First report of the WHO Independent High-level Commission on Non-Communicable Diseases

Response to web consultation
The missing NCD strategy: tobacco harm reduction

Submission by:

David B. Abrams PhD
Professor, Department of Social and Behavioral Science
NYU College of Global Public Health
New York University. United States

Clive D. Bates MSc
Director, Counterfactual
London, United Kingdom

Raymond S. Niaura PhD
Professor, Department of Social and Behavioral Science
NYU College of Global Public Health
New York University. United States

David T. Sweanor JD
Adjunct Professor of Law
Chair of the Advisory Board of the Centre for Health Law, Policy and Ethics
University of Ottawa, Canada

16 May 2018

Table of contents

First report of the WHO Independent High-level Commission on Non-Communicable Diseases

Response to web consultation
The missing NCD strategy: tobacco harm reduction

This is a response to the consultation on the draft of the First Report of the WHO Independent High-Level Commission on Non-Communicable Diseases[1]. We make the case for embracing 'tobacco harm reduction' as an essential NCD strategy and propose four amendments to the draft report.

1 NCD objectives – widespread failure to meet the tobacco target is likely

Under agreements made to reduce non-communicable diseases (NCDs), the nations of the World Health Assembly committed to reduce smoking prevalence by 30% in relative terms by 2025, compared to 2010[2]. However, the World Health Organisation's most recent assessment of progress and likely outcomes[3] suggests that this target will be missed in three-quarters (97 of 129) of the countries assessed. In 33 countries, smoking prevalence will actually rise on current trends. The WHO's assessment is consistent with similarly pessimistic analysis of a larger set of countries by independent academics writing in *The Lancet*[4].

> *If these trends continue, only 37 (21%) countries are on track to achieve their targets for men and 88 (49%) are on track for women, and there would be an estimated 1·1 billion current tobacco smokers (95% credible interval 700 million to 1·6 billion) in 2025. Rapid increases are predicted in Africa for men and in the eastern Mediterranean for both men and women, suggesting the need for enhanced measures for tobacco control in these regions.*

2 Enhanced tobacco control measures should include tobacco harm reduction

What could those 'enhanced measures for tobacco control' be? Fortunately, the WHO Framework Convention on Tobacco Control provides a definition of tobacco control that includes the answer[5]:

> 1.(d) *"tobacco control" means a range of supply, demand* ***and harm reduction strategies*** *that aim to improve the health of a population by eliminating or reducing their consumption of tobacco products and exposure to tobacco smoke*. (emphasis added)

The key strategy available to reduce smoking and smoking-related NCDs over the short timescale to 2025-30 is *tobacco harm reduction*. The harm reduction strategy involves substituting a high risk product or behaviour with a low risk product or behaviour. It is a well-established strategy in many

---

1 WHO Independent High-Level Commission on Non-Communicable Diseases, draft version 1 May 2018 [report]. Web based consultation 10-16 May 2018 [consultation]

2 World Health Assembly Resolution 66/8 Draft comprehensive global monitoring framework and targets for the prevention and control of non-communicable diseases, March 2013 [link]

3 World Health Organisation, WHO global report on trends in prevalence of tobacco smoking 2015. [link]

4 Bilano V, Gilmour S, Moffiet T, d'Espaignet ET, Stevens GA, Commar A, et al. Global trends and projections for tobacco use, 1990-2025: an analysis of smoking indicators from the WHO Comprehensive Information Systems for Tobacco Control. Lancet (London, England). Elsevier; 2015 Mar 14;385(9972):966–76. [link]

5 WHO Framework Convention on Tobacco Control, Article 1 (Definitions), Geneva, 2003 [link]

areas of public health, for example in intravenous drug use and HIV prevention. To put it bluntly, we do not try to help people avoid HIV by telling them to stop having sex, but by ensuring they access condoms when they do have sex. It is not quite the same with nicotine and smoking – we have had great success at helping people quit smoking. But there is more we can do to reduce NCD burdens by *also* adopting tobacco harm reduction strategies for people who continue to use nicotine.

3 What is tobacco harm reduction?

Tobacco harm reduction starts from the insight that the vast majority of harm done by tobacco use is done by *smoke* – the products of combustion arising from burning tobacco leaf. The nicotine is not the main or even an important harmful agent in tobacco use, but it is the reason why people use tobacco, mostly as smokers. This has been known since at least the 1970s[6]: *People smoke for the nicotine, but they die from the tar.*

So the opportunity for a rapid win for health is to eliminate the tar (the smoke residues) for people who continue to use nicotine by choice or because they are dependent. Tobacco harm reduction involves the use of non-combustible products such as vaping products like e-cigarettes, heated tobacco products, or smokeless tobacco made to high purity standards. These products have risen to prominence rapidly since 2010, and their rise has coincided with rapid declines in smoking in the UK and US among *both adults and adolescents*.

The science and policy issues are discussed in more depth in the appendix which draws on five statements from the UK Royal College of Physicians' major 2016 report: *Nicotine without the smoke: tobacco harm reduction*[7]. The Royal College endorses the use of e-cigarette to reduce smoking:

> *The Royal College of Physicians' new report, 'Nicotine without smoke: tobacco harm reduction', has concluded that e-cigarettes are likely to be beneficial to UK public health. Smokers can therefore be reassured and encouraged to use them, and the public can be reassured that e-cigarettes are much safer than smoking.*

This is a conclusion supported by the largest UK public health agency, Public Health England[8], which has recently shown its support by advertising switching to e-cigarettes on national prime-time television. Independent American experts have reviewed the evidence in detail and have called for a fundamental change in the public health approach to nicotine, giving primary to reducing NCDs and stressing the value of harm minimisation approaches:[9]

> *A reframing of societal nicotine use through the lens of harm minimization is an extraordinary opportunity to enhance the impact of tobacco control efforts.*

---

6 Russell MJ. Low-tar medium nicotine cigarettes: a new approach to safer smoking. BMJ 1976;1:1430–3. [link]

7 Royal College of Physicians (London) Nicotine without smoke: tobacco harm reduction 28 April 2016 [link][press]

8 McNeill A, Brose LS, Calder R, Bauld L & Robson D. Evidence review of e-cigarettes and heated tobacco products 2018. A report commissioned by Public Health England. London: Public Health England. 6 February 2018 [link] [Press release]

9 Abrams DB, Glasser AM, Pearson JL, Villanti AC, Collins LK, Niaura RS. Harm Minimization and Tobacco Control: Reframing Societal Views of Nicotine Use to Rapidly Save Lives. *Annu Rev Public Health*; 2018. [link]

4 Tobacco harm reduction – held back by WHO FCTC?

Some of the world's top tobacco control scientists have consistently urged the WHO and FCTC Secretariat to embrace this aspect of tobacco control strategy[10]. Despite this, there has been a tendency to emphasis *threats* over *opportunities,* with an implicit suggestion that the best policy is to prohibit these much-safer products even though cigarettes would remain widely available[11]. However, the threats are relatively trivial and the opportunities are very significant, so WHO has been criticised for its poor science and an instinctive hostility to private sector innovation[12]. The danger of opposing new innovations that are low-risk alternatives to cigarettes) is that it amounts to a form of regulatory protection of the most harmful product of all, cigarettes. It is welcome, therefore, that the Commission's draft report acknowledges the importance of technology and innovation, but recognises that technology alone is insufficient (paragraph 41):

> *"The challenge is to convert technical successes into meaningful health impact and for that engagement with the private sector is critical."*

These technologies now exist in the field of tobacco control, yet most governments and WHO still are far from exploiting this potential. To address this, the following amendment in red to Recommendation 1 of the report is respectfully suggested. This draws on the full FCTC definition of tobacco control and emphasises that tobacco harm reduction is included within the definition:

Recommendation 1: Identify and implement a small set of priorities within the overall NCD and mental health agenda.
a) 1) Implementing comprehensive tobacco-control programmes, including integrating tobacco harm reduction into tobacco control as a key fast-acting strategy to address the burden of NCDs

5 A more nuanced approach to the private sector role in reducing NCDs

The focus on the private sector in the Independent High Level Commission draft report is therefore most welcome, and this provides an opportunity for a potential 'win' for the report and the Commission. This means drawing on the insight that the private sector is neither inherently good nor bad, and that businesses can adopt business practices and market products that are either health-harming or innovative products that are health-improving or displace health-harming products. Sometimes the same companies can do both.

The High Level Commission should urge governments take a more discriminating approach to private sector innovation and encourage it, rather than take a counter-productive and excessively risk-averse approach with regulation that prevents innovation and protects health-harming products. To emphasise this, a more specific statement of the private sector role in innovation is

[10] Letter to Dr Margaret Chan, Director General WHO from 53 scientists, Reducing the toll of death and disease from tobacco – tobacco harm reduction and the Framework Convention on Tobacco Control 26 May 2014 [context][letter]

[11] WHO. Electronic Nicotine Delivery Systems and Electronic Non-Nicotine Delivery Systems (ENDS/ENNDS), FCTC/COP/7/11 August 2016. [Link] – see especially WHO's policy proposals (para 29-32) which start by assuming prohibition is the norm.

[12] UK Centre for Alcohol and Tobacco Studies (UKCTAS), Commentary on WHO report on ENDS and ENNDS, October 2016 [link][PDF]

warranted. The following amendment is respectfully proposed: insert a new point after point b) in recommendation 2.

Recommendation 2: Increase engagement with the private sector.
a) […]
b) Governments should explore regulatory and legislative solutions to minimize the production, marketing, and consumption of health-harming products while also increasing opportunities for positive contributions from the private sector to reach SDG 3.4.

c) Governments should encourage uptake of innovative health-improving products and ensure that regulatory and legislative approaches to new products are proportionate and non-discriminatory, and do not have the unintended effect of protecting health-harming products.

6 A reconsideration of the wording of NCD targets to focus on smoking

6.1 NCD framework targets

Two of the key NCD targets have a potential conflict and there is an opportunity for the High Level Commission to address this. The targets in question are Target 1, the overarching NCD health outcome goal, and Target 2, the goal that addresses the risk factor of tobacco use[13].

Target 1: A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases by 2025 compared to 2010.

Target 5: A 30% relative reduction in the prevalence of current tobacco use in persons aged 15+ years by 2025 compared to 2010.

The conflict arises because some *tobacco* products, including smokeless tobacco and heated tobacco products, can have the effect of *reducing smoking,* and reducing smoking is the most rapid way to reduce NCD mortality risk, the subject of the overall target. Three examples illustrate the problem.

E-cigarettes. In the UK, smoking rates fell considerably in the last few years: adult smoking prevalence in England declined from 19.9% in 2010 to 15.5% in 2016[14]. According to a 2018 Public Health England Review, in 2017 quit success rates were at the highest rates ever, and e-cigarettes may have contributed to as many as 57,000 additional quits in 2016[15].

Smokeless tobacco. The country with the lowest smoking prevalence in the developed world is Sweden. A European Union survey showing adult smoking prevalence at 7% (5% daily smoking) compared to 26% (24% daily) for the European Union as a whole[16]. But the reason for this low

13 World Health Organisation, Global Monitoring Framework for NCDs About 9 voluntary global targets [link]

14 UK Office for National Statistics (ONS), Adult smoking habits in the UK: 2016 [link]

15 McNeill A, Brose LS, Calder R, Bauld L & Robson D. Evidence review of e-cigarettes and heated tobacco products 2018. A report commissioned by Public Health England. London: Public Health England. 6 February 2018 [link]

16 European Commission. Eurobarometer Special Survey 458: Attitudes of Europeans towards Tobacco and Electronic Cigarettes. 2017. Fieldwork March 2017. Published May 2017 [link]

smoking prevalence[17] and resulting low rates of NCDs in Sweden[18], especially among men, is a form of smokeless tobacco known as snus. From a point of view of NCDs, Sweden has benefited from the rise of snus and decline in smoking.

Heated tobacco products. Similarly, there has been a remarkable decline in cigarette consumption in Japan following the introduction of heated tobacco products – again a form of nicotine product that does not involve combustion and greatly reduces exposure to hazardous chemicals compared to smoking. Cigarette volumes in Japan have fallen by an *incredible 27% in two years*, from 43.6 billion sticks in Jan-March 2016 to 31.8 billion sticks in Jan-March 2018[19]. Analysts at Citi Group attribute the disruption of the cigarette market to heated tobacco products[20]:

> *Heated tobacco, led by iQOS, is completely disrupting the cigarette industry in Japan and Korea: we expect that heated tobacco to cut the volume of cigarettes sold in Japan by more than 30% by the end of 2018.*

These remarkable data should be a wake-up call to everyone involved in tackling NCDs – there are technology changes that can reduce smoking at rates that are unprecedented in the history of tobacco control. However, the current targets and indicators cannot reflect the very high benefit of switching from high-risk to low-risk product.

6.2 Sustainable Development Goals

A similar problem afflicts the implementation of NCD objects in Sustainable Development Goals, SDG 3.4 on to reduce by one-third pre-mature mortality from non-communicable diseases (NCDs) by 2030[21]. The SDG indicator (30) for tobacco is *Current use of any tobacco product (age-standardized rate)*. The definition for 'any tobacco product' bundles all low-risk alternatives to smoking, including e-cigarettes, together cigarettes and other combustible tobacco products[22]. This indicator therefore misses the high health-improvement value in terms of reduced NCD burden when smokers switch from combustion to non-combustion products. Data gathered in the UK, for, example, tracks smoking separately for non-combustible tobacco product and e-cigarette use.

6.3 Refashion the targets to focus on smoking

The High Level Commission should recommend a change in the specification of the target to focus on *smoking* not on tobacco more generally. In this way, Target 5 can be met, in part, by switching from high-risk to low-risk tobacco products and therefore make a contribution to meeting the main outcome Target 1 on reducing NCD mortality risk.

---

17 Ramström L, Borland R, Wikmans T. Patterns of Smoking and Snus Use in Sweden: Implications for Public Health. Int J Environ Res Public Health. Multidisciplinary Digital Publishing Institute (MDPI); 2016 Nov 9;13(11). [link]

18 Ramström L, Wikmans T. Mortality attributable to tobacco among men in Sweden and other European countries: an analysis of data in a WHO report. *Tob Induc Dis*. 2014 Jan;12(1):14. [link]

19 Japan Tobacco, Japanese Domestic Cigarette Sales Results for March 2015 2016 2017 2018 – note JT provides its own volumes and market share, so the total market volume can be calculated.

20 Spielman A, The new world of tobacco , Citi Group, page 20. 18 April 2018

21 United Nations, Sustainable Development Goal 3.4 Sustainable Development Solutions Network (SDSN) [link]

22 United Nations, Sustainable Development Indicator 30, Sustainable Development Solutions Network (SDSN) [link]

The High Level Commission could make a recommendation to focus on tobacco used in combustible form, or smoking. This would appropriately fit within the 'prioritisation' section of the report but because it addresses the framework for NCD targets, an insertion in the 'accountability' section and addition to Recommendation 4 may be appropriate. The following text is respectfully proposed:

Add a new paragraph in the accountability section following current paragraph 46:
47. There should be periodic review of NCD targets and indicators to ensure they drive the deepest and fastest possible reduction in NCD risks, taking account of new scientific insights, public or private sector innovation, and emerging risks or opportunities. For example, a clear distinction in targets and indicators should be made between combustible and non-combustible tobacco products because the risks are so different and the emerging low-risk products can substitute for high-risk, with benefit to health.

Modify recommendation 4 by changing the recommendation title and adding an additional bullet (b).

RECOMMENDATION 4. Strengthen accountability and refine targets for action on NCDs.

a) The existing NCD accountability mechanisms created since 2011 should be simplified and the data made publicly available to foster accountability.
b) Targets and indicators for risk factors should reviewed periodically to ensure they drive the most rapid improvement in NCD health outcomes target and not be a barrier to progress. The targets and indicators for the tobacco use risk factor should emphasise reducing prevalence of *combustible* tobacco products.

7 Conclusion

We welcome the opportunity to provide input into the important deliberations of the High Level Commission on NCDs. We look forward to the final report and outcome of Third High Level Meeting of the UN General Assembly on NCDs that will take place in New York in September

We believe that leadership from the Commission could make a significant advance in the struggle against non-communicable disease by encouraging governments and WHO to embrace positive, health-improving private sector innovation, especially in the area where the greatest harms arise, tobacco use. We argue that the international community should adopt an unswerving focus on *smoking* as it is tobacco smoke, not nicotine, that is the overwhelming cause of NCDs.

Tobacco harm reduction means smokers switching from the high risk behaviour of smoking to other forms of nicotine use that are much less risky because they do not involve combustion and inhalation of smoke. The strategy of tobacco harm reduction is complementary to other tobacco control measures, not an alternative to them. Tobacco harm reduction should be embraced as a component of tobacco control and built into the development of the WHO FCTC.

Appendix: Five insights inspired by the Royal College of Physicians

To provide background on tobacco harm reduction, we draw on five key findings of the April 2016 Royal College of Physicians (London) report[23]: *Nicotine without smoke: tobacco harm reduction*. The Royal College first put the dangers of smoking on the public agenda with its ground-breaking 1962 report, *Smoking and Health*[24].

1. On the relative risks of vaping and smoking

> *Although it is not possible to precisely quantify the long-term health risks associated with e-cigarettes, the available data suggest that they are unlikely to exceed 5% of those associated with smoked tobacco products, and may well be substantially lower than this figure. (RCP Section 5.5 page 87)*

People who smoke need to know that they have the option to switch to vaping and that doing this will radically reduce their incremental risks. Likewise, professionals involved in health care and policy need a good feel for the relative risks. The RCP aimed provide some clarity and has provided its own best estimate of relative risk based on what is known about these products – and this estimate is independent of other studies. Vaping involves completely different chemical and physical processes, and the main harmful or potentially harmful agents in cigarette smoke are either not present or present at levels well below 5% of those found in cigarettes. Even if new harmful agents are discovered, it is much easier to remove them from e-liquids than it is to remove target chemicals from cigarette smoke. Note how carefully worded this statement is – it is steering the reader to the right ball-park, acknowledging uncertainty, and pointing out it is a cautious estimate.

2. On the idea that allowing e-cigarettes will somehow cause people to smoke

> *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.* (RCP Key recommendations)

The finding is what a rational observer would expect – that people will use much safer products to reduce the risks to their health and as a way of quitting smoking, rather than to smoke more. The rise of vaping in the UK and US has been accompanied by rapid falls in adult smoking. There are strong *associations* between smoking and vaping because the same personal characteristics or circumstances that cause people to smoke also cause them to use ENDS, there is no compelling evidence that vaping causes smoking[25].

---

23 Royal College of Physicians (London) *Nicotine without smoke: tobacco harm reduction*, 28 April 2016 [report] and [press release]

24 Royal College of Physicians (London) *Smoking and Health*, 1962 [link]

25 Kozlowski LT, Warner KE. Adolescents and e-cigarettes: Objects of concern may appear larger than they are. *Drug Alcohol Depend.* 2017 May;174(1 May 2017):209–14. [link][PDF]

The American experience is of *rapidly declining teenage smoking* coinciding with the rise in vaping, much of which is occasional and without nicotine. The National Academies of Science, Engineering and Medicine states "*for youth and young adults, there is substantial evidence that e-cigarette use increases the risk of ever using combustible tobacco cigarettes*". However this has not translated to increases in smoking. In fact, the opposite effect, an anomalously rapid *decline* in adolescent smoking, has occurred, as the National Academies point out:[26]

> *Overall, the population-based data broadly show opposing trends in e-cigarette and cigarette use prevalence across time among U.S. youth in recent years and thus do not provide confirmatory evidence of the epidemiologic person-level positive associations of vaping and smoking.*

Likewise, a 2017 analysis of UK survey data concluded[27]:

> *In summary, surveys across the UK show a consistent pattern: most e-cigarette experimentation does not turn into regular use, and levels of regular use in young people who have never smoked remain very low.*

A comprehensive American independent review of the studies and methodologies purporting to reveal 'gateway effects' found multiple flaws in methodology and interpretation, concluding[28]:

> *Only a small proportion of studies seeking to address the effect of e-cigarettes on smoking cessation or reduction meet a set of proposed quality standards. Those that do are consistent with randomized controlled trial evidence in suggesting that e-cigarettes can help with smoking cessation or reduction.*

3. On the potential for bad policies to cause additional harm

> *A risk-averse, precautionary approach to e-cigarette regulation can be proposed as a means of minimising the risk of avoidable harm, eg exposure to toxins in e-cigarette vapour, renormalisation, gateway progression to smoking, or other real or potential risks.*
>
> *However, if this approach also makes e-cigarettes less easily accessible, less palatable or acceptable, more expensive, less consumer friendly or pharmacologically less effective, or inhibits innovation and development of new and improved products, then it causes harm by perpetuating smoking. Getting this balance right is difficult. (**RCP** Section 12.10 page 187)*

The Royal College draws our attention to the challenge of unintended consequences and the idea that supposedly cautious policies are not necessarily cost-free if the risk "*perpetuating smoking*". Policy-makers can believe they are being 'precautionary' and risk-averse, while actually being 'reckless' by protecting the cigarette trade and discouraging smokers from quitting.

---

[26] National Academies of Science, Engineering and Medicine (US). The Public Health Consequences of E-cigarettes. Washington DC. January 2018. [link]

[27] Bauld L, MacKintosh A, Eastwood B, Ford A, Moore G, Dockrell M, et al. Young People's Use of E-Cigarettes across the United Kingdom: Findings from Five Surveys 2015–2017. Int J Environ Res Public Health. Multidisciplinary Digital Publishing Institute; 2017 Aug 29;14(9):973. [link]

[28] Villanti AC, Feirman SP, Niaura RS, Pearson JL, Glasser AM, Collins LK, et al. How do we determine the impact of e-cigarettes on cigarette smoking cessation or reduction? Review and recommendations for answering the research question with scientific rigor. *Addiction*. 2017 Oct 3; [link]

The list of potential mechanisms for harmful unintended consequences arising from poorly designed regulation is long[29]. There is already evidence that superficially attractive regulation of ENDS can have the effect of perpetuating smoking[30] [31] [32], and therefore doing more harm than good. Recommendations for regulatory policy:

- The application of standard consumer protection legislation should be the starting point. Further regulation, should be carefully justified and assessed for unintended consequences.
- The optimum regulatory regime would set transparent standards for chemical, electrical, thermal and mechanical safety when these are of material benefit to consumers, together with standard testing procedures. The French AFNOR standards are good model[33]. Arbitrary standards, for example for maximum nicotine strength for e-liquids or maximum size of containers or tanks[34], serve no purpose and may inhibit uptake or promote smoking relapse.
- Warnings and labelling should inform consumers rather than scare them and not convey the impression that vaping is especially harmful. The most important information would convey relative risk: that ENDS are much less harmful than cigarettes.
- There is no case to ban ENDS advertising and promotion. Firstly, because advertising for ENDS is effectively privately funded anti-smoking campaign spending. Secondly, because the justification for banning tobacco advertising is because of the great risk to health that it causes. Some safeguards to prevent targeting of youth may be justified: the UK Codes of Advertising Practice provide a reasonable model[35].
- Any taxation on ENDS should create a price incentive to switch from the high risk cigarette to the low risk ENDS and as far as possible reflect relative risk[36]. In most cases, the cost of tax administration would outweigh the value of the appropriate tax, so ENDS should generally have no additional tax applies, other than standard sales taxes.
- Policy on indoor use of ENDS should be a matter for owners and managers of building. The application of law can be justified where there is evidence that exposure to emissions creates material harm to bystanders, but no such evidence exists for ENDS. The role of the state is to provide guidance on making these decisions[37] – but not to impose them.

---

29 New Nicotine Alliance (UK consumer organization) Assessing and mitigating unintended consequences of policies for vapour technologies and other low risk alternatives to smoking, 29 April 2016 [link] See especially Appendix 1.

30 Friedman AS. How does Electronic Cigarette Access affect Adolescent Smoking? *J Health Econ* Published Online First: October 2015. [link]

31 Cooper MT, Pesko MF. "The effect of e-cigarette indoor vaping restrictions on adult prenatal smoking and birth outcomes." Journal of Health Economics, Volume 56, 2017, Pages 178-190. [link]

32 Pesko MF, Hughes JM, Faisal FS. The influence of electronic cigarette age purchasing restrictions on adolescent tobacco and marijuana use. *Prev Med (Baltim),* February 2016 [link]

33 AFNOR (France) Electronic cigarettes and e-liquids Part 1: Requirements and test methods for e-cigarettes XP D90-300-1 March 2015 [link] Part 2: Requirements and test methods for e-cigarette liquid XP D90-300-2 March 2015 [link] and Part 3: Requirements and emission-related test methods XP D90-300-3 July 2016 [link]

34 Bates CD: What is wrong with the Tobacco Products Directive for vapour products? Counterfactual May 2015 [link]

35 Committee on Advertising Practice (UK), UK Code of Broadcast Advertising: 33. E-cigarettes Broadcast [link]; UK Code of Non-broadcast Advertising, Sales Promotion and Direct Marketing (CAP Code): 22. E-cigarettes [link]

36 Chaloupka FJ, Sweanor D, Warner KE. Differential Taxes for Differential Risks--Toward Reduced Harm from Nicotine-Yielding Products. New England Journal of Medicine 2015;373:594–7. [link]

37 Public Health England, Use of e-cigarettes in public places and workplaces, 6 July 2016 [link]

4. On quitting smoking as a consumer behaviour

> *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**. (RCP Key recommendations, original emphasis)*

Vaping products are *consumer products* marketed as an alternative to smoking. They are not smoking cessation medications any more than diet soda is an anti-obesity drug. The overall public health impact of any given approach is a function of both uptake and impact on the person's health. Vaping works well on both of these – by being attractive as an alternative to smoking and by mirroring many of the things that people want from smoking it is an effective low-risk substitute. We now have 1.5 million ex-smoker vapers in the UK. The number of UK smokers fell by 1.5 million between 2014 and 2016 (from 9.7 to 8.2 million) – a dramatic decline. Another 1.1 million people both smoke and vape – and many may be on a journey to quitting or substantially cutting down. There is an abundance of evidence that ENDS are promoting reductions in smoking[38], including this substantial 2017 study from the United States[39]:

> *The substantial increase in e-cigarette use among US adult smokers was associated with a statistically significant increase in the smoking cessation rate at the population level. These findings need to be weighed carefully in regulatory policy making regarding e-cigarettes and in planning tobacco control interventions.*

5. On the public health interest in vaping as a harm reduction strategy

> *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.* (RCP Key recommendations, original emphasis).

Professor John Britton, chair of the RCP's Tobacco Advisory Group, said[40]:

> *The growing use of electronic cigarettes as a substitute for tobacco smoking has been a topic of great controversy, with much speculation over their potential risks and benefits. This report lays to rest almost all of the concerns over these products, and concludes that, with sensible regulation, electronic cigarettes have the potential to make a major contribution towards preventing the premature death, disease and social inequalities in health that smoking currently causes in the UK.*

This is a strong recommendation from the Royal College of Physicians to embrace the concept of tobacco harm reduction as a public health policy. *That is not an alternative to other tobacco policies* – in fact it makes the traditional tobacco control policies more effective and less ethically challenging by giving smokers a viable way to respond to incentives or pressures.

---

38 Bates CD, Mendelsohn C, Submission 336 - Evidence to Standing Committee on Health, Aged Care and Sport (Australia) Inquiry The Use and Marketing of Electronic Cigarettes and Personal Vaporisers in Australia Do vapour products reduce or increase smoking? A summary of published studies. 19 October 2017 [link]

39 Zhu S-H, Zhuang Y-L, Wong S, Cummins SE, Tedeschi GJ. E-cigarette use and associated changes in population smoking cessation: evidence from US current population surveys. Bmj. 2017;358:j3262. [link]

40 Royal College of Physicians (London) Nicotine without smoke: tobacco harm reduction. 26 April 2016 (Press release)

About the authors

Dr. David B. Abrams is Professor, Department of Social and Behavioral Science NYU College of Global Public Health New York University. USA. He directed the Office of Behavioral and Social Sciences Research (OBSSR), National Institutes of Health. He has published over 280 peer-reviewed articles, is Principal Investigator on numerous NIH grants and served on the Board of Scientific Advisors of the National Cancer Institute. Dr. Abrams was President of the Society for Behavioral Medicine and recipient of their Distinguished Scientist, Research Mentorship and Service Awards; received the Cullen Memorial Award, American Society for Preventive Oncology for lifetime contributions to tobacco control; Research Laureate Award, American Academy of Health Behavior; and the Distinguished Alumni Award, Rutgers University. He authored the award-winning: *The Tobacco Dependence Treatment Handbook: A Guide to Best Practices.* His current focus is health promotion in populations and nicotine use from basic science to prevention, treatment, public health and health care practice, to policy.

Clive D. Bates is Director of Counterfactual, a consulting and advocacy practice focussed on a pragmatic approach to sustainability and public health. He has had a diverse career in the public, private and not-for-profit sectors. He started out with the IT company, IBM, then switched career to work in the environment movement. From 1997-2003 he was Director of Action on Smoking and Health (UK), campaigning to reduce the harms caused by tobacco. In 2003 he joined Prime Minister Blair's Strategy Unit as a senior civil servant and worked in senior roles in government and regulators, and for the United Nations in Sudan.

Dr. Raymond S. Niaura is Professor, Department of Social and Behavioral Science NYU College of Global Public Health New York University. USA. He is a psychologist and an expert on tobacco dependence and treatment, as well as substance use and addiction to alcohol. Dr. Niaura researches the bio-behavioral substrates of tobacco dependence, including factors that influence adolescent and early adult tobacco use trajectories. For eight year, Dr. Niaura was the Director of Science and Training at the Schroeder Institute (SI) for Tobacco Research and Policy Studies at the Truth Initiative. Dr. Niaura has previously taught and conducted research at Brown University, Johns Hopkins Bloomberg School of Public Health, the Georgetown Medical Center, and the School of Public Health at University of Maryland. He was also a former President of the Society for Research on Nicotine and Tobacco and is a Deputy Editor of the journal Nicotine and Tobacco Research. Dr. Niaura has published over 400 peer-reviewed articles, commentaries, and book chapters, including the book The Tobacco Dependence Treatment Handbook: A Guide to Best Practices.

David T. Sweanor JD is Adjunct Professor of Law and Chair of the Advisory Board of the Centre for Health Law, Policy and Ethics at the University of Ottawa. He has worked on global tobacco and health issues for more than 30 years, helping set many global precedents in Canada. He has also worked globally on tobacco issues with the WHO, PAHO, World Bank and numerous other bodies and spoken and published widely on issues of tobacco and health. His interests extend to a wide range of topics, and in addition to his personal work he funds numerous initiatives. He was the recipient of the Outstanding Individual Philanthropist award for Ottawa in 2016.

The authors have no competing interests with respect to e-cigarette, tobacco or pharmaceutical industries.