E-cigarette use in air transit: self-reported data from US flight attendants

INTRODUCTION

The purpose of this analysis was to evaluate the use of electronic cigarettes (e-cigarettes) in air transit, and to understand potential problems created by this practice for flight crew and patrons. Safety concerns around the long-term effects of e-cigarette use and passive inhalation in enclosed spaces are being studied, yet e-cigarettes are increasingly being used in smoke-free places.[1] No studies have examined the issues of e-cigarette use in air transit.

METHODS

In 2012, we surveyed 723 flight attendants for a study on secondhand smoke and air quality in the work environment. Participants were recruited through a flight attendant union and advertisement in social media groups for flight attendants. Based on discussions with flight attendants and key informants, it was determined that eligible participants had to service a minimum of two international flights per month for at least 1 year in their current position. The study focused on US carriers but participation was open to all English-speaking flight attendants.

Participants were asked "Do you use e-cigarettes? (yes or no)". Next they were asked whether they ever observed anyone using an e-cigarette in an airport or aeroplane (yes or no), and if yes, an open-ended response obtained further details on their observations of e-cigarette use. All open responses were coded using Stata to assign categories for location of observation (aeroplane, airport, other) and person observed (passenger, flight attendant, crew) and were then validated by hand to confirm that the coding system was accurate. Other information collected in the survey included demographics, smoking status and attitudes toward smoke-free policies.

RESULTS

Among responses to the e-cigarette questions, 92.4% of respondents worked for a US-based carrier, 82.4% of which were a major US carrier. A total of 39 (6.8%) responded that they used e-cigarettes (table 1). After adjustment for age and gender, the OR for e-cigarette use was 13.6 (95% CI 6.3 to 29.3) comparing current smokers to never smokers.

A total of 264 (46.4%) respondents reported ever seeing e-cigarette use in an aeroplane or airport. Among those respondents, 41.3% reported seeing an e-cigarette used in an airplane, 25% in an airport, 6.4% in both locations, and 27.3% of locations were unspecified. Within these observations of use on an aeroplane (N=109), 76.9% involved a passenger using an e-cigarette, 8.8% involved a flight attendant or crew, and 12.9% were unspecified.

Flight attendants' open responses indicated confusion among coworkers, passengers, and crew about e-cigarette usage during flights. Notable responses included:

"Pilot had [e-cigarette] onboard and demonstrated it"

"Several [flight attendants] use them inflight in bathroom (against regulations) and on the ground."

"[Passenger] was told by ticket agents it was allowed on board…"

"…Occasionally passengers will attempt to use them in the airplane and have to be told they are prohibited by the FAA."

DISCUSSION

Results suggested that flight attendant e-cigarette use is similar compared to the national prevalence of 6.2% adult ever-use.[2] Flight attendants commonly witnessed e-cigarette use during flights and gave conflicting reports about what was allowed by airlines, which indicates inadequate communication of policies to passengers and crew. Indeed, the Federal Aviation Administration (FAA), Department of Transportation (DOT) and Transportation Security Administration (TSA) do not have official policies on e-cigarette use in air travel, though the DOT did issue a Notice of Proposed Rulemaking (NPRM) in 2011 and 2013. Meanwhile, numerous domestic and international US airline companies, including United, American Airlines, Southwest, Delta and JetBlue, have begun banning e-cigarette use on a voluntary basis.[3]

Allowing e-cigarette use in smoke-free places undermines the denormalisation of cigarette smoking,[4] particularly with respect to the milestone ban on in-flight smoking that flight attendant unions and smoke-free advocates fought incredibly hard to pass.[5] The use of e-cigarettes in air transit—both on aeroplanes and in airports—must be addressed in the current policy and regulatory deliberations in the US and around the world. Given the growing evidence around passive vaping and air quality associated with e-cigarette use,[6–8] banning e-cigarettes on aeroplanes and in airports is a needed step-forward for the protection of both passengers and crew.

Table 1 Flight attendant characteristics by e-cigarette use and observation of e-cigarette use

	N	Do you use e-cigarettes?			Have you ever observed a person using e-cigarettes in an airport or aeroplane?		
		Yes	No	p Value	Yes	No	p Value
N	569	39	530		264	305	
Sex							
Men	184	51.3	30.6	<0.01	36.4	28.2	0.04
Women	387	48.7	69.4		63.6	71.8	
Age, years*	569	39.3 (11.9)	42.6 (11.6)	0.08	44.1 (11.1)	40.8 (11.9)	<0.01
College and more	302	59.0	52.6	0.44	48.9	56.7	0.06
Worked before in-flight smoking ban	225	38.5	39.6	0.89	48.5	31.8	<0.01
Smoking status							
Never	385	33.3	70.2	<0.01	63.6	71.1	0.15
Former	106	2.6	19.8		20.5	17.1	
Current	78	64.1	10.0		15.9	11.8	
Agree with smoke-free indoor public places (including airports)	497	71.8	88.5	<0.01	90.9	84.3	0.02
Prefer to work in a smoke-free environment	515	79.5	91.3	0.02	93.9	87.5	<0.01
Believe airports need additional tobacco control policies	382	43.6	68.9	<0.01	78.4	57.4	<0.01

*Data are % or mean (SD).

What this paper adds

▶ This paper provides data on the use of electronic cigarettes (e-cigarettes) in air transit, which is needed to inform current policy and regulatory deliberations in the US and around the world.

▶ Our findings show that e-cigarettes are frequently used in air transit-both on aeroplanes and in airports- by flight attendants, crew, and passengers.

▶ Findings also indicate confusion around knowledge and awareness of airline and federal regulations around e-cigarettes in air transit.

▶ These results indicate that it is urgent to take action to consistently ban these products on flights and in airports, and to implement and enforce rules.

Frances A Stillman,[1] **Andrea Soong,**[1] **Laura Y Zheng,**[2] **Ana Navas-Acien**[2]

[1]Department of Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health, Institute for Global Tobacco, Baltimore, Maryland, USA
[2]Department of Environmental Health Sciences, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA

Correspondence to Dr Frances A Stillman, Department of Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health, Institute for Global Tobacco, 2213 McElderry Street, 4th Floor, Baltimore, MD 21205, USA; fstillm1@jhu.edu

Correction notice This article has been corrected since it was published Online First. In the Results section the sentence 'Among those respondents, 41.3% reported seeing an e-cigarette used in an aeroplane, 25% on an aeroplane…' has been amended to 'Among those respondents, 41.3% reported seeing an e-cigarette used in an airplane, 25% in an airport…'.

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