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Editorial

The European Association of Dental Public Health conference resolution on the control of e-cigarettes; Or "*You have to be a bit crazy to carry on smoking conventional cigarettes when there are e-cigarettes available*"

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On the 12th June 2014, at their 19th Scientific Congress, the European Association of Dental Public Health (EADPH), at the University of Gothenburg, Sweden, drafted a conference resolution calling for control of the availability of e-cigarettes (and other unlicensed nicotine-containing products). This resolution was subsequently ratified by the EADPH Executive Council and is posted on the EADPH website (www.eadph.org).

The conference resolution stated;

> *"Delegates at the European Association of Dental Public Health 19th annual scientific congress note the uncertainties surrounding electronic cigarettes in their manufacture, safety, marketing, advertising, regulation and long term general health and oral health outcomes. This conference calls on national governments to regulate electronic cigarettes and other unlicensed nicotine-containing products in the same way as existing tobacco products. This is to support rather than undermine current tobacco restrictions to maintain and improve the oral health of their national populations, especially younger citizens."*

In the United Kingdom, over two million people are users (ASH, 2014). E-cigarettes are becoming popular through an enormous and expanding range of products with diverse contents and actions – at least 466 e-cigarette brands and 7764 unique flavours (Zhu *et al*., 2014). This diversity of products has engendered the term electronic nicotine delivery systems (ENDS) to encompass e-cigarettes, vapourisers, shisha pens, hookah pens, etc. They are designed to match the experience of smoking and usually contain nicotine albeit nicotine is comparatively less harmful than the other constituents in tobacco. *"tobacco users smoke primarily for the nicotine but die primarily from the tar"* (Russell, 1976).

ENDS also contain a variety of other ingredients, most commonly propylene glycol, glycerine and flavourings. Existing evidence suggests that ENDS are likely to be less harmful than tobacco smoking, containing considerably fewer toxins and in lower concentrations, although other chemical compounds and other characteristics are yet to be established. Nicotine is addictive, and although peripheral to the central argument, liquid nicotine poisoning can occur, and there has been increased reporting of poison centre incidents, half of such emergency calls involving young children under 5 years of age (CDC, 2014). Incorrect charging of batteries has also led to fires or even small explosions.

Could ENDS render normal cigarettes obsolete?

Some countries, such as Singapore and Brazil, have banned these products entirely (Cressey, 2014). There is scant evidence about the quality, safety or effectiveness of ENDS use, and even less on long-term effects. Despite varying claims on how they are used (e.g. often to quit or to reduce cigarette consumption), evidence for effectiveness is mixed, with the most promising results suggesting that they are on a par with the nicotine replacement therapy (NRT) patch.

The colourful sub-title quotes a BBC Radio 4 Today programme in early September. In a feature that suggested warnings about e-cigarettes were alarmist, Professor Robert West from University College London stated that, for every million smokers who switch to e-cigarettes, more than 6,000 lives a year could be saved, thus *"You have to be a bit crazy to carry on smoking conventional cigarettes when there are e-cigarettes available."*

ENDS, if used by established smokers or recent quitters and if they are effective in keeping them off tobacco, are likely to have a positive effect on public health. ENDS may reduce harm caused by tobacco through replacement with a less harmful alternative. There are other potential modes of use of ENDS including those by long-term ex-smokers, those wishing to smoke or inhale nicotine vapour (vaping) continuously to circumvent smoke-free legislation and those with continuous experimental use eventually culminating in regular use..

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Little is known about ENDS use together with cigarettes. No level of continued tobacco use is safe, and there are no clear benefits from reduced tobacco consumption. Although most ENDS users have been current or former smokers, their potential use by light or long-term ex-smokers (and others) is unclear. In the case of other potential uses and users, and dual use, the amount of nicotine (and other constituents) ultimately ingested is not clear. Their role in reducing but not completely replacing consumption of cigarettes may also be harmful by delaying quitting cigarettes altogether.

The EADPH oral cancer prevention special interest group, who initiated the conference resolution, believe it is essential that nothing undermines current action on the prevention and cessation of tobacco use. Tobacco use is not only harmful to oral health but also to general health and EADPH has adopted the common risk factor approach to chronic smoking diseases. Parties on both sides of the debate had been petitioning the WHO before it published its stance in August 2014. Those favouring ENDS argue that tough regulation is counterproductive and would serve to protect the conventional cigarette market. Those favouring a more cautious approach argue that the evidence is not sufficiently robust to predict whether the effect on public health will be positive. Chapman (2014) provides a useful summary of the key issues on each side of the debate. Either way, future regulation, marketing and public policy need to reflect the balance between maximising benefit and minimising harm.

We do know that no level of cigarette usage or tobacco products is safe, and complete cessation through abrupt quitting using a combination of behavioural support and licensed pharmacotherapy will give the best health outcomes. Health professionals and dentists can only prescribe licensed medicines based on evidence of quality, safety and effectiveness. ENDS and NRT differ in several ways. NRT contains nicotine per se, has undergone rigorous tests and clinical trials, is designed, and manufactured as medicinal products to exacting pharmaceutical standards, specifically to address nicotine addiction, and has longstanding safety and effectiveness profiles. ENDS and their contents vary enormously and may be manufactured from non-pharmaceutical grade ingredients.

Given the tobacco industry's practices to recruit and maintain their customers (i.e. tobacco smokers), and undermine tobacco control efforts, there are clearly risks of engaging with the industry and their control of these diversifying products. Such engagement is also at odds with the WHO Framework Convention on Tobacco Control's Article 5.3 which requires signatories to protect tobacco control policies from tobacco industry influence. The tobacco industry is increasingly investing in the ENDS market including successfully obtaining a licence for a cigarette shaped nicotine inhaler licensed by the United Kingdom Medicines and Healthcare Products Regulatory Agency (MHRA).

The EADPH resolution on e-cigarettes has been based on the best available evidence and adopts an holistic approach to health. We recognise that further research and evidence is required; however, we also support the regulation of e-cigarettes being introduced under the EU Tobacco Products Directive to cover product marketing, quality and claims of medicinal use, particularly in light of the potential attractiveness to young people or former smokers resulting from advertising claims, heavy marketing and product appeal, and thus potentially serving as a gateway device into or relapse into cigarettes. In the case of tobacco and replacement products, every approach must enable the achievement of reduced tobacco use and national targets of 'tobacco-free' within a generation. There is an argument for restrictions on the use of ENDS in public places being the same as smoking tobacco, recognising that such a measure supports rather than undermines current smoking restrictions – and from the perspective of role-modelling to children in which smoking behaviour may be perceived as socially acceptable and the norm once again. Restrictions on availability, use and marketing of ENDS should also be consistent with tobacco products, particularly to young people.

What should dentists advise about ENDS?

Patients using tobacco or ENDS should be advised of the benefits of quitting tobacco, advised of the availability of licensed medicines, and signposted/referred to smoking cessation support. ENDS users should be encouraged to switch to licensed products unless this puts them at risk of relapsing to tobacco. For those unable or unwilling to quit completely at present or unable to stay quit, other harm reduction options are available such as 'cut down to quit' or NRT for temporary or long-term abstinence.

EADPH will continue to monitor, review and update this position statement as and when necessary as dictated by emerging research in the area.

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