



## ELECTRONIC CIGARETTES SHOULD BE INCLUDED IN SMOKE-FREE LAWS

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Smoke-free laws that protect everyone's right to breathe clean air in most workplaces and public places now cover a majority of the U.S. population. These laws have been a huge public health success — implemented with ease and high compliance, improving health and saving health care dollars. They not only protect Americans from the thousands of chemicals in secondhand smoke; they also create an environment that discourages smoking among kids and encourages smokers to quit. Allowing the use of electronic cigarettes (e-cigarettes) in workplaces and public places threatens to undermine the success of smoke-free laws:

- E-cigarettes release nicotine and other chemicals into the air. Allowing their use in smoke-free places would reintroduce toxins into clean air made possible by smoke-free policies.
- Allowing the use of e-cigarettes in workplaces and public places will complicate enforcement of smoke-free laws.

A report from the National Academies of Sciences, Engineering, and Medicine found conclusive evidence that “e-cigarette use increases airborne concentrations of particulate matter and nicotine in indoor environments compared with background levels.”<sup>1</sup> The U.S. Surgeon General called on states and localities to include e-cigarettes in smoke-free policies,<sup>2</sup> and in an earlier report noted that “smoke-free air policies should be modernized to include e-cigarettes” in order to protect the public from both secondhand smoke and secondhand aerosol. Further, the Surgeon General found that including e-cigarettes in smoke-free policies, “will maintain current standards for clean indoor air, reduce the potential for renormalization of tobacco product use, and prevent involuntary exposure to nicotine and other aerosolized emissions from e-cigarettes.”<sup>3</sup>

Nineteen states include e-cigarettes in their existing statewide smoke-free laws (AK, CA, CO, CT, DE, FL, HI, ME, MA, MN, NJ, NM, NY, ND, OR, RI, SD, UT, and VT). In addition, Washington, D.C. and hundreds of cities have taken action, including New York City, Chicago, New Orleans and Minneapolis.<sup>4</sup>

### **The aerosol released by e-cigarettes contains nicotine and other toxins.**

While e-cigarettes may be less harmful to the individual user than conventional cigarettes, many questions remain about the impact of exposure to the inhaled or exhaled aerosol. The Surgeon General found that, “prohibiting the use of e-cigarettes in enclosed spaces eliminates potential health risks to nonusers and ensures their right to clean air.”<sup>5</sup>

- According to the CDC, e-cigarette aerosol is not harmless “water vapor” and it is not as safe as clean air.<sup>6</sup> E-cigarette aerosol contains nicotine, which is absorbed by users and bystanders.<sup>7</sup> Studies have found other chemicals and toxins present in some e-cigarettes, including formaldehyde, acrolein, volatile organic compounds like toluene, tobacco-specific nitrosamines, and metals like nickel and lead.<sup>8</sup> These compounds are generally present at levels much lower than in cigarette smoke, although the compounds themselves are found on FDA's list of harmful or potentially harmful substances.<sup>9</sup>
- Because of the limited data available on the safety of exposure to e-cigarette emissions, in 2015 the National Institute for Occupational Safety and Health (NIOSH) issued a recommendation that e-cigarettes be included in smoke-free workplace policies.<sup>10</sup>
- Published studies have found that e-cigarettes emit significant amounts of nicotine into the air and can involuntarily expose nonsmokers and people who choose not to use e-cigarettes to nicotine.<sup>11</sup> One study found that passive exposure to e-cigarettes produced a similar effect on

serum cotinine levels (a measure of nicotine exposure) as exposure to secondhand smoke from traditional cigarettes.<sup>12</sup>

- Several of the products themselves include warnings that inhaled nicotine is “very toxic.”\*
- Although an increasing number of scientists are examining the issue, it remains unclear to what extent secondhand exposure to nicotine causes harm to bystanders, especially among vulnerable populations, such as children, pregnant women, and people with cardiovascular conditions.<sup>13</sup> And the long-term health effects of e-cigarettes are not known, because they have not been in widespread use long enough to assess them.<sup>14</sup>
- In a June 2014 column to the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Journal, one member writes that e-cigarettes emit harmful chemicals into the air and should be regulated indoors in the same manner as tobacco smoking. When modeling exposure for a small office setting, the author determined that in the highest exposure situations, ventilation was not sufficient to mitigate the risks from direct or indirect exposure. He notes, “Clearly, ventilation is not a solution and e-cigarette use will have to be regulated indoors in the same manner as is done for tobacco smoking, which is prohibited indoors.”<sup>15</sup>

Smoke-free laws protect everyone’s right to breathe clean air. When evaluating the potential risks of exposure to e-cigarette aerosols, the standard for comparison should not be whether the aerosol is less harmful than secondhand tobacco smoke. It should be whether e-cigarettes release nicotine and toxins into the clean air made possible by smoke-free laws.<sup>16</sup>

#### **Allowing e-cigarette use will undermine enforcement of smoke-free laws.**

Smoke-free laws have been implemented successfully across the country with few problems and near-universal compliance rates.<sup>17</sup> These laws work because the rules are simple and clear and easily understood by business owners, workers, patrons, and enforcement agencies.

As noted by the CDC, prohibiting the use of e-cigarettes in public places can support enforcement of smoke-free laws.<sup>18</sup> Allowing e-cigarettes in workplaces and public places, on the other hand, would cause needless confusion and complicate enforcement. Not only are some e-cigarettes made to closely resemble conventional cigarettes and be smoked like them; the marketing of these products in television and other advertising promotes their use in a way that mimics smoking conventional cigarettes.

Business owners, employees, and enforcement officers would have to make an extra effort to distinguish between e-cigarettes and actual cigarettes and possibly take time to referee disputes between users and other customers. Having to distinguish e-cigarettes from others will complicate enforcement and may even make smokers of conventional cigarettes think smoking is allowed.

These problems are entirely avoidable by including e-cigarettes in smoke-free laws along with other tobacco products. Experience in smoke-free cities and states shows that customers quickly adjust to smoke-free laws, and even smokers come to support them. Including e-cigarettes in the law means that those wishing to use the products would simply need to step outside, just as cigarette smokers do under the law. And just as cigarette smokers across the country have adjusted to abiding by smoke-free laws, e-cigarette users will adjust as well.

#### **Smoke-free laws are working to improve public health and should not be undermined.**

A majority of the U.S. population now lives in jurisdictions that prohibit smoking in most workplaces and public places. Smoke-free laws not only protect everyone’s right to breathe clean air; they also create an environment in which smokers are more likely to try to quit and succeed in doing so and in which kids are

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\*Product packaging for at least four e-cigarettes (NJOY, MarkTen, METRO, and Mystic) have included warnings that state nicotine is “very toxic by inhalation.”

less likely to start smoking. The CDC has stated that including e-cigarettes in smoke-free laws can support these tobacco-free norms.<sup>19</sup> Allowing e-cigarettes in workplaces and public places, however, could reverse this progress.<sup>20</sup>

- By encouraging smokers to use e-cigarettes in places where they cannot smoke, e-cigarette marketing discourages quitting by offering smokers a way to get nicotine when they otherwise cannot.
- Allowing e-cigarette smoking in workplaces and public places will add to the re-glamorization of smoking that e-cigarette companies are attempting to achieve through their marketing efforts, which include many of the same tactics and themes that have addicted kids for decades.<sup>21</sup>

## **Conclusion**

Many questions remain about the potential impact of e-cigarettes on both users and non-users. The use of e-cigarettes in otherwise smoke-free places raises challenges for enforcement and has the potential to undermine the public health impact of smoke-free laws. Including e-cigarettes in smoke-free laws is the best policy for public health and the best policy to protect everyone's right to breathe clean air.

***Campaign for Tobacco-Free Kids, June 28, 2019***

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<sup>1</sup> National Academies of Sciences, Engineering, and Medicine (NASEM), *Public Health Consequences of E-Cigarettes*, Washington, DC: The National Academies Press, 2018, doi: <https://doi.org/10.17226/24952>.

<sup>2</sup> Office of the Surgeon General, "Surgeon General's Advisory on E-Cigarette Use Among Youth," December 18, 2018, <https://e-cigarettes.surgeongeneral.gov/documents/surgeon-generals-advisory-on-e-cigarette-use-among-youth-2018.pdf>.

<sup>3</sup> U.S. Department of Health and Human Services. *E-Cigarette Use Among Youth and Young Adults. A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2016, <https://www.surgeongeneral.gov/library/2016ecigarettes/index.html#fullreport>

<sup>4</sup> Americans for Nonsmokers' Rights Foundation, *States and Municipalities with Laws Regulating Use of Electronic Cigarettes*, Berkeley, CA, <http://www.no-smoke.org/pdf/ecigslaws.pdf>. For Alaska, see <http://dhss.alaska.gov/dph/Chronic/Pages/Tobacco/SmokeFreeWorkplace/default.aspx>. In April 2019, the Governor of Florida signed an amendment passed by voters in November 2018 to prohibit e-cigarette use in enclosed indoor workplaces (see <https://www.flsenate.gov/Session/Bill/2019/07012>). In April 2019, New Mexico passed a law to include e-cigarettes in the state's Clean Indoor Air Act (see <https://www.nmlegis.gov/Legislation/Legislation?chamber=H&legtype=B&legno=256&year=19>). In May 2019, the Governor of Colorado signed a bill that added e-cigarettes in the state's Clean Indoor Air Act (see <https://leg.colorado.gov/bills/hb19-1076>). In May 2019, the Governor of Minnesota signed a bill to include e-cigarettes in the state's Clean Indoor Air Act (see <https://kstp.com/news/e-cigarettes-added-to-clean-indoor-air-law-banning-them-from-indoor-spaces-/5373155/>). In March 2019, the Governor of South Dakota signed a bill to include e-cigarettes in the state's Smoke-Free law (see [https://sdlegislature.gov/Legislative\\_Session/Bills/Bill.aspx?Bill=1209&Session=2019](https://sdlegislature.gov/Legislative_Session/Bills/Bill.aspx?Bill=1209&Session=2019)).

<sup>5</sup> U.S. Department of Health and Human Services. *E-Cigarette Use Among Youth and Young Adults. A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2016, <https://www.surgeongeneral.gov/library/2016ecigarettes/index.html#fullreport>

<sup>6</sup> CDC Office on Smoking and Health, "Electronic Nicotine Delivery Systems: Key Facts," October 2016. Accessed February 2, 2017. <https://www.cdc.gov/tobacco/stateandcommunity/pdfs/ends-key-facts-oct-2016.pdf>

<sup>7</sup> CDC, "Dual Use of Tobacco Products." <http://www.cdc.gov/tobacco/campaign/tips/diseases/dual-tobacco-use.html#ten>, accessed February 2, 2017.

<sup>8</sup> Cheng, T, "Chemical Evaluation of Electronic Cigarettes," *Tobacco Control* 23:ii11-ii17, May 2014. [http://tobaccocontrol.bmj.com/content/23/suppl\\_2/ii11.full](http://tobaccocontrol.bmj.com/content/23/suppl_2/ii11.full). Goniewicz, ML, et al., "Levels of selected carcinogens and toxicants in vapour from electronic cigarettes," *Tobacco Control* 23(2):133-9, March 6, 2013. Williams, M, et al., "Metal and Silicate Particles Including Nanoparticles Are Present in Electronic Cigarette Cartomizer Fluid and Aerosol," *PlosOne*, 8(3), March 2013. See also Williams, M, "Electronic Cigarette Liquids and Vapors: Is It Harmless

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Water Vapor,” presented October 3, 2013 at TRDRP Electronic Cigarette Webinar,

<http://www.trdrp.org/docs/Williams%20ecig%20vapor%20this%20time%20slides%202013.pdf>.

<sup>9</sup> Goniewicz, ML, et al., “Levels of selected carcinogens and toxicants in vapour from electronic cigarettes,” *Tobacco Control* 23(2):133-9, March 6, 2013. Williams, M, et al., “Metal and Silicate Particles Including Nanoparticles Are Present in Electronic Cigarette Cartomizer Fluid and Aerosol,” *PlosOne*, 8(3), March 2013. See also FDA, “Harmful and Potentially Harmful Constituents in Tobacco Products and Tobacco Smoke: Established List,” March 2012, <http://www.fda.gov/TobaccoProducts/GuidanceComplianceRegulatoryInformation/ucm297786.htm>.

<sup>10</sup> Current Intelligence Bulletin 67: *Promoting Health and Preventing Disease and Injury Through Workplace Tobacco Policies*, <http://www.cdc.gov/niosh/updates/upd-04-02-15.html>.

<sup>11</sup> Czogala, J, et al., “Secondhand Exposure to Vapors From Electronic Cigarettes,” *Nicotine & Tobacco Research*, December 11, 2013, doi:10.1093/ntr/ntt203.

<sup>12</sup> Flouris, AD, et al., “Acute impact of active and passive electronic cigarette smoking on serum cotinine and lung function,” *Inhalation Toxicology*, 25(2):91-101, 2013.

<sup>13</sup> Czogala, J, et al., “Secondhand Exposure to Vapors From Electronic Cigarettes,” *Nicotine & Tobacco Research*, December 11, 2013, doi:10.1093/ntr/ntt203.

<sup>14</sup> Grana, R, et al., “E-Cigarettes: A Scientific Review,” *Circulation*, 129:1972-1986, 2014.

<sup>15</sup> Offermann, FJ, “The Hazards of E-Cigarettes,” *ASHRAE Journal*, June 2014, <http://www.iese-sf.com/pdf/ASHRAEJOffermann.pdf>.

<sup>16</sup> Grana, R, et al., *Background Paper on E-Cigarettes (Electronic Nicotine Delivery Systems)*, Prepared for the World Health Organization Tobacco Free Initiative, December 2013.

<sup>17</sup> Centers for Disease Control and Prevention (CDC), *Smoke-Free Policies Result in High Levels of Compliance*, [http://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/secondhand\\_smoke/protection/compliance/index.htm](http://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/protection/compliance/index.htm)

<sup>18</sup> CDC, “State Laws Prohibiting Sales to Minors and Indoor Use of Electronic Nicotine Delivery Systems—United States, November 2014,” *Morbidity and Mortality Weekly Report*, 63(49), December 12, 2014.

<sup>19</sup> CDC, “State Laws Prohibiting Sales to Minors and Indoor Use of Electronic Nicotine Delivery Systems—United States, November 2014,” *Morbidity and Mortality Weekly Report*, 63(49), December 12, 2014.

<sup>20</sup> Gentzke AS, et al., “Exposure to SecondhandSmoke and Secondhand E-Cigarette Aerosol Among Middle and High School Students,” *Preventing Chronic Disease*, April 2019; <https://doi.org/10.5888/pcd16.180531>.

<sup>21</sup> See Campaign for Tobacco-Free Kids, “7 Ways E-Cigarette Companies Are Copying Big Tobacco’s Playbook,” October 2, 2013, [http://www.tobaccofreekids.org/tobacco\\_unfiltered/post/2013\\_10\\_02\\_ecigarettes](http://www.tobaccofreekids.org/tobacco_unfiltered/post/2013_10_02_ecigarettes).