

Vaping and public health – eight talking points

1. Vaping is far less risky than smoking – and there is no legitimate scientific doubt about this. This is because vaping does not involve combustion. It is toxins created by burning organic material that cause almost all of the harm arising from smoking: “people smoke for the nicotine but die from the tar” [\[link\]](#). Some claim that we have no evidence to back any risk claims, but this is not true. There have been many studies of vapour toxicology and several high quality assessments [\[link\]](#) [\[link\]](#) [\[link\]](#).

Public Health England (the CDC equivalent) has assessed the evidence and gave guidance in accessible form: *E-cigarettes an evidence update*, August 2015 [\[link\]](#)

The estimate that e-cigarette use is around 95% safer than smoking is based on the facts that:

- *the constituents of cigarette smoke that harm health – including carcinogens – are either absent in e-cigarette vapour or, if present, they are mostly at levels much below 5% of smoking doses (mostly below 1% and far below safety limits for occupational exposure)*
- *the main chemicals present in e-cigarettes only have not been associated with any serious risk*

[...] Some flavourings and constituents in e-cigarettes may pose risks over the long term. We consider the 5% residual risk to be a cautious estimate allowing for this uncertainty.

The Royal College of Physicians (the main doctors’ professional association in the UK), reached a similar view: *Nicotine without smoke: tobacco harm reduction*, April 2016 [\[link\]](#) (Section 5.5 page 87)

“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”.

2. No “gateway effects” discovered (other than “exits”). Royal College of Physicians [\[link\]](#) states:

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. (Report summary)

This is also true of the United States. There is no credible evidence that to any significant degree adolescents who would not have otherwise smoked are taking up vaping, or smoking as a result.

3. Vapour exposure poses no material risk to bystanders. Because toxic exposure to active vapers is so low and because vaping devices do not emit ‘sidestream’ vapour when not being inhaled, any exposure to bystanders is very low. In his detailed review of the toxicity evidence, the expert in occupational health, Professor Igor Burstyn, concluded that risks to active users were well below thresholds used to set workplace exposure standards and that for second hand vaping exposure:

Exposures of bystanders are likely to be orders of magnitude less, and thus pose no apparent concern. [\[link\]](#)

Because the issues raised by vaping are social and nuisance, and not about prevention of harm to the health of bystanders or workers, it should be left to owners and managers of properties to decide their vaping policy – i.e. whether, when and where to allow vaping, if at all.

4. The U.S. has seen a rapid decline in smoking coincide with the rise in vaping. *It is a good news story.* The ultimate test is the reduction in smoking – the main cause of harm. Both U.S. youth and adult smoking prevalence has reached record lows and smoking rates have fallen sharply.

- The U.S. National Health Interview Survey [\[link\]](#) shows that U.S. adult smoking prevalence has fallen rapidly in historical terms from 18.9% in 2011 to a record low 15.1% in 2015.
- The impact of vaping on the cigarette trade is already substantial: in 2015, there were 37.5m smokers, but there were 8.3m vapers of whom 2.5m were ex-smokers [\[link\]](#).
- The National Youth Tobacco Survey (CDC) [\[link\]](#) shows that between 2011 and 2015, current use of cigarettes by high school students fell from 15.8 percent to 9.3 percent, and use of cigars and pipes also fell. The rates of decline have been most rapid since 2013.

5. Smokers have dangerously incorrect understanding of the relative risk of smoking and vaping.

According to the National Cancer Institute HINTS survey for FDA [\[link\]](#), only 5.3% of US adults correctly think e-cigarettes are “much less harmful than smoking”, but 37.5% think they are the same or more harmful and another 34% don’t know. This is a potential source of harm because it removes a key reason to switch from high-risk to low-risk products. *This is caused by misinformation.*

6. Policy interventions intended to improve safety can easily become be a cause of harm. The Royal College of Physicians explains ‘unintended consequences’ of excessively burdensome policy:

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. (Section 12.10 page 187)

7. FDA’s deeming regulation is “anti-proportionate” and damaging. Under the deeming rule, regulatory burdens on the far-safer vaping products will be much greater than on the most dangerous product, cigarettes. The likely effect of the deeming rule is a dramatic (>99%) contraction of the range of products available and concentration of the vaping industry in a smaller number of firms, probably dominated by the tobacco industry. Thousands of cigarette brands have default unchallenged access to the market under ‘grandfathering’.

8. What should be done? At Federal level, key issues are regulation and the role of FDA and CDC, which may require greater Congressional oversight and stronger accountability.

1. **Emergency response.** To prevent the unnecessary and unjustified destruction of the U.S. vaping market, Congress should move the ‘grandfathering date’ from 2007 to 2016 for vaping products.
2. **Move to standards.** Instead of an authorisation regime, regulators should set consumer protection standards (mechanical, thermal, chemical, electrical) for devices and liquids.
3. **Communicate risk truthfully.** Health protection agencies should be reliable communicators of risk to the public. The current approach does not contribute to improved consumer awareness.
4. **Assess unintended consequences.** FDA is making major untested interventions in a market that is likely helping millions of Americans quit smoking. How will it know it is not doing harm?
5. **Permit vape marketing.** Vaping works for public health by its appeal to smokers. Efforts to ban elements of that appeal (flavours, marketing etc) amount to protection of the cigarette trade.