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irish dental association

Journal of the Irish Dental Association

Iris Cumainn Déadach na hÉireann



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caries primary teeth: a review

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. Efflant 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): 1167-1113. 8. Sallian 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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Understanding our priorities

Excellence in dentistry, awareness of mouth cancer, robust exchanges of views and continuing professional development all feature in this edition of the *Journal*.

Several important issues arise in this edition of the *Journal* and I can recommend all of them to you for your attention. First of all, we had the very happy occasion of the Sensodyne Sensitive Dentist of the Year Awards in the RDS in January. This competition is distinguished by the fact that the nominations for the dentists come from the patients. It has become, over the few short years that it has been running, a tremendous channel for the Irish public to express their special thanks for the care and attention which they receive from their dentists all over the country. All of the entries represent satisfied patients and ensure that the judges have a very tough job in identifying the winning dentists. You can read the full report of their adjudications and of the winners on pages 20 to 22. The *Journal* is very grateful to both the judges and GSK, makers of Sensodyne, for their continued support of this excellent competition. May I express our special thanks to David McNamara, an oral cancer patient, who nominated his dentist, Dr Sarah McMorro, for "saving his life". His bravery in speaking up adds greatly to the efforts of the profession (most notably through Mouth Cancer Awareness Day) to raise awareness of oral cancer among the public.

We have a robust and welcome exchange of views on our Letters to the Editor page (page 7), which arises from the peer-reviewed paper in our October/November edition on 'A review of inappropriate payments in the DTSS' (*Journal of the Irish Dental Association* 2011;57 (5): 252-255). I heartily recommend that you read both letters fully. Letters on the subject from other dentists and interested parties are welcome.

I am very happy to report on the communication between the new CPD Committee of the Association, under the Chairmanship of Dr Garry Heavey, and the Editorial Board of the *Journal*. As you will read (page 25), the two bodies are co-operating with a view to members of the Association being able to gain verifiable CPD points for reading the *Journal*. We will keep readers abreast of developments.

There was a fantastic turnout on a Saturday in January for the Association's practice management seminar. It is reported on pages 12 to 14, with additional reporting in the Members' News section on the issue of the tax status of associates.

In our peer-reviewed papers, we have an excellent paper on early childhood caries (ECC) (pages 31-42). The paper shows how these caries have consequences that affect both the child's dental health and his/her general health. It reviews the literature regarding ECC and its consequences (pain, sepsis, space loss, disruption to quality of life, failure to thrive, effects on intellectual development, greater risk of new carious lesions in both primary and permanent dentitions, higher incidence of hospitalisation and emergency visits, and increased treatment costs and time). These are very significant issues and in a time of limited resources, it is valuable to help understand where priorities should lie. We also have a short but very interesting paper on supporting career choices in dentistry (pages 41-42).

Finally, we are all faced with many challenges. Perhaps we have a better chance of overcoming these challenges by working in greater co-operation. I wish all of you an excellent year in 2012.



A handwritten signature in blue ink that reads "Leo F. A. Stassen".

Prof. Leo F. A. Stassen
Honorary Editor

Mark those dates

The President urges all dentists to take part in the coming annual scientific meetings in Dublin, Kilkenny and Killarney.

I'd like to begin by wishing all our readers a belated happy new year. January began with the Sensodyne Sensitive Dentist of the Year Awards for 2011. This is a type of 'dental Oscars' awards ceremony, jointly sponsored by GSK and the *Journal of the Irish Dental Association*. Patients were invited to nominate their dentist for outstanding care and treatment. It was my pleasure to present the overall award to Dr Sarah McMorrow from Loughrea. The best supporting actors (and highly commended regional winning dentists) were Drs Claire McGrath from Sandyford, Eoin Fleetwood from Galway, Mairéad Browne from Cork and Marcas Mac Domhnaill from Dún Chaoin. Congratulations to one and all.

Later that week, I was a guest of the British Dental Association, Northern Ireland Branch, at their presidential installation dinner in the Great Hall at Queen's University. Barry McGonigle from Omagh was installed as branch president for 2012 at what was a most enjoyable occasion held in magnificent surroundings. Barry has a couple of busy years ahead as he will follow his year as branch president by becoming president of the BDA in London for 2013. He will become the first Northern Ireland president of the national BDA since Ian Bennington in 2002. We wish him the very best for the next two years and look forward to strengthening the ties that already exist between our two associations.

On the following day, the third IDA annual practice management seminar was held in Croke Park. There is obviously a place for this type of event in the calendar as evidenced by an attendance of over 200 dentists. An impressive line-up of speakers from Canada, the UK and Ireland gave some excellent presentations on running a dental practice at a wonderful conference venue. I would like in particular to thank my former classmate Dr John O'Keefe, who travelled from Ottawa. John gave a very interesting presentation, which described what steps the Canadian dental profession is taking to nurture trust and communicate the value of oral health and dental care to the general public. Of course the day was also a great opportunity for IDA members to meet up with colleagues from around the country.

The Irish Dental Association continues to focus on providing the highest standard of continuing dental education to the dental profession. Our CPD committee, under the chairmanship of Dr Garry Heavey, continues to strive to make our Association the primary provider of CDE in the country. You may like to note the following dates for your diary: the Metropolitan Branch will hold its Annual Scientific Day on the afternoon of Friday, February 10, in the Hilton Hotel, Charlemont; and, the South Eastern Branch Annual Scientific Day will take place on Friday, March 2, in the Ormonde Hotel, Kilkenny. Both programmes have a very interesting list of speakers whose brief is to educate and entertain!

By now you will have received the provisional programme for our Annual Scientific Conference in Killarney. The conference will take place in the Malton Hotel (formerly the Great Southern) from May 17-20. There is a terrific line-up of national and international speakers so I would urge you to note the dates in your diary now! Don't forget that attendance at your branch meetings and at the Annual Conference will fulfil your CPD requirements for the entire year. Come to the Kingdom in May!

I'm delighted that Sean Malone will be taking over as President of the Association in May 2013. Sean had a very successful year as President of the Metropolitan Branch in 2005. I would like to wish him every success for 2013.

We also welcome the appointment of Michael Kilcoyne as Facilitator of the new Dental Complaints Resolution Service.

Finally, it was with great sadness that we learned of the death of our dear colleague and friend, Seamus Keating from Cork, on St Stephen's Day. Seamus was a very popular and highly respected member of the dental profession who will be greatly missed. He was a former president of the Munster Branch of the IDA and of the Orthodontic Society of Ireland. Ar dheis Dé go raibh a anam dílis.

Dr Conor McAlister
IDA President



Dear Sir,

Re: Lynch, L. A review of assessments of inappropriate payments in the DTSS

While delighted that the issue of 'inappropriate payments' is receiving attention and welcome criticism of our work, we are disappointed in the extremely poor qualities of the published paper. In our view, the paper has numerous flaws: it is highly selective in its examination of the field; very weak in the analysis of reports; and, draws implications that show a lack of understanding of the issues.

Our work on probity assurance is not synonymous with 'inappropriate payments', the latter being a subset of the former, but was far wider in scope. That aside, the author has failed to explore what he has termed 'inappropriate payment' except in his selective interpretation of the word. In our report the term "inappropriate payment" includes any instance where the party making the payment has a legitimate cause to question its justification. Payments made as a result of fraud, error and abuse (including inappropriate diagnosis or poor quality treatment) are all forms of 'inappropriate payment'. The 'literature review', and we use that term loosely, fails to explore these elements or the associated issues.

The author shows no appreciation of the system in general and the role of the various agencies involved. For example, he fails, either through ignorance or selective reporting, to analyse: the validity or structural nature of the claims database; the role of the various regulatory bodies involved, or among a number of highly specific cases; the results of the DTSS examination into expenditure on oral surgical claims. The author also appears to fail to recognise the difference between a policy publication and that found in a scientific journal. These are all major failings in what has pretensions to be a scientific publication.

Finally, we would like to pose a question on his comment about the lack of transparency in how the system functions. Is he really arguing that the methods used by authorities should be made public? Would he support Customs and Excise personnel publishing in advance where and when they will be undertaking checks and their exact nature?

Yours sincerely,

Paul Batchelor
Derrick Stirling

Dear Sir,

Thank you for the opportunity to respond to this letter.

At the start of this curious letter, the writers say they "welcome criticism of their work". However, sadly, the remainder of the letter leads one to believe that the opposite is the truth. What seems to rankle the letter writers is the fact that an Irish dentist has the temerity to question the methodology they employed, when they made an estimate of inappropriate payments in the DTSS of over 10%. This estimate was subsequently published in a report paid for by the Irish taxpayer and has been interpreted in ways damaging to the general body of contracting dentists in the DTSS in Ireland. Those who make such estimates have a responsibility to give at least an outline of their methodology. The vast majority of contracting dentists deserve nothing less.

Regrettably, the tone of the letter is arrogant, as exemplified by the sentence: "These are all major failings in what has pretensions to be a scientific publication". This is a slur on the proud history of the *Journal of the Irish Dental Association* and its editorial staff, contributors, peer reviewers and readers. I suppose arrogance is to be expected from a firm whose directors say of themselves on its website: "I wonder if any other three people in the UK know as much about dentistry as we three do?"

Having made no attempt to reply to the five main points raised in my paper, the letter writers make strenuous efforts to refute criticisms of their report which are not, in fact, contained in my paper. For example, the term "lack of transparency" was not used. Therefore, I

am at a loss to understand what the letter writers are referring to when they somewhat bizarrely state that they wish to pose a question to me concerning the Customs and Excise. The letter proceeds to develop an *argumentum ad hominem* or attack on the man, and indeed an attack on the *Journal of the Irish Dental Association*, rather than refute the argument. Thus, it is no surprise that the language of the letter is intemperate and at times coarse, for example its use of the term ignorance ("he fails either through ignorance"...)

Finally, and this is the key point, the letter writers state that I "show no appreciation of the system in general and the role of the various agencies involved". This is quite risible coming as it does from a small (apparently three-person) commercial firm based in North Yorkshire and referring to myself, an Irish dentist with 30 years' experience of daily interaction with publicly funded dental delivery systems in Ireland. Who, indeed, was an Examining Dentist in the DTSS, holds a Masters in Dental Public Health with thesis in inappropriate payments in the DTSS and is in the final year of research towards a PhD in counter-fraud in publicly funded oral healthcare.

I stand by every word contained in my scientific peer-reviewed paper and congratulate the *Journal of the Irish Dental Association* for having published it.

Sincerely,
Liam Lynch

Dentists run for Aware

Well done to all those who took part in the Aware Christmas five-mile run. Over 25 dentists, hygienists, family members and friends braved the near arctic conditions in the Phoenix Park on Saturday December 10 in aid of Aware.

Dr Ultan McGuckin has asked us to convey a big thanks to all those who sponsored our runners and helped raise much needed funds for this charity in their efforts to help combat depression and suicide. Thanks again.



Drs Pat Cashman, Caitriona McCool and Niall Collins were among 25 dentists, hygienists, family and friends who completed the Aware five-mile run in December.

South Eastern Branch ASM

The South Eastern Branch will hold their ASM on Friday March 2 at the Ormonde Hotel, Kilkenny. Speakers on the day include:

- Dr Andrew Norris* – Extractions: keeping it simple
- Dr Johnny Fearan* – Malice in Maryland?
- Dr Catherine McKinley and Dr Eimear Norton* – Paediatric pickles and practical prevention
- Dr Paul Cashman* – Management of the heavily restored dentition
- Dr Melissa Lee* – Periodontal regeneration

Rotating table demonstrations:

- Dr Cormac Cullinane* – Dam Busters: de-mystifying rubber dam placement – a practical guide
 - Dr Johnny Fearan* – Cobalt chrome design tips
 - Dr Paul Cashman* – Treatment planning for the heavily restored dentition
 - Dr Catherine McKinley and Dr Eimear Norton* – Prevention, prevention, prevention
- There will also be a short presentation from IDA President Elect, *Dr Andrew Bolas*.

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Metro Branch ASM

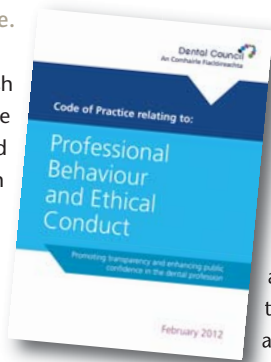
The Metro Branch will hold their Annual Scientific Meeting on Friday February 10, at the Hilton Hotel, Charlemont, Dublin 2. This year's event has a slightly different format from previous years, in that it commences at 2.00pm, allowing dentists to be in their surgeries in the morning. A full trade show will be present. Speakers on the day include:

- Dr Eimear Norton* – Helpful tips in paediatric care
 - Dr Tony Coughlan* – Orthodontic tips for you to take home
 - Dr Declan Corcoran* – Early pick-ups in perio
 - Dr Dermot Canavan* – Current concepts in solving local anaesthesia problems
 - Dr Sean McCarthy* – Porcelain crowns and when to use them
 - Dr Mairtin Brennan* – The marriage of porcelain and composite
 - Dr Frank Burke* – The twilight teeth
 - Prof. Finbarr Allen* – Learning from the old dentures
- For further details or to book contact IDA House, Tel: 01-295 0072.

New Code from Dental Council

The publication of the new Guide to Professional Behaviour and Ethical Conduct by the Dental Council is to be welcomed given the overwhelming support of the dental profession for promoting the highest standards of dental care.

It is notable that the guide is written in plain English and this again is very much welcomed. The Association strongly encourages all dentists to read the entirety of the guide, which has been reformulated to reflect the patient journey, according to the Council. It is also worth noting that the Council has accepted a number of proposals from the Irish Dental Association, which we feel will not only ensure adherence to the highest standards of dentistry, but also offer appropriate protection to dentists, particularly where they are faced with difficult patients or where they are have concerns about their ability to provide the highest standards of care because of funding cutbacks and resource deficiencies.



While there are a number of new provisions in the guide, including the requirement to have a complaints procedure (and therefore it is particularly timely that the Association is rolling out a dispute resolution service – see page 27), and new provisions regarding adverse events, the management of data, and social media, there are also significant changes to key provisions, including those dealing with consent, communicating with patients and the need to ensure understanding of the treatment plan, outcomes and cost. There are also important provisions that dentists ought to become familiar with, including the provisions relating to patient records and also in regard to promoting dental practices. There are also significant provisions regarding the health of dentists, the need to notify appropriate authorities, new provisions regarding ceasing practice and also the clear onus on dentists to only undertake treatments dentists are competent to complete safely and to a satisfactory standard.

The Association will circulate more detailed advice to its members shortly, but, in the meantime, we would strongly encourage all members to acquaint themselves with the full text of the Guide, which has been circulated by the Dental Council in recent days.



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Basic life support training

The next basic life support (BLS) course will take place in the Nuremore Hotel, Co. Monaghan, on Saturday March 24 from 10.00am to 4.00pm.

The BLS Healthcare Provider Course is designed to provide a wide variety of healthcare professionals with the ability to recognise several life-threatening emergencies, provide CPR, use an AED and relieve choking in a safe, timely and effective manner. The course is specifically designed for healthcare professionals.

Places are limited to six.

IDA member or IDA member's team (team members must be an IDA member's dental nurse, hygienist or practice manager): €195

Non-members: €390

Contact IDA House, Tel: 01-295 0072, to book.

Annual Conference 2013

The Annual Conference 2013 returns to the West of Ireland. After the success of 2010's event, the conference returns to the Radisson Hotel, Galway, from April 18-21, 2013.

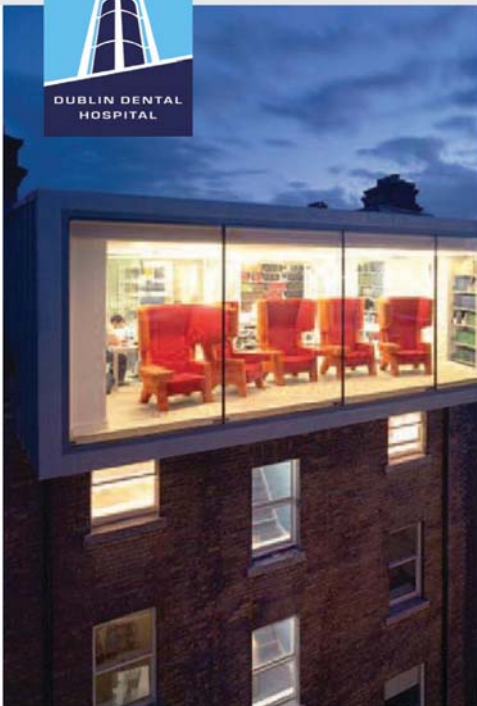


Ireland to host CED meeting in May 2013

The Council of European Dentists (CED) will hold its annual meeting in Dublin in May 2013. The four-day event was last hosted in Dublin,

and will attract around 150 dentists from all over Europe to the capital. The CED's Irish delegation consists of Drs Tom Feeney, Barney Murphy and Robin Foyle.

OSPIDEÁL DÉADACH
BHAILÉ ÁTHA CLIATH



CALLING ALL DUBLIN DENTAL ALUMNI

The Dublin Dental School and Hospital, will be hosting an Alumni Evening on Thursday April 19, 2012. All Alumni (and a guest) are invited to attend a drinks/canapé reception at the Dental Hospital, Lincoln Place, starting at 18:30. The schedule for the evening includes a tour of the new School and Hospital facilities as well as the awarding of the annual Perpetual Teaching Award. The recipients of the award this year will be Dr Collette Boothman and Professor Liam McDevitt. They have been selected by Alumni to receive this award, based on their outstanding contribution to teaching in the School. If you are interested in attending please RSVP to Jennifer McSweeney at jennifer:mcsweeney@dental.tcd.ie or 01 612 7606.

We look forward to seeing you on 19th April!

June Nunn
Dean, School of Dental Science

Photo courtesy of McCullough Mulvin/Christian Richters

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References: 1. Data on file 45348, McNEIL-PPC, Inc. 2. Data on file, microbiology dossier, McNEIL-PPC, Inc. 3. Data on file 103-0214, McNEIL-PPC, Inc. 4. Le Geros RZ et al. *Am J Dent* 1999; 12(2): 65-71.



There was an excellent turnout of IDA members for this year's Croke Park Seminar.



From left: Jim Kelly of Grant Thornton; and, Brian Edlin of Dental Protection.



From left: Bernard Doherty of Grant Thornton; and, Dr Conor McAlister, IDA President.

Game on

The Association's recent seminar in Croke Park addressed a myriad of professional challenges. PAUL O'GRADY reports.

Chris Barrow, Director of The Dental Business Club, was the first speaker and immediately took questions from the floor. The first question was: is there a future for small dental practices? Chris pointed to the experience in the UK pharmacy and opticians' sectors where independent practices now only make up 10% of the market. The 10% survive, he said, because they provide a boutique service. Asked about dental earnings, he said that the prognosis for dental earnings is down. He stated that in Canada, most associates are on 35-40% of their gross revenue – and he claimed this is the correct number. "It represents a win for the associate, a win for the dentist through modest profit, and a win for the patient through the reinvestment in the practice of profits generated by the associate," said Chris.

Asked about what key advice he would give to dentists, he said:

- improve your brand (he says it is a statistical probability that your brand is tired);

- understand the power of the internet; and,
- get your team to understand the importance of the customer service experience.

Increase in litigation

Dr Brian Edlin of Dental Protection remarked on the change in culture in Ireland and the UK from a non-confrontational style to increased competition, followed by increased litigation. "There has been an astronomical increase in litigation in Ireland. Eighty of every thousand dentists are sued in Ireland every year. We indemnify the majority of dentists in Ireland and we are dealing with 25 cases a month," said Brian. He reminded the audience that dentists can use complaints as an opportunity and that it is enormously easier to keep a patient than to get a new one. "If we have one piece of advice for dentists who receive a complaint, it is not to go it alone. Additionally, I would particularly say: do not respond within an hour."

Boots – what happened in the UK?

In response to a question about the success of supermarkets in the dental business, Chris Barrow explained what happened to Boots' entry into the provision of dental services.

"Boots set up dental surgeries at 47 in-store locations in the UK. They employed 150 dentists and a total of 600 staff. They achieved 250,000 patients. Why? Because people trust the Boots brand. They also kitted out the surgeries very well, including with the latest software. They ran superb marketing campaigns, mostly around their Clubcard members, and achieved their sales targets every year they were in operation.

So what didn't work? In the first place, they initially employed dentists on salaries. However, after a while they had a rethink. They sacked all the dentists and rehired them as associates. The second thing that they did wrong was that they didn't integrate the dental surgery with the store management. Attendance figures at the surgery were not a key performance indicator for management of the store where the surgery was located. Then in year four, Boots changed hands and the new owners didn't want to operate healthcare. So they sold the dental business to Optical Express. And remember, despite all of the above, Boots had 250,000 satisfied customers."



Dr Brian O'Loughlin of Phibsborough in Dublin was one of the large attendance at the seminar.



Delegates heard presentations on all aspects of running a dental business.

He noted that only 4% of patients with adverse outcomes actually sue and that if a dentist handles a complaint properly, the patient can be an ambassador for the practice. He strongly advocated use of the new Dental Complaints Resolution Service when it commences in Ireland – most likely in March. Brian concluded his address by showing some samples of the more amusing complaints received by Dental Protection.

Managing stress

Ray McKiernan made a very interesting presentation about stress and how it is in everyone's life. He made the point that everyone experiences stress and he talked about what we do with that stress. Noting the level of change in dentistry in the last few years, he said that a lot of change leads to an increase in stress and, very often, people have no training in how to deal with stress. An accumulation of stress will escalate into anxiety and if left unchecked, that will turn into depression.

Ray pointed out that meditation techniques that focus on breathing – and particularly on extended exhalation – are very successful in alleviating stress. "People who practice relaxation tend to be able to switch off stress," he said.

Survey reveals key thoughts of dentists

John O'Connor, Managing Director, Omega Financial Management, opening the afternoon session, revealed the key findings of the survey which his firm carried out in conjunction with the Association. These findings included the following:

- turnover in dental practices fell in 2011 and is expected to fall further in 2012;
- earnings from PRSI are disappearing;
- private patients are becoming the key source of income;
- marketing your practice is a key challenge for 2012;
- one in five dentists wish to sell their practice but there aren't enough buyers;
- there's an urgent need to address the shortfalls in retirement assets;
- staffing levels are continuing to fall;
- middle-aged dentists need to rediscover their "joie de vivre";
- 83% of dentists prefer the *Journal of the Irish Dental Association* over the competition;
- there is tentative optimism about Ireland's prospects; and,
- reform of the public sector is seen as critical to our economic recovery.



From left: John O'Connor, Omega Financial Management; Bernard Doherty, Grant Thornton; IDA CEO Fintan Hourihan; Gerard Gavin of VHI DeCare Dental Insurance (sponsors), and Dr Paul McEvoy.



IDA President Dr Conor McAlister addressed the Seminar.



Drs Kevin Dunne, Jennifer Dunne and Eddie Goggins.



Drs Gillian Smith, Conor McAlister and Sharon McAlister.

Full results are available from Omega Financial Management and can be found on their website.

Tax status of associates

Bernard Doherty and Jim Kelly of Grant Thornton made a significant presentation on serious developments in the tax status of associates and in particular, reported on the project carried out by the Revenue Commissioners in North Cork. Details of this presentation are available to members only in the members’ update pages in the centre of this *Journal*.

Code of Professional Behaviour and Ethical Conduct

David O’Flynn, the Registrar of the Dental Council, outlined the contents of the forthcoming Code of Professional Behaviour and Ethical Conduct. He said the critical features of the Code are:

- the approach to treating patients;
- communicating treatment to patients;
- patient consent;
- dealing with adverse events;
- keeping patient records; and,
- dentists’ responsibilities.

The Registrar also outlined that tooth whitening would become dentistry from about October 2012. In that scenario, the first application will have to be by a dentist. The Irish Medicines Board is

expected to carry out an awareness campaign around the issue. David reviewed some issues around advertising of dental practices and highlighted the problems that tend to arise when advertising orthodontic treatment. He also welcomed the proposed introduction of a Dental Complaints Resolution Service.

Trust is earned

Dr John O’Keefe is an Irish dentist who emigrated to Canada 20 years ago and now works with the Canadian Dental Association. He has been Editor of the *Journal of the Canadian Dental Association* and currently has an ambassadorial role on communication and trust issues. He has long advocated the maxim: value is demonstrated; trust is earned. He explained that there are 19,000 dentists and 22,000 hygienists in Canada and the good news is that dentists there are generally held in high regard. Interestingly, though, he reported research in Canada, which showed that 63% of the public see dentists as business people, while 57% see dentists as doctors – and the fact that that adds up to more than 100% is accounted for by the fact that 57% were comfortable with their dentist being both. Out of that research the Canadian Dental Association identified three goals: a healthy public; a united dental community; and, a strong profession. Dr O’Keefe finished by paying tribute to two Irish dentists who had acted as mentors to him: Drs Joe Maloney and John Costello.



Dr Paul McEvoy announces details of the Metropolitan Branch ASM.

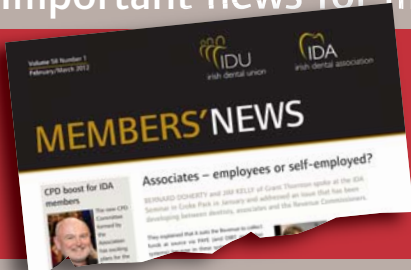


Drs John O’Keefe and Reamon Ryan.



Speakers held the large crowd’s interest to the end.

Important news for members in the centre pages 25 – 28



Taxing issues



Complaints service



DTSS update



Staff holidays

Irish hygienists on expert tour

The Colgate Dental Hygiene Tutor Expert Tour 2011 was attended by hygiene tutors from Ireland, England, Scotland and Wales. The Irish tutors in attendance were Martina Collins of Cork University School and Hospital and Catherine Waldron of Dublin Dental University Hospital. The tutors attended the Colgate research and development facility in New Jersey, USA, where they were briefed on the latest developments in dental hygiene research by Colgate.

At the event were (from left): Maddie Tucker; Lorraine Keith; Martina Collins; Jane Rowbotham; Joanne MacLeod; Betty King Sutton; Kira Stearns; Fiona Sandom; Erica Clough; Diane Hunter; Catherine Waldron; Lynne Mackay; Gail Marsh; and, Anousheh Alavi.



Quiz

Submitted by Dr Maurice Fitzgerald.

Questions:

1. What abnormality is seen in the radiographs?
2. What causes this bony abnormality?
3. What other common clinical finding is often associated with this condition?
4. What treatment is indicated?

Answers on page 47



The Financial Experts for Dentists

At Omega Financial Management, we pride ourselves on understanding the financial challenges faced by dentists. We hugely value the endorsement given to us by the Irish Dental Association and our mission is to deliver financial solutions to meet the specific needs of dentists.

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New chair for PR Committee

Dr Maurice Quirke has recently taken over as Chair of the PR Committee. Dr Quirke, a GDP based in New Ross, Co. Wexford, is a former Board member and Chairman of the GP Group. We wish him well in his new role. Drs Pat Cleary (Metro Branch) and Rosemarie Daly (Kerry Branch) have also agreed to join this committee. Thank you!

Alcohol-free Listerine Total Care Zero

According to Johnson&Johnson, makers of Listerine Total Care Zero, the product is alcohol free but still retains the Listerine brand's four essential oils. So it has a softer taste but, the company says, kills up to 99% of plaque bacteria in vitro, more than the leading alcohol-free

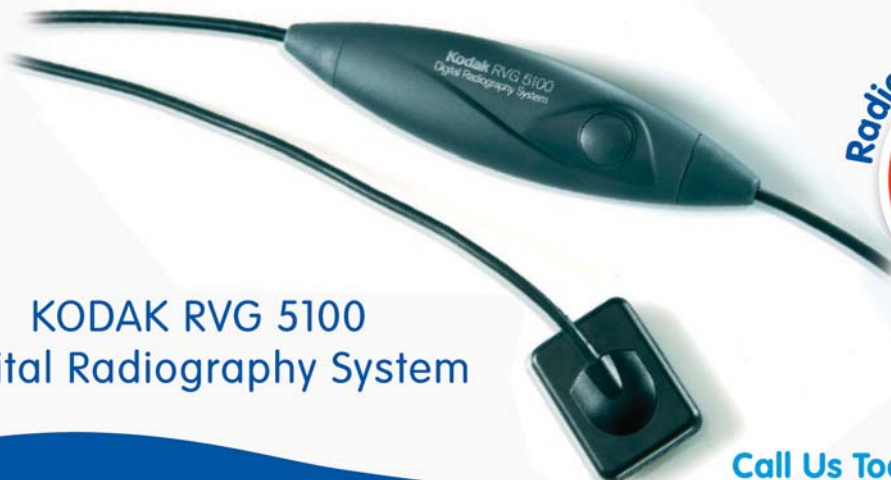
daily use mouthwash brand. In addition, they say that Total Care Zero contains 220ppm (0.05%) fluoride, with high uptake for extra enamel protection, and zinc chloride to reduce calculus formation and help keep teeth white. So, the company asks, when patients want a less intense, alcohol-free mouthwash, why not add Listerine



Total Care Zero to their oral care routine? Listerine Total Care Zero is available through grocery and pharmacy outlets nationwide and is suitable for patients of six years and over.



Carestream Dental selects Medray as Irish Dental Business Partner



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SENSODYNE

Sensitive Dentist of the Year™

**IRELAND'S
MOST SENSITIVE DENTIST**



Congratulations to
Dr Sarah McMorrow of
Loughrea, Co. Galway, who
was adjudged to be Ireland's
Sensodyne Sensitive Dentist of
the Year - based on
nominations by her patients.



journal of the irish dental association
Iris Cumainn Déadach na hÉireann



Dentists identify their main business challenges

In the survey of Irish dentists carried out by the Irish Dental Association and Omega Financial Management at the end of 2011, over 300 dentists identified the main business challenges facing them. The survey findings showed that with approximately only one-quarter of income coming from medical card patients, and the disappearance of income from PRSI for most, the need to attract more income from private patients is a key challenge. It also demonstrated that marketing campaigns aimed at existing patients, better networking with other health professionals, and an overall raising of awareness of the importance of oral hygiene are critical activities for 2012.

A bleak outlook for turnover, which will affect future practice values, the continuing fall in property values and a lack of dentists wanting to buy existing practices are all factors in dentists needing to re-examine their exit strategies. Irish dentists identified their pension funds as the cornerstone of their income in later years; however, the current levels of retirement planning are not sufficient in many cases to provide the desired lifestyle in retirement. As a result, many require increasing pension contribution levels and, indeed, the prospect of working well into their 70s will become a reality for many.



John O'Connor of Omega Financial Management introduced the results of a joint Omega and IDA survey of dental practices at Croke Park recently. The full results of the survey are available at www.omegafinancial.ie.

An Introduction to Dental Implantology Proposed Course Date: Saturday May 26 2012



- A comprehensive one day presentation for GDPs
- An opportunity for interactive case discussion and treatment planning of potential cases
- A precursor for a one-year modular course in Limerick

Saturday May 26 2012 at The Clarion, Limerick City (Aquila Room).
www.clarionhotellimerick.com Tel (00353) 061444100
info@clarionhotellimerick.com
 Verifiable CPD hours to be confirmed.

Speakers:

Mr Lloyd Searson, BDS, MS (Univ. of Michigan), FDS.RCS(Eng)
 Specialist in Restorative Dentistry
 Consultant in Restorative Dentistry, Kings' College Dental Hospital

Mr Kavir Shah, BDS, MFDS.RCS(Eng), M.Clin.Dent, MRD.RCS(Eng)
 Specialist in Prosthodontics/Senior Clinical Teaching Fellow
 in Implant Dentistry, UCL, Eastman Dental Institute.

Mr Robert Stone, BDS MSc (Con Dent)
 Senior Clinical Teaching Fellow in Restorative Dentistry, UCL,
 Eastman Dental Institute.

Aims

- To provide participants with a fundamental knowledge of biological and biomechanical aspects of dental implantology.
- To provide an insight into the role of dental implants as a treatment option for the replacement of missing teeth.

Learning outcomes & objectives

- The biological concept of osseointegration and common factors that can affect its development and maintenance
- How to assess a patient that potentially requires restoration with dental implants
- The usual treatment sequence associated with the surgical insertion and subsequent restoration of a dental implant
- The role of dental implants in the prosthodontic rehabilitation of more complex cases

Course fee €350 including lunch and refreshments
 (full fee refundable one month before event).

Please send cheque payable to Shields Dental, with all contact details and Dental Council number to:
 Shields Dental Centre, 10 Ashdown Centre,
 Courtbrack Avenue, SCR, Limerick.

If you have any queries please do not hesitate to contact us by telephone or email.
 Tel (00 353) 061 480070 Email Info@shieldsdentalcentre.ie

Course details on www.neoss.com



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**WILL YOU BE IRELAND'S
MOST SENSITIVE DENTIST
IN 2012?**



journal of the irish dental association
Iris Cumainn Déadach na hÉireann



Patients hail their dentists

A huge entry for the Sensodyne Sensitive Dentist of the Year Awards ensured a tough job for the judges – and worthy winners.



President of the Association, Dr Conor McAlister with (from left): Dr Marcus Mac Domhnaill; Dr Claire McGrath; Dr Sarah McMorrow; Dr Mairead Browne; and, Dr Eoin Fleetwood.

Awards come in many guises, and some are worthwhile and others probably not. In some cases, people nominate themselves for prizes – and that’s fine as far as it goes. However, the distinguishing feature of the Sensodyne Sensitive Dentist of the Year Awards is that dentists can only be nominated by their patients – patients who appreciate the extra care and attention they have received from their dentist.

It takes time and effort to sit down and write and then mail off an entry – or even to do it online – but patients did that in their hundreds in 2011. Taken together, the entries are an eloquent testimony to excellent work by dentists (perhaps you would expect that) but also to the really good relationships that exist between patients and their dentists. This is especially true in the case of families who develop long-term relationships with their dentists.

In having to assess the quality of the entries – as well as getting through the great volume – the judges were looking out for exceptional commitment. Patients gave a series of terrific endorsements of dentists and these gave the judges the basis for adjudication through patterns of treatment and professionalism. In a year (2011) when Mouth Cancer Awareness Day proved to be such a successful campaign, it was the referral to a specialist which proved to be a life-saving act – and to be the act which warranted the overall award.

Overall winner: Dr Sarah McMorrow

The judges’ citation for the overall winner reads: “Dr McMorrow’s diligence and professionalism led her to refer a query to a specialist. That query had serious consequences for the patient. She subsequently supported the patient during his care for cancer of the head and neck, and her treatment included aftercare and



Ruth Martin, Oral Healthcare Brand Manager for GlaxoSmithKline, speaks on behalf of the sponsors.



Winning nominator, David McNamara, with his dentist Dr Sarah McMorrow.

encouragement of the patient over a prolonged period.”
Dr McMorrow, who practices in Loughrea, Co. Galway, received a special trophy and a certificate.

The winning nomination for Dr McMorrow was made by David McNamara, who said: “Thanks to Sarah’s diligence and professionalism during a routine visit in 2006,... she referred me quickly to a specialist consultant. ...After my latest major operation on my mouth and jaw, she again treated me painstakingly with her usual professionalism and encouragement, to the point where I can now talk, eat and smile confidently. Sarah has been like an angel to me in very difficult times. She probably also saved my life.”

David won a travel voucher to the value of €5,000 from Sensodyne.

Highly commended

Out of the more than 300 entries, the judges identified the overall winner and four other entries that they felt warranted special recognition. All had received multiple nominations and the judges deemed these four dentists to be ‘Highly Commended’.

Dr Mairéad Browne – Highly Commended

The judges said that Dr Browne showed dedication to the care of her



Paul O’Grady of the Journal opens the ceremony.



Chairman of the judging panel, Dr Barry Harrington, addresses the attendance.

patients even when due to go on holidays. She came to the surgery and treated the patient, removing pain and solving the patient’s problem.

That particular nomination came from Gordon Brazier, who said: “Mairéad put her plans back until the evening and came in especially to see me and got me out of pain. I had so much appreciation for what she did for me because she put her plans on hold and came in especially to see me.”

Dr Browne practises in two locations in Cork.

Dr Eoin Fleetwood – Highly Commended

Dr Fleetwood practises in Galway and his citation from the judges was for the exceptional lengths he went to in ensuring that the visit to the dentist was a fun occasion shared among the family.

The relevant nomination came from Neasa Nic Dhonncha who said: “Dr Fleetwood is always so kind and gentle with our children. He also has a great sense of humour. When our boys were small, they loved going to the dentist and talked for weeks beforehand about what trick to play.”

Dr Marcas Mac Domhnaill – Highly Commended

In the case of Dr Mac Domhnaill, the judges said he demonstrated a



From left: Highly Commended dentist Dr Claire McGrath; competition judge Dr Seton Menton; IDA President Dr Conor McAlister; and, IDA Assistant Chief Executive Elaine Hughes.

Sensitive Dentist of the Year

JOURNAL OF THE IRISH DENTAL ASSOCIATION



Dr Mairéad Browne (left) receives her award from Claudia Long of GlaxoSmithKline.



Dr Eoin Fleetwood receives his award from Orla Sheehy of GlaxoSmithKline.



Dr Claire McGrath (left) receives her award from Orla Sheehy of GlaxoSmithKline.



Dr Marcas Mac Domhnaill receives his award from Claudia Long of GlaxoSmithKline.



Dr Dermot Canavan (left); and, IDA CEO Fintan Hourihan.



Paul Hatton and Ruth Martin of GlaxoSmithKline, makers of Sensodyne, sponsors of the Awards.



Fintan Hourihan with judge Dr Anne O'Neill.

constant availability to treat dental issues for a patient with an underlying health problem, and a commitment to donating his knowledge, skill and expertise to the Chernobyl Charity.

Bernie Kennedy wrote of Dr Mac Domhnaill: "I have dental problems related to a recent health problem and he never once refused to see me and to encourage me...and he does wonderful work for Chernobyl every year."

Dr Mac Domhnaill practises in Tralee, Co. Kerry.

Dr Claire McGrath – Highly Commended

Dr McGrath showed exceptional care – above and beyond the call of duty – when dealing with an aesthetic emergency on the occasion of a major family event.

Her nominator in this case, Catherine Callinan, said: "On the morning of our daughter's wedding, my husband walked into a door and broke his two front teeth. Panic ensued. We phoned Claire who was all packed to go on her family holiday but came to the rescue, opened her surgery and solved the problem."

Dr McGrath practises in South County Dublin.

Judges

The judges for the Awards were: Dr Barry Harrington, Dr Seton Menton and Dr Anne O'Neill – a highly experienced group representing the private, community, and hospital sectors of dental care.

Dr Barry Harrington, Chairman of the judges, commented: "We were exceptionally gratified by the comments of a huge number and a wide diversity of patients, on all sorts of dental situations. All the winning dentists had more than one nomination and the judges looked at the story behind the nominations and particularly at the pattern of care being provided. Whilst there was great difficulty in making selections because of the evidently high standards of care, we sought out those nominations which showed that the dentist went beyond the norm to provide professional, conscientious and patient-oriented dental care."

Managing patients and their expectations

The professional relationship between a dental care professional and their patient can be one of the most complex interpersonal interactions that the dentist will experience in the course of a career, says Dental Protection's HUGH HARVIE.



Much is spoken and written about the importance of honesty and integrity, as well as maintaining trust. Guidance and comment comes from many quarters and many organisations and you might well wonder why. The answer is quite simple: all these groups are particularly keen to reduce the likelihood of a complaint being made to the practice, to the dentist's regulatory body, or even manifesting as legal action.

Ground rules

Treatment can only begin after:

- a proper diagnostic process;
- consideration of the clinical situation and the options available;
- discussion with the patient on the treatment options with costs;
- agreement a treatment plan that is within the clinician's abilities to deliver; and,
- delivery of the treatment and resolution of any issues that may arise.

Dentists are trained to consider what they are told by their patients and to be able to resolve the associated clinical issues. We are very good at analysing complex clinical symptoms, arriving at a diagnosis and proceeding with treatment. We are also mindful, or we should be, of any limitations in our skills, knowledge or expertise, and we should inform the patient if we lack the required expertise and refer them if necessary.

We are perhaps less effective in managing our patients and their expectations.

Changing expectations

Looking at the number and types of complaints that Dental Protection deals with, there often appears to be less of a failure to achieve a satisfactory clinical outcome than a failure to manage the patient and, perhaps more importantly, a failure to manage the patient's expectations. Patients' expectations and demands have changed and are continuing to change as a result of advertising and promotional activities, etc., and also because of the growth of makeover programmes on television, which feature a 'miraculous' reversal of the effects of time!

Perhaps, in our anxiety to progress treatment, we are not sufficiently questioning of the patient's willingness and ability to comply with the basics.

For example:

- the need to deal with other problems, such as active decay and/or periodontal disease, before embarking upon a complex and complicated course of treatment that involves the placement of implants, or crowns and bridgework; or,
- a course of complex treatment could be doomed because the patient does not or cannot maintain an adequate oral hygiene regime.

Case study

(NB: the events described do not relate to a patient treated in Ireland)

A female patient had two crowns placed on the lower left premolar teeth. The dentist fitted the crowns having carefully checked the margins and occlusion, and satisfied himself that the fit of the crowns was satisfactory. He then cemented the crowns and offered the patient a mirror to check the appearance and he was dismayed when the patient said that the crowns were "whiter than expected".

The dentist explained that the crowns were made to the shade chosen by him with her agreement and that they were "perfect". The patient repeated the comment that the crowns were lighter than she expected but given his reluctance to redo them, she had no option but to accept them. The notes recorded: LR4 LR5 PBC crowns fitted. Patient happy.

The patient left the practice having paid the fees as requested, but returned the next day with her husband. The patient was upset and her husband was angry because the dentist had been unsympathetic to her comments about the crowns, and because the receptionist

demanded payment despite the fact that the patient was unhappy. The dentist resisted this criticism, indicating that he was satisfied that the crowns were "perfect in fit and function" and that the notes confirmed that his wife was "happy" at the time of fitting. This was, of course, hotly refuted by the patient. The dentist refused any further treatment or a refund, in part or in full, despite a report from an independent dentist that the crowns were at least two shades lighter and were of uniform colour.

A complaint to the regulatory body ensued and the dentist was "advised" to be more willing to listen and respond effectively to patient complaints. He then became more "empathetic" and offered a full refund of the fees.

If he had only "empathised" at an earlier stage, he could have avoided the stress of a complaint to the Board and, more importantly, maintained an element of good will in the eyes of two patients.

Check the foundation

Surely, in our initial assessment and in conversation at the diagnosis and treatment planning stage, we should be emphasising the importance of building treatment on solid foundations by putting a premium on oral hygiene and preventive measures. It may well be that we have to be more demanding of our patients by requiring them to demonstrate that they recognise the importance of this basic requirement and also understand that there is no point in spending large sums of money on sophisticated treatment when the result will be compromised by poor attention to oral hygiene or diet.

As clinicians we have to be careful not to encourage unrealistic expectations and at the same time provide good sound advice about what can realistically be achieved with the available tissues.

Communicate

Do we take time to make it clear to our patients that the dental treatment, although sophisticated and delivered to the highest standards, will not be as good as or perform as well as the original provided by nature?

Do we take time to explain that that crown or bridge, even supported by an implant, will 'feel' different, as it will perhaps be heavier, more bulky and have a different shape to the patient's natural teeth?

Recrimination

When things go wrong, and sometimes they do, are we as excited and enthused about having the opportunity to sort out the problem as we were when embarking upon the treatment? Or, more commonly, does the patient then become "the problem" due to "having unrealistic and unachievable expectations from the start" – as one dentist wrote to Dental Protection.

If the patient does have unrealistic expectations, whose fault is that?

And why did those "unrealistic expectations" only arise when the treatment did not turn out as expected?

Delivering dental care and treatment is not unlike a 'romance' that has gone wrong. There is all the initial excitement and expectation, the exploration of ideas, the anticipation of completion, followed by disappointment with the outcome, leading to acrimony and feelings of betrayal by both parties.

As members of a caring profession, we do our best to resolve our patients' dental problems with sympathy and understanding, and we try very hard to maintain this approach even when things go wrong. However, perhaps there would be fewer complaints if we empathised with our patients.

Empathy

One interesting statistic is that fewer complaints are made against female dentists than against male dentists. Many reasons have been advanced to explain this and one possible explanation is that female dentists are much more likely to be more understanding and sensitive to the patient's point of view and more willing to recognise the nature of the problem and seek a resolution. Is it because female dentists are much more empathetic than men? Or is it because, as my wife often reminds me, men just don't listen!

Hugh Harvie BDS FDSRCS(Edin) FDSRCP(S Glasg) FFGDP(UK) Dip For Med
Hugh worked in general dental practice and as a lecturer in children's and preventive dentistry before being appointed to the Borders Health Board as Chief Administrative Dental Officer. He later became Head of Dental Services for The Medical & Dental Defence Union of Scotland before joining Dental Protection as Head of Dental Services, Scotland. In addition to his responsibility for DPL members in Scotland, he is part of the team that handles cases for members working in Ireland.

Adapting to the changing pensions landscape

DR BARRY HARRINGTON considers the continued changes in the private pensions market, and offers advice to dentists on planning and investment based on current information.

While the impact of successive tax reductions has been negative, Budget 2012 made no changes to the availability of marginal rate tax relief for individual pension contributions, and the lifetime pensions limit was unchanged at €2.3m. In addition, there are some positive signs, with innovation from the pensions industry to improve flexibility.

For many years pensions were supported by valuable tax incentives to promote long-term savings, allowing dentists to accumulate a pot of money to manage the transition from dental practice to retirement years. However, the past three years have seen very significant change to the Irish pensions regime. With individuals generally living longer, and with reducing tax breaks for pensions, the traditional approaches to pension planning must be reconsidered.

Key Government pension policy changes

The key policy changes are summarised below and can broadly be defined as reduced State support and lower tax efficiency, but in certain areas, some element of greater choice at retirement:

- State retirement pension benefits – the qualifying age will rise to 68 years from 2028;
- pension funds valued at more than €2.3 million will be taxed at a penal rate, but this may have little impact on most dentists, who have been restricted by ongoing limits on personal pension plans;
- the maximum lifetime retirement tax-free lump sum is now €200,000, with amounts between €200,000 and €575,000 being taxed at the standard rate of income tax, still a very attractive tax outcome;
- the annual earnings limit that can be considered for personal pension contributions is now €115,000;
- greater choice at retirement for defined contribution schemes – although dentists already enjoy the same level of flexibility with their personal pension plans;
- as a counterbalance, individuals will now need to have specified retirement income of more than €18,000 per annum (or set aside a minimum retirement fund of about €118,000) before they can avail of the approved retirement fund (ARF) regime (explained later). Approved retirement funds (ARFS) in excess of €2m will be required to pay tax based on 6% of the value of the ARF each year from December 2012 onwards – formerly this had been 5%. ARFs that are inherited by adult children will now be liable to 30% tax, formerly 20%; and,
- pension levy – a 0.6% levy on pension scheme assets will be applied in the four years from 2011 through to 2014.

Further changes after Budget 2012 are anticipated, most likely by way of more reductions in tax relief on personal savings, and the lifetime



pensions limit may be reduced to around €1.5 million. The Minister for Finance is to engage in consultation with the pensions industry throughout 2012 on such measures.

Action points for individuals as they save

It is widely acknowledged that reduced tax reliefs and the wider challenges in the business, economic and investment environment have led to a sharp fall in personal pension savings. That said, the need for a private retirement income has not diminished and has perhaps become even more acute with the changes in the State pension. To help you get the most from your pension plans into the future, the following points might be useful:

- decide what is financially achievable – take into account when you intend to retire, the prospects for other income in retirement (inheritances/personal savings, etc.), the requirement to reduce debt going forward, etc;
- maximise the remaining tax efficiencies – personal pension funding remains tax effective, with generous lump sum rules at retirement. Dentists that use a corporate structure to run some of their practice can also utilise company pension schemes, where the scope for pension funding can be more flexible. Where a spouse is employed by the dental practice, it should also be possible for the spouse to pension their own salary;
- ensure that your pension scheme is competitively priced – this aspect will become more important if tax reliefs are reduced or where investment returns are challenging. Beware of exit costs from certain plans where penalties can apply within the first five years of the plan; and,
- make appropriate investment choices – inflation and the choice of

investments you make play key roles in how much you will have saved at retirement and the value of your pension pot. When investing for pensions, take into account how you invest your other assets and savings. Think broadly in terms of total wealth planning to achieve overall diversification among your assets.

Planning as retirement draws near

For many individuals, the tax rules at retirement can be quite daunting, but with increased complexity comes a greater opportunity to plan properly for the drawdown of pension benefits, and to optimise the value from all the available options. You may wish to consider some of the following broad principles at retirement:

- consider the tax treatment of any overseas pension plans that you may have built up;
- different rules may apply for your private pension plans and those earned as an employee/consultant;
- the death/inheritance tax provisions of your pension arrangements should be reviewed;
- in most cases it makes sense to avail of any tax-free lump sum entitlement from your pension scheme;
- however, some of your older pension plans may offer generous guaranteed annuity rates as an option;
- you should factor in the rate of tax that will apply to your income in retirement;
- for those who retire overseas, there may be no Irish tax payable on some pension benefits; and,
- consider the possible risk that your pension provider in retirement becomes insolvent.

New innovation to the annuity market

The pensions industry has recently begun to introduce greater choice for individuals at retirement. The following is a brief overview of just two new changes. Dentists should take advice on their own retirement matters.

With traditional annuities, your pension fund at retirement is used to buy an income (annuity) for life. While it is possible to provide a pension for dependants and to protect the annuity from inflation, the cost of these additional benefits will result in a smaller opening pension for the dentist during his or her life.

Proponents of annuities like the certainty of income during their lifetime and that there is no exposure to investment risk. Those against dislike that the 'capital' is lost if one dies early during retirement.

A new type of annuity is now available. It addresses the drawback of traditional annuities where capital is lost when an individual pays over their entire pension fund at retirement but dies shortly thereafter. With an investment protection annuity, the individual's estate will be given the balance of the proceeds that had not been paid out by way of annuity.

Example:

A €100,000 pension fund is used to buy an investment protection annuity. The annuity rate is, say, 5%, providing annuity income of

€5,000 to the individual during his or her lifetime. The individual dies after one year. His or her estate will get €95,000 (€100,000 less €5,000).

There is a cost associated with a guarantee of a return of capital. The annuity rate on this type of annuity may be up to 18% lower than the rate to be obtained with a traditional annuity product. An individual sacrifices income in his or her own retirement in favour of passing on a balance to his or her estate, but many individuals may be unable to adopt this approach and may need to simply maximise their own income. Nonetheless, this new product option is to be welcomed.

New innovation in the approved retirement fund market

Dentists with personal pension plans can, as an alternative to buying an annuity, invest their pension fund into a post-retirement savings plan (an ARF). This will be used to generate their own retirement income. Any balance left on death can be passed to their estate. Tax rules require you to pay tax on at least 5% of your ARF each year and, at a time when the investment performance of the underlying fund may be disappointing, this can lead to an erratic level of income during retirement or, worse still, the fund 'bombing-out' while you are still alive.

A new product – the lifelong income ARF – addresses the erratic, unpredictable nature of retirement income associated with ARFs. In addition, to safeguard against the risk of retirement income drying up during your lifetime, a new product offering will guarantee a quantifiable level of income throughout your life. On death, the balance of the fund (not otherwise paid out as income) will be returned to the estate.

Example

A sum of €100,000 is invested in the lifelong income ARF and it provides guaranteed income of, say, 4%. The individual dies near the end of year one. The gross income received is €4,000 and the gross balance to the estate is €96,000 (€100,000 less €4,000 income paid). This new product innovation is to be welcomed but advice should be obtained, as the rate of guaranteed income may be lower than that available under annuity products.

Conclusion

The pension environment has changed, and will certainly continue to do so. The challenge is to ensure that your pension planning continues to reflect this changing environment. While the State does continue to offer support through the taxation system, more effort is needed from individuals to ensure that they attain maximum advantage with their hard-earned retirement funds.

Dr Barry Harrington is one of the Trustees to The Irish Dental Association Retirement Trust, an approved pension scheme available solely to IDA members (idapensions.com). The views expressed here are those of Dr Harrington and his co-Trustees in consultation with our Trust adviser, Brendan Bartley of PricewaterhouseCooper. This advice should not be relied upon as a formal interpretation of tax or pensions law.

Rationale for restoration of carious primary teeth: a review

Précis

The literature regarding the dental and systemic effects of early childhood caries, the consequences of leaving carious primary teeth untreated, the benefits of appropriate treatment, and concerns regarding dental treatment of young children and the potential for dental anxiety, is reviewed.

Abstract

Early childhood caries (ECC) has consequences, affecting both the child's dental health and his/her general health.

This paper reviews the literature regarding ECC and its consequences (pain, sepsis, space loss, disruption to quality of life, failure to thrive, effects on intellectual development, greater risk of new carious lesions in both primary and permanent dentitions, higher incidence of hospitalisation and emergency visits, and increased treatment costs and time). The effects of treatment of ECC are also reviewed, and concerns regarding purported associations between treatment of ECC and dental anxiety are addressed.

Search method

A PubMed search was conducted of peer-reviewed papers published in the English language in the years 1986-2011, using the search terms: early childhood caries (ECC); nursing caries (NC); consequences and ECC/NC; treatment and ECC/NC; treatment outcomes and ECC/NC; dental anxiety; dental fears; onset of dental anxiety/fear; and, dental experiences and dental fear/anxiety. More than 300 articles were studied. Reference lists of the selected articles were also studied, and frequently quoted articles were thus also located. Articles with small sample size, poor or poorly described methodology, and unclear or unsupported conclusions were rejected. A representative sample is presented in this paper, citing the articles with greater levels of evidence, with a description of study methods, where appropriate.

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Table 1: Possible effects of early childhood caries

Effect of ECC	References
Pain	Levine RS, <i>et al. Br Dent J</i> 2002 ⁴ Shepherd MA, <i>et al. Br Dent J</i> 2002 ¹² Milsom KM, <i>et al. Br Dent J</i> 2002 ¹³ Slade GD. <i>Community Dent Health</i> 2001 ¹⁴
Sepsis	Pine CM, <i>et al. Br Dent J</i> 2006 ¹⁵ Unkel JH, <i>et al. Pediatr Dent</i> 1997 ¹⁶ Lin HW, <i>et al. Clin Pediatr</i> 2009 ¹⁷ Davies RG, <i>et al. Clinical Intensive Care</i> 2002 ¹⁸
Space loss	Northway WM. <i>J Am Dent Assoc</i> 2000 ²⁰ Laing E, <i>et al. Int J Paediatr Dent</i> 2009 ²¹ Lin YT, <i>et al. J Clin Pediatr Dent</i> 1998 ²² Rao AK, <i>et al. J Indian Soc Pedod Prev Dent</i> 1999 ²³ Padma Kumari B, <i>et al. J Indian Soc Pedod Prev Dent</i> 2006 ²⁴ Lin YT, <i>et al. J Am Dent Assoc</i> 2007 ²⁵
Disruption to quality of life	Low W, <i>et al. Pediatr Dent</i> 1999 ⁹ Acs G, <i>et al. Pediatr Dent</i> 2001 ²⁷ Cunnion DT, <i>et al. J Dent Child</i> 2010 ²⁸ Filstrup SL, <i>et al. Pediatr Dent</i> 2003 ²⁹ Sheiham A. <i>Br Dent J</i> 2006 ⁴² Casamassimo PS, <i>et al. J Am Dent Assoc</i> 2009 ⁴⁷
Disruption of growth and development (failure to thrive)	Elice CE, <i>et al. Pediatr Dent</i> 1990 ³⁰ Acs G, <i>et al. Pediatr Dent</i> 1992 ³¹ Ayhan H, <i>et al. J Clin Pediatr Dent</i> 1996 ³² Clarke M, <i>et al. Pediatr Dent</i> 2006 ³⁷
Possible disruption of intellectual development	Blumenshine SL, <i>et al. J Publ Health Dent</i> 2008 ⁴⁵ Jackson SL, <i>et al. Am J Public Health</i> . 2011 ⁴⁶
Higher incidence of hospitalisation and emergency visits	Fleming P, <i>et al. Int J Paediatr Dent</i> 1991 ⁴⁹ Wilson S, <i>et al. Clin Pediatr</i> 1997 ⁵⁰ Sheller B, <i>et al. Pediatr Dent</i> 1997 ⁵¹ Oliva MG, <i>et al. Pediatr Emerg Care</i> 2008 ⁵²
Increased treatment costs and treatment time	Thikkurissy S, <i>et al. Am J Emerg Med</i> 2010 ⁵⁶
Greater risk of new carious lesions in both primary and permanent dentitions	Johnsen DC, <i>et al. Pediatr Dent</i> 1986 ⁵⁷ Grindejord M, <i>et al. Caries Res</i> 1995 ⁵⁸ O'Sullivan DM, <i>et al. J Public Health Dent</i> 1996 ⁵⁹ Al-Shalan TA, <i>et al. Pediatr Dent</i> 1997 ⁶⁰ Skeie MS, <i>et al. Int J Paed Dent</i> 2006 ⁶³ Mejare I, <i>et al. Caries Res</i> 2001 ⁶⁶

Introduction

Early childhood caries (ECC) is the presence of one or more cavitated or non-cavitated carious lesions before a child's sixth birthday. Severe early childhood caries (S-ECC) is smooth surface caries in a child less than three years old (**Figure 1**).¹

Recent reports from several European countries, including Ireland, cast doubt on the effectiveness of treatment of carious primary teeth, with the apparent rationale that they are shed before causing symptoms "in the majority of cases", although when such reports are scrutinised, what constitutes the "majority" is often dubious.²

Critical examination of the retrospective, community-based and practice-based studies that form much of the basis for the philosophy of non-restoration or selective restoration of asymptomatic carious primary teeth reveals deficiencies:^{3,4}

- data were collected solely from dental records, and so are only as reliable as the information entered on the patients' records;
- no patients were examined or interviewed;
- radiographic examination was rarely performed;
- there is no standardisation of restoration techniques practised, or of materials used;
- there is no comment on restorative techniques practised, or on the quality of restorations placed; and,
- the experience of operators is not addressed.

The quality of restorative work carried out on primary teeth has a bearing on its success or failure. Effective, evidence-based restorative interventions for primary teeth exist; however, inappropriate or poorly performed restorations, where the status of the pulp is not given due consideration, are likely to fail.^{5,6,7,8}

The outcome measure of many studies that cast doubt on the effectiveness of treatment of ECC is pain. However, as carious primary teeth can cause serious problems, sometimes with little or no pain, other outcome measures should also be considered.^{4,9}

The results of such retrospective studies^{3,4} contrast with those of most clinical trials and prospective studies of primary molar restorations.¹⁰ This paper reviews the evidence regarding consequences of ECC, treatment of carious primary teeth, and outcomes of treatment.

Those who advocate a policy of non-intervention in cases of ECC often express concerns that treatment of young children might result in dental anxiety. This topic is also reviewed.

Consequences of early childhood caries

The Surgeon General of the USA has stated that: "You cannot be healthy without good oral health".¹¹ ECC has consequences, not only for the teeth of the affected child, but also for the child's general health (**Table 1** and **Figure 2**).

Pain

Shepherd *et al.* interviewed 589 eight-year-old children, and found that almost 50% had suffered dental pain.¹² The pain was of such severity that 73% of those affected had been unable to eat, 31% had been unable to sleep, 27% had stopped playing, and 11% had not been able to attend school.



FIGURE 1: Images of (severe) early childhood caries.
 1a: Caries affecting maxillary primary incisors.
 1b: Caries affecting maxillary primary incisors and molars.
 1c: Caries affecting mandibular primary molars.

Acknowledgement: Thanks to Dr E. Kratunova for permission to use images 1b and 1c.

Early childhood caries (ECC):

- dmfs* ≥ 1 in any 1^o tooth in a child ≤ 71 months old.

Severe early childhood caries (S-ECC):

- any sign of smooth surface caries in a child < 3 y.o.;

- dmfs ≥ 1 (smooth surface cavity) in 1^o maxillary anterior teeth at age three to five years;
- dmfs ≥ 4 (age three years);
- dmfs ≥ 5 (age four years); and,
- dmfs ≥ 6 (age five years).

*d = non-cavitated or cavitated lesion; m = missing due to caries.

In a retrospective study of dental records of 677 children aged five to 15 years with approximal primary molar caries, Milsom *et al.* stated: "The majority of carious primary teeth exfoliate without causing pain".¹³ However, almost half of the children whose records were analysed (48%) had experienced pain, with more than one in four experiencing pain on three or more occasions, and 43% having had extractions due to pain and sepsis.

The authors acknowledged that: "For those children who have decay in their primary molars, dental pain is a common finding".

Levine *et al.* published a more refined retrospective study of 481 case notes of patients with carious primary teeth.⁴ In their study, in which standardised chart recording and data extraction methods were used, the same operator had treated all patients. Data were separated into caries affecting single surface, multiple surfaces, and pulp involvement.

Their study revealed that:

- 18% of unrestored carious primary teeth had caused pain;
- pain was significantly more likely the earlier caries presented;
- carious molars were the teeth most likely to cause pain; and,
- teeth with multiple carious surfaces or pulp exposure were more likely to cause pain.

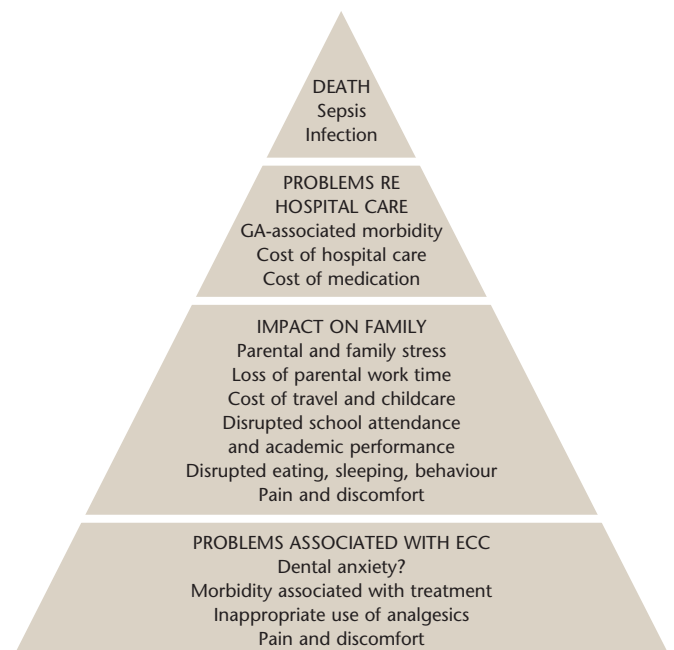


FIGURE 2: Morbidity and mortality pyramid for early childhood caries (Adapted from: Casamassimo, P.S., *et al.*).⁴⁷

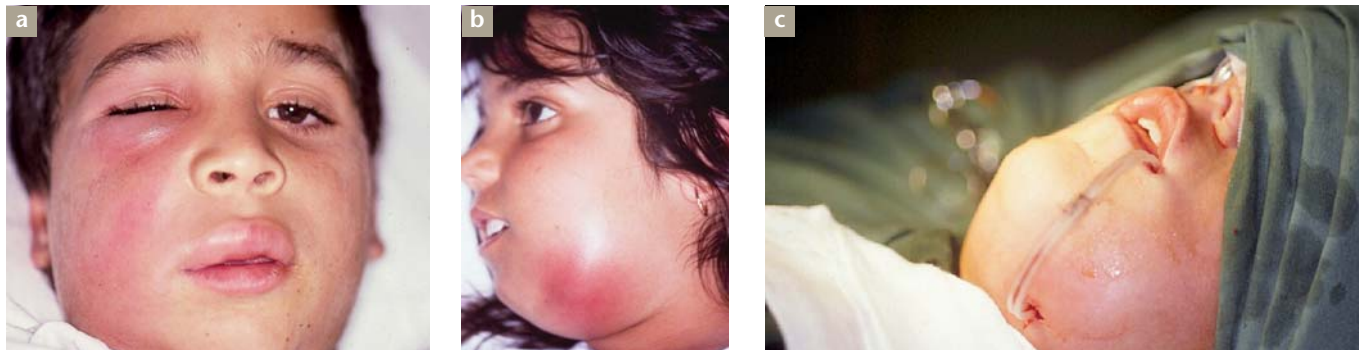


FIGURE 3: Examples of facial cellulitis consequent on odontogenic infection. These children were seriously ill and required hospitalisation.

3a: Cellulitis affecting right side upper face. There is a risk of infection of the orbit, and spread to cavernous sinus.

3b: Significant submandibular cellulitis. If untreated, this may progress to Ludwig's angina.

3c: Drainage of submandibular cellulitis, under general anaesthesia (same patient as Figure 3b).

Figures 3b & 3c reproduced from: Cameron, A.C., Widmer, R.P. (eds.). *Handbook of Pediatric Dentistry (2nd ed.)*. Sydney; Mosby, 2003: 142. The author gratefully acknowledges the permission of Prof. Richard Widmer, Prof. Angus Cameron, and Mosby Elsevier Ltd. to reproduce these images.

The authors cautioned that while the outcome criteria of their study focused on pain, carious primary teeth can cause painless dento-alveolar infection with potential for serious dental and systemic consequences. They stressed that they were not advocating a policy of not restoring carious primary teeth.

Slade found, in a critical analysis of epidemiological studies of dental pain among children and adolescents, that the prevalence of toothache correlated with caries experience.¹⁴ Correlations were stronger among lower socio-economic groups, consistent with a 5-6% increase in the probability of toothache for each additional carious primary tooth.

Sepsis

A 2006 study by Pine *et al.* in which almost 7,000 Scottish children (mean age 5.3 years) with ECC were examined, revealed that:¹⁵

- almost 5% of children had dental sepsis;
- those with sepsis had much higher caries experience (mean dmft 6.30) than those without sepsis (mean dmft 2.36);
- the greatest predictor of dental sepsis was untreated decay; and,
- failure to treat carious primary teeth markedly increased the risk of sepsis (Figure 3).

The authors concluded that the findings from their study "would not support a policy of non-intervention for deciduous caries if oral sepsis is to be minimised".

A retrospective study by Unkel *et al.* of medical records of patients with facial cellulitis revealed that:¹⁶

- 47% of facial cellulitis was of odontogenic origin;
- cellulitis was more common in the upper facial region (65% of cases);
- odontogenic cellulitis was more common in the mixed dentition period (mean age 8.8 years); and,
- posterior teeth were responsible for the highest number (64.3%) of odontogenic cellulitis cases.

Dental sepsis can progress to cellulitis, and then to Ludwig's angina, a rapidly progressing cellulitis of the floor of mouth that compromises the airway. One in three cases of Ludwig's angina occur in children and adolescents. The condition is potentially fatal, with a mortality rate of 8-10%, the risk being greater in those with medical comorbidity. Management requires specialist care, including IV antibiotics, securing of the airway and drainage. General anaesthetic and intensive care facilities are usually required.^{17,18}

A recent editorial in *Pediatric Dentistry* reports the deaths of two American children as a result of complications related to odontogenic infections.¹⁹

Space loss

Premature loss of primary molars may contribute to problems such as deviation of the mid-line, crowding, dental impaction, ectopic eruption and crossbite formation. Longitudinal studies with subjects who have had unilateral premature loss of teeth, using the unaffected side as a control, have revealed that:²⁰⁻²⁵

- following early loss of a primary molar, adjacent molars migrate mesially, while canines drift distally;
- the extent to which migration of adjacent teeth occurs depends on the timing of the tooth loss, the severity of crowding, and the type of tooth that is prematurely lost;
- the reduction in arch length is more severe in the maxilla;
- distal movement of primary canines is greater in the mandible;
- less space is lost following early extraction of primary first molars, compared to primary second molars;
- eruption of permanent maxillary canines can be impaired following premature loss of primary first molars; and,
- premature loss of a second primary molar, prior to eruption of the first permanent molar, results in significant mesial movement of the first permanent molar.

There are, to date, no prospective randomised controlled studies of the consequences of premature loss of primary teeth.

Space maintainers may help to prevent change in arch length following early loss of primary molars; however, evidence supporting their use is limited.²¹ The UK National Clinical Guidelines in Paediatric Dentistry recommended space maintenance under the following circumstances:²⁶

- following loss of a primary second molar in all but spaced arches; and,
- following loss of a primary first molar, where crowding is greater than half a unit (3.5mm) per quadrant.

The disadvantages of space maintainers are that they are plaque retentive, may impinge on soft tissues, may interfere with eruption of adjacent teeth, and may fracture, become dislodged, or be lost. They require regular review by the dental practitioner. It is preferable, therefore, to retain primary molars, where possible, until their natural exfoliation.²¹

Disruption to quality of life and effects of treatment on ECC

Low *et al.* carried out a questionnaire-based survey to investigate the impact of severe caries on quality of life (QOL) in otherwise healthy young children (mean age 44 months).⁹ Parents/guardians of children with severe ECC completed questionnaires pre treatment under general anaesthesia, and four to eight weeks post treatment.

Pre treatment, 48% of the children had complained of pain, 43% had problems eating certain foods (with 61% having reduced intake of food), and 35% had experienced sleep disturbance. A total of 5% had reported problems of negative behaviour. Dental treatment had a statistically significant effect ($p < 0.001$) on this cohort of patients, in alleviating the complaint of pain, reversing certain eating problems, and improving sleep habits, while the effect on behaviour was not statistically significant.

Although all children in the sample were affected by S-ECC and required at least one pulpotomy or extraction, only 48% complained of pain. The authors pointed out the difficulty in measuring a young child's degree of pain or discomfort, due to the child's level of cognitive and language development. They noted that pain caused by caries can manifest in various ways: the child may eat less, experience sleep disturbance and/or exhibit negative behaviour. They advised that, as some children do not complain verbally, it is equally important to assess pain by indirect methods, such as through habits or behaviour. The study demonstrated that ECC does affect QOL in children and that, though the children may not complain of pain, they manifest its effects by disrupted eating and sleep habits.

Acs *et al.*, who evaluated parents' perceptions of outcomes following their children's complete dental rehabilitation under general anaesthesia, reported similar improvement in QOL.²⁷ The children in their study were aged 3.5 to 5.5 years, and were categorised upon presence of significant medical or developmentally compromising conditions. Their data revealed that parents perceived improved QOL in their children following comprehensive dental rehabilitation, and that there was a hierarchy of benefits, with the greatest improvement noted in pain experience, followed by improved abilities to eat and sleep. It was noteworthy that the children more likely to have

reported improvements in eating, sleeping and overall health, following treatment of ECC, were those who were medically/developmentally compromised.

A recent prospective multi-site study revealed that children with ECC were reported by their parents as having significantly poorer oral health, and worse perceived impact on physical functioning and pain, than caries-free children.²⁸ Post dental treatment, the children with ECC were rated by their parents as having significant improvement in oral health, and in physical, mental and social functioning, compared to baseline. The authors concluded that children's oral health has a significant impact on their well-being, as assessed by their parents. The positive effects of a dental intervention for the children with ECC were significant at the six- and 12-month follow-ups, and enhanced QOL in multiple domains. The authors developed a new assessment instrument of QOL for this study, in which a large number of parents ($n=501$) reported on their children.

In a longitudinal intervention study, Filstrup *et al.* investigated the effects of ECC on children's oral health-related QOL before, and four weeks after, its treatment, as assessed by the children themselves, and by their parents/guardians.²⁹ The study group comprised 69 otherwise healthy children with ECC (mean age 50.4 months), treated by full-mouth dental rehabilitation under GA (one visit), or under LA \pm oral sedation (multiple visits). The control group was 43 healthy, age-matched children without caries.

The study revealed that:

- some children as young as 36 months are able to answer questions about their own oral health and oral health-related QOL and, with increasing age, are able to do so reliably and validly;
- children's self-reported oral health-related QOL is significantly correlated with their oral health;
- children with ECC had significantly worse oral health-related QOL than caries-free children, but this significantly improved post treatment; and,
- parents'/guardians' evaluations of their child's oral health-related QOL are significantly related to their child's oral health.

In summary:

- ECC negatively affects a child's QOL;
- children with ECC do not always complain of pain, but can manifest disruption to QOL in other ways, such as eating, sleeping and behaviour problems;
- both parents/guardians and affected children are able to validly report on oral health-related QOL; and,
- treatment of ECC improves the child's QOL.

Disruption of growth and development (failure to thrive), and effects of treatment of ECC

Failure to thrive (FTT) is defined as:

- weight or height below the third percentile for age;
- weight $< 80\%$ of ideal weight for age;
- failure to maintain a previously established growth pattern; and/or,
- growth failure of unknown origin.

Over the past two decades, several studies have revealed an association between ECC and FTT.

Acs *et al.* reviewed records of 115 children, aged two to four years, with otherwise non-contributory medical history, treated for “nursing caries” using GA or sedation.³¹ They found that children with nursing caries weighed significantly less than controls (approximately 1kg less), and were significantly more likely to weigh <80% of their ideal weight. Affected children in the bottom 10th percentile for weight were significantly older than those children at or above their ideal weight, indicating that progression of nursing caries may adversely affect growth.

Similar results were obtained in a study by Ayhan *et al.* in which young children (n=126) with “rampant or nursing caries” were found to be significantly lighter and shorter than controls without caries.³² The mean weight of children with caries was between the 25th and 50th percentiles, whereas that of children without caries was in the 50th to 75th percentile.

The beneficial effect of dental rehabilitation on the weight and growth velocity of children with ECC was demonstrated in a later study by Acs *et al.*³³ Prior to dental rehabilitation (under GA), children with ECC (aged 2.4-4.8 years at baseline) weighed significantly less than the control group (caries-free children), and were represented by significantly lower percentile weight categories. The authors advised that: “Delay in intervention (dental treatment) appears to have a tangible and adverse impact upon growth”.

Post-operatively, the children were reviewed for periods between 10 and 28 months.

Following dental rehabilitation, the children with ECC had significantly increased growth velocities until, after a time, there was no difference in age-adjusted weights between the ECC and control groups, a phenomenon known as catch-up growth.^{34,35}

Using body weight alone as a measure of FTT can lead to conflicting results, however, because some of the food choices and eating behaviours that can put an individual at risk of caries are also risk factors for unhealthy weight. Sheller *et al.* illustrated this in a retrospective, cross-sectional case study of 293 otherwise healthy children (aged two to six years) who received treatment under GA for S-ECC.³⁶ Age and gender-specific body mass index (AGS BMI) and dental status (dmft and number of pulp-involved teeth – determined from operative reports and radiographs) were recorded for each subject. The comparison group (control) was a reference sample from the US Pediatric Nutrition Surveillance System of 2000.

The data revealed that the sample of children with S-ECC did not have a typical weight distribution. The percentage of study subjects in groups “at risk for overweight” and “overweight” was lower than the reference sample, though the difference was not significant.

However, 32% of those with S-ECC had unhealthy weights (being below the 5th or greater than the 85th percentile), of whom a significant number (11%) were underweight. The data revealed that the AGS BMI percentile was not correlated with dmft, or the number of pulp-involved teeth, even after adjusting for confounding factors, though underweight children had the highest mean number of pulp-

involved teeth (4.5), though this was not statistically significant.

A more refined study by Clarke *et al.* investigated the nutritional status of 56 children (mean age 3.8 years) with S-ECC, attending hospital for complete oral rehabilitation under GA. Anthropometric measurements (height, weight, mid-arm muscle circumference – indicative of protein stores, triceps skin fold, a measure of fat storage), and blood samples (assessed for serum albumin, haemoglobin, mean corpuscular volume, and serum ferritin) were analysed.³⁷

The data revealed that early childhood caries was a risk marker for undernutrition and iron deficiency. All nutrition tests detected malnourishment, with more cases of nutritional deficiency detected by blood tests than by anthropometric measurements. Some 80% of children in the sample were found to have low iron levels. Anthropometric measurements revealed that a significant proportion of children with S-ECC exhibited malnutrition, being below the 90th percentile for ideal body weight (17% of sample), and showing evidence of low fat stores (23%). Despite the evidence of malnutrition from blood tests and anthropometry, tests of body mass index (BMI), using the 5th percentile on childhood charts as a measure for malnutrition, were insensitive and missed many cases.

The findings of Clarke *et al.*³⁷ that S-ECC is associated with anaemia are significant, as chronic iron deficiency in infancy is associated with impaired brain development and function, and can result in poor school performance. Cognitive scores and behaviour do not improve, even after iron supplementation, if chronic iron deficiency occurs during infancy.³⁸⁻⁴¹

Several papers have reported that chronic inflammation (e.g., pulpitis, abscess) affects growth via metabolic pathways. Cytokines (e.g., IL-1) can induce inhibition of erythropoiesis, which leads to anaemia of chronic disease.^{42,43,44} Pain due to ECC may also contribute to FTT due to reduced intake of food and disturbed sleep, which affects glucocorticoid production and growth.⁴²

Disruption of intellectual development

Blumenshine *et al.* carried out a study in which randomly selected parents of 2,871 schoolchildren were interviewed by telephone regarding their child’s school performance and oral health status.⁴⁵

The relationship of oral health status and school performance was examined, while accounting for control variables (sex, ethnicity, parental education, school type [public/private], diagnosis of mental health disorder, diagnosis of behavioural health conditions, and diagnosis of learning disability). Parents were 2.3 times more likely to report poor school performance when a child had poor oral health in addition to poor general health. Children with either poor oral health or poor general health were 1.4 times more likely to have a report of poor school performance. The study fell short of implicating oral health as a stand-alone factor in poor school performance.

A recently published follow-up study found that children with poorer oral health status were more likely to experience dental pain, miss school and perform poorly in school. The authors stated that their findings suggest that improving children’s oral health status may be a vehicle to enhancing their educational experience.⁴⁶

Hospitalisation and emergency visits

Emergencies related to dental caries in children constitute an important public health problem, with dental pain a common reason for attendance at hospital accident and emergency departments.^{47,48}

A retrospective study by Fleming *et al.* at the Royal Belfast Hospital for Sick Children revealed that 4% of after-hours emergency attendances were for dental problems.⁴⁹ The ages of the children attending with dental emergencies ranged from one month to 12 years 10 months, with 51% of attendances by children aged five years or younger. Of the 407 dental emergencies (62% male), the most common complaint (49%) was of toothache, with or without abscess. Of the 21% who presented with a dento-alveolar abscess, the majority were related to the primary first molar.

Wilson *et al.* found that of 1,459 children treated in a children's hospital for dental emergencies over a one-year period, 65% presented as a non-traumatic emergency.⁵⁰ The patients (52% male) had a mean age of 6.9 years. Dental caries was the aetiological factor prompting 73% of visits, with 33% of patients presenting with a dental abscess.

In a review of emergency dental records over a three-year period, Sheller *et al.* found that 38% of attendances at the Children's Hospital Seattle were for caries-related emergencies.⁵¹ The mean age of the children presenting with a caries-related emergency was 6.4 years, and for 27% of the children the emergency visit was their first contact with a dentist. The most frequent diagnoses were: abscess with sinus tract (44%); caries with spontaneous pain (23%); caries with provoked pain (12%); and, cellulitis (9%). Only 9% of those with caries presented without symptoms. Maxillary first primary molars were implicated in the development of cellulitis in 40% of cases, while maxillary second primary molars were implicated in 17% of cellulitis cases.

Of the 247 emergency hospital visits for non-traumatic dental complaints over a one-year period, Oliva *et al.* found that 59% were by children younger than five years, 53% presented in pain, and 8% had severe infections requiring hospitalisation for intravenous antibiotics.⁵²

Pain due to ECC can lead to medical problems due to inappropriate use of over-the-counter medications, which may ultimately result in the need for emergency hospital admission. Paracetamol is frequently used for management of ECC-related pain in children. Hepatotoxicity due to excessive administration of the drug by parents for management of their child's odontogenic pain is a growing concern in paediatric emergency medical care.^{47,53}

Treatment time and costs

In terms of cost to the community, care of ECC consumes a significant amount of healthcare budgets, due to the extent of the problem and the frequent need for use of emergency and general anaesthetic facilities.⁴⁷

A recent paper by Davis *et al.* investigated the costs involved in patients receiving emergency outpatient hospital treatment (not including extractions or restorations) for dental problems, in Minneapolis-St. Paul, USA.⁵⁴ They found that over a one-year period

there were over 10,000 visits to hospital emergency rooms (ER) for dental-related problems, 2% by children aged less than five years, at an average cost of \$459 per patient. Nearly 25% of the visits were second, or more, visits to the same ER for care of a dental problem, indicating that while ER physicians treated acute pain and infection, the underlying dental problem was often not resolved. Gift *et al.* estimated 164 million hours of lost work time and 51 million hours of lost school time as a result of dental problems in the USA in 1989.⁵⁵ A recent retrospective study from America of medical records of children admitted for treatment of odontogenic cellulitis revealed that the mean length of stay in hospital was 2.08 days, while the mean cost of hospitalisation was \$4,166.⁵⁶

Greater risk of new carious lesions in both primary and permanent dentitions

Many studies have demonstrated an association between caries in pre-school children and further caries development (incipient lesions becoming cavitated and/or development of new carious lesions).⁵⁷⁻⁶⁰ In a longitudinal study (n=692 children, aged 2.5 years at baseline), Grindeffjord *et al.* demonstrated that 92% of children diagnosed with caries at baseline developed new carious lesions over a one-year period.⁵⁸ Of the children who were caries-free at baseline, 29% developed caries during the study period. The difference was significant (p<0.001). The majority of new lesions were located on the occlusal surfaces of second primary molars. Some 64% of the lesions diagnosed at baseline as initial caries progressed to manifest lesions during the study period. The children with caries at baseline developed significantly more proximal lesions in molars than those who were caries free at baseline. Some 56% of the children in this study were of immigrant background.

The study indicated that children manifesting caries early in life exhibit high caries progression, as well as high risk for development of further new lesions.

It is well established that past caries experience in a child is the strongest single predictor of future caries.⁶¹⁻⁶⁴ However, a recent prospective study by Fontana *et al.* in which 329 pre-school children (26±6 months old at baseline) were examined, and subsequently re-examined one year later, revealed the risk factors for caries progression towards cavitation to be: family caries experience; transmission-related behaviours; dietary factors; health beliefs; and, lower income.⁶⁵ Addition of clinical variables (baseline caries experience, dental plaque, gingivitis, mutans streptococci counts, proportion of mutans streptococci/total streptococci) did not improve the predictive power in this cohort of very young children.

In a prospective longitudinal study of 186 children, examined at ages five and 10 years, Skeie *et al.* found significant correlations between the caries experience in the primary and permanent dentitions, and between the primary second molars at baseline and the permanent teeth at 10 years old.⁶³ The authors suggested that a clinically useful predictor, at five years of age, for being at high caries risk at 10 was primary second molars with more than two surfaces exhibiting caries. A retrospective study assessing annual bitewing radiographs of

Table 2: Benefits accruing from treatment of early childhood caries.

Benefit	References
Carious teeth are restored to function	Stephenson J, <i>et al. Caries Res</i> 2010 ¹⁰
Pain and discomfort are resolved or prevented	Low W, <i>et al. Pediatr Dent</i> 1999 ⁹ Acs G, <i>et al. Pediatr Dent</i> 2001 ²⁷
Risk of sepsis is reduced	Pine CM, <i>et al. Br Dent J</i> 2006 ¹⁵
Space loss is lessened or avoided	Laing E, <i>et al. Int J Paediatr Dent</i> 2009 ²¹
The child's oral health-related quality of life improves	Low W, <i>et al. Pediatr Dent</i> 1999 ⁹ Acs G, <i>et al. Pediatr Dent</i> 2001 ²⁷ Cunnion DT, <i>et al. J Dent Child</i> 2010 ²⁸
Beneficial effects on child's growth and development	Acs G, <i>et al. Pediatr Dent</i> 1999 ³³
Child's educational experience may be enhanced	Blumenshine SL, <i>et al. J Publ Health Dent</i> 2008 ⁴⁵ Jackson SL, <i>et al. Am J Public Health</i> . 2011 ⁴⁶

children (n=374) was conducted by Mejare *et al.* to investigate the influence of the caries status of the second primary molar's distal surface on the caries rate of the mesial surface of the proximal first permanent molar, from six to 12 years of age.⁶⁶ The study revealed that the caries rate for the first permanent molar depended on the status of the distal surface of the proximal second primary molar. The caries rate for the mesial surface of the first permanent molar increased 15 times if the distal surface of the proximal second primary molar had enamel/enamel-dentin caries, compared to a sound distal surface of the second primary molar.

In a four-year prospective study (assessing annual bitewing radiographs of 196 children aged six to eight years at baseline), Vanderas *et al.* found that the presence of distal caries in second primary molars increases the risk of developing mesial surface caries in the proximal first permanent molars.⁶⁷ They also observed that the greater the period of exposure of the first permanent molar's sound mesial surface to the carious lesion of the second primary molar, the greater is the risk of developing caries on the sound surface. The risk of developing mesial surface caries in first permanent molars was found to be different among the studied paired surfaces, indicating different cariogenic conditions at each proximal surface. The authors concluded that caries developing on the mesial surface of mandibular first permanent molars is primarily due to distal caries in second primary molars, whereas in the maxillary teeth, other factors, together with distal caries in the second primary molars, should be considered. They found that if the distal surfaces of the second primary molars are sound, the risk of developing mesial surface caries in first permanent molars is low.

Benefits accruing from treatment of ECC

A recent cohort study of data from more than 5,000 carious molars of 2,654 British children aged four to five years at baseline, augmented with Dental Practice Board treatment data, assessed the effect of restorative treatment on the likelihood of carious teeth subsequently progressing to exfoliation or extraction (Table 2).¹⁰

The study revealed that beyond four years of age, filling carious primary teeth substantially improves the likelihood of a "successful" outcome (subsequent natural exfoliation without the need for extraction). It was found that more than 80% of all carious teeth that were filled subsequently exfoliated naturally.

The time of occurrence of caries was seen to affect survival experience, with higher survival rates of teeth in which caries occurred later in life. When primary molars were filled, it was observed that later occurrence of fillings was also associated with higher survival rates.

Studies demonstrating the beneficial effects of treatment of ECC on the child's quality of life, and growth and development, have been discussed previously.^{9,27,28,29,33}

Is treatment of early childhood caries associated with dental anxiety?

The prevalence of dental fear in children is reported as 5-20% (mean 11%).^{68,69} Newton described a simple model to explain the development of dental anxiety:⁷⁰

Direct conditioning is a process whereby the experience of traumatic events or treatments is associated with development of fear – the child learns to associate pain and distress with the dental setting. However, if the child has positive dental experiences, he/she will learn to have a positive attitude towards dental treatment.

Latent inhibition is a process whereby if positive dental experiences are followed by a traumatic event, prior learning inhibits the child's development of dental fear.

Dental anxiety disorders are, however, of multifactorial and complex origin.⁷¹ Many people with no dental fear have had negative dental experiences, while some with considerable dental fear fail to recall any traumatic incidents. A study by Davey revealed that subjects who reported never having had anxieties about dental treatment were less likely to have had a painful dental treatment than those who did report an anxiety.⁷² Those who did report a painful dental experience, but did not acquire anxiety, reported a history of dental treatment favourable to the operation of latent inhibition. Under some conditions in which latent inhibition should have precluded the acquisition of a dental fear, anxiety appeared to be acquired because a very painful experience had attenuated the latent inhibition process. The author concluded that: "Those subjects whose dental anxiety did not remit reported significantly more painful and traumatic dental experiences than those whose anxiety did remit."

A questionnaire-based survey by Armfield of more than 1,000 adults chosen at random, revealed that negative dental experiences were significantly associated with dental fear.⁷³ However, cognitive

perceptions of uncontrollability, unpredictability, danger and disgust were superior predictors of dental fear, compared with negative dental experiences. This, according to the author, supports the cognitive vulnerability model, which proposes that a person's perception of a stimulus or situation is the important factor in determining anxiety or fear, rather than any particular experiences that he/she may have had.⁷⁴

A longitudinal study by Raadal *et al.* investigated the relationship between caries prevalence at five years, and dental anxiety at 10 years of age.⁷¹ Dental anxiety was measured at age 10 years by means of a psychometric questionnaire, which parents completed by interviewing their children.

At five years of age, the majority (68%) of children who subsequently exhibited high dental anxiety at 10 had mean dmfs of 10.7, while those with low anxiety had significantly lower dmfs (mean 4.7).

The authors concluded that children with many carious lesions at five years of age are at high risk of being dentally anxious at 10. They proposed that the most likely reason is classical conditioning (including procedural pain and other negative experiences during dental treatment, as the unconditioned stimuli), but they offered no proof of this. The authors stated that the children surveyed had received treatment of their carious teeth between ages five and 10, and thus concluded that: "The study supports the assumption that treatment of caries in early childhood represents a risk for acquisition of dental anxiety". Robust proof to support their conclusion, however, was not demonstrated. They cautioned that high caries levels at age five do not necessarily lead to dental anxiety, as nearly 75% of five-year-olds with dmfs of 6 or greater did not report high dental anxiety at age 10, demonstrating that dental anxiety is of multifactorial origin. They also advised that, as anxiety at five years of age was not measured, the findings at 10 years of age are not a follow-up of dental anxiety during this period.

In a cross-sectional, questionnaire-based study of five-year-old children, in which parents reported regarding their own and their child's anxiety, 10.8% judged their child to be dentally anxious.⁷⁵ The children's dental anxiety was associated with symptoms, irregular attendance pattern, a history of dental extraction, and having a dentally anxious parent. Dentally anxious children had significantly higher caries experience than those who were judged not to be anxious (dmft 2.58 vs. dmft 1.12). A history of restoration of teeth was not found to be a significant predictor of anxiety in this cohort of children. The cause and effect dynamics of these relationships were not determined. The authors noted that children who are sporadic attenders often present in pain, when extraction may be the only possible treatment option. Such a pattern of attendance and treatment may perpetuate dental anxiety.

Locker *et al.* carried out a questionnaire-based cross-sectional study in which more than 3,000 randomly selected adults participated.⁷⁶ Data were obtained regarding negative dental experiences and their relationship to dental anxiety. Three-quarters of those surveyed reported direct negative experiences, of which 71% were painful, 23% frightening and 9% embarrassing. Only 37% of the negative

experiences occurred during childhood, with 23% occurring during adolescence and 40% in adulthood. The relationship between negative experiences and dental anxiety was found to be strong. Those who experienced all three negative experiences (pain, fright, embarrassment) were at 22.4 times greater risk of dental anxiety than those with no negative experience. The data suggested that while painful experiences were predictive of dental anxiety, other types of experience, alone or in combination with pain, showed a stronger relationship. The nature of the unpleasant experiences was found to be more important than the age at which they occurred, in predicting dental anxiety.

The authors advised that the study results should be interpreted with caution as, though they were consistent with a causal role, there could be no certainty that the reported negative events preceded the onset of anxiety. They advised that the causal direction might be opposite; that is, anxious subjects might be more likely to characterise previous dental experiences as negative, even if they did not play an aetiological role in their anxiety.

A later study by Locker *et al.* aimed to identify the age of onset of dental anxiety, and to identify differences by age of onset with respect to aetiological factors, such as negative dental experiences, family history of dental anxiety, and general psychological states.⁷⁷

1,420 subjects responded to mailed questionnaires, which revealed that 16.4% were dentally anxious. Half the study population reported onset of dental anxiety in childhood, one-fifth in adolescence, and almost one-third in adulthood. Logistic regression analysis indicated that negative dental experiences were predictive of dental fear regardless of age of onset, while a family history of dental anxiety was predictive of childhood onset only. Subjects whose onset of dental anxiety was in adolescence were characterised by trait anxiety, while those with onset in adulthood were characterised by multiple severe fears and symptoms indicative of psychiatric problems. The authors concluded that subjects with onset of dental anxiety in childhood were more likely to fall into the exogenous aetiological category, while those with adult-onset anxiety were more likely to fall into the endogenous category.

According to Milgrom *et al.* the consequences of traumatic dental experiences are dependent on the context in which they occur.⁷⁸ This means that pain inflicted by a dentist is likely to have less psychological impact if the dentist is perceived as caring, rather than one who is cold and controlling. This highlights the importance of good, appropriate communication and behaviour management techniques, which enhance the child's trust and feelings of control.

A recent study, in which 1,303 children aged five to 12 years were examined and interviewed in school, revealed that those who had previous restorative dental care were significantly less anxious than those who had no previous dental care.⁷⁹ This indicates that early dental intervention, if properly managed and not stressful, can have a positive impact on dental fear.

It is not the purpose of this paper to describe behaviour management techniques for dental care of children. The reader is referred to relevant articles and texts.⁸⁰⁻⁸³

In a recent meta-analysis of the relationship between parental and child dental fear, the majority of the 43 international experimental studies included confirmed a link between parental and child dental fear, which was most evident in children aged eight years or younger. The studies varied widely, however, in terms of research design, methods, age of children, and reported link between parental and child dental fear.⁶⁹

Although a small number of studies have established associations between negative dental experiences and dental fear^{72,75,76,77} these, according to Armfield *et al.*, are the exception rather than the rule.⁷³ This does not, of course, negate the possible influence of aversive experiences in the aetiology of dental fear.

If difficult procedures are more likely to lead to dental anxiety, then dental intervention and, where necessary, treatment should ideally occur early, before problems escalate. Early intervention would result in easier, less traumatic treatment than that required for a symptomatic tooth.

Several authors have highlighted the likely benefit of early, non-emergency intervention in terms of prevention of onset of dental fear and anxiety in children.^{79,84}

Paediatric dental societies, and some State agencies, have adopted policies encouraging the early introduction of children to dental healthcare and prevention, in an attempt to prevent caries.⁸⁵⁻⁸⁷ In addition to likely benefits in reducing onset of anxiety, early intervention to prevent and treat ECC has been modelled as both cost effective and cost saving.^{47,88,89}

In summary, although it is often stated that treatment of ECC may contribute to dental anxiety, this is not invariably true. Traumatic early dental experiences seem more likely than non-traumatic ones to result in anxiety; however, the causes of dental anxiety are multifactorial.

Conclusions

This review has demonstrated that ECC has implications for both the dental and general health of the affected child. Such problems are potentially serious, even life-threatening. Evidence has been provided of the beneficial effects on dental and general health of dental rehabilitation of children with caries.

Causes of dental anxiety are multifactorial, and treatment of ECC does not invariably contribute to dental anxiety, as long as the child's experience of dentistry is not traumatic.

Children with the highest levels of dental disease are primarily from disadvantaged communities. Failure to adequately treat their dental disease may further disadvantage these children.^{31,32,37,47,90}

Paediatric dental societies, renowned experts in paediatric dentistry, and the Medical Protection Society (Dental Protection) do not support a policy of leaving carious primary teeth untreated.^{2,91,92,93,94}

Finally, a quote from Professor Aubrey Sheiham is particularly pertinent: "Treating caries in pre-school children would increase growth rates and the quality of life of millions of children. Prevention of caries would be preferable to treatment, but the high level of untreated caries worldwide suggests that current preventive approaches are not working".⁴²

References

1. Ismail, A.I., Sohn, W. A systematic review of clinical diagnostic criteria of early childhood caries. *J Public Health Dent* 1999; 59 (3): 171-191.
2. Curzon, M. Supervised neglect – Again! (Editorial). *Eur Arch Paediatr Dent* 2010; 11: 51-52.
3. Tickle, M., Milsom, K., King, D., Kearney-Mitchell, P., Blinkhorn, A. The fate of the carious primary teeth of children who regularly attend the General Dental Service. *Br Dent J* 2002; 192: 219-223.
4. Levine, R.S., Pitts, N.B., Nugent, Z. The fate of 1,587 unrestored carious deciduous teeth: a retrospective general dental practice based study from northern England. *Br Dent J* 2002; 193: 99-103.
5. Duggal, M.S. Research summary. Carious primary teeth: their fate in your hands. *Br Dent J* 2002; 192: 215.
6. Evans, D. Letter to Editor. *Br Dent J* 2002; 192: 669-670.
7. Fayle, S.A. Letter to Editor. *Br Dent J* 2002; 193: 299-300.
8. Roberts, J.F., Attari, N. Letter to Editor. *Br Dent J* 2004; 196: 64-65.
9. Low, W., Tan, S., Schwartz, S. The effect of severe caries on quality of life in young children. *Pediatr Dent* 1999; 21: 325-326.
10. Stephenson, J., Chadwick, B.L., Playle, R.A., Treasure, E.T. A competing risk survival analysis model to assess the efficacy of filling carious primary teeth. *Caries Res* 2010; 44: 285-293.
11. Satcher, D. Oral health in America: a report of the Surgeon General – executive summary. Rockville (MD): US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
12. Shepherd, M.A., Nadanovsky, P., Sheiham, A. The prevalence and impact of dental pain in eight-year-old children in Harrow, England. *Br Dent J* 2002; 187: 38-41.
13. Milsom, K.M., Tickle, M., Blinkhorn, A.S. Dental pain and dental treatment of young children attending the General Dental Service. *Br Dent J* 2002; 192: 280-284.
14. Slade, G.D. Epidemiology of dental pain and dental caries among children and adolescents. *Community Dent Health* 2001; 18 (4): 219-227.
15. Pine, C.M., *et al.* Relationship between untreated decay and dental sepsis in five-year-old children. *Br Dent J* 2006; 200: 45-47.
16. Unkel, J.H., McKibben, D.H., Fenton, S.J., Nazif, M.M., Moursi, A., Schuit, K. Comparison of odontogenic and non-odontogenic facial cellulitis in a paediatric hospital population. *Pediatr Dent* 1997; 19 (8): 476-479.
17. Lin, H.W., O'Neill, A., Cunningham, M.J. Ludwig's angina in the paediatric population. *Clin Pediatr* 2009; 48 (6): 583-587.
18. Davies, R.G., Harris, N.A., Gemmell, L. Ludwig's angina. *Clinical Intensive Care* 2002; 13 (1): 43-45.
19. Adair, S.M. A shock to the system: deaths of two children and a good friend. *Pediatr Dent* 2007; 29 (2): 95.
20. Northway, W.M. The not so harmless maxillary first primary molar extraction. *J Am Dent Assoc* 2000; 131: 1711-1720.
21. Laing, E., Ashley, P., Naini, F.B., Gill, D.S. Space maintenance. *Int J Paediatr Dent* 2009; 19: 155-162.
22. Lin, Y.T., Chang, L.C. Space changes after premature loss of the mandibular primary first molar: a longitudinal study. *J Clin Pediatr Dent* 1998; 22: 311-316.
23. Rao, A.K., Sarkar, S. Changes in the arch length following premature loss of deciduous molars. *J Indian Soc Pedod Prev Dent* 1999; 17: 29-32.

24. Padma Kumari, B., Retnakumari, N. Loss of space in the dental arch after premature loss of the lower primary molar: a longitudinal study. *J Indian Soc Pedod Prev Dent* 2006; 24: 90-96.
25. Lin, Y.T., Lin, W.H., Lin, Y.T. Immediate and six-month space changes after premature loss of a primary maxillary first molar. *J Am Dent Assoc* 2007; 138: 362-368.
26. Rock, W.P. Extraction of primary teeth – balance and compensation. UK National Clinical Guidelines in Paediatric Dentistry. *Int J Paediatr Dent* 2002; 12: 151-153.
27. Acs, G., Pretzer, S., Foley, M., Ng, M.W. Perceived outcomes and parental satisfaction following dental rehabilitation under general anesthesia. *Pediatr Dent* 2001; 23: 419-423.
28. Cunnion, D.T., Spiro, A., Jones, J.A., Rich, S.E., Papageorgiou, C.P., Tate, A., et al. Paediatric oral health-related quality of life improvement after treatment of early childhood caries: a prospective multisite study. *J Dent Child* 2010; 77: 4-11.
29. Filstrup, S.L., Briskie, D., da Fonseca, M., Lawrence, L., Wandera, A., Inglehart, M.R. Early childhood caries and quality of life: child and parent perspectives. *Pediatr Dent* 2003; 25: 431-440.
30. Elice, C.E., Fields, H.W. Failure to thrive: review of the literature, case report, and implications for dental treatment. *Pediatr Dent* 1990; 12: 185-189.
31. Acs, G., Lodolini, G., Kaminski, S., Cisneros, G.J. Effect of nursing caries on body weight in a paediatric population. *Pediatr Dent* 1992; 14: 302-305.
32. Ayhan, H., Suskan, E., Yildirim, S. The effect of nursing or rampant caries on height, body weight and head circumference. *J Clin Pediatr Dent* 1996; 20: 209-212.
33. Acs, G., Shulman, R., Ng, M.W., Chussid, S. The effect of dental rehabilitation on the body weight of children with early childhood caries. *Pediatr Dent* 1999; 21: 109-113.
34. Prader, A., Tanner, J.M., von Harnack, G.A. Catch-up growth following illness or starvation. *J Pediatrics* 1963; 62: 646-659.
35. Mosier, H.D. The determinants of catch-up growth. *Acta Paediatr Scand* (Suppl) 1990; 367: 126-129.
36. Sheller, B., Churchill, S.S., Williams, B.J., Davidson, B. Body mass index of children with severe early childhood caries. *Pediatr Dent* 2009; 31: 216-221.
37. Clarke, M., Locker, D., Berall, G., Pencharz, P., Kenny, D.J., Judd, P. Malnourishment in a population of young children with severe early childhood caries. *Pediatr Dent* 2006; 28 (3): 254-259.
38. Lozoff, B., Jimenez, E., Wolf, A.W. Long-term developmental outcome of infants with iron deficiency. *N Engl J Med* 1991; 325: 687-694.
39. Lozoff, B., Jimenez, E., Hagen, J., Mollen, E., Wolf, A.W. Poorer behavioural and developmental outcome more than 10 years after treatment for iron deficiency in infancy. *Pediatrics* 2000; 105: e51.
40. Pollitt, E. Developmental sequel from early nutritional deficiencies: conclusive and probability judgements. *J Nutr* 2000; 130: 350s-353s.
41. Saloojee, H., Pettifor, J.M. Iron deficiency and impaired child development. *Br Med J* 2001; 323: 377-378.
42. Sheiham, A. Dental caries affects body weight, growth and quality of life in pre-school children. *Br Dent J* 2006; 201: 625-626.
43. Mears, R.T., Krantz, S.B. Progress in understanding the pathogenesis of anaemia of chronic disease. *Blood* 1992; 80: 1639-1647.
44. Mears, R.T. Recent developments in the anaemia of chronic disease. *Curr Hematol Rep* 2003; 2: 116-121.
45. Blumenshine, S.L., Vann, W.F., Gizlice, Z., Lee, J.Y. Children's school performances: impact of general and oral health. *J Publ Health Dent* 2008; 68: 82-87.
46. Jackson, S.L., Vann, W.F., Kotch, J.B., Pahel, B.T., Lee, J.Y. Impact of poor oral health on children's school attendance and performance. *Am J Public Health* 2011; 101: 1900-1906.
47. Casamassimo, P.S., Thikkurissy, S., Edelstein, B.E., Maiorini, E. Beyond the dmft: the human and economic cost of early childhood caries. *J Am Dent Assoc* 2009; 140: 650-657.
48. Rowley, S.T., Sheller, B., Williams, B.J., Mancl, L. Utilisation of a hospital for treatment of pediatric dental emergencies. *Pediatr Dent* 2006; 28 (1): 10-17.
49. Fleming, P., Gregg, T.A., Saunders, I.D. Analysis of an emergency dental service provided at a children's hospital. *Int J Paediatr Dent* 1991; 1 (1): 25-30.
50. Wilson, S., Smith, G.A., Preisch, J., Casamassimo, P.S. Non-traumatic dental emergencies in a paediatric emergency department. *Clin Pediatr* 1997; 36 (6): 333-337.
51. Sheller, B., Williams, B.J., Lombardi, S.M. Diagnosis and treatment of dental caries-related emergencies in a children's hospital. *Pediatr Dent* 1997; 19 (8): 470-475.
52. Oliva, M.G., Kenny, D.J., Ratnapalan, S. Non-traumatic dental complaints in a paediatric emergency department. *Pediatr Emerg Care* 2008; 24 (11): 757-760.
53. Squires, R.H., Shneider, B.L., Bucuvalas, J., Alonso, E., Sokol, R.J., et al. Acute liver failure in children: the first 348 patients in the paediatric acute liver failure study group. *J Pediatr* 2006; 148 (5): 652-658.
54. Davis, E.E., Deinard, A.S., Maiga, E.W.H. Doctor, my tooth hurts: the cost of incomplete dental care in the emergency room. *J Public Health Dent* 2010; 70: 205-210.
55. Gift, H.C., Reisine, S.T., Larach, D.C. The social impact of dental problems and visits. *Am J Public Health* 1992; 82 (12): 1663-1668. (Published correction: *Am J Public Health* 1993; 83 (6): 816).
56. Thikkurissy, S., Rawlins, J.T., Kumar, A., Evans, E., Casamassimo, P.S. Rapid treatment reduces hospitalisation for paediatric patients with odontogenic-based cellulitis. *Am J Emerg Med* 2010; 28 (6): 668-672.
57. Johnsen, D.C., Gerstenmaler, J., DiSantis, T.A., Berkowitz, R.J. Susceptibility of nursing caries children to future approximal molar decay. *Pediatr Dent* 1986; 8: 168-170.
58. Grindejord, M., Dahllöf, G., Modéer, T. Caries development in children from 2.5 to 3.5 years of age: a longitudinal study. *Caries Res* 1995; 29 (6): 449-454.
59. O'Sullivan, D.M., Tinanoff, N. The association of early childhood caries patterns with caries incidence in pre-school children. *J Public Health Dent* 1996; 56 (2): 81-83.
60. Al-Shalan, T.A., Erickson, P.R., Hardie, N.A. Primary incisor decay before age four as a risk factor for future dental caries. *Pediatr Dent* 1997; 19 (1): 37-41.
61. Grindejord, M., Dahllöf, G., Nilsson, B., Modéer, T. Stepwise prediction of dental caries in children up to 3.5 years of age. *Caries Res* 1996; 30: 256-266.
62. Hausen, H. Caries prediction – state of the art. *Community Dent Oral Epidemiol* 1997; 25: 67-96.

63. Skeie, M.S., Raadal, M., Strand, G.V., Espelid, I. The relationship between caries in the primary dentition at five years of age and permanent dentition at 10 years of age – a longitudinal study. *Int J Paed Dent* 2006; 16: 152-160.
64. Vadiakas, G. Case definition, aetiology and risk assessment of early childhood caries (ECC): a revisited review. *Eur Arch Paediatr Dent* 2008; 9 (3): 114-125.
65. Fontana, M., Jackson, R., Eckert, G., Swigonski, N., Chin, J., Ferreira Zandoná, A., et al. Identification of caries risk factors in toddlers. *J Dent Res* 2011; 90 (2): 209-214.
66. Mejare, I., Stenlund, H., Julihn, A., Larsson, I., Permert, L. Influence of approximal caries in primary molars on caries rate for the mesial surface of the first permanent molar in Swedish children from six to 12 years of age. *Caries Res* 2001; 35: 176-185.
67. Vanderas, A.P., Kavvadia, K., Papagiannoulis, L. Development of caries in permanent first molars adjacent to primary second molars with interproximal caries: four-year prospective radiographic study. *Pediatr Dent* 2004; 26: 362-368.
68. Klingberg, G., Broberg, A.G. Dental fear/anxiety and dental behaviour management problems in children and adolescents: a review of prevalence and concomitant psychological factors. *Int J Paed Dent* 2007; 17: 391-406.
69. Themessl-Huber, M., Freeman, R., Humphris, G., MacGillivray, S., Terzi, N. Empirical evidence of the relationship between parental and child dental fear: a structured review and meta-analysis. *Int J Paed Dent* 2010; 20: 83-101.
70. Newton, J.T. Is childhood dental anxiety a result of irregular attendance? Research Summary. *Br Dent J* 2003; 194: 495.
71. Raadal, M., Strand, G.V., Amarante, E.C., Kvale, G. Relationship between caries prevalence at five years of age and dental anxiety at 10. *Eur J Paed Dent* 2002; 1: 22-26.
72. Davey, G.C. Dental phobias and anxieties: evidence for conditioning processes in the acquisition and modulation of a learned fear. *Behav Res Ther* 1989; 27 (1): 51-58.
73. Armfield, J.M. Towards a better understanding of dental anxiety and fear: cognitions v experiences. *Eur J Oral Sci* 2010; 118: 259-264.
74. Armfield, J.M. Cognitive vulnerability: a model of the aetiology of fear. *Clin Psychol Rev* 2006; 26: 746-768.
75. Milsom, K.M., Tickle, M., Humphris, G.M., Blinkhorn, A.S. The relationship between anxiety and dental treatment experience in five-year-old children. *Br Dent J* 2003; 194 (9): 503-506.
76. Locker, D., Shapiro, D., Liddell, A. Negative dental experiences and their relationship to dental anxiety. *Comm Dent Health* 1996; 13: 86-92.
77. Locker, D., Liddell, A., Dempster, L., Shapiro, D. Age of onset of dental anxiety. *J Dent Res* 1999; 78 (3): 790-796.
78. Milgrom, P., Weinstein, P. Dental fears in general practice: new guidelines for assessment and treatment. *Int Dent J* 1993; 43: 288-293.
79. Nicolas, E., Bessadet, M., Collado, V., Carrasco, P., Rogerleroi, V., Hennequin, M. Factors affecting dental fear in French children aged five to 12 years. *Int J Paediatr Dent* 2010; 20: 366-373.
80. Wright, G., Starkey, P.E., Gardener, D.E., Curzon, M.E.J. (eds.). *Child Management in Dentistry*. Bristol; Wright, 1987.
81. Fayle, S.A., Tahmassebi, J.F. Paediatric dentistry in the new millennium: 2. Behaviour management – helping children to accept dentistry. *Dent Update* 2003; 30: 294-298.
82. Welbury, R.R., Duggal, M.S., Hosey, M.-T. (eds.). *Paediatric Dentistry* (3rd ed.). Oxford; Oxford University Press, 2005: 19-37.
83. Cameron, A.C., Widmer, R.P. (eds.). *Handbook of Pediatric Dentistry* (3rd ed.). Sydney; Mosby Elsevier, 2008: 9-37.
84. Folyan, M.O., Idehen, E.E. Effect of information on dental anxiety and behaviour ratings in children. *Eur J Paediatr Dent* 2004; 5: 147-150.
85. Guideline on prevention of Early Childhood Caries: An EAPD Policy Document. *European Academy of Paediatric Dentistry* 2008: 1-4.
86. American Academy of Pediatric Dentistry Clinical Affairs Committee, Infant Oral Health Subcommittee; American Academy of Pediatric Dentistry Council on Clinical Affairs. Guideline on infant oral health care. *Pediatr Dent* 2008; 30 (Suppl. 7): 90-93.
87. Early Childhood Oral Health (ECOH) Program: The role of Public Oral Health Services. Policy Directive, Document No.: PD2008_020. NSW Health, Sydney, Australia 2008: 1-8. (<http://www.health.nsw.gov.au/policies/>).
88. Ramos-Gomez, F.J., Shepard, D.S. Cost-effectiveness model for the prevention of early childhood caries. *J Calif Dent Assoc* 1999; 27 (7): 539-544.
89. Zavras, A.I., Edelstein, B.L., Vamvakidis, A. Healthcare savings from microbiological caries risk screening of toddlers: a cost estimation model. *J Public Health Dent* 2000; 60 (3): 182-188.
90. Locker, D. Disparities in oral health-related quality of life in a population of Canadian children. *Community Dent Oral Epidemiol* 2007; 35: 348-356.
91. Fayle, S.A., Welbury, R.R., Roberts, J.F. British Society of Paediatric Dentistry: A policy document on management of caries in the primary dentition. *Int J Paed Dent* 2001; 11: 153-157.
92. Kandiah, T., Johnson, J., Fayle, S.A. British Society of Paediatric Dentistry: A policy document on management of caries in the primary dentition. *Int J Paed Dent* 2010; 20 (Suppl. 1): 5.
93. American Academy of Pediatric Dentistry – Policy on early childhood caries (ECC): Unique challenges and treatment options. *Pediatr Dent Reference Manual* 2008-'09; 30 (7): 44-46.
94. Policy statements – what's the risk? *Riskwise Ireland Vol. 17*. Dental Protection Ltd. July 2010: 1-2.

Supporting career choices in dentistry

Abstract

The Cork University Dental School & Hospital, University College Cork, introduced an innovative programme in April 2011, which provided prospective dental students with an opportunity to participate in a one-day experiential workshop. The aim of the workshop was to provide students with an overview of the dental undergraduate programmes. Feedback on the workshop was exceptionally positive, and prospective students would recommend the workshop to a fellow student, as it helped to inform their decision about choosing dentistry as a first option.

Journal of the Irish Dental Association 2012; 58 (1): 43 – 44.

Introduction

In April 2011, the Cork University Dental School & Hospital (CUDSH)¹ provided prospective dental students with an opportunity to participate in a one-day experiential workshop. Similar workshops have been implemented in medical schools, for example in the Royal College of Surgeons in Ireland,² but this was the first reported workshop designed specifically for prospective undergraduate dental students. The aim of the workshop was to provide students with an overview of the dental undergraduate programmes Bachelor in Dental Surgery, Diploma in Dental Hygiene and Diploma in Dental Nursing. The workshop addressed the following topics: introduction to the human dentition; patient management; cross-infection control; specialties in dentistry; and, dental materials.

Career decision making

Making choices about a career can be difficult at any stage of life, but it is particularly arduous in adolescence. Traditionally, the information students receive to inform career choices in dentistry is obtained either through their career guidance teacher or from university open days. Making a fully informed choice can be difficult, especially in the area of medicine

and health, as programmes in this area generally require students to deal with the public, develop manual skills, and are academically challenging.³

In vocational psychology, career decision-making models support interventions to improve students' understanding of the world of work, helping the student to enhance self-knowledge, as well as clarifying career and educational goals.⁴ This allows students to determine what qualities of the occupation they find appealing. However, when career decision making is examined, Lent *et al.*,⁵ state that students frequently mention vicarious exposure to work experiences as shaping their expected choices and that young people normally recruit others to assist with their decision making. This led the authors to conclude that "endorsement of experiential factors supports the practice of exposing students to career exploration activities that enable them to clarify interests, values, and skills in relation to a particular occupational field". To this end, the dental workshop provided a framework to enhance the students' overall understanding and improve their ability to make effective career choices. This is a highly effective educational method because it engages the learner at a more personal level.⁶

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Recruitment of students

Recruitment of the secondary school participants commenced in February 2011 when 82 schools in Cork City and County were contacted. A letter from Cork University Dental School & Hospital was sent to each career guidance teacher in the schools outlining the details of the dental workshop. Twenty five students (nine male and 16 female) were offered placement on the workshop.

Dental attitudes

To gain insight into student motivation for choosing a career in dentistry, the Dental Attitude Questionnaire (DAQ)⁷ was administered and collected at the end of the workshop. Completion of the questionnaire and the evaluation sheet was voluntary. In addition, an evaluation sheet rating components of the workshop was also circulated.

The DAQ is a 12-item scale to assess students' influences and attitudes for selecting a career in dentistry. Students were asked to rate each question on a scale from 0-10, with 0 being the least influential factor and 10 being the extremely influential factor in choosing dentistry as a career.

The most influential aspects of making a choice of dentistry as a career were: appearance/health ("I want to help people improve their appearance or oral health"); self-employment; regular hours; and, career aspirations. Less influential factors were having a relative or family member with a career in dentistry, or that they were encouraged by others to pursue a career in dentistry. The main consideration for both males and females was helping people to improve their appearance or oral health, but males also scored self-employment and the ability to begin practice after graduating as decisive factors.

A qualitative assessment of the student's evaluation of the workshop ranked the following aspects as excellent: information appropriate and interesting; content explained expertly; duration; and, quality of handouts. Students indicated that the main learning factors from the dental workshop were academic information and patient management. Of particular benefit was information regarding entry requirements to the various courses, the content of the programmes and interpersonal aspects of patient management. Students reported that the academic information gave them "an overall sense of what the course actually involved and the subjects covered in each academic year". With regard to patient management, the important aspects were "how to effectively communicate and interact with patients". The cohort found the workshop to be beneficial and all students would recommend the workshop to a fellow secondary student with an interest in pursuing a dental career.

Conclusion

Overall, feedback on the workshop was exceptionally positive. Students stated that the dental workshop contributed in a meaningful and positive way to their educational and vocational understanding of what a professional career in dentistry demanded. The workshop created learning experiences that introduced students to the skills and

competencies necessary for a successful career in dentistry. In addition, identifying their motivation for choosing a career in dentistry also provided valuable insight and introspection, which enhanced the student's self-knowledge, thus empowering them to make an informed career decision.

References

1. University Dental School & Hospital, University College Cork. Retrieved May 2011 from www.ucc.ie/dentalschool.
2. Royal College of Surgeons Ireland (RCSI). Retrieved October 2011 from http://www.rcsi.ie/site_search.jsp?search_term=open+day&Search=Search.
3. Mossey, P., Holsgrove, G., Davanport, E., Strippups, D. *Essential Skills for Dentistry*. Oxford; Oxford University Press, 2006.
4. Hirschi, A., Läge, D. The relation of secondary students' career-choice readiness to a six phase model of career decision making. *Journal of Career Development* 2007; 34 (7): 164-191.
5. Lent, R., Brown, S.D., Taleyrand, R., McPartland, E.B., Davis, T., Chopra, S.B., et al. Career choice barriers, supports, and coping strategies: college students' experiences. *Journal of Vocational Behaviour* 2001; 60: 61-72.
6. Itin, C.M. Reasserting the philosophy of experiential education as a vehicle for change in the 21st Century. *The Journal of Experiential Education* 1999; 22 (2): 91-98.
7. Hallissey, J., Hannigan, A., Ray, N. Reasons for choosing dentistry as a career – a survey of dental students attending a dental school in Ireland during 1998-99. *European Journal Dental Education* 2000; 4: 77-81.

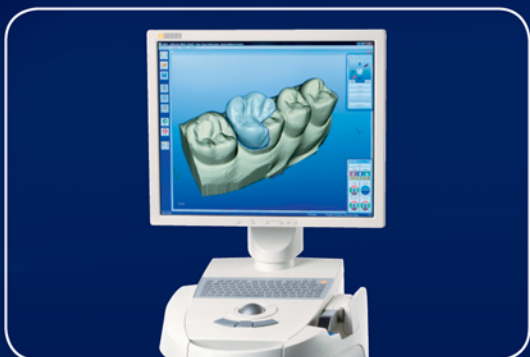
Dental Innovations Celebrating Irish Dentistry



Henry Schein Ireland would like to invite you to attend the “Dental Innovations – Celebrating Irish Dentistry Showcase”.



This showcase will feature cutting edge technologies from dentistry’s leading manufacturers, in conjunction with topical presentations given by keynote speakers from the dental profession. During the event we will be displaying a varied range of innovative dental products & equipment, hosting a series of lectures and offering you extra special showcase deals!



Lecture Topics Include

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“Cross Infection Control – are you covered?” with Schülke

“Helping you thrive in the recession – 10 key areas for focus”

“CEREC 4.0 20:20 VISION, The Future of Cad Cam Dentistry.”
With Dr Paul Moore. B.D.S

“Mega-Trends; Trends in restorative dentistry for the next ten years” with Professor Robert J.McConnell, B.D.S.,F.F.D.Ph.D.

Hands-on Course:

“Posterior Composite restorations – update on materials & techniques.” With Professor Robert J.McConnell, B.D.S.,F.F.D.Ph.D.

*A fee to attend the hands-on course will apply.



The event will take place on **Thursday 8th March, 2012** from **10:00 a.m. to 9:00 p.m.** at the **Galway Bay Hotel, Salthill, Galway.**
www.galwaybayhotel.com

If you have any queries, or would like any further information please contact your field sales consultant or your local office.

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A prospective clinical trial of single Astra Tech 4.0 or 5.0 diameter implants used to support two-unit cantilever bridges: results after three years

Palmer, R.M., Howe, L.C., Palmer, P.J., Wilson, R.

Objective

To evaluate the use of a single Astra Tech implant to support a two-unit cantilever fixed dental prosthesis.

Materials and method

Twenty-nine subjects with an edentulous space (at least equivalent to two bicuspid units) in the premolar/molar segments of the maxilla or mandible with opposing natural teeth or a fixed/removable prosthesis were treated. They were provided with either a 4 or 5mm diameter fixture MT OsseoSpeed. Prostheses were constructed using a cast-to-abutment as a one-piece unit with porcelain fused to precious metal to allow direct screw retention.

Results

Subjects expressed a high satisfaction with treatment, including appearance and function. The most important complication was abutment screw loosening. It occurred as a single episode in four subjects, and in another six subjects the loosening was recurrent. Bone levels were stable and there were no significant differences in radiographic bone height between cantilever and non-cantilever sides of the implant at any time point.

Conclusion

Single implants can be successfully used to support two-unit cantilever FDPs in the premolar region. A common factor could not be identified in relation to abutment screw loosening.

Clinical Oral Implants Research 2012; 23 (1): 35-40.

Non-surgical periodontal therapy improves oral health-related quality of life

Wong, R.M.S., Ng, S.K.S., Corbet E.F., Leung, W.K.

Aim

The influence of non-surgical periodontal therapy on oral health-related quality of life (OHQoL) was investigated.

Materials and methods

Sixty-five Chinese adults (25 men, mean age 47.4 years) with moderate-to-advanced chronic periodontitis were recruited. All received oral hygiene instructions (OHI) and non-surgical periodontal treatment in a quadrant-wise approach, followed by recalls at one, three, six, nine and 12 months post treatment, when OHI and prophylaxis were repeated. Clinical parameters were recorded, and oral health impact profile short-form (OHIP-14S) was administered at all time points.

Results

Moderate-to-deep sites (≥ 4 mm) decreased from 31% to 3% at 12 months post treatment ($p < 0.005$), which corresponded well with reductions in plaque (72.8% to 25.4%; $p < 0.005$), and bleeding on probing (86.3% to 32%; $p < 0.005$). Median OHIP-14S scores gradually reduced from 17 at baseline to 14 over the first six months and remained plateaued at 12 months post treatment ($p < 0.005$). Improvements in subdomains of physical pain, psychological discomfort and psychological disability accounted for the changes.

Conclusion

This study demonstrates that improvement in OHQoL, in particular pain and psychological subdomains, was associated with non-surgical periodontal therapy responses. Clinicians could capitalise upon the positive psychological OHQoL impacts of mechanical periodontal treatment for subsequent patient-centred motivation during maintenance therapy.

Journal of Clinical Periodontology 2012; 39 (1): 53-61.

Iliac crest autogenous bone graft versus alloplastic graft and guided bone regeneration in the reconstruction of atrophic maxillae: a five-year retrospective study on cost-effectiveness and clinical outcome

Dahlin, C., Johansson, A.

Background

Reconstruction of the atrophic maxillae with autogenous bone graft and jawbone-anchored bridges is a well-proven technique. However, the morbidity associated with the concept should not be neglected. Furthermore, the costs for such treatment, including general anaesthesia and hospital stay, are significant. Little data are found in the literature with regard to a cost-benefit approach to various treatment alternatives.

Purpose

The aim of this retrospective study was to compare from a health-economical and clinical perspective the reconstruction of the atrophic maxillae prior to oral implant treatment either with autogenous bone grafts harvested from the iliac crest or the use of demineralised freeze-dried bone (DFDB) in combination with a thermoplastic carrier (Regeneration Technologies Inc., Alachua, FL, USA) and guided bone regeneration (GBR).

Materials and methods

A total of 26 patients (13 + 13) were selected and matched with regard to indication, sex and age. The study was performed five years after the completion of the treatment. Implant survival, morbidity and complications were analysed. Furthermore, a detailed analysis of the

total cost for the respective treatment modality was performed, including material, costs for staff, sick leave, etc.

Results

The study revealed no statistical difference with regard to implant survival for the respective groups. The average total cost, per patient, for the DFDB group was 22.5% of the total cost for a patient treated with autogenous bone grafting procedures.

Conclusions

The study concluded that reconstruction of atrophic maxillae with a bone substitute material (DFDB) in combination with GBR can be performed with an equal treatment outcome and with fewer resources and a significant reduced cost in selected cases compared with autogenous bone grafts from the iliac crest.

Clinical Implant Dentistry and Related Research 2011; 13 (4): 305-310.

Reliability of panoramic radiographs for identifying supernumerary teeth in children

Anthonaappa, R.P., King, N.M., Rabie, A.B.M., Mallineni, S.K.

Objectives

To evaluate the reliability of panoramic radiographs (PRs) for identifying supernumerary teeth (ST) and to determine whether the level of dental training of the observer influenced the identification of ST.

Methods

Seventy-five PRs were randomly selected from the patient records and 18 examiners independently rated 25 radiographs each for specific risk factors, as well as for a measure of adequacy. Subsequently, the results were paired with those of the other examiners who assessed the same set of PRs. Descriptive statistics were computed using Fisher's exact test, and kappa statistics were used to assess the inter- and intra-observer reliability.

Results

Four hundred and fifty PRs were available for analysis. The overall sensitivity and specificity figures were 50% and 98.3%, whereas the positive and negative predictive values were 90.6% and 83.6%, respectively. The sensitivity figures for junior house dental officers and postgraduate paediatric dental trainees were 39.2% and 60.8%, whereas the specificity figures were 99.4% and 95% with slight inter-examiner and moderate intra-examiner reliability.

Conclusions

PRs are unreliable for identifying ST, and a higher level of dental training is essential for identifying ST.

International Journal of Paediatric Dentistry 2011; 22: 37-43.

Quiz

Questions on page 15



Answers:

1. The overgrowth of bone under the bridge pontic is most commonly described as subpontic osseous hyperplasia (SOH). There are only 15 other reported cases and other names for this condition are plateausation, subpontic osseous proliferation or subpontine extosis. The radiographic findings are of radiopaque bone overgrowth continuous with the alveolar crest under a fixed partial denture pontic. Loss of crestal bone adjacent to the abutment teeth and obliteration of the subpontic space are consistently found.
2. The causes of this condition are not fully known. It is thought that mild chronic irritation of the subpontic site may cause proliferation of the bone, or that it is caused by stresses from the forces of mastication.
3. In a number of cases, SOH is found along with mandibular tori and it is thought that they may share a common aetiology.
4. No treatment is indicated for this benign condition alone. If the overgrowth is impacting oral hygiene or ulcerating the gingiva under the pontic, removal of the FPD, surgical re-contouring of the bone (along with histology) and replacement of the FPD may be indicated.

Classified advert procedure

Please read these instructions prior to sending an advertisement. Below are the charges for placing an advertisement for both members and non-members. Advertisements will only be accepted in writing via fax (01- 295 0092), letter or email (fionnuala@irishdentalassoc.ie). Non-members must pre-pay for advertisements, which must arrive no later than Friday, March 9, 2012, by cheque made payable to the Irish Dental Association. If a box number is required, please indicate this at the end of the ad (replies to box number X). Classified ads placed in the *Journal* are also published on our website www.dentist.ie for 12 weeks.

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

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

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

The Malthouse, 537 North Circular Road, Dublin 1.

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

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

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

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

POSITIONS WANTED

Dentist available for locum work or stand-ins in Munster area, two years' experience. Please Tel: 087-793 4550, or Email: srh_mrrssy@yahoo.ie.

Enthusiastic and friendly dentist with three years' private practice experience, keen to secure a position with a dynamic and progressive dental practice in Dublin area. Part-time/full-time. CV available on request. Email: dentistirl@hotmail.com.

Gentle and friendly dentist with six years' experience (four years of private practice) is available for progressive, busy and well-established dental practice. Great communicator, enthusiastic, ambitious and team player. Please Tel: 087-625 1135, or request CV from: fiacloir@hotmail.com.

Experienced and enthusiastic dental hygienist seeks employment in Cork area City/County. Full/part-time or maternity cover. Inferior alveolar dental block, dental x-rays, CPR course. Email: dentalhygienistcork@gmail.com.

POSITIONS VACANT

Two new NHS dental practices to open in Scotland in February and May 2012 looking for six associates. Experience not essential. Enquiries to scotlanddental@gmail.com.

Greater Dublin area – ambitious dynamic associate required. Experience minimum three to five years. Superb modern facilities/equipment. Part of thriving primary care centre. Area wide open. Incentives and long-term prospects for right candidate. Flexibility crucial. New Year Start. Tel: 086-807 5273, or Email: niall@innovatedental.com.

Part-time associate required to work two days at modern dental practice in North East. Tel: 042-933 7033 on Mon/Tues/Wed.

Full-time experienced associate wanted to replace departing colleague in progressive multiple surgery practice – Carlow town – with long-term view. All modern facilities – rotary endo, nitrous oxide, four-handed dentistry – visiting specialists and hygienist. January start – long-term view expected. Tel: 087-266 6524, or Email: info@pembrokedental.ie.

Enthusiastic, ethical, productive associate required for busy South Dublin practice. Must be great communicator, team player and focus on quality dentistry and excellent patient care. Monday, Tuesday, Friday, possibly Saturday. Immediate start available, full book, established modern private practice. Email: dublindentaljob@gmail.com.

Leinster. Full/part-time, experienced and enthusiastic associates required for established, modern and expanding practice. Great location, 50 minutes from Dublin. Immediate start available. Apply by emailing CV, along with references, to leinsterdentalpractice@gmail.com.

Orthodontic associate required for specialist orthodontic group practice in Dublin. Two days per week. State-of-the-art facilities. Digital imaging. Fully computerised. Please reply with CV to suzanne@dublinorthodontics.ie.

Saturday associate dentist required for a practice in South East County Galway. Modern surgeries, full chairside and clerical support OPG, etc. Please Email: rothdent@hotmail.com.

Experienced (at least five years) associate required for Fridays in busy Athlone practice. Modern, computerised new surgery. Please Tel: 087-620 8466, or Email CV to dentalvacancy@hotmail.com.

Dentist wanted – West of Ireland coastal town. Experienced and mature person to manage and work practice. With long-term view. Excellent terms. Replies to Email: lights.harbour@gmail.com.

Experienced, gentle and friendly GDP required for six- to seven-month maternity locum in busy well-established practice in Oranmore, Galway for three to four days per week. Start end March 2012. Reply with CV and references to orantowndental@eircom.net.

Mature (minimum 10 years' experience) dentist required to join well-established practice, South Dublin. Part-time, flexible schedule required. Excellent patient management and communication skills necessary. Please reply with CV to dublindentistry@gmail.com.

Dentist required Dublin 4. Must be driven by a desire to provide excellent quality dentistry, in a modern well equipped environment, and as part of a vibrant and active team. Please Email your CV to: conor@smiles.ie.

Dentist wanted one or two days a week in modern surgery in Carndonagh, Co. Donegal. Good mix of medical card and private patients. Tel: 074-937 3680.

Experienced, professional locum dentist required to join the dental team at VHI Swiftcare Urgent Care Clinic, Dundrum. Minimum three years qualified. Experience in dental trauma desirable but not essential. Apply by emailing CV and references to shannon.poynton@vhiswiftcare.ie.

Oral surgeon required one to two sessions per month. Cork City practice. Tel: 086-368 6124.

Paedodontist required to work one day a week in a practice in Dublin 2. Please Tel: 087-232 2384.

Orthodontist. Part-time registered orthodontist required for busy general/implant clinic in Sligo Town. Ultra modern clinic with digital OPT, excellent staff, large patient base and demand for ortho treatments. Tel: 087-775 0938, or Email: dandckennedy@eircom.net.

Dental nurse required for South Dublin practice. Part-time position at present. Must be flexible regarding hours (early and late). Must have at least two years' nursing experience in dental practice. Email cover note and CV to njdental2011@gmail.com.

Full time DSA/receptionist for maternity leave cover commencing mid-March in Tramore, Co. Waterford. Must be computer competent with clinical experience. Email CV to bridmcorkery@yahoo.ie.

Orthodontist required for sessions in specialist practice – Dublin 2. Email enquiries to perioprosortho@gmail.com.

Enthusiastic experienced dental nurse required to join our friendly team. Position is for two to three days per week to commence in February. Email: edelcallandental@gmail.com.

PRACTICES FOR SALE/TO LET

Practice for sale – West of Ireland seaside town – long established. Two-person practice, hygienist and visiting oral surgeon. Fully trained staff. Computerised – digital x-rays, OPG, intra-oral camera, mixed client base. Different options available. Tel: 087-246 1813.

For sale – South East. Two-surgery, real WOW factor, available in prime city centre location. Low overheads. Excellent equipment, tax allowances transferable. Bright premises. Very low entry price reflecting immediate sale. Tel: 086-807 5273, or Email: niall@innovatedental.com.

Dublin City Centre – area space to rent. Great location – close to expanding Mater Hospital. Premises surrounded by 40 retail outlets; strong local business community. Ample room: three surgeries/central sterilising. Highly flexible lease terms. Tel: 086-807 5273, or Email: niall@innovatedental.ie.

For sale – Canary Islands. Busy clinic with high net profit in best climate worldwide for sale. We offer all kind of dentistry to international clientele. Email: lanzarote.dental.clinic@hotmail.com.

Dental practice for sale, long established, Tralee, Co. Kerry. Modern, progressive, busy, fully private for over 12 years. Good equipment, excellent support staff. Ideal opportunity for well-qualified dynamic personality. Email: swsales78@gmail.com.

Practice for sale – Co Clare. Long-established – great location. Walkinable. Low overheads – expense sharing. OPG – good equipment. Hygienist. Excellent potential for growth. Ample room available. Primarily private practice. Good new patient numbers. Tel: 086-807 5273, or Email: niall@innovatedental.com.

Northbrook Clinic – Dental unit to let. Suit specialist/multi-specialist practice. Wheelchair access. OPG and dental CT available on site. Tel: 01-496 7111, ext 240.

Why I'm an IDA/Dental Union member

A dozen reasons why

- 1 I want to belong to my professional representative body and my trade union.
- 2 I want to belong to Ireland's main CPD provider and to enjoy access to members-only CPD meetings locally and nationally.
- 3 I want to be kept informed.
- 4 I know it makes financial sense. The amount I save as a member is far greater than the cost of membership. Joining is easy and costs no more than €8 per week.
- 5 I want to have my say in shaping the future for dentistry.
- 6 I enjoy the security afforded by membership.
- 7 I value the exclusive access I am given to professional HR advice and representation.
- 8 I believe the profession is stronger when we combine together.
- 9 I value the cheaper professional indemnity cover I enjoy as an IDA member. (last year I saved over €700 alone in indemnity costs with Dental Protection as an IDA member).
- 10 I love to meet colleagues at events organised for members by the IDA.
- 11 I value the savings I will make in accessing the new dental complaints service (non-members face a €350 annual registration fee).
- 12 I appreciate the access to many benefits made available to members which serve to reduce my practice and professional costs.

Tel: (01) 295 0072

FEBRUARY

Kerry Branch IDA – Meeting: Management of Periodontal Disease for the General Dental Practitioner

February 9

Malton Hotel, Killarney

Meeting is at 8.00pm. Speaker is Dr Patricia Shalloe, who will present an outline of diagnostic tools for periodontal therapy and discussion of principles and techniques of periodontal therapy

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Metropolitan Branch IDA – Annual Scientific Meeting: Treating the whole family

February 10

Hilton Hotel, Charlemont Place, Dublin 2

Starts at 2.00pm with gala dinner available afterwards.

Kerry Branch IDA – Meeting: Posterior Composites

February 23

Manor Hotel, Tralee

Meeting is at 8.00pm. Speaker is Dr Christopher Lynch, who will update attendees on current evidence and recent trends in relation to posterior composite placement.

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MARCH

South Eastern branch IDA – Annual Scientific Meeting

March 2

Ormonde Hotel, Kilkenny

Speakers will include Drs Andrew Norris, Johnny Fearan, Catherine McKinley, Eimear Norton, Paul Cashman and Melissa Lee. There will also be a presentation from IDA President Elect, Dr Andrew Bolan.

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Metropolitan Branch IDA – Scientific Meeting and AGM

March 8

Hilton Hotel, Charlemont Place, Dublin 2

Speakers are Dr Andrew Norris and Professor Leo Stassen. The meeting starts at 7.30pm and will be followed by the Metropolitan Branch Annual General Meeting.

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Kerry Branch IDA – Meeting

March 15

Malton Hotel, Killarney

Title TBC. Meeting starts at 8.00pm. Speaker is Dr Michael Hartnett.

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APRIL

Kerry Branch IDA – Meeting: Update on imaging techniques for implant assessment

April 19

Malton Hotel, Killarney

Meeting starts at 8.00pm. Speaker is Dr Sean McCarthy.

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Irish Society of Dentistry for Children – Annual Scientific Meeting 2012

April 26

Guest speakers are Prof. Bill Bowen, University of Rochester NY, on 'Cariology', and Dr Marie Therese Hosey, Kings College Dental School, London, on 'Behaviour management techniques'. Further details to follow when available.

Orthodontic Society of Ireland – Meeting

April 27-28

Faithlegg House, Waterford

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

MAY

Two-day motivational interviewing programme

May 21 and 22

Dublin Dental University Hospital

See the DDUH and Irish Society of Disability and Oral Health websites for up-to-date details. Contact Jennifer.McSweeney@dental.tcd.ie

JUNE

Europeo7 – 7th Congress of the European Federation of Periodontology

June 6-9

Vienna, Austria

Learn the newest techniques and treatment methods in the fields of periodontology, implantology and dental hygiene from renowned experts. More information on this conference can be found on the website – www.europeo7.com.

SEPTEMBER

BDA Seminar Series – Crown and bridgework: improve your skills, update your knowledge and get the best results

September 28

Belfast

To view the full programme and to book, Email: events@bda.org, or call Rebecca Hancock, Tel: 020-7563 4590. CPD verifiable.

OCTOBER

21st Congress of the International Association for Disability and Oral Health

October 17-20

Sydney, Australia

For further information, see www.iadh2012.com.

Faculty of Dentistry of the Royal College of Surgeons in Ireland – 2012 Annual Scientific Meeting: An overview of Aesthetic Dentistry

October 26-27

RCSI, St Stephen's Green, Dublin

Further information to follow when available.

NOVEMBER

Orthodontic Society of Ireland – Meeting

November 23-24

K Club, Co. Kildare

'The face and occlusion in the diagnostic process: new strategies for treatment from mixed dentition to surgery'. Speakers are Drs Marco Rosa, Renato Colconi and Mirco Raffaini.

The Asia Pacific Orthodontic Conference

November – 29 to December 2

New Delhi, India

For further information, see www.8thapoc-47thioc.in



I've heard that chewing Extra Ice helps to neutralise plaque acid attacks.

Keep your lid on!



Teeth need extra protection after eating and drinking, especially when people are on the go and can't brush.

That's why many dentists and hygienists are recommending sugarfree gum, because it removes food debris, neutralizes harmful plaque acids and restores pH balance in the mouth. And chewing gum is a preferred treatment for xerostomia because it increases sufferers' salivary flow by up to seven times.

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