



A review of the current geographic distribution of and debate surrounding electronic cigarette clean air regulations in the United States



Joy Kadowaki, Mike Vuolo*, Brian C. Kelly

Department of Sociology, Purdue University, 700 W State St, West Lafayette, IN 47907, USA

ARTICLE INFO

Article history:

Received 25 July 2014

Received in revised form

3 November 2014

Accepted 4 November 2014

Keywords:

Electronic cigarettes

Policy debate

Health policy

Geographic distribution of policy

ABSTRACT

In this article, we present the results of a systematic review of state, county, and municipal restrictions on the use of electronic cigarettes (e-cigarettes) in public spaces within the United States, alongside an overview of the current legal landscape. The lack of federal guidance leaves lower-level jurisdictions to debate the merits of restrictions on use in public spaces without sufficient scientific research. As we show through a geographic assessment of restrictions, this has resulted in an inconsistent patchwork of e-cigarette use bans across the United States of varying degrees of coverage. Bans have emerged over time in a manner that suggests a “bottom up” diffusion of e-cigarette clean air policies. Ultimately, the lack of clinical and scientific knowledge on the risks and potential harm reduction benefits has led to precautionary policymaking, which often lacks grounding in empirical evidence and results in spatially uneven diffusion of policy.

© 2014 Elsevier Ltd. All rights reserved.

Contents

1. Introduction.....	75
2. The current state of empirical research on e-cigarettes.....	76
3. The legal context of e-cigarette regulation.....	77
4. Current policies regulating e-cigarette use.....	77
4.1. Data.....	77
4.2. Geographic and temporal patterns of e-cigarette clean air restrictions.....	78
5. Controversy and debate.....	79
6. Public health implications.....	80
Cases cited.....	81
Funding source.....	81
Conflict of interest.....	81
Acknowledgments.....	81
References.....	81

1. Introduction

In January 2014, NBC's telecast of the Golden Globe Awards drew criticism when stars such as Julia Louis Dreyfus and Leonardo DiCaprio were shown puffing on electronic cigarettes, or

“e-cigarettes,” during the award show (Git, 2014). Among the critics were four U.S. Senators who wrote an open letter to NBC and the Hollywood Foreign Press, requesting that steps be taken to prevent showing e-cigarette usage in future broadcasts, arguing that, “Such action would help to avoid the glamorization of smoking and protect the health of young fans” (Durbin et al., 2014). These senators and other lawmakers in favor of various types of restrictions argue that the health effects and safety of e-cigarette use are unknown, that allowing public representations may re-normalize smoking and contribute to clean air enforcement problems, and

* Corresponding author. Tel.: +1 765 494 4668; fax: +1 765 496 1476.

E-mail addresses: jkadowak@purdue.edu (J. Kadowaki), mvuolo@purdue.edu (M. Vuolo), bckelly@purdue.edu (B.C. Kelly).

that e-cigarettes are a danger to young people for whom they may serve as a gateway to conventional cigarette use. Opponents of restrictions argue that e-cigarettes offer a safer alternative to tobacco smoking, and e-cigarette usage should not be excessively discouraged in the interests of harm reduction.

Electronic cigarette usage is novel and, as a result, policy is changing quickly and has outpaced scientific knowledge on the health effects of use and exposure. A range of restrictions on e-cigarette use have been introduced in recent years; however, these responses have not been uniform at the geographic level at which policies have been passed (e.g. municipal, county, state), nor across the types of spaces that have been regulated (e.g. schools, workplaces, bars, restaurants, parks). The variation in responses to e-cigarette use leads us to consider the following questions in this article:

- (1) What are the legal foundations of the implementation of e-cigarette clean air policies in the United States?
- (2) What are the temporal and geographic patterns of the enactment of e-cigarette clean air policies across the U.S.?
- (3) What are the key points in debates surrounding enactment of these policies and the public health implications of prohibiting e-cigarette use in public spaces?

We address the first question through a review of current empirical research on e-cigarettes, followed by an outline of the legal decisions and patterns of diffusion relevant to the current policy environment in the U.S. We address the second question by assessing underutilized data on the geographic patterns of e-cigarette clean air restrictions temporally and spatially across the U.S. For the final question, we summarize key points in the debate surrounding e-cigarette clean air policies, while providing examples of discussions stemming from these debates. In considering these issues, we address the role of place in policymaking both with respect to the spaces in which restrictions are being enacted as well as the geographic distribution of these policies. While the policy data used for this paper are specific to the U.S., these policy debates are occurring globally (Gartner and McNeill, 2010), and thus the shifting landscape of e-cigarette policy may have broader implications.

2. The current state of empirical research on e-cigarettes

Electronic cigarettes are battery-operated devices that simulate smoking. A practice sometimes described as “vaping,” users inhale vapor produced from the combustion of a solution, usually water and propylene glycol (Riker et al., 2012). The liquid is often flavored like tobacco, menthol, or with various sweet or fruity flavors, and may or may not include nicotine. Many e-cigarettes offer adjustable doses of nicotine through the attachment of cartridges. While vaping is largely believed to be safer than smoking because e-cigarettes contain fewer toxins and particulates than smoke from tobacco, the recent introduction of e-cigarettes means that the long-term effects of vaping or exposure to second-hand vapors is not yet conclusively established. While also advocated by some as a tool to reduce or cease smoking, studies have not yet definitively established whether e-cigarettes are an effective smoking cessation tool, nor established the health effects of vaping as an adjunct to smoking (Riker et al., 2012). Vapors emitted from e-cigarettes contain some toxins; however, the toxicity levels were 9–450 times lower than those in cigarette smoke (Goniewicz et al., 2014) and bystander exposure to vapors is likely much safer than exposure to second-hand smoke (McAuley et al., 2012; Schripp et al., 2012; Hajek et al., 2014). Despite these findings, public health concerns remain in that where restrictions on tobacco smoke are already in place, allowing vaping may

still expose bystanders to secondhand particulates, which have potential health effects (Schober et al., 2014). The assessment of the toxicity levels ultimately remains uncertain due to weak federal regulatory practices and the resulting lack of consistent quality control (Cobb et al., 2010; Goniewicz et al., 2014).

The practice of vaping has grown in popularity. In a 2012 survey of Australia, Canada, the U.K., and the U.S., almost half of respondents were aware of e-cigarettes, although this varied greatly from 20% in Australia to 73% in the U.S. (Adkison et al., 2013). The same survey shows the U.S. leading the other three countries by considerable margins in both lifetime (have tried at least once) and current e-cigarette use (Adkison et al., 2013). Awareness of e-cigarettes has grown rapidly in the U.S.: from four in ten adults in 2010 to three in four adults in 2012 (Centers for Disease Control and Prevention, 2013a; Adkison et al., 2013; King et al., 2013). The CDC data from June 2014 suggests that 14.1% of American adults have tried e-cigarettes at least once (Agaku et al., 2014). Of those Americans who reported themselves as current e-cigarette users, 17.9% reported everyday use (Agaku et al., 2014). Research suggests that current smokers are more likely to use e-cigarettes than the general population, and former smokers are also slightly more likely to “vape” than those who have never been smokers (Centers for Disease Control and Prevention, 2013a; King et al., 2013; Pearson et al., 2012). Individuals who reported currently using e-cigarettes were more likely to be recent quitters of smoking than long-term quitters (Zhu et al., 2013). Research using data collected in 2012 found that among never smokers, 1.0% had tried e-cigarettes, and among those smokers who quit more than one year ago, 2.4% had tried them (Zhu et al., 2013). This was in stark contrast to 26.8% of those who quit smoking during the past year who reported trying e-cigarettes at least once and 32.2% of current smokers. Of those who had tried e-cigarettes, 54.9% indicated one of the reasons they did so was because they were trying to quit smoking, and 49.9% reported trying e-cigarettes because they believed them to be safer than cigarettes (Zhu et al., 2013).

E-cigarette use is also increasing among youth (Centers for Disease Control and Prevention, 2013b). The CDC reported that the percentage of high school students who reported using e-cigarettes at least once rose from 4.7% in 2011 to 10.0% in 2012 (Centers for Disease Control and Prevention, 2013b). In 2012, 76.3% of middle and high schoolers who reported using an e-cigarette during the last 30 days also reported smoking conventional cigarettes (Centers for Disease Control and Prevention, 2013b). Among middle school students, 1 in 5 students who reported trying e-cigarettes had not yet tried tobacco cigarettes (Centers for Disease Control and Prevention, 2013b). Research specifically on adolescent boys suggests that while awareness is high, only a minority of respondents reported a willingness to try e-cigarettes (Pepper et al., 2013). Current tobacco smoking remains the strongest predictor of e-cigarette use among teens (Camenga et al., 2014).

Tobacco smoking is the leading cause of preventable death in the U.S., accounting for 1 in every 5 deaths each year (Centers for Disease Control and Prevention, 2014). Knowledge about the negative health effects of smoking, combined with increased tobacco regulation in recent decades has led to a considerable decrease in smoking across the U.S. (Centers for Disease Control and Prevention, 2014). Many smokers who seek to quit use outpatient treatments for reducing the withdrawal symptoms of nicotine. Such therapies often include alternative nicotine delivery systems such as chewing gum, patches, and lozenges (Riker et al., 2012). Similarly, e-cigarettes offer an alternative form of nicotine delivery and may be used in smoking cessation treatment. Yet, the extent to which e-cigarette usage may be an effective smoking cessation tool is uncertain. Several studies relying on surveys using convenience samples reported that respondents perceive e-cigarettes as safer than tobacco (Etter and Bullen, 2011) and that they use e-cigarettes in an attempt to abstain from smoking (Etter,

Download English Version:

<https://daneshyari.com/en/article/7458329>

Download Persian Version:

<https://daneshyari.com/article/7458329>

[Daneshyari.com](https://daneshyari.com)