

# Letters to the Editor

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LETTERS

## THE GOLDEN RATIO

Sir, in the article on perceived aesthetics of maxillary incisors<sup>1</sup> no mention was made of the Golden Ratio. This is a ratio 1.61:1 and is also referred to as the Divine Number. It has been known for over 2,500 years. It occurs in nature and science and has been used in architecture; reputedly the Parthenon was built to these proportions. There are claims of its use by artists such as Dali. Many psychologists have carried out tests presenting a range of rectangular shapes to subjects. There is a consistent finding that the most pleasing shape conforms to the Golden Ratio.

P. Erridge  
East Grinstead

1 Cooper G E, Tredwin C J, Cooper N T, Petrie A, Gill D S. The influence of maxillary central incisor height-to-width ratio on perceived smile aesthetics. *Br Dent J* 2012; **212**: 589–599.

G. E. Cooper, C. J. Tredwin, N. T. Cooper, A. Petrie and D. S. Gill respond: We would like to thank P. Erridge for his interest in our article. We tested the aesthetic impact of a number of width-height alterations of the maxillary central incisor. During the design stage of the research we reviewed past published findings to help decide which ratios should be included in our study. The research of Wolfart et al.<sup>1</sup> clearly demonstrated that the 62% width-length ratio (the Golden Proportion) of the maxillary central incisors was judged as one of the least aesthetically pleasing ratios for both laypeople and dentists. In fact this study found that the 80% ratio was one of the most pleasing ratios for both assessor groups. Bearing this in mind we selected the 80% ratio as our midpoint and produced our photo range spanning approximately 15% either way of this

ratio which did not include the Golden Proportion. The results of our study also clearly demonstrated that the assessors did not like the photos where the width-length ratio approached the Golden Proportion as shown by the ranking of the 69% and 66% ratios. Therefore, the assumption that the Golden Proportion need not be included was reinforced.

1. Wolfart S, Thormann H, Freitag S, Kern M. Assessment of dental appearance following changes in incisor proportions. *Eur J Oral Sci* 2005; **113**: 159–165.

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## LEFT IN THE DARK

Sir, the paper by Yip and Smales<sup>1</sup> on the subject of diagnosis and treatment planning for caries in practice gives a reader from 'practice' cause for concern. Use is made of data that are not referenced (eg '...was shown in the UK patients who have regular dental care ... are just as likely to require emergency dental treatment as those who visit a dentist regularly' – really? By whom and when and where can I verify the data and read more? – because this is of interest!)

Authoritative statements are presented, with no evidence to support them of first paragraph on page 218 making statements about restoration replacement. I am familiar with the issues raised and know where to go for further reading and information (Annusavice, Elderton and Christensen – because I have already read around the subject. However, readers who have not are left in the dark).

This is a shame because the paper deals with many aspects of contemporary practice which are of interest to dentists in general practice, but we want to know what the evidence base is and what is 'expert opinion'. This paper

does not make that distinction. There is an urgent need for evidence-based papers like this, as we increasingly face patients armed with extensive 'reading off the Internet' – some of which is simply wrong, but a lot is opinion – which we have difficulty finding research for or against, because we are so busy simply doing the work! A lot of the statements made in this paper simply either reinforce or contradict current professional dogma, without providing us with the tools for making our own minds up on the validity (or otherwise) of what is presented.

Y. Maidment  
By email

1. Yip K, Smales R. Oral diagnosis and treatment planning: part 5. Preventive and treatment planning for dental caries. *Br Dent J* 2012; **213**: 211–220.

Professor Roger Smales and Dr Kevin Yip respond: We acknowledge that there are ever-increasing numbers of dental journals and published articles on many topics relevant to dental practice that busy practitioners have difficulties in finding time to read. However, the reading lists in the present series are not intended to reference every statement made in the eight chapters selected from the 19 chapters in the textbook. A clinical guide to oral diagnosis and treatment planning, but to provide some pertinent material as a starting point for those readers who may wish to explore the topics included in more depth. The book chapters are not intended to be critical reviews of each and every topic mentioned. Where possible, the reading lists have included relevant review articles, clinical guidelines, long-term clinical studies, articles or sources from recognised authorities (several of which Dr Maidment has

mentioned) and more recent articles. Many evidence-based reviews on topics of interest to practitioners (and patients) are available at the Cochrane Oral Health Group Reviews ([www.ohg.cochrane.org/reviews.html](http://www.ohg.cochrane.org/reviews.html)) – as was mentioned in Newsome P, Smales R, Yip K. Oral diagnosis and treatment planning; part 1. Introduction. *Br Dent J* 2012; 213: 15–19. We hope that such evidence-based reviews will also assist practitioners to move out of the dark!

More specifically, various articles have explored associations between the frequency of patients' attendances and the dental treatments received. Several studies have found that regular attendees have more restorations (mostly replacement restorations) placed because of disease experience and unsatisfactory restorations than do irregular attendees.<sup>1–3</sup> The average number of restorations placed also increased significantly with a change in dentist.<sup>2</sup> The lowest survival of restorations was strongly and directly related to the shortest median frequency of attendances, due possibly to the higher occurrence of dental problems in the most frequent attendees.<sup>4</sup> A three-year study of dentate adults aged less than 35 years at baseline also found that similar percentages of 'dentally successful' people (56%) expected to retain teeth beyond the age of 65, and of 'dentally unsuccessful' people (57%) expected to lose all teeth by the age of 45, had sought General Dental Service care.<sup>5</sup> And, one other clinical study involving 677 children who attended 50 general dental practitioners on a regular basis reported that similar percentages of deciduous molars having either unrestored caries (18.8%) or a history of restorative care (17.0%) were extracted because of pain or sepsis.<sup>6</sup> An Australian dental hospital study of 301 adults found that, although 62% claimed to have seen a dentist during the past 12 months, overall 86% attended because of a dental problem – usually toothache, broken teeth and lost fillings and denture problems.<sup>7</sup> Another Australian private general practitioners' study of 497 adults found that although 64% had attended during the prior 12-month period, overall 54% were now attending because of dental problems.<sup>8</sup> All of these studies indicate that receiving regular restora-

tive care does not necessarily result in fewer dental problems and, in the latter two clinical studies, the patients also required more periodontal and restorative treatments than just for their immediate dental problems. The reasons for this situation are largely conjectural, such as regular attendees (who retain more teeth) receive more restorations and complex restorative treatments<sup>9</sup> and, therefore, are also more likely to have increased dental maintenance problems. Finally, most of the statements and supporting references relevant to the mentioned first paragraph on page 112 of Part 5 are contained in additional articles by Elderton.<sup>10–12</sup>

1. Nuttall N M. General Dental Service treatment received by frequent and infrequent dental attendees in Scotland. *Br Dent J* 1984; 156: 363–366.
2. Elderton R J, Nuttall N M, Eddie S, Davies J A. Dental health services research in Scotland: a review of some 5-year results. *Community Dent Oral Epidemiol* 1985; 13: 249–252.
3. Sheiham A, Maizels J, Cushing A, Holmes J. Dental attendance and dental status. *Community Dent Oral Epidemiol* 1985; 13: 304–309.
4. Burke F J T, Lucarotti P S K, Holder R L. Outcome of direct restorations placed within the general dental services in England and Wales (Part 2): variation by patients' characteristics. *J Dent* 2005; 33: 817–826.
5. Nuttall N M. Characteristics of dentally successful and dentally unsuccessful adults. *Community Dent Oral Epidemiol* 1984; 12: 208–212.
6. Milsom K M, Tickle M, King D, Kearney-Mitchell P, Blinkhorn A S. Outcomes associated with restored and unrestored deciduous molar teeth. *Prim Dent Care* 2002; 9: 16–9.
7. Broughton A M, Smales R J. Comparison of dental needs with the treatments actually received. *Aust Dent J* 1991; 36: 223–230.
8. Mount G, Walker B, Roder D. The dental health and treatment needs of middle-aged and older patients attending 21 general dental practitioners in South Australia. *Aust Dent J* 1987; 32: 166–170.
9. Mount G, Walker B, Roder D. Professionally defined dental treatment needs of middle-aged and older patients attending 21 general practitioners, as related to tooth retention. *Aust Dent J* 1988; 33: 129–132.
10. Elderton R J. Implications of recent dental health services research on the future of operative dentistry. *J Pub Health Dent* 1985; 45: 101–105.
11. Elderton R J. Clinical studies concerning re-restoration of teeth. *Adv Dent Res* 1990; 4: 4–9.
12. Elderton R J. Preventive (evidence-based) approach to quality general dental care. *Med Princ Pract* 2003; 12(Suppl 1): 12–21.

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### AUTOINJECTOR OR VIAL?

Sir, we are medical emergency trainers and it has come to our attention that some practices undergoing CQC inspections in the North of England are receiving confusing information regarding adrenaline preparations that they should have in their medical emergency kits. Some practices have been advised that they should have vials of adrenaline rather than adrenaline in the form of an autoinjector preparation which is

presumably due to that fact that some autoinjector preparations are only available in 300 micrograms (0.3 mL adrenaline injection 1:1000). The Resuscitation Council (UK) states that for a severe life-threatening anaphylactic reaction in an adult, 500 (micrograms (0.5 mL adrenaline injection 1:1000) should be administered into the anterolateral thigh.<sup>1</sup> Appendix (ii),<sup>1</sup> however, suggests that an autoinjector preparation delivering a dose of 300 micrograms ... is an acceptable alternative if immediately available.<sup>1</sup> Those practices that have autoinjector preparations of adrenaline are therefore compliant with national guidelines. As medical emergency events are rare, we suggest that it is easier for dental practitioners to deliver adrenaline via an autoinjector rather than to use adrenaline from a vial.

K. H. Taylor  
By email

1. Resuscitation Council (UK). *Medical emergencies and resuscitation: standards for clinical practice and training for dental practitioners and dental care professionals in general dental practice. A statement from The Resuscitation Council (UK)*. July 2006, revised February 2012. Available at: <http://www.resus.org.uk/pages/MEdental.pdf>.

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### REAL WORLD EVIDENCE

Sir, this week CQC have commenced another consultation regarding fees for dental practices.

We recently had a visit by two members of the CQC to our LDC meeting. They stressed that CQC was not a 'tick box exercise' but outcome based. When asked about the outcome of CRB checks in dentistry they said that one person had been prevented from working since CRB checks had been instigated.

There were 22,920 dentists working in the NHS in 2011–2012 ([www.ic.nhs.uk](http://www.ic.nhs.uk)). Assuming they all work with a nurse and add on approximately 10,000 receptionists this equals 55,840 people requiring CRB checks. The cost is £44 for the CRB plus £20.83 to the post office to process the application. This is therefore at a total cost of £3.6 million in round figures. This doesn't include the cost of my CQC registration to pay for someone to check I have a CRB, or the cost of the time involved in getting it. When asked, the CQC representative said in reply, 'even if it prevents one