

examples - and if in doubt about a warped science narrative there is Dr Farsalinos' excellent [e-cigarette research blog](#). I don't want to labour them in this posting, because I really want to discuss *product* in the second part.

Professor West, who leads on this survey work, referring to reports of carcinogens such as formaldehyde in e-cigarette vapour, highlights the propaganda theory in his comment in the [Financial Times](#):

“misleading” and “sensationalist” reports were putting smokers off. “What they don’t say is the concentrations are negligible or the same as nicotine replacement therapies. In some cases they arise from using the e-cigarettes in a way that no one would use it,”.

By the way, Professor West's [short guide to misleading e-cigarette science](#) is a useful tool for navigating the propaganda spewing from academia into the public square. The point is we know that smokers' perceptions of risk are very far from accurately aligned with reality, and that this affects smoking and vaping behaviour - see [Farsalinos on this](#).

So it was particularly irritating, if predictable, to see WHO's FCTC secretariat apparently celebrating this decline in e-cigarette use, especially as the decline appears to coincide with their [appalling propaganda offensive](#) starting August of 2014.



Like a toddler with jam all over his
face denying all contact with cake

WHO is the biggest of all of [Big Tobacco's Little Helpers](#) and has probably led the world in inventing and amplifying these concerns while doing little to place the real risks in context - see my review of WHO's highly misleading risk communications ([PDF](#)).

2. Product: e-cigarettes are not up to the job

The other likely reason, also discussed in the [FT](#), is that e-cigarettes do not match the experience of smoking. Again, Robert West...

But although smokers are still using them as an aid to quitting, said Mr West, their popularity among continuing smokers has fallen as they find the devices do not always satisfy their nicotine cravings.

This is likely to be true but also probably quite subtle.... especially as 'e-cigarettes' are not one thing.



There are certainly people who find vaping a satisfactory alternative to smoking, but that is clearly not the full story. There are several possible explanations for why 'product' could be the issue (I'm not saying I know which) - each with a different remedy, and not mutually exclusive:

1. Technology? Maybe the category as whole is not good enough as an alternative to smoking - just doesn't work as a recreational drug delivery product, or has some other failings (a case for a regulatory framework that promotes continuing innovation - currently proceeding at a rapid rate prior to imposition of smothering EU and FDA bureaucratic burdens)
2. Access? Perhaps the technologies that people chose when they switch are not the ones that are good enough to keep them from smoking. The easy-to-buy products that are generally available in mass retail outlets are not the ones that work well, and good products may be crowded out by the mediocre. There is very little neutral advice available to new e-cigarette users on what to buy and blanket official disapproval rather than helpful orientation.
3. Cost of entry? Perhaps moving to the more effective products requires an

upfront capital investment - i.e. buying big batteries, tanks, mods etc... yet as a new user you may not know if you will like the experience. So there is a danger you'll have to spend big and then find the money wasted. For others, their budget might not allow a significant one off expenditure, however much they want it. So poverty and understandable risk aversion may confine some people to the less effective products.

4. Learning curve? Maybe the learning curve from naive user to experienced user is too long to retain a smoker's interest during a transition, especially for the products more likely to be a satisfactory alternative. The most successful products are also more complicated, requiring technical knowledge and skill to use. Not a barrier for geek-orientated vapers, but maybe for (many) others. Again, the thicket of advice is terribly dense, jargon-laden and ponderous on Facebook, commercial web sites, YouTube etc.
5. Missing aspects of smoking? Perhaps there are other aspects of smoking that matter, not just nicotine delivery: image and brand affinity, taste, sensory, other psychoactive elements such as MAOIs. This view forms some of the public health rationale for 'heat not burn' tobacco products - that they will appeal to more smokers because they more closely mimic the experience. That proposition will ultimately be tested in the marketplace. On the other hand, snus captures a large share of Swedish nicotine use and perhaps there is nothing inevitable about smoking habits.
6. Adverse trade-offs? Perhaps smokers are less willing to accept a diminished nicotine [pharmacokinetic](#) experience if they think the benefits are small. If they believe the health risks about the same, they can't vape indoors, that the costs are going up, why compromise on the nicotine hit? As hostile public health commentary and policies degrade the benefit side of the e-cigarette value proposition, perhaps smokers become less willing to compromise to achieve diminished benefits and become more sensitive to any losses associated with switching to e-cigarettes?
7. Repeat attempts? Perhaps users who had an unsatisfactory experience first time around with first generation products are not trying again with more modern products, at least not in sufficient numbers. Smokers get a strong 'buyer beware' message about e-cigarettes from all the authorities telling them they are unlicensed and unregulated. For nicotine and other smoking cessation medications, they are more likely to get

encouragement to “try, try and try again”.

8. Limited interest? Perhaps only a small fraction of the smoking population is interested in switching to vaping, and the rest just aren't bothered. Perhaps a small but interested segment has tried and either taken it on or shrugged and the stock of potential converts has dried up. This is quite unlikely I think - most people will ultimately act rationally in their own interests, taking account of the costs, benefits and uncertainties, *as they perceive them*, of any change of course. The question is when does an e-cigarette provide enough benefits to offset any losses? That will be something that shifts over time as alternative products improve. “Never” some will inevitably say. But I suspect most would say: “never say never” and remain interested. One [2012 survey of British smokers](#) found: *Among current smokers who were aware of but had never used e-cigarettes, approximately half were interested in using them in the future.*

Given all these interesting questions, and many more about reduced risk products, what a pity so much research effort and commentary goes into frightening people with misleading pseudo-science and so little, though not zero, goes into to deeper understanding of behaviours and preferences.

I'd be really interested in views of vapers and smokers on this: why is the rise of e-cigarettes stalling in England? Propaganda, product, both or neither? Please comment!