

Young Adults May Be Engaging in Risky Behaviors with their E-Cigarettes

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Introduction

Electronic cigarettes (i.e., e-cigarettes) have significantly increased in prevalence in recent years. Approximately 7.6% of young adults in the United States report using an e-cigarette,¹ and this rate is even higher among young adults presenting for military service (15.3%).² While the use of e-cigarettes as intended may be considered risky,^{3,4,5} especially given the recent publicity surrounding e-cigarette/vaping-associated-lung-injury (EVALI),⁶ some users also may use the devices or the e-liquids (i.e., “juice”) in a way that increases their risk. From September 2010 to February 2014, calls to Poison Control related to e-cigarettes increased from one call to 215 calls, with 42% of those calls for individuals aged 20 or older.⁹ However, there is limited research describing risky use of e-cigarettes.

Methods

A qualitative study was conducted to assess tobacco use among Airmen (called such regardless of sex or gender identity; $N = 64$) attending Air Force Technical Training. Airmen who self-identified as using tobacco were selected to participate in eight focus groups. A thematic analysis was used to determine trends related to risky e-cigarette use.

Results

In three of the focus groups, risky e-cigarette behaviors were described, with two main themes: 1) using high concentration liquids in ways that were not intended by the manufacturer for that product; and 2) risky strategies to avoid nicotine withdrawal during the day. First, Airmen described using nicotine salts or a 50 mg e-liquid (a potentially lethal amount of nicotine) in a “normal vape,” which is not the manufacturers intended use, to provide them with a more intense “hit.”^{7,8} They also indicated their concern about being able to quit given this higher concentration use pattern.

“What's weird is if you put the salt nic juice into the normal vape, it knocks you off your feet.”

“I went from a really easy habit to kick, 3 milligram, to... 50 milligram. You have to sit down after you take a hit.”

“You want such a high nicotine that you can't sit up.”

Second, since personnel are not able to use tobacco during the 12-hour duty day, they described risky strategies to avoid nicotine withdrawal:

“Hitting 28[mg] on my rig and I threw up. Then, I hit it right again. It was worth it.”

“... hit my Juul like, eight times in a row without an exhale.”

Discussion

E-cigarettes are being used in ways for which they were not intended. Multiple individuals endorsed using e-cigarettes at such a high dosage of nicotine that they could not stand up or vomited, or using lethal doses of nicotine because they could not use nicotine for extended periods and wanted to buffer themselves until nicotine use was allowed. It is possible that these behaviors also occur among civilians when access to tobacco is restricted, such as high school or college students in classes most of the day or individuals working long shifts (e.g., nurses, police officers). Understanding current risky behaviors associated with e-cigarettes will be important in order to inform education or countermarketing efforts as well as potential product regulation.

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