THE DANGERS OF E-CIGARETTE USE

AMONGST YOUNG ADULTS



WHAT ARE E-CIGARETTES AND WHAT IS THEIR PURPOSE?

Electronic cigarettes (e-cigarettes) are battery-operated devices which are used to inhale a vaporized substance that usually contains nicotine, flavorings, and other chemicals (Cox, Barry, & Glantz, 2014). They are intended to replace the need for traditional cigarettes; because of this, they are often praised for "harm reduction," or the idea that because they contain fewer toxic and carcinogenic chemicals than their traditional counterparts, they reduce harm by acting as a safer alternative (Al-hamdani, 2014).

POPULARITY AMONGST YOUNG ADULTS



13.8%

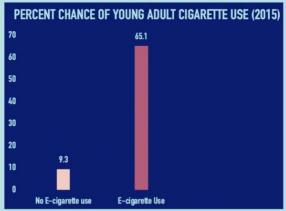
OF STUDENTS (ABOUT 3.62
MILLION) IN GRADES 6 THROUGH
12, REPORTED THAT THEY
WERE E-CIGARETTE USERS,
ACCORDING TO A 2018 STUDY
CONDUCTED BY THE US FDA.

Graphic by Vandermel

To make matters worse, e-cigarette popularity is increasing amongst young adult users, most of whom did not smoke previously (Durmowicz, 2014). Further, with e-cigarette exposure, young adults are more likely to develop an urge to smoke traditional cigarettes (King, Smith, McNamara, Matthews, & Fridberg, 2015). A recent study found that within a population of over 800 high school aged participants, individuals that had used e-cigarettes within the past month were seven times more likely to smoke traditional cigarettes within the next six-months (Bold et al., 2018).

HEALTH AND SAFETY CONCERNS

E-cigarettes are a risk to health because there is a large lack of awareness of the health risks of e-cigarettes; "E-cigarettes have unknown health risks and deliver nicotine, raising health concerns about youth and young adult use" (Duke et al., 2014, p. e35). Also, e-cigarettes pose a safety threat to society because vaping, or the act of using e-cigarettes, promotes the re-normalization of smoking (Al-hamdani, 2014).



Graphic by Vandermel

THE ROLE OF THE MEDIA

Seemingly, the media is increasing the prevalence of e-cigarettes amongst young adults. New studies indicate that advertisements for e-cigarettes are reaching young adults frequently; "Exposure to television advertisements for electronic cigarettes rose by just over 250% among teenagers in the United States and by 320% among young adults from 2011 to 2013" (McCarthy, 2014, p. 348). In a study that was conducted between the months of October 2012 and September 2013, 50% of young adults had been exposed to an average of 35 e-cigarette advertisements (Duke et al., 2014). Because e-cigarettes do not contain tobacco, the United States does not restrict their advertisement levels which is concerning, considering that over 24 million youth and young adults are exposed to advertisements which prompt them to use these devices (Duke et al., 2014).

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MYTHS AND MISCONCEPTIONS

- It is true that e-cigarettes do not contain the carcinogen tobacco which is found in traditional cigarettes, but they do contain other toxins and carcinogens which are released during the vaporization of e-cigarettes and are then inhaled ("Debunking the Myths of Electronic Cigarettes," 2014).
- In extreme cases, it is believed that e-cigarettes only produce water vapor; in reality, this could not be further from the truth. They contain chemicals such as propylene glycol and vegetable glycerin, which may cause soft tissue irritation or organ damage, respectively, as well as nicotine, which is poisonous and highly addictive ("Debunking the Myths of Electronic Cigarettes," 2014).

- It is widely believed that e-cigarettes are used only by previous smokers as an alternative to traditional cigarettes, however, in a study conducted amongst young adults. there was no association found between cigarette use and future e-cigarette use; hence, many users, including young adults are not using these devices as an alternative to using traditional cigarettes (Bold et al., 2018).
- · E-cigarettes are advertised as devices which replace the need for traditional cigarettes and are claimed to be beneficial for reducing harm, however, e-cigarettes have also provoked the re-normalization of smoking (Al-hamdani, 2014).

- Starting in 2016, e-cigarette ingredients are regulated by the US Food and Drug Administration (US FDA). However, any products which are, "marketed for therapeutic purposes (for example, marketed as a product to help people quit smoking)" do not face regulations by the US FDA ("Vaporizers," 2019).
- . Many e-cigarette users, including young adults, started using e-cigarettes before they were regulated and in a 2015 study, "62.5% of respondents did not know that e-cigarettes are unregulated by the FDA" (Wackowski & Delnevo, 2015, p. 543).
- · E-cigarettes are widely believed to be completely safe, however, "The research on e-cigarettes is in its adolescence and the long-term effects of e-cigarettes remain unknown," (Al-hamdani, 2014, p. 133), and "we lack robust evidence about the association between e-cigarette vaping and smoking abstinence" (Al-hamdani, 2014, p. 133).



EXISTING POLICIES

Current Policies mandate that e-cigarettes cannot be sold to persons under the age of 18 (Cox, Barry, & Glantz, 2014, p. 528). Additionally, in 2018 the US FDA enacted a policy which limits tobacco products to only be flavored as menthol or tobacco (Kux, 2018).

WHAT STILL NEEDS TO BE DONE?

STEP 1: BAN MENTHOL FLAVORINGS IN E-CIGARETTES AT LOCAL LEVELS

- Menthol flavorings should be banned in order to discourage the majority of young adult users from vaping.
- According to recent studies, over 54% of smokers aged 12-17 use menthol flavored e-cigarette or tobacco products (Fox, 2018).
- This should be done at local levels because previous regulation attempts within this field indicate that it is most feasible to implement regulations at local levels first (Cox, Barry, & Glantz, 2014).

STEP 2: IMPLEMENTING THE MENTHOL BAN AT BROADER LEVELS

• If banning menthol flavors is successful at local levels, this policy could then expand to state and potentially even national levels (Cox, Barry, & Glantz, 2014).

STEP 3: IMPLEMENTING MEDIA REGULATIONS

- After imposing the menthol ban, policies should also be imposed to restrict the media from promoting the use of e-cigarettes.
- This is needed because the media yields high levels of youth exposure to vaping, increasing their likelihood to use e-cigarettes by about 320% according to a 2011-2013 study (McCarthy, 2014).

References

- (2014, January). Table 203.10: Enrollment in public elementary and secondary schools, by level and grade: Selected years, fall 1980 through fall 2023. Retrieved April 9, 2019, from National Center for Education Statistics website:

 https://nces.ed.gov/programs/digest/d13/tables/dt13_203.10.asp
- Al-hamdani, M. (2014). A short note on e-cigarette issues: Harm reduction, re-normalization, and Big Tobacco. *Journal of Public Health Policy*, *35*(1), 132-134. DOI: 10.1057/jphp.2013.42
- Bold, K., Kong, G., Camenga, D., Simon, P., Cavallo, D., Morean, M., & Krishnan-Sarin, S. (2018). Trajectories of E-Cigarette and Conventional Cigarette Use Among Youth.

 Pediatrics, 141(1), 1-7. doi:10.1542/peds.2017-1832
- COX, E., BARRY, R., & GLANTZ, S. (2016). E-cigarette Policymaking by Local and State Governments: 2009-2014. *The Milbank Quarterly*, *94*(3), 520-596. DOI: 10.1111/1468-0009.12212
- Debunking the Myths of Electronic Cigarettes. (2014). Davis, CA: University of California,

 Davis. Retrieved from https://shcs.ucdavis.edu/blog/archive/health-trends/debunking-mythselectronic-cigarettes-e-cigs
- Duke, J., Lee Y., Kim, A., Watson, K., Arnold, K., Nonnemaker, J., & Porter, L. (2014).
 Exposure to Electronic Cigarette Television Advertisements Among Youth and Young
 Adults. *Pediatrics*, 134(1), e29-e36. DOI: 10.1542/peds.2014-0269
- Durmowicz, E. (2014). The impact of electronic cigarettes on the paediatric population. *Tobacco Control*, 23, Ii41-Ii46. DOI: 10.1136/tobaccocontrol-2013-051468
- Fox, M. (2018, November 15). FDA restricts all flavored e-cigarettes; moves to ban menthol.

- NBC. Retrieved from https://www.nbcnews.com/health/health-news/fda-restricts-all-flavored-e-cigarettes-moves-ban-menthol-n936471
- Haelle, T. (2018, November 15). FDA Ban On E-Cigarette Flavors: A Showdown Between Protecting Kids And Reducing Harm. Retrieved March 5, 2019, from https://www.forbes.com/sites/tarahaelle/2018/11/15/fda-ban-on-e-cigarette-flavors-a-showdown-between-protecting-kids-and-reducing-harm/#2de3af0f1b68
- King, A., Smith, L., McNamara, P., Matthews, A., & Fridberg, D. (2015). Passive exposure to electronic cigarette (e-cigarette) use increases desire for combustible and e-cigarettes in young adult smokers. *Tobacco Control*, 24(5), 501-504. DOI: 10.1136/tobaccocontrol-2014-051563
- Kux, L. (Ed.). (2018, March 15). Regulation of Flavors in Tobacco Products. Retrieved March 5, 2019, from https://www.regulations.gov/document?D=FDA-2017-N-6565-0001
- McCarthy, M. (2014). Youth exposure to e-cigarette advertising on US television soars. *BMJ: British Medical Journal*, *348*. DOI: 10.1136/bmj.g3703
- National Institute on Drug Abuse. (2018, June 6). Electronic Cigarettes (E-cigarettes). Retrieved from https://www.drugabuse.gov/publications/drugfacts/electronic-cigarettes-e-cigarettes on 2019, February 5.
- US Food and Drug Administration. (2019, February 5). Vaporizers, E-Cigarettes, and other Electronic Nicotine Delivery Systems (ENDS). Retrieved March 5, 2019, from https://www.fda.gov/tobaccoproducts/labeling/productsingredientscomponents/ucm456610.h tm

Wackowski, O., & Delnevo, C. (2015). Smokers' attitudes and support for e-cigarette policies and regulation in the USA. *Tobacco Control*, 24(6), 543-546. DOI: 10.1136/tobaccocontrol-2014-051953