients are now sharing their experiences of treatment online via video. YouTube allows easy uploading of videos and many video editing software packages also allow direct upload to YouTube to make the process even easier. Dental practices are now making use of YouTube and adding video content to their websites. See www.hiddenbraces.co.uk for an example of this powerful communication tool.

LinkedIn

LinkedIn is a professional social networking site, which allows businesses and business people to set up connections. The idea is the same as the traditional concept of developing business networks but in an online environment, and allows for a wider network to be reached.

Concerns about social media

A number of concerns have arisen about social media.⁶ Facebook has been under scrutiny over the sale of users' data to companies who harvest information and sell it on to marketing firms. People

who provide information on Facebook may be unaware of this, and may feel that information has been used without their consent. This has the potential to be a legal problem for many online companies who hold personal information and use it incorrectly. Sites such as Facebook are constantly reviewing their privacy policies to try and limit these potential problems, but users need to be vigilant about the information they provide to online sites. Potential data protection and privacy issues can arise for individual business users of Facebook and similar sites. In dentistry, pages are open for all to see and practices may post pictures of patients who have undergone treatments, typically before and after photos. It is imperative to seek written and verbal consent from patients who agree to pictures or testimonials being posted to avoid any data protection problems (see below).

Another area requiring caution is the potential for negative or malicious comments to be posted on your business Facebook page. Close monitoring of a business Facebook page is a must to ensure that such material is removed and a malicious user 'blocked'. Links in the form of 'friends' to other pages, such as dental supply companies, could contravene the code of practice of the Dental Council (see below) and practitioners would need to be able to stand over information contained on these pages if it was being used to help promote the practice.

Data protection

Any information held about a patient in an electronic format (or in any other format) in a practice is subject to current data protection legislation. The Office of the Data Protection Commissioner is the body in Ireland responsible for overseeing compliance with legislation. Up-to-date information regarding individual and organisational responsibilities in regard to data protection, and also individuals' rights regarding their personal information held by others, is available online.

One key issue to stress is the need to register with the Data Protection Commissioner. Current legislation states that health professionals processing personal data related to mental or physical health need to register. Dentists running a practice fall into this category. The Commissioner's website is www.dataprotection.ie.

Advertising online

Since the Dental Council issued new guidelines⁷ on public relations, communication of "appropriate professional information to the public" is allowed as long as it complies with these guidelines. Information about services must be "truthful, legal, decent, factual, relevant, accurate" and "must not have the potential to mislead the public". As regards practice websites, they can include similar information to a practice brochure. Social media sites are not referred to in the code; however, it is stated that "dentists should avoid personal publicity, whether in press, radio, television or other media, where such publicity could result in his/her gaining professional advantage". The word "advertising" appears nowhere in the code. In order to clarify this issue, the Dental Council issued a further statement in September 2010⁸ detailing more precisely what is and

is not permitted. "Advertisement" as a word appears and it is stated clearly that practitioners should behave responsibly to ensure that information in adverts abides by the code of practice. The statement gives a list of details, that "a dental web presence must" display. These include the practice name, address, contact details, opening hours, name and qualification (including country) of the principal dentist and the date the website was last updated. Subjective practice and professional titles are not allowed and specific instructions on the use of clinical photographs and patient testimonials are given. What is also of note is that the dentist must ensure that information contained in web links complies with the code of practice if the information is designed to assist in promotion of the practice. A link to the Dental Council website is advised.

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Classified advert procedure

Please read these instructions prior to sending an advertisement. Below are the charges for placing an advertisement for both members and non-members. Advertisements will only be accepted in writing via fax, letter or email (fionnuala@irishdentalassoc.ie). Non-members must pre-pay for advertisements, which must arrive no later than November 4, 2011, by cheque made payable to the Irish Dental Association. If a box number is required, please indicate this at the end of the ad (replies to box number X). Classified ads placed in the *Journal* are also published on our website www.dentist.ie for 12 weeks.

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

Non-members must send in a cheque in advance with their advert. The maximum number of words for classified ads is 40.

Only if the advert is in excess of 40 words, then please contact:
Think Media

The Malthouse, 537 North Circular Road, Dublin 1.

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

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

Positions Wanted

Positions Vacant

Practices for Sale/To Let

Practices Wanted

Unwanted/Second Hand Equipment for Sale

Classified adverts must not be of a commercial nature. All commercial adverts must be display advertisements, and these can be arranged by contacting Paul O'Grady at Think Media, Tel: 01 856 1166.

POSITIONS WANTED

Experienced dentist looking to relocate to Southeast of Ireland. Would like position as associate in Waterford, Tipperary, Kilkenny, or Carlow region. Please Email: dentald7@gmail.com.

Experienced dentist, highly qualified, looking for work on a daily or sessional basis, Dublin area. Available immediately. Email: jfob19@hotmail.com.

Competent, friendly dentist available. Looking for part-time or locum work in Cork area. Experienced in private practice and HSE. Flexible regarding evenings/Saturdays. Tel: 086-821 1212.

Female dentist with over 20 years' experience in private practice seeks associate/locum position in Cork area. Any number of sessions considered. Available for immediate start. Tel: 087-943 5914.

POSITIONS VACANT

Associate required, Limerick City. Single chair practice with digital x-ray. Private patient base, strong support team. Excellent opportunity. Minimum three years' experience. Email: citydentlk@gmail.com.

Experienced part-time (three days) associate required for a busy practice in Co. Cavan (one hour from Dublin). Fully computerised, digital OPG, hygienist, intra-oral camera. Start November. Tel: 087-744 0398, or Email: info@virginadentalsurgery.com.

Experienced dental associate required for busy, modern dental practice in Galway City. Full book. Excellent staff. Superbly equipped and computerised (digital x-ray, OPG, hygienist, etc.). Please Email: dentalpractice@live.ie.

Limerick: Experienced – minimum three to five years – ambitious, dynamic associate required for high profile modern clinic. Very busy, fully private. Computerised OPG, digitalised. Top of the range equipment, superbly trained staff. Extremely good long-term prospects. Email: info@crescentdental.ie.

Associate required in modern dental practice, Monaghan town. Fully

computerised, digital x-ray. Please Email CV to: eldibany113@hotmail.com.

Associate dentist wanted for Wednesdays and Thursdays for busy practice. Tel: 042-933 7033.

Associate dentist required for modern, computerised South Dublin City Centre practice. Full clinical freedom. Excellent support team. Experience essential. Email CV and application to: progressive.dentistrydublin@gmail.com.

Dublin South – ambitious dynamic associate required. Minimum of three to five years' experience. Busy well-equipped two-surgery clinic. Fully private – great location. Superb staff. Good long-term prospects. Flexibility crucial. Full-time – suitable candidate. Immediate start. Tel: 086-807 5273, or Email: niall@innovatedental.com.

Part-time associate dentist required for state-of-the-art clinic in Dublin. Minimum three years' experience. Please Email: carol.moroney@redmondmolloy.ie.

Associate required two to three days a week in Kerry practice. Tel: 087-799 6807, or Email: beanoriordan@eircom.net.

North West Ireland – Associate dentist required to replace departing colleague in modern, fully computerised dental and implant centre. Excellent opportunity for successful applicant. Tel: 0044-78-9658-5557, or Email CV to: info@derryindental.co.uk.

Enthusiastic ethical associate dentist wanted for part-time position in Co. Galway general practice. Contact John and Cathy, Tel: 086-394 7071, or Email: catherine.ann.burke@gmail.com.

Experienced dentist required in Dublin. Busy, modern, digital practice. Full-time position with immediate start date. Please send your CV to emmet@smiles.ie.

Locum required for maternity leave from January, for approximately six months. Busy single surgery practice. SOE. Minimum three years' experience essential. Email CVs to abbeyleixdentalpractice@ireland.com.

Locum required for immediate start, approximately three to four days per week for four weeks in busy modern Co. Galway practice. Email: tuamdental@hotmail.com.

Locum dental associate wanted starting December for busy Southside Dublin practice. Computerised, digital x-ray. Must have experience. Please Email CV to: dentistsdc@hotmail.com.

Periodontist required for a very successful dental clinic in Blackrock, Dublin. On a session basis. Immediate start. Please contact Grace, Tel: 086-264 8970.

Experienced full-time hygienist required. Full-time. Two rural practices. A long-term view is required. Please submit your CV to jamespturner@eircom.net.

Dental nurse/receptionist (full-time) wanted – minimum two years' experience – for Dublin City Centre practice. Please forward your CV to surgerydental@hotmail.com.

Dental nurse required. Swords area. Must be qualified, experienced and computer literate with great organisational and interpersonal skills. Email CV to: dentaljobswords@gmail.com (no agency please).

Experienced dental nurse required full-time, Dublin 18. Must have experience in both nursing and reception. Email CVs to: southdublidentist4@gmail.com.

Dental nurse/receptionist required for new South County Dublin practice. Twenty-five hours a week with view to full-time. Experience essential. Please Email CV to: jobs@ballybrackdental.ie.

Full-time qualified dental nurse required for multi-disciplinary practice in Ballsbridge. Applicants must be well presented and enthusiastic, with good communication and clinical skills – 38 hours per week. Minimum salary €26k. Position available immediately. Please Email: appts@visiondental.ie.

Dental surgery assistant required for busy practice in Killaloe, Co. Clare. Three-day week required commencing September. No agencies. Computer literacy essential. Please Email CV with cover letter to killaloe dental@gmail.com.

Dental surgery assistant required part-time for busy Dublin Northside practice. Computer literacy essential. Please email CV with cover letter to: andrewhatherell@gmail.com.

EQUIPMENT FOR SALE

Equipment for sale: surgery units (Beaver) and full surgery equipment (used). Tel: 087-997 7589.

EQUIPMENT WANTED

Wanted – second-hand dental equipment for new surgery. Please Tel: 087-699 3487.

Equipment wanted for new practice opening shortly. Everything needed – chairs (delivery units preferred), x-ray cameras, handpieces, dentist and nurse chairs, compressor, suction, reception desk, office furniture, waiting room furniture, etc. Will consider collection from anywhere. Email: longdentcent@gmail.com.

Second-hand dental equipment wanted for a complete surgery. Tel: 085-238 8543.

PREMISES FOR SALE/TO LET

Dental premises to let opposite Knocklyon Shopping Centre. Excellent location with superb road frontage. Dentist previously practised in this surgery for 30 years. Rent negotiable. Tel: 087-224 6764 to arrange viewing.

Prominently located spacious surgery to let. Ground floor shop unit, Dublin 8. Practice established 1968. Needs modernisation. Tel: 01-454 1488/416 9775. Email: mboylan73@hotmail.com.

For sale – Co. Clare. Long established – good footfall. Walkinable. Low overheads – expense-sharing relationship present. Good equipment including OPG. Hygienist. Large potential for growth. Ample room. Excellent staff. Mainly private practice. Good new patient numbers. Tel: 086-807 5273, or Email: niall@innovatedental.com.

For sale. Busy dental practice – well equipped – in South Dublin area. Excellent location. Established 30 years plus. Email: dublindental@yahoo.ie.

Brand new surgery to let in a medical centre. First floor, Glenageary Shopping Centre. Flexible terms, good footfall and pleasant environment to work in. Contact David, Tel: 086-242 4746.

Norfolk, England



Full-time Associate wanted for six-surgery practice

Located in beautiful Norfolk countryside

- Practice is computerised, has a hygienist and experienced staff
- Panoramic, intra-oral camera, air-conditioned
- Member of the BDA Good Practice Scheme
- Situated 30 minutes from Norwich

See our website: www.clarencehouse.net
Email your CV to dmhansell@btconnect.com
or telephone 00 44 7900 216174

OCTOBER 2011

Eastern Branch, IDA – Scientific Meeting

October 11 *Riverside Park Hotel, Enniscorthy,
Co. Wexford, 8.00pm*

The speakers are: Dr Maurice Fitzgerald on 'Restoration of the endodontically treated tooth', Dr Seamus Rogers on 'Complex medical histories and oral surgery', and a joint presentation by Drs Fitzgerald and Rogers on 'Implant treatment planning – the prosthodontically driven approach'. This meeting is Dental Council approved for two CPD points.

IDA
MEMBERS
ONLY

HSE Dental Surgeons Group of the IDA – Annual Seminar

October 12-14 *Sheraton Hotel, Athlone, Co. Westmeath*

Open to all of the dental team in both public and private practice.
Tel: 01-2950072, or Email: Dario@irishdentalassoc.ie.

Kerry Branch, IDA – Scientific Meeting

October 13 *Aghadoe Hotel, Killarney, Co. Kerry, 8.00pm*

The speaker is Dr Eamon Murphy on 'Temporomandibular Joint Disorders'.

IDA
MEMBERS
ONLY

Metropolitan Branch, IDA – Team Evening:

Practical Cross Infection Control, Practical Radiological Compliance, Revenue Changes

October 13 *Hilton Hotel, Charlemont Place, Dublin 2, 6.30pm*

Speakers are Drs Nick Armstrong and Brendan Fanning.

IDA
MEMBERS
ONLY

NOVEMBER 2011

Irish Dental Hygienists Association –

Annual Conference

November 5 *Clarion Hotel, Sligo*

Please see <http://idha.ie/idha-winter-conference-november-5th-2011> for more information.

Eastern Branch, IDA – Scientific Meeting:

An overview of orthodontics in 2011

November 8 *Riverside Park Hotel, Enniscorthy, Co. Wexford, 8.00pm*

The speakers are Dr Don Ryan, orthodontics, and Dr Jonny Butler, orthodontics. This meeting is Dental Council approved for two CPD points.

IDA
MEMBERS
ONLY

Metropolitan Branch, IDA – Scientific Meeting:

Restoring Endodontically Treated Teeth

November 10 *Hilton Hotel, Charlemont Place, Dublin 2, 7.30pm*

Speakers are Drs Gerry Cleary and Rebecca Carville.

IDA
MEMBERS
ONLY

Irish Society for Disability and Oral Health (ISDH) Evening Meeting – 'What's so special about care for patients with learning disability?'

November 17 *Dublin Dental Hospital and School, 7.00-8.00pm.*

Speaker is Dr Caomhín MacGiolla Pádraig. Admission free to all. For further information contact adrienne.dolan@gmail.com, or visit www.isdh.ie.

Orthodontic Society of Ireland – Autumn Meeting:

Orthodontics – Art Meets Science

November 18 and 19 *Hayfield Manor Hotel, Cork*

Featuring Professor Kevin O'Brien and Dr Jonathan Sandler.

Munster Branch, IDA – Annual Scientific Meeting:

The changing face of dentistry

November 18 *Fota Island Resort and Spa, Cork*

Lecturers include Professor David Bartlett, Professor Tim Newton, Dr Tom Houlihan, Dr Donal Blackwell and Leanne Papaioannou.

Email c.nevin@ucc.ie for more information.

IDA
MEMBERS
ONLY

Munster Branch, IDA – Meeting

November 30 *Maryborough House Hotel, Cork, 8.00pm*

Speaker is Sheila Scott.

IDA
MEMBERS
ONLY

JANUARY 2012

Metropolitan Branch, IDA, and Irish Endodontic Society – Scientific Meeting

January 26 *Hilton Hotel, Charlemont Place, Dublin 2, 7.30pm*

Speaker is Dr Jens Andreasen.

AEECD Dubai 2012

January 31 to February 2 *Dubai International Convention and Exhibition Centre*

For further information contact info@aeecd.com.

FEBRUARY 2012

Metropolitan Branch, IDA –

Annual Scientific Meeting: Treating the whole family

February 10 *Hilton Hotel, Charlemont Place, Dublin 2, 2.00pm*

Starts at 2.00pm with Gala Dinner afterwards.

IDA
MEMBERS
ONLY

MARCH 2012

Metropolitan Branch, IDA –

Scientific Meeting and Annual General Meeting

March 8 *Hilton Hotel, Charlemont Place, Dublin 2, 7.30pm*

Speakers are Dr Andrew Norris and Professor Leo Stassen. The meeting will be followed by the Metropolitan Branch Annual General Meeting.

IDA
MEMBERS
ONLY

APRIL 2012

Orthodontic Society of Ireland

April 27-28 *Faithlegg House, Co. Waterford*

Speakers are Dr Vince Kokich Jnr on 'Aesthetics, finishing and interdisciplinary treatment', and Drs Albino Triaca, Marco Tribo and Luca Signorelli on 'Surgical Orthodontics'

JUNE 2012

Europerio7 – 7th Congress of the European Federation of Periodontology

June 6-9 *Vienna. See www.europerio7.com.*

Clinically proven non-stop 12 hour protection against bacteria...



*Dramatisation illustrating reduction of plaque bacteria 12 hours after toothbrushing with Colgate Total vs stannous fluoride toothpaste.

...and protects against most common dental problems, including:

- Plaque
- Tartar
- Cavities
- Gum Problems
- Sensitive Teeth
- Enamel Erosion
- Bad Breath
- Staining

**For a healthy mouth
recommend NEW Colgate Total.**

Colgate Total provides 12 hour clinically proven antibacterial protection and is approved by the Irish Dental Association



All-on-4™

The efficient treatment concept
with immediate loading.



All-on-4 was developed to provide clinicians with an efficient and effective restoration using only four implants to support an immediately loaded full-arch prosthesis.* Final solutions include both fixed and removable prostheses such as NobelProcera Implant Bridge Titanium or Implant Bar Overdenture. The tilted posterior implants help avoid relevant anatomical structures, can be anchored

in better quality anterior bone and offer maximum support of the prosthesis by reducing cantilevers. They also help eliminate the need for bone grafting by increasing bone-to-implant contact. All-on-4 can be planned and performed using the NobelGuide treatment concept, ensuring accurate diagnostics, planning and implant placement.

Nobel Biocare is the world leader in innovative and evidence-based dental solutions. For more information, call + 44 (0) 208756 3300 (UK), 1800 677306 (Ireland) or visit our website.

www.nobelbiocare.com