

# Policy Options for Regulating Electronic Cigarettes

Fact Sheet

• November 2018

Electronic cigarettes, or “e-cigarettes,” are battery-operated devices, which resemble tobacco cigarettes and create a vapor that users inhale; this vapor contains nicotine, flavorings, and other substances.<sup>1</sup> They have grown in popularity since becoming available in the United States in 2006. E-cigarette use has the potential to undermine standards established by the Arkansas Clean Indoor Air Act of 2006 and to increase nicotine addiction among Arkansans. Currently, e-cigarettes are not included in any of the state’s statutes that define tobacco products that deliver nicotine, and there is no state excise or special tax on e-cigarettes.

## BACKGROUND AND OVERVIEW

### Impact on Health

Smoking tobacco cigarettes is proven to be harmful to one’s health, and they are addictive because of the effects of nicotine. While many try to quit smoking by substituting e-cigarettes, these devices are not free of harmful agents and, among young people who have never smoked, they can lead to conventional smoking.<sup>1</sup> According the National Academies of Science, Engineering, and Medicine, the net public health outcome of e-cigarette use depends on the balance between positive and negative consequences. For some adults, e-cigarette substitution for traditional smoking may offer some risk reduction.<sup>2,3</sup> However, among youth and young adults, there is substantial evidence that e-cigarette use increases the risk of future use of tobacco cigarettes.<sup>4</sup>

Although e-cigarettes do not produce tobacco smoke, they do contain nicotine and other potentially harmful chemicals. In one test of e-cigarettes, the vapor contained known carcinogens and toxic chemicals, such as diethylene glycol (a solvent found in brake fluid and anti-freeze), as well as potentially toxic metal nanoparticles from the vaporizer.<sup>5</sup> E-cigarette vapor may contain formaldehyde-releasing agents at levels five to 15 times greater than tobacco smoke.<sup>6</sup> Additionally, e-cigarette vapors can have a negative impact on the body’s ability to fight bacteria that cause antibiotic-resistant Staph infections.<sup>7</sup>

### E-Cigarette Use: Youth and Young Adults

In recent years, the number of high school students who reported having used e-cigarettes has increased both in Arkansas and in the U.S. overall.

Figure 1. Percentage of U.S. Students in Grades 6-12 That Ever Used an E-Cigarette, 2011-2015

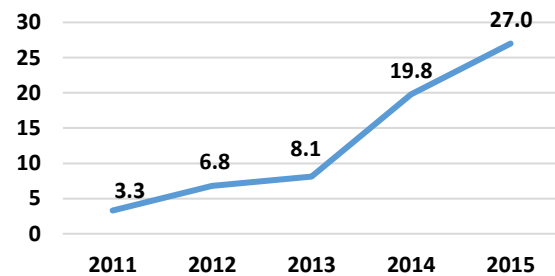
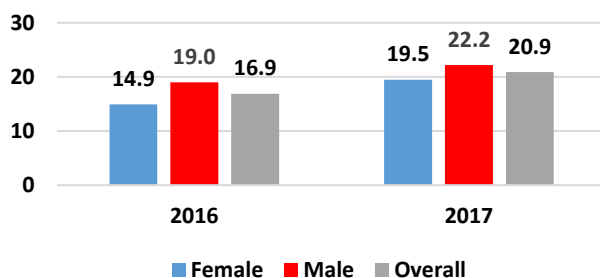


Figure 2. Percentage of Arkansas Students Grades 6-12 That Ever Used An E-Cigarette, 2016-2017



A 2017 statewide survey of students in grades six through 12 found that overall, 22.2 percent of male students and 19.5 percent of female students had used an electronic smoking device, compared to the 2016 rates of 19.0 percent and 14.9 percent, respectively.<sup>8,9</sup>

Nationally, the rate of students in grades six through 12 having used e-cigarettes increased substantially from 3.3 percent in 2011 to 27.0 percent in 2015.<sup>10</sup>

Current studies may not fully capture the recent widely reported surge in popularity among teens of “JUUL”

brand e-cigarettes. Introduced in 2017, these discreet, USB flash-drive shaped devices feature flavors like

“cool cucumber.” JUUL’s popularity and distinct interest among youth and young adults has sparked renewed urgency in e-cigarette regulation efforts.<sup>11</sup>

### Arkansas E-Cigarette Regulations

To date, the Arkansas legislature has considered and passed two bills related to e-cigarettes: Acts 1451 and 1099 of 2013<sup>12,13</sup> ban the sale of e-cigarettes to minors and prohibit the use of e-cigarettes on public school property, respectively. Additionally, several healthcare<sup>14</sup> and child care<sup>15</sup> entities, colleges, universities,<sup>16,17</sup> and municipalities<sup>18</sup> have introduced local ordinances or policies to regulate where e-cigarettes may be used. In addition, several businesses have included e-cigarettes in their no-smoking policies.<sup>19,20,21</sup>

#### E-Cigarette Restrictions in Arkansas<sup>23</sup>

- Use of vapor products or e-liquids is prohibited on grounds of any school or at off-campus school-sponsored events, in or on the grounds of any child care facility or healthcare facility.
- Use of e-cigarettes is “prohibited on each campus of state-supported institutions of higher education.”
- Use of e-cigarettes in registered child-care facilities and their vehicles is prohibited.
- Use of e-cigarettes near State Park buildings is restricted.

In May 2014, the Arkansas Department of Health issued a public health advisory warning consumers to exercise caution when considering e-cigarettes, electronic nicotine delivery systems (ENDS), and vaping devices.<sup>22</sup> The advisory states that these devices contain and emit harmful chemicals, are currently unregulated, and pose known and unknown health risks to users and non-users alike.

Currently, e-cigarettes are not included in any state statute definition of “Tobacco Products,” and there is no special or state excise tax placed on e-cigarettes.<sup>23</sup> E-liquid containers must be sold in child-resistant packaging (excepting pre-filled and sealed cartridges not intended to be opened by the consumer). Sale of vapor products, e-liquids, or any component thereof is prohibited to persons under age 18. Additionally, the distribution of vapor products, e-liquids or components, free samples, or coupons for free samples near youth-centered places or to persons under age 18 is prohibited, as is the possession/use/purchase of vapor products, e-liquids, or components by those under 18. Finally, self-service displays or vending machine sales of vapor products or e-liquids are restricted to locations inaccessible to those under 21, unless the vending machine is under employee supervision. A retail license or permit is required to sell e-cigarettes.<sup>22</sup>

## TAXATION OF E-CIGARETTES

Taxation methods of e-cigarette vapor products vary across states and localities. Some tax a percentage of the wholesale value, while others tax per unit or milliliter of e-liquid. When taxing the products based on volume (per milliliter) — as opposed to price (*ad valorem*) — taxes do not apply to the delivery device when the e-liquid and device are sold together.

Vapor products are not currently subject to special excise taxes in Arkansas.<sup>21</sup> However, eight states and the District of Columbia levy a statewide excise tax on vapor, and three state localities apply excise taxes to the products.<sup>24</sup>

### Impact of Taxes on E-Cigarette Use

Taxation has proven an effective means for reducing tobacco cigarette consumption. Studies have demonstrated an inverse relationship between taxation and tobacco use, with fewer people smoking as prices increase. Youth are generally more sensitive to price increases because they tend to have lower income and a relatively lower tobacco dependency.

Results from price elasticity studies show that for every 10 percent increase in the real price of cigarettes, overall cigarette consumption is reduced by approximately 3 to 5 percent, the number of young adult smokers

State	E-Cigarette Tax
California	62.78% wholesale price
Delaware	5¢ per ml
DC	60% wholesale price
Kansas	5¢ per ml
Louisiana	5¢ per ml
Minnesota	95% wholesale price
North California	5¢ per ml
West Virginia	7.5¢ per ml
Pennsylvania	40% wholesale price

falls by 3.5 percent, and the number of children (under 18 years old) who smoke declines by 6 to 7 percent.<sup>25,26</sup>

In drafting a new tobacco tax inclusive of e-cigarettes, policymakers will need to consider key variables including what parts to tax (e.g., devices, liquids, or both), how much to tax relative to conventional tobacco products, and if tax revenues should be earmarked for smoking prevention efforts. Regarding determination of tax rates, The Tobacco Control Network advocates, as a best practice, indexing the excise tax rate to inflation to reduce erosion of the tax over time or, alternatively, to use an *ad valorem* tax that will automatically increase with inflation as a percentage of the overall price.<sup>27</sup>

## NATIONAL POLICY TRENDS

Thirteen states, along with hundreds of cities and many counties, have banned e-cigarette use in their 100 percent smoke-free venues. At present, 15 states have incorporated e-cigarette bans similar to those described above for Arkansas, from public schools and health agencies to public colleges and universities.<sup>28</sup> In addition, some states have addressed the use of these products on transit systems, at fairgrounds, and state agency worksites.

Table 2: Summary of Smoke-Free Laws that Include E-Cigarettes	
State Laws	
● Restricting e-cigarette use in 100% smoke-free venues	<b>13</b>
● Restricting e-cigarette use in other venues	<b>15</b>
Local Laws	
● Restricting e-cigarette use in 100% smoke-free venues	<b>752</b>
● Restricting e-cigarette use in other venues	<b>630</b>

### Increasing Purchase Age for E-Cigarettes

Currently all states prohibit the sale of e-cigarettes to minors under the age of 18, and customers must show a valid photo ID. However, as of June 11, 2018, five states — California, New Jersey, Oregon, Hawaii, and Maine — have raised the minimum tobacco and e-cigarette purchasing age to 21, along with at least 320 localities, including New York City, Chicago, San Antonio, Boston, Cleveland, Minneapolis, and Kansas City. Some localities are in states that subsequently enacted statewide laws. Thus far three Arkansas localities have raised the minimum legal purchasing age for tobacco and e-cigarettes to 21: Helena-West Helena in 2016 and Harrison and Phillips County in 2018.<sup>29</sup>

### Action by the FDA

The FDA brought e-cigarettes within its oversight in 2016 when it expanded the definition of tobacco products. It planned to require such products that were on the market as of Aug. 8, 2016, when the so-called deeming rule was enacted, to undergo review starting in 2018. Many of the deeming rule’s requirements that went into effect on that date, included the prohibition of sales to minors under 18 years, the prohibition of free sampling, and restrictions on tobacco product vending machines. Other requirements, such as those regarding warning labels, premarket review, and tobacco product manufacturer registration, were scheduled to go into effect between Aug. 20, 2016, and May 10, 2018.<sup>30</sup>

In August 2017, the FDA extended the review deadline as part of a plan to overhaul tobacco regulation. Under the revised timeline, manufacturers won't need to submit a tobacco review application until 2021 for combustible products and until 2022 for e-cigarettes. The FDA said the decision would allow time to explore better ways to make tobacco products less toxic, less appealing, and less addictive.<sup>31</sup>

On Sept. 12, 2018, the FDA cited youth e-cigarette use as having reached “epidemic proportions,” and announced broad enforcement measures, including sending more than 1,300 warning letters and fines to retailers who illegally sold e-cigarettes to minors. In all, 28 Arkansas retailers were sent warnings or fines. The FDA is also requiring the five top-selling e-cigarette brands (JUUL, Vuse, MarkTen XL, blu e-cigs, and Logic) to submit — within 60 days of Sept. 12, 2018 — plans for how they will prevent youth access to their products.<sup>32</sup>

### Conclusion

Sustained implementation of population-based strategies at the state and local levels, in coordination with Food and Drug Administration regulation of tobacco products, are critical to reducing tobacco product use and initiation among U.S. youths. Researchers continue to assess the net public health impact of e-cigarette use, as states and local entities continue to implement strategies to minimize the harmful impact of e-cigarettes on their citizens. Arkansas policymakers have an opportunity to consider options that may improve the health of Arkansans, such as e-cigarette taxation and raising the minimum tobacco purchasing age requirement to 21.

## REFERENCES

- 1 Chafee B, Watkins S, Glantz S. Electronic Cigarette Use and Progression from Experimentation to Established Smoking. *Pediatrics*. Volume 141 Issue 4. April 2018. Accessed August 2, 2018. <http://pediatrics.aappublications.org/content/141/4/e20173594.long>
- 2 Siegel MB, Tanwar KL, Wood KS. "Electronic Cigarettes as a Smoking-Cessation Tool; Results from an Online Survey." *American Journal of Preventive Medicine*, 2011;40(4):472-75.
- 3 Biener L, Hargraves JL. "A Longitudinal Study of Electronic Cigarette Use in a Population-Based Sample of Adult Smokers: Association with Smoking Cessation and Motivation to Quit." *Nicotine & Tobacco Research*, 2015;17(2):127-133.
- 4 The National Academies of Sciences, Engineering, and Medicine. Committee on the Review of the Health Effects of Electronic Nicotine Delivery Systems. Public Health Consequences of E-Cigarettes. Press Release. January 23, 2018. Accessed August 1, 2018. <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=24952>
- 5 "Summary of Results: Laboratory Analysis of Electronic Cigarettes Conducted By FDA." U.S. Food and Drug Administration, April 22, 2014. Accessed February 4, 2015. <http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm173146.htm>.
- 6 Jensen RP, Luo W, Pankow JF, Strongin RM, Peyton DH. "Hidden Formaldehyde in E-Cigarette Aerosols." *New England Journal of Medicine*, 2015;372(4):392-4. doi:10.1056/NEJMc1413069.
- 7 Crotty Alexander LE, Enany S, Hwang H, Sladewski K, Nizet V. "Electronic Cigarette Vapor (ECV) Exposure Decreases Staphylococcus aureus Susceptibility to Macrophage and Neutrophil Killing." American Thoracic Society International Conference in San Diego, May 18, 2014.
- 8 Arkansas Prevention Needs Assessment 2017 Statewide Report. Accessed August 2, 2018. [https://arkansas.pridesurveys.com/dl.php?pdf=Arkansas\\_Report\\_2017.pdf&type=region](https://arkansas.pridesurveys.com/dl.php?pdf=Arkansas_Report_2017.pdf&type=region)
- 9 Arkansas Prevention Needs Assessment 2016 Statewide Report. Accessed August 2, 2018. [https://arkansas.pridesurveys.com/dl.php?pdf=Arkansas\\_Report\\_2016.pdf&type=region](https://arkansas.pridesurveys.com/dl.php?pdf=Arkansas_Report_2016.pdf&type=region)
- 10 U.S Department of Health and Human Services. E-Cigarette Use Among Youth and Young Adults: A Report of the Surgeon General. Accessed August 4, 2018. Chapter 2, page 28. [https://e-cigarettes.surgeongeneral.gov/documents/2016\\_SGR\\_Full\\_Report\\_non-508.pdf](https://e-cigarettes.surgeongeneral.gov/documents/2016_SGR_Full_Report_non-508.pdf)
- 11 Truth Initiative. JUUL E-cigarettes Gain Popularity among Youth, But Awareness of Nicotine Presence Is Low. April 18, 2018. Accessed August 5, 2018. <https://truthinitiative.org/news/juul-e-cigarettes-gain-popularity-among-youth>
- 12 89<sup>th</sup> General Assembly Regular Session. "Act 1451 – To Prohibit the Transfer of E-Cigarettes and Other Nicotine Products to Minors; and to Prohibit Minors from Possessing or Buying E-Cigarettes." Little Rock, AR: Arkansas General Assembly, April 22, 2013. Accessed February 9, 2015. <http://www.arkleg.state.ar.us/assembly/2013/2013R/Acts/Act1451.pdf>.
- 13 89<sup>th</sup> General Assembly Regular Session. "Act 1099 – To Prohibit the Use of E-Cigarettes on Public School Property." Little Rock, AR: Arkansas General Assembly, April 11, 2013. Accessed February 9, 2015. <http://www.arkleg.state.ar.us/assembly/2013/2013R/Acts/Act1099.pdf>.
- 14 "UAMS Administrative Guide Number 3.1.01: Smoking/Tobacco Policy." Little Rock, AR: University of Arkansas for Medical Sciences, December 4, 2013. Accessed January 30, 2015. [http://www.uams.edu/AdminGuide/PDFs/Section%203/3\\_1\\_01\\_Smoking\\_Tobacco\\_Use.pdf](http://www.uams.edu/AdminGuide/PDFs/Section%203/3_1_01_Smoking_Tobacco_Use.pdf).
- 15 Arkansas Department of Human Services Division of Child Care and Early Childhood Education Child Care Licensing Unit. *Minimum Licensing Requirements for Child Care Centers*. (PUB-002) Little Rock, AR: Arkansas Department of Human Services, January 1, 2015. Accessed January 30, 2015. [http://humanservices.arkansas.gov/dccece/licensing\\_docs/2014%20A1%20CCC%20Clean%20Copy%20Final%20Filing.pdf](http://humanservices.arkansas.gov/dccece/licensing_docs/2014%20A1%20CCC%20Clean%20Copy%20Final%20Filing.pdf).
- 16 "Campus Facilities: Tobacco-Free Policy." In *Arkansas Tech University 2014-2015 Student Handbook*, 73. Russellville, AR: Arkansas Tech University, 2014. Accessed on February 3, 2015, <http://issuu.com/arkansastechuniversity/docs/studenthandbook2014>.
- 17 University of Central Arkansas. *University of Arkansas Board Policy Number 519: Smoking and Tobacco Use*. Conway, AR: University of Central Arkansas, February 2014. Accessed February 3, 2015, <http://uca.edu/board/files/2010/11/519.pdf>.
- 18 Saylor R. "Airport Commission Gives OK for Talks on \$40 million Fort Smith Schools Project." *The City Wire*, May 27, 2014. Accessed February 3, 2015, [http://www.thecitywire.com/node/33275#\\_U4YcuSqXI5R](http://www.thecitywire.com/node/33275#_U4YcuSqXI5R).
- 19 Bahn C. "Firms Look at Regulating E-Smokes." *Arkansas Democrat-Gazette Business Section*, January 19, 2014.
- 20 Baldwin M, Reed A. "E-cigarettes, Smokeless Tobacco Banned from One Local Public Library." *5 News KFSM-KXNW*, October 20, 2013. Accessed February 5, 2015. <http://5newsonline.com/2013/10/20/e-cigarettes-smokeless-tobacco-banned-from-public-library/>.
- 21 "Restaurant Bans E-Cigarettes in Dining Room." *ArkansasMatters.com*, Nexstar Broadcasting, Inc., December 10, 2013. Accessed January 16, 2015, <http://www.arkansasmatters.com/story/restaurant-bans-e-cigarettes-in-dining-room/d/story/b3rrSTCAmUWAC8R8YhZ5TQ>.
- 22 "Public Health Advisory: To Consumers of Electronic Cigarettes, Electronic Nicotine Delivery Systems (ENDS) and Other Vapor Products." Little Rock, AR. Arkansas Department of Health, May 6, 2014. Accessed February 3, 2015, [www.arkansas.gov/health/newsroom/index.php?do:newsDetail=1&news\\_id=1039](http://www.arkansas.gov/health/newsroom/index.php?do:newsDetail=1&news_id=1039).
- 23 Public Health Law Center. U.S. E-Cigarette Regulations – Arkansas. Accessed August 1, 2018. <http://www.publichealthlawcenter.org/resources/us-e-cigarette-regulations-50-state-review/ar>
- 24 Tax Foundation. Vapor Taxes by State, 2018. Accessed August 1, 2018. <https://taxfoundation.org/vapor-taxes-2018/>
- 25 Atwaer P. et al. E-Cigarettes and Public Health: Policy Options for Washington State. Accessed August 10, 2018. <https://depts.washington.edu/esreview/wordpress/wp-content/uploads/2015/07/E-Cigarettes-and-Public-Health.pdf>
- 26 Chaloupka F, Pacula R. The Impact of Price on Youth tobacco Use. Smoking and Tobacco Control Monograph No. 14. Accessed August 7, 2018. [https://cancercontrol.cancer.gov/brp/tcrb/monographs/14/m14\\_12.pdf](https://cancercontrol.cancer.gov/brp/tcrb/monographs/14/m14_12.pdf)
- 27 The Tobacco Control Network. 2016 Policy Recommendations Guide. Accessed August 17, 2018. <http://tobaccocontrolnetwork.org/wp-content/uploads/2016/07/TCN-2016-Policy-Recommendations-Guide.pdf>
- 28 American Nonsmokers' Rights Foundation. States and Municipalities with Laws Regulating Use of Electronic Cigarettes. Accessed August 11, 2018. <http://no-smoke.org/wp-content/uploads/pdf/ecigslaws.pdf>
- 29 Campaign for Tobacco-Free Kids. States and Localities that Have Raised the Minimum Legal Sale Age for Tobacco Products to 21. Accessed August 7, 2018. [https://www.tobaccofreekids.org/assets/content/what\\_we\\_do/state\\_local\\_issues/sales\\_21/states\\_localities\\_MLSA\\_21.pdf](https://www.tobaccofreekids.org/assets/content/what_we_do/state_local_issues/sales_21/states_localities_MLSA_21.pdf)
- 30 Food and Drug Administration. Extension of Certain Tobacco Product Compliance Deadlines Related to the Final Deeming Rule. Accessed August 19, 2018. <https://www.fda.gov/downloads/TobaccoProducts/Labeling/RegulationsGuidance/UCM557716.pdf>
- 31 Food and Drug Administration. FDA's Comprehensive Plan for Tobacco and Nicotine Regulation. Accessed August 19, 2018. <https://www.fda.gov/TobaccoProducts/NewsEvents/ucm568425.htm>
- 32 FDA News Release. "FDA takes new steps to address epidemic of youth e-cigarette use, including a historic action against more than 1,300 retailers and 5 major manufacturers for their roles perpetuating youth access." Accessed September 12, 2018.