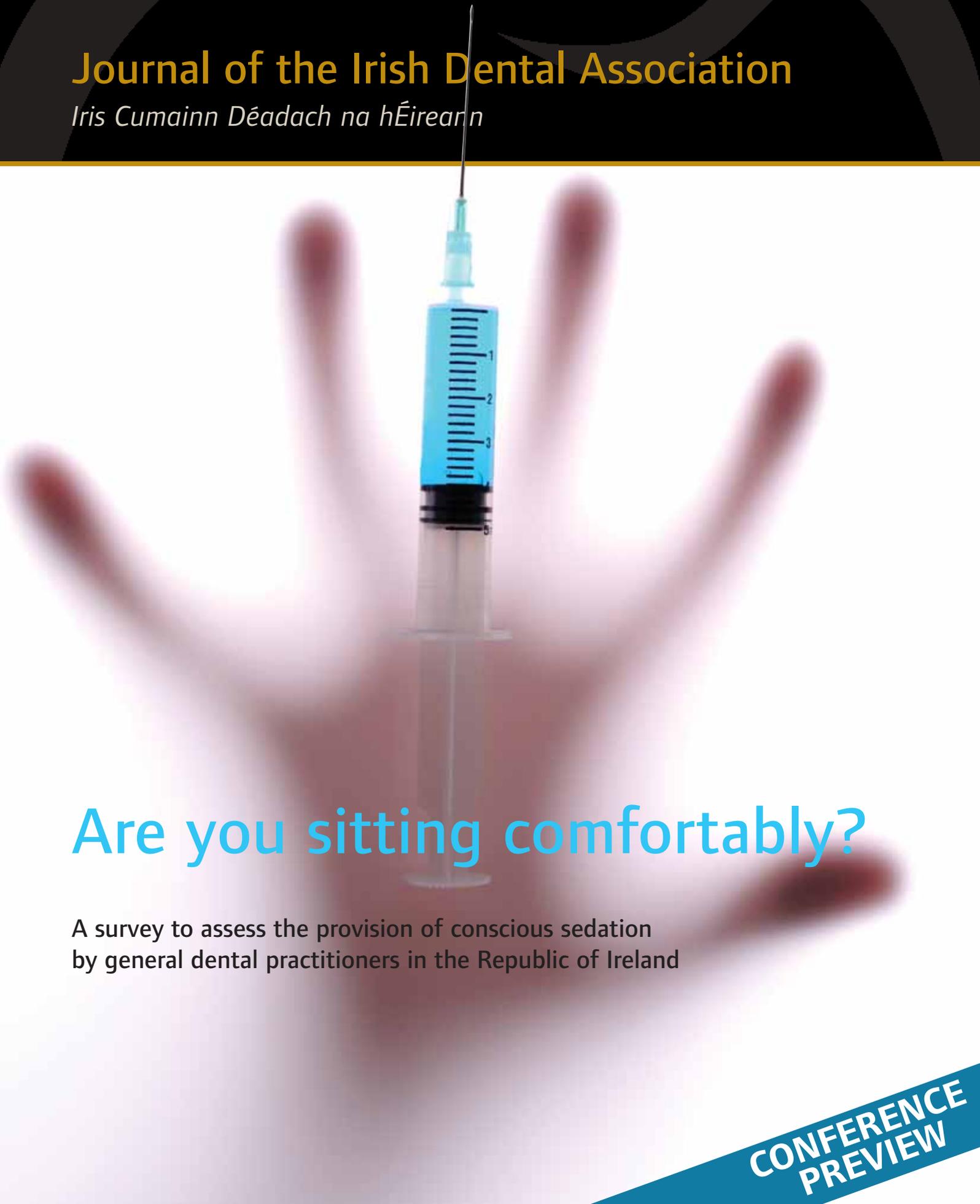


Volume 57 Number 2  
April/May 2011

  
irish dental association

# Journal of the Irish Dental Association

*Iris Cumainn Déadach na hÉireann*



## Are you sitting comfortably?

A survey to assess the provision of conscious sedation  
by general dental practitioners in the Republic of Ireland

**CONFERENCE  
PREVIEW**

new

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**References:** 1. Burwell A et al. J Clin Dent 2010; 21(Spec Iss): 66-71. 2. LaTorre G, Greenspan DC. J Clin Dent 2010; in press. 3. Effiant SE et al. J Mater Sci Mater Med 2002; 26(6):557-565. 4. Clark AE et al. J Dent Res 2002; 81 (Spec Iss A): 2182. 5. GSK data on file. 6. Du MQ et al. Am J Dent 2008; 21(4): 210-214. 7. Pradeep AR et al. J Periodontol 2010; 81(8): 1167-1173. 8. Sallan S et al. J Clin Dent 2010; in press. SENSODYNE® and the rings device are registered trademarks of the GlaxoSmithKline group of companies. Prepared November 2010. GSKCH/2011/0026.

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**For advice to authors, please see:**  
[www.dentist.ie/resources/jida/authors.jsp](http://www.dentist.ie/resources/jida/authors.jsp)

Published on behalf of the IDA by  
 Think Media, 537 NCR, Dublin 1  
 T: 01-856 1166  
[www.thinkmedia.ie](http://www.thinkmedia.ie)

EDITORIAL  
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73 EDITORIAL

74 PRESIDENT'S NEWS  
 A challenging year – with further challenges ahead

75 LETTER TO THE EDITOR

75 IDA NEWS  
 IDA on Facebook and Twitter ...  
 Display of dentists' fees ... Learning by the Lakes 2011 social programme

76 QUIZ

84 BUSINESS NEWS  
 Industry news for dentists

88 IRISH DENTAL BENEVOLENT SOCIETY

91 IDA ANNUAL CONFERENCE 2011

95 INTERVIEW  
 Ann-Marie Hardiman talks to Dr Brid Hendron, dentist and speaker at this year's Annual Conference

99 PEER-REVIEWED  
 A survey to assess the provision of conscious sedation by general dental practitioners in the Republic of Ireland  
*V Fisher, LFA Stassen, J Nunn*

107 ABSTRACTS

110 FACT FILE  
 Metal-ceramic versus all-ceramic restorations: part 3

114 PRACTICE MANAGEMENT  
 Induction of staff and team training

116 CLASSIFIED

118 DIARY OF EVENTS



News 80

*Successful conference for Metro Branch*



Conference preview 95

*Interview with Brid Hendron*



Fact file 110

*Choosing the right restoration*

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## New era

Honorary Editor, PROFESSOR LEO STASSEN, reflects on changes in Government and on highlights of this latest edition of the Journal.

Since our last edition, the Irish political landscape has changed very radically. We extend, as always, a courteous welcome to the Ministers responsible for the areas involved in oral healthcare (see p75). Certainly the breadth of change in political representation makes this something of a new era. However, the scale of change required to develop meaningful state-funded oral healthcare is enormous. We live in hope, but our hope is tempered by our experiences over many years.

Change too is coming to the IDA as Dr Billy Davis completes his term as President of the Association and Dr Conor McAlister prepares to take office. We wish both every success. Readers should note (p78) that there was a record number of new members in 2010 and that the Association is planning a series of road show meetings on the future of state-funded dentistry with details to follow.

Professor Helen Whelton's election (p84) to the Vice-Presidency of the International Association for Dental Research is a significant honour for her and for Irish dentistry. We celebrate this honour and look forward to her elevation to the Presidency in 2013.

These are difficult times and while many of us are fortunate, some of our colleagues fall into serious financial difficulty. It is important that everyone is aware of the Irish Dental Benevolent Society (p88) for two reasons: so that you may contribute to their excellent work (should you be in a position to do so); or so that you may avail of their assistance if you find yourself in financial difficulty. Our thanks to new Society President Dr Aislinn Machesney for the information on the Society.

The single biggest event of the dental calendar in Ireland is the IDA's Annual Conference. This year it is in Cavan and appropriately themed 'Learning by the Lakes'. We preview the Conference and interview one of the speakers, Dr Brid Hendron, in this edition (pp91-96). Dr Hendron employs neurolinguistic programming to assist patients who are experiencing anxiety. It is evident from the interview that there are aspects of her techniques that all of us can use in our daily routines. We should, and I look forward to hearing Brid speak at the Conference.

The use of sedation is an important skill in dental surgery. The survey by Veronica Fisher (pp99-106) identifies the need for postgraduate training in conscious sedation and for increased awareness of the Dental Council Code on the provision of conscious sedation.

In Part 3 (the final part) of his series on 'Metal-ceramic versus all-ceramic restorations', Dr Seamus Sharkey demonstrates how dentists can achieve the best outcomes for both types of restorations. This is a comprehensive and very well documented fact file which will be of significant value to clinicians who can use it in their daily practice. We are grateful to Dr Sharkey for his excellent series.

Dr Andrew Collier (pp114-115) makes the simple point that good training is vital to the safe and effective integration of new team members. He explains the steps and procedures involved and his advice is helpful to every practitioner with staff.

As always, I look forward to meeting you all in Cavan at the Annual Conference.



Leo F. A. Stassen

Prof. Leo F. A. Stassen  
Honorary Editor

# A challenging year – with further challenges ahead

In his final message as IDA President, DR BILLY DAVIS encourages members to come to Cavan for the Annual Conference.

As I write my last President's news for the *Journal of the IDA*, it does not seem so very long since the IDA Annual Conference in Galway. It has been a very busy year, in which many very important issues had to be considered and acted on. The support and enthusiasm from our team at IDA House has been immense.

Now, more than ever, as I have said before, it is really important to look out for and help each other, not just on an individual basis, but as an Association of colleagues working in the different aspects of the same profession. While each of the various constituent groups have their own particular interests, it is encouraging to see the spirit of co-operation that exists between them. What happens to one group will nearly always have a knock-on effect on other groups. This co-operation also exists with our colleagues in other dental organisations, and indeed with other professional bodies both here in Ireland, in the UK, and in North America.

### Come and learn by the lakes

Yes, it is that time again when our Annual Conference – Learning by the Lakes – beckons at the Slieve Russell Hotel, Co. Cavan, from May 12-15, and there are more reasons than ever why we should all attend. There is an excellent line-up of international and national speakers whose presentations should not be missed. The Annual General Meeting of the Association on the Thursday evening will afford the opportunity to hear what is happening in the Association and to voice your opinion on it. The GP Meeting will be critical for general practitioners to discuss those matters that are of particular relevance to general dental practice.

One of the more important aspects of the Conference is the opportunity to interact with our colleagues, sharing views on treatment modalities, materials and aspects of practice management long after the lectures have finished. Many a take home gem has

surfaced in such conversations. Lest you might think that it will all be scientific, there will also be plenty of activities on the social front to keep you entertained.

The bookings have been excellent to date, so register now to avoid disappointment. Attendance at the Conference fulfils your entire CPD obligations for the year.

### Time for thanks

Finally, I would like once again to thank the Metropolitan Branch for nominating me and you for allowing me the honour of being President of the IDA. It has been an enjoyable, challenging, exciting and rewarding experience and I am taking many happy memories of the year with me. I wish Dr Conor McAlister every success and the very best of luck during his year as President.

Dr Billy Davis  
President, IDA



### PRE CONFERENCE COURSES



Conservative aesthetic and restorative dentistry – a potpourri for clinical success  
Prof. Harald Heymann



Advanced endodontics – lecture and workshop  
Dr Fred Barnett



Problem solving in restorative dentistry  
Prof. Richard Ibbetson



Medical emergencies (half-day)  
Dr Alison Dougall/Skills for Life

## Letter to the Editor

Dublin Dental School and Hospital  
Lincoln Place  
Dublin 2

Dear Editor,

We refer to the recent article 'An audit comparing the discrepancies between a verbal enquiry, a written history and an electronic medical history questionnaire: a suggested medical history/social history form for clinical practice' by Carey and Stassen (*Journal of the Irish Dental Association* 2011; 57 (1): 54-59). The methodology of this audit is flawed as it audited paper records of a verbal history. The quality of a verbal history can only be assessed by direct observation of the history-taking process. It is established practice for experienced clinicians to record relevant medical history, i.e., only record positive and relevant negative findings in their written notes, rather than a long list of irrelevant negatives. It is surprising that the authors did not consider this in their discussion.

Yours Sincerely

Prof. SR Flint  
Dr CM Healy

## Editor's response

Dear Prof. Flint/Dr Healy,

Thanks for your letter with regard to our audit on history taking. Unfortunately, if part of a medical history is not recorded in the notes (electronic or other), there is no record of a verbal history available to assess. If negative history questions are not recorded, it is hard from a clinical or medico-legal point of view to claim that a question was asked. A purely verbal medical history with no negatives recorded is not therefore available for audit or to define good clinical practice, or to allow comment. A verbal history without confirmation of positive and negative questions asked is flawed. Experienced clinicians are also fallible and as many medical histories are taken by students in busy clinics, it might be safer practice for a clinician to agree questions, check the answers and expand on any deficiencies in the history, as suggested in the paper.

Prof. Leo FA Stassen FRCS (Ed) FDSRCS MA FTCD FFSEM(UK) FFDRCSI  
Oral & Maxillofacial Surgeon  
Dublin Dental School and Hospital,  
National Maxillofacial Unit,  
St James's Hospital

## New Ministers at the Departments of Health and Social Protection

Following the General Election of February 25, 2011, new ministers have been appointed to the Departments of Health and Social Protection.

**Dr James Reilly TD,**  
*Minister for Health*



Originally from Lusk in North Co. Dublin, Dr Reilly worked as a GP in the North County Dublin area for 25 years, and is a past president of the Irish Medical Organisation. He served on the former Eastern Health Board, the Eastern Regional Health Authority and the Northern Area Health Board. He was first elected to Dáil Éireann for Dublin North in 2007. He was appointed Party Spokesperson on Health in 2007 and Deputy Leader in July 2010.

**Roisin Shortall TD**  
*Minister of State with responsibility for Primary Care*



Originally from Dublin, Minister Shortall was first elected to Dáil Éireann in 1992 and was re-elected in 1997, 2002 and 2007. Formerly the Labour Party Spokesperson for Social and Family Affairs, she has been a member of the Committee of Public Accounts and the Joint Committee on Social and Family Affairs. She was a member of Dublin City Council from 1991 to 2003, and was Chairperson of the Eastern Health Board between 1996 and 1998.

**Joan Burton TD**  
*Minister for Social Protection*



Formerly a chartered accountant and senior lecturer at Dublin Institute of Technology, Minister Burton was first elected to the Dáil in 1992, and was re-elected in 2002, 2007 and 2011, when she was the first TD elected to the 31st Dáil in the Dublin West constituency. Minister Burton has been Minister of State for Social Welfare, Minister of State for Justice, and Minister for Overseas Development. Her current portfolio will include the administration of the PRSI scheme.

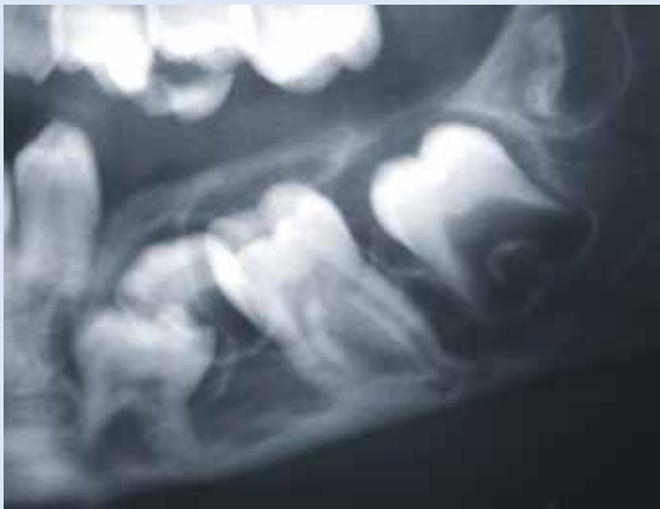
## Quiz

Submitted by Dr Ciara Scott.

This nine-year-old girl presents for a dental visit with her mum. The following teeth were charted as present:

6 E D C 2 1 / 1 2 C D E 6  
6 E D C 2 1 / 1 2 C D

The patient is in the early mixed dentition, but LLE and LL6 are not present. The parent and patient could not recall any history of dental extractions, so an OPG was taken.



1. What abnormalities does the radiograph show?
2. What would this patient's treatment involve?
3. What risks might this involve?

Answers on page 108

## News from IDA House

2011 is already shaping up to be a very busy year for the Association.

### HSE cannot unilaterally vary medical card scheme without notice



The High Court has ruled that the HSE cannot unilaterally vary the terms of the medical card scheme's (DTSS) 1999 Revised Procedures "to the point that the service to be provided is radically reduced without providing any notice whatsoever".

Mr Justice Murphy found against the claim brought by Drs Martin Reid and James Turner that there had been a breach of contract by the HSE in unilaterally varying the terms of the contract as set out in Circular 08 of 2010.

In spite of the finding that the HSE was not entitled to unilaterally vary the terms of the DTSS contract/procedures, Mr Justice Murphy found that the HSE was entitled to act to limit the scope of the scheme because of an obligation to live within its resources as set out in legislation introduced in 1996. The judgment was handed down on February 28. Drs Martin Reid and James Turner are set to appeal to the Supreme Court on a number of fundamental points of law covering aspects of the judgement from Mr Justice Murphy, and also having regard to issues that were not addressed in his judgement.

### Government must deliver on dental health

The Chief Executive of the IDA, Fintan Hourihan congratulated Dr James Reilly on his appointment as Minister for Health, Roisin Shortall on her appointment as Minister of State in charge of primary care and Joan Burton as Minister for Social Protection (responsible for the PRSI dental scheme). The Association has also sought urgent meetings with all three.

The Association is looking forward to the new Government delivering on the commitments both coalition parties made on dental health issues during the election campaign.

Both Fine Gael and Labour said they would:

- ✓ reinstate the Medical Card Dental Scheme;
- ✓ fill the vacant post of Chief Dental Officer as soon as possible;
- ✓ review the PRSI Dental Scheme; and,
- ✓ engage with representative bodies such as the IDA.

*continued overleaf*

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### Complaints system at advanced stage

Plans for the introduction of a system to deal with 'minor' patient complaints are at an advanced stage, with ongoing discussions taking place between the Irish Dental Association and Dental Protection. It is hoped that a system will be rolled out later in the year that will be available to patients who wish to pursue complaints that cannot be resolved within the practice, and it is hoped that this will also reduce the incidence of claims being referred to the civil courts or to the Dental Council, and will thereby reduce a lot of red tape and worry for dentists. Full details of the operation of the scheme are still under discussion and it is hoped that they will be finalised in the coming months.

### Trade union/charitable status

The establishment of a trade union for IDA members is at an advanced stage and discussions with the Registrar of Friendly Societies are making significant progress. The Registrar has received a copy of the proposed rules for the trade union and it is hoped that a few minor outstanding matters can be resolved to the satisfaction of the Registrar in the very near future. Securing trade union status has been the subject of intensive effort since the adoption of the AGM decision to take all necessary steps to secure trade union status, in an attempt to protect and enhance the position of the Irish Dental Association as the sole representative body for the entire dental profession.

### Plans for 2011

It's clear that 2011 will see change being accelerated for all members of the profession, and this will require new and dynamic responses on the part of the Association.

The future of the two state dental schemes, and the need to find new ways of retaining and attracting patients, as well as the challenges posed by pending legislation to deal with licensing of dental premises, new powers for regulatory bodies such as HIQA and the Dental Council and so on, mean that dentists need a strong voice and

professional representation. We have taken careful note of the responses received in the members' survey recently undertaken and we are already making plans to progress a number of important initiatives, including:

- the launch of further additional online CPD resources for IDA members;
- new practice management guidance for members;
- the launch of a new generation of the IDA website; and,
- ongoing media and public affairs campaigning to highlight the policy mistakes being implemented in respect of dentistry and to encourage regular visits to dentists.



In addition, you will have received an extremely exciting programme associated with our Annual Conference in the Slieve Russell Hotel, which will run between May 12 and 15. The value of meeting colleagues at our many events, or chatting online through the members' section of our website, is probably even greater than ever, and we would encourage you to attend our branch and national events and to visit our highly popular website.

In addition, for members working in the HSE, the year ahead should see intensive discussions on reforms based on the PA report, and changes to the structure of the service, reporting relationships and possible redeployment mean that representation by the IDA will be ever more crucial. In addition, we will continue to offer members advice and representation with employers and at third party hearings on matters such as grievance and disciplinary hearings, leave entitlements, sick pay, converting temporary positions to permanent posts, bullying investigations, and many other contractual issues and disputes.

## IDA attracts record number of new members

Last year saw a record increase in the number of new members joining the Association. In total, 145 new members joined the Association in 2010 – recognising that the profession generally, and individual dentists, are stronger when we are united. But we need them, and every member, to renew their membership this year so that we can continue to fight on your behalf in the months ahead. 2010 has been a tough year for all of our members. In response to the savage cuts imposed by the Government at the end of 2009, the IDA launched the most comprehensive public affairs campaign that we have ever undertaken. In addition to lobbying politicians and supporting major challenges through the courts, we undertook a very proactive media campaign to highlight the impact of these draconian measures and to encourage people to visit their dentist.

Many members contacted IDA House to express their appreciation and support for our efforts on their behalf.

Initiatives we undertook included:

- offering tailored advisory services for dentists as employers;
- providing new practice management services for members;
- acquiring trade union status in order to enhance the representative strength we need;
- commissioning new online resources to assist members to meet their CPD requirements;
- providing a very successful series of scientific seminars and conferences;
- enhancing the content of the *Journal*;
- conducting a series of surveys of IDA members; and,
- launching the popular Dáil Digest and a record number of Circulars to IDA members.

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### IDA plans branch road show meetings

IDA Chief Executive Fintan Hourihan has written to branch committees around the country to inform them that the Association plans to organise a road show of IDA branch meetings to brief and consult members on 'The Future of State Funded Dentistry'.

The presentation will cover developments affecting the DTSS and DTBS, as well as discussing the implications for dentistry of the introduction of a Dutch model of universal healthcare and developments in HSE-delivered services. Obviously, a key element will be affording members an opportunity to state their views, concerns and preferences. Further details will be available in due course.

### Metro Branch Scientific Day



The Metro Branch held a very successful Annual Scientific Meeting at the Hilton Hotel, Dublin 2, on February 18. Pictured above at the meeting were (from left): Speaker Professor Robin Seymour; Metro Branch President Dr Declan Corcoran; Speaker Dr Garry Heavey; and, speaker Dr St John Crean.

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### New code on display of fees is welcomed



Eamon Croke, President of the Dental Council.

The Irish Dental Association has welcomed the new Code of Practice from the Dental Council relating to the display of professional fees. According to the new Code, dentists in general practice have to display a single fee for a minimum range of specified treatments such as an examination or an x-ray as well as range of fees for more complex treatments, such as restorations, surgical extractions, crowns etc. The Code also advises that failure to observe the guidance may lead to fitness to practice proceedings. The guidance offers

direction on where fees should be displayed within the practice.

The IDA said that now a Code of Practice has been published by the Dental Council all its members would be happy to display their fees in the agreed, uniform format.

Chief Executive Fintan Hourihan said a recent survey by the Consumer Association showed real price competition existed across the country and this would become more apparent with fees on public display. "We are advising patients to build a relationship with a local dentist and to focus on the quality of work done and the value which it delivers rather than on superficial price comparisons", Hourihan said.

The Dental Council has also published guidance for members of the public on the criteria they should use in choosing a dentist. "We strongly encourage patients to acquaint themselves with this advice in deciding on which dentist they entrust with their treatment and care," Hourihan concluded.

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## Annual Conference 2011 – social programme

Our Annual Conference 2011 is fast approaching! This year we head to the spectacular Slieve Russell Hotel and Country Club in Cavan. Our conference preview starting on page 91 highlights the exciting educational programme. However, no annual conference would be complete without a varied and enjoyable social programme, and this year is no exception.



### Casino night for all

The fun and frolics commence on Thursday evening in the Golf Club where dental teams take a gamble to become the Dental Team of the Year at our Casino Night. Roll the dice and take your bets ladies and gents! Fun for all delegates at our blackjack tables!

### Trade Show Party

The Annual Trade Show Party will take place on Friday evening from 5.30pm to 7.30pm. Fun, music and drinks will be provided for all delegates and trade sponsors. Come along and enjoy the party.



### Golf

The Annual President's Prize Competition will be played on Sunday May 15. All delegates and accompanying persons are welcome to play.

### Annual President's Dinner

Of course, the highlight of the social programme will be the Annual President's Dinner, which takes place on Saturday evening. A drinks reception will be followed by dinner and dancing. Dress code is Black Tie and a fantastic night is, as ever, guaranteed for all!

## IDA on Facebook and Twitter – get connected, stay connected!



The IDA's Facebook and Twitter pages are updated regularly with news, advice, events, videos, photos, guides and reports. To follow the IDA on Twitter or Facebook go to [www.dentist.ie](http://www.dentist.ie) and click on the logos in the top right hand corner.

### What's happening on the discussion forums at [www.dentist.ie](http://www.dentist.ie)?

The IDA website's discussion forums allow members to chat directly to each other and share tips on clinical matters. The top discussion threads at the moment are:

- Hungary comes to Ballylanders;
- HSE outsourcing ortho but primary care?;
- Good time to call Govt TDs;
- What's happening with med cards?;
- Healthcare hustings;
- Dental plans;

You will need your log-in details to access the members' section of the IDA website.

### IDA e-bulletins – assisting practice management

The IDA regularly sends e-bulletins on matters relating to practice management. The following is a list of the most recent circulars:

- Tax treatment of associates and hygienists

- Dental Council's ethical guide, national minimum wage, public holidays 2011 and Revenue email scam
- Finance Bill 2011
- Budget 2011 (changes to taxation of personal pension contributions for self-employed, personal pension contributions for employees and professional subscriptions)
- FAQs re attendance at court and dental-legal reports
- Dental Council's new codes
- Christmas closing arrangements and staff parties
- Advice re staff missing work due to adverse weather
- Update on IDA Strategy Plan and Dental Council elections
- Advice re HSE questionnaire regarding compliance with patient radiation protection legislation
- Employer job (PRSI) incentive scheme, directive on equal treatment of self-employed and assisting spouses and scam warning!
- Advice re St Paul Garda Medical Aid Society's refusal of certain claims
- Incorporation of dental practices, revenue status of associates and hygienists

## Decontamination in dentistry

The IDA Quality and Patient Safety Committee is developing an audit tool to assist members with their compliance with decontamination protocols. It is planned to launch this practice aid with a series of workshops at our conference in Cavan in May.



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NEW LAUNCH

### Whelton to assume presidency at IADR

Professor Helen Whelton has been elected Vice President of the International Association for Dental Research (IADR), the

largest dental research organisation in the world. The organisation, which has 11,000 members globally, has its headquarters in the US. Prof. Whelton took office in March 2011 and will assume the role of

president of the organisation in 2013. The IADR annual research meeting typically draws in excess of 5,000 registrations from 70 countries. The scientific content is shared in over 3,000 presentations, including posters,



Professor Helen Whelton, who has been elected Vice President of the IADR and who will assume the role of president in 2013.

oral presentations, symposia, hands-on workshops and learning sessions, and distinguished lecture series. Helen is Dean of the Graduate School of Medicine and Health in UCC, Professor of Dental Public Health and Preventive Dentistry and Director of the WHO Collaborating Centre for Oral Health Services Research. She was awarded the Annual Oral Health Research Award from the IADR Oral Health Research Group for her work on the prevention of oral disease and the promotion of wellness in July 2010.

### Love Your Smile

Dr Owen Crotty, President of The Orthodontic Society of Ireland (OSI), tells us that the first annual National Orthodontic Week 'Love Your Smile' is taking place from April 11 to 15. The OSI represents the majority of orthodontists in Ireland. The 'Love Your Smile' campaign highlights how an orthodontist is best qualified to diagnose, prevent and treat any problems with the appearance and alignment of teeth and jaws. Parents are being advised to ask their family dentist to refer the child to their local orthodontist, if necessary.



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## European dental care under the spotlight

A gathering of dental experts meeting in Dublin in February examined the current status of the provision and financing of dental care in six different regions across Europe, extending from Ireland to the Russian Federation. The meeting was hosted by DeCare Dental Insurance Ireland.



**FRONT ROW:** Dr Ger Gavin, CDO, DeCare Dental Insurance Ireland; John Murphy, General Manager, DeCare Systems Ireland; Dr Doreen Wilson, Northern Ireland; Michael Walsh, President and CEO, DeCare Dental; Professor Eeva Widstrom, Finland; Dr Paula Vassallo, Malta; Maureen Walsh, General Manager, DeCare Dental Insurance Ireland; and, Norm Storbakken, Executive Vice President, DeCare Dental.

**BACK ROW:** Professor Corrado Paganelli, Italy; Dr Paul Batchelor, UK; Associate Professor Elias Casals, Spain; Dr Jos Van den Heuvel, The Netherlands; Dr Sebastian Ziller, Germany; Gabi Sax, Austria; Dr Paul Riordan, France; Dr Anna Kurhanska-Fliskowska, Poland; and, Professor Ken Eaton, UK.

## Kin range from Pamex

With the Tooth Fairy feeling the recessionary pinch, Pamex Ltd, the distributor of Kin products, is promoting the message that healthy children's teeth are good for your pocket. According to the company, the Kin range of products is a professional range of mouthwashes and toothpastes available in dental surgeries and pharmacies nationwide. 'Fluor-kin' is a patented, child-friendly toothpaste and mouthwash combining fluoride and calcium. According to the company, Fluor-kin's patented formulations have been specially created for children, and they have been scientifically proven to have improved anticaries action and remineralising capacity.



## New toothpaste from Oral-B

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### Masters Degree in Dental Public Health – MDPH 2011-2012

Applications are invited for this 12-month Taught Masters degree programme, commencing September 2011. The course is designed to facilitate health professionals in current employment with contact teaching hours Thursday evenings and Friday all day. The curriculum prepares experienced health professionals to assume leadership roles as members of multidisciplinary teams and to be able to develop, implement and evaluate programmes which have an impact on the health of the population. Subject areas to be covered include Public Health, Decision Analysis in Healthcare and Healthcare Financing, Applied Social Studies, Health Promotion, Preventive Dentistry, Health Service Structures and Management.

For informal discussion, please contact:  
Dr Máiréad Harding, Tel: (+353) 21 4901210  
Email: m.harding@ucc.ie

Applicants are required to have a BDS degree of the NUI or equivalent degree. (Note: Health care professionals holding relevant degrees may also be considered).

Closing date for applications is: Wednesday, 1st June, 2011.  
Applications should be made online at <http://www.pac.ie/ucc>

Application queries should be directed to the Graduate Studies Office, University College Cork, Tel: (+353) 21 4902876 Fax: (+353) 21 4901897 Email: [graduatestudies@ucc.ie](mailto:graduatestudies@ucc.ie)

## Fifty years of dental public health



Professor June Nunn, Dean, Dublin Dental University Hospital, with three former Chief Dental Officers: Dr Seamus O’Hickey; Emeritus Professor Denis O’Mullane; and, Dr Ger Gavin.

UCC recently hosted a major presentation on the history of oral health services in Ireland. The presentation encompassed the more than 50 years of water fluoridation and dental public health in Ireland. Dr Margaret McDonnell (HSE-South) opened the evening and was followed by invited speakers including academics, researchers, practitioners and dental officers, whose experience spanned the 50-year period.

### DDUH appoints TG Medical

Ralf Sander in TG Medical (Ireland) tells us that his company recently won the tender to be the preferred supplier of dental burs to the Dublin Dental University Hospital. The contract is for an initial 12 months, with the potential for an extension for a further 24 months.

TG Medical is also organising a 10-day course in restorative dentistry using phantom heads. The course will run in Tallaght in Dublin on weekends between September and December and offers 65 verifiable hours for CPD.

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1. Study 103-0193. Data on file 1, McNEIL-PPC, Inc. 2. Study 103-0196. Data on file 2, McNEIL-PPC, Inc. 3. Tanzer JM et al. J Dent Ed 2004; 65(10): 1028-37.  
4. Data on file A, McNEIL-PPC, Inc. 5. Sharma NC et al. J Am Dent Assoc 2004; 135: 496-504.

## Here to help

The Irish Dental Benevolent Society has a distinguished history assisting dentists who find themselves in financial difficulty.

The extraordinary reverses that have occurred in the Irish economy in recent times have affected all sections of society, and the dental profession has been far from immune to these events. With the severe curtailment of both the PRSI and Medical Card schemes, as well as falling incomes generally, dentists have seen their incomes fall significantly, and many are now experiencing financial difficulty. For dentists who are in difficulty, it is timely to point out that the Irish Dental Benevolent Society is there to offer support and assistance. For those members of the profession who are more fortunate, the Society is appealing for support to help it to continue its work.

### A proud history

The Irish Dental Benevolent Society was founded in 1949 by Dr John Daunt and a group of other dentists with the aim of raising funds to help dentists or their dependants and has been actively doing so over the last 60 years. The Society is a registered charity, and its role is to assist colleagues and their families who may be experiencing difficulties.

### How we can help

The society can provide help by:

- supplementing income;
- protecting the family home (mortgages, etc.);
- helping to educate dependants;
- helping to meet health costs, such as health insurance or nursing home costs;
- helping with insurance premia; or,
- helping with once off expenses, such as Christmas.

New President of the Society, Dr Aislinn Machesney, says that now more than ever it is important for dentists who can, to get involved: "There have been enormous changes in Ireland over the last 60 years and the variety of circumstances for which aid may be requested has changed. We are currently facing a very uncertain future and the dental profession has been severely affected by cutbacks and the current economic crisis. At a time like this it is helpful to look back at the principles of the dentists who set up this society, and to draw on their altruism".



*President of the Irish Dental Benevolent Society, Dr Aislinn Machesney.*

The Society is embarking on a period of more active fundraising, and the committee would be delighted to hear from dentists who would like to get involved. "It is a time to foster a strong sense of collegiality and to look out for one another. As dentists we constantly provide care to our patients, but we must also care for each other," said Dr Machesney.

The Society is constantly in need of funding and the committee is very grateful to all of its supporters.

### How to contact us

You may contact us by writing to:



Irish Dental Benevolent Society

Irish Dental Benevolent Society  
57 Merrion Square  
Dublin 2

All correspondence relating to new applications, donations and grantees may be sent to the Treasurer:

Dr Mark Kelly  
c/o Irish Dental Benevolent Society  
Shelbourne Dental Clinic  
Office 7, Grand Canal Wharf,  
South Dock Road,  
Dublin 4.

Alternatively, you may email us at [info@idbs.ie](mailto:info@idbs.ie).

### How you can help us

- Donate online – [www.idbs.ie](http://www.idbs.ie);
- Subscribe to the Society by means of a standing order; or,
- Support Irish Dental Benevolent Society events.

You can also tell your colleagues of the existence of the Irish Dental Benevolent Society, both to support the Society and in case our assistance should ever be required.

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MacPractice User, Dublin.

We hope to see you at:

**Cavan**

IDA Annual Conference

May 12-15, 2011

Slieve Russell Hotel

**LEARNING BY THE LAKES**



**20-22 October 2011  
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## Come to Cavan

This year, the IDA Annual Conference travels to Cavan for some learning by the lakes.

This year's venue is the Slieve Russell Hotel in Ballyconnell, Co. Cavan, and the conference takes place from May 12 to 15. The Conference Committee has worked hard to produce an excellent scientific programme for the whole dental team, presented by a truly impressive group of international and local speakers.

The Annual General Meeting of the Association, which takes place on Thursday, May 12, is a must for members who wish to have a say in the IDA's plans for the coming year, and the meeting for dentists in private practice on Friday is not to be missed, as it will feature a presentation from Jim Kelly of Grant Thornton on recent developments in the treatment of health professionals by the Revenue Commissioners.

As has been the case for the last number of years, the scientific sessions have been approved for continuing professional development (CPD) credit, and attendance at the full conference will satisfy your CPD requirements for the year.

### Trade show

As ever, a full trade show will take place during the Conference, and the IDA is grateful once again for the support of our partners in the dental industry. A total of 43 companies will exhibit and the trade show is always worth visiting to find out about the latest in dental products and technology.

### Pre-Conference courses

A number of outstanding pre-Conference courses will take place on Thursday May 12. Prof. Harald Heymann of the University of North Carolina School of Dentistry will present a full-day session on 'Conservative aesthetic and restorative dentistry'. Dr Fred Barnett of the Albert Einstein Medical Center in Philadelphia will provide a lecture and hands-on workshop on 'Advanced endodontics'. 'Problem solving in restorative dentistry' will be tackled by Prof. Richard Ibbetson of the University of Edinburgh, and Dr Alison Dougall of the Dublin Dental University Hospital will present a half-day course on 'Medical emergencies' on Thursday afternoon. These courses will update members on the very latest techniques and research, and will be a very rewarding start to the Conference, so be sure to register for your chosen course.

### Learning for the whole team

Friday is dental team day, with presentations to cover all aspects of practice. The dentists' programme in the morning will cover adhesive dentistry, dental implants, and panoramic imaging, while the nurses' session looks at digital imaging, anxious patients, oral cancer and best practice in decontamination.

May 12-15, 2011  
Slieve Russell Hotel

# Cavan

IDA Annual Conference

LEARNING BY  
THE LAKES



In the afternoon, the Conference will once again feature a dental team programme, where issues of management and communication will be covered by a group of highly qualified speakers including Dr John Tiernan and Dr Brid Hendron.

On Saturday, the main dental programme will 'split' into two parallel programmes, and delegates can move between the halls as the presentation times are synchronised for greater convenience. Presentations on Saturday will, as ever, cover the whole range of dentistry, including: practical skills for modern restorative dentistry; infection control; caring for older patients; diagnosis and management of oral cancer; prescribing for pain; and, practical paediatric dentistry. Management and communication issues will also be covered by presentations on maximising your dental practice website; and, dentists and their finances. There is certainly something for everyone in what promises to be a packed programme.

### Awards and table demonstrations

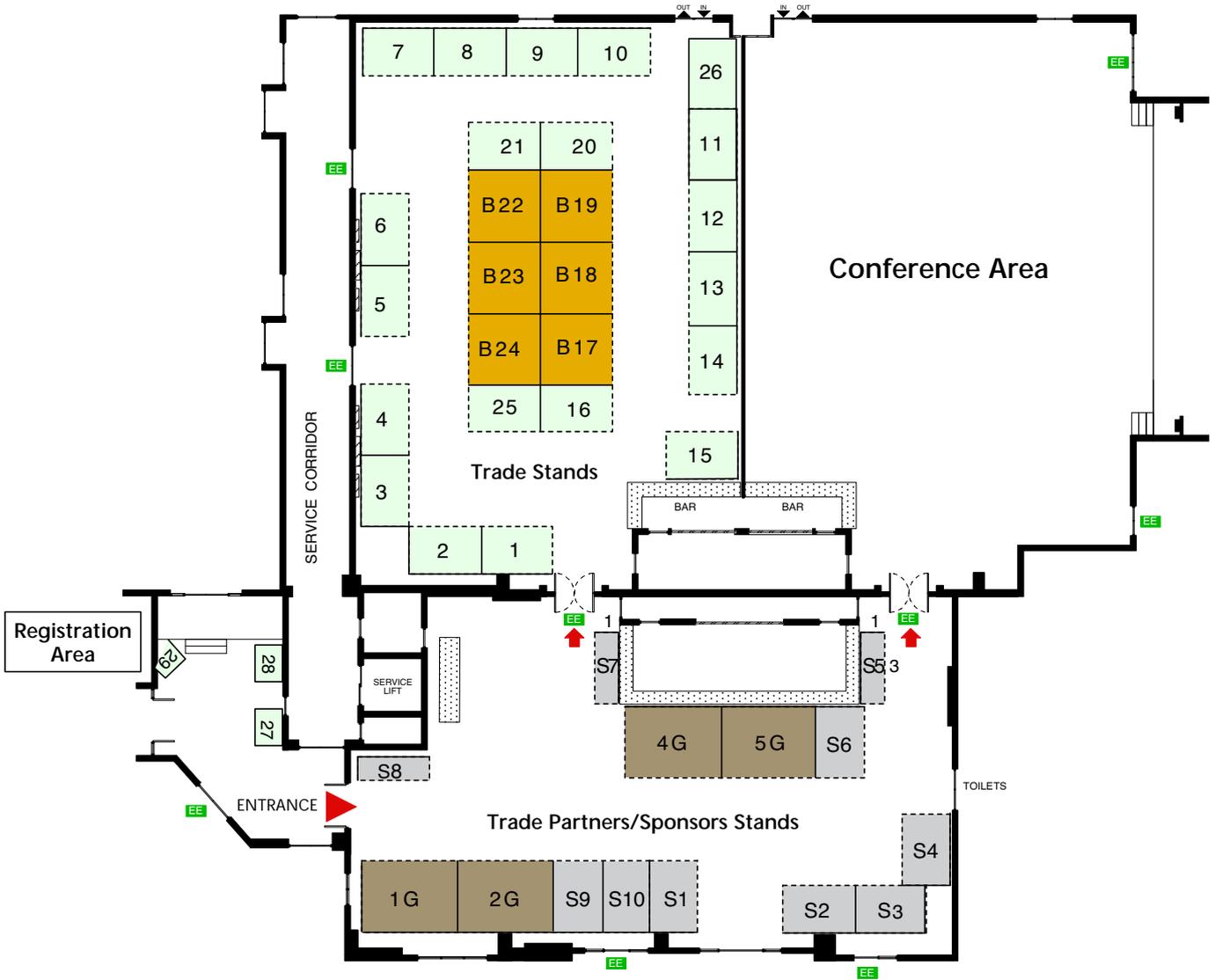
The Conference will feature table demonstrations and poster presentations. The Dr Joe Moloney Award, kindly sponsored by the Dental Health Foundation, will be given to the presentation judged as Best Table Demonstration by a panel of judges. A magnificent glass trophy will be awarded in perpetuity.

The competition for the Tony Costello Memorial Medal will be judged on a table demonstration or poster presentation of not more than 10 minutes on a subject applicable to general dental practice. Each of the three dental schools may enter a team of a maximum of two people.

If you haven't already reserved your place, be sure to do so soon, for the opportunity to learn, socialise, and support and be supported by your colleagues all over the country at the 2011 IDA Annual Conference.

# CONFERENCE PREVIEW

JOURNAL OF THE IRISH DENTAL ASSOCIATION



## GOLD

- 1G Colgate
- 2G Wrigleys
- 4G Tekno Surgical
- 5G VHI Decare

## SILVER

- S1 Sybronendo
- S2 Oral B
- S3 Dentech
- S4 Listerine
- S5 Dentsply
- S6 Handpiece Harry
- S7 Sensodyne
- S8 McDowell & Service Dental Lab
- S9 Nobel Biocare
- S10 Philips

## BRONZE

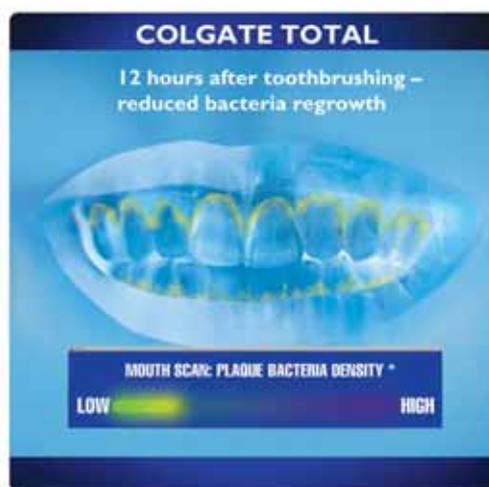
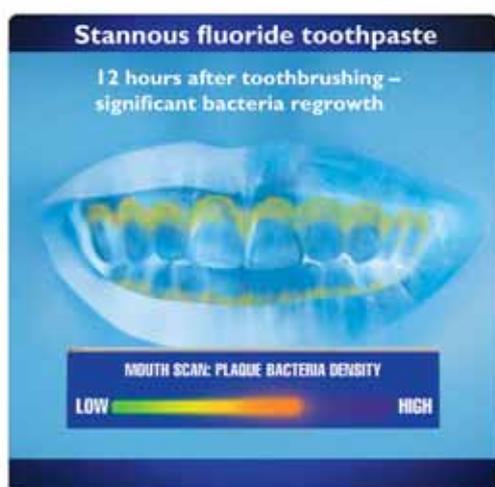
- B17 Dental Tech
- B18 Denplan
- B19 HSF Health Plan
- B22 Dental Medical Ireland
- B23 Ivoclar Vivadent
- B24 DP Medical

## STANDHOLDERS

- 1 Pamex
- 2 Thomond Asset Management
- 3 Initial Medical
- 4 Dental Protection
- 5 Southern Implants
- 6 Biomet 3i
- 7 Ardagh Dental

- 8 Henry Schein
- 9 Omega Financial
- 10 Karma
- 11 Bio-Physica
- 12 Carestream/Kodak
- 13 The Dental Plan
- 14 Celtic Marketing
- 15 Stream Solutions
- 16 Aerona Software
- 20 Septodont
- 21 Dental Medical Ireland
- 25 MedAccount
- 26 Happythreads
- 27 3M
- 28 Optident
- 29 Coincidental

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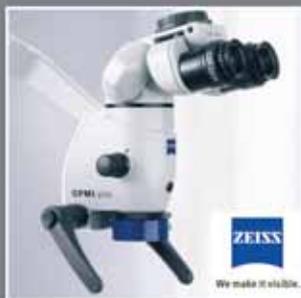
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## Free your mind

Improving your practice and making treatment easier for your patients is all in the mind, according to dentist and expert in neurolinguistic programming Dr Brid Hendron, a speaker at this year's Annual Conference in Cavan. She spoke to ANN-MARIE HARDIMAN about her work.

The term neurolinguistic programming (NLP) may conjure up images from science fiction, but according to Dr Brid Hendron, who has made the study and practice of NLP central to her dentistry, nothing could be further from the truth. "NLP is not a created science, it is an observed science – a natural science. We are all already doing things that can be seen as NLP, such as when we behave differently with different people. NLP helps us to understand these skills and use them more effectively."

For Brid, an interest in NLP and hypnosis was very much a natural progression in her training. "I've always been more interested in people than I am in teeth, and in particular in how the mind works". While working in Co. Donegal, she took a course in life coaching, which set her on a path of discovery. "I realised that it worked – you can change how people feel and think. So I decided to look into the subject further, particularly at the connection between these theories and dentistry."

After several years in London, where she studied the areas of hypnosis and NLP extensively, Brid returned to Northern Ireland in 2008, and now divides her work between three main areas: working in Belfast and Dublin with anxious and nervous patients, treating profoundly phobic patients, and training professionals in the use of NLP. She is also the associate adviser for continuing education at the Northern Ireland Medical and Dental Training Agency (NIMTDA), responsible for planning the postgraduate calendar.

### What is NLP?

So what is involved in learning and applying this "natural" science? Brid is happy to clarify: "NLP is many things in many different contexts: the N, for 'neuro', is about our neurology – how we feel and think; the L, for 'linguistic', is about how we communicate that to people around us; and, the 'P', for 'programming', refers to the habits and behaviours, both conscious and unconscious, that we use to interact with the world around us, often reflecting, or indeed masking, how we think and feel. If we can identify these habits, we create an opportunity to change how we behave, think and feel, and improve



Photo: Richard Watson

how we communicate. We can learn to enhance our productive habits and alter those that limit us".

For Brid, NLP is about taking control of our lives and enhancing our potential. In dental practice, NLP is a flexible discipline that is applied differently depending on where and how it is required, and that has rewards for both practitioner and patients. "In general practice, NLP is about understanding yourself and how you communicate with your patients. It encourages you to be more flexible as a practitioner, enabling you to adapt yourself to be more like the patient you're with so that they can have an easier experience of being with you."

This is particularly helpful with nervous and anxious patients, as it enables practitioners to react to behaviours and language that might result from those nerves and anxieties in a more positive way.

### Loving the work

Originally from Armagh, Brid graduated from Trinity College Dublin in 1992 and, after a vocational training year in Derry, went to work in Letterkenny, Co. Donegal, a period she describes as "learning the trade". She then spent some years in London before returning to settle in Northern Ireland in 2008.

Brid remains fascinated by the broader theories that originally

brought her to NLP and hypnosis, so a lot of her free time is spent in career/work-related activities. She admits that this might seem odd, but finds it rewarding, and doesn't see the courses and conferences as a chore. When she does take time off, she loves to escape to Donegal to spend time on the beach with her "very supportive" husband Stefan, who works in web design and IT, and her adorable young son Cathal.

Brid emphasises the importance of using positive language in everyday practice: "Instead of saying 'I'm going to give you some anaesthetic to prevent any pain', it is more helpful to say 'I'm going to give you some anaesthetic to make sure you remain comfortable'. Simple adjustments like these can have a profound effect on the experience for both practitioner and patient".

From the practitioner's point of view, the benefits of using these techniques can extend into the area of work-life balance. "It helps me to manage my energy and state, and to separate the work mode from the private mode more successfully. It means that I no longer bring problems or stresses of my personal life into the surgery and vice versa."

For patients with more serious phobias, NLP is used differently and it is necessary to approach each patient's circumstances individually. This is an area about which Brid feels very strongly (see panel). "People have phobias because of how they have stored dentistry in their minds. This creates a disproportionate reaction, and often a profound fear, which general dentists can find very difficult to deal with, whether the phobia concerns dental treatment itself, failed sedation experiences, or needles in general. Assisting patients to overcome phobias is one of the most rewarding aspects of my practice."

### Training the professionals

Brid also trains other dental professionals to apply these skills in practice, mainly through in-house training, with a focus on the whole dental team. Dentists come to her for a variety of reasons. "Professionals generally self-refer: perhaps they know someone who they feel is a good communicator and want to be like them, or they have a natural curiosity about the subject. Some have identified communication as a problem for them, and wish to address it.

"The intention with NLP and training is to reduce the stress experienced in the practice of dentistry – both for the patient and the practitioner. People think you either have these skills or you don't, but you can learn to be a better communicator and this invariably relieves clinician stress. Many of the professionals I train are naturally great communicators and are already using some of these skills. On the other hand, many are brilliant clinicians who do not have the people skills to support their talent or good intent."

Training has rewards for the trainer too: "The more you do the more you learn: I learn a tremendous amount from the people I train and this keeps it fresh".

### Fighting the fear

Treating patients who suffer from phobias is something Brid feels very strongly about. "I see this as an awareness issue. These patients' lives have been blighted by their phobia; they are often desperate, and feel that there is nowhere for them to go. It is vital to make the wider dental profession aware that these patients can be helped. As few as two sessions can be life changing for patients, and it is incredibly empowering for them to overcome their phobia and

### State of the nation

The current state of dentistry in Ireland is a topic of great interest to Brid, and she feels very positive about developments in the profession in recent years. "We are in a phase of explosive change in dentistry, and this is good for us and for patients. Practices are better places to be for the patient; technology is better, and patients have more choice."

She welcomes the move to further regulation of the profession: "I feel that the increase in regulation is very good on the whole – it's there to help us to help others and we should embrace it."

In Northern Ireland, the recognition of dental care professionals – of the role of support staff – has been a major change, and one that Brid feels is very positive. "I work with fantastic people, and feel very strongly about the synergy of dentistry as a team."

The increase in specialties in dentistry has changed the way that general practice is carried out, and Brid feels that the CPD stipulations that are now in place "keep us in touch with techniques we don't necessarily practise ourselves anymore. General practitioners are diagnosticians first – we need to be knowledgeable and to think on our feet."

She acknowledges that economic circumstances have meant major changes for many practitioners, but feels that it is important to turn these challenges into something positive that lays the foundations for more prosperous times in the future.

"Patients have less money, and they are more discerning: they take longer to reach decisions about treatment, and are looking for added value and an honest approach. I feel that dentists need to look at patients differently. Perhaps, during the boom, we lost sight a little of the 'bread and butter' patient – the loyal customer who comes year after year for their exam, scale and polish. These patients are valuable and deserve our attention and appreciation. Where your attention goes, your energy flows; hence, we should devote attention wisely."

She feels that there are certainly opportunities for clinicians in these times. "We have time on our hands now, time to prepare for regulation, to embrace and learn to use new technology, and most importantly to spend longer with our patients. We also have time to train as a team – to help each other – for instance to teach our associate what we know and to find out what they know."

She also feels that it is important to educate the public and improve the image of the profession, particularly by embracing the media. "We are in the provision of care – not of selling. Healthcare is a very different 'commodity': your body is where you live, and practitioners and our representatives have to be aware of this in their approach to patients' concerns and needs."

reflects well on our profession when we do not 'give up' on patients."

Dental professionals or patients can contact Brid for more information about treatment, or indeed to find out more about the theories behind NLP, at:

[www.dentalphobiasolutions.com](http://www.dentalphobiasolutions.com)

[www.bridhendron.com](http://www.bridhendron.com)

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# A survey to assess the provision of conscious sedation by general dental practitioners in the Republic of Ireland

## Abstract

**Aim:** To quantify and qualify how conscious sedation was used in general dental practice before the introduction of formal sedation teaching in the Republic of Ireland.

## Objectives:

1. To determine the extent of use of oral, inhalational and intravenous sedation;
2. to determine the training and experience of general dental practitioners providing conscious sedation;
3. to determine the perceived barriers to the practice of conscious sedation; and,
4. to gauge the level of interest in a postgraduate course in conscious sedation.

**Method:** Postal questionnaire sent to one general practitioner in seven, selected randomly from the General Dental Council register, in 2007.

**Results:** Seventy six percent of respondents agreed that the provision of conscious sedation in general dental practice is important. However, the current provision of inhalation and intravenous sedation by respondents is low in comparison to provision in the UK. The main barrier to the use of conscious sedation in general dental practice appears to be lack of availability of training.

**Conclusions:** The data from this study indicated the need for postgraduate training in conscious sedation in Ireland and a need for increased awareness of the Dental Council Code of Practice on sedation.

*Journal of the Irish Dental Association* 2011; 57 (2): 99–106

## Introduction

### Guidelines for the practice of conscious sedation in the UK and Ireland

Dentists in Ireland are registered by the Dental Council of Ireland, according to the Dentists Act 1985.<sup>1</sup> Dentists must work under its code of professional behaviour and dental ethics.

The UK guidelines for the use of general

anaesthesia and conscious sedation, from the General Dental Council and Standing Dental Advisory Committee, are very comprehensive and specific. The Code of Practice of the Dental Council of Ireland for sedation is less prescriptive but is legally more binding. Any dental surgeon practising outside the Code of Practice is liable to a charge of professional misconduct.

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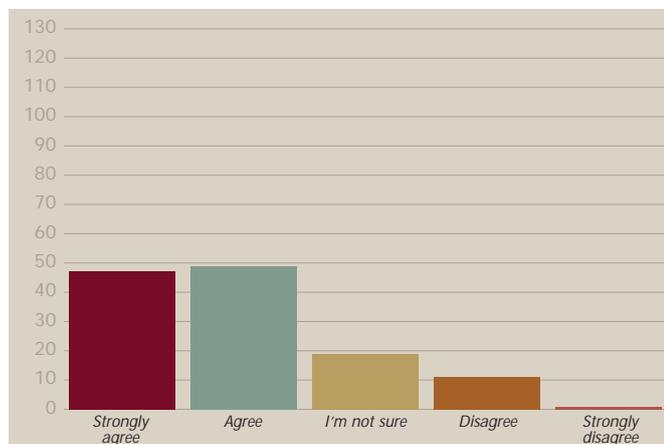


FIGURE 1: Is there a need for conscious sedation in dental practice?

In the UK, the most comprehensive recent set of professional standards relating to the provision of general anaesthesia and sedation for dental treatment derive from the Poswillo report in 1990, which changed the way general anaesthesia in dentistry was administered.<sup>2</sup> The report set out over 50 recommendations covering general anaesthesia, sedation and resuscitation. The Poswillo report gave clear advice on the clinical setting in which dental anaesthesia/sedation can be administered, and the minimum training requirements for practitioners. Five years later, a Clinical Standards Advisory Group (CSAG)<sup>3</sup> drew attention to continuing problems relating to the quality of referral, indications for general anaesthesia and standards of anaesthetic care. In fact, after the publication of the Poswillo Report,<sup>2</sup> there was an initial increase in the use of chair case general anaesthesia. The CSAG reasoned that general anaesthesia was being given on demand, rather than meeting clinical need, and additional providers had emerged. These reports raised concerns in the Department of Health in the UK, and a further review of sedation in general anaesthetic services, entitled 'A Conscious Decision', was published in 2000.<sup>3</sup> This report recommended that general anaesthesia for dental treatment should only take place in a hospital setting, with access to critical care facilities. In addition, recommendations for conscious sedation included a need for a suitably trained operator-sedationist and assistant, with appropriate equipment, in an appropriate setting.

The UK Standing Dental Advisory Committee (SDAC) produced further guidelines in 2003, with similar but more specific recommendations to all dentists providing conscious sedation in general dental practice, community and hospital settings.

In light of these reports, the dental undergraduate curriculum in England has been restructured to include the teaching of conscious sedation as a safer and much cheaper alternative to general anaesthesia in general dental practice. In addition, postgraduate education on the subject has expanded. The Dental Sedation Teaching Group<sup>4</sup> provides the current guidelines on undergraduate and postgraduate training.

The development and practice of general anaesthesia and sedation in

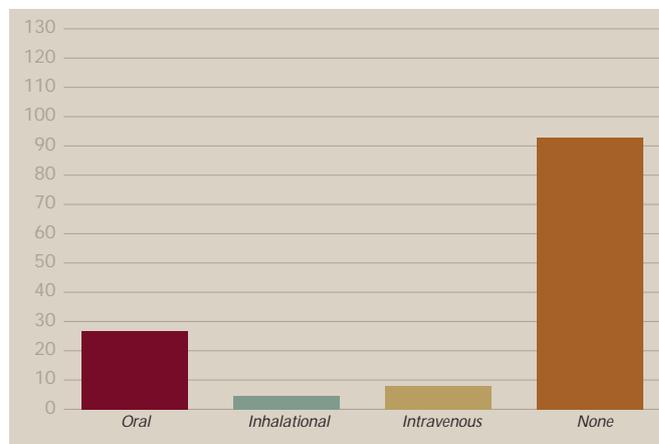


FIGURE 2: What form of conscious sedation do you provide for adults?

the Republic of Ireland have been similar to those in the United Kingdom, against a backdrop of EU legislation.

#### Sedation in Ireland

There is a paucity of literature on the use of general anaesthesia or conscious sedation in dentistry in Ireland.

Several papers by dentists practising in Ireland were published in the 1980s comparing the use of oral temazepam, oral midazolam and a sublingual preparation of lorazepam with intravenous diazepam.<sup>5,6,7</sup> All of these techniques were used for outpatient oral surgery. The authors concluded that the rapidly acting oral benzodiazepines provide an effective and safe alternative to intravenous diazepam, for conscious sedation. The Dublin Dental Hospital was one of the first units to use temazepam and midazolam as oral sedative agents.

In 1995 Sleeman *et al.* published a review of 25 years' experience with day case oral surgery in the Dublin Dental Hospital.<sup>8</sup> This retrospective study showed that the number of patients treated under general anaesthesia between 1968 and 1992 had fallen. The number of patients treated with local anaesthesia had risen slightly, and the number treated under local anaesthesia and sedation had increased markedly since its introduction in 1980.

Leitch and Girdler (2000) and Leitch and Jauhar (2006) investigated the quality and quantity of dental undergraduate teaching in the 16 dental schools in the United Kingdom and Ireland, by using questionnaires to collect information from teaching staff and final year students.<sup>9,10</sup> The results from the 2006 study showed an increase in the didactic teaching of conscious sedation and an increase in hands-on practical experience, in comparison to the 1998 study.

Undergraduate sedation teaching in the dental schools in Ireland has expanded to attain the recommended levels of sedation experience set by the Dental Sedation Teachers Group and the Dental Council of Ireland. A dedicated lecturer post in conscious sedation has recently been created at the Dublin Dental School, with a view to developing the whole area of conscious sedation for undergraduate and postgraduate training.

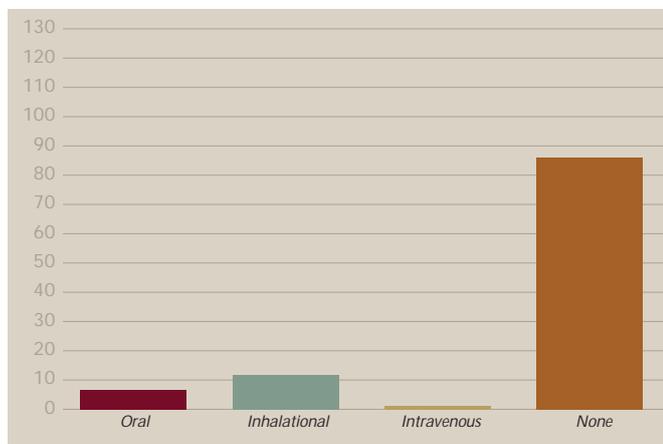


FIGURE 3: What form of conscious sedation do you provide for children?

In 2006, Quinn *et al.* published a survey describing the extent of the practice of conscious sedation in the then Health Board Dental Service (now Health Service Executive Dental Service).<sup>11</sup> This study showed that the practice of conscious sedation in this setting was extremely limited, although the level of interest among health board dentists in the use of conscious sedation was high. The main barrier to the provision of conscious sedation was perceived to be the lack of availability of training programmes.

Since this latter study only concerned dentists working in the Public Dental Service in the Republic of Ireland, this study aimed to identify the provision of conscious sedation by general dental practitioners in Ireland, prior to the establishment of a postgraduate training programme. The objectives were:

1. To determine the arrangements already in place for the practice of conscious sedation by general dental practitioners.
2. To assess the training and experience of the dentists practising conscious sedation.
3. To understand the perceived barriers to the provision of conscious sedation in dental practice.
4. To determine the degree of interest in a postgraduate training programme in conscious sedation.

## Method

Information was obtained by a short postal questionnaire sent to general dental practitioners in the Republic of Ireland. The sample was acquired from the list of dentists registered with the Dental Council of Ireland. All dentists with addresses outside the Republic of Ireland were excluded, as were all those known to be working in the Health Service Executive (HSE) and hospital service. The questionnaire was then sent to 300 dentists, selected randomly from each name in seven appearing on the register (nth name selection technique). The sample size was calculated to obtain at least 60 responses. Tan in 1997 investigated response rates to mailed questionnaires in studies published in the *British Dental Journal*, the *Journal of the American Dental Association* and *Dental Update*.<sup>12</sup> He found that response rates varied from 17-100%. Therefore, the response rate for this study was

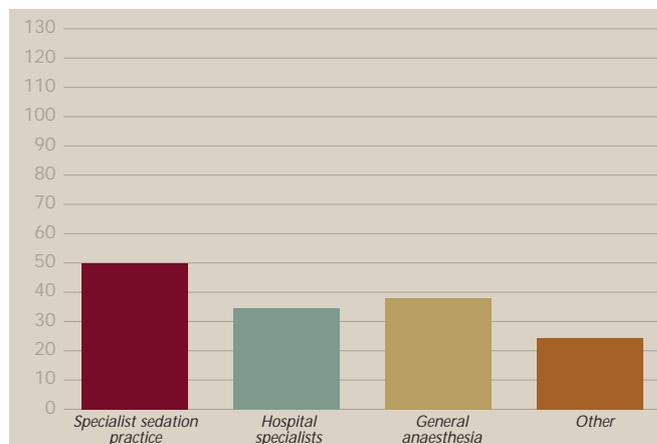


FIGURE 4: If you do not provide sedation, how do you deal with anxious and phobic patients?

expected to be at least 20%. A 45% response was achieved. A self-addressed envelope was included and contact information for the author was also printed on the questionnaire. A deadline for the return of the questionnaire was not given, as studies have shown that it does not increase the response rate and may well reduce the number of respondents.<sup>13,14</sup> Questions relating to practitioner details, the type of sedation offered, referral patterns for those not offering sedation, and details of undergraduate and postgraduate training, were asked.

Ethical approval was received from the Trinity College Faculty of Health Services Research ethics committee.

## Results

One hundred and thirty five questionnaires (45%) were returned. Six were excluded from the data as two of the respondents were hospital based, two were based in the health board, one was based in Northern Ireland and one questionnaire was returned by an orthodontist. These questionnaires were excluded from the data analysis. However, three completed questionnaires by recently retired general dental practitioners were deemed to be useable, as was one completed by a dentist working in private practice and in a hospital. There were thus 129 useable questionnaires to assess. Data were entered on an Excel spreadsheet and are represented graphically for the closed questions. Analysis of responses to the open questions is in a discussion format.

**Figure 1** represents the response to the dentist's perceived need for sedation in practice. Forty-seven (37%) strongly agreed and 49 (39%) agreed that there was a need for sedation in general practice. Nineteen (15%) were unsure, 11 (8%) disagreed and one (1%) strongly disagreed.

**Figure 2** shows the types of sedation provided by the practitioner to adults. Twenty-seven (21%) offer oral sedation, four (3%) inhalation sedation and eight (6%) provide intravenous sedation. Sedation is not provided by the 92 (70%) remaining dentists.

**Figure 3** illustrates the types of sedation provided to children. For children, seven respondents (7%) use oral sedation, 11 (10%) inhalation sedation and one (1%) intravenous sedation. Eighty-six (82%) do not provide sedation for children.

**Figure 4** shows the management strategies employed by dentists for

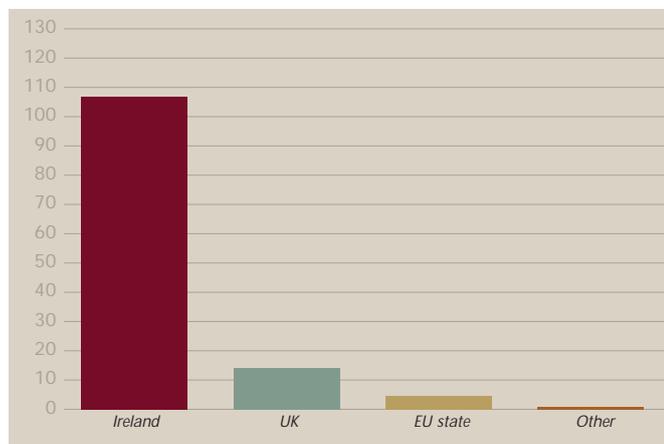


FIGURE 5: Where did you qualify?

anxious patients. Fifty (34%) refer to specialist sedation practices, 34 (23%) refer to hospital specialists, 38 (26%) refer for general anaesthesia and 24 (16%) stated that they used other methods. Ten practitioners stated that the needs of anxious patients are met using behavioural management techniques. In one practice an anaesthetist is employed to provide intravenous sedation twice a year, and three practices use hypnosis.

Figure 5 shows the country of qualification of respondents. The majority ( $n=108$  or 86%) received their undergraduate training in Ireland. A further 13 (10%) are UK graduates, three (2%) are from EU states and one (1%) received their training in South Africa.

In Figure 6 it can be seen that the largest concentration of practitioners is in the Dublin area (32), followed by Cork (14). While this does not mean that the sample is representative of the general dental practitioner population, it suggests that it may be regarded as a useful sample as a geographical reflection of practitioner distribution. Year of qualification is also evenly distributed (Figure 7).

## Details relating to practitioners providing a sedation service

### Sedation agents

Thirty-nine (30%) respondents stated that they offered some form of sedation to adults. A total of 18% offered sedation to children, which was mainly inhalation. The practitioners were asked to complete open questions related to the provision of this service. Twenty (51%) respondents stated that they only provided oral sedation. Diazepam was the agent most commonly used for oral sedation by 13 practitioners. Five respondents listed temazepam and the remainder (two) did not state which drug(s) were used. Nine (23%) respondents use intravenous sedation. Midazolam is used by four practitioners, diazepam by two, and a diazepam derivative by one practitioner. There was one questionnaire for which this section was left blank and one whose responses were excluded because they practised intravenous sedation in a hospital setting. Those practising intravenous sedation also provided oral sedation (four) and inhalation sedation (five). Replies from seven (18%) practitioners stated that they



FIGURE 6: Concentration of practitioners.

practised inhalation sedation alone and three (8%) provide inhalation and oral sedation, using midazolam, diazepam or temazepam.

### Monitoring equipment

*Oral sedation only (n=20):* Twelve respondents had no monitoring equipment when providing oral sedation with diazepam. Two stated that they used a blood pressure monitor and one questionnaire was marked N/A. Four of the five providing oral sedation with temazepam also had no monitoring equipment. One practitioner uses a blood pressure monitor.

*Intravenous sedation (n=8):* Four respondents have a pulse oximeter, with a further two also making use of a blood pressure monitor and ECG machine. Two stated that they only use a blood pressure monitor and two were left blank.

*Inhalation sedation only (n=7):* Three stated that they use pulse oximetry to monitor the patient, one stated that no monitoring equipment was used and three left the section blank.

*Inhalation and oral sedation (n=3):* Two use pulse oximetry and one uses a blood pressure monitor alone.

### Emergency drugs for sedation

*Oral sedation only (n=20):* Five respondents stated that oxygen is available as are the standard emergency drugs. Ten stated that they

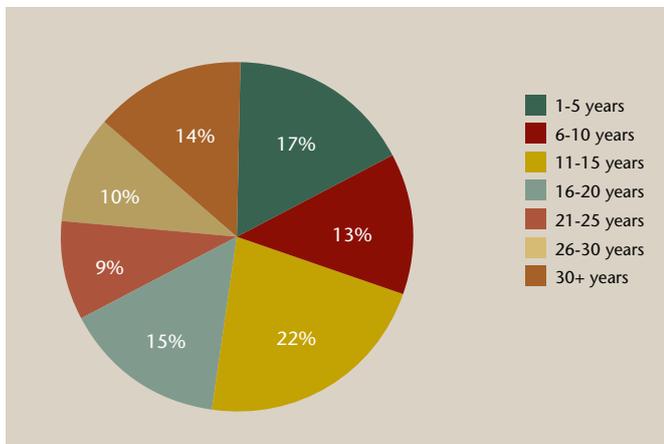


FIGURE 7: How long have you been qualified?

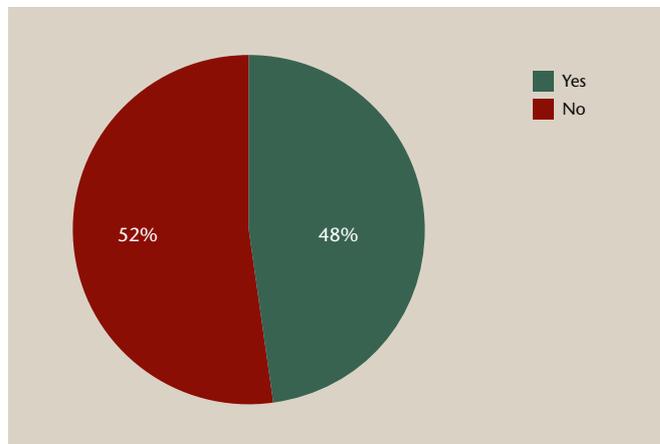


FIGURE 8: Was conscious sedation a part of your undergraduate curriculum?

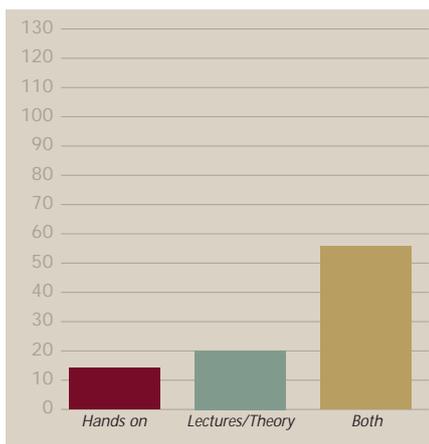


FIGURE 9: What form did the training take?

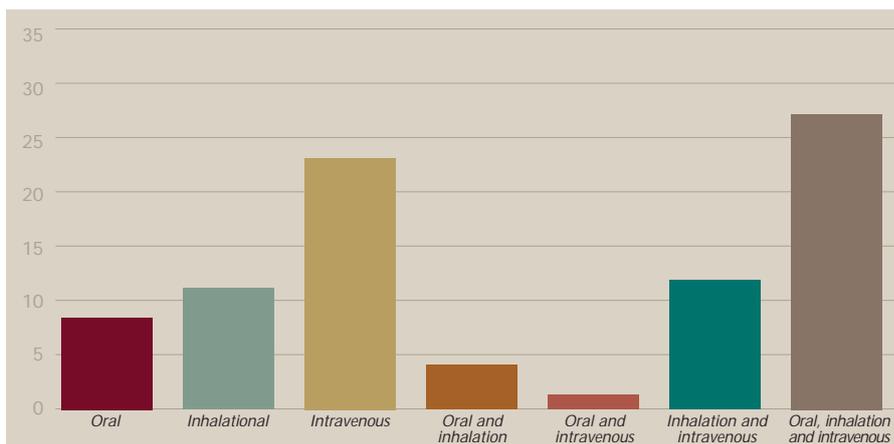


FIGURE 10: What methods of sedation were you trained in?

have no emergency drugs for sedation and four left the section blank. *Intravenous sedation (n=8)*: Four stated that their emergency drugs for sedation were oxygen and flumazenil. One respondent stated that he had oxygen and intubation equipment and three left this section blank.

*Inhalation sedation only (n=7)*: Oxygen was listed by three practitioners and flumazenil by one. Three respondents left the section blank.

*Inhalation and oral sedation (n=3)*: All three of the respondents listed oxygen as their emergency drug for sedation.

### Training and experience of practitioners in relation to sedation

Sixty-one (48%) respondents received training in sedation as undergraduates and 67 (52%) received no training (Figure 8).

Fifty-six respondents (62%) received practical and theoretical training, 20 (22%) theoretical only and 14 (16%) practical only (Figure 9).

Figure 10 shows that a combination of oral, intravenous and inhalation sedation techniques were taught to 27 (31%) of those who

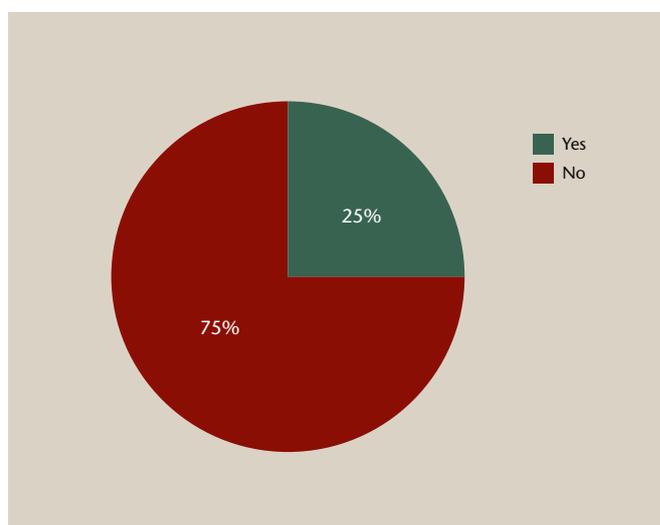


FIGURE 11: Have you had postgraduate training in conscious sedation?

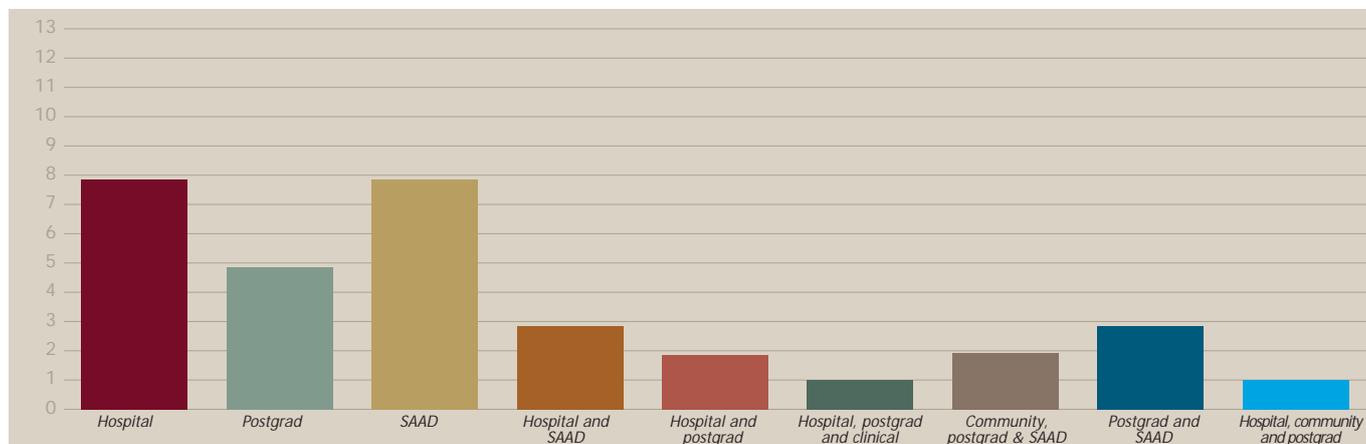


FIGURE 12: What form did this training take?

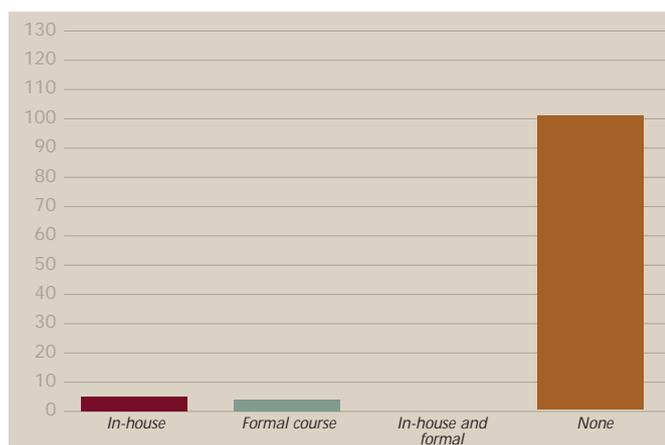


FIGURE 13: Does your dental nurse have training in conscious sedation?

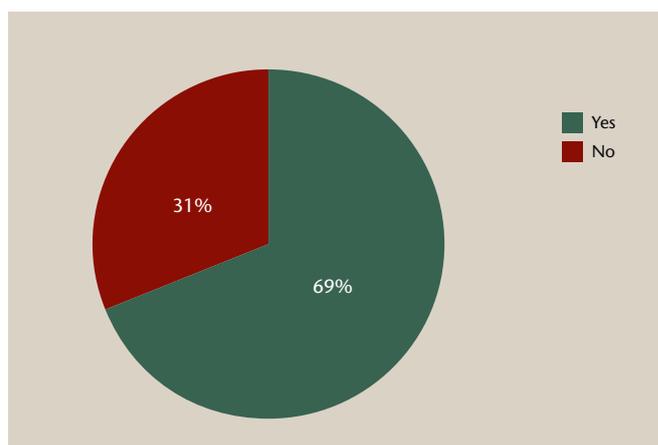


FIGURE 14: Interested in a dedicated postgraduate course in conscious sedation in Ireland?

received undergraduate training, followed by 23 (26%) who were taught intravenous sedation only, 12 (14%) taught inhalation and intravenous sedation, and 11 (13%) inhalation only.

Only 32 (25%) respondents stated that they had received some form of postgraduate training in sedation (Figure 11).

Figure 12 shows the types of postgraduate training that these respondents received, which is mainly from the Society for the Advancement of Anaesthesia in Dentistry (SAAD) courses (33%), hospital experience (33%) and postgraduate courses (29%).

The majority of dental nurses have no training in sedation (82%) and of those who do have training, only 8% have been formally trained, having obtained certification in dental sedation nursing (Figure 13).

When asked about postgraduate training, 86 respondents (69%) expressed an interest (Figure 14). A mentored programme providing comprehensive training and one-to-one coaching was preferred by 86% of practitioners to a dedicated postgraduate programme (64%).

### Barriers to the provision of sedation in general dental practice

The greatest perceived barrier to the provision of sedation is lack of

training (42%), followed by concerns for patient safety (36%). Fear of litigation (13%), unsuitable patients (5%) and cost (4%) are perceived to be less important. Figure 15 illustrates the number of respondents and their preferences

### Free comments

There were several sections of the questionnaire where comments from practitioners were encouraged. There was positive and negative feedback on the use of conscious sedation in dental practice. The general theme, which was repeated by those providing comments, is best summed up by a comment from one practitioner as follows: "Conscious sedation is routinely provided in the UK/Northern Ireland practices because they have received the necessary training. It should be part of the curriculum here as well".

### Discussion

#### Current provision of conscious sedation by general dental practitioners

The majority of respondents (76%) either strongly agreed or agreed that the provision of sedation was important in general dental

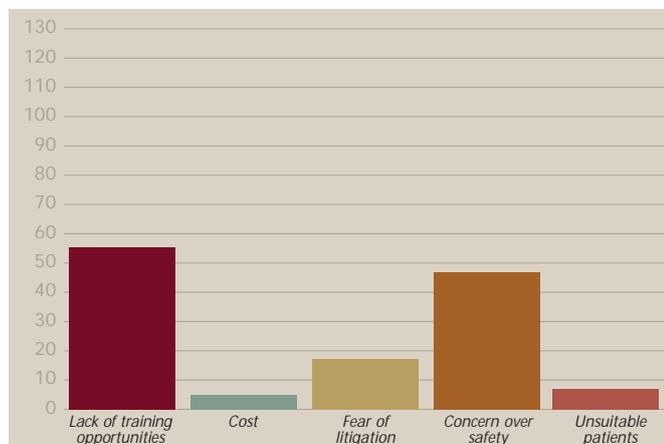


FIGURE 15: The main barriers to the provision of conscious sedation in general dental practice.

practice. This concurs with studies showing that the use of conscious sedation is an important method of behaviour management for extremely anxious and phobic dental patients.<sup>15</sup> These results must be interpreted with caution and the possibility of bias has to be considered. A representative sample of dentists was used and those responding may have been more interested in the topic than non-respondents, especially with a response rate of 45%.

Although 30% of respondents stated that they provide some form of sedation to adults, half of them use oral sedation alone, mainly with diazepam. As mentioned in the literature review, diazepam has a slow onset of action, a long half-life, and active metabolites. It is not suitable as an oral sedative agent. However, the standard oral premedicament used in dentistry is often diazepam, which is prescribed the night before and/or the morning of a dental appointment. This may explain why a high number of respondents use diazepam. Oral drugs are easy for the dentist to administer and are universally accepted by patients, hence their popularity. The Dental Council Code of Practice states that the relevant drug should be administered under supervision in the dental surgery.

A total of 7% provide intravenous sedation, with over half of these practitioners also providing other forms of conscious sedation. Midazolam is the principal drug used for intravenous sedation and it is administered by half of respondents providing sedation. The two respondents who administer diazepam are recently retired.

A total of 8% provide inhalation sedation, mainly to children. The numbers of respondents providing inhalation sedation is surprisingly low, especially as it is often quoted as the safest form of conscious sedation.<sup>16</sup>

If the data for oral sedation are excluded, this study shows that the provision of sedation services in Ireland falls far short of the 15% availability suggested by the National Centre for Continuing Postgraduate Education in Dentistry in the UK.<sup>17</sup>

The requirement for pulse oximetry monitoring during oral, intravenous and inhalation sedation, as recommended in the Dental Council Code of Practice for Sedation (Appendix 4) and in the UK guidelines, is only being met by nine (23%) practitioners. The absence

of appropriate equipment in the case of some practitioners may be a result of misunderstanding or ignorance of the guidelines, especially with regard to the use of oral sedation. Dentists often mistakenly believe that oral sedation is the safest way to administer sedation when, in fact, its relatively unpredictable effect makes its use more difficult.<sup>18</sup>

When asked what emergency drugs for sedation were available, 15 (38%) stated oxygen and five had flumazenil available. In the UK, it is mandatory that a dentist be able to administer supplemental oxygen should the need arise. The Dental Council of Ireland does not give any guidelines regarding emergency equipment for conscious sedation. In light of these findings, the availability of emergency drugs may need to be included in the Dental Council guidelines.

Referral patterns for those practitioners who do not provide a sedation service show that one-third of anxious patients are referred to a specialist sedation practice, one-quarter are referred for general anaesthesia, one-quarter to hospital specialists, and the remainder are managed using other methods. Unfortunately, there are no figures available in Ireland to show the number of dentally related general anaesthetics that have occurred, except that published by Sleeman (1995) relating to day case oral surgery over 25 years at the Dublin Dental Hospital.<sup>9</sup>

Similarly, there are no data on the number of specialist sedation practices in the country. As would be expected, the majority of respondents (86%) qualified in Ireland. Half (four) of the respondents who are providing intravenous sedation in practice were trained in the UK. This highlights sedation training opportunities in the UK, which until recently were not available in the Republic of Ireland.

### Training in conscious sedation

Of the respondents providing intravenous sedation, two stated that they had formal postgraduate training, three had attended SAAD courses, two were hospital trained and one had no postgraduate training. The number of respondents who provided oral sedation and had postgraduate training numbered one for a formal course, two for SAAD courses and one for hospital experience. The remaining 15 had no postgraduate training.

Of those providing sedation services, three had formal postgraduate training and six had no postgraduate training.

These practices do not comply with the Dental Council Code of Practice, which states that intravenous and inhalation sedation must be provided by a practitioner who has successfully completed a Dental Council recognised postgraduate training programme.

In comparison, Quinn (2006) found that 38% (19) of senior dental officers in the HSE had attended a postgraduate course and 62% (31) had no postgraduate training.<sup>11</sup>

A total of 69% of respondents expressed an interest in attending a postgraduate training programme. Mentored experience is preferred to a dedicated course as the mode in which sedation training would be delivered. Mentored training would fill the gap between a formal course leading to a diploma and the short, weekend-type SAAD courses.

### Barriers to the provision of sedation in practice

A total of 42% of practitioners graded lack of availability of training as the most important barrier to the provision of sedation in general practice. This opinion is backed up by responses in Quinn *et al.*'s study of health board dentists,<sup>11</sup> and by the fact that there were no recognised Dental Council postgraduate training programmes at the time of this survey.

A total of 36% of respondents stated a concern over safety and 13% feared litigation. As mentioned in the literature review, Roberts<sup>19</sup> stated that there were no recorded mortalities after the administration of inhalation sedation. The most reliable statistics on the safety of intravenous sedation in dentistry are those published by Coplans and Curson.<sup>20,21</sup> They found that there were no deaths in over two million administered sedations from 1970 to 1979. From 1980 to 1989 there were two deaths, one of which was thought to be secondary to an overdose of midazolam. The patient was receiving treatment for hypothyroidism and was given 13mg midazolam, after which lignocaine 2% with adrenaline one in 1,000 local anaesthetic was used. There was no record of who administered the sedation. Death was said to have occurred from respiratory failure, possibly associated with the large dose of midazolam.

Unsuitable patients and cost seemed to be the least important perceived barriers to sedation provision in practice. However, funding for sedation in the UK, initially by the Department of Health (through the NCCPED) and subsequently via healthcare trusts, has helped to increase the number of practitioners providing a sedation service in the National Health Service (NHS).

### Conclusion

This study shows that there is a need and desire for sedation training in Ireland, particularly at postgraduate level. A combination of mentored training programmes and more structured diploma courses would be advantageous, in order to facilitate the needs of most dental practitioners with an interest in sedation. Fulfilment of these training needs should then translate to increased service provision.

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### How do implant surface characteristics influence peri-implant disease?

Renvert, S., Polyzois, I., Claffey, N.

**Objectives:** To review the literature on how implant surface characteristics influence peri-implant disease.

**Material and methods:** A search of PubMed and The Cochrane Library of the Cochrane Collaboration (CENTRAL), as well as a hand search of articles, was conducted. Publications and articles accepted for publication up to March 2010 were included.

**Results:** Thirteen studies were selected for the review. *Human studies:* To date, few studies have investigated if such differences occur. Limited data suggest that smooth surfaces may be less affected by peri-implantitis than rough surface implants. *Animal studies:* In ligature-induced peri-implantitis studies, no difference between surfaces has been reported. In a spontaneous progression model of peri-implantitis, there was a suggestion that the progression was more pronounced at implants with a porous anodised surface.

**Conclusion:** The current review revealed that only a few studies provided data on how implant surfaces influence peri-implant disease. Based on the limited data available, there is no evidence that implant surface characteristics can have a significant effect on the initiation of peri-implantitis.

*J Clin Periodontol 2011; 38 (Suppl. 11): 214-222.*

### Disinfection procedures: their efficacy and effect on dimensional accuracy and surface quality of an irreversible hydrocolloid impression material

Rentzia, A., Coleman, D.C., O'Donnell, M.J., Dowling, A.H., O'Sullivan, M.

**Objectives:** This study investigated the antibacterial efficacy and effect of 0.55% ortho-phthalaldehyde (Cidex OPA®) and 0.5% sodium hypochlorite (NaOCl) on the dimensional accuracy and surface quality of gypsum casts retrieved from an irreversible hydrocolloid impression material.

**Methods:** A simulated clinical cast and technique was developed to compare the dimensional accuracy and surface quality changes of the test gypsum casts with controls. Dimensional accuracy measurements were completed between fixed points using a travelling microscope under low angle illumination at a magnification of  $\times 3$ . Surface quality changes of "smooth" and "rough" areas on the cast were evaluated by means of optical profilometry. The efficacy of the disinfection procedures against *Pseudomonas aeruginosa* was evaluated by determining the number of colony-forming units (cfu) recovered after disinfection of alginate discs inoculated with  $1 \times 10^8$  cfu for defined intervals.

**Results:** The dimensional accuracy of the gypsum casts was not significantly affected by the disinfection protocols. Neither disinfectant solution nor immersion time had an effect on the surface roughness of the "smooth" area on the cast; however, a significant increase in surface roughness was observed with increasing immersion time for the "rough" surface. Complete elimination of viable *Pseudomonas aeruginosa* cells from alginate discs was obtained after 30 and 120s immersion in Cidex OPA® and NaOCl, respectively.

**Conclusions:** Immersion of irreversible hydrocolloid impressions in Cidex OPA® for 30s was proven to be the most effective disinfection procedure.

*J Dent 2011; 39 (2): 133-140.*

### Impact of systemic antimicrobials combined with anti-infective mechanical debridement on the microbiota of generalised aggressive periodontitis: a six-month RCT

Heller, D., Varela, V.M., e Silva-Senem, M.X., Torres, M.C.B., Feres-Filho, E.J., Vieira Colombo, A.P.

**Aim:** To compare the effects of systemic amoxicillin (AMX) plus metronidazole (MET) or placebos combined with anti-infective mechanical debridement on the sub-gingival microbiota of generalised aggressive periodontitis (GAP).

**Material and methods:** The study was a six-month randomised, double-blinded, placebo-controlled clinical trial. Thirty-one subjects received full-mouth ultrasonic debridement followed by scaling and root planing with chlorhexidine rinsing, brushing and irrigation. During mechanical therapy, subjects received systemic AMX (500mg)+MET (250mg) or placebo, t.i.d., for 10 days. Sub-gingival samples were obtained from each patient and analysed for their composition by checkerboard at baseline, three and six months post therapy. Significant differences between groups over time were examined by General Linear Model of Repeated Measures.

**Results:** High levels of periodontal pathogens, as well as some "non-periodontal" species, were observed. Most of the periodontal pathogens decreased significantly over time ( $p < 0.05$ ), whereas "non-periodontal" bacteria tended to increase in both groups. Sites that showed attachment loss and probing depth increase harboured higher levels of *Dialister pneumosintes*, *Campylobacter rectus*, *Fusobacterium necrophorum*, *Prevotella tannerea* and *Peptostreptococcus anaerobius* than sites that improved after both therapies ( $p < 0.05$ ).

**Conclusions:** Systemic AMX+MET or placebos adjunctive to anti-infective mechanical debridement were comparable in lowering periodontal pathogens up to six months after treatment. Species not commonly associated with GAP were less affected by both therapies.

*Journal of Clinical Periodontology 2011; 38: 355-364.*

### Successful bleaching of teeth with dentinogenesis imperfecta discolouration: a case report

Bidra, A.S., Uribe, F.

Dentinogenesis imperfecta (DI) is a hereditary condition that can cause discolouration of teeth in addition to other dental abnormalities. Patients often present to the dentist with a main goal of improving their aesthetics. A myriad of treatment options have been described for this condition. This clinical report describes the management of a young adult with DI who desired improvement in dental aesthetics after orthodontic treatment. As a result of his condition, the patient's dentition exhibited the classic generalised dark amber opalescence. A 14% hydrogen peroxide gel was used for bleaching of the maxillary and mandibular teeth, performed by the patient at home. The patient was followed at different intervals, and the improvement in teeth shade was significant and remained stable at 3.5 years. No adverse effects were observed. This article is the first case report in the literature describing the long-term follow-up of teeth bleaching in a patient with DI.

#### Clinical significance

Teeth bleaching may be considered as the first choice of treatment in DI patients. If successful, it offers a simple, conservative and economical solution to satisfy the aesthetic requirements of these patients.

*J Esthet Restor Dent* 2011; 23: 3-11.

### Quiz answer (questions on page 76)

1. The radiograph shows:
  - ▶ caries in LRD and LLE. As the patient has caries present, it would be easy to assume that the missing teeth may have been extracted;
  - ▶ severely infraoccluded LLE;
  - ▶ marked disruption in the position of the unerupted LL5; it appears to be above the LLE; and,
  - ▶ unerupted LL6.
2. Clinical management involved surgical removal of LL5 and LLE, and exposure of LL6 under GA.
3. Risks:
  - Dental: centreline shift, spacing and risk large bone defect, and LL6 may fail to erupt.
  - Surgical: swelling, bleeding, infection and mental nerve damage.
  - Medical: risks associated with hospital admission and GA.



The LL6 and LL7 erupted normally without orthodontic intervention.

### Erratum

In the Quiz included in the February/March 2011 issue of the Journal (*Journal of the Irish Dental Association* 2011; 57 (1): 49), the final three references to accompany the Quiz answers were omitted. We apologise for this error, and the references concerned are included below:

5. Jälevik, B., Klingberg, G.A. Dental treatment, dental fear and behaviour management problems in children with severe enamel hypomineralisation of their permanent first molars. *Int J Paediatr Dent* 2002; 12 (1): 24-32.
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- Carbon fibre posts/ composite cores
- Adhesion and bonding techniques
- Anterior composites
- Posterior composites
- Anatomical carving for composites
- Staining posterior composites
- Amalgam bonded restorations
- Nayyar amalgam cores
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## Metal-ceramic versus all-ceramic restorations: part 3

In the final article of this series, DR SEAMUS SHARKEY looks at how clinicians can maximise outcomes for both types of restorations.

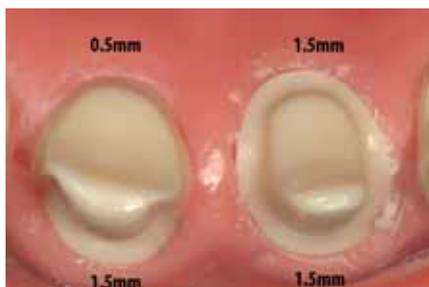


FIGURE 1a: Two central incisors showing the reduction necessary for a metal-ceramic and all-ceramic crown.



FIGURE 1b and FIGURE 1c: Supporting substructures that have to be blocked out to render life like restorations.



As we have seen from the previous two articles,<sup>1,2</sup> no one material is suitable for all clinical scenarios. It then falls to clinical judgement and adequate case selection to choose the right restoration. The following list is not an exhaustive one, but may be helpful in improving outcomes for both all-ceramic and metal-ceramic restorations, and preventing some of the common reasons for failure. Some basic principles will help to improve the aesthetics and fit of both types of restoration:

### Adequate tooth reduction

A 1.5mm buccal reduction and 0.5mm palatal reduction is recommended for metal-ceramic; 1.5mm reduction all over for all-ceramic restorations. This degree of reduction allows the metal or ceramic cores to be adequately blocked out and aesthetic, durable restorations to be made (Figures 1a, 1b and 1c).

### Adequate finishing

Smooth accurate margins make it much easier for a technician to produce a well fitting and properly contoured restoration. The easier it is for the technician, the better the fit and aesthetics of a restoration will be (Figures 2a and 2b).

### Adequate impression procedures

Accurate impressions are essential to replicate the evenly reduced and refined



FIGURE 2a: Smooth refined margins will facilitate accurate restorations.



FIGURE 2b: Rough poorly delineated margins will result in inaccurate restorations.



FIGURE 3a: Well contoured provisionals that will encourage good gingival health and stability.



FIGURE 3b: Excellent gingival health after provisionals are removed (teeth were prepared at previous visit).



FIGURE 3c: Judicious use of double cord technique to allow impression into the sulci but not to damage the thin tissue.

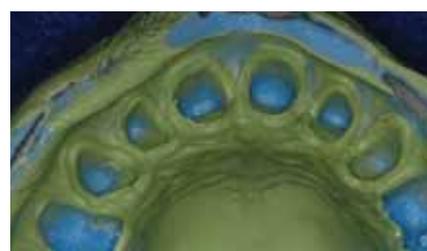


FIGURE 3d: Accurately made impression for upper anterior sextant.



FIGURE 4a: Failing metal-ceramic fixed partial denture (FPD) with poor cervical aesthetics replacing 12, 11 and 21.

preparations. The type of impression material is far less important than the tissue management procedures used. Therefore, judicious retraction and, most importantly, well contoured and polished provisionals, are essential (Figures 3a, 3b, 3c and 3d).

#### Improving outcomes with metal-ceramics

There are also some suggestions specific to metal-ceramic restorations that will help to improve the aesthetic outcome and minimise ceramic fractures:

#### Improving gingival aesthetics

One of the main aesthetic drawbacks of metal-ceramic restorations can be the lifeless gingival portion (Figure 4a). This is very often due to inadequate preparation and an excessively thick metal substructure (Figure 4b). Provided an adequate buccal margin thickness is available, then two methods can be combined:

1. Prescription of ceramic butt joint at the buccal shoulder (Figure 4c); and,
2. Requesting that the metal framework be cut back from the last 1mm of the



FIGURE 5a: Preparation for metal-ceramic crown with metal occlusal surface.



FIGURE 4b: Sectioned FPD showing excessive metal in cervical area of 21.

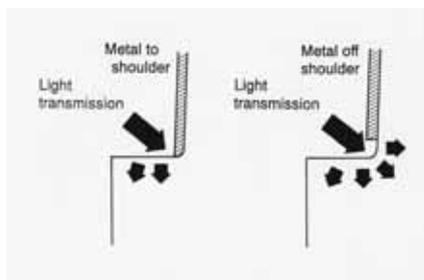


FIGURE 4d: Diagram showing extent of framework cutback to allow light transmission.

preparation will allow light to be transmitted in the cervical area instead of reflected (Figure 4d). This allows for better aesthetics in this area without a noticeable reduction in strength (Figure 4e).<sup>3</sup>

#### Prescribing the external metal-ceramic finish line

In some cases the occlusion or limited interocclusal space will dictate careful positioning of the metal-ceramic finish line. This should be clearly prescribed to the technician and the preparation should reflect the space requirements for each material. The contact points on the occluding surfaces



FIGURE 5b: Finished metal-ceramic crown with finish line 1mm away from contact areas.



FIGURE 4c: Ceramic butt joint on buccal aspect of restoration.



FIGURE 4e: New FPD showing improved cervical porcelain aesthetics.

should be at least 1mm from this junction (Figures 5a, 5b and 5c).

#### Improving outcomes with all-ceramics

Similarly, there are some further guidelines available in the literature to help us improve the longevity and success of all-ceramic restorations:

#### Avoid acid base cements

All acid base cements produce water as a result of their acid-base reaction. These cements include zinc phosphate, polycarboxylate, glass ionomer and even resin-modified glass ionomer. All-ceramic



FIGURE 5c: Finished crown with no aesthetic compromise.



FIGURE 6a: Spot etching reveals extent of enamel remaining that may be used to bond.



FIGURE 6b: Etched surface of a veneer with 5% hydrofluoric acid (extreme caution needed).

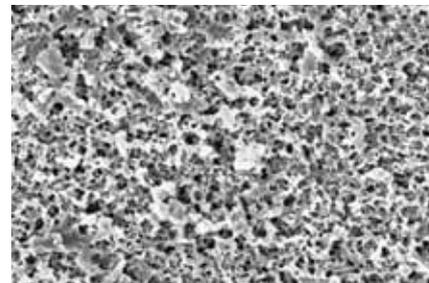


FIGURE 6c: Scanning electron microscope view (x2,000) of etched porcelain surface.



FIGURE 7: Pyramid diagram illustrating the relative translucency of the most popular types of ceramic. The top of the pyramid represents the most translucent, whereas the base represents the most opaque.



FIGURE 8a: Adjacent preparations show differences in colour and could transmit through translucent material.



FIGURE 8b: Final zirconia-based all-ceramic crowns show no signs of shine through.

crowns, regardless of their structure, do not react well with water. Ceramics fail by crack propagation and water acts like a catalyst for opening the crack. This even applies to the high-strength core ceramics, despite the fact that manufacturers recommend any of these cements.<sup>4</sup> Therefore, it is far less confusing to just use any proprietary resin-based cements to lute these restorations in place.

**Luting versus bonding restorations**

Bonding ceramic to a tooth will increase the longevity and strength of the restorations.<sup>5</sup> This is only true if both the restoration and tooth can be effectively bonded to and all the necessary steps are carried out. Only glassy or particle-filled glass ceramics can be effectively etched. High-strength cores such as alumina and zirconia cannot be effectively etched or even sandblasted.<sup>6</sup> Therefore, even though these restorations should still be cemented in place with resin cements (for the reasons outlined above), they are technically luted in place and not bonded (Figure 6a).

If sufficient tooth structure remains for bonding (especially enamel), then the glassy (feldspathic) and particle-filled ceramics (Empress and

E-max) can be bonded. The ceramic should be etched with 5% hydrofluoric acid and all subsequent bonding steps should be followed exactly per the manufacturer's instructions (Figures 6b and 6c). (Hydrofluoric acid is an extremely hazardous material and should be used with extreme care. These restorations can be etched in most laboratories if requested.)

**Ceramic selection for anterior region**

As most clinicians know, the aesthetics of all-ceramic restorations can be far better than metal-ceramics, but which type of all-ceramic is best: particle-filled, alumina core or zirconia core ceramics? The ultimate decision of which type of crown to use in the anterior region will often be decided by the translucency of the restoration. Heffernan<sup>7</sup> was able to grade the degree of translucency of each type of restoration, and the results are illustrated in Figure 7, with the top of the pyramid indicating the most translucent. As can be seen, the zirconia core restorations are the most opaque, alumina cores are next, followed by the particle-filled glass ceramics and finally feldspathic glassy porcelain. The effect that the translucency of the



From left: FIGURE 9a: Preparations for four E-max crowns for maxillary incisors, E-max veneers for 13, 23 and 24, and a Procera alumina crown for 14. Lightness of preparations evident. FIGURE 9b and FIGURE 9c: Finished restorations in place.

TABLE 1: Metal-ceramic versus all-ceramic crowns – a limited guide to selection.

Clinical scenario	Metal-ceramic (M-C)	All-ceramic (A-C)	Comment
Parafunction	✓!	✗	Caution – needs to be controlled + finish line prescribed
Erosive activity	✓!	!	Caution – needs to be under control in both cases but M-C preferable
Deep vertical overlap	✓!	✗	Caution – occlusion needs to be controlled and finish line prescribed
Limited occlusal clearance	✓	✗	Check space using putty index or measuring thickness of provisionals
Maximum strength	✓	✗	M-C first choice but space again crucial
Maximum aesthetics	✗	✓	A-C unsurpassed but excellent aesthetics also possible with M-C
Translucent restoration	✗	✓	A-C best if translucent restoration desired – glassy and particle-filled ceramics (Empress) best
Opaque adjacent tooth	✓	✓	If A-C then opaque core needed – Alumina or Zirconia. Will give high value restoration
Discoloured core	✓	✓!	Can use either but if A-C then opaque core needed – Alumina or Zirconia
Gingival aesthetics	✓!	✓	A-C best but if ceramic butt joint and metal cutback (~1.5mm) used at shoulder then M-C
Bonding	✗!	✓!	Can bond to base metal alloys (beware nickel allergy) High-strength cores can't be bonded but still best to use resin (avoid acid base) Glassy/particle-filled glass ceramics can be effectively etched and bonded.
Legend	✓ = Indicated	✗ = contraindicated	! = Can be used but see comment

restoration has on the selection of a given ceramic is illustrated in the following examples:

- If the tooth preparation is dark, then a more opaque core will be needed to block out the underlying colour (Figures 8a and 8b).
- If the tooth preparation is light in colour and some depth of colour can be obtained from light passing through the restoration, then a translucent restoration may be indicated (Figures 9a, 9b and 9c).
- If matching an opaque tooth with high value to a crown then an opaque core may facilitate higher value restorations and a better match (Figures 10a and 10b). The opposite can also apply and a lower value tooth that has more see-through enamel may need a particle-filled glass ceramic.



FIGURE 10a: Missing maxillary canine to be matched to opaque first premolar and lateral incisor.



FIGURE 10b: All-ceramic zirconia-based implant crown used to match to adjacent teeth.

So, as can be seen from the preceding sections, no one material will be suitable for every situation. The rational selection of the correct restoration depends on being able to combine the knowledge of the materials we use, with the evidence that exists to support them and the clinical expertise to apply the right material to a given situation.

Table 1 is a guide to material selection incorporating the previous points. This guide is not meant to be a recipe book for every situation but will provide some guidance when faced with certain clinical scenarios.

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7. Heffernan, M.J., Aquilino, S.A., Diaz-Arnold, A.M., Haselton, D.R., Stanford, C.M., et al. Relative translucency of six all-ceramic systems. Part I: core materials. *J Prosthet Dent* 2002; 88: 4-9.

## Induction of staff and team training

In the latest Dental Protection article, ANDREW COLLIER presents some guidelines on training employees who are new to work in a dental surgery.

Dentistry is a profession that is based on team working. Any dentist owning or about to buy a practice will obviously value the building, the equipment and the patients but I would suggest that the greatest asset is the team of staff that works in the surgery.

Working effectively together is therefore an essential skill if we are to lead happy and efficient professional lives. That skill depends upon the team's ability to function with mutual respect for each other's qualities and capabilities.

How then do we get the best from our staff? One of the most important factors is good training.

### Induction training

Team training starts from day one. Particular care must be taken with new members of staff, especially if they have no previous formal training or experience in dentistry.

Induction training should therefore be started prior to or from the first day of any new episode of employment. However, the nature and structure of that induction will vary from one practice to another, and will need to take account of the employee's background, previous knowledge and experience. How then do we achieve this?

### Initial assessment

A sensible starting point for any new staff member would be to ask them to complete a self-assessment questionnaire, indicating what they believe to be their level of knowledge in respect of the kind of areas that will be discussed in this article (see panel).

This approach has many benefits:

1. It demonstrates the importance that the practice attaches to the safety, welfare and training of its staff.
2. It gives staff members the opportunity to think about these issues, and to provide feedback.
3. It enables the employer/practice owner to prioritise the employee's training and development needs.
4. It provides a basis for further discussions with those responsible for supervising the new employee.

Another important safeguard can be achieved before the position is offered to the employee by obtaining a confidential medical history. Many aspects of this history may be relevant to their health, safety and welfare in the dental workplace, as well as relevant for patient safety.

### The workplace and surgery equipment

Any new employee – especially if working in a dental practice for the first time – should be given a 'guided tour' of the working environment. The purpose of this is not just orientation but also to highlight potential hazards of which they might otherwise be unaware. Examples of this might include x-ray machines, sterilisers, curing lights, and so on.

Any instructions for operating equipment with moving parts should always be clearly described and demonstrated to the new employee.

### Procedures

There are many different procedures that the clinician may take for granted, but that can represent a personal risk to a new member of staff until the risks and safety precautions have been explained. Below are three obvious examples.

### Infection control

For anyone who will be working in or around the surgery environment, comprehensive training in infection control procedures is fundamental, since the implications of getting things wrong are considerable. This is a complicated field for new team members, and a written infection control policy should exist for every practice, which sets out the procedures to be followed for the protection of patients, staff and third parties (such as laboratory technicians, cleaners, service engineers, etc). The importance of supervision in the early stages of an

### Sample self-assessment question

How aware are you of the risks of infective inoculation injuries from 'sharps' in the dental workplace? (Tick the box that best describes your present level of knowledge.)

- NOT AT ALL – I do not understand these terms.
- VERY LITTLE – my understanding is very limited.
- I HAVE SOME KNOWLEDGE, but would welcome further advice/training.
- GOOD GENERAL AWARENESS, but I would welcome further advice/training.
- VERY AWARE – I have received formal training in the source and nature of these risks, and their prevention, and I do not believe that I need any further information/advice/training at the present time.

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employee's training is vital because the whole team has to trust every other member of the team to maintain the chain of properly sequenced procedures that create effective cross-infection control.

Employees should also be made aware of the risks of infective injury through:

- inoculation;
- inhalation; and,
- splatter.

Understanding the systems that exist for the safe management of sharps and other clinical waste, and the rationale for each of the procedures involved, is also a priority in induction and ongoing training. This also applies to non-surgery workers, such as receptionists and cleaners, who also need to understand these systems, not only to avoid injury to themselves but also to ensure that they do not inadvertently interfere with the safe segregation and disposal of clinical and non-clinical waste.

## Radiation

Radiation safety needs to be stressed to every new employee and especially those new to healthcare. Clear rules should exist, and the need to follow them should be explained carefully to each and every new team member, especially those who are unfamiliar with the effects of ionising radiation.

## Personal protection

An employer has a duty to ensure that employees are provided with any protective equipment that is necessary to minimise the chance of avoidable harm being caused to them.

In the surgery environment, this would normally include protective clothing, surgical gloves (and also heavy duty gloves for use when instrument handling), masks, protective eyewear, and lenses or screens designed to filter out otherwise harmful wavelengths emitted from curing lights, lasers, etc.

Of course, even the provision of protective equipment is of little value if the employee does not fully appreciate the importance of how and when to use it. It is therefore advisable to have written protocols whereby the employer makes it clear that employees are expected to take advantage of the various protective measures that have been taken on their behalf.

## Summary

Good training is vital for the safe and effective integration of a new team member. This training will be made easier if a deliberate, structured approach is taken, which takes due account of the need to safeguard their health, safety and welfare, from the moment they start.

### Andrew Collier LLM BDS

Andrew spent 20 years in general practice before joining Leeds Dental Hospital as a clinical teacher. He now works part-time as a dento-legal adviser for members of Dental Protection and has a responsibility for members who work as university teachers or dental school staff. Andrew is an emeritus member of the Dental Nurse Exam Board Council (UK).



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Oral surgeon required to work one Saturday a month. Excellent working conditions in modern South Dublin dental practice. Please send CV to the practice manager, Email: [sinead@portobellodental.com](mailto:sinead@portobellodental.com).

Galway – part-time associate wanted for immediate start. Locum required on Wednesdays, Thursdays and Fridays for a minimum of three months. Contact Marguerite at Irish Dental Jobs, Tel: 01-8494070, or Email your CV to: [marguerite@irishdentaljobs.ie](mailto:marguerite@irishdentaljobs.ie).

Part-time associate required for long-established family practice in Dublin. Must be experienced, conscientious, friendly and patient-oriented. Good support team and hygienists, fully computerised. Replies please Email: [kanedentcare@gmail.com](mailto:kanedentcare@gmail.com).

Wanted, associate for full-time work in busy modern Donegal dental surgery. Full book available. Email CV to: [dentalassociatewanted@yahoo.ie](mailto:dentalassociatewanted@yahoo.ie).

Associate required for busy, patient-oriented Midlands practice. Experience preferable. Email: [campbelldental@yahoo.ie](mailto:campbelldental@yahoo.ie).

Part-time associate wanted to join very busy practice in Westmeath. Fully computerised, modern facilities, hygienist service, digital x-rays and excellent support staff. Immediate start. Email CV to: [info@cooledental.com](mailto:info@cooledental.com).

Full, part-time associate required to join very busy practice. Modern surgeries, computerised, OPG, experienced support staff. Northside Dublin. Please Email CV to: [dentistswork@gmail.com](mailto:dentistswork@gmail.com).

Experienced dental associate required to replace a departing colleague in Co. Mayo. Busy, well-equipped modern surgery with OPG, hygienist and excellent support staff. Tel: 087-755 0673 after 6.00pm, or Email CV to: [reception@drrosemarysmith.com](mailto:reception@drrosemarysmith.com).

Locum dentist wanted for holiday cover for modern dental surgery in Mayo. Commencing mid March. Minimum three years' experience. Tel: 087-257 0835 after 5.00pm.

Periodontist required for specialist implant and periodontist practice in Norwich, England. Excellent remuneration and working conditions. Email: [hamedperio@yahoo.com](mailto:hamedperio@yahoo.com).

Part-time dental associate wanted. Email: [info@ballincolligidental.ie](mailto:info@ballincolligidental.ie).

Experienced part-time dental hygienist required for a busy, modern dental practice in Galway City. Full assistance provided (digital x-ray, OPG, Cavitron, etc.). Email CV to: [dental.practice1@yahoo.ie](mailto:dental.practice1@yahoo.ie).

Full time DSA required for modern practice located near the Navan Road, Dublin 15. Must be able to work two late evenings to 8.00pm per week. Tel: 01-866 4080, or Email CV for interview to: phoenixdental@eircom.net.

Dental receptionist/nurse required for Dublin 12 practice. Computer literacy essential. No agencies to respond to this ad please – applicant only. Email: cliodhna.heavey@gmail.com.

Qualified dental nurse/receptionist required for treatment co-ordination in state-of-the-art Cork private practice. Experience and computer literacy essential. Email: claire.rath@smilesandmore.ie.

Experienced receptionist/practice manager required for a dental practice in Galway City. Previous experience in a similar role would be advantageous. Email CV to: dental.practice1@yahoo.ie.

Locum/associate wanted for busy Cork City practice from early April. Email: marygoconnor@eircom.net.

### PRACTICES FOR SALE/TO LET

Dental specialists looking for rooms on rent/sharing who are living in Ireland: join specialist oral surgery/implants practice in Heuston South Quarter, Dublin 8. Tel: 086-395 6863, or Email: oralbeacon@gmail.com.

Blackrock, Co. Dublin. Fully equipped surgery available two days a week on a sessional basis – Tuesdays and Fridays. Ideal for specialist practice. Digital, OPG and periapical. Surgery also available in Bray. Tel: 01-283 4101 for details.

Practice for sale in Western Australia. House and two-surgery practice on five acres in South-West of W.A. Established over 30 years. Opportunity to serve an appreciative community in a wealthy rural area. Tel: + 61 407 083 905, or Email: badgie@wn.com.au.

For sale, Co. Cork. Long-established, good footfall, busy dental practice – walkinable. Expansion possible – services installed. Excellent equipment, including OPG. Expanding: hygienist. Low

overheads. Private practice. Computerised. Good new patient numbers – crown, bridge, ortho on site. Contact Liam, Tel: 087-232 7557, or Email: liamtuohy46@eircom.net.

Practices for sale: attention clinic groups or dentists with associates! Three single-handed leasehold practices in three different counties. Good equipment, OPGs, highly profitable. For sale together or separately. Tel: 087-667 9306.

To let, West Cork. Great opportunity for an associate to branch out on their own. Fully equipped single surgery dental practice. OPG. Includes one-bed apartment. Owner retiring. Lovely seaside location. Good earnings, option to buy. Email: osullivan dentalcare@eircom.net.

Dental surgery for sale on Northside of Dublin. Freehold. Well-equipped surgery. Enquiries, Email: johnd224@hotmail.com.

Small one-surgery private dental practice for sale in Wales but close to Ireland. Low maintenance costs, good profits and reliable patient base. Email: surgeryinwales@hotmail.co.uk.

Practices for sale – Co. Meath. Two well-equipped modern surgeries. Ample room to expand. Busy private practice. Good location, low rent. Low overheads. Excellent figures. Genuine reason for speedy sale. Realistically priced. Tel: 086-807 5273, or Email: niall@innovatedental.com.

For sale, West of Ireland. Single-handed, long-established practice. Ample room to expand area and service. Excellent location. Flexible lease terms. Low overheads. Very good profits. Ideally suited for young dynamic personality. Loyal staff. Tel: 086-807 573, or Email: niall@innovatedental.com.

### EQUIPMENT FOR SALE

Opportunity to acquire Belmont Clesta chair with light, spittoon and cart delivery, also Durr xr24 developer with daylight hood, Bambi compressor, all good working order. Colleague closing practice. For details, Email: qds@eircom.net.



**Irish Dental Jobs**  
THE DENTAL RECRUITMENT SPECIALIST

Irish Dental Jobs is the first recruitment company in Ireland to focus solely on the needs of Irish dentistry. The company was created to offer a comprehensive professional service to dentists and those seeking to join practices.

**Temps... Temps... Temps**  
Available nationwide. Over 500 dental nurses and hygienists available at short notice.

**Dublin**  
Associate required from 6:00pm-9:00pm, three to five days a week.

**South East**  
Paedodontist required one day a week; must have post-graduate qualification.

**Cork**  
Endodontist and paedodontist required for multi-disciplinary practice.

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Part-time position available for experienced dentist. Flexible on the days.

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Ongoing need for experienced dentists in NSW and Queensland. Interviews can be arranged immediately.

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**M: 087 9383155 W: www.irishdentaljobs.ie**

## Diary of events

JOURNAL OF THE IRISH DENTAL ASSOCIATION

### APRIL 2011

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#### Orthodontic Society of Ireland – Meeting

April 15-16

Aviva Stadium, Dublin

Speakers are Dr Hugo De Clerck and Dr Bjorn Ludwig. See [www.orthodontics.ie](http://www.orthodontics.ie) for more details.

#### The Caribbean Dental Convention

April 27 to May 1

Accra Beach Hotel & Spa, Barbados.



*I don't know about you – but I'd rather be in Cavan.*

For further information contact [www.caribbeandentalprogram.com](http://www.caribbeandentalprogram.com)

### MAY 2011

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#### IDA Annual Conference 2011

May 12-15

Slieve Russell Hotel and Country Club, Ballyconnell, Co. Cavan



For further information contact IDA House, Tel: 01-295 0072.

April/May 2011

118 : VOLUME 57 (2)

#### Irish Society of Dentistry for Children – Annual Scientific Meeting

May 19-20

The Strand Hotel, Limerick

#### IDA Golf Society – Lyttle Cup

May 27

Concralwood Golf Club, Castleblayney, Co. Monaghan

### SEPTEMBER 2011

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#### IDA Golf Society – Captain's Prize

September 3

Carlow Golf Club

#### The 24th Annual Meeting and Refresher Course of the European Society of Head and Neck Radiology (ESHNR)

September 8-10

Congress Center Oud Sint-Jan, Bruges, Belgium



More information on the programme can be found on [www.eshnr2011.be](http://www.eshnr2011.be).

### OCTOBER 2011

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#### HSE Group Seminar

Sheraton Hotel, Athlone, Co Westmeath

October 12-14, 2011

### JUNE 2012

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#### Europerio7 – 7th Congress of the European Federation of Periodontology

June 6-9

Vienna, Austria

Learn from renowned experts' newest techniques and treatment methods in the fields of periodontology, implantology and dental hygiene. More information on this conference can be found on [www.europerio7.com](http://www.europerio7.com).

# Sensitive Pro-Relief™

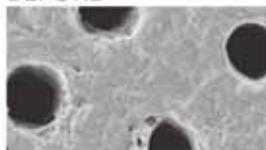
## TREATMENT PROGRAMME



Finally, instant\* sensitivity relief patients can take home.

### A breakthrough: Pro-Argin™ Technology

BEFORE<sup>1</sup>



In Vitro SEM photograph of untreated dentine surface.

The tubules that lead to sensitivity are open

AFTER<sup>1</sup>



In Vitro SEM photograph of dentine surface after application.

The tubules are occluded for instant, lasting relief

With Pro-Argin™ Technology, you can finally provide instant\* and lasting relief from dentine hypersensitivity using the Colgate® Sensitive Pro-Relief™ Treatment Programme:

- In-surgery desensitising paste
- At-home everyday toothpaste

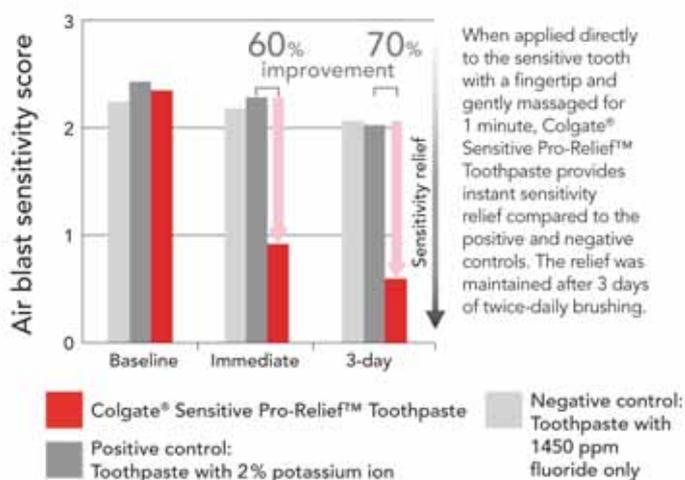
Pro-Argin™ Technology works through a natural process of dentine tubule occlusion that attracts arginine and calcium carbonate to the dentine surface to form a protective seal that provides instant relief.<sup>2</sup>

\*Instant relief is achieved with direct application of toothpaste massaged on sensitive tooth for 1 minute.

References: 1. Petrou I et al. / Clin Dent. 2009;20(Spec Iss):23-31 2. Cummins D et al. / Clin Dent. 2009; 20(Spec Iss):1-9 3. Nathoo S et al. / Clin Dent. 2009;20(Spec Iss):123-130.

### The results are revolutionary

Instant relief achieved with direct application of toothpaste massaged on sensitive tooth for one minute and continued relief with subsequent twice-daily brushing<sup>3</sup>



Ask your Colgate Oral Care Consultant about how instant relief from dentine hypersensitivity can benefit your patients.

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Colgate Customer Care Team: 01 403 9800

www.colgate.ie

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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.

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[www.nobelbiocare.com](http://www.nobelbiocare.com)