

Letters to the editor

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Dental radiography

Retracted Article: Quality assessment grading of radiographs

Sir, since 2001 and the publication of *Guidance notes for dental practitioners on the safe use of x-ray equipment* by the National Radiological Protection Board (NRPB), the recommended method for assessing quality of radiographic imaging has been via a three-grade NRPB system: Grade 1 – ‘Excellent’, Grade 2 – ‘Diagnostically Acceptable’ and Grade 3 – ‘Unacceptable’. This guidance was withdrawn in October 2020 and replaced with an updated second edition which is free to view and download from the College of General Dentistry (CGDent) website.¹

The chief aim of dental radiography is to produce an image of adequate quality for diagnostic purposes while minimising patient dose as far as reasonably possible.² Measuring the quality of radiographs compared with NRPB guidelines is a common clinical audit performed across primary and secondary care and is a useful tool to help improve personal practice or check if the required standard is being met.² Public Health England (PHE) previously recommend certain targets – eg >70% Grade 1 and <10% Grade 3.²

A move away from traditional film-based imaging towards digital imaging systems has removed the need for chemical processing, a major source of reduced image quality.² As such, CGDent and PHE now recommend a two-point grading scale, where images are recorded as either ‘diagnostically acceptable’ (‘A’) or ‘not acceptable’ (‘NA’) (see Table 1).²

An important point to note is the allowance for differentiation between digital and film imaging in the recommended targets when performing clinical audit. The new guidance details clearly defined elements of image quality analysis, quality assurance audits and image quality rating, of which all practitioners should be aware going forwards.

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Antimicrobial resistance

Phenoxymethylpenicillin

Sir, the recent *British Dental Journal* Upfront article¹ highlighted the importance of a whole team approach to combatting antimicrobial resistance, with a range of excellent resources to refer to.

With regards to the SDCEP publication² that was referred to, this was updated in June 2021 and stated:

In October 2020, the Scottish Antimicrobial Prescribing Group (SAPG) and its dental sub-group published a statement on the management of acute dento-alveolar infections. The SAPG statement reiterates that antibiotic therapy is only appropriate if immediate drainage is not achieved via local measures or where there is evidence of spreading infection or systemic involvement. When an antibiotic is unavoidable, Phenoxymethylpenicillin is now recommended as the preferred first line antibiotic. This is due to its narrower spectrum of activity, which is less likely to drive antimicrobial resistance.

In a recent audit across our four dental education facilities, we noted that dentists are often prescribing Amoxicillin as first line ahead of Phenoxymethylpenicillin for dentoalveolar infections. As stated in the SDCEP document, dental abscesses are usually infected with viridans *Streptococcus spp.* or gram-negative organisms, so utilising Phenoxymethylpenicillin as first line antibiotic reduces the risk of antibiotic resistance by narrowing the spectrum.

As we were unable to extract any local NHS dental prescribing data to see whether this pattern was specific to our clinics, we looked at antibiotic items dispensed by Cornish community pharmacies against dental prescriptions (data from NHS Cornwall and Isles of Scilly prescribing and medicines optimisation ICB). We found that the pattern of prescribing for dentistry across

Table 1 Subjective image quality ratings of dental radiographs and CBCT images²

Quality rating	Basis	Target	
		Digital imaging	Film imaging
Diagnostically acceptable (‘A’)	No errors or minimal errors in either patient preparation, exposure, positioning, image (receptor) processing or image reconstruction and of sufficient image quality to answer the clinical question	Not less than 95%	Not less than 90%
Diagnostically not acceptable (‘NA’)	Errors in either patient preparation, exposure, positioning, image (receptor) processing or image reconstruction which render the image diagnostically unacceptable	Not greater than 5%	Not greater than 10%

the county has some similarities on a far larger scale. Of the 6,542 dental prescriptions for penicillin-related antimicrobials over a recent six-month period, 6,038 were for Amoxicillin, 42 for Co-amoxiclav and 462 for Phenoxymethylpenicillin.

Though this is not prescribing but rather dispensing data and it does not specify the reason for the antibiotic, it does highlight that Phenoxymethylpenicillin is used far less frequently than Amoxicillin for dental prescriptions, so perhaps something for wider consideration by the profession.

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<https://doi.org/10.1038/s41415-023-5442-4>

Smoking cessation

Rethinking e-smoking

Sir, cigarette smokers may make quitting one of their New Year's resolutions, but it is reputedly one of the most difficult to maintain. Evidence demonstrates e-cigarettes as an effective aid to quitting cigarette smoking, with many patients starting to use them.¹ E-cigarettes, often known as 'vapes' or 'e-cigs', are a general name for portable devices that deliver vaporised nicotine to the user, currently used by 3.6 million adults in the UK.² The maximum allowable amount of nicotine included in a single device is 20 mg/ml, but some devices can contain up to 50 mg/ml.³ Contrary to conventional cigarettes, which offer up to 20 puffs with a natural endpoint, the amount of puffs provided by an

Box 1 Example questions focusing on e-cigarette use during social history assessment

E-cigarette use: Yes/No

How long have you been using e-cigarettes?
____ years

Length of time until new purchase/refill
____ day/month

Brand of e-cigarette used _____

Volume of capsule/device ____ (if known)

Concentration of nicotine ____ (if known)

e-cigarette depends on its type and brand. A vape device with 11 ml of liquid can produce 3,000 puffs.⁴

As clinicians, should we be worried about the frequency of e-cigarette use with our patients? With varying nicotine levels and dosages, how do we investigate the frequency of their use? Although having fewer harmful chemicals than normal cigarettes, the nicotine present still has adverse effects on wound healing and the periodontal supporting tissue through vasoconstrictive mechanisms.⁵ The question, 'How much do you smoke?' is difficult to apply to estimate the rate of e-cigarette use, given the variable nicotine content and quantity and the number of puffs each device offers.

Asking patients the brand of the device used will reveal the concentration of nicotine consumed. Probing the length of time until a refill or new device is purchased will provide clinicians with an understanding of the rate of e-cigarette use. Box 1 shows example questions that could be asked to e-cigarette users. Although seen as safer than conventional tobacco smoking, e-cigarettes still pose some risks to oral health and maybe we should rethink our questions to our patients on the subject.

R. Lee, London, UK

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<https://doi.org/10.1038/s41415-023-5443-3>

NHS dentistry

'Top-up' fees revisited

Sir, I write in reference to the letter published in the 12 August 2022 issue of the *BDJ* from colleagues Haigh and Vasant¹ related to Judgement of Mr Justice Ritchie in an appeal.² The judgement rightly brought about significant questions related to if it were

possible to charge additional 'top-up' fees to NHS banded treatment patient charges.

I have taken interest in this case from the time I was alerted in the summer to the judgement and have engaged with senior officials at NHS England and the GDC, on how they were to respond to the judgement. This is a complicated case due to the issues of fitness to practise being appealed and the regulations of patient charges pertinent to the NHS care. However, it appears now that the questioning of the judgement has progressed to an appeal lodged by the GDC.³

It is good to see that the GDC are not seeking to appeal the sanction on the colleague imposed. There is, however, wide belief that the judge may have erred in the judgement and that not all documents relevant to the patient charge regulations may have been reviewed. It will be interesting to see how the appeal progresses and I will continue to follow the outcome as I am sure many other colleagues will too.

E. Crouch, Chair of BDA PEC, London, UK

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<https://doi.org/10.1038/s41415-023-5444-2>

Genetics

Oligo-correction

Sir, I read with interest the recent editorial in the *BDJ* entitled '32:20'.¹ Apart from being an interesting read, I did notice that it was stated that supernumeraries and oligodontia were conditions which would arise if the numbers 32 and 20 were exceeded in their respective dentitions.¹ I would respectfully contend that oligodontia refers to six or more teeth which are congenitally missing.²

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The Editor-in-Chief stands corrected – with thanks.

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