

Targeting the supply and sale of e-cigarettes to smokers



Key points:

- E-cigarettes are significantly less harmful than cigarettes, with increasing evidence that they can aid smoking cessation
- Among smokers who have never vaped, only 1 in 8 (12%) correctly believe e-cigarettes are a lot less harmful than cigarettes
- Specialist vape stores are the visible face of e-cigarettes on the high street, with supermarkets, convenience stores and online stores also major retailers
- There are 1,700 specialist vape stores in the UK, with around 650 of these opening in 2016
- An RSPH investigation found that almost 9 in 10 vape stores are knowingly or unwittingly encouraging non-smokers to begin vaping

Calls to action:

- E-cigarette retailers to adhere to a code of best practice
- Business rates relief to be considered as a means to incentivise small retailers to no longer sell tobacco products
- An end to tobacco advertising in trade publications
- All local stop smoking services to become e-cigarette friendly
- MHRA to encourage and support more e-cigarette manufacturers through the medicinal licensing process, so that suitable products can be prescribed on the NHS

Introduction

Despite great progress, smoking is still the leading cause of preventable illness and death in the UK, killing approximately 260 people every day,¹ more than the next five largest causes of preventable death combined. Disease and death from cigarette smoking place a huge financial burden on healthcare services, the welfare system and employers, with costs to society of £12.9 billion per year,² more than the estimated £12 billion in tobacco revenue received by the UK treasury each year.³ Moreover, there is a clear social pattern to tobacco use which makes it a major contributing factor in health inequalities, with smoking behaviour accounting for half the difference in life expectancy between the richest and poorest quintiles in the UK.⁴

Currently in the UK there are approximately 9.1 million smokers,⁵ a figure which is the result of a steady and dramatic decrease in smoking rates over the past fifty years. In 1974, 51% of men and 41% of women in the UK were smokers;⁶ this has fallen to 19% of men and 15% of women in 2015.⁷ Importantly, this overall decline has been reproduced among young people, with regular smoking prevalence among 11-15 year olds, for example, falling from 12% in 1983 to 3% in 2014 (despite a brief spike in the mid-1990s)⁸.

The decline in smoking rates can be attributed to various factors. Over the past fifty years, we have seen a raft of government legislation to reduce smoking levels, beginning with the ban on tobacco advertising on television in 1965, and followed by, for example, the introduction of health warnings on packaging in 1971,

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and the ban on smoking in enclosed public spaces in 2007.^{9,10} Most recently changes have focused on the retail environment and the products themselves, with a ban on point-of-sale display of cigarettes from 2012 for larger shops and 2015 for smaller ones. Legislation on standardised cigarette packaging also came into effect in 2016, meaning that from May 2017 all cigarette packets on sale will look the same, apart from the make, brand name and health warnings.¹¹

While this progress is encouraging, if we are to achieve a smoke-free generation we will need to continue to make progress in supporting existing smokers to quit. One effective means of doing this is to encourage smokers to switch from tobacco to e-cigarettes as a means of smoking cessation.

Role of e-cigarettes in stopping people smoking

There is growing evidence demonstrating the efficacy of alternative nicotine products for smoking cessation, especially when combined with appropriate behavioural support. Routine data from Stop Smoking Services suggests that, when Nicotine Replacement Therapy (NRT) is used alongside their services, the chance of quitting long term is four times higher than for an unaided quit attempt.¹² Similar benefits have been identified for e-cigarette use alongside behavioural support, with evidence coming from wide scale crosssectional data¹³ as well as randomised longitudinal studies.^{14,15}

The largest recent data set which provides evidence on smoking cessation is the Smoking Toolkit Study (STS),¹³ a nationwide survey, which indicates that the 4-week quit rate for attempts with e-cigarettes is at least as high as that of attempts using other medication. Among all smokers using Stop Smoking Services, the average quit rate is 51%, whereas among the service users who were also e-cigarette users, the quit rate was 66%.¹⁴ Though not unequivocal, this result is consistent with, and suggestive of, the effectiveness of e-cigarettes as cessation aids. This proposition is also consistent with the steady increase in recent years of the proportion of vapers who are ex-smokers – from 1 in 3 in 2014 to approximately 1 in 2 in 2016.¹⁵

The most recent support from randomised trials for the efficacy of e-cigarettes as cessation aids comes from a Cochrane review, published in September 2016, which concluded there is evidence that e-cigarettes aid long term smoking cessation, while noting that this area would benefit greatly from further trials.¹⁶ These findings are further bolstered by research published in The BMJ at the same time, based on STS data, which estimated that e-cigarette use leads to an additional 16,000-22,000 people quitting smoking each year who would not otherwise have done so.¹⁷

It is therefore important, as recognised in the Royal College of Physicians (RCP) report, *Nicotine without smoke*,¹⁸ to promote wider use of e-cigarettes as a smoking cessation tool, along with other alternative nicotine products, as a means to significantly boosting the number of smokers who quit.

Addressing concerns around vaping

There is a lack of understanding among both the public and some medical professionals about vaping, which may be acting as a significant barrier to their usage. For example, among smokers who have never used e-cigarettes, as few as 12% believe that vaping is "a lot less harmful" than smoking,15 even though many in the UK public health community now believe e-cigarettes carry a much lower risk than tobacco. These figures are seriously concerning: we know that two thirds of the UK's nine million smokers want to quit,¹⁹ yet many of them may overlook a device which could help them do so, simply because they don't know how much safer it is. Research has shown that perceptions of harm can indeed inhibit the use of e-cigarettes among smokers,²⁰ and this barrier will only be exacerbated if the concerns of the public and healthcare professionals go unaddressed. Some of the most common concerns around vaping include the following:

Long term health risks

Concerns have been raised over the unknown long term health risks of certain artificial flavourings found in e-liquids. Diacetyl has been linked to a respiratory condition known as 'popcorn lung' - owing to its increased incidence in popcorn factory employees, who are exposed to abnormally high diacetyl concentrations.²¹ This is a live area of e-cigarette research, but it is vital that the focus remains on relative and not absolute risk: even for the few e-cigarette brands that still contain diacetyl, the concentration is several hundred times lower than it is in cigarettes,²²

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and smoking has not yet been determined as a risk factor for popcorn lung or other related conditions.²³

Another concern is that while much is known about the safety of flavourings for ingestion, their safety when inhaled remains untested. For example, pulegone and menthofuran, listed as possible carcinogens in humans, are often found in peppermint flavouring,²⁴ and though they are found in e-liquids at levels known to be harmless to humans when ingested, it is not yet clear that the same holds true when inhaled.

While the need to be vigilant to new research on the inhalation of flavourings is clear, it is unlikely to alter the overarching judgment that e-cigarettes carry but a fraction of the risk of smoked tobacco.¹⁸ For this reason, though the e-cigarette should not be advocated as a lifestyle product, it remains an unambiguous harm reduction tool for any smokers who can make the switch.

• Dual use

There are many different ways in which people try to quit smoking, and some do so by aiming to gradually reduce their cigarette intake over time, while concurrently using alternative nicotine products to satisfy their nicotine dependency. It is therefore not uncommon for smokers who begin using e-cigarettes to continue smoking tobacco at the same time. Some have raised concerns that such "dual users" may be sustaining their tobacco intake at a significant level and for a long time, leading people to question whether they are reducing their harm exposure after all. The current proportion of e-cigarette users who dual use - understood as those who regularly vape but also smoke - is approximately half.¹⁵ While there is no evidence that dual use increases a smoker's tobacco consumption, it should be stressed that there is no safe level of smoking. More needs to be done to encourage vapers who continue to smoke to make the leap, and "switch and break" the smoking habit.

In theory, if smokers get some nicotine from an alternative (and less harmful) source, the nicotine they need from cigarettes should decrease, leading to fewer cigarettes being smoked. However, in the case of continuing smoking while using NRT products, a 2013 systematic review found that dual use was associated with little to no reduction in cigarette consumption.²⁵ Most recently, a 2017 study found that dual use of NRTs or e-cigarettes with cigarettes was not associated with any substantially reduced levels of carcinogens and toxins, relative to smoking only cigarettes.²⁶ Therefore, while there is a need for

more research in this area, the current evidence base indicates that dual use of tobacco and e-cigarettes does not effectively reduce harm exposure.

It has also been claimed that prolonged dual use can hamper a directed guit attempt, sustaining the harm exposure to someone who otherwise might have quit smoking entirely at an earlier time. Research is still needed to determine whether this is the case for e-cigarettes, but a systematic review found that in the case of using NRT for smoking reduction, there is a positive association with both attempts to guit smoking and with successful smoking cessation.²⁵ In fact, current licensed NRT products are approved for cutting down on smoking through dual use, and they are recommended on the basis that dual use is likely to increase quit attempts.²⁷ If e-cigarettes function in a similar manner to other alternative nicotine products, dual use involving e-cigarettes should also be regarded as a viable pathway to guitting - not as an obstacle. Dual use is not, however, a viable harm reduction behaviour, and it is vital to encourage as many dual users as possible to give up completely.



Gateway

A recurring contention around e-cigarettes is that their use by non-smokers could potentially act as a gateway behaviour towards smoking. A report from the US Surgeon General in December 2016 described vaping among young people in the United States as a public health concern – an assessment that was in part down to a focus on potential for absolute, as opposed to relative harm, but also the contention that vaping may be causing people to start smoking.²⁸ A related concern is that certain fruit flavours of e-liquid popular with young people may be attracting non-

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smokers in this group to try vaping. While it is important to remain vigilant to these possibilities, any worries should be tempered by the fact that in Britain, regular e-cigarette use among young people and adults is almost entirely confined to those who currently smoke or have previously,^{29,18} and there is currently no evidence of a gateway effect in the UK.

The existing studies on the gateway effect involve checking participants for smoking and vaping behaviour, then following up on the same participants at a later date. If those who, at outset, were e-cigarette users but had never smoked are more likely to be users of tobacco products at the follow-up date, it is claimed that a gateway effect is responsible. The Surgeon General report identified this effect in five different studies, all based in the USA.²⁸

However, there are significant challenges to these findings, including small sample sizes, and studies failing to distinguish between participants who had become regular e-cigarette users by the follow-up date and those who had simply experimented with vaping at some point during the same period.

The magnitude of the gateway effect observed in these studies is typically small.²⁸ In contrast, one of the strongest

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Since their introduction into the UK in 2005, e-cigarettes have experienced a surge in popularity, with 2.8 million adults in Great Britain using regularly in 2016, up from just 700,000 in 2012.¹ Of the 2.8 million, nearly as many were ex-smokers (1.3 million) as were current smokers (1.4 million), while among those who have never smoked at all the number of e-cigarette users remains small.¹⁵ While greater research is required to fully understand the long-term health impacts of e-cigarette usage, there is a growing but not yet universal consensus amongst UK health professionals that these products offer a safer alternative to combustible tobacco products, and an effective means of quitting smoking altogether.

The UK's e-cigarette market is the second largest globally, after the USA, and was estimated by Cancer Research UK at £445 million in 2015.³² This figure is expected to grow to £510 million in 2017, with the UK market following the global trend toward expansion.³² In 2015, the majority of UK sales were made at supermarkets, followed by convenience stores. These retailers typically sell e-cigarettes at point-of-sale, either at a tobacco counter or alongside tobacco products.

However, recent years have seen an upsurge of specialist vape stores: figures from ECigIntelligence

and best known determinants of smoking uptake among young people is parental role modelling in the home.³⁰ Since e-cigarettes can help parents to stop smoking at home in large numbers, they may have the potential to be a huge driver for falling uptake rates of smoking among young people – not the opposite.

Nevertheless, the possibility of a gateway progression to smoking cannot be dismissed: it is therefore important that e-cigarettes are targeted exclusively at smokers, and that the minimum age of sale (18) is properly enforced.

Passive inhalation

According to the current evidence base, there is no evidence of secondary harm to bystanders from the vapour exhaled by e-cigarette users.¹⁸ Despite a lack of consensus on the exact effects of second-hand vapour, it is very likely that, due to the far lower concentration of toxic substances in e-cigarettes, it is substantially less harmful to bystanders than cigarette smoke. As for nicotine, a Public Health England (PHE) review of the evidence concluded that vaping releases only negligible levels into the ambient air, with "no identified health risks to bystanders."³¹

show that they now number approximately 1,700 nationwide, with around 650 of these opening last year.³³ This includes the growth of chain retailers such as Vaporised and VIP, which now has upwards of 100 UK stores. For many members of the public, these high street stores are the visible face of vaping.

Robust national data on purchasing trends at different retailer types are not available; however, there appears to be growth in the market share of specialist vape shops.³⁴ It is also clear that a significant proportion of sales occur online, with many independent retailers having both an online and high street presence.³² E-cigarettes are also sold at many other small retail outlets, such as petrol stations, pound shops and, since February 2014, pharmacy chains such as Lloyds and Boots, where they are often positioned alongside NRT and other health products.

Though the market for e-cigarettes was led by small companies, major tobacco companies such as British American Tobacco (BAT) and Philip Morris International (PMI) have become increasingly involved in the past five years.³² Between them they now control a majority share of the global e-cigarette market,³² and produce seven of the UK's ten best-selling e-cigarettes of 2016.³⁵ Despite this, there are as yet no specialist UK vape shops that are tobacco industry owned.



What is RSPH calling for?

E-cigarette retailers to adhere to a code of best practice

Despite the proven harm reduction potential of e-cigarettes, their image within a sceptical media and public is negative, with widespread concerns about their unknown health risks and potential uptake among young people and nonsmokers. It is crucial for vape retailers to be, and be seen to be, responsible retailers of evidence-based quitting aids, so that e-cigarettes are viewed as a harm reduction tool for smokers, and not a lifestyle product. Part of this responsibility means ensuring e-cigarettes are targeted exclusively at smokers, and guarding against a possible growth in the appeal of vaping to a younger generation of non-smokers.

In a recent investigation, researchers from RSPH made undercover visits to 100 specialist vape shops across England, Scotland, and Wales, to record the way vendors sell to new customers who have never vaped before.

- In 55% of stores, the vendor screened the researchers by asking whether they smoked.
- Of the stores that screened, 3 in 4 (76%) continued to encourage the customer to begin vaping, despite the researchers telling them they do not smoke.
- In the remaining 45% of stores, the vendor did not screen the customer, and then continued the interaction without knowing they were attempting to sell to a non-smoker.
- Overall, the research suggests that at almost 9 in 10 vape shops (87%), vendors are either knowingly or unwittingly encouraging non-smokers who have never vaped to start using e-cigarettes.

RSPH is calling for vape retailers to adhere to a code of best practice. The transparent adoption of responsible business practice could help reassure the public, and guard against accusations that the surge we are seeing in vaping represents a future population health risk. Codes of practice for vape retailers do exist already, most notably the Independent British Vape Trade Association (IBVTA) code,³⁶ to which all retailers should be encouraged to sign up. These are helpful, but do not fully cover the following three areas of best practice that we are calling to be adopted by all retailers of vape products. We believe these can help the e-cigarette retail sector build a reputation as one that maximises opportunities for harm reduction while minimising risks to health.

Screen new customers for current smoking behaviour

Vape retailers should screen new customers to ensure they are either current or former smokers. Customers who are neither current smokers, former smokers, or current vapers, should be advised against using e-cigarettes, on the basis that, though far safer than tobacco, their long term behavioural and medical effects are not fully known, and moreover, those that contain nicotine are addictive.

Recent polling commissioned by RSPH shows that over two thirds of the public (68%) would be in support of e-cigarette retailers advising those who have never vaped or smoked against starting vaping.

IBVTA Code of Conduct; point 3:

"Vape products are for current or former smokers and existing users of vaping devices, therefore never knowingly sell to anyone who is not a current or former smoker, or a current vaper."

RSPH supports the IBVTA Code of Conduct on this point, and encourages its inclusion in any future set of retail practice guidelines.

Ensure all customers who smoke are aware of their local stop smoking service

Retailers should be prepared to make all customers who smoke aware of their local stop smoking service, and how to find it. Behavioural support services can significantly boost the chances of successfully switching from smoking to vaping, and so can be of great benefit to both first-time vapers as well as longer term dual users.

Adopt a Challenge 25 approach to enforcement of e-cigarette age of sale enforcement

Since October 2015 it has been illegal to sell nicotineinhaling products to anyone under 18, yet over a year later, investigations by the Chartered Trading Standards Institute have shown that many e-cigarette retailers are failing to enforce this properly.³⁷ Among the worst culprits are specialist e-cigarette stores, of whom half were found to be making illegal sales. As well as being a breach of law, this poor age of sale enforcement ties in to the worries many people have about young people developing a nicotine dependency through vaping. It is therefore important that the vape retail sector can demonstrate compliance with age of sale legislation, in order to develop their credibility as a positive factor in public health.

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The Challenge 25 scheme was introduced by the British Beer and Pub Association for customers buying cigarettes and alcohol products; those who look under the age of 25 are asked to provide ID. Retailers who have taken on the Challenge 25 policy have made considerable progress in curbing underage sales of alcohol,³⁸ and we believe vape retailers should adopt this approach. By doing so, vape retailers can openly demonstrate their commitment to minimising the exposure of e-cigarettes to children and young people, as well as their full compliance with the law.

We recognise that e-cigarette sales take place in a variety of retail environments, and that following all best practice guidelines may not be possible in some retailers, such as supermarkets, where the level of customer service is not sufficiently high. That being said, many supermarket staff are already experienced at enforcing age of sale laws using Challenge 25, and they could also keep information on the local stop smoking service clearly on display at all times.

Similarly, online retailers are unable to provide the same support as specialist vape stores, but could do more with regards to best practice. In an audit of 20 popular online retailers conducted by RSPH, the majority (65%) were found to have age checks for new site visitors, warning under 18s of the law, but none provided signposting towards, or a location for, local stop smoking services. The latter could be achieved by a site visitor simply entering their postcode and being informed of their local service, or the phone number of a quitting helpline.

Business rates relief to be considered as a means to incentivise small retailers to no longer sell tobacco products

Retailers who sell tobacco as well as e-cigarettes could be incentivised to encourage their customers who smoke to instead switch to e-cigarettes. With the profit margin on e-cigarettes around 40%, compared to 6% for tobacco products,³⁹ any retail practice that boosts vape sales at the expense of tobacco sales is likely to return higher overall profits. RSPH therefore echoes calls by ASH in their 2016 report, Counter Arguments,⁴⁰ for small retailers to reduce tobacco stock to core products, and use the freed-up space behind the counter to increase the visibility of higher profit margin products, such as e-cigarettes and other alternative nicotine products. Small retailers could enhance their capability to help nudge customers from smoking onto vaping, both by using point-of-sale displays targeting e-cigarettes at smokers, as well as cross-selling of e-cigarettes to customers purchasing tobacco.

In addition to the greater profit margin for e-cigarettes and NRT compared to tobacco, the business rates system could provide a mechanism to better incentivise small retailers to destock cigarettes. This could include offering discretionary relief to businesses which no longer sell tobacco products. Such tax relief is already provided to certain businesses – for example those with charitable or non-profit status – and would provide an extra incentive for small retailers to take steps that would encourage their customers to switch off smoking and onto vaping.



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An end to tobacco advertising in trade publications

Trade publications for the convenience store sector are a major platform in the UK where tobacco advertising still occurs regularly. Under the Tobacco Advertising and Promotion Act of 2002,⁴¹ advertising of tobacco products in the press and on billboards became prohibited, yet trade publications such as Convenience Store currently enjoy an exemption from this ban. RSPH calls for this exemption to be lifted, thereby further reducing exposure to tobacco advertising, and making retailers more likely to push safer products to their customers.

This recommendation is a call for the UK's ongoing commitment to the WHO Framework Convention on Tobacco Control, whose Article 13 requires parties to the treaty to undertake a "comprehensive ban on all tobacco advertising", including "*all* forms of *commercial communication* [and] *recommendation*."⁴²



Tobacco advertising is still widespread in trade publications such as Convenience Store.⁴²

All local stop smoking services to become e-cigarette friendly

It is estimated that roughly one third of smokers try to quit each year,¹⁹ but just 4% of those who try unaided are successful in doing so over the longer term.¹² The health and financial benefits of stopping smoking are well established, but giving up can pose a real challenge for many. The local stop smoking services, established in 1999, seek to support individuals to quit smoking by providing advice, as well as a range of smoking cessation aids, including NRT and medication.⁴⁴ Research has shown that when used alongside combination NRT, the behavioural support service assists roughly 15% to quit and remain smoke-free after 12 months,¹² making long term quit success as much as four times more likely than when attempted unaided.

E-cigarette use for quitting has been increasing for some years, and is now involved in 2 in every 5 quit attempts.⁴⁵ Only a small proportion of these attempts are combined with behavioural support, but those that are have a four-week quit rate of 66%, which is higher than the average four-week quit rate at stop smoking services.⁴⁶ RSPH is therefore calling for a recognition that, in order to maximise the number of smokers who quit, an effective strategy would be to combine the most popular quitting device – e-cigarettes – with the most effective support – stop smoking services. At present, however, there is significant variation between services in terms of their approach to e-cigarettes. Stop smoking services in Leicester became the first 'e-cigarette friendly' service in 2014, meaning that they will provide support and guidance to those seeking to quit using an e-cigarette.⁴⁷ Whilst other services have followed suit, this approach is not universal. Data from English stop smoking services show that in the year 2014-15 just 4,000 quit attempts were made using unlicensed NCPs.⁴⁶

RSPH therefore calls on commissioners and smoking cessation services to adopt an 'e-cigarette friendly' approach, and use the opportunities to better evaluate the effectiveness of these products for supporting smoking cessation. This echoes the official PHE advice that "stop smoking services should support smokers using e-cigarettes to quit by offering them behavioural support."³¹ Many pharmacies have stop smoking services attached: it is really important that these stores have e-cigarettes for sale and can help smokers use them to quit by providing cooperative support services.

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MHRA to encourage and support more e-cigarette manufacturers through the medicinal licensing process, so that suitable products can be prescribed on the NHS.

E-cigarette products in the UK can be brought to market through one of two regulatory channels: manufacturers can apply for a medicinal licence through the Medicines and Healthcare products Regulatory Agency (MHRA), or instead opt for the consumer route. The consumer route to market, regulated under the EU Tobacco Products Directive (TPD), places different and more significant restrictions on the product.

Of these differences, the most important is that only licensed products can be prescribed on the NHS. For this reason, medicinal licensing would provide the most promising route towards maximising the availability of a proven harm reduction tool to smokers nationwide. Availability on prescription will provide reassurance to smokers of the safety and effectiveness of the product as a quitting aid. On top of this, licensed products can be advertised in ways and places that consumer products cannot. Manufacturers of licensed e-cigarettes would be free to advertise their products across multiple platforms, including television, radio, and newspapers, which would significantly boost the promotion of e-cigarettes among smokers. Moreover, unlike consumer e-cigarettes, these products could be publicised alongside evidence-based smoking cessation claims,⁴⁸ further reinforcing their credibility.

RSPH believes that the widespread exposure of such medicinally licensed products would help generate a more informed public opinion of vaping, thus removing some of the barriers that may prevent smokers from switching to e-cigarettes. It may also convince those stop smoking services who are not yet working with e-cigarettes of the significant benefits of doing so. Finally, the availability of e-cigarettes on the NHS would be of particular value to lower income smokers who are less likely to use e-cigarettes ordinarily,⁴⁵ and amongst whom smoking rates are disproportionately high.⁴⁹

However, the medicinal route to market has proved an expensive and time-consuming process when compared to the consumer route.[†] RSPH is calling for the MHRA to reach out to manufacturers with interests in acquiring licences for their products, encouraging and guiding them through the process of doing so. Fundamental to this are the ministers with responsibility for MHRA, who should hold the agency to account, and ensure there is a policy of actively aiding and supporting manufacturers through the medicinal regulation of their products.

*The National Centre for Smoking Cessation and Training provide a working definition for this term in their briefing on e-cigarettes⁴⁵ †To date there has been just one product, the 'e-voke', which has been granted a medicinal licence, but this has not since been pursued by the manufacturer, British American Tobacco

References

- Smoking statistics, Action on Smoking and Health (ASH). Available online at: http://ash.org.uk/information-and-resources/fact-sheets/ test-download-for-fact-sheets/ (2016, last accessed 17th February 2017)
- Tobacco levy consultation document. HM Treasury, December 2014. Available at https://www.gov.uk/government/uploads/system/ uploads/attachment_data/file/384769/tobacco_levy_consultation.pdf (last accessed 4th April 2017)
- The economics of tobacco, ASH. Available online at: http://ash. org.uk/information-and-resources/fact-sheets/the-economics-oftobacco/ (2015, last accessed 17th February 2017)
- 4. Tobacco update, PHE Board Paper, 2016, available at https://www. gov.uk/government/uploads/system/uploads/attachment_data/ file/523085/PHE16-22_tobacco_update.pdf (last accessed 4th April 2017)
- Persons aged 16 and over. Estimate calculated using: Population estimates, summary for the UK, mid 1971- mid-2015 & ONS bulletin: Adult smoking habits in the UK: 2015.
- 6. ONS data: Adult smoking habits in Great Britain: 2014. Available at https://www.ons.gov.uk/peoplepopulationandcommunity/ healthandsocialcare/healthandlifeexpectancies/bulletins/ adultsmokinghabitsingreatbritain/2014 (last accessed 27th February 2017)

- 7. ONS Statistical bulletin: Adult smoking habits in the UK: 2015. Available at https://www.ons.gov.uk/peoplepopulationandcommunity/ healthandsocialcare/healthandlifeexpectancies/bulletins/adultsmokin ghabitsingreatbritain/2015#e-cigarette-data-from-the-opinions-andlifestyle-survey-2014-to-2015-adults-aged-16-years-and-above (last accessed 4th April 2017)
- Cancer Research UK, available at http://www.cancerresearchuk. org/sites/default/files/cstream-node/smoking_child_trend_2.pdf (last accessed 27th February 2017)
- 9. British Broadcasting Corporation. Timeline: smoking and disease. Available online at: http://news.bbc.co.uk/1/hi/health/4377928.stm (2007, last accessed 17th June 2015)
- Royal College of Physicians. Fifty years since smoking and health. Progress, lessons and priorities for a smoke-free UK. Report of conference proceedings. London: Royal College of Physicians, 2012
- 11.UK Government. The standardised packaging of tobacco products regulations 2015. Available online at: http://www.legislation.gov.uk/ukdsi/2015/9780111129876 (2015, last accessed 17th February 2017)
- 12. Stopping smoking: The benefits and aids to quitting. ASH, September 2014. Available at http://ash.org.uk/stopping-smoking/ stopping-smoking-the-benefits-and-aids-to-quitting/ (last accessed 4th April 2017)
- 13. Smoking Toolkit Study, accessible at http://www.smokinginengland. info/sts-documents/ (last accessed 24 March 2017)

www.rsph.org.uk

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- Health and Social Care Information Centre. Statistics on NHS Stop Smoking Services in England – April 2014 to March 2015. London: HSCIC, 2015.
- 15. Use of electronic cigarettes (vapourisers) among adults in Great Britain. ASH, May 2016, available at http://ash.org.uk/informationand-resources/fact-sheets/use-of-electronic-cigarettes-vapourisersamong-adults-in-great-britain/ (last accessed 4th April 2017)
- 16. Electronic cigarettes for smoking cessation. 13 September 2016, The Cochrane Library, Jamie Hartmann-Boyce, Hayden McRobbie, Chris Bullen, Rachna Begh, Lindsay F Stead, Peter Hajek
- 17. Association between electronic cigarette use and changes in quit attempts, success of quit attempts, use of smoking cessation pharmacotherapy, and use of stop smoking services in England: time series analysis of population trends BMJ 2016; 354 doi: https://doi. org/10.1136/bmj.i4645, published 13 September 2016
- 18. Royal College of Physicians. Nicotine without smoke: Tobacco harm reduction. London: RCP, 2016.
- 19. Smoking Statistics: Illness and Death. ASH, June 2016, available at http://ash.org.uk/information-and-resources/fact-sheets/smoking-statistics-illness-and-death/ (last accessed 4th April 2017)
- 20. Perceived relative harm of electronic cigarettes over time and impact on subsequent use. Brose LS, Brown J, Hitchman SC, McNeill A.; Drug and Alcohol Dependence 2015;157:106-11 doi: 10.1016/j. drugalcdep.2015.10.014
- CDC: Flavorings related lung disease. Available at https://www.cdc. gov/niosh/topics/flavorings/exposure.html (last accessed 23 March 2017)
- 22. Peter Hajek, 2016, Communication of research on e-cigarettes to smokers. Presented to E-cigarette Summit 2016, slides retrieved from http://www.e-cigarette-summit.com/files/2016/11/920-Prof-Peter-Hajek.pdf (last accessed 24 March 2017)
- 23. Diacetyl and 2,3-pentanedione exposures associated with cigarette smoking: implications for risk assessment of food and flavoring workers. Jennifer S. Pierce, Anders Abelmann, Lauren J. Spicer, Rebecca E. Adams, and Brent L. Finley Critical Reviews In Toxicology Vol. 44, Iss. 5, 2014
- 24. Flavourings for E-cigarettes See you in court? David Baines, Flavour Horizons, Issue 17, Spring 2016
- 25. Does Use of Nicotine Replacement Therapy While Continuing to Smoke Undermine Cessation?: A Systematic Review. Beard, E., Aveyard, P., Michie, S., McNeill, A., & West, R. Journal of Smoking Cessation, 45-56, 2013
- 26. Nicotine, Carcinogen, and Toxin Exposure in Long-Term E-Cigarette and Nicotine Replacement Therapy Users: A Cross-sectional Study. Lion Shahab, PhD et al. Ann Intern Med. 2017;166(6):390-400.
- 27. UK Centre for Tobacco and Alcohol Studies: Electronic cigarettes, p. 15. Professor John Britton and Dr Ilze Bogdanovica, Division of Epidemiology and Public Health, University of Nottingham (2014)
- 28. U.S. Department of Health and Human Services. E-Cigarette Use Among Youth and Young Adults: A Report of the Surgeon General— Executive Summary. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2016.
- 29. Use of electronic cigarettes among children in Great Britain. ASH, October 2016, available at http://ash.org.uk/information-andresources/fact-sheets/use-of-electronic-cigarettes-vapourisersamong-children-in-great-britain/ (last accessed 4th April 2017)
- 30. Exposure to parental and sibling smoking and the risk of smoking uptake in childhood and adolescence: a systematic review and metaanalysis; Jo Leonardi-Bee, Mirriam Lisa Jere, John Britton, Thorax 2011; 66: 847 – 855

- 31. E-cigarettes: an evidence update, commissioned by Public Health England. McNeill A, Brose LS, Calder R, Hitchman SC Institute of Psychiatry, Psychology & Neuroscience, National Addiction Centre, King's College London UK Centre for Tobacco & Alcohol Studies Hajek P, McRobbie H (Chapters 9 and 10) Wolfson Institute of Preventive Medicine, Barts and The London School of Medicine and Dentistry Queen Mary, University of London UK Centre for Tobacco & Alcohol Studies
- 32. CRUK Electronic Cigarette Marketing: Current Research and Policy. Prof Linda Bauld, Kathryn Angus, Dr Marisa de Andrade, Dr Allison Ford. Available at https://www.cancerresearchuk.org/sites/default/ files/electronic_cigarette_marketing_report_final.pdf (last accessed 24 March 2017)
- 33. Figures from research conducted by ECigIntelligence
- 34. Electronic Cigarettes, POSTNOTE, Parliamentary Office of Science and Technology; Number 533, August 2016
- 35.E-cigs surge £30m as new rules loom; The Grocer's Top Products Survey 2016; The Grocer, 17 December 2016, p.195
- 36. IBVTA code of conduct, available at http://www.ibvta.org.uk/join-us/ code-of-conduct (last accessed 4th April 2017)
- 37. An updated review of business compliance with the Nicotine Inhaling Products (Age of Sale and Proxy Purchasing) Regulations. Jane MacGregor MacGregor Consulting Limited for the Chartered Trading Standards Institute, November 2016. Available at https:// www.tradingstandards.uk/media/documents/news--policy/tobaccocontrol/nips2.pdf (last accessed 24 March 2017)
- 38. Protecting Young People From Alcohol Related Harm, April 2009. Available at https://www.gov.uk/government/uploads/system/ uploads/attachment_data/file/261916/09-1667-protecting-peoplefrom-alcohol.pdf (last accessed 24 March 2017)
- 39. E-cigarette marketing in UK stores: an observational audit and retailers' views, D Eadie et al., BMJ Open, 2015
- 40. Counter Arguments: How important is tobacco to small retailers? Accessible at http://ash.org.uk/information-and-resources/reportssubmissions/reports/counter-arguments-how-important-is-tobaccoto-small-retailers/ (last accessed 24 March 2017)
- 41. Tobacco Advertising and Promotion Act 2002, available at http:// www.legislation.gov.uk/ukpga/2002/36/contents (last accessed 24 March 2017)
- 42. Guidelines for implementation of Article 13 of the WHO Framework Convention on Tobacco Control (Tobacco advertising, promotion and sponsorship), available at http://www.who.int/fctc/guidelines/ article_13.pdf?ua=1 (last accessed 24 March 2017)
- 43. Convenience Store, September 2016 Edition, available at http://edition.pagesuite.com/html5/reader/production/default. aspx?pubname=&pubid=85ef772e-0e06-4a3d-8afd-34365c6ce502 (last accessed 24 March 2017)
- 44. Health and Social Care Information Centre. Statistics on NHS stop smoking services in England. Available online at: http://www.hscic. gov.uk/catalogue/PUB16345/stat-stop-smok-serv-eng-1415-q2-repkey.pdf (2015, last accessed 24 March 2017)
- 45. Smoking Toolkit Study, Trends in e-cigarette use in England 06/01/2017. Available at http://www.smokinginengland.info/stsdocuments/ (last accessed 24 March 2017)
- 46. Electronic cigarettes: A briefing for stop smoking services, Andy McEwen and Hayden McRobbie, NCSCT, 2016
- 47. Leicestershire Partnership NHS Trust. Media release we are going e-cig friendly from national No Smoking Day. Available online at: http://www.leicspart.nhs.uk/Library/FYPC_014_14ecigfriendlyannoun cementNosmokingDay.pdf (2014, last accessed 24 March 2017)
- 48. Countdown to 20th May 2016: changes to tobacco regulations, ASH, May 2016. Available at file://hq.rshealth.org.uk/userfiles/ UserProfiles/tgreen/Downloads/ASH_937%20(1).pdf (last accessed 24 March 2017)
- 49. WHO report, 2014, Tobacco and inequities: Guidance for addressing inequities in tobacco-related harm, Belinda Loring

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