

Alarmist survey on teenage vaping misses the point - reaction

written by Clive Bates | 31 March 2015

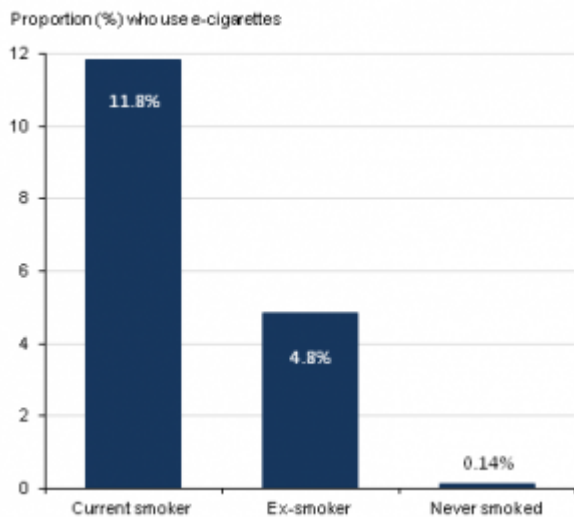
The [BBC](#), [Guardian](#), [Telegraph](#) and others report on a new study, [Associations between e-cigarette access and smoking and drinking behaviours in teenagers](#), that “*showed one in five had tried or bought e-cigarettes*”. The researchers put out a [forthright press release](#) and concluded e-cigarettes were the “*alcopops of the nicotine world*” and need tougher controls. Nice soundbite, but have the researchers, journal editors, peer reviewers and journalists really interpreted this survey correctly?

I think this study is being widely misunderstood or spun ...It may actually may be showing something that is a good news. Let's examine four things that must be considered when assessing the implications of this survey - then some [expert reaction](#) and [consumer reaction](#):

1. “Accessed e-cigarettes” is a poor measure of anything useful. This can mean as little as “tried or bought once”. It captures large numbers of kids messing about, experimenting or trying it just once but not really doing anything that consolidates into ‘current use’ or a pattern of behaviour that may potentially cause harm. It's a measure that generates the highest possible number and provides a basis for a moral panic, but gives no real insight into the scale of anything that might be harmful. The interesting numbers are about how many adolescents use e-cigarettes regularly or would describe themselves as ‘e-cigarette users’ - and what else we know about them (do they smoke? do they use nicotine containing products? do they do other risky things? do their parents smoke?). These more useful data were not collected or presented - the survey is an analysis of data collected for a different purpose.

2. Displacing smoking? The use of e-cigarettes among these users may not actually be a bad thing. It is highly likely that there are characteristics that incline kids to smoke and these also incline them to try e-cigarettes. Typically these would be parental smoking or vaping, inclination to experiment with illicit behaviours, general anti-authority attitude... So the rising use of e-cigarettes holds out the prospect that these adolescents are switching from something

known to be very dangerous (smoking) to something for which no harms have been established (vaping). It also seems likely that these common characteristics would better explain binge drinking or violence, rather than the odd idea that e-cigarettes might be causing bingeing and fights. We would expect e-cigarette use to rise among adolescents because it is a new technology and rising in use among adults - and is having a very positive influence on the health of users. As the [ONS shows](#), current use is overwhelmingly among smokers in the adult population.

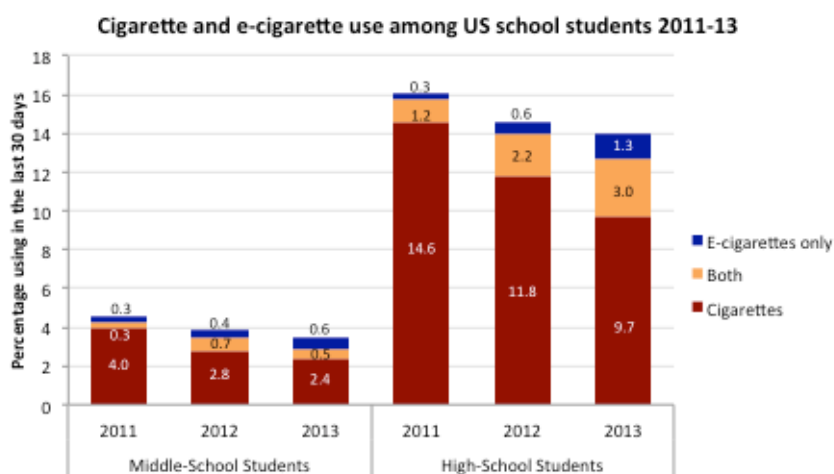


3. Diverting from smoking onset? Even among those who use e-cigarettes but have never smoked there may be good news... It is quite possible that some or most of these would otherwise have smoked had there been no e-cigarettes - so e-cigarettes may be diverting onset. We know something like this worked to reduce smoking in Scandinavia - young men who otherwise would have smoked started using snus (a form of smokeless tobacco) and never took up smoking. That has been good for health in Sweden - especially among men.

4. Gateway effect? Finally, the Faculty of Public Health and some other commentators adopt the most alarmist, but evidence free, interpretation they can and suggest that this points to a 'gateway' to smoking. Cross sectional ("snapshot") surveys like this cannot tell you anything about the transitions from vaping to smoking over (or vice versa) over time. However, vaping is *much more likely* to be an 'exit' than an 'entrance' to smoking as far as gates are concerned. That means it would displace smoking or head off onset of smoking. There's no evidence in this new survey or anywhere else that vaping creates a causal pathway to smoking... Looking at the smoking and vaping data over time suggests (but does not prove) the opposite, where this is measured properly (e.g. in the US,

France). The position looks like this in the United States:

E-cigarette growth coincides with decline in smoking



Sources: Raw data from CDC National Youth Tobacco Surveys 2012-13. Analysis and graphic by Brad Rodu

The rise of e-cigarettes coincides with a fall in smoking and decline in total use

Until the data on e-cigarette use among British teenagers is presented in the manner above it is premature and misleading to make alarmist comments about the rise of e-cigarette use... That is, to understand what is going on, we need to see: 1) current use; 2) as a trend over time; 3) with the important context of smoking behaviour measured on the same basis.

No-one, including me, feels comfortable about kids using e-cigarettes - but everyone should be mindful of the 'counterfactual' - what would they be doing in the absence of e-cigarettes? If e-cigarettes reduce harm to smokers, then there is no reason to frown on teenage smokers switching or using them instead of smoking.

Expert reaction

Worried by this survey? The best piece of expert advice designed for parents is by Lynn Kozlowski a thoughtful Professor of Public Health from New York - I recommend concerned parents and commentators read this:

[So your teenager is vaping e-cigarettes - should you worry?](#)

In terms of the science of the study itself, UK experts have weighed in to sound caution on over interpreting these findings:

The Stats Guy... terrific blog by Adam Jacobs a medical statistician and a kind of 'statistics vigilante', keeping researchers and journalists honest:

[Vaping among teenagers](#) [worth reading it all - but some extracts below]

"The claim that vaping is encouraging people to take up smoking isn't even remotely supported by the data. To do that, you would need to know what proportion of teenagers who hadn't previously smoked try vaping, and subsequently go on to start smoking. Given that the present study is a cross sectional one (ie participants were studied only at a single point in time), it provides absolutely no information on that.

"Even if you did know that, it wouldn't tell you that vaping was necessarily a gateway to smoking. Maybe teenagers who start vaping and subsequently start smoking would have smoked anyway. To untangle that, you'd ideally need a randomised trial of areas in which vaping is available and areas in which it isn't, though I can't see that ever being done. The next best thing would be to look at changes in the prevalence of smoking among teenagers before and after vaping became available. If it increased after vaping became available, that might give you some reason to think vaping is acting as a gateway to smoking. But the current study provides absolutely no information to help with this question.

While there are some important questions to be asked about how vaping is used by teenagers, I'm afraid this new study does absolutely nothing to help answer them.

Dr Carl V. Phillips, Director of Science at the [Consumer Advocates for Smoke-free Alternatives Association](#) (CASAA) provides a detailed and uncompromising retrospective peer review of this paper:

[A real peer review of Hughes et al paper on teenage use of ecigs](#) overview of his retrospective peer review with commentary

[Full review \(11 pages - PDF\)](#)

“So, welcome to the real world of public health journal peer review: Start with a manuscript that is dominated by political conclusions that do not follow from the results, and is also chock full of clear scientific errors. Send it to two reviewers who share the authors’ disdain for tobacco harm reduction (though they lie about that) and who clearly lack the scientific skills to spot even the glaring errors that could have been addressed without even changing the political rhetoric. Make a few utterly inconsequential changes. And publish it.”

Professor Robert West, Professor of Health Psychology, Department of Epidemiology and Public Health, University College London, said:

“This is a relatively large survey of one region in the UK. The key problem is not so much about the methods used as the interpretation of the findings. This study shows exactly the same as all the other studies. The data to date show that lots of young people are trying e-cigarettes, mostly smokers, but that almost no non-smokers continue to use them.”

“The kinds of young people who try e-cigarettes are pretty much the same people as those who try smoking. The conclusion that we should try to prevent young people from using e-cigarettes is pretty obvious but this does not follow from the study.”

Professor Linda Bauld, Professor of Health Policy, University of Stirling, said:

“There are now at least 37 peer-reviewed published studies reporting use of electronic cigarettes amongst young people in different parts of the world. This study adds to that literature by reporting on use from one region in England, where a large sample was asked about e-cigarettes alongside tobacco and alcohol consumption. Its findings are consistent with surveys in other countries.”

“What this study shows, as others have done, is that a significant proportion of young people are trying electronic cigarettes, including non-smokers. This underscores the need for age-of-sale restrictions of the kind that will soon be introduced in England.”

“However, while the study asks questions about frequency and amount of

tobacco and alcohol use, for e-cigarettes it only asks whether a young person has ever tried or purchased an e-cigarette. This ignores a key question, which is whether young people are regularly using e-cigarettes. Other surveys have so far found that progressing from ever trying an e-cigarette to regular use amongst non-smoking children is very rare or entirely absent, suggesting that, to date, e-cigarettes are not responsible for creating a 'new generation' of nicotine addicts, despite what some commentators have claimed."

Professor Marcus Munafò, Professor of Biological Psychology, MRC Integrative Epidemiology Unit, UK Centre for Tobacco and Alcohol Studies, School of Experimental Psychology, University of Bristol

"This study builds on what we already know - young people who have not smoked are experimenting with electronic cigarettes. There are a number of percentages referenced which can be a bit confusing. To clarify, from the figures presented it seems that less than 3% of the 16,193 youth sampled fell into the category of never having smoked but having accessed an e-cigarette. Of the 61.2% (9,699) of teenagers who reported never having previously smoked conventional cigarettes, 4.9% of them (475) had accessed e-cigarettes. These figures have been calculated from Table 1 and may be subject to a degree of rounding error. The results from this study are broadly consistent with previous large, representative surveys in the UK.

"Critically, these previous surveys have shown that while some young people are experimenting with electronic cigarettes, progression to regular use is rare. Product labels already indicate that electronic cigarettes are not for sale to under-18s, and in 2014 the UK government indicated that legislation will be brought forward to prohibit the sale of electronic cigarettes to under-18s.

"To describe electronic cigarette use as "a new drug use option" and part of "at-risk teenagers' substance using repertoires" is unnecessarily alarmist, given the evidence that regular use among never smokers is negligible, the lack of evidence that electronic cigarette use acts as a gateway to tobacco use, and the likely low level of harm associated with electronic cigarette use."

Dr Konstantinos Farsalinos, M.D. Researcher Onassis Cardiac Surgery Center, Athens Greece

The findings have nothing to do with the conclusion that there is a need to restrict e-cigarette access to youth. They admit themselves that they do nothing but experiment with them. I would prefer that they use them to quit smoking, but nothing bad will happen with experimentation.

Vaping consumer reaction

Sarah Jakes of the [New Nicotine Alliance](#) (NNA) which campaigns for vapers and vaping, said:

“This survey adds little of value to what we already know. It’s hardly news that 14-17 year olds experiment with many things and given that e-cigarettes are a new and developing technology it would be surprising if some didn’t try them – but that shouldn’t be a cause for a moral panic. Most vapers and all companies support the UK government intention to introduce a ban on sales to people under the age of 18.

“The survey isn’t designed to detect a gateway either to or from smoking and anyone claiming it shows something new and worrying is just being alarmist and misleading. Similarly, a correlation between e-cigarette use and binge drinking and / or alcohol related violence doesn’t tell you that vaping causes heavy drinking or fighting, but it might tell you that a certain type of adolescent is more like to do all of these. Common sense tells us that young people who binge drink might be more likely to try things like e-cigarettes but common sense is sadly lacking in some areas of the e-cigarette debate and indeed in the media stories which trumpet it.

“Some of the comments provided by academics to the media are just irresponsible scaremongering. The Committee of Advertising Practice already regulates the advertising of e-cigarettes and the targeting of young people is not permitted. Once the government implements the under age sales ban it is difficult to see what problem the authors would wish to be solved.