



# E-cigarettes: a new foundation for evidence-based policy and practice

## Introduction

Smoking rates in England are in long-term decline. However, tobacco use remains one of the country's major public health challenges with the harm increasingly concentrated in more disadvantaged communities. Over recent years, e-cigarettes have risen in popularity to become the number one quitting aid used by smokers.<sup>1</sup> This consumer-led phenomenon has attracted considerable controversy within public health and beyond, with the unfortunate consequence of confusion among the general public about the relative risks of nicotine, e-cigarettes and smoked tobacco.

Public Health England (PHE) has a key role in mobilising the evidence base to protect public health and reduce inequalities. Our response to the uncertainty and controversy associated with e-cigarettes has been to establish a sound evidence base. In our first year we commissioned independent evidence reviews from leading UK researchers Professor John Britton<sup>2</sup> and Professor Linda Bauld.<sup>3</sup> These were published in May 2014 to coincide with our national symposium on e-cigarettes and tobacco harm reduction.

Together with Cancer Research UK we have set up the UK Electronic Cigarette Research Forum to discuss new and emerging research, develop knowledge and understanding, enhance collaboration among researchers interested in this topic, and inform policy and practice.

This latest comprehensive review of the up-to-date evidence on e-cigarettes, commissioned from Professor Ann McNeill and Professor Peter Hajek, synthesises what is now a substantial international peer-reviewed evidence base on e-cigarettes. It provides a firm foundation for policy development and public health practice in the context of new regulations for e-cigarettes to be introduced in the UK from May 2016 under the revised EU Tobacco Products Directive (currently under consultation).

## Main findings of the evidence review

The report details the steady increase in the use of e-cigarettes in England over recent years (fig 1). This increase has taken place in the context of continued long-term declines in smoking prevalence among adults (fig 2) and youth (fig 3).

Figure 1

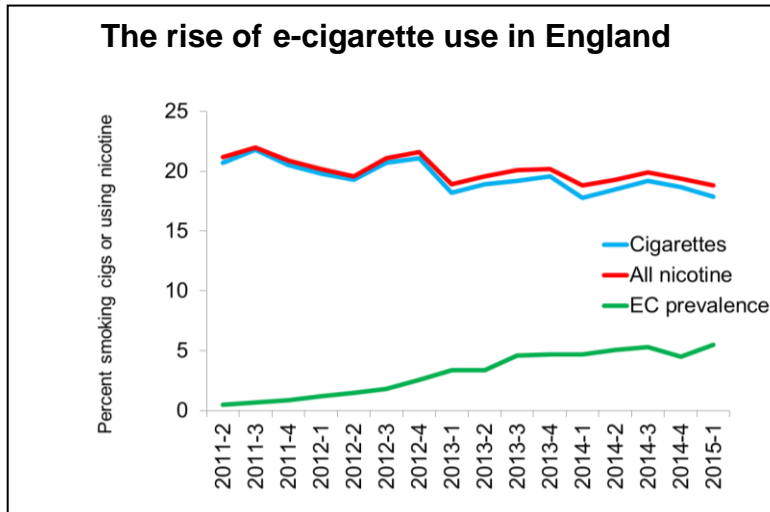


Figure 2

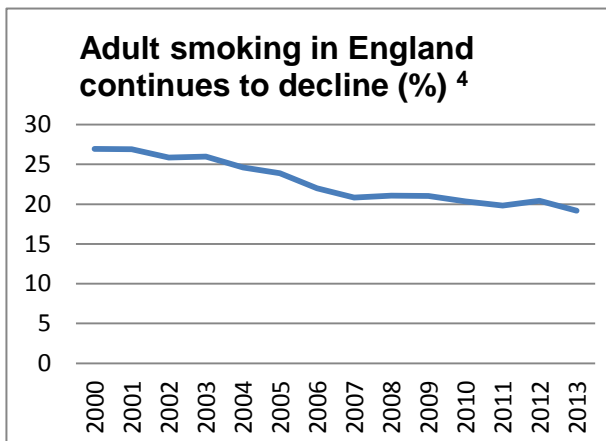
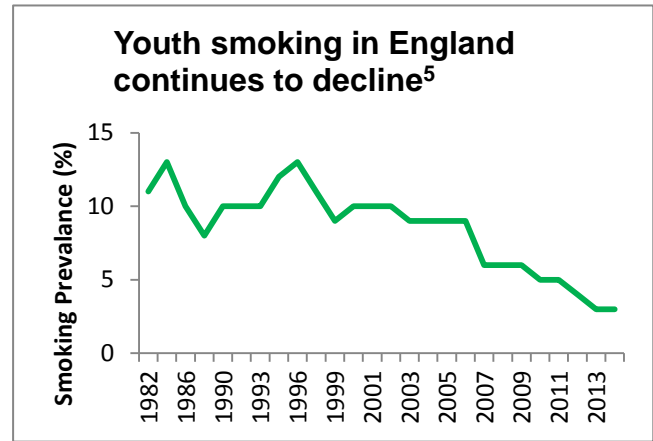


Figure 3



The authors find that among adults and youth, regular use of e-cigarettes is found almost exclusively among those who have already smoked. The highest rates of e-cigarette use are found among adult smokers. E-cigarettes have rapidly become the most widely used quitting aid in England (fig 4).

Figure 4

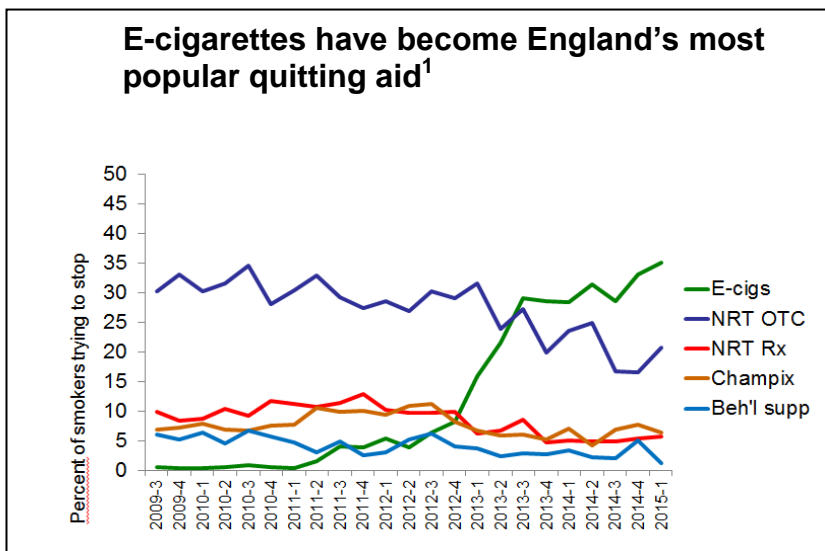
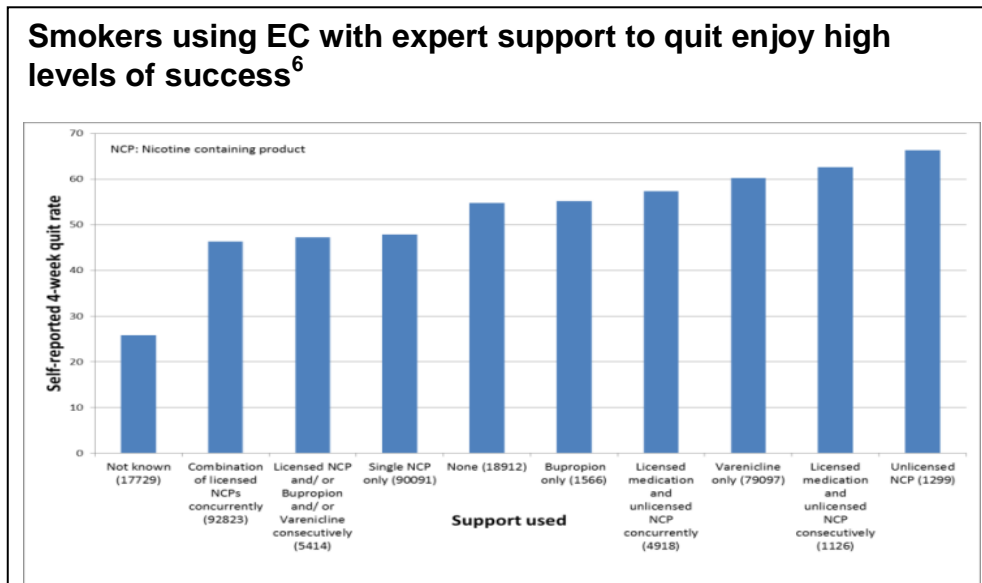


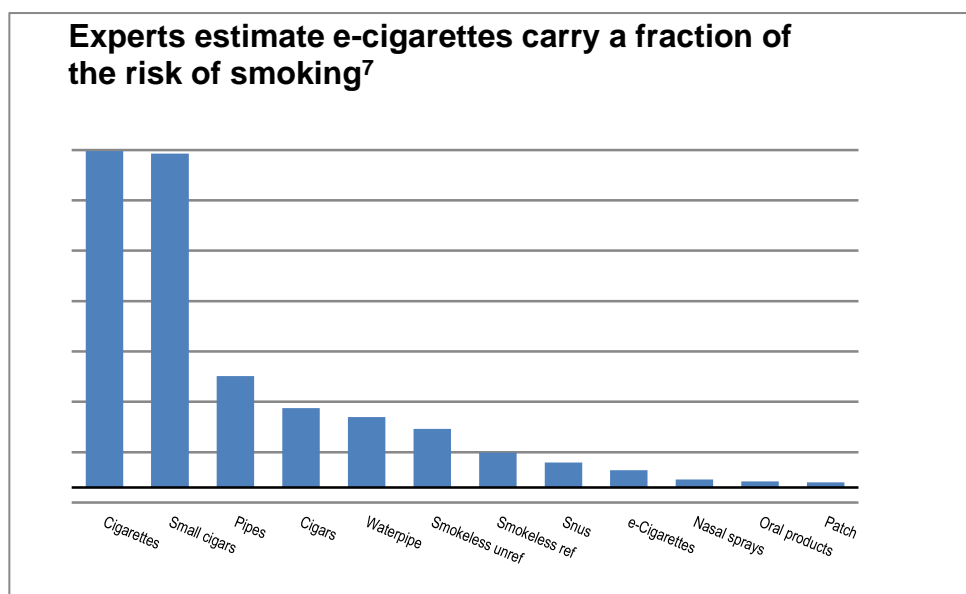
Figure 5



Recent studies support the Cochrane Review<sup>7</sup> findings that e-cigarettes can be effective in helping people to quit smoking. In local stop smoking services across England the relatively small number of smokers who have combined e-cigarettes with expert support have had high rates of success (fig 5).

Under the current regulatory system individual e-cigarette products vary considerably in quality and specification. We also do not yet have data on their long-term safety. However, the current best estimate by experts is that e-cigarette use represents only a fraction of the risk of smoking (fig 6).

Figure 6



## Safety and the perception of risks

It is important that the public be provided with balanced information on the risks of e-cigarettes, so that smokers understand the potential benefits of switching and so non-smokers understand the risks that taking up e-cigarettes might entail:

- when used as intended, e-cigarettes pose no risk of nicotine poisoning to users, but e-liquids should be in 'childproof' packaging. The accuracy of nicotine content labelling currently raises no major concerns
- the conclusion of Professor John Britton's 2014 review for PHE, that while vaping may not be 100% safe, most of the chemicals causing smoking-related disease are absent and the chemicals present pose limited danger, remains valid. The current best estimate is that e-cigarette use is around 95% less harmful to health than smoking
- e-cigarettes release negligible levels of nicotine into ambient air with no identified health risks to bystanders
- over the last year, there has been an overall shift among adults and youth towards the inaccurate perception of e-cigarettes as at least as harmful as cigarettes

## Implications of the evidence for policy and practice

Based on the findings of the evidence review PHE also advises that:

- e-cigarettes have the potential to help smokers quit smoking, and the evidence indicates they carry a fraction of the risk of smoking cigarettes but are not risk free
- e-cigarettes potentially offer a wide reach, low-cost intervention to reduce smoking in more deprived groups in society where smoking is elevated, and we want to see this potential fully realised
- there is an opportunity for e-cigarettes to help tackle the high smoking rates among people with mental health problems, particularly in the context of creating smokefree mental health units
- the potential of e-cigarettes to help improve public health depends on the extent to which they can act as a route out of smoking for the country's eight million tobacco users, without providing a route into smoking for children and non-smokers. Appropriate and proportionate regulation is essential if this goal is to be achieved

- local stop smoking services provide smokers with the best chance of quitting successfully and we want to see them engaging actively with smokers who want to quit with the help of e-cigarettes
- we want to see all health and social care professionals providing accurate advice on the relative risks of smoking and e-cigarette use, and providing effective referral routes into stop smoking services
- the best thing smokers can do for their health is to quit smoking completely and to quit for good. PHE is committed to ensure that smokers have a range of evidence-based, effective tools to help them to quit. We encourage smokers who want to use e-cigarettes as an aid to quit smoking to seek the support of local stop smoking services
- given the potential benefits as quitting aids, PHE looks forward to the arrival on the market of a choice of medicinally regulated products that can be made available to smokers by the NHS on prescription. This will provide assurance on the safety, quality and effectiveness to consumers who want to use these products as quitting aids
- the latest evidence will be considered in the development of the next Tobacco Control Plan for England with a view to maximising the potential of e-cigarettes as a route out of smoking and minimising the risk of their acting as a route into smoking

## Next steps for PHE

PHE's ambition is to secure a tobacco-free generation by 2025. Based on the evidence, we believe e-cigarettes have the potential to make a significant contribution to the endgame for tobacco. With opportunity comes risk, and a successful approach will be one that retains vigilance and manages these risks, while enabling a flourishing and innovative market with a range of safe and effective products that smokers want to use to help them quit.

From October this year, new regulations prohibiting the sale of e-cigarettes to under-18s and purchase by adults on behalf of under-18s will provide additional protection for young people. The government is consulting on a comprehensive array of regulations for e-cigarettes under the revised EU Tobacco Products Directive, for introduction from May 2016.

As part of our ongoing work to build an evidence-based consensus to support policy and practice on e-cigarettes, PHE will:

- continue to monitor the evidence on uptake of e-cigarettes, health impact at individual and population levels, and effectiveness for smoking cessation as products and technologies develop

- hold a second national symposium on e-cigarettes and harm reduction in spring 2016 to present the latest evidence and discuss its implications for policy and practice
- provide the public with clear and accurate information on the relative harm of nicotine, e-cigarettes and smoked tobacco. Nearly half the population don't realise e-cigarettes are safer than smoking, and studies have shown that some smokers have avoided switching in the belief that e-cigarettes are too dangerous
- publish framework advice to support organisations in developing evidence-based policies on use of e-cigarettes in enclosed public places and workplaces. This follows an engagement exercise conducted with public health partners and the wider stakeholder community to discuss the evidence and invite their input on its implications
- commission the National Centre for Smoking Cessation and Training to provide training and support to stop smoking practitioners to improve their skills and confidence in advising clients on the use of e-cigarettes
- monitor tobacco industry involvement in the evolving e-cigarettes market and exercise continuing vigilance to ensure we meet our obligations under Article 5.3 of the Framework Convention on Tobacco Control to protect public health policy from commercial and other vested interests of the tobacco industry

<sup>1</sup> Smoking Toolkit Study [www.smokinginengland.info](http://www.smokinginengland.info)

<sup>2</sup> [www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/311887/E-cigarettes\\_report.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/311887/E-cigarettes_report.pdf)

<sup>3</sup> [www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/311491/E-cigarette\\_uptake\\_and\\_marketing.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/311491/E-cigarette_uptake_and_marketing.pdf)

<sup>4</sup> Statistics on Smoking, England 2015 HSCIC [www.hscic.gov.uk/catalogue/PUB17526/stat-smok-eng-2015-rep.pdf](http://www.hscic.gov.uk/catalogue/PUB17526/stat-smok-eng-2015-rep.pdf)

<sup>5</sup> Smoking drinking and drug use among young people in England 2014, HSCIC, [www.hscic.gov.uk/pubs/sdd14](http://www.hscic.gov.uk/pubs/sdd14)

<sup>6</sup> Stop Smoking Service Quarterly Returns 2014-5, HSCIC, [www.hscic.gov.uk/stopsmoking](http://www.hscic.gov.uk/stopsmoking)

<sup>7</sup> McRobbie H, Bullen C, Hartmann-Boyce J, Hajek P. Electronic cigarettes for smoking cessation and reduction. Cochrane Database of Systematic Reviews 2014, Issue 12. Art. No.: CD010216. DOI: 10.1002/14651858.CD010216.pub2

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