Tooth whitening

An Update on Techniques and the New Legislation by Dr Trevor Bigg

The History

The bleaching of teeth has been practised from at least the 19th century utilizing many different chemicals, including chloride of lime, alumina chloride, oxalic acid and carbamide peroxide amongst others.\(^1\)

The birth of modern bleaching techniques started in the late 1960s with Kusmier devising a successful technique for home bleaching, which used 10% carbamide peroxide in a custom-made mouth tray. Initially, the carbamide peroxide was often placed in removable orthodontic retainers to reduce gingival inflammation following the removal of fixed orthodontic appliances. It quickly became apparent that a side effect of the treatment was that it whitened the teeth.

Although Dr Kusmier presented several table-clinics at the meetings of the Arkansas State Dental and the Southwestern Orthodontic Societies, it wasn’t until the publication of Heywood and Heymann’s western Orthodontic Societies, State Dental and the South -

Within a few years many products had appeared on the market, using carbamide or hydrogen peroxide and different modes of delivery that can be sub-divided into:

1. In-Office procedures
2. Nightguard vital bleaching using trays: Home Bleaching
3. ‘Over-the-counter’ (OTC) products

While OTC products proved popular throughout most of the world, they were never used greatly in the European Union (EU), as their purchase was easier to monitor and subsequent prosecution was a real possibility.

In-Office procedures were extensively advertised and promoted in parallel as they continued in the tradition of dentistry being led by the dentist treating the patient in his/her surgery or office. In many cases, In-Office bleaching increased patient compliance, which could be poor if Home Bleaching alone was used. Many utilised ‘la- sers’ both to mask the apparent and suggested modern, ‘state-of-the-art’ treatment modalities that appealed to the patient.

But wasn’t bleaching illegal?

Until recently in the EU it was illegal to use hydrogen peroxide at a greater concentration than 0.1 per cent. However, the Dental Defence Societies were prepared to defend dentists who used bleaching tech- niques containing greater than 0.1 per cent hydrogen peroxide as their members were using a procedure that was safe, estab- lished and much less invasive than the alternatives. The General Dental Council (GDC) also recognised that the situation at that time was unsatisfactory for patients and dentists. Provided the dentists acted in the best interest of their patients and ob- tained fully informed consent, and that the dentist’s defence organisation gave indemnity for bleaching, the GDC stated that they would not act against a dentist unless they were prosecuted by Inspectors from the Department of Trade and Indust.

New regulations from 1st No- vember 2012

This anomalous situation continued for many years in the EU until the publication of an amendment to the EU Directive 76/768/EEC concerning cosmetic products. The amend- ing Council Directive 2011/84/ EU was published in September 2011 requiring the UK Govern- ment to amend the law.

The Cosmetic Products (Safety) (Amendment) Regula- tions 2012 (the Regulations) amended all previous regula- tions relating to tooth whitening and subsequently, the practice of bleaching in this country altered overnight.

The new Regulations allow the use of hydrogen peroxide preparations that release hydrogen peroxide, including carbamide peroxide and zinc peroxide to be used for tooth whitening.

1. The risks and benefits of bleaching and more interven- tive alternatives
2. The legal status of tooth whitening for under 18s
3. Whether treatment could be delayed until after the age of 18

Document the consultation carefully in the patient’s notes and be aware that the dentist may be vulnerable to prosecu- tion!

How does this change the way we bleach our patients?

During October 2012 many manufacturers, such as Philips and Dentsply contacted their clients to say that their high concentration whitening products, like Zoom and In Office Il- lumine, were being withdrawn from the market.

They were aware that, as up to 6 per cent hydrogen peroxide is now a legal, the Defence Societies would no longer defend their members who used higher concentrations.

Conversations with advis- ers from Dental Protection have confirmed that the Defence Societies would have difficulty justifying the use of greater than 6 per cent concentrations of hydrogen peroxide and its equivalent of carbamide peroxide when there is a viable le- gal alternative. Particularly, in these days of Evidence Based Dentistry, when research has shown that higher bleach con- centrations did not quench the bleaching process probably and only increase tooth sensitivity and gum irritation.\(^2\)

The good news and the bad news!

So the bad news is that those dentists who favoured In-Office procedures with 25 to 50 per cent hydrogen peroxide would be wise to continue, even though their patients requested the treatment.

However, the good news is that we can now offer many ‘over-the-counter’ bleaching products that we dare not use before. The use of bleaching systems utilizing whitening strips and pre-formed trays will help make the bleaching process cheaper and more accessible to our pa- tients.

Conclusion

The recent changes in whitening legislation should be wel- comed by the dental profession. By amending the EU Directive, dentists and their patients alike will benefit as:

1. The threat of prosecution has now been lifted and Dentists will be free to advertise, provided they follow GDC guidelines
2. Dentists will be encour- aged to use lower, safer and ef- fective concentrations of hydro- gen peroxide
3. OTC preparations can now be sold by practitioners, providing a successful and cheaper whitening process

References:
4. Pretty IA, Edgar WML, Higham, SM Br Dent 13 May; 196: 183-190

Dr Bigg has been working in private practice in Wooton Underwood for nearly 40 years and treated up to four generations of some families. He takes referrals for cosmetic dentistry, the non-invasive restoration of the worn dentition and treatment of TMD-Mandibular Dysfunctions. Dr Bigg has the Membership in General Dental Surgery at the Royal College of Surgeons, London and Fellowships from the College of Surgeons in Edin- burgh and London. He is also President of the British Society for General Dental Surgery. He lectures at home and abroad on crowns and bridge updates, posterior and anterior tooth whitening, and Minimal Intervention Dentistry. He also runs hands-on courses on Contemporary Esthetic Dentistry and Posterior Composite and presents Webinars on Bleaching and Posterior Composite Restorations.

About the author
All you need to know about tooth whitening

Nick Torlot, DDU dento-legal adviser, looks at some questions from dental practitioners

I’ve heard the law on tooth whitening has changed, what is the latest legal position?

Under new regulations which came into effect on 31 October 2012, dental professionals can legally treat patients over 18 years of age with tooth whitening treatments which contain or release up to six per cent hydrogen peroxide. This is provided that:

• The treatments are sold to dental practitioners
• For each cycle, the treatment is first administered by a dental practitioner or under their direct supervision. It can then be completed by the patient at home.

There are times when I think a patient would benefit from a product containing 10 per cent hydrogen peroxide. Is it legal to provide the patient with a bleaching kit containing a higher level of hydrogen peroxide than six per cent to use at home?

No, it is illegal to use tooth bleaching compounds containing or releasing more than six per cent hydrogen peroxide. The new regulations make no distinction between in-surgery bleaching and at-home bleaching products provided by dental professionals, in terms of the permitted concentration of hydrogen peroxide. This means patients can only be provided with bleaching kits containing up to six per cent hydrogen peroxide after they have been examined by a dentist and have received their first cycle of treatment in the surgery.

The new regulations are informed by scientific advice that compounds containing or releasing up to six per cent hydrogen peroxide are safe.

ternally or internally eg on a root canal treated tooth.

If you were to use or supply a bleaching compound containing 10 per cent hydrogen peroxide, you could face a criminal prosecution by Trading Standards and a GDC investigation. In the worst case scenario, you may be imprisoned and/or fined up to £5,000 under the Consumer Protection Act 1987.

I am a dental hygienist. Can I offer tooth whitening treatments to my patients?

Yes, provided a dentist has prescribed the treatment and is present on the premises during the first treatment cycle. As with any treatment you must be trained and competent to carry out the treatment, so the level of safety is equivalent to a dentist carrying out the treatment.

The GDC’s guidance, Principal Dentists and the South East Regional Dental Health Authority, 2013

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ciples of Dental Team Working (2006) requires a third person, trained to deal with medical emergencies, to be routinely present during planned treatment by a hygienist. While the GDC does not specify that this has to be a dentist, the regulations for tooth whitening procedures introduce a legal duty of direct personal supervision by a dentist, which has been interpreted to mean there must be a dentist on the premises during the first treatment cycle.

Do I need to warn patients about the risk of relapse? Yes, in seeking a patient’s consent you need to warn them about all the common risks and complications of the procedure, including relapse and sensitivity, along with the benefits. The GDC also advises that before starting any treatment, that you must have the patient’s medical history. As part of effective patient care and to ensure you can provide evidence that you have complied with both the law and the GDC’s ethical guidance, you should make a complete and clear record, at the time of the consultation, of the following:

- the treatment plan,
- the consent discussion
- any instructions given to the patient (such as how to continue the treatment at home)
- any adverse outcome.

A patient is unhappy with the shade of her teeth after whitening even though I believe we have achieved a reasonable result. She smokes, and drinks black coffee and red wine, and seems unwilling to change her lifestyle, despite my advice. She wants further whitening treatment, which I don’t believe is in her best interests. Can I refuse to provide it?

It is important that before any procedure is carried out, you discuss the treatment options with the patient, as well as the potential risks, side effects and complications that could occur. The patient should be given the opportunity to ask questions and you should make sure that you have a realistic idea of the likely results, given their oral health and lifestyle. It may be wise to allow the patient a ‘cooling off period’ so they can go away and consider their options more fully.

Any dental treatment that you carry out should be in the best interests of the patient and if you do not feel that is the case, then you should explain this to the patient and not carry it out. You may decide to refer the patient for a second opinion or to a colleague, such as a dental hygienist, for alternative treatment.

Whatever your decision, it is important that accurate and detailed notes are kept of any consultations. That way, if a complaint is made, it will be easy to refer back to the notes and recall the course of events leading up to the complaint.

Will you indemnify me for tooth bleaching treatments? DDU members can seek our assistance with complaints, claims, disciplinary actions or criminal prosecutions arising from tooth bleaching treatments. We encourage our members to work within the new regulations and to use only compounds that contain or release up to 6 per cent hydrogen peroxide. In the event of a criminal conviction, the DDU would not pay any fine.

Further information on the legal position on tooth bleaching is available from the DDU at www.the-ddu.com.


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About the author

Nick qualified from University College Hospital in 1981. After starting his career in hospital dentistry, he has spent the past 15 years as assistant and then clinical director of salaried dental services in Hampshire, while continuing to practise dentistry. He has also been involved in dental education as an adviser and vocational trainer with the London Deanery and as a trainer with the Winchester scheme. He joined the DDU in 2009.