

## Curbing the Youth Vaping Pandemic: A Review of How Utah's Laws and Policies Compare Nationally and to Other States

By *Laura Summers, MPP, Senior Health Care Analyst, and Julia Martin, Intern*

### Introduction

Vaping, or the use of electronic cigarettes, is a public health issue both nationally and here in the state of Utah. Rates of vaping doubled nationally between 2017 and 2019,<sup>1</sup> and Utah has experienced a significant increase over the past several years as well. For example, the percent of 12th graders who have ever tried vaping increased from 6.4% in 2013 to 31.5% in 2019 — more than a five-fold increase over six years.<sup>2</sup> These data show the seriousness of youth e-cigarette use, which both the federal and state governments are addressing. The purpose of this policy brief is to present an overview of Utah's current regulations on vaping, and how they compare nationally and with other states.

### Background Information

#### *What Are E-cigarettes?*

E-cigarettes come in many different forms. Some look like regular combustible cigarettes, cigars, or pipes, while others resemble pens or USB sticks. There are also larger devices such as tank systems or “mods.”<sup>3</sup> E-cigarettes have different names, including “e-cigs,” “vapes,” “e-hookahs,” “vape pens,” “electronic nicotine delivery systems (ENDS),” and “disposables.”<sup>4</sup> Disposables are e-cigarettes that come pre-filled and are intended for one-time use.<sup>5</sup> Cartridge-based e-cigarettes are devices that contain a cartridge. Cartridges either come pre-filled or are refillable. As mentioned in a Matheson Center for Health Care Studies Fact Sheet, disposable and pre-filled e-cigarettes are most commonly used by students and youth as they are sold online, at convenience stores, and in gas stations.<sup>6</sup>

#### *What Is in E-cigarettes?*

Common to all devices is a battery, a heating element, and a liquid storage compartment. E-cigarettes produce an aerosol by igniting this liquid. The contents of this aerosol are not always known, but often contain nicotine, flavoring, and many other chemicals, including cancer-causing chemicals, heavy metals, and ultrafine particles that can easily be inhaled deep into the lungs.

#### *Negative Health Effects of E-cigarettes and Nicotine*

E-cigarette use is associated with increased exposure to cancer-causing chemicals and heavy metals, an increased risk for transitioning to tobacco use,<sup>7</sup> and risk of developing e-cigarette or vaping associated lung injury (EVALI).<sup>8</sup> E-cigarettes can also contain significant amounts of nicotine. For example, one study found that the blood nicotine concentration in rats administered aerosol from JUUL pods was five times higher than with smoke from cigarettes.<sup>9</sup> Even though some e-cigarettes are marketed as containing zero nicotine, a few have been found to contain small levels of nicotine among the other chemicals noted above.<sup>10</sup>

Nicotine negatively impacts the prefrontal cortex, the area of the brain responsible for attention and judgement. Continued exposure to nicotine severely reduces impulse control and decision-making abilities.<sup>11</sup> These harmful effects are exacerbated in adolescents as their brains are still developing.<sup>12</sup> As such, the nicotine content of e-cigarettes is particularly concerning, given that teens are more susceptible to addiction.<sup>13</sup>

## National E-cigarette Policies

### *The Tobacco Control Act of 2009 and “Deeming Rule”*

In 2009, passage of the Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) enabled the U.S. Food and Drug Administration to create the Center for Tobacco Products (CTP), which regulates tobacco products. On August 8, 2016, the FDA finalized the “Deeming Rule,” which provided it with the authority to regulate new and emerging tobacco products, such as e-cigarette products. Prior to August 8, 2016, vape products, cigars, and hookah products were not regulated by the FDA.

Part of the Tobacco Control Act requires e-cigarette manufacturers to apply for and receive FDA authorization to sell their products, which is known as the Premarket Tobacco Product Application (PMTA) process. After a lengthy litigation period, it was determined that by September 9, 2020, the FDA would require all new tobacco products that are not “substantially equivalent” to a grandfathered tobacco product, to apply for authorization through the PMTA process.

In September 2020, the FDA received a large volume of PMTA applications. Manufacturers that filed applications for their products could continue to sell the products for up to one year, through September 9, 2021, unless the FDA denied the application and forced the manufacturer to remove the product from the market. As part of the application process, manufacturers had to prove that the marketing of their products is “appropriate for the protection of public health.” E-cigarette product manufacturers must receive an affirmative marketing order from the FDA to continue to sell their products. As of October 8, 2021, no manufacturer had received an affirmative marketing order.

### *Federal Age Limit*

On December 20, 2019, federal legislation was signed into law prohibiting retailers from selling all tobacco products, including e-cigarettes, to anyone under age 21.<sup>14</sup> This legislation aims to reduce teenage vaping and nicotine addiction in the younger generation.

It is important to note, however, that states can’t enforce federal policies unless supporting state-level policies are in place. In the 2020 General Legislative Session, Utah passed House Bill 23 and Senate Bill 37, which granted local agencies enforcement authority of the federal age limit policies.

### *Federal Flavor Ban*

In February 2020, the FDA issued a policy prioritizing enforcement of certain unauthorized flavored e-cigarette products in an attempt to further reduce underage access and dissuade teenage vaping through updated FDA marketing authorization policies and guidance. Under the updated guidance, the FDA prioritized enforcement against illegally

marketed ENDS products by targeting “(1) any flavored, cartridge-based ENDS product (other than tobacco- or menthol-flavored ENDS products); (2) all other ENDS products for which the manufacturer has failed to take (or is failing to take) adequate measures to prevent minors’ access; and (3) any ENDS product that is targeted to minors or likely to promote use of ENDS by minors.”<sup>15</sup> The FDA’s guidance excluded mint and menthol ENDS product flavors and flavored disposables.

Utah legislation passed in 2020 (House Bill 23) enacted additional e-cigarette flavor restrictions to the federal e-cigarette flavor enforcement guidance. The Utah law restricts the sale of flavored e-cigarette products to age-restricted retail tobacco specialty businesses. General retailers, such as grocery stores and convenience stores, are now prohibited from selling flavored e-cigarette products, excluding tobacco, mint, and menthol flavors, as well as other flavors that may be authorized by the FDA in the future.

### *Federal Changes to the PACT Act*

The PACT (Preventing All Cigarette Trafficking) Act aims to prevent and reduce the use of tobacco and vape products, specifically by minors. The original PACT Act, enacted in 2010, regulates the online sales of cigarettes through the U.S. Postal System (USPS). In 2020, the PACT Act was amended to include all ENDS, regardless of device and nicotine content.<sup>16</sup> The PACT Act differentiates between direct-to-consumer sales and business-to-business sales; the USPS ban applies only to direct-to-consumer sales.

The federal expansion of the PACT Act supports and reinforces Utah’s pre-existing ban of online e-cigarette sales. Utah banned the online sale of e-cigarettes in 2015 with the passage of House Bill 415.

### *Proposed Federal Nicotine Content Limit*

No federal law or FDA regulation currently limits nicotine content in e-cigarette products. However, a newly introduced federal bill, H.R. 4324,<sup>17</sup> proposes to limit the nicotine content in all e-cigarette products nationwide. The bill would limit nicotine concentration to 20 mg/mL “to make them significantly less addictive and appealing to youth.”<sup>18</sup>

## Comparative State E-cigarette Policies

Table 1 presents an overview of key components of state e-cigarette policies, including limiting the sale of e-cigarette products above certain nicotine levels, licensing requirements to sell e-cigarettes, state excise taxes, packaging regulations, and clean air and aerosol-free restrictions. It is important to note that this table is not inclusive of all states, but includes Utah’s neighboring states, along with other select states from across the U.S., in an attempt to present representative data. It is also important to note that some municipalities have enacted

their own policies that may be stricter than the state’s policies listed in the table. For example, the city of San Francisco banned the sale of all nicotine e-cigarette products, while the State of California has yet to enact a similar ban. Table 1 does not include these specific city or county policies.

As shown in Table 1, Utah has enacted many policies to restrict the sale and impact of e-cigarettes on youth. Utah is not unique in requiring a retail license and permit in order to sell electronic cigarettes, but Utah’s state e-cigarette excise tax of 56% falls on the higher end when compared with neighboring and politically similar states. That said, Utah’s tax is lower than those in California, Massachusetts, and Minnesota. In terms of e-cigarette packaging regulations, Utah aligns with the majority of states in requiring some form of child-resistant packaging of e-liquids. Utah law requires e-cigarette packaging to include nicotine addictiveness warnings, and while nicotine content is not required to be displayed on the label, manufacturers often include it to help consumers make informed decisions. All of

the states included in the table have some form of e-cigarette use restrictions in terms of indoor or outdoor clean air and aerosol-free areas.

One of the biggest differences between Utah and the rest of the nation in terms of e-cigarette regulations is Utah’s sale restrictions on nicotine content. The only other state included in the table with similar laws is Massachusetts, which limits the sale of devices with a nicotine concentration greater than 35 mg/mL to adult-restricted specialty tobacco stores.

### Conclusion

Adolescent vaping is a growing public health concern perpetuated by the addictive and harmful nature of nicotine. From the 2009 Tobacco Control Act to the 2019 adjustment of the federal age limit, the 2020 federal flavor ban, the 2020 changes to the PACT Act, and the 2021 changes to Utah’s limits on selling e-cigarette products above certain nicotine levels, it is apparent that this is a rapidly changing environment.

**Table 1: Overview of State Policies**

| State      | Retail License or Permit Required to Sell E-Cigarettes | State Excise Tax   | E-Cigarette Packaging Regulations  | Clean Air & Aerosol-Free Restrictions   | Sales Restrictions on Nicotine Content  |
|------------|--|--|--|---|---|
| Utah       | ✓  | 56% of wholesale price   | Required safety warning, prohibition from creating the impression the vape product has a health benefit or additives associated with energy and vitality, and child-resistant packaging. | E-cigarettes are included in the definition of smoking and are likewise prohibited in the same places as smoking.   | Open systems are limited to 24 mg/mL or 360mg per container, while closed systems are limited to 3% or 36 mg/mL.* |
| Arizona    | N/A  | N/A  | N/A  | E-cigarette use is prohibited in foster homes and in vehicles when the foster child is present.   | N/A   |
| Arkansas   | ✓  | N/A  | Must be sold in child-resistant packaging, except in the case of pre-filled and/or sealed cartridges.  | E-cigarette use is prohibited on school grounds and vehicles, and in health care facilities. Likewise, e-cigarette use is prohibited on state-supported campuses of higher education.   | N/A   |
| California | ✓  | 59.27% of wholesale price  | Must be sold in child-resistant packaging.   | E-cigarette restrictions are similar to state smoking prohibitions.   | N/A   |
| Colorado   | ✓  | 30% of wholesale price in 2021, 35% in 2022, 50% in 2023, 56% from 2024–2028, and 62% from 2027 on | N/A  | E-cigarette restrictions are similar to state smoking prohibitions.   | N/A   |
| Florida    | ✓  | N/A  | N/A  | E-cigarette use is prohibited indoors (with the exception of private residences), near children, at health care facilities, within 1,000 feet of a school (between the hours of 6am to midnight), in the Sixth Judicial Circuit courthouse, in certain detention facilities, and in all firefighter places of employment. | N/A   |
| Idaho      | ✓  | N/A  | Must be sold in manufacturer-sealed packaging with all required warnings.  | E-cigarette use is prohibited in the interior and exterior of the State Capitol.  | N/A   |
| Iowa       | ✓  | N/A  | N/A  | E-cigarette use is prohibited on state-operated and -owned buildings, foster homes and any vehicle when a foster child is present, and by regulation on Iowa State University Campus.   | N/A   |

| State         | Retail License or Permit Required to Sell E-Cigarettes | State Excise Tax       | E-Cigarette Packaging Regulations   | Clean Air & Aerosol-Free Restrictions  | Sales Restrictions on Nicotine Content  |
|---------------|--|------------------------|---|--|---|
| Massachusetts | ✓  | 75% of wholesale price | Must be sold in child-resistant packaging. Packaging cannot be opened or repackaged into smaller quantities other than distributed by the manufacturer.   | E-cigarettes are included in the definition of smoking and are likewise prohibited in the same places as smoking.  | Sale of devices with a nicotine concentration greater than 35 mg/mL is restricted to specialty tobacco stores and smoking bars. |
| Michigan      | N/A  | N/A                    | Must be sold in child-resistant packaging (unless prefilled, sealed, and not intended to be opened by the consumer).  | E-cigarette use is prohibited in the Third Judicial Circuit Court, on child care center properties, and in homes and vehicles used to transport children in care when in operation for child care.   | N/A   |
| Minnesota     | ✓  | 95% of wholesale price | Must be sold in child-resistant packaging.  | E-cigarettes are included in the definition of smoking and are likewise prohibited in the same places as smoking.  | N/A   |
| Missouri      | ✓  | N/A                    | Must be sold in child-resistant packaging.  | E-cigarette use is confined to designated areas of public buildings. Use of e-cigarettes is prohibited in the presence of foster children and in foster homes. Likewise, the use of e-cigarettes is prohibited in public schools and busses. | N/A   |
| Montana       | ✓  | N/A                    | N/A   | E-cigarette use is prohibited in or on public school property.   | N/A   |
| Nevada        | ✓  | 30% of wholesale price | N/A   | E-cigarettes are included in the definition of smoking and are likewise prohibited in the same places as smoking.  | N/A   |
| New York      | ✓  | 20% of wholesale price | Must be sold in child-resistant packaging, and manufacturers must publish detailed information about each product, including a list of ingredients, potential health effects of each, and byproducts that may be produced in the vapor during normal use. | E-cigarettes are included in the definition of smoking and are likewise prohibited in the same places as smoking.  | N/A   |
| North Dakota  | N/A  | N/A                    | Must be sold in child-resistant packaging.  | E-cigarettes are included in the definition of smoking and are likewise prohibited in the same places as smoking.  | N/A   |
| Pennsylvania  | ✓  | 40% of wholesale price | Must be sold in original manufacturer's packaging.  | E-cigarettes are prohibited on school property owned or leased or under the control of a school district, and on school vehicles.  |   |
| South Dakota  | N/A  | N/A                    | Must be sold in original manufacturer's packaging.  | E-cigarette restrictions are similar to state smoking prohibitions.  | N/A   |
| Wyoming       | ✓  | 15% of wholesale price | Must be sold in child-resistant packaging.  | E-cigarette use is prohibited in child care facilities when children are present.  | N/A   |

\* The sale of non-manufacturer-sealed e-cigarettes (e-liquids or open systems) are limited to 360 mg nicotine, or are not to exceed 24 mg/mL nicotine concentration per container.

Effective September 9, 2021, tobacco retailers are prohibited from selling manufacturer-sealed e-cigarette products with a nicotine content greater than 3% by weight or exceeding 36 mg/mL for all closed systems, including cartridges, pods, and disposables.<sup>19</sup>

N/A: Not available based on our review of different state laws. Review might not have captured all relevant information and state statutes.

Source: Mitchell Hamline School of Law, Public Health Law Center, U.S. E-cigarette Regulations – 50-State Review (2021). Available from <https://www.publichealthlawcenter.org/resources/us-e-cigarette-regulations-50-state-review>.

## Endnotes

1. Teen e-cigarette use doubles since 2017. (2019, September 18). National Institute on Drug Abuse. Available from <https://www.drugabuse.gov/news-events/news-releases/2019/09/teen-e-cigarette-use-doubles-since-2017>
2. Student Health and Risk Prevention: Prevention Needs Assessment Survey (2019). Utah Division of Substance Abuse and Mental Health. Utah Department of Human Services. Available from <https://dsamh.utah.gov/pdf/sharp/2019/State%20of%20Utah%20Report.pdf>
3. About Electronic Cigarettes (E-Cigarettes). (2021, April 28). Smoking & Tobacco Use. Centers for Disease Control and Prevention. Available from [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/about-e-cigarettes.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html)
4. Electronic Cigarettes. (2021, July 12). Smoking & Tobacco Use. Centers for Disease Control and Prevention. Available from [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/index.htm](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/index.htm)
5. E-Cigarette, or Vaping, Products Visual Dictionary. Centers for Disease Control and Prevention. U.S. Department of Health and Human Services. Available from [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/pdfs/ecigarette-or-vaping-products-visual-dictionary-508.pdf](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/pdfs/ecigarette-or-vaping-products-visual-dictionary-508.pdf)
6. Wilson, FA. Proposed Rule Amendment to Rule R384-415: Public Health Implications for Youth E-Cigarette Use. Salt Lake City, UT: Matheson Center for Health Care Studies; 2021.
7. Ibid.
8. Dangers of Vaping. University of Utah Health experts explain the dangers of vaping and address vaping health risks. (2019, Sept. 20). University of Utah Health. Available from <https://uofuhealth.utah.edu/newsroom/news/2019/09/vaping-illness-faqs.php>
9. Rao, P., Liu, J., & Springer, M. L. (2020). JUUL and Combusted Cigarettes Comparably Impair Endothelial Function. *Tobacco Regulatory Science*, 6(1).
10. About Electronic Cigarettes (E-Cigarettes). (2021, April 28). Smoking & Tobacco Use. Centers for Disease Control and Prevention. Available from [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/about-e-cigarettes.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html)
11. Four E-cigarette Health Risks for Kids. Dangers of Vaping. *Northwestern Medicine*. Available from <https://www.nm.org/healthbeat/healthy-tips/emotional-health/vaping-4-risks-for-kids>
12. Jones, K., & Salzman, G. A. (2020). The Vaping Epidemic in Adolescents. *Missouri Medicine*, 117(1), 56–58. Available from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7023954>
13. Ibid.
14. STATE System E-Cigarette Fact Sheet. State Legislative Activity Enacted as of March 31, 2021. Centers for Disease Control and Prevention. Available from <https://www.cdc.gov/statesystem/factsheets/ecigarette/ECigarette.html>
15. FDA finalized enforcement policy on unauthorized flavored cartridge-based e-cigarettes that appeal to children, including fruit and mint. (2020, January 02). Press release. U.S Food & Drug Administration. Available from <https://www.fda.gov/news-events/press-announcements/fda-finalizes-enforcement-policy-unauthorized-flavored-cartridge-based-e-cigarettes-appeal-children>
16. Chowdhury, A., & Rende, G. D. (2021). Congress Amends the PACT ACT to Apply to All Vaping Products, Placing Huge Burden on Small Manufacturers as Third-Party Common Carriers Refuse to Ship Products. *The National Law Review*. Available from <https://www.natlawreview.com/article/congress-amends-pact-act-to-apply-to-all-vaping-products-placing-huge-burden-small>
17. H.R. 4624 (Ending Nicotine Dependence from Electronic Nicotine Delivery Systems Act of 2019). Available from <https://www.congress.gov/bill/116th-congress/house-bill/4624>
18. Congressman Raja Krishnamoorthi Reintroduces The END ENDS Act To Limit Nicotine Concentration In E-Cigarettes And Mitigate Youth Addiction. (2021, May 7). Press Release. United States Congressman Raja Krishnamoorthi. Available from <https://krishnamoorthi.house.gov/media/press-releases/congressman-raja-krishnamoorthi-reintroduces-end-ends-act-limit-nicotine>
19. Notice of Proposed Rule: R384-415 (Amendment). *Electronic Cigarette Substance Standards*. Available from [https://utahtobaccolaws.org/wp-content/uploads/2021/06/R384-415\\_6.15.2021.pdf](https://utahtobaccolaws.org/wp-content/uploads/2021/06/R384-415_6.15.2021.pdf)

## Acknowledgments

The authors extend appreciation to Christy Cushing, Policy Analyst at the Tobacco Prevention and Control Program, Utah Department of Health, for her research guidance and contributions.

## Partners in the Community

The following individuals and entities help support the research mission of the Kem C. Gardner Policy Institute.

### Legacy Partners

The Gardner Company  
 Intermountain Healthcare  
 Clark and Christine Ivory Foundation  
 KSL and Deseret News  
 Larry H. & Gail Miller Family Foundation  
 Mountain America Credit Union  
 Salt Lake City Corporation  
 Salt Lake County  
 University of Utah Health  
 Utah Governor's Office of Economic Opportunity  
 WCF Insurance  
 Zions Bank

### Executive Partners

Mark and Karen Bouchard  
 The Boyer Company  
 Salt Lake Chamber

### Sustaining Partners

Clyde Companies  
 Dominion Energy  
 Staker Parson Materials and Construction

## Kem C. Gardner Policy Institute Advisory Board

### Conveners

Michael O. Leavitt  
 Mitt Romney

### Board

Scott Anderson, Co-Chair  
 Gail Miller, Co-Chair  
 Doug Anderson  
 Deborah Bayle  
 Cynthia A. Berg  
 Roger Boyer  
 Wilford Clyde  
 Sophia M. DiCaro

Cameron Diehl  
 Lisa Eccles  
 Spencer P. Eccles  
 Christian Gardner  
 Kem C. Gardner  
 Kimberly Gardner  
 Natalie Gochnour  
 Brandy Grace  
 Rachel Hayes  
 Clark Ivory  
 Mike S. Leavitt  
 Derek Miller  
 Ann Millner

Sterling Nielsen  
 Cristina Ortega  
 Jason Perry  
 Ray Pickup  
 Gary B. Porter  
 Taylor Randall  
 Jill Remington Love  
 Brad Rencher  
 Josh Romney  
 Charles W. Sorenson  
 James Lee Sorenson  
 Vicki Varela

### Ex Officio (invited)

Governor Spencer Cox  
 Speaker Brad Wilson  
 Senate President  
 Stuart Adams  
 Representative Brian King  
 Senator Karen Mayne  
 Mayor Jenny Wilson  
 Mayor Erin Mendenhall

## Kem C. Gardner Policy Institute Staff and Advisors

### Leadership Team

Natalie Gochnour, Associate Dean and Director  
 Jennifer Robinson, Associate Director  
 Shelley Kruger, Accounting and Finance Manager  
 Colleen Larson, Administrative Manager  
 Dianne Meppen, Director of Survey Research  
 Pamela S. Perlich, Director of Demographic Research  
 Juliette Tennert, Chief Economist  
 Nicholas Thiriout, Communications Director  
 James A. Wood, Ivory-Boyer Senior Fellow

### Staff

Eric Albers, Research Associate  
 Max Backlund, Senior Research Associate  
 Max Becker, Research Associate  
 Samantha Ball, Senior Research Associate  
 Mallory Bateman, Senior Research Analyst  
 Andrea Thomas Brandley, Research Associate  
 Kara Ann Byrne, Senior Research Associate  
 Mike Christensen, Scholar-in-Residence  
 Phil Dean, Public Finance Senior Research Fellow  
 John C. Downen, Deputy Director of Economic and Public Policy Research  
 Dejan Eskic, Senior Research Fellow  
 Emily Harris, Senior Demographer  
 Michael T. Hogue, Senior Research Statistician  
 Mike Hollingshaus, Senior Demographer  
 Thomas Holst, Senior Energy Analyst

Jennifer Leaver, Senior Tourism Analyst  
 Levi Pace, Senior Research Economist  
 Shannon Simonsen, Research Coordinator  
 Joshua Spolsdoff, Senior Research Economist  
 Paul Springer, Senior Graphic Designer  
 Laura Summers, Senior Health Care Analyst  
 Natalie Young, Research Analyst

### Faculty Advisors

Matt Burbank, College of Social and Behavioral Science  
 Adam Meierowitz, David Eccles School of Business  
 Elena Patel, David Eccles School of Business  
 Nathan Seegert, David Eccles School of Business

### Senior Advisors

Jonathan Ball, Office of the Legislative Fiscal Analyst  
 Silvia Castro, Suazo Business Center  
 Gary Cornia, Marriott School of Business  
 Wes Curtis, Community-at-Large  
 Theresa Foxley, EDCUtah  
 Dan Griffiths, Tanner LLC  
 Emma Houston, University of Utah  
 Beth Jarosz, Population Reference Bureau  
 Darin Mellott, CBRE  
 Chris Redgrave, Community-at-Large  
 Wesley Smith, Western Governors University