



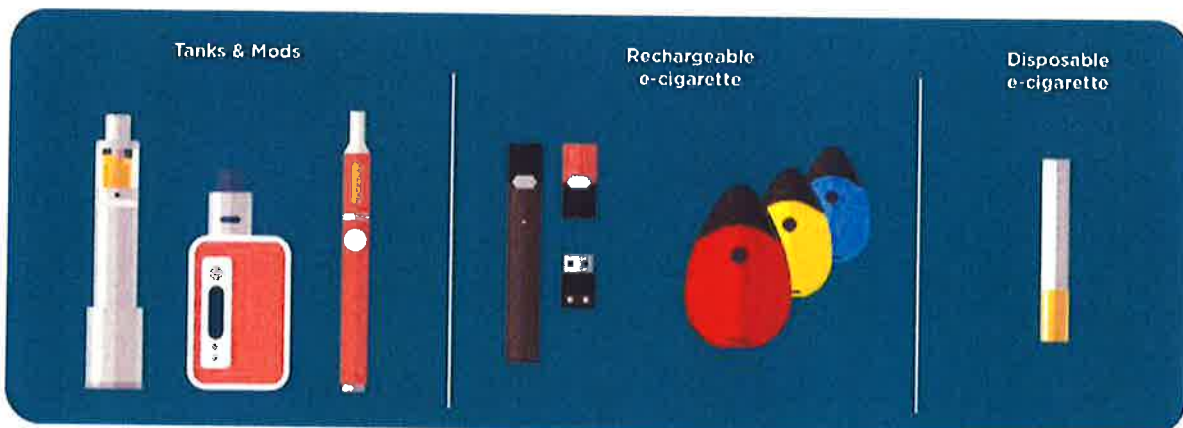
**Public Health**  
Prevent. Promote. Protect.  
**Winnebago County**  
**Health Department**

# Smoke-Free Winnebago County

Protecting our health by incorporating e-cigarettes  
into smoke-free air laws

## What are e-cigarettes?

Electronic cigarettes (e-cigarettes) are devices that can be used to simulate smoking and they produce an aerosol of nicotine and/or other substances. The e-cigarette aerosol that users inhale and exhale can expose both the user and those around them to other harmful substances, including heavy metals, volatile organic compounds, and ultrafine particles that can be inhaled deep into the lungs. Using an e-cigarette is sometimes called “vaping” and e-cigarettes are commonly called e-cigs, e-hookahs, vape pens, electronic nicotine delivery systems (ENDS), electronic vapor products, mods, vapes, tanks, and the list goes on. These devices can be used to deliver nicotine, marijuana, and other drugs.<sup>i</sup>



## E-cigarettes are not safe

Little is known about the safety or efficacy of e-cigarettes as **they have not been approved by the Federal Drug Administration (FDA) and are not currently regulated.** Since they’re not regulated, e-cigarette ingredients are not tested for safety and manufacturers do not have to list their ingredients or ensure products are accurately labeled. It is difficult for consumers to know what e-cigarette products contain. For example, some e-cigarettes marketed as containing zero percent nicotine have been found to contain nicotine.<sup>i</sup> Because of the lack of clinical research on e-cigarettes, many public health organizations and policymakers are concerned about their safety and health impact on users.

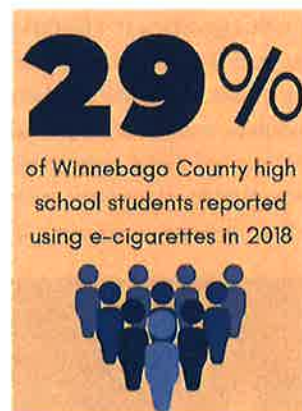
## Why is this issue important?

On December 18, 2018, the U.S. Surgeon General declared that e-cigarette use among youth is an epidemic and that aggressive steps must be taken to protect our children from nicotine addiction and other associated health risks caused by e-cigarettes.<sup>ii</sup> In 2019, the Wisconsin State Health Officer issued a public health advisory on e-cigarettes due to the alarming statistics on current use among youth in Wisconsin.<sup>iii</sup> A growing number of state

and local governments have taken steps to regulate the sale, marketing and use of e-cigarettes to protect the health of users, reduce youth initiation to nicotine and tobacco products, and promote enforcement of smoke-free laws. As of October 17, 2019, the Wisconsin Department of Health Services and local health departments are tracking 76 confirmed and probable cases and investigating 14 more cases of individuals throughout Wisconsin counties with severe lung disease who all reported recent vaping.<sup>iv</sup>

### Key Statistics

- Commercial tobacco use is the single most preventable cause of death in the U.S.<sup>v</sup>
- Tobacco costs Wisconsin \$4.7 billion in health care and lost productivity annually.<sup>vi</sup>
- More than 7,700 Wisconsinites die from tobacco use or exposure each year.<sup>vii</sup>
- In Wisconsin, 96% of middle schoolers say they probably wouldn't try an e-cigarette if it wasn't flavored.<sup>viii</sup>
- Current e-cigarette use among Wisconsin high school students increased 154% between 2014 and 2018.
- Cigarette smoking among Winnebago County high school students is at an all-time low (9%), but e-cigarette use continues to rise. **E-cigarette use has increased at an alarming rate from 21% of high school students in 2016 to 29% in 2018.**<sup>ix</sup>
- E-cigarette use among students earning less than a "B" average is significantly higher than students earning a "B" average or better.<sup>ix</sup>

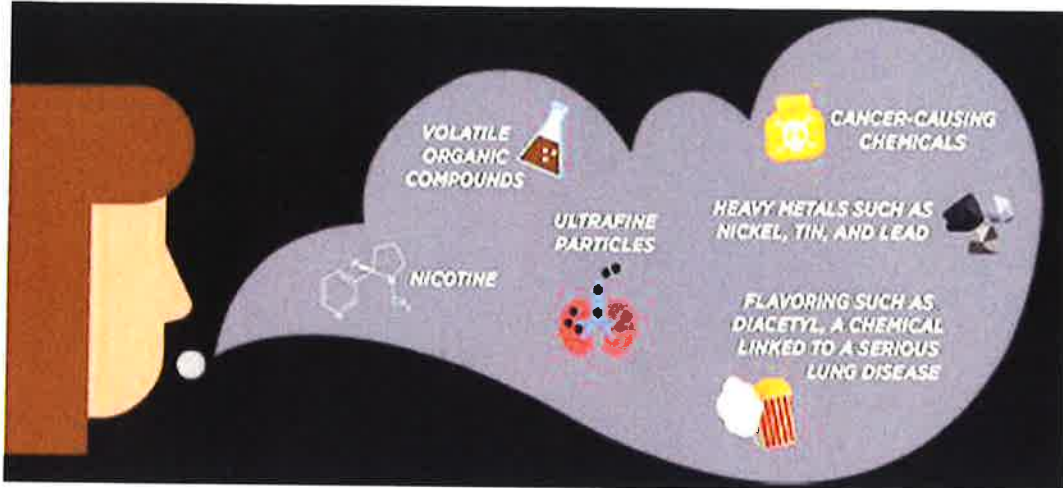


### Health Risks

These electronic vapor products are so new, science hasn't had enough time to study all of the health risks or understand what long-term use can do to your body. So far, we know e-cigarettes are associated with the following health risks:

- Most e-cigarettes contain nicotine, a potent chemical compound that is highly addictive and has been proven to be harmful to the adolescent brain.<sup>x</sup>
- The industry's most popular e-cigarette pod contains as much nicotine as 20 cigarettes.<sup>x</sup>
- Ingesting the nicotine in e-liquids can cause vomiting, confusion, cardiac arrhythmia, coma, and death.<sup>x</sup>
- Teens who use e-cigarettes are three times as likely to become cigarette smokers. The use of any non-cigarette tobacco or other nicotine product, including e-cigarettes, predicts smoking cigarettes one year later.<sup>x</sup>
- E-cigarette aerosol can contain potentially harmful chemicals, including heavy metals like nickel, tin, and lead, volatile organic compounds, ultrafine particles, formaldehyde, and other cancer-causing chemicals.<sup>ix</sup>
- The aerosol that users inhale and exhale from e-cigarettes can potentially expose both themselves and bystanders to these harmful chemicals.<sup>ii</sup>
- Two chemicals found in many e-cigarette flavors – diacetyl and 2,3-pentanedione – have been shown to cause irreparable lung disease.<sup>x</sup>
- Aerosols contain super fine particles that can irritate the eyes, throat, and lungs.<sup>x</sup>
- E-cigarette devices have been known to explode, causing severe injuries.<sup>x</sup>

## What is in e-cigarette aerosol?



### Solutions: What can we do about this?

- Update definitions in local county and municipality smoke-free workplace ordinances to include e-cigarettes and vapor products.
- Implement strategies to curb e-cigarette advertising and marketing that appeal to youth.
- Implement strategies to reduce youth access to flavored tobacco products.
- Educate the community on the dangerous levels of nicotine and other chemicals in these products.
- Provide retailer education around compliance to ensure these products are not being sold to youth.

### References

<sup>i</sup> CDC. About Electronic Cigarettes (E-Cigarettes). 2018. [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)

<sup>ii</sup> Surgeon General's Advisory on E-Cigarette Use among Youth. 2018. <https://e-cigarettes.surgeongeneral.gov/documents/surgeon-generals-advisory-on-e-cigarette-use-among-youth-2018.pdf>

<sup>iii</sup> WI DHS Public Health Advisory. 2019. <https://www.dhs.wisconsin.gov/tobacco/advisory.htm>

<sup>iv</sup> Outbreaks in Wisconsin. 2019. <https://www.dhs.wisconsin.gov/outbreaks/index.htm>

<sup>v</sup> CDC. Burden of Tobacco Use in the U.S. 2019. <https://www.cdc.gov/tobacco/campaign/tips/resources/data/cigarette-smoking-in-united-states.html>

<sup>vi</sup> Educational Advocacy Toolkit. <https://tobwis.org/toolkits/educational-advocacy/>

<sup>vii</sup> Healthy Wisconsin, Tobacco. <https://healthy.wisconsin.gov/content/tobacco>

<sup>viii</sup> WI DHS Tobacco is Changing: Understand the Issues. 2019. <https://www.dhs.wisconsin.gov/tobaccoischanging/know-issues.htm>

<sup>ix</sup> Winnebago County Youth Risk Behavior Survey. 2018.

<sup>x</sup> WI DHS Tobacco is Changing: Know the Products. 2019. <https://www.dhs.wisconsin.gov/tobaccoischanging/know-products.htm>