



# Faculty of Public Health

Of the Royal Colleges of Physicians of the United Kingdom

Working to improve the public's health

## UK Faculty of Public Health Policy Statement on Electronic Cigarettes

### About the UK Faculty of Public Health

The UK Faculty of Public Health is the standard setting body for specialists in public health in the United Kingdom. The UK Faculty of Public Health is a joint faculty of the three Royal Colleges of Physicians of the United Kingdom (London, Edinburgh and Glasgow) and also a member of the World Federation of Public Health Associations. The UK Faculty of Public Health is an independently constituted body with its own membership and governance structure.

The UK Faculty of Public Health is the professional home for more than 3,300 professionals working in public health. Our members come from a diverse range of professional backgrounds (including clinical, academic, policy) and are employed in a variety of settings, usually working at a strategic or specialist level. The UK Faculty of Public Health is a strategic organisation and, as such, works collaboratively, drawing on the specialist skills, knowledge and experience of our members as well as building relationships with a wide range of external organisations.

### Introduction

The UK Faculty of Public Health recognises that electronic cigarettes are likely to be significantly less hazardous than smoking and therefore, for smokers who do not wish to or cannot otherwise quit, health benefits may be realised by switching from smoking cigarettes to using electronic cigarettes. Furthermore, in view of the higher levels of addiction among the most disadvantaged smokers, access to pure nicotine products as an alternative to smoking may, in the long-term, be an important means of tackling health inequalities and helping communities manage very high levels of addiction and reducing risk. To that end, the UK Faculty of Public Health recognises the importance of encouraging smokers who would not otherwise quit to switch to alternative nicotine products.

However, the UK Faculty of Public Health has major concerns about the population impacts of electronic cigarettes. It strongly believes that the advertising and promotion of electronic cigarettes to non-smokers, including children, can and should be prevented. In light of overwhelming evidence that voluntary codes on marketing of tobacco and alcohol products have failed to protect young people from such advertising we therefore believe an outright ban on marketing of electronic cigarettes is preferable.

We are alarmed by the rapid growth in advertising for electronic cigarettes including that from multinational tobacco companies, and the potential for this advertising to re-normalise and re-glamourise smoking. We also recognise the “fundamental and irreconcilable conflict of interest between the tobacco industry’s interests and public health policy interests”<sup>1</sup> and the extent to which the tobacco industry can use electronic cigarettes and harm reduction to undermine progress in tobacco control.

We share the concerns of Dr Haik Nikogosian of the WHO Framework Convention on Tobacco Control Secretariat, who cautions that electronic cigarettes “could result in a new wave of the tobacco

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<sup>1</sup> World Health Organization, *Guidelines for implementation of Article 5.3 of the WHO Framework Convention on Tobacco Control* <[http://www.who.int/fctc/guidelines/article\\_5\\_3.pdf](http://www.who.int/fctc/guidelines/article_5_3.pdf)>

epidemic”<sup>2</sup> or a new epidemic of nicotine (an addictive product) among population groups who would not otherwise have used tobacco products.

The UK Faculty of Public Health is one of 129 signatories to a [letter to Dr Margaret Chan, Director General of the World Health Organization](#) outlining our concerns.

The UK Faculty of Public Health also [responded to the recent Committee of Advertising Practice and Broadcast Committee of Advertising Practice consultation on the marketing of electronic cigarettes](#).

**The Faculty of Public Health has four major concerns, which together make a powerful case for the regulation of electronic cigarettes as tobacco products: These are that:**

- The tobacco industry is using electronic cigarettes to promote traditional cigarettes and to gain access to policy makers
- Electronic cigarettes may be a ‘gateway’ to smoking among young people and current non-smokers
- The efficacy of electronic cigarettes as smoking cessation aids remains uncertain
- The safety of electronic cigarettes has not been scientifically demonstrated

The evidence underpinning these concerns is summarised below.

### **1. The tobacco industry is using electronic cigarettes to promote traditional cigarettes and gain access to policy makers**

The UK Faculty of Public Health is deeply concerned by the aggressive marketing and promotion of electronic cigarettes, in particular, to young people. We note with grave concern the recent report by a group of US Senators that concludes that, in the USA, manufacturers are:

- promoting products through sponsorship of youth oriented sports events
- using flavours designed to appeal to youth, and;
- using celebrity spokespersons that appeal to youth.<sup>3</sup>

The UK Faculty of Public Health also draws attention to a separate recent study published in the American Journal of Preventative Medicine, which found that **electronic cigarettes are being aggressively marketed with health claims and smoking cessation messages that are not supported by the available evidence**. The study concludes that “implied and overt health claims, the presence of doctors on websites, celebrity endorsements, and the use of characterizing flavours should be prohibited.”<sup>4</sup> However, we also recognise that electronic cigarettes are likely to be less harmful, and it is important to ensure, under strict marketing and advertising control, that the public is aware of this.

The UK Faculty of Public Health draws attention to a website, compiled by a US Senate Committee, that compares imagery employed by the electronic cigarette manufacturers now and tobacco

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<sup>2</sup> Financial Times, *WHO plans to regulate e-cigarettes in same way as normal tobacco*, < <http://www.ft.com/cms/s/0/d822d056-c1c3-11e3-83af-00144feabdc0.html#axzz3504Lleil>>

<sup>3</sup> Senator Richard J Durbin et al. *Gateway to Addiction: A Survey of Popular Electronic Manufacturers and Targeted Marketing to Youth*, April 2014. <http://democrats.energycommerce.house.gov/sites/default/files/documents/Report-E-Cigarettes-Youth-Marketing-Gateway-To-Addiction-2014-4-14.pdf>

<sup>4</sup> American Journal of Preventative Medicine 2014 *Smoking Revolution”: A Content Analysis of Electronic Cigarette Retail Websites* [http://www.ajpmonline.org/webfiles/images/journals/amepre/AMEPRE\\_3992-with\\_embargo\\_stamp.pdf](http://www.ajpmonline.org/webfiles/images/journals/amepre/AMEPRE_3992-with_embargo_stamp.pdf)

companies in the past, and which shows that many images are virtually identical, except that the clothing of the models and accessories used are more modern.<sup>5</sup> The UK Faculty of Public Health contends that many of these images can be considered to be seeking to re-normalise and re-glamourise the imagery of smoking, especially as many promote products that are almost indistinguishable from real cigarettes.

### **Similar concerns are raised by a recent review of electronic cigarette marketing in the UK.<sup>6 7</sup>**

The UK Faculty of Public Health is confident that the tobacco industry is explicitly using its ability to advertise electronic cigarettes as a covert means of promoting its main product, the traditional cigarette.<sup>8</sup> This is particularly pertinent at a time when the last route available for the tobacco industry to market its products, the cigarette packet, looks likely to be closed.

The UK Faculty of Public Health is also concerned, given the tobacco industry's longstanding efforts to undermine public health policies, by recent evidence that the tobacco industry intends to use reduced risk products as a means of presenting itself as a partner in policy making<sup>9 10</sup> and thus undermine Article 5.3 of the Framework Convention on Tobacco Control.

## **2. Electronic cigarettes may be a 'gateway' to smoking among young people and non-smokers**

Although in all the studies, including those in young people, the majority of electronic cigarette users are current or former smokers, no longitudinal studies have yet examined whether electronic cigarettes serve as 'gateways' to future tobacco use.<sup>11</sup> Until then, the precautionary principle suggests that it would be rash to rule out this possibility particularly given the advertising detailed above.

**In the US, which is further ahead on the curve of electronic cigarette use, the Centers for Disease Control and Prevention found that from 2011 to 2012 electronic cigarette use increased significantly among middle school and high school students<sup>12</sup> (from 0.6% to 1.1%, and from 1.5% to 2.8% respectively).**

We recognise that while high school electronic cigarette use went up, high school smoking continued to decline. While this does not imply that the former led to the latter, it does provide some reassurance because if electronic cigarettes were acting as a gateway already we might expect the pre-existing declines in youth smoking to stabilise or reverse and they have not.

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<sup>5</sup> Democratic Committee on Energy and Commerce, Electronic Cigarette Flashbacks, <http://democrats.energycommerce.house.gov/index.php?q=page/e-cigarette-flashbacks>

<sup>6</sup> 1. M. de Antrade, G. Hastings, K. Angus, Promotion of electronic cigarettes: tobacco marketing reinvented? BMJ, 2013;347:doi:10.1136/bmj.f7473 2. M. de Antrade, G. Hastings, K. Angus, D. Dixon, R. Purves, The marketing of electronic cigarettes in the UK. A report commissioned by Cancer Research UK, November 2013

<sup>7</sup> M. de Antrade, G. Hastings, K. Angus, D. Dixon, R. Purves, The marketing of electronic cigarettes in the UK. A report commissioned by Cancer Research UK, November 2013

<sup>8</sup> Democratic Committee on Energy and Commerce, Electronic Cigarette Flashbacks, <http://democrats.energycommerce.house.gov/index.php?q=page/e-cigarette-flashbacks>

<sup>9</sup> Peeters S and Gilmore AB, *Understanding the emergence of the tobacco industry's use of the term tobacco harm reduction in order to inform public health policy* Tobacco Control <<http://www.ncbi.nlm.nih.gov/pubmed/24457543>>

<sup>10</sup> Peeters S and Gilmore AB, *Transnational tobacco company interests in smokeless tobacco in Europe: analysis of internal industry documents and contemporary industry materials* <<http://www.ncbi.nlm.nih.gov/pubmed/24058299>>

<sup>11</sup> Pepper JK, Brewer NT. Electronic nicotine delivery system (electronic cigarette) awareness, use, reactions and beliefs: a systematic review. Tobacco Control. Published Online First 20 November 2013 doi:10.1136/tobaccocontrol-2013-051122

<sup>12</sup> Centres for Disease Control and Prevention, *Youth Risk Behavior Surveillance — United States, 2013*, <http://www.cdc.gov/mmwr/pdf/ss/ss6304.pdf>

The latest data on youth use of electronic cigarettes in the UK come from a March 2013 survey of children 11-18 years old carried out for Action on Smoking and Health. This showed that of 1428 children who had heard of electronic cigarettes, 1% of those who had never smoked had tried them but none reported continued use. It is possible to infer from this that there is no current compelling evidence to suggest that young people are using electronic cigarettes as a 'gateway' to smoking.

However, elsewhere in Europe where data are available, electronic cigarette use among young non-smokers is higher, reported as ranging from 3.2% to 4.7%.<sup>13</sup> The situation in the UK could also change rapidly, particularly given the high levels of promotion, and how advertising and promotion of electronic cigarettes seeks to glamorise the use of these products and promote their use to young people. A new survey of young people's use of electronic cigarettes should be urgently undertaken, and timely, ongoing monitoring of use among children is essential. While recognising the studies above, we maintain a precautionary principle. It is important that we continue to monitor this evolving situation.

### 3. The efficacy of electronic cigarettes as smoking cessation aids remains uncertain

Although electronic cigarette users report that electronic cigarettes have helped them quit smoking, these benefits are not yet seen in population based studies, whether cross-sectional or longitudinal<sup>14</sup> while randomised controlled trials find that electronic cigarettes are no more effective than existing medicinal means of nicotine delivery which are known to be safe.<sup>15</sup>

The most promising evidence comes from the cross-sectional Toolkit study<sup>16</sup> which suggests that among smokers in England making quit attempts, those who used electronic cigarettes in their last quit attempt were more likely to quit than those using over-the-counter nicotine replacement.

We also note that the published study<sup>17</sup> made no comparison with those using full behavioural support via the NHS stop smoking services to quit which, as the authors point out is the most effective means of stopping. Using the stop smoking service almost triples a smoker's odds of successfully quitting compared with going it alone or relying on over-the-counter products.<sup>18</sup> A further danger, therefore, is that electronic cigarettes drive smokers away from the stop smoking service.

Further, the study tells us nothing about smokers who are not attempting to quit but use electronic cigarettes – so called 'dual use'. The American evidence for dual use, which again is limited by its largely cross-sectional nature, suggests it may prolong tobacco usage as smokers may not attempt to quit.<sup>19</sup> This may be because they are able to use electronic cigarettes in public places where smoking is banned and therefore they are not getting a harm reduction effect at all.<sup>20</sup>

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<sup>13</sup> Durmowicz EL. The impact of electronic cigarettes on the paediatric population. *Tobacco Control*. 2014;23:ii41-ii6; Dautzenberg B, Birkui P, Noël M, et al. E-cigarette: a new tobacco product for schoolchildren in Paris. *Open J Respir Dis* 2013;3:21-4; Goniewicz ML, Zielinska-Danch W. Electronic cigarette use among teenagers and young adults in Poland. *Pediatrics*. 2012;130:e879-85; Kinnunen JM, Ollila H, El-Amin SE-T, et al. Awareness and determinants of electronic cigarette use among Finnish adolescents in 2013: a population-based study. *Tobacco Control*. Published Online First 14 May 2014 doi:10.1136/tobaccocontrol-2013-051512; Electronic Cigarettes - An Overview. German Cancer Research Center. 2013. <http://www.dkfz.de/en/presse/download/RS-Vol19-E-Cigarettes-EN.pdf> (accessed 19 May 2014)

<sup>14</sup> NB: There are some reasons these studies find no impact: these were underpowered and look at ever use rather than current use

<sup>15</sup> Bullen C, Howe C, Laugesen M, McRobbie H, Parag V, Williman J, Walker N. Electronic cigarettes for smoking cessation: a randomised controlled trial. *Lancet*. 2013; 382: 1629-37.

<sup>16</sup> Smoking in England, <http://www.smokinginengland.info> 2014

<sup>17</sup> Smoking in England, <http://www.smokinginengland.info> 2014

<sup>18</sup> *Addiction*, *E-cigarette use for quitting smoking is associated with improved success rates*, <http://www.addictionjournal.org/press-releases/e-cigarette-use-for-quitting-smoking-is-associated-with-improved-success-rates->

<sup>19</sup> Glantz S. *E-cigs can increase odds for smokers using them to quit while still having overall negative effect on population quitting* <tobacco.ucsf.edu/e-cigs-can-increase-odds-smokers-using-them-quit-while-still-having-overall-negative-effect-populati> May 2014

<sup>20</sup> Grana R, Benowitz N. Glantz S, Contemporary Reviews in Cardiovascular Medicine, E-Cigarettes: A Scientific Review, American Heart Association, 2014

Finally, FPH notes that the Toolkit study is only 16+ and the age specific sample sizes are almost certainly too small to detect all but a large increase in youth smoking at a significant level. The last Action on Smoking and Health data on youth electronic cigarette use was from 2013. FPH looks forward to updated data. FPH notes that by the time surveys like GLS are published it may be too late again and young children may not be protected.

Currently, most electronic cigarette users are 'dual users' who continue to smoke cigarettes.<sup>21</sup> While the recent NICE review on harm reduction noted that those using nicotine alongside cigarettes were more likely to go onto quit<sup>22</sup> and that it is possible this may also occur with electronic cigarettes, we are cognisant that if those using electronic cigarettes alongside cigarettes do not go on to quit, little if any harm reduction will result even if cigarette consumption falls – and certainly far less than if those smokers were to quit smoking entirely. This is because reducing smoking (instead of quitting) is unlikely to reduce the risk of cardiovascular disease which occurs at very low levels of cigarette consumption.

The UK Faculty of Public Health is therefore very concerned about the potential for misleading messages that may lead those considering quitting to instead simply reducing consumption of traditional cigarettes while simultaneously using electronic cigarettes, as is happening with adolescents in Korea.<sup>23</sup>

#### **4. The safety of electronic cigarettes has not been scientifically demonstrated**

The UK Faculty of Public Health is concerned that the safety of electronic cigarettes has not been scientifically demonstrated and that they present potential and currently undetermined risks for health at individual and population level especially if use occurs among current non-smokers.

There appears to be consensus that electronic cigarettes are of considerably lower toxicity relative to cigarette smoking, and therefore current smokers who cannot or do not wish to quit would be better off switching entirely to electronic cigarettes.

As yet, however, these products cannot be considered safe. The UK Faculty of Public Health draws attention to concerns raised by the World Health Organization (WHO) that safety of electronic cigarettes has not been scientifically demonstrated and that the potential risks they pose for the health of users remain undetermined. We note the WHO's finding, coupled with evidence from the tobacco industry's own documents and recent research, that scientific testing indicates that the products vary widely in the amount of nicotine and other, potentially hazardous, chemicals they deliver, with evidence demonstrating that, in some products, levels of carcinogens can reach those present in cigarette smoke.<sup>24</sup> The chemicals used in electronic cigarettes have not been fully disclosed by industry, and there are no adequate data on their emissions or long term health impacts.<sup>25</sup> We are concerned, therefore, by potential use and negative health impacts among non-smokers.

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<sup>21</sup> Action on Smoking and Health, *Use of electronic cigarettes in Great Britain* [http://www.ash.org.uk/files/documents/ASH\\_891.pdf](http://www.ash.org.uk/files/documents/ASH_891.pdf), April 2014

<sup>22</sup> National Institute of Health and Care Excellence, *Tobacco: harm-reduction approaches to smoking: Public Health Guidance 45*, July 2013

<sup>23</sup> Lee S, Grana RA, Glantz SA. Electronic Cigarette Use Among Korean Adolescents: A Cross-Sectional Study of Market Penetration, Dual Use, and Relationship to Quit Attempts and Former Smoking. *J Adolesc Health*. 2013; S1054-139X(13)00748-9.

<sup>24</sup> Kosmider L, Sobczak A, Fik M, et al. Carbonyl Compounds in Electronic Cigarette Vapors—Effects of Nicotine Solvent and Battery Output Voltage. *Nicotine & Tobacco Research*. Published Online First 15 May 2014 doi: 10.1093/ntr/ntu078

<sup>25</sup> World Health Organization. July 2013. *Questions and answers on electronic cigarettes (e-cigarettes) or electronic nicotine delivery systems (ENDS)* <<http://www.ctri.wisc.edu/Smokers/ecigs/who.pdf>>

Similarly, although electronic cigarettes do not emit side-stream smoke, bystanders are exposed to the aerosol exhaled by vapers and this may cause harm to health. As yet there is little research in this area. We note, however, that toxins, including known human carcinogens, have been measured in e-cigarette aerosol albeit at much lower levels than in conventional cigarette side-stream smoke.<sup>26</sup>

These products, when containing nicotine – can also pose a risk of nicotine poisoning, a risk that is increased by the way that many are packaged and flavoured in ways that are attractive to children. If a child of 30 kilos of weight swallows the contents of a nicotine cartridge of 24 mg this could cause acute nicotine poisoning with potentially fatal consequences.

Nicotine, whether inhaled, ingested or in direct contact with the skin, can be particularly hazardous to the health and safety of certain populations – such as children, young people, pregnant women, breastfeeding mothers, people with heart conditions and older people.<sup>27</sup> The UK Faculty of Public Health is also deeply concerned that nicotine exposure has adverse effects on fetal growth and development, including fetal brain development, even though these risks are much less than the considerable risks of continuing to smoke during pregnancy.

When electronic cigarettes are used as cessation aids, they are intended to deliver nicotine directly to the lungs. The biological mechanism by which smoking cessation might be achieved by delivery of nicotine to the lungs and its effects are unknown. There is no evidence that delivery to the lung is safe. Therefore, independently of the effects of nicotine, it is of global importance to study lung delivery scientifically. The dose of delivered nicotine is also unknown. It is suspected that the delivered dose varies notably by product, given that they contain nicotine in various quantities and concentrations.<sup>28</sup>

It is also of great significance that nicotine is a highly addictive substance and the UK Faculty of Public Health is concerned at the prospect of non-smokers, in particular young people, developing addiction to electronic cigarettes, and of a new industry being launched, seeking to maximise profits from an addictive product

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<sup>26</sup> Grana R, Benowitz N, Glantz S, Contemporary Reviews in Cardiovascular Medicine, E-Cigarettes: A Scientific Review, American Heart Association, 2014

<sup>27</sup> World Health Organization. July 2013. *Questions and answers on electronic cigarettes (e-cigarettes) or electronic nicotine delivery systems (ENDS)* <<http://www.ctri.wisc.edu/Smokers/ecigs/who.pdf>>

<sup>28</sup> World Health Organization. July 2013. *Questions and answers on electronic cigarettes (e-cigarettes) or electronic nicotine delivery systems (ENDS)* <<http://www.ctri.wisc.edu/Smokers/ecigs/who.pdf>>

## Recommendations

The UK Faculty of Public Health strongly believes that the ideal regulatory framework should prevent initiation among youth and other non-tobacco users and protect bystanders.

It should also maximise product safety and enable current smokers who would not or cannot otherwise quit to move to electronic cigarettes.

The UK Faculty of Public Health recognises that it is difficult for a single regulatory framework to achieve all these aims. We note that regulations already agreed under the 2014 EU Tobacco Products Directive (TPD) will come into force in 2016. These stipulate that electronic cigarettes can either be regulated as medicines (and then subject to the same marketing controls as medicines) or as consumer products (and then subject to the same marketing controls as tobacco).

The UK Faculty of Public Health recognises the advantages of this regulatory approach, and, in particular the marketing controls it puts on electronic cigarettes. The UK Government is permitted to implement the Tobacco Products Directive without delay and we strongly encourage it to do so. The UK Faculty of Public Health is concerned about the high levels of marketing and exposure (e.g. through use in public places) that young people will be exposed to between now and 2016. As such it recommends that:

- comprehensive controls on marketing in line with the TPD should be urgently implemented<sup>29</sup>
- as such, unlicensed products should be subject to the same comprehensive and binding marketing controls as tobacco products so that they cannot be marketed or advertised
- marketing controls should extend to bans on the sponsorship of sports clubs or sporting events, any events targeting young people, product placement, use of flavours designed to appeal to youth and celebrity spokespersons – no advertising or use should ‘re-normalise’ or ‘re-glamourise’ smoking and undermine smoking prevention policies
- all products, whether licenced as medicines or consumer products, should be required to carry a health warning clearly indicating the addictive nature of nicotine and detailing ingredients and their safety, and also encourage smoking cessation, with links to the NHS Smokefree website
- outlets selling electronic cigarettes should provide information on the dangers of smoking, the addictive nature of nicotine and encourage cessation
- until further information is available on effectiveness as a quit product, smokers should be informed that the most effective means of quitting is via the NHS stop smoking service
- age of sale legislation on e-cigarettes should be actively enforced
- a ban on use in public places should be introduced in order to protect bystanders
- products must be consistent in quality and deliver nicotine as effectively and safely as possible
- independent data on exclusive and ‘dual use’ by socioeconomic status should be collected
- studies must be in place to detect any small changes in youth smoking rates in a timely manner

In light of evidence showing how the tobacco industry intends to misuse its claimed interest in harm reduction, the UK Faculty of Public Health stresses that full weight should be accorded to Article 5.3 of

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<sup>29</sup> World Health Organisation, *Guidelines for implementation of Article 13 of the WHO Framework Convention on Tobacco Control* [http://www.who.int/fctc/guidelines/article\\_13.pdf?ua=1](http://www.who.int/fctc/guidelines/article_13.pdf?ua=1); and World Health Organisation, *Guidelines on Protection from Exposure to Smoke*, [http://www.who.int/fctc/cop/art%208%20guidelines\\_english.pdf?ua=1](http://www.who.int/fctc/cop/art%208%20guidelines_english.pdf?ua=1)

the FCTC. Developments should be closely monitored and independent data on use of electronic cigarettes by socioeconomic status should be collected.

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