

FAR FROM HARMLESS:

THE VAPING EPIDEMIC IN INDIANA

OCTOBER 2023

INDIANA'S E-CIGARETTE USE – SEVENTH HIGHEST IN THE U.S. – LEADS TO SERIOUS HEALTH AND ECONOMIC COSTS FOR HOOSIERS, THE STATE.

Indiana stands at a critical juncture, ranking seventh highest in the nation for adult e-cigarette use – a rate that grew 72.3% from 2016 to 2021. While there is evidence youth e-cigarette use has declined in recent years, Marion County youth are vaping more than their peers statewide.

This is especially concerning because many people consider e-cigarettes a healthy substitute for traditional cigarettes. Yet, vaping comes with considerable health risks, including impaired brain development and an increased risk of cardiovascular and pulmonary health conditions. There are also significant economic consequences to consider, such as increased healthcare costs and lower employee productivity.

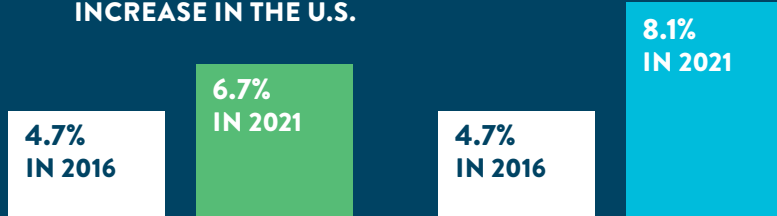
To better understand the scope and impact of vaping statewide and in Marion County, the Richard M. Fairbanks Foundation commissioned a study from leading experts with decades of experience in tobacco and nicotine research. The study also offers steps that can be taken to reduce the vaping rate, including policy changes and other recommendations for stakeholders such as schools and healthcare organizations.



PERCENTAGE OF ADULTS WHO USE E-CIGARETTES

+42.6%
INCREASE IN THE U.S.

+72.3%
INCREASE IN INDIANA



FOR BOTH ADULT AND YOUTH POPULATIONS, MARION COUNTY RESIDENTS USE E-CIGARETTES AT A HIGHER RATE THAN INDIANA OVERALL, THOUGH YOUTH NUMBERS VARY BASED ON GRADE LEVEL.

Nationwide, we have seen an increase in adult e-cigarette use. The percentage of adults who vape in the U.S. surged from 4.7% in 2016 to 6.7% in 2021, marking a 42.6% increase. Hoosiers use e-cigarettes at an even higher rate; Indiana e-cigarette use increased from 4.7% to 8.1% during the same period – a 72.3% jump. Central Indiana experienced an even sharper rise from 4.9% in 2016 to 8.6% in 2021 – an alarming 75.5% increase.

E-cigarettes are now more popular among young people than traditional cigarettes. In 2022, a worrying 9.4% of Indiana youth said they used e-cigarettes in the past month, with 12th grade students vaping at nearly three times the rate of 7th graders. On average, Marion County youth reported higher vaping rates than their peers statewide, with nearly 18% of 11th and 12th graders vaping in the past month.

STATEWIDE, THERE ARE SIGNIFICANT DISPARITIES IN BOTH ADULT AND YOUTH E-CIGARETTE USE BASED ON DEMOGRAPHICS.

E-cigarette use in Hoosier adults varies by gender, race, household income and educational attainment. Disparities are most apparent across education and race.

Only 3.2% of Hoosiers with a college degree used e-cigarettes in 2021, which is in stark contrast to those with lower educational attainment. For example, individuals with some high school or less, a high school degree or some post-high school education were about three times more likely to vape, with use rates between 8.7% and 10.6%.

In 2021, only 6.2% of Black Hoosier adults reported using e-cigarettes, compared to 8.5% of white Hoosiers and 9.4% of multiracial Hoosiers.

Statewide, multiracial adult vaping rates have declined since 2016, while Black and white adult usage rates have risen during the same period.

Youth across the state exhibit disparities in e-cigarette use as well, though patterns based on race and gender have recently changed.

18%
OF 11TH AND 12TH GRADERS IN MARION COUNTY VAPED IN THE PAST MONTH

For example, Hispanic youth were the most likely to use e-cigarettes from 2016 to 2020 – with usage rates surging to roughly 18% in 2018. However, 2022 data indicated that usage rates have become similar statewide among all demographic groups, ranging from 9% to 10%.

From 2016 to 2018, male youth were more likely to report vaping than female youth, but in 2020, female youth became more likely to report e-cigarette use. In 2022, 11.2% of female students in grades 7-12 reported vaping in the previous 30 days compared to 7.5% of male students statewide. Interestingly, this change in pattern has not been reflected in adults, where males 18 and over have been consistently more likely to report vaping than adult females, with 2021 usage rates at 8.7% and 7.5% respectively.

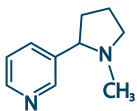


While e-cigarettes may be considered safer than combustible cigarettes because they do not include the chemicals contained in tobacco smoke, studies show they are **far from harmless**. In fact, some e-cigarettes contain **just as much nicotine** as traditional cigarettes – **if not more**.



NICOTINE IMPACTS YOUTH BRAIN DEVELOPMENT

The human brain continues to develop until approximately age 25. Youth who use nicotine, including via e-cigarettes, are at risk of impaired brain development. This may lead to behavioral issues, cognitive problems and mental health challenges.



NICOTINE IS ADDICTIVE AND MAY MAKE YOUTH MORE SUSCEPTIBLE TO OTHER TYPES OF ADDICTION

Nicotine affects key brain receptors, which may make youth more susceptible to nicotine addiction. Some studies have even shown nicotine use may lead to future substance use by sensitizing the brain to other drugs – a phenomenon sometimes referred to as the “gateway effect.”



E-CIGARETTE USE DISRUPTS NORMAL LUNG FUNCTION

Studies connect e-cigarette use to higher likelihoods of chronic cough, bronchitis and asthma. Though long-term effects on diseases like lung cancer and chronic obstructive pulmonary disease are not yet fully understood, research illustrates vaping may worsen respiratory health.



E-CIGARETTE VAPOR EXPOSES NON-USERS TO NICOTINE

Commonly – and mistakenly – thought to be safe, e-cigarette vapor in the home leads to 2.7 times more airborne nicotine than in homes without tobacco use. One study linked these vapors to more wheezing, bronchitis, and shortness of breath in young adults. Because vapors can contain harmful substances like carcinogens and metals, they may have lasting health effects.



E-CIGARETTE USE INCREASES RISK OF CARDIOVASCULAR HEALTH CONDITIONS

Studies have shown e-cigarettes cause short-term elevations in vital signs like heart rate and blood pressure, which can have long-term health implications. In short, e-cigarettes can lead to cardiovascular disease and early death.



E-CIGARETTE USERS OFTEN USE TRADITIONAL COMBUSTIBLE CIGARETTES, TOO

It is commonly believed that e-cigarettes are used as a substitute for combustible cigarettes. Yet, many e-cigarette users also smoke traditional cigarettes. These individuals are exposing themselves to the harmful effects of both e-cigarettes and traditional cigarettes.



E-CIGARETTE USE ADDS BILLIONS IN ANNUAL HEALTHCARE COSTS AND PUTS A STRAIN ON EMPLOYER RESOURCES.

E-CIGARETTE USE LEADS TO SIGNIFICANT HEALTHCARE COSTS

The use of e-cigarettes costs the U.S. an estimated \$15.1 billion annually in adult healthcare expenditures across four primary categories: hospital nights, emergency room visits, doctor visits and home visits. This breaks down to \$2,024 in expenses per e-cigarette user per year. Because government entities and private employers pay most healthcare expenditures, these costs are shared by everyone.

E-CIGARETTE USE IMPOSES COSTS ON EMPLOYERS

The expenses tied to e-cigarettes go beyond healthcare. Research indicates that e-cigarette use can drive up additional costs for employers, including through increased absences and lower productivity. Moreover, being exposed to e-cigarettes at work may lead people who used to smoke or vape to start again, which harms individuals and is expensive for employers.



EACH E-CIGARETTE USER EQUALS

\$2,024

IN HEALTHCARE EXPENSES EVERY YEAR

\$15.1B

ANNUAL HEALTHCARE COSTS ACROSS FOUR CATEGORIES

1.



HOSPITAL NIGHTS

2.



EMERGENCY ROOM VISITS

3.



DOCTOR VISITS

4.



HOME VISITS



ADDRESSING THE E-CIGARETTE EPIDEMIC IS COMPLEX, BUT THERE ARE WAYS TO REDUCE VAPING AND THE IMPACTS IT HAS ON INDIVIDUAL HEALTH AND THE ECONOMY.

ENFORCE “TOBACCO 21” LAWS

Laws that ban the sale of e-cigarettes to people under the age of 21 have been shown to be effective at reducing youth e-cigarette use. Currently in Indiana, selling e-cigarettes to people under the age of 21 is a Class C infraction for both the business that sells the vaping product and the individual who purchases it, and both parties can be fined. Enforcing these laws may assist in minimizing e-cigarette usage in underage populations.

RAISE THE TAX ON E-CIGARETTES AND TRADITIONAL CIGARETTES AT THE SAME TIME

Research has consistently shown higher prices decrease e-cigarette use. In fact, one study estimates that raising the e-cigarette tax by \$1 (per fluid mL of vaping liquid) would reduce the probability of vaping among adults by 15.3%. However, it is essential to proceed with caution to prevent an economic substitution where users shift to traditional cigarettes. Increasing the tax on e-cigarettes and traditional cigarettes at the same time may offset this risk.

FOLLOW RECOMMENDATIONS FOR SCHOOLS AND HEALTHCARE PROVIDERS

Further research is needed to identify the most effective evidence-based strategies for healthcare providers and schools to help reduce e-cigarette use. However, expert recommendations are outlined in the full report. For example, schools should avoid punitive policies like expelling or suspending students who violate tobacco-free policies. Instead, they should connect youth with tobacco education programming and treatment to address potential nicotine addiction, aiming to enforce policies while also supporting students who are addicted.

BAN THE SALE OF FLAVORED E-CIGARETTE CARTRIDGES

In 2020, the FDA prioritized enforcing existing bans on flavored e-cigarettes, which may be especially appealing to youth. There is evidence that banning the sale of flavored e-cigarette cartridges reduces e-cigarette consumption overall and among youth.



MORE INFORMATION

To read the full report, visit RMFF.org/vaping.

To read the Fairbanks Foundation's 2023 reports on what Indiana businesses spend annually in smoking-related costs and the projected outcomes of a \$2 increase to the cigarette tax, visit RMFF.org/smoking.

To read the report on the overall economic impact of tobacco on Indiana, visit RMFF.org/eliminatetobacco.