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Priority will be given to letters less than 500 words long. Authors must sign the letter, which may be edited for reasons of space

Da iawn!

Sir, in response to F. M. Jones' letter (*BDJ* 2005; **199**: 547) regarding the use of the Welsh language, I totally agree with her/him that the Welsh language is getting stronger than ever in Wales, in spite of ignorance by people such as the previous author, Mr Nigel L. Carter. Many more people speak, and want to speak Welsh than ever, and it's only right that literature in relation to dentistry should be in Welsh only, and shouldn't have to always be in English too.

I recently saw a Welsh-only Denplan poster, promoting better oral health (for the minority of us, according to N. Carter!) – for this I have to give Denplan praise, well done them.

M. L. L. Hughes
Penrhyndeudraeth
doi: 10.1038/sj.bdj.4813178

Check your UDAs

Sir, GDP colleagues working in the NHS will by now have received a statement from the DPB detailing the number of UDAs they must achieve if they choose to stay within the NHS. We have taken it on trust that the figures are accurate but at a recent meeting with our PCT, my practice colleagues commented that our UDA target seemed rather high. I was personally challenged by the PCT to go through all my treatment forms in the relevant test period (01/10/04–30/09/05) to see if there had actually been an error.

Perhaps they did not expect me to do so but I actually went through every submitted form in the test period and allocated 1, or 3 or 12 treatment UDAs according to the proposed guidelines. Imagine my surprise when I noted that the DPB had set my UDA target some 9% ABOVE the number of UDAs I actually 'earned' in the test period.

I raised this at a meeting with Lester Ellman and he informed us that this was not unusual and indeed, he knew of one dentist whose proposed UDA target was up by 20% on what he had actually 'earned'.

I have set an appeal in motion, but felt colleagues should not take their UDA figure on trust and advise them to check their proposed UDAs against what they actually earned in the test period. After all, if you have an unrealistic target and you sign up to it, not only will you be back on that treadmill with avengence, but you could find your salary being cut as a result of not making your unrealistic target.

R. Kitchen
By email
doi: 10.1038/sj.bdj.4813203

Call for censorship

Sir, I am happy for you to publish biased book reviews, as a journal without opinion is as dull as ditchwater. However, in the interests of taste and decency could you in future censor letters (*BDJ* 2005; **199**: 485) describing both the author (E. Kidd of Surbiton) and yourself, the Editor, as naked?

C. Stillman-Lowe
Reading
doi: 10.1038/sj.bdj.4813180

Ozone slayers

Sir, Edwina Kidd running naked through the streets of Surbiton! What would the Guy's chaps pay for that come next rag week? Talking of a rag I think Professor Kidd's letter (*BDJ* 2005: **199**: 485) gave the new *BDJ* Editor quite a severe ragging, in spite of her confessed lack of sleep! I feel if she had been more awake she might have reflected better on her action in sending the *BDJ* such a letter for publication.

While I have absolutely no complaint about the comments made by Professor Kidd and that of Dr Richards' letter (same edition), pertaining to NICE and the Cochrain group's reporting that there is insufficient hard evidence published into the efficacy of the therapeutic use of ozone in dentistry, it makes me wonder if either of the two distinguished letter writers have actually read the book (*Ozone: A revolution in dentistry*)?

Professor Kidd may reveal too much of her own personal bias (as opposed to the 'balance' she seeks) when she uses language referring to the reviewer of the ozone book as a 'born again ozone fanatic'. The language used by Professor Kidd is strong stuff, hardly professional in the academic sense, maybe even a little offensive. Perhaps we can refer to Edwina as a born again needle and drill fanatic? How would that feel?

As a graduate of the 1970s, which I hope can be reasonably regarded as in the 'modern era', it reminds us of all the dogmatic rubbish we were taught as gospel: Black's cavity design is such a classic example – I painfully remember being made to feel a total fool when as an undergraduate I had the temerity to ask why we should have to cut out such massive cavities in teeth that had minimal carious lesions. What about the huge flaps and bony contouring in periodontal therapy? Apicectomies for teeth with large apical areas, the routine decoronating of root filled anterior teeth, wholesale surgical removal of symptom-less unerupted teeth, never place any acid etchant near dentine, Ante's law, etc, I could go on and on. All of these things are now regarded as silly. What of the introduction of something like ozone into dentistry? The therapeutic use of ozone in dentistry represents exciting potential that could change the face of our work. It is so typical of traditional dental academics (how many patients do you treat each week Professor Kidd and Dr Richards?) to want to throw scorn on such an amazing innovation. Why not be enthused by the concept?

The serious people involved in ozone research (that includes me) have never suggested that the therapy is proven beyond doubt. There are individuals out there with a mission to oppose the work and, sadly, these people are condemning the ozone project without any foundation themselves. I am in complete agreement that many more randomised controlled trials need to be completed and a lot more research is required. The whole point of the ozone textbook is to present all the work that has already been carried out and the results that have been achieved thus far and that is all.

There is a misconception out there (usually peddled by the opposers of the ozone project) that ozone can 'cure' all aspects of dental caries. The fact is the ozone research work is centred on the early carious lesion and for root surface decay and it is wholly unfair for the anti brigade to go around suggesting that the born again ozone fanatics are claiming miracles! This is not the case, please, read the book!

With such exciting potential of the use of ozone in dentistry, would it not be

uplifting if the cynical out there kept an open mind and would want to become personally *involved* in the research? Dare I suggest that one may detect a whiff of halitosis from the little green gremlin of envy that sits on the shoulder of a few academics who specialise in cariology because they didn't think of using the ozone system themselves first? (No, naughty boy, I should not think that).

After all these years, our best efforts remain embedded in the needle and drill; totally shameful in my opinion since we have known for years what is the basic cause of dental decay and periodontal diseases yet we continue to train our dental students so badly in that the needle and drill is regarded the number one tool in our armoury.

I don't know if ozone therapy will prove to be a wonderful therapeutic agent, or a false dawn, but we should feel ashamed that people in our noble profession wish to remain so negative to anything that could prove to be a revolution in our approach to the prevention and cure of dental diseases. No, not hot air Professor Kidd, but a blast of ozone! A genuine attempt todo something better than the needle and drill.

N. D. Johnson
By email
doi: 10.1038/sj.bdj.4813181

Difficulty with samples

Sir, I write in response to the recent letters on the subject of ozone treatment. I purchased the HealOzone machine relatively soon after the machine was made available. My experience with the machine has been in the treatment of early carious lesions in dentine. I have also treated a limited number of endodontic cases using ozone as an adjunct to conventional endodontic treatment. My perceived failures in the treatment of caries in dentine (and there have been some) have in some cases been related to poor patient compliance on diet control and inadequate application of fluoride containing dentifrices and rinses. The other reason for failure may have been attempting to treat deep lesions. Where treatment has failed I have offered a repeat application to the patient and some cases have shown an apparent improvement following the second ozone application. There have been other failures with this treatment, which I have been unable to explain. The two studies I carried out suggested an overall success rate of about 80%.

A number of GDPs were approached to participate in recording their treatment results and to tabulate these to show the successes and failures of ozone intervention in general dental practice. This would be analogous to a number of GDPs being approached to document their successes and failures in conventional bridgework over say a minimum period of 10 years. Sadly we now know from a number of so called meta-analyses carried out on conventional bridgework that we can get very precise but very inaccurate results from such analyses because of the difficulties in obtaining a sufficient number of comparable studies. This does not mean that conventional bridgework is an unsuccessful treatment. It merely shows how difficult it is to obtain the ideal study samples. I believe this is where we currently are with ozone treatment.

I agree with previous authors that random controlled trials (RCT) are the Gold Standard to which research aspires. However the Cochrane Library has many papers that tell us that there were insufficient numbers of comparable studies to permit an RCT to be carried out. Does this then invalidate the conventional treatments we are currently providing? I think not. I believe the reviewer was correct in his assessment of this new book. I have found it to give a very detailed and comprehensive view of ozone treatments in general practice today.

P. Jackson
Hertfordshire
doi: 10.1038/sj.bdj.4813182

A catalyst for change

Sir, I read with considerable interest the comments of Professor Kidd[1] and Mr Richards[2] concerning the new Quintessence publication *Ozone: the revolution in dentistry.*[3] I agree with Professor Kidd that it is unfortunate that the reviewer did not comment on the Cochrane review[4] or the appraisal by NICE[5] which both concluded that evidence of efficacy was lacking at the time they did their assessment. For example I believe the Cochrane review stopped sometime in 2003 and therefore did not consider excellent peer reviewed papers published after that date which have since proved the efficacy of the HealOzone to treat caries. This is a fertile area for discussion as not only does it refer to the specific subject of ozone, the principles behind it refer to how as a profession we view the importance of evidence-based research.

I would contend that the majority of current clinical practice is based on no real evidence base. As clinicians we are left to apply our own critical faculties as to which techniques to adopt based on traditional teaching, personal clinical experience, pragmatism and a good dose of common sense. In addition there is a professional requirement to be involved in CPD and clinical audit as part and parcel of the concept of clinical governance.

The importance of an adequate evidence base is indisputable, however, at the current stage of knowledge it is a poor cousin to the hard earned clinical experience of individual practitioners. Clinical outcome research is the ultimate measure of the validity or otherwise of clinical methods and as individual clinicians our reputations with our patients stand or fall according to how well we do by them. Whether or not our work is audited our patients vote with their feet and their chequebooks and we are rewarded or penalised accordingly.

The question I would pose is one of should we as clinicians not adopt novel treatment modalities in the absence of a concrete evidence base? I think that if this were to be the case it would act as a major brake to the development and introduction to practice of new ideas, equipment and techniques. Modern dentistry is a highly competitive business driven by consumer demand for new and better methods. In my view the fiscal incentive for clinical excellence in the rapidly expanding market of private practice is to be whole heartedly welcomed as it is a profound catalyst for change. Patients as consumers choose caring practitioners who offer the most up to date methods. The clinical outcome has to match the patient's expectations as failure to deliver the goods is severely frowned on by today's discerning consumer.

In the specific case of ozone I am now in my fourth year of use and both I and my patients are more than merely happy. From my hard earned clinical experience I know that ozone works. I use it as a sterilising agent as an additional step to my more conventional repairs. There is no evidence of any harm arising in consequence to applying ozone with the HealOzone and I am confident that in time the next Cochrane and NICE reports will demonstrate a marked clinical advantage for the use of ozone. The routine sterilisation of cavities prior to restoration makes obvious sense. To suggest I shouldn't do it in the absence of a large evidence base is nonsense as if I only did clinically what I can support with a large evidence base I know I would be doing very little clinical dentistry. The Cochrane review and NICE have effectively thrown the baby out with the bath water. Without doubt in time Cochrane and NICE will catch up with the experience of the now thousands of practitioners like me who have found ozone an invaluable adjunct to modern restorative practice which has helped our patients enormously.

As for the book I have read it and liked it. The first third consists of a description of the research supporting ozone as a therapeutic treatment. The rest of the book is a beautifully illustrated manual showing

the many and versatile ways ozone can be used in dentistry. The restorative methods described are state of the art and the accompanying articles by amongst others Carsten Stockleben, George Freedman and Liviu Steier deserve to be read by any forward thinking practitioner regardless of their liking or not of ozone in dentistry.

M. A. Cronshaw
Isle of Wight

1. Kidd E. Sleepless in Surbiton. *Br Dent J* 2005; **199**: 485.
2. Richards D. Ozone revolution? Or emperor's new clothes? *Br Dent J* 2005; **199**: 485.
3. Lynch E. Ozone: *The revolution in dentistry*. Surrey: Quintessence Publishing, 2005.
4. Rickard G D, Richardson R, Johnson T *et al.* Ozone therapy for the treatment of dental caries (Cochrane review). Issue 3. In the Cochrane Library. Chichester: John Wiley, 2004
5. Healozone treatment for the treatment of tooth decay (occlusal pit and fissure caries and root caries). Technology Appraisal 92. National Institute for Health and Clinical Excellence www.nice.org.uk/TA092.

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An epistemological approach

Sir, I am well aware that there is a British bias about the philosophy of science, and that it is considered academic, boring and irritating. Nonetheless an epistemological approach to ozone, as now being debated in the *BDJ*, seems necessary and appropriate.

In the history of science any new theory contrasts with sets of assumptions, rules and practices of the paradigm it challenges, and the transition from one paradigm to another does not necessarily involve verification or falsification of scientific theories.[1]

The fact that the Cochrane Institute[2] issued a report on the studies on the remineralisation effects of ozone does not imply that the studies and the naturalistic observations accumulated over a number of years are non-existent. In addition, the respect that Cochrane enjoys does not necessarily imply that the conclusions of the report are congruent with the results. In fact, even if the way in which naturalistic observations are described and translated into experimental and linguistic schemes may appear inadequate for some. The same naturalistic observations witness that something is happening, something which adds in this case, a new perspective to our theories on dental decay and remineralisation.

Therefore there is no incongruence in reviewing a book relating to a new theory and vision, even if it generates some controversies.[3] For those who have been involved in the genesis of a new vision, any criticism generated by intellectual honesty is more than welcomed as it enriches the points observed. Epistemiology is the critical analysis of science and answers the question: how do we know what we know? Dental decay is a controversial topic. It is well established that the natural history of dental decay depends on two sets of factors, local and systemic. For some reason most dentists seem to ignore the systemic aspects of decay. An example is the use of salivary tests. At the recent FDI Congress in Montreal we witnessed the promotion of the measurement of saliva buffering capacity to assess caries risk. We have known for many years that it is an evidence-based practice but still, for some reason, it is not in widespread use.[4]

By the same token, caries cannot any longer be reasonably described as holes, since the lesions are the consequences of demineralisation and enzyme activity. Why we do not focus our attention on the very early stages as routine?

Ozone acts topically with its effect related to the local medium and it is clear and evident that it also indirectly induces remineralisation. It acts directly on the local dentinal environment where it restores homeostasis, facilitates the expression of tissue specialisation and makes any systemic condition ephemeral. However, we still know very little about the biomolecular environment in which local and systemic conditions interact.

Ozone offers the opportunity to help investigate this grey area. Caries is now considered to be a metabolic process which can be reversed and whose diagnosis and metabolic reversion are determined by metabolic activities. In our studies in Italy, ozone treatment has reversed 92% of early carious lesions which has never been possible previously by any other method. This is the new vision. This is the revolution and the challenge. I fully support the book review by Dr Hayes.

G. Dicran Megighian
Italy

1. Kuhn T. *The structure of scientific revolutions*. USA: University of Chicago Press, 1962.
2. Rickard G D, Richardson R, Johnson T *et al.* Ozone therapy for the treatment of dental caries (Cochrane review). Issue 3. In the Cochrane Library. Chichester: John Wiley 2004.
3. Ozone: the revolution in dentistry. Book review. *Br Dent J* 2005; **199**: 307.
4. Review of methods of identification of high caries risk groups and individuals. Federation Dentaire Internationale Technical Report No. 31. *Int Dent J* 1988; **38**: 177-189.

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Oral insecticidation

Sir, I am writing to report a rather unusual case of oral ulceration I came across recently that required a certain amount of detective work to finally establish a cause. The patient, a 68-year-old gentleman, attended with severe oral ulceration of two weeks duration. The ulceration was unilateral, involving the floor of mouth, gingivae and buccal mucosa on the right side. The affected areas were very large and painful with multiple coalesced ulcers in all areas. The patient's medical history revealed medication for hypertension and high cholesterol but nothing of any further significance. The unilateral nature of the ulceration seemed to be significant but as to its cause I couldn't come to a firm diagnosis. The patient was prescribed Benzydamine Hydrochloride and was reviewed two weeks later. At review the ulceration was still present with little change. I applied Propolis and instructed the patient to rinse regularly with Propolis tincture. The patient was reviewed one week later at which time the ulceration had improved considerably. At this review appointment the patient asked whether holding anything in his teeth would give rise to the problem. On questioning it appears that he is a very keen gardener and the week before the ulceration appeared he was staking out dahlias with plant ties, which he held in his mouth. On further questioning he was holding anything up to 400 ties during this process, which were re-used ties from other plants. I asked him whether the plants were sprayed with anything and it was revealed he used both insecticide and fungicide regularly on the plants and of course the ties.

The cause of the ulceration then became clear. The insecticide contained permethrin and malathion and the fungicide contained myclobutanil. All these chemicals are highly toxic if ingested causing multiple problems especially mucosal damage to mouth, oesophagus and stomach lining. The patient was naturally told to desist from this practice in future and was reviewed regularly with no further problems.

This is an example of how a commonplace presentation may have a much more complex history than first thought.

T. A. Parr
Wirral

doi: 10.1038/sj.bdj.4813185

Formation of salts

Sir, thank you for the excellent series of articles on *Oral Medicine – Update for the dental practitioner* by Professors Scully and Felix. I refer to the recent one on Red and pigmented lesions (*BDJ* 2005; **199**: 639-645). The authors make mention of eradication of the mucosal infection in denture stomatitis with concurrent use of chlorhexidine and either miconazole gel, nystatin pastilles or amphotericin lozenges.

I am under the impression that it is generally not advisable to administer chlorhexidine and nystatin concurrently, due to the chlorhexidine-nystatin complexes that form with this combination. It has been suggested in the literature that these salts are the probable reason for the significant difference seen in patients who continued to develop candidal infections after cancer treatment and received chlorhexidine together with nystatin, as compared to patients who received either topical agent alone.

I question whether just because there have not yet been specific studies to prove or disprove the interactions between chlorhexidine and nystatin (or it may just be that I am not aware of any such study) whether we should go against current evidence that would imply that we use chlorhexidine or nystatin alone rather than in combination. Also, would I be mistaken if I suggested that in order to avoid the formation of chlorhexidine-nystatin salts, that chlorhexidine and nystatin could be used at alternative times during the day, rather than at the same time?

The advice and opinion of the authors would be very much appreciated.

M. Gaibi
Birmingham

Professors Scully and Felix respond: *Dr Gaibi makes a fair point. However,* in vitro *studies do not always reflect the* in vivo *situation. The minimum inhibitory concentration (MIC) value for the combination of nystatin and chlorhexidine digluconate on Candida albicans used* in vitro *is significantly higher than the values for each of the drugs alone and thus, in theory the combination of the drugs is less effective, the most likely reason being that a low solubility chlorhexidine-nystatin salt can form.*[1] *However, nystatin and chlorhexidine are used clinically together and with some effect.*[2] *Nevertheless, many patients prefer miconazole because of the taste, it can be purchased over the counter in UK, and it may even prove cheaper (Table 1).*

Table 1 Approximate costs of topical antifungals for a two week course, as per BNF 50, 2005.

Antifungal	Approximate contents	Approximate cost in Pounds Sterling
Amphotericin	60 lozenges	3.67
Miconazole	15g gel	2.45
Nystatin	30ml suspension	3.90
	56 pastilles	6.48

1. Barkvoll P, Attramadal A. Effect of nystatin and chlorhexidine digluconate on Candida albicans. *Oral Surg Oral Med Oral Pathol* 1989; **67**: 279-281.
2. Epstein J B, Vickars L, Spinelli J, Reece D. Efficacy of chlorhexidine and nystatin rinses in prevention of oral complications in leukemia and bone marrow transplantation. *Oral Surg Oral Med Oral Pathol* 1992; **73**: 682-689.

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Nicotine, smoke and patches

Sir, we should like to draw readers' attention to a point in the paper by Scully and Felix (*BDJ* 2005; **199**: 565) on oral white patches. The brown discolouration of teeth or lesions in tobacco smokers was referred to as 'nicotine staining' but more accurately it should be referred to as 'tar staining'. Although nicotine is the addictive component of tobacco smoke it is not responsible for the staining or most of the injurious effects of smoking. Tobacco smoke contains at least 4,000 components, some examples of which are given in Table 1. The tar component is responsible for the staining and contains many of the harmful chemicals that are highly carcinogenic. Therefore we should like to reinforce the message that nicotine is not the most harmful component of tobacco smoke, and indeed nicotine replacement therapy has been shown to be very safe. It is probably legitimate to retain the term 'stomatitis nicotina' to describe the changes induced in the palate by smoking, but rather than blame the 'nicotine' one should implicate the combustion products of the tobacco plant Nicotiana.

R. Palmer
C. Scully
London
D. H. Felix
Glasgow
doi: 10.1038/sj.bdj.4813187

Table 1 Some constituents of tobacco smoke (http://www.ash.org.uk/)

Particulate phase	Gas phase
nicotine	carbon monoxide
'tar' (composed of many chemicals)	ammonia
benzene	dimethylnitrosamine
benzo(a)pyrene	formaldehyde
	hydrogen cyanide
	acrolein

Brainstorming

Sir, as a dentist of over 25 years who amazingly helped vote this Government in, here are some of my thoughts and ideas:

- 'NHS' dentistry could be a very basic free service only available at drop in centres.
- Private payment schemes should be tax deductible and practices should be able to set up their own schemes.
- Private fee paying dental schools could be formed to train more dentists and hygienists.
- Student debt should be set at £250,000 interest free over 15 years to prevent non-dedicated to the profession applicants from applying.

The public should not be afraid of the cost of private dentistry because competition will soon drive prices down – there will always be someone out there willing to offer a no frills service.

Why cannot the Government see that if 33% of dentists have opted for the new contract it means that 66% have not?

Why have the Conservative Party not taken advantage of the turmoil in dentistry and come up with high profile alternative policies? No Tory dentists out there?

Is it not prudent for dentists to strategically opt out of the NHS now? It almost certainly will be easier to return once the dust has settled rather than 'go private' later.

Going private means that we have to only add 10% to the present NHS fees in most instances and I reckon the queues will be just as long.

R. Parbury
Colchester
doi: 10.1038/sj.bdj.4813188

Protecting staff and patients

Sir, could I open a debate on the safety aspects of receiving hepatitis B immunisation? As recommended I follow guidelines and insist all clinical staff are vaccinated as indeed I have been for the last 20 years. This is to protect both staff and patients alike. However, I believe there may be growing resistance to the acceptance of this requirement due to the possible complications of various forms of demyelination disease and the growth in belief in homeopathic remedies. Are our staff put at risk by our good intentions and does an employee have a right to take the homeopathic alternative if there is one?

K. Gower
doi: 10.1038/sj.bdj.4813189

Note

Readers wishing to respond directly to the authors of the letter *Need for orthodontic truth* by A. Hedger *et al.* (*BDJ* 2005 **199**: 754–755) should use the email address: contact@openwide.biz and not that previously published.