from different specialities were asked to contribute. The leaflet was then taken to the Assistant Chief Dental Officer for Scotland, Mary McCann, who put me in touch with a dental public health consultant, Colwyn Jones, who has been instrumental in making the project a success through his contacts and previous experiences.

Further ideas were contributed by a second multidisciplinary group, this time involving specialist addiction pharmacists, and an NHS design team who ensured that the leaflet met NHS rules and regulations relating to the leaflet design.

It has taken three years, but finally, the number of leaflets chosen to be produced by NHS Scotland was 25,000. The cost of printing these was £627 (or 3p per leaflet). Dentists can now work alongside pharmacists in order to make a small but important contribution in reducing drug-related problems in Scotland.

G. Isherwood
Edinburgh
DOI: 10.1038/sj.bdj.2012.620

DIGITAL NATIVES

Sir, I attended the opening of the British Dental Conference and Exhibition in Manchester this year when Susan Greenfield OBE gave an excellent session. She spoke for an hour without notes, PowerPoint or any other visual aids but engaged the majority of her audience in such a spellbinding way that it was a surprise when she finished.

During her talk she referred to the 'digital native'. This describes a person who was born during or after the general introduction of digital technology and who has interacted with digital technology from an early age. She quoted research that some young people are spending 30 hours a week interacting with their screens. She suggested that this group of people have an under-developed hippocampus and referred to some evidence for this. One effect upon such a person is a lack of empathy. In my opinion empathy must rank alongside clinical skill and the ability to communicate, as one of the essential qualities needed by dentists.

During this talk I was surrounded by a group of young members of our profession who spent the entire talk turning the pages of their programmes loudly, texting or whispering to each other. What better evidence of the lack of empathy possessed by the 'digital native'?

After the session I spoke to a group of foundation dentists who had, like me, been thoroughly engaged by Baroness Greenfield and for whom the morning had been a genuine pleasure.

Perhaps the future isn't all bad!

M. Green
By email
DOI: 10.1038/sj.bdj.2012.621

LONG-TERM APPEARANCE

Sir, I read the paper by McDowall, Yar and Waring (*BDJ* 2012; **212:** 417–423) with some concern. Most orthodontists would accept that dental and facial objectives occasionally conflict[1] and many now avoid closing anterior spaces for fear of 'dishing in the face'. Unfortunately the very regulations that are intended to protect patients may prevent them from making the most important decision about their treatment: 'will it improve my long-term appearance?' Valid consent is only possible if patients can be shown facial photographs of alternative approaches; see www.orthotropics.com.

The authors also recommend moving the lateral incisor mesially without tilting. If this is attempted after the apex has closed noticeable root resorption will take place[2] especially in laterals.[3] They also recommend intrusion but this may increase root resorption even more.

Root resorption often followed by mobility is routine following fixed appliances[4,5] but due to a lamentable lack of research we are quite unable to forecast the long-term consequences.

J. Mew
By email

1. Bowman S J, Johnston L E Jr. The esthetic impact of extraction and non-extraction treatments on Caucasian patients. *Angle Orthod* 2000; **70:** 3–10.
2. Kjaer I. Morphological characteristics of dentitions developing excessive root resorption during orthodontic treatment. *Eur J Orthod* 1995; **17:** 25–34.
3. Mohandesan H, Ravanmehr H, Valaei N. A radiographic analysis of external apical root resorption of maxillary incisors during active orthodontic treatment. *Eur J Orthod* 2007; **29:** 134–139.
4. Jönsson A, Malmgren O, Levander E. Long-term follow-up of tooth mobility in maxillary incisors with orthodontically induced apical root resorption. *Eur J Orthod* 2007; **29:** 482–487.
5. Kurol J, Owman-Moll P, Lundgren D. Time-related root resorption after application of a controlled continuous orthodontic force. *Amer J Orthod Dentofacial Orthop* 1996; **110:** 303–310.

DOI: 10.1038/sj.bdj.2012.622

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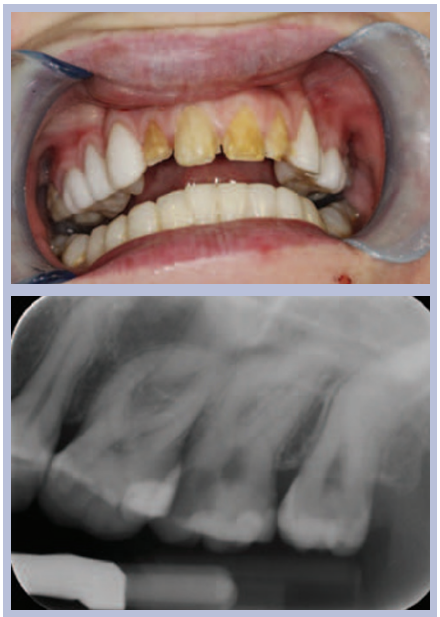
FAILED SMILE DESIGN

Sir, we would like to take this opportunity to add to the debate highlighted in *Ethical issues in cosmetic dentistry* by M. Kelleher (*BDJ* 2012; **212:** 365–367) and show how failure of this type of cosmetic dental treatment can impact on a patient's life.

Our community dental service treats patients with moderate to severe special care needs. It is uncommon that we come across patients who demand 'ideal smile designs', as our patients generally have pressing complex social, medical and psychological problems to deal with. We were therefore surprised when this 26-year-old female, who is homeless with other complex problems, presented to us as an emergency patient seeking help with her veneers, which she complained 'would not stay on' (Figs 1-2). Further examination revealed 12 veneers extending from UL6 to UR6 of which five had failed. On questioning, the patient revealed that they were fitted less than a year ago, under sedation, and when the veneers



Figs 1–2 A 26-year-old patient with failed veneers and multiple deep carious lesions

fell off she re-cemented them herself with superglue. She was prompted to seek treatment as the layers of glue h ad become so thick that it was no longer effective and her poor appearance was causing her great distress, impacting adversely on her rehabilitation into society, and had increased her dental phobia.

Further investigation also revealed multiple deep carious lesions with potential pulpal involvement, a diet history of excessive sugar intake, including six spoonfuls of sugar in her tea, and the fact that she was in the early stages of pregnancy, ruling out the use of sedation to manage her dental anxiety.

Whilst a dentist cannot accurately predict the future potential health and personal issues that their patients may suffer from, we feel that before 'cosmetic procedures' are undertaken one should always consider what the consequence would be if treatment fails or the patient becomes unable to maintain it both financially and psychologically.

This case highlights the importance of a thorough social and medical history with a full caries risk assessment prior to any cosmetic treatment planning. We are now facing the challenge of achieving oral health for this patient who is currently very vulnerable and is under a great deal of stress, partly as a result of this failed 'smile design'.

C. Chan, C. Colhoun, D. Simons
London
DOI: 10.1038/sj.bdj.2012.623

DEVELOPED AND REFINED

Sir, in response to the letter published in the *BDJ* in April titled *Inevitable deskilling* (*BDJ* 2012; **212:** 303), we wish to challenge Mr Marlow's assumption that frequent referral of 'even the most straightforward of extractions' is likely due to shortcomings of the nation's dental schools.

We are current 3rd year students (first clinical year) at Newcastle University, School of Dental Science and we believe that our training in routine extractions is first class.

In our first year of hands-on dentistry we have already had four weeks of oral surgery attachments. This allows us to have an intense experience of purely dental extractions alongside excellent clinical supervision and ample nursing support. This has I believe given us tremendous experience in managing most extractions and even simple dento-alveolar surgery.

This initial experience is built on with further block allocations to the oral surgery clinics of four weeks in 4th year and three weeks in final year. Continual allocation to our dental emergency clinic means our skills are always being developed and refined. Our competence is assessed in molar extractions, root removal and surgical removal of teeth, and student evaluation of the oral surgery course is consistently excellent.

Whilst we cannot speak for other undergraduate courses we believe that our training at Newcastle provides us with competence and confidence to undertake routine extractions and moreover deal with simple dento-alveolar surgical procedures provided foundation dental training practices are appropriately equipped and the trainers are happy for surgical extractions to occur.

G. Garlington, F. Usher
Newcastle
DOI: 10.1038/sj.bdj.2012.624

A LOGICAL SERVICE

Sir, Martin Kelleher (*BDJ* 2012; **212:** 365–367) succinctly points out the ethical merits of obtaining informed consent from our patients prior to elective restorative therapy, although I am sure that such ethics have long been established by the GDC.

I would like to be able to quote accurate outcome success rates for the various dental procedures that we, as general dental practitioners, carry out on a daily basis.

Indeed, prior to 2006, the Business Services Authority (then the Dental Practice Board) probably held the most meaningful data.

It would therefore be a logical service to the profession if such data were available to us via a website so as to enable us to obtain informed consent.

In addition, a centrally updated database of evidence based papers (eg NICE) would enable the 'wet-fingered dentist' to give patients the outcome figures advocated by the author.

N. Larah
Manchester
DOI: 10.1038/sj.bdj.2012.625

SHOULD BE CREDITED

Sir, I write further to the letter *Historical fraud?* (*BDJ* 2012; **212:** 573). In 1864 the American Dental Association acknowledged that Horace Wells should be credited with the introduction of inhalation anaesthesia having used nitrous oxide for dental extraction in 1844. In 1870 this was also acknowledged by the American Medical Association. The event was commemorated by the American Dental Association in 1948.[1]

There were others who claimed to have discovered anaesthesia, for example a Dr Crawford Long of Jefferson, Georgia, had claimed to have removed a neck tumour with ether anaesthetic in 1842, before Morton had used ether. However, publication and knowledge of this was not revealed until some years after the use of ether had been generally accepted.

The fascinating story of the discovery of anaesthesia and the attempts by Morton to capitalise on it is beautifully told in *The sleep of life – a novel* by Richard Gordon, 1975. The book is out of print but there are numerous copies for sale at online book sellers.

A. Sadler
By email

1. Gies W J (ed). *Horace Wells, dentist. Father of surgical anesthesia. Proceedings of centenary commemorations of Wells' discovery in 1844 and list of Wells Memorabilia including bibliographies, memorials and testimonials.* American Dental Association, 1948.

DOI: 10.1038/sj.bdj.2012.626