

November 2021: NICE guidelines PH45 (June 2013) PH48 (November 2013) have been updated and replaced by NG209. The recommendations labelled [2013] or [2013, amended 2021] in the updated guideline were based on these evidence reviews. See www.nice.org.uk/guidance/NG209 for all the current recommendations and evidence reviews.

Expert paper 8a - E-cigarettes - views from UK smoking cessation practitioners - expert paper by Deborah Arnott

E-cigarettes: views from UK smoking cessation practitioners

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Abstract

Introduction: Guidelines for e-cigarettes are currently being developed in a number of countries. In order to inform UK guideline development, a web based survey was used to gather smoking cessation practitioners' views of these products.

Methods: 592 smoking cessation service advisors, managers and commissioners completed the survey and data from the 587 who had heard of e-cigarettes were used in the analysis. Multiple choice questions and verbatim text comments were analysed.

Results: 86% of respondents had been asked about e-cigarettes by clients and up to a quarter of clients were using them. Smoking cessation staff were more positive about e-cigarettes' potential for harm reduction than as a cessation aid. Although there were anecdotal reports of clients successfully using e-cigarettes for both quitting and harm reduction, respondents had concerns about e-cigarettes prolonging habitual smoking behaviour (the 'hand to mouth action') and reintroducing smoking behaviour into smoke free environments. Ninety percent of respondents wanted more research and guidance on e-cigarettes.

Conclusions: Smokers using services to help them quit are asking health professionals about e-cigarettes. However, cessation staff, who hold a variety of personal views about e-cigarettes, are unable to advise smokers due to the lack of research and information on their safety and efficacy. Clear guidance on use of these products is needed if they are to complement interventions to help people stop smoking.

Introduction

E-cigarettes are battery powered devices which simulate tobacco cigarettes by heating nicotine and other chemicals into an inhalable vapour. Their aim (either explicit or implicit) is to reduce toxic compounds in smoke and to help smokers quit; there has, however, been little evaluation of their safety and effectiveness (Etter, Bullen, Flouris, Laugesen, & Eissenberg, 2011; Flouris & Oikonomou, 2010).

E-cigarettes may provide nicotine and potentially act as a behavioural replacement for smoking (Etter & Bullen, 2011b; Goniewicz, Kuma, Gawron, Knysak, & Kosmider, 2012). Although they deliver less nicotine than cigarettes, and deliver it much more slowly, they have been found to alleviate craving and cigarette withdrawal symptoms (Bullen et al., 2010; Eissenberg, 2010; Vansickel, Cobb, Weaver, & Eissenberg, 2010). Several internet surveys report that e-cigarette users consider the product a satisfactory replacement for cigarettes and an effective stop-smoking treatment (Etter, 2010; Etter & Bullen, 2011a; Siegel, Tanwar, & Wood, 2011). In the UK, e-cigarettes are available for sale in a range of venues and their use is increasing. In 2010 9% of smokers reported ever having used e-cigarettes. By 2012 this had risen to 22%, equivalent to 650,000-700,000 smokers and ex-smokers in the UK (ASH, 2012).

Evidence is needed on e-cigarette safety and efficacy when used to assist in smoking cessation. To inform the development of UK guidance on e-cigarettes the National Centre for Smoking Cessation and Training (NCSCT) administered a web based survey to smoking cessation practitioners.

Methods

In June 2011 a link to the web-based survey was sent to all smoking cessation practitioners on a national list held by the NCSCT. Respondents could complete the survey up to August 2011 and were asked 14 multiple choice questions and were also able to leave comments. The quantitative data were analysed using SPSS (version PASW 18.0). Wilcoxon tests were used to compare whether respondents were more positive about using e-cigarettes for quitting, cutting down or as an alternative to smoking. Chi square tests were used to find predictors of a positive opinion of e-cigarettes. The comments were grouped into themes and positive and negative respondents' views. .

Results

904 smoking cessation advisors, managers and commissioners accessed the survey web page and 627 answered at least one question with 592 completing the survey. Five respondents had not heard of e-cigarettes and were excluded from the analysis leaving 587 responses.

Expert paper 8a - E-cigarettes - views from UK smoking cessation practitioners - expert paper by Deborah Arnott

Respondents' encounters with e-cigarettes are outlined first and then their views of e-cigarettes. Illustrative respondents' comments can be found in table 1 and are referenced in the text with subscript letters e.g. ^X.

Encountering e-cigarettes

The vast majority (86%) of respondents had been asked by clients about e-cigarettes over the last six months (table 1). Two thirds of respondents, however, reported that less than a quarter of their clients had asked about e-cigarettes, ever used e-cigarettes and regularly used e-cigarettes. Most (58%) believed that more clients were now asking about e-cigarettes. In many comments e-cigarettes were viewed as of interest to clients and as popular^A.

The most common initial encounter with e-cigarettes was through clients (43%) and a third of professionals had heard of e-cigarettes through media, promotions or observing e-cigarettes being sold. Only a fifth had heard about e-cigarettes through work.

The questions that clients asked about e-cigarettes were grouped into access, effectiveness and safety. Clients most commonly asked about access (44%), just over a fifth asked about safety and 12% asked about effectiveness. The limited proportion of questions on safety and effectiveness practitioners suggested might be due to clients being given misinformation by vendors and assuming they are safe and effective as they are being openly sold and advertised in the UK to clients^B.

In summary, only a minority of practitioners were being introduced to e-cigarettes through their employment yet the majority were encountering a small but growing proportion of clients who were interested in or were using e-cigarettes. Clients were generally concerned with accessing e-cigarettes rather than determining whether they would be safe and useful.

Responses to e-cigarettes

Effectiveness: Quantitative results

Respondents were asked whether they thought clients had found e-cigarettes useful for quitting, cutting down or as an alternative to smoking (table 1). Just over a third agreed or strongly agreed that their clients had found e-cigarettes useful for quitting, 52% for cutting down and 58% as an alternative to smoking. Respondents who recorded direct experience of clients using e-cigarettes for quitting were more positive than those whose clients were using e-cigarettes for other purposes (49% compared to 38%). Overall, however, respondents thought that clients found e-cigarettes less helpful for smoking cessation than for harm reduction (i.e. for cutting down or as an alternative to smoking). Furthermore only 15% agreed or strongly agreed that in general 'e-cigarettes are a good thing'. The quantitative results were reflected in and expanded upon in the verbatim comments.

Effectiveness: positive comments

Few comments unconditionally endorsed e-cigarettes for quitting. E-cigarettes were viewed as useful either as a last resort or potentially useful when their effectiveness and safety had

Expert paper 8a - E-cigarettes - views from UK smoking cessation practitioners - expert paper by Deborah Arnott

been confirmed^C. Nevertheless there were reports of clients finding them helpful.

There were more positive comments on the effectiveness of e-cigarettes for harm reduction but again the majority mentioned the need for more research and additionally that, in practitioners' experience, clients found e-cigarettes more effective for harm reduction than for quitting^D. E-cigarettes were seen as useful for harm reduction by reducing exposure to toxins and because they are not banned in smoke free environments.

Practitioners thought e-cigarettes' popularity and effectiveness was because they were perceived to be an alternative to NRT, in particular the inhalator, that was closer to cigarettes in terms of appearance, producing smoke, delivery (the 'hit' provided) and the hand to mouth action. Thus respondents reported that clients viewed e-cigarettes as an easier option than NRT.

In summary, there were anecdotal reports of clients finding e-cigarettes effective for smoking cessation and particularly harm reduction. The similarity of e-cigarettes to real cigarettes was thought to appeal to clients.

Effectiveness: negative comments

A number of practitioners reported that all or most clients who had used e-cigarettes to aid a quit attempt had relapsed. Although for some the closeness of e-cigarettes to real cigarettes was an advantage, for others it was likely to reduce the chances of success in quitting^E. In addition, the strength of the nicotine was also criticised in that there were anecdotal reports of a few clients becoming strongly 'addicted' to e-cigarettes.

Other respondents saw e-cigarettes as ineffective because they were "gimmicky" so clients quickly lost interest and returned to tobacco cigarettes. Their lack of appeal for some included high pricing and technical issues: break downs at "inconvenient times" could provoke a relapse.

In addition to e-cigarettes being identified as ineffective for quitting there were also concerns that they could undermine other tobacco control measures: a few clients had switched from NRT to e-cigarettes and relapsed and e-cigarettes were seen as a challenge to smoke free^F. There were also concerns that e-cigarettes could be a gateway for smoking due to users' role modelling smoking behaviour and non-smokers trying e-cigarettes exposing themselves to addictive nicotine.

Practitioners' safety concerns included overheating, the potential to be a breeding ground for bacteria and e-cigarettes being possibly implicated in a death. Some respondents reported that clients had experienced side effects such as a sore throat. Generally the safety issue raised was the toxins contained in the e-cigarettes. Although some respondents claimed they knew that e-cigarettes contained toxins, for many respondents the lack of knowledge of e-cigarettes' contents was the issue.

Lack of research and guidelines

Ninety percent of respondents agreed or strongly agreed that both more guidelines and more research were needed (table 2). The comments implied this was firstly in order to govern their use and secondly to give health providers control over this product.

Many practitioners commented that they were not currently recommending e-cigarettes but that they would like more information on safety and effectiveness to pass on to clients^G. E-cigarettes are easily accessible, even through airlines and pharmacies, but smoking cessation practitioners are unable to counter claims made by vendors^B. There were concerns about the amount and quality of nicotine, high carbon monoxide readings on breath tests, the contents of the vapour and effect on pre-existing medical conditions.

Furthermore it was noted that there are a “plethora of varieties and brands”. If e-cigarettes were found to be safe and effective, it was suggested that a kite marked brand should be developed and provided as a form of NRT on prescription. There were concerns that the companies developing e-cigarettes were tobacco manufacturers or companies from abroad who would not have smoking cessation in the UK as a primary interest and were furthermore overcharging users. Thus lack of research is compromising safety, effectiveness and control over the product^H.

Discussion

A small but growing proportion of smokers who are seeking help to quit from services in the UK are enquiring about e-cigarettes. Currently smoking cessation advisers are not recommending them because they have not been adequately evaluated. There are, however, reports of clients successfully using e-cigarettes for quitting, or more often for harm reduction and practitioners with direct experience of e-cigarettes were more positive. Thus practitioners could be discouraging clients’ use of a potentially helpful aid to smoking cessation. Respondents recommended that further research and guidance are needed so that they could advise smoker’s trying to quit about any risks, and about e-cigarettes potential role as an alternative to smoking.

Most practitioners were not positive about e-cigarettes; in particular they were described as promoting the continuation of smoking habits and challenging smoke free legislation. There were also a few reports of clients who had become dependent on e-cigarettes. .

Our conclusions are limited by the small sample size and the need to rely on respondents’ recall. Findings from the UK may not necessarily be applicable to other countries particularly where e-cigarette sales are restricted. It was not possible to know how much respondents’ opinions were shaped by what they had heard through the media or tobacco control networks or their direct experience of what clients were asking. However, both the quantitative data and comments showed lack of consensus on the current utility of e-cigarettes.

Declaration of Interest

Maciej L. Goniewicz has received research funding from *Pfizer*, a manufacturer of stop smoking medication.

Andy McEwen receives a personal income from Cancer Research UK via University College London. He received travel funding, honorariums and consultancy payments from manufacturers of smoking cessation products (Pfizer Ltd, Novartis UK and GSK Consumer Health care Ltd). He also receives payment for providing training to smoking cessation specialists, receives royalties from books on smoking cessation and has a share in a patent of a nicotine delivery device.

Acknowledgements

This work was supported by the UK Centre for Tobacco Control Studies (UKCTCS), a UK Centre for Public Health Excellence. Funding to UKCTCS from the British Heart Foundation, Cancer Research UK, the Economic and Social Research Council, the Medical Research Council and the National Institute of Health Research, under the auspices of the UK Clinical Research Collaboration, is gratefully acknowledged. This work was also supported by the National Centre for Smoking Cessation and Training and University College London.

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Expert paper 8a - E-cigarettes - views from UK smoking cessation practitioners - expert paper by Deborah Arnott

Table 1. Encounters with and responses to e-cigarettes: quantitative findings (N=587)

ENCOUNTERING E-CIGARETTES						
Respondents recalled clients who ...	asked about e-cigarettes over last 6 months		ever used e-cigarette		regularly used e-cigarette	
	N	%	N	%	N	%
none	82	14.0	50	8.5	90	15.3
less than a quarter	378	64.4	404	68.8	382	65.1
quarter to a half	105	17.9	38	6.5	11	1.9
half to three quarters	14	2.4	6	1.0	0	0
more than three quarters	8	1.4	8	1.4	0	0
missing	0	0	81	13.8	104	17.7
Compared to a year ago (2010) are:						
more clients asking about e-cigarettes?	338	57.6				
the same proportion of clients asking about e-cigarettes?	129	22.0				
fewer clients asking about e-cigarettes?	59	10.1				
missing	61	10.4				
Where first heard about e-cigarettes						
client	251	42.8				
media/promotions/sales ¹	196	33.4				
work ²	123	21.0				
other or unknown ³	17	2.9				
Questions clients asked about e-cigarettes						
access ⁴	256	43.6				
safety ⁵	133	22.7				
effectiveness ⁶	70	11.9				
other, unknown or none ⁷	128	21.8				
RESPONSE TO E-CIGARETTES						
How useful did clients find e-cigarettes for...	quitting?		cutting down?		an alternative to smoking?	
	N	%	N	%	N	%
<i>Among all respondents (p<.001⁸)</i>						
Strongly agreed or agreed useful	219	37.3	303	51.6	340	57.9
Total	587	100.0	587	100.0	587	100.0
<i>Among respondents who stated that their clients used e-cigarettes for this purpose</i>						
Strongly agreed or agreed useful	186	48.8	10	58.8	38	65.5
Total	381	100.0	17	100.0	58	100.0
Difference between respondents with clients who used e-cigarettes for this and other purposes						
	P<.001 ⁹		P=.549 ⁹		P=.421 ⁹	
Respondents opinion of e-cigarettes	E-cigarettes are a good thing		Need more info		Need more research	
	N	%	N	%	N	%
strongly agree	27	4.6	416	70.9	393	67.0
agree	60	10.2	113	19.3	141	24.0
unsure	282	48.0	44	7.5	22	3.7
disagree	123	21.0	9	1.5	22	3.7
strongly disagree	95	16.2	5	.9	9	1.5

Expert paper 8a - E-cigarettes - views from UK smoking cessation practitioners - expert paper by Deborah Arnott

¹included TV, newspaper, radio, shops selling e-cigarettes, email or internet, airlines, public promotions, adverts including email adverts

²included work, colleagues, professional network, training or conference

³included friend or family, other or more than one source

⁴included where to get them, whether they were legal and whether SSS provide them and how much they cost

⁵included whether contained harmful additives, how safe they are for users or others around them and whether there are any problems

⁶included whether effective for stopping smoking or cutting down or avoiding smoking

⁷included how they work and why SSS don't provide them and missing

⁸Wilcoxon signed ranks test for all three pairwise comparisons using full version of variable responses (strongly agree, agree, unsure, disagree, strongly disagree)

⁹Chi Square test predicting whether clients agreed or strongly agreed that clients thought e-cigarettes were useful (compared with unsure, disagreed and strongly disagreed) (n=464).

Expert paper 8a - E-cigarettes - views from UK smoking cessation practitioners - expert paper by Deborah Arnott

Table 1. Encounters with and responses to e-cigarettes: qualitative findings (N=587)

Id	Topic	Illustrative quote(s)
<i>Encountering e-cigarettes</i>		
A	Popular and of interest	<ul style="list-style-type: none"> • I spend a lot of time giving talks in schools. In almost every lesson about ways to stop smoking, a student will mention e-cigarettes. • I have recently been to an area where a private company were selling them. They had opened a shop and people were queuing out of the door.
B	Clients believe they are safe	<ul style="list-style-type: none"> • [Clients] tell me they were told by the vendor that the e-cigarette is significantly safer than smoking tobacco, that there are no health risks at all to using them, and that they are the safest and most effective way to stop smoking. • Clients assume they are purchasing something that is safe, has gone through clinical trials. Usually they are already using them before coming to a 1st appointment.
<i>Response to e-cigarettes</i>		
C	Anecdotally positive but needs research	<ul style="list-style-type: none"> • I think we really need more research into e-cigarettes as some people do seem to find them very helpful and maybe if they were thoroughly tested they could be used as another product to help smokers quit.
D	Effective for harm reduction but not quitting	<ul style="list-style-type: none"> • Many clients who have used them use them to cut down and simply just replace cigarettes, rather than trying to move away from cigarettes both physically and psychologically. They are also unaware of what is in the cartridges
E	Smoking habits	<ul style="list-style-type: none"> • The clients we see want to stop smoking and cut out the habit that controls their everyday life. If we offered them this "safer" e-cigarette alternative, it's no real difference and the habit/routine might never be dealt with. In fact, it could get worse as they can use it anywhere
F	A challenge to smoke free	<ul style="list-style-type: none"> • The use of e-cigarettes... was giving out misinterpreted signals within public locations such as a pub/restaurant that it was still ok for some people to smoke. Onlookers were possibly seeing the use of e-cigarettes and interpreting then as a normal cigarette, prompting them to smoke. • They are used as an act of rebellion/defiance in bars etc. where staff have to be vigilant in upholding the public places legislation
G	Research and guidelines needed	<ul style="list-style-type: none"> • My clients and I feel that e-cigarettes should be tested and regulated as soon as possible... I feel a leaflet should be made so that patients can make a decision themselves. The leaflet should educate the pros and cons and experiences from ex-smokers who used them compared to NRT.
H	Lack of research compromising safety and control	<ul style="list-style-type: none"> • I understand that worldwide 10,000,000 have been sold. The authorities have been too slow to regulate this new product – if they are found to be dangerous to health millions of smokers have already been put at risk. If they are safe the NRT companies should have launched this product not Chinese internet companies.