

# THE CHANGING LANDSCAPE OF E-CIGARETTES: 2020 UPDATE

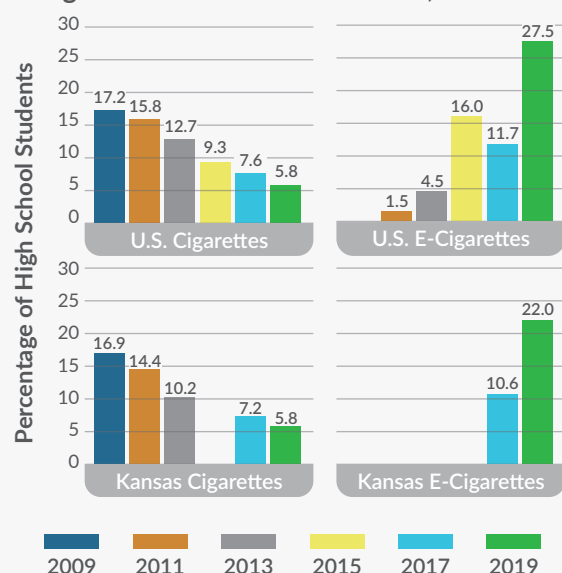
## Introduction

Electronic cigarettes, or e-cigarettes, entered the U.S. market in 2007, and their use quickly became widespread. In 2019, nearly a quarter (22.0 percent) of Kansas high school students reported using e-cigarettes in the past 30 days.

As public health researchers and officials began to express concerns about rising use among youth and the potential harm they could cause, state and federal policymakers began to take action to regulate e-cigarettes. As early as 2012, Kansas lawmakers banned the possession and sale of e-cigarettes to minors. In 2014, the U.S. Food and Drug Administration (FDA) proposed regulating e-cigarettes as tobacco products under the Tobacco Control Act, and the Final Rule to do so took effect in August 2016. Beginning in 2014, a number of Kansas localities passed local ordinances raising the minimum age of legal access (MLA) from age 18 to age 21 for tobacco products, including e-cigarettes, known as Tobacco 21 (T21), and/or banning the use of e-cigarettes in some public places. In 2015 the Kansas Legislature passed a new tax on e-cigarette fluid, which took effect in 2017.

In December 2019, Congress amended the Federal Food, Drug, and Cosmetic Act to enact T21 nationally. Two weeks later the FDA issued

Figure 1. Percentage of High School Students Who Currently Smoke Cigarettes or Use E-Cigarettes in the U.S. and Kansas, 2009-2019



Note: Survey questions included e-cigarettes, vapes, vape pens, e-cigars, e-hookahs, hookah pens and mods. Current use is defined as tobacco product use at least once in the past 30 days prior to the survey.

Source: KHI analysis of the National Youth Tobacco Survey (NYTS), 2009-2019, and the Kansas Youth Risk Behavior Survey (YRBS) Trend Report from the Kansas State Department of Education, 2009-2019.

guidance for the e-cigarette industry, entitled *Enforcement Priorities for Electronic Nicotine Delivery Systems (ENDS) and Other Deemed Products on the Market Without Premarket Authorization*, which:

## KEY POINTS

- ✓ E-cigarette use increases the risk of ever using conventional cigarettes among youth and young adults because nicotine is highly addictive and early use of nicotine (i.e. by high schoolers) increases the risk of long-term dependence and use.
- ✓ As commonly seen in traditional cigarette smokers, research has described how e-cigarette use can hamper mucus clearance from the airways, making it more difficult for the main pathways to the lungs to defend against injury or infections.
- ✓ Using e-cigarettes in the past 30 days among Kansas high school students doubled from 10.6 percent in 2017 to 22.0 percent in 2019.
- ✓ Vaping marijuana in the past 30 days nearly tripled among U.S. 12th grade students (4.9 percent in 2017 and 14.0 percent in 2019).
- ✓ In 2019, Congress raised the national minimum age of legal access (MLA) from age 18 to age 21 for tobacco products, including e-cigarettes — a policy action often referred to as Tobacco 21 (T21). Agreement of federal and state law would improve enforcement and retailer compliance.
- ✓ Kansas has a tax on e-cigarettes. However, the state has not passed or amended laws related to T21, smoke-free restrictions, flavor bans, online sales and delivery services, taxation or retail licensing. Kansas legislators had considered some of these policies in House Bill 2563.

- Prioritizes enforcement of a ban, effective February 6, 2020, on flavored, cartridge-based ENDS products, a type of e-cigarette produced primarily by large manufacturers such as JUUL and Suorin, except for tobacco- and menthol-flavored products. The ban does not include flavored e-liquids and disposable products.
- Requires all e-cigarette manufacturers to submit a premarket authorization application on or before May 12, 2020, to remain on the market for one year while the FDA determines which products to approve or reject. The FDA recently extended the application deadline to September 9, 2020.

To achieve the full benefits of the new T21 law, FDA compliance checks could begin in 2020, once new regulations are issued. Each state will have three years to comply before being issued Synar penalties, which could cost up to 40 percent of its Substance Abuse Prevention and Treatment Block Grant.

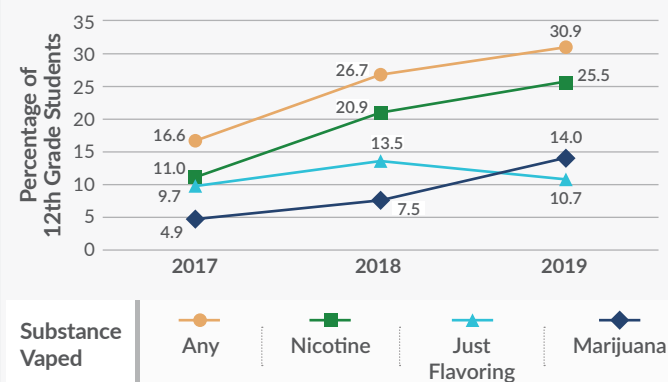
This issue brief provides data on e-cigarette use among youth and the vaping-related disease outbreak known as the e-cigarette or vaping product use-associated lung injury (EVALI) as well as discusses state regulatory actions.

## E-Cigarette Use Among Youth

While the prevalence of combustible cigarette smoking has trended down over the last decade, e-cigarette use has increased significantly among high school students. The National Youth Tobacco Survey (NYTS), funded jointly by the FDA and the Centers for Disease Control and Prevention (CDC), reported that among U.S. high school students, current cigarette smoking dropped from 17.2 percent in 2009 to 5.8 percent in 2019, while current e-cigarette use rose from 1.5 percent in 2011 to 27.5 percent in 2019 (Figure 1, page 1). In addition, the percentage of middle school students currently using e-cigarettes also rose, from 0.6 percent in 2011 to 10.5 percent in 2019.

Generally, Kansas youth tobacco use rates are similar to national rates. According to the biennial Kansas Youth Risk Behavior Survey (YRBS), sponsored by the CDC, the percentage of Kansas high school students currently smoking cigarettes dropped from 16.9 percent in 2009 to 5.8 percent in 2019, while the percentage of students currently using e-cigarettes doubled from 10.6 percent in 2017 to 22.0 percent in 2019. Additionally, 4 in 10 (40.2 percent) Kansas high school students reported their reason for using e-cigarettes was because “a friend or family member uses,” and 1 in 10 (10.7 percent) reported that it was because e-cigarettes were “available in flavors, such as mint, candy, fruit, or chocolate.”

Figure 2. Percentage of 12th Grade Students in the U.S. Who Are Currently Vaping Marijuana, Vaping Just Flavoring, Vaping Nicotine, or Doing Any Vaping, 2017-2019



Note: Current use is defined as substance vaped at least once in the past 30 days prior to the survey. Any Vaping is calculated based upon youth reporting Vaping Marijuana, Vaping Just Flavoring, or Vaping Nicotine. Source: Monitoring the Future Survey, National Adolescent Drug Trends Press Release: Text & Tables, 2017-2019.

The rate of vaping different substances also has changed in recent years. From 2017 to 2019, the Monitoring the Future Survey, funded by the National Institute on Drug Abuse (NIDA), reported that currently vaping nicotine more than doubled (11.0 percent in 2017 and 25.5 percent in 2019) and currently vaping marijuana nearly tripled (4.9 percent in 2017 and 14.0 percent in 2019). Data for vaping just flavoring should be interpreted with caution because the study notes that teens might not have known the contents of the vaping e-liquid and labeling is inconsistent.

## Health Impacts

According to a 2016 report by the U.S. Surgeon General, adolescent brains have a heightened sensitivity to the rewarding effects of nicotine, which places youth at increased risk for addiction. Early users of e-cigarettes in high school are now young adults. While e-cigarettes might have a role in reducing the health-related harms of cigarette smoking for current smokers, e-cigarette use among young adults age 18-24 is not motivated for purposes of cessation and could lead to initiation of cigarette smoking.

In 2018, the National Academies of Sciences, Engineering, and Medicine (NASSEM) reported substantial evidence that e-cigarette use increases the risk of ever using conventional cigarettes among youth and young adults. The report also concluded most e-cigarette products contain and emit numerous potentially toxic substances in addition to addictive nicotine, and increases airborne concentrations of particulate matter and nicotine in indoor environments.

More recently in 2019, a team of researchers at the University of Kansas Medical Center described how e-cigarette vaping with nicotine can hamper mucus clearance from the airways, making it more difficult for the main pathways to the lungs to defend against injury or infections, which is commonly seen in traditional cigarette smokers.

While the long-term health effects of vaping are still unknown, the outbreak of EVALI has raised awareness of the potential harms of e-cigarettes. Nationally, the CDC reported 2,807 hospitalized EVALI cases or deaths as of February 18, 2020, including 68 confirmed deaths in 29 states and the District of Columbia. In Kansas, the state agency reported 27 confirmed or probable cases of EVALI, 23 hospitalizations and two deaths as of January 28, 2020. Most patients were male (74 percent) and young (41 percent of patients were under age 24). The current evidence is insufficient but the CDC reported a strong association between these cases and vitamin E acetate, which is an additive in some THC-containing e-cigarettes and might interfere with normal lung function when inhaled.

## State Regulatory Actions

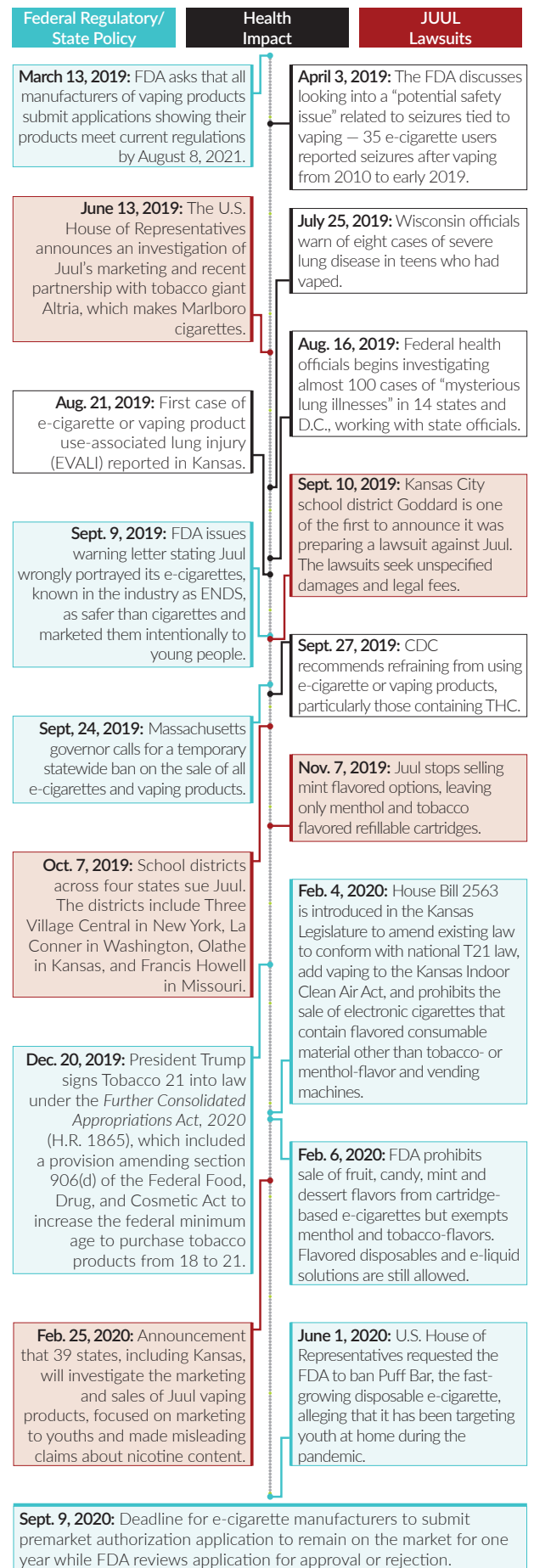
The rapid uptake of e-cigarettes by youth and the EVALI outbreak last year have prompted state policymakers to consider and enact a variety of regulatory actions at the state level (Figure 3). Six policy areas are identified – T21; indoor air and smoke-free restrictions; flavor bans; online sales and delivery services; taxation; and retail licensure – and presented as of March 15, 2020.

**Tobacco 21 (26 states and D.C., not Kansas):** Before the federal T21 law was enacted, states had already begun adopting their own T21 laws as part of a comprehensive approach to reduce youth access to e-cigarettes. In states, like Kansas, that do not have T21 laws in place, enforcement of the federal law can only be done by federal officials. This conflict between state and federal law and the inability of state and local law enforcement officials to participate in enforcement of the federal law can compromise the enforcement efforts needed to ensure a high rate of retailer compliance and achieve the full benefits of a T21 law.

**Indoor air and smoke-free restrictions (21 states and D.C., not Kansas):** Building upon existing combustible cigarette smoking prohibitions or indoor clean air policies, states generally have either modified the definition of smoking to include e-cigarettes or states have added “vaping” or “e-cigarette use” to existing smoking prohibitions.

**Flavor bans or restrictions (4 states, not Kansas):** Flavored e-cigarette products are sold as cartridges (e.g., Juul), e-liquid solutions or disposable devices, which have been sold since e-cigarettes first entered the market so potential users could try

Figure 3. E-Cigarettes Timeline of Events 2019-Present



new products at a low cost. Recognizing the regulatory gap in the federal flavor ban, which does not apply to disposable products (e.g., Puff Bar), states have enacted flavor bans that also apply to disposable vaping products, with tobacco and menthol flavors often excluded.

**Online sales and delivery services (26 states, not Kansas):** In the absence of federal regulation under the Prevent All Cigarette Trafficking Act (the PACT Act), states generally have enacted legislation to restrict online sales and shipments of e-cigarettes as well as regulate delivery services, which are generally app-based or on-demand retailers. States have enacted regulatory strategies such as prohibiting shipments, specifying a particular method of delivery, requiring packages to be labeled as containing tobacco, limiting the quantity of shipments and requiring age-verification at the time of delivery.

**Taxation (22 states and D.C., including Kansas):** Generally, states have imposed an excise tax on the wholesale value of the e-cigarette product, or on the volume of e-liquid contained in the e-cigarette product. In contrast, traditional cigarette taxes are typically levied per cigarette. The Kansas Legislature enacted a privilege tax for the sale of consumable e-liquid in 2016 of \$0.20 per milliliter, but then reduced the amount of the tax to \$0.05 per milliliter in 2017. Other states have enacted taxes, such as Ohio, which has an excise tax of \$0.01 per vapor volume, and New York, which has a tax of 20 percent on the retail price of all vapor products.

**Retail licensure (31 states and D.C., including Kansas):** States generally require retailers to obtain a license before selling tobacco products and may revoke or suspend a license if the retailer violates the law. Fees generated from licensing laws can provide stable and reliable funding for regulatory actions such as retailer inspections. Under licensing laws, states also have reduced or restricted the number, location, density, and types of tobacco retail outlets; limited point-of-sale advertising and product placement; and required retailers to comply with other tobacco control measures.

During the 2020 session, the Kansas Legislature considered two bills:

- House Bill (HB) 2450: Introduced on January 16, this bill would have amended the Kansas Indoor Clean Air Act to add the use of an electronic cigarette to the definition of smoking. HB 2450 died when it was stricken from the House calendar.
- HB 2563: Introduced on February 4, this comprehensive bill would have amended Kansas law to conform with the federal T21 law, added use of an electronic cigarette to the Kansas Indoor Clean Air Act, prohibited cigarette vending machines, and prohibited flavored vaping products, except tobacco- or menthol-flavor. The bill did not have a provision addressing online and delivery sales. HB 2563 passed favorably out of committee, but received no further action in the House.

Although there was no state law enacted by the Kansas Legislature, other officials in the state have taken action. Fourteen Kansas localities have amended their clean indoor air ordinances to include e-cigarettes and 29 Kansas localities have adopted T21 in local ordinances as of May 2020. In addition, the Kansas State Board of Education (KBOE) convened a task force to study six topics last year, including state policy, regulation and enforcement, awareness, education, web-based central hub, and modification of health standards. In December 2019, KBOE approved a policy encouraging adoption of a comprehensive tobacco-free school grounds policy that includes vaping.

## Conclusion

The rapidly changing e-cigarette product landscape, the rising rates of e-cigarette use among young people, and the EVALI outbreak present challenges to regulators and legislators. Despite the many actions taken at the federal, state and local levels across the United States, concerns about a new generation addicted to nicotine products continue to compel policymakers, school officials, public health officials and other stakeholders to work collaboratively to reduce the use of e-cigarettes.

### ABOUT THE ISSUE BRIEF

This brief is based on work done by Hina B. Shah, M.P.H., Wyatt J. Beckman, M.P.H., C.H.E.S., and Linda J. Sheppard, J.D. It is available online at [khi.org/policy/article/20-34](https://khi.org/policy/article/20-34). The authors would like to thank Edward Ellerbeck, M.D., University of Kansas School of Medicine, for peer review, as well as the Kansas State Department of Education and the Kansas Department of Health and Environment for data presented in this brief.

### KANSAS HEALTH INSTITUTE

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