Submission to Senate Select Committee on Tobacco Harm Reduction

Submitted by:

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1. This submission is made in response to the email invitation sent to me by the committee secretary (but with the letter beginning 'Dear Mr Wilsmore') on 9.10.20.

2. I respond in my position as emeritus professor of epidemiology and former director of the UK Centre for Tobacco and Alcohol studies at the University of Nottingham, having retired from my post as professor of epidemiology and honorary consultant in respiratory medicine on 31.7.20.

3. I remain a member of the Royal College of Physicians (RCP) Tobacco Advisory Group, and in my former role as chair of that group commissioned and edited the 2016 RCP report on tobacco harm reduction *Nicotine without smoke* [1]. I also chaired the NICE group responsible for producing guidance in 2013 on managing smoking in secondary care settings (PH48) [2] and was a member of the NICE group producing guidelines on tobacco harm reduction (PH45), also in 2013 [3]. I am a member of the NICE group currently updating those and all other NICE guidelines on tobacco. I was an expert member of a Medicines and Healthcare products Regulatory Agency (MHRA) and Committee on Safety of Medicines *ad hoc* working group on electronic cigarette licensing in 2019-20.

4. E-cigarettes have proved to be controversial products and different countries have adopted markedly different regulatory approaches to their availability and use. Within the UK there has been a lively debate on the role of e-cigarettes in tobacco control, but almost all leading medical organisations and a range of charities and other organisations have for some time now accepted the principle that while not harmless, e-cigarettes are likely to substantially less harmful than tobacco cigarettes [4]. For many years UK policy has therefore been to encourage smokers, so far as possible, to try to quit smoking using current best medical therapy but failing that, to switch from tobacco to electronic cigarettes. As evidence on the effectiveness of e-cigarettes as quitting aids has grown, so e-cigarettes have come increasingly to be recommended as cessation therapy by Stop Smoking Services.

5. The UK evidence on the role of e-cigarettes, on their potential hazards and the challenges they present to ethical clinical and public health practice has been summarised in the 2016 RCP report [1] and in a series of reviews commissioned by Public Health England [5-9]. A comprehensive review of evidence on e-cigarettes from outside the UK is also available from the US National Academies of Sciences Engineering and Medicine [10].

6. Despite a continual growth in published evidence on all aspects of e-cigarettes, the conclusions of the UK reports, and particularly those of the 2016 RCP report, are as valid today as they were when published in 2016. They are reproduced here:

- Smoking is the biggest avoidable cause of death and disability, and social inequality in health, in the UK.
- Most of the harm to society and to individuals caused by smoking in the near-term future will occur in people who are smoking today.
- Vigorous pursuit of conventional tobacco control policies encourages more smokers to quit smoking.
- Quitting smoking is very difficult and most adults who smoke today will continue to smoke for many years.
- People smoke because they are addicted to nicotine, but are harmed by other constituents of tobacco smoke.
- Provision of the nicotine that smokers are addicted to without the harmful components of tobacco smoke can prevent most of the harm from smoking.
- Until recently, nicotine products have been marketed as medicines to help people to quit.
- NRT is most effective in helping people to stop smoking when used together with health professional input and support, but much less so when used on its own.
- E-cigarettes are marketed as consumer products and are proving much more popular than NRT as a substitute and competitor for tobacco cigarettes.
- E-cigarettes appear to be effective when used by smokers as an aid to quitting smoking.
- E-cigarettes are not currently made to medicines standards and are probably more hazardous than NRT.
- However, the hazard to health arising from long-term vapour inhalation from the e-cigarettes available today is unlikely to exceed 5% of the harm from smoking tobacco.
- Technological developments and improved production standards could reduce the long-term hazard of e-cigarettes.
- There are concerns that e-cigarettes will increase tobacco smoking by renormalising the act of smoking, acting as a gateway to smoking in young people, and being used for temporary, not permanent, abstinence from smoking.
- To date, there is no evidence that any of these processes is occurring to any significant degree in the UK.
- Rather, the available evidence to date indicates that e-cigarettes are being used almost exclusively as safer alternatives to smoked tobacco, by confirmed smokers who are trying to reduce harm to themselves or others from smoking, or to quit smoking completely.
- There is a need for regulation to reduce direct and indirect adverse effects of e-cigarette use, but this regulation should not be allowed significantly to inhibit the development and use of harm-reduction products by smokers.
- A regulatory strategy should, therefore, take a balanced approach in seeking to ensure product safety, enable and encourage smokers to use the product instead of tobacco, and detect and prevent effects that counter the overall goals of tobacco control policy.
- The tobacco industry has become involved in the e-cigarette market and can be expected to try to exploit these products to market tobacco cigarettes, and to undermine wider tobacco control work.
- However, in the interests of public health it is important to promote the use of e-cigarettes, NRT and other non-tobacco nicotine products as widely as possible as a substitute for smoking in the UK.

6. The major developments in evidence and in UK regulation since the 2016 report was published, all of which speak to the specific questions asked by the Committee, are as follow:

6.1 From May 2017 e-cigarettes have been subject to regulation under legislation arising from the 2014 EU Tobacco Products Directive [11] which limits the nicotine content of e-cigarettes, requires e-cigarette products to carry health warnings, and requires e-cigarette suppliers to

notify the content and emissions of all products to the MHRA. Since 2017, advertising of e-cigarettes has been prohibited from targeting people aged under 18 years and from being used to promote smoking [12]. It is illegal to sell e-cigarettes to persons aged under 18 in the UK, or to purchase e-cigarettes for someone aged under 18.

6.2 A definitive clinical trial, published by Hajek *et al* in the New England Journal of Medicine in 2019 established that e-cigarettes were almost twice as effective than conventional nicotine replacement therapy (NRT) as a quitting therapy [13]. A 2020 update of a Cochrane review of the effectiveness of e-cigarettes has reached much the same conclusion [14]. It is now thus clear that e-cigarettes are effective cessation aids, probably more so than conventional NRT.

6.3 Smoking prevalence has fallen rapidly in the UK since e-cigarettes began to be widely used, in around 2013. According to the Annual Population Survey, a nationally representative survey of around 320,000 people, the proportion of adults who reported that they were current smokers (that is, daily or non-daily smokers) in 2013 was 18.8%, and in 2019 (the most recent data available) 14.1% [15]. This decline of approximately 0.8 percentage points per annum is one of the most, if not the most, rapid over this period in the rich world. By contrast, the proportion of daily and occasional smokers in Australia (where e-cigarette use has not been encouraged) in 2017/18 was 15.1% [16], falling by only 0.3 percentage points per year over the three years since the previous survey estimate of 16% in 2014/15 [17]. This difference is likely to be due, in large part, to the widespread uptake of vaping in the UK where an estimated 1.9 million former smokers now vape [18]. E-cigarettes have not therefore proved to be a gateway into smoking among UK adults; rather they have appreciably diverted smokers from smoking.

6.4 Smoking among young people in the UK has continued to fall [19] while UK cohort studies of use of e-cigarettes among young people have demonstrated consistently that regular use occurs almost exclusively among those who are already using tobacco [20,21]. Thus, whilst it is the case that the risk of smoking is increased among young people who vape, and indeed *vice versa*, these associations probably arise from common jeopardy rather than a causal pathway from vaping to smoking. Despite concerns to the contrary therefore, use of e-cigarettes has not proved to be an appreciable gateway to smoking in young people.

6.5 The tobacco industry has continued to acquire and develop e-cigarette products over the past decade in the UK and through a range of initiatives has attempted to establish and engage itself in promoting vaping and influencing UK policy on electronic cigarettes. These initiatives have been countered respectively by the advertising controls described in 6.1 [12] and in relation to policy by adherence to the terms of Article 5.3 of the Framework Convention on Tobacco Control [22].

6.6 In 2019 an epidemic of serious lung disease occurred among vapers in north America [23], which for some time was (and to some extent is still) attributed to vaping *per se* rather than to the substance vaped. It has transpired that the epidemic was caused by vitamin E acetate, a substance used to cut tetrahydrocannabinol in illicit vape liquids. Outside of north America, and among people who use e-cigarettes to vape nicotine, serious adverse reactions are rare; in the UK, for example, as of January 2020 the MHRA was aware of only two cases of serious lung disease [24]. Vitamin E acetate is not present in licit vaping liquids sold in the UK [25].

7. On the basis of this evidence therefore, in my view, UK government policy in making e-cigarettes widely available as a reduced-harm consumer alternative to tobacco, subject to regulations to protect promotion to children, has proved to be a public health success. Making

e-cigarettes available to smokers saves lives. I would recommend the Australian government to adopt a similar approach.

8. I believe that the facts that I have stated in this submission are true and that the opinions I have expressed are correct.

Professor John Britton

Dated 27th October 2020

8. **References**

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