



Brief Original Report

Patient–physician communication regarding electronic cigarettes

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ABSTRACT

Introduction. Smokers are likely asking their physicians about the safety of e-cigarettes and their potential role as a cessation tool; however, the research literature on this communication is scant. A pilot study of physicians in the United States was conducted to investigate physician–patient communication regarding e-cigarettes.

Methods. A total of 158 physicians were recruited from a direct marketing e-mail list and completed a short, web-based survey between January and April 2014. The survey addressed demographics, physician specialty, patient–provider e-cigarette communication, and attitudes towards tobacco harm reduction.

Results. Nearly two-thirds (65%) of physicians reported being asked about e-cigarettes by their patients, and almost a third (30%) reported that they have recommended e-cigarettes as a smoking cessation tool. Male physicians were significantly more likely to endorse a harm reduction approach.

Discussion. Physician communication about e-cigarettes may shape patients' perceptions about the products. More research is needed to explore the type of information that physicians share with their patients regarding e-cigarettes and harm reduction.

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Introduction

The tobacco market has changed dramatically, with cigarette use declining and the use of other tobacco products expanding (U.S. Department of Health and Human Services [USDHHS], 2014). In particular, e-cigarette use has risen significantly and is especially high among adult smokers (King et al., 2014). The tobacco control community has begun to shift messaging from a traditional “all tobacco is equally bad” approach to one distinguishing a risk continuum, with some focus on e-cigarettes (Hajek et al., 2014). This messaging shift has been directed not only at consumers, but also at physicians who treat tobacco users. A recent article in the *New England Journal of Medicine* stated that although the long-term effects of e-cigarette use are not known, these devices are “probably much safer than combustible tobacco products” (Fiore et al., 2014). Likewise, the 50th anniversary issue of the Surgeon General's Report suggested that less risky cigarette substitutes, such as e-cigarettes, might contribute to the reduction of tobacco-caused disease (USDHHS, 2014). However, harm reduction and e-cigarettes in particular are not without controversy (Warner, 2002). Some researchers point to the lack of safety and efficacy data for the product and because nicotine is addictive, many health professionals remain opposed to its use (Grana et al., 2014; Schraufnagel et al., 2014).

Consequently, the public receives mixed messages about e-cigarettes, even among experts. Given the role physicians play as a trusted and credible source of health information, smokers are likely asking their physicians about these products (Smith, 2011). Although the research literature on physician communication regarding e-cigarettes is scant, it suggests that discussions are taking place in the clinical setting and some physicians are even recommending e-cigarettes to their patients as a smoking cessation aid (Kandra et al., 2014). Given the paucity of data and the explosive growth of e-cigarettes, a pilot study was conducted to investigate e-cigarette physician–patient communication.

Methods

We targeted a quota sample of 150 physicians who treat adults and released sample until the quota was met. The sampling frame was obtained from Jubilant Marketing Solutions, a firm that maintains e-mail lists of US physicians for direct marketing. Between January and April 2014, participants were e-mailed a link to a short web-based survey and received a \$10 Starbucks gift card for participation. Given the large number of e-mails that were non-deliverable (e.g., the physician no longer works for organization, the e-mail address does not exist), calculating an accurate response rate was problematic. The survey addressed demographics, including physician characteristics (e.g., specialty), whether patients had asked about e-cigarettes, whether the physician recommended e-cigarettes, and attitudes towards tobacco harm reduction. Data were

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Table 1
Physician–patient communication and perceptions regarding e-cigarettes, United States, 2014 (n = 158).

	n	Patients asked about e-cigarettes			Recommended e-cigarettes			Endorses harm reduction approach		
		%	Crude OR	Adjusted OR	%	Crude OR	Adjusted OR	%	Crude OR	Adjusted OR
<i>Time</i>										
Jan/Feb	73	51.4%	1.0 (ref)	1.0 (ref)	21.4%	1.0 (ref)	1.0 (ref)	26.4%	1.0 (ref)	1.0 (ref)
Mar/Apr	85	77.1%	3.2 (1.6–6.4)	3.0 (1.3–6.8)	34.9%	2.0 (0.9–4.1)	1.8 (0.8–4.1)	41.0%	1.9 (1.0–3.9)	1.4 (0.7–3.1)
<i>Provider type</i>										
Primary care	62	50.8%	1.0 (ref)	1.0 (ref)	24.1%	1.0 (ref)	1.0 (ref)	23.3%	1.0 (ref)	1.0 (ref)
Specialist – tobacco diseases ^a	96	74.0%	2.7 (1.4–5.5)	1.7 (0.8–3.8)	31.6%	1.5 (0.7–3.1)	1.1 (0.5–2.6)	41.1%	2.3 (1.1–4.8)	1.9 (0.8–4.1)
<i>Sex</i>										
Female	44	62.8%	1.0 (ref)	1.0 (ref)	11.6%	1.0 (ref)	1.0 (ref)	18.2%	1.0 (ref)	1.0 (ref)
Male	112	65.8%	1.1 (0.5–2.4)	0.8 (0.3–1.9)	35.8%	4.2 (1.5–11.8)	3.5 (1.3–9.7)	40.9%	3.1 (1.3–7.4)	2.6 (1.0–6.6)
<i>Asks/advises smokers to quit</i>										
Less than always	67	51.6%	1.0 (ref)	1.0 (ref)	25.4%	1.0 (ref)	1.0 (ref)	35.9%	1.0 (ref)	1.0 (ref)
Always	91	74.4%	2.7 (1.4–5.5)	2.7 (1.3–5.6)	30.3%	1.3 (0.6–2.7)	1.4 (0.6–3.1)	33.7%	0.9 (0.5–1.8)	0.9 (0.5–1.9)
<i>Graduated med school</i>										
Before 1990	78	61.5%	1.0 (ref)	1.0 (ref)	27.3%	1.0 (ref)	1.0 (ref)	30.8%	1.0 (ref)	1.0 (ref)
1990–2010	73	68.1%	1.3 (0.7–2.6)	1.5 (0.7–3.1)	32.4%	1.3 (0.6–2.6)	1.5 (0.7–3.2)	40.8%	1.6 (0.8–3.1)	1.6 (0.8–3.2)
Overall	158	64.7%			29.7%			35.6%		

Bold-faced values indicate statistical significance at the $p < 0.05$ level.

^a Includes oncologists, cardiologists, and pulmonologists.

analyzed using logistic regression; crude and adjusted odds ratios are presented.

Results

Nearly 2 of 3 (65%) physicians reported being asked about e-cigarettes by their patients, and almost a third (30%) reported that they have recommended e-cigarettes (see Table 1). In addition, more than a third (36%) endorsed a harm-reduction approach rather than a traditional “all tobacco is bad” position. Patient inquiry about e-cigarettes significantly increased over the course of the study (March/April vs. January/February), and was higher among physicians who always assess smoking status. In addition, male physicians were more likely to recommend e-cigarettes and endorse a harm-reduction approach. Physicians who treat tobacco-caused disease (e.g., oncologists, pulmonologists, cardiologists) generally had more e-cigarette inquiries and a harm-reduction orientation, as were those who graduated medical school after 1990, but these were not statistically significant.

Discussion

These findings demonstrate that many patients ask their physicians about e-cigarettes, and despite a lack of scientific support, many physicians recommend them. This is consistent with results from a survey of North Carolina physicians in which nearly half reported that patients ask about e-cigarettes sometimes or often and a third recommended them to their patients for cessation (Kandra et al., 2014). With a shift in perceptions from an “all tobacco is bad” approach to a broader harm-reduction understanding, as endorsed by 36% of physicians in our sample, the opportunity for physicians to consider smoking alternatives, such as e-cigarettes, has emerged.

This study is subject to limitations. First, the direct email list did not contain all physicians and was largely a sample of convenience, which limits generalizability. Second, the quality of the list was problematic (e.g., numerous emails were returned as “not deliverable”). While this makes calculating a response rate difficult, we estimated a minimum response rate of 2.25%. Although low, this is comparable to other physician email surveys with higher quality samples. Indeed, Dykema et al., 2011, using the American Medical Association Masterfile, conducted a

physician email survey and achieved a 2% response rate with 5 email contacts (invite + 4 reminders) and no incentives; a \$50 incentive resulted in a slightly improved, but still low response rate of 7.4% (2011). While physician email surveys are less than ideal for generalizable data, they have an appropriate role to gather pilot data in a timely fashion. This sample is valuable in that it establishes that patients are asking about e-cigarettes and that responses to questions about the products are not uniform among physicians.

Despite patients asking physicians about e-cigarettes, the scientific community has limited data regarding physicians' perceptions about these products or what type of information they share with their patients. This is concerning since physician–patient communication about e-cigarettes may shape patients' perceptions (e.g., perceived safety) or whether they decide to use e-cigarettes (e.g., switch from cigarettes to e-cigarettes or stop using them because of a doctor's warning). More strongly designed research studies are needed on this timely and important issue.

Conflict of interest statement

The authors declare that there are no conflicts of interest.

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