

# E-cigarettes: Data and resources for the Center

## Overview

This document provides data and resources regarding electronic cigarettes (e-cigarettes) for the Center for Tobacco Prevention and Control Policy. These data and resources can help the Center prepare for and respond to legislative bills proposed and questions raised. This document reviews reports of youth e-cigarette use; offers information to help the Center respond to arguments related to harm reduction; and summarizes regulations regarding e-cigarettes.

## Youth e-cigarette use

### In North Dakota:

- The current use of e-cigarettes (defined as using an e-cigarette on 1 or more days during the past 30 days) among North Dakota students in grades 9 through 12 increased between 2011 and 2013 from 1.6% to 5.9%. (Source: ND DOH YTS, [http://www.ndhealth.gov/tobacco/Facts/Trends\\_Youth\\_9-12.pdf](http://www.ndhealth.gov/tobacco/Facts/Trends_Youth_9-12.pdf))

### Nationally:

- In 2013, current e-cigarette use among high school students (grades 9-12) in the U.S. overall was 4.5% (and 1.1% among middle school students in the U.S.).
- In 2013, 11.9% of high school students in the U.S. reported that they had ever used e-cigarettes; 3.0% of middle school students in the U.S. reported ever use. (Source: National Youth Tobacco Survey, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6345a2.htm>)
- According to the 2014 Monitoring the Future survey, e-cigarette use among teenagers has surpassed the use of traditional cigarettes. Past-month use of e-cigarettes was 8.7% among 8<sup>th</sup> graders, 16.2% among 10<sup>th</sup> graders, and 17.1% among 12<sup>th</sup> graders. (Monitoring the Future, 2014) (Figure 1). Past month use of traditional cigarettes was 4% among 8<sup>th</sup> graders, 7.2% among 10<sup>th</sup> graders, and 13.6% among 12<sup>th</sup> graders) (Monitoring the Future, 2014).

**Figure 1. Campaign for Tobacco-Free Kids Infographic regarding e-cigarette use exceeding traditional cigarette use**



Source: [http://www.tobaccofreekids.org/press\\_releases/post/2014\\_12\\_16\\_ecig](http://www.tobaccofreekids.org/press_releases/post/2014_12_16_ecig)

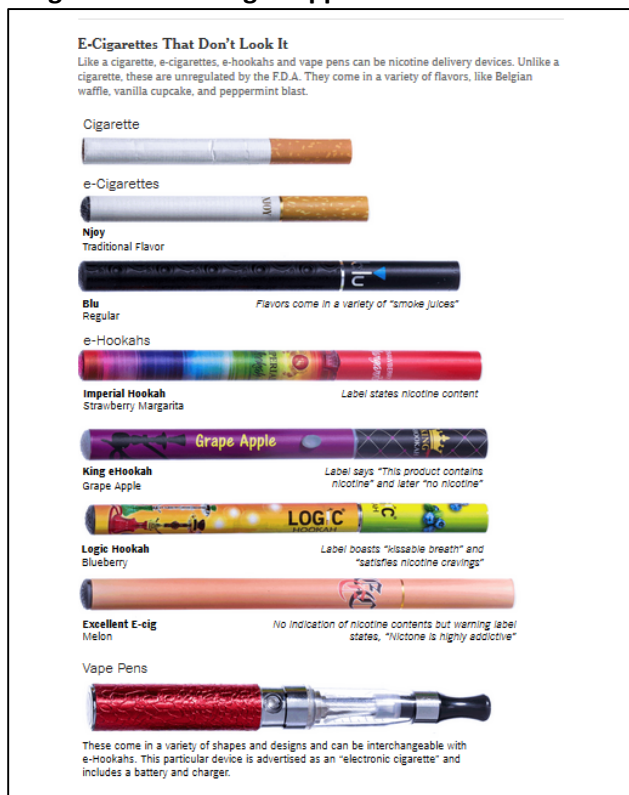
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- “More than a quarter of a million youth who had never smoked a cigarette used electronic cigarettes in 2013, according to a CDC study published in the journal *Nicotine and Tobacco Research*. This number reflects a three-fold increase, from about 79,000 in 2011, to more than 263,000 in 2013” (Quote from CDC press release, <http://www.cdc.gov/media/releases/2014/p0825-e-cigarettes.html>; data reported in Bunnell, R. E., Agaku, I. T., Arrazola, R., Apelberg, B. J., Caraballo, R. S., Corey, C. G., ... & King, B. A. (2014). Intentions to smoke cigarettes among never-smoking U.S. middle and high school electronic cigarette users, National Youth Tobacco Survey, 2011-2013. *Nicotine & Tobacco Research*, 1-8. doi:10.1093/ntr/ntu166).

### Surveys may underestimate use rates

- It is possible that surveys underestimate youth e-cigarette use because surveillance tools may not be keeping up with the evolution of these emerging products and what language is used to describe them. A *New York Times* article (“E-cigarettes, by other names, lure young and worry experts,” by Matt Richtel, published March 4, 2014; [http://www.nytimes.com/2014/03/05/business/e-cigarettes-under-aliases-elude-the-authorities.html?\\_r=0](http://www.nytimes.com/2014/03/05/business/e-cigarettes-under-aliases-elude-the-authorities.html?_r=0)) called attention to the range of terminology for what were previously called “e-cigarettes,” including “hookah pens,” “e-hookahs,” and “vape pipes.”

**Figure 2. Excerpt from *New York Times* article regarding e-cigarettes evolving in appearance and name**



Source: [http://www.nytimes.com/2014/03/05/business/e-cigarettes-under-aliases-elude-the-authorities.html?\\_r=0](http://www.nytimes.com/2014/03/05/business/e-cigarettes-under-aliases-elude-the-authorities.html?_r=0))

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### Responses to harm reduction arguments

The Center anticipates challenges to the statewide smoke-free air law and perhaps other tobacco control efforts, some of them centering on characterizations of e-cigarettes as a form of harm reduction. This section describes some anticipated arguments and offers potential responses and data.

Anticipated argument	Response/data
E-cigarettes help people quit smoking	<p>E-cigarettes are not approved by the FDA as a cessation device.</p> <ul style="list-style-type: none"> <li>• FDA has proposed regulations of e-cigarettes as a tobacco product, not as a cessation device.</li> <li>• Proposed FDA regulations (and any changes to them) may not be finalized for several years – and legal challenges may follow.</li> </ul> <p>E-cigarettes may discourage smokers from quitting.</p> <ul style="list-style-type: none"> <li>• People may become dual users (using both traditional cigarettes and e-cigarettes) rather than quitting cigarettes.</li> <li>• By serving as a bridge to allow smokers to get nicotine when they can't smoke traditional cigarettes, e-cigarettes may lessen the impact of tobacco control policy efforts on quitting outcomes.</li> </ul> <p>Whether or not e-cigarettes are effective as a cessation tool has not yet been established. Evidence regarding the effectiveness of e-cigarettes on cessation are mixed.</p> <ul style="list-style-type: none"> <li>• The North American Quitline Consortium released a report summarizing quitline perspectives and the scientific literature – and offered recommendations, including, “Quitlines should continue to advise against using e-cigarettes for smoking cessation. Evidence is insufficient to suggest that e-cigarettes can help smokers quit combustible cigarettes” (NAQC, p. 13). (Source: NAQC statement on cessation treatment and e-cigs. <a href="http://c.ymcdn.com/sites/naquitline.site-ym.com/resource/resmgr/ECigarettes/ECigarettesReportFinal.pdf?utm_source=Tobacco+Cessation+Digest+-+December+2014&amp;utm_campaign=TC+Digest&amp;utm_medium=email">http://c.ymcdn.com/sites/naquitline.site-ym.com/resource/resmgr/ECigarettes/ECigarettesReportFinal.pdf?utm_source=Tobacco+Cessation+Digest+-+December+2014&amp;utm_campaign=TC+Digest&amp;utm_medium=email</a>)</li> </ul> <p>Even if e-cigarettes can help some individuals quit smoking traditional cigarettes, it is important to consider the public health risks. It is possible that e-cigarettes could be a gateway to traditional cigarettes for youth or could contribute to reductions in successful quitting at the population level.</p> <ul style="list-style-type: none"> <li>• Legacy released a policy statement in 2014 that discussed the importance of looking at all sides of the issue. “...if e-cigarettes increase the total number of combusted tobacco smokers by encouraging initiation of use of combusted tobacco products, delaying cessation of combusted tobacco product use, or promoting dual use without eliminating combusted use, then they would not benefit public health.” (Source: <a href="http://www.legacyforhealth.org/content/download/3962/56088/version/1">http://www.legacyforhealth.org/content/download/3962/56088/version/1</a>)</li> </ul>

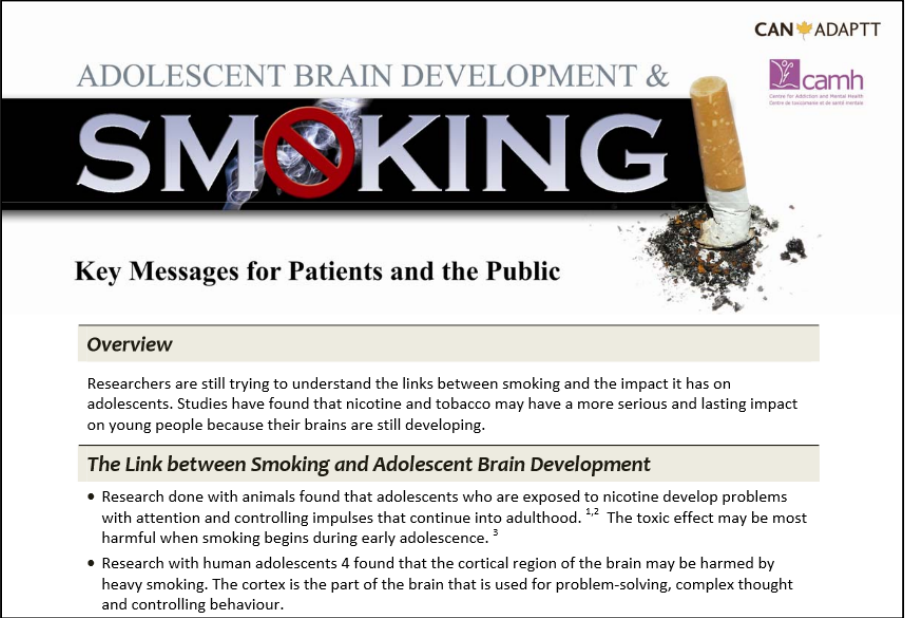
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Anticipated argument	Response/data
	<a href="/file/LEG-Policy_Statement-ECigarette-JAN2014.pdf">/file/LEG-Policy_Statement-ECigarette-JAN2014.pdf</a>
E-cigarettes are safe – or are safer than cigarettes	<p>The safety of e-cigarettes has not been established.</p> <ul style="list-style-type: none"> <li>• There have not been enough studies conducted over a long enough period of time to determine the safety of e-cigarettes. The Institute of Medicine indicated in a report considering the science base for harm reduction that comprehensive studies take many years (National Research Council, 2001).</li> <li>• One study found that e-cigarette liquid damages healthy lung cells (<a href="http://actiontoquit.org/study-e-cigarettes-damage-healthy-cells/">http://actiontoquit.org/study-e-cigarettes-damage-healthy-cells/</a>; Wu, et al., 2014; <a href="http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0108342#s3">http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0108342#s3</a>).</li> <li>• Legacy’s policy statement on e-cigarettes highlights a variety of potential health risks associated with e-cigarettes:</li> </ul> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><b>Additional Health Risks:</b> E-cigarettes present a variety of other potential health risks which must also be carefully evaluated even if they are logically assumed to be less harmful to an individual user than combusted tobacco.<sup>26-35</sup> These include, but are not limited to:</p> <ul style="list-style-type: none"> <li>◦ the dangers posed to the public by the distribution of potentially toxic nicotine solutions (including the need for childproof packaging),<sup>36,37</sup></li> <li>◦ the impact of the additives and flavorings used, the risks associated with the presence of heavy metals in some e-cigarette products,<sup>26-35</sup></li> <li>◦ the demonstrated weakness of manufacturing standards for a number of these products that can result in contaminants or amounts of nicotine in solution that are misleading or dangerous,<sup>26-37</sup> and</li> <li>◦ the long-term impact of inhaling e-cigarette vapor, which often contains propylene glycol and other potential contaminants and flavorings, for both the individual user and for non-users impacted through second-hand exposure.<sup>26-37</sup></li> </ul> </div> <p>(Source: <a href="http://www.legacyforhealth.org/content/download/3962/56088/version/1/file/LEG-Policy_Statement-ECigarette-JAN2014.pdf">http://www.legacyforhealth.org/content/download/3962/56088/version/1/file/LEG-Policy_Statement-ECigarette-JAN2014.pdf</a>)</p> <p>E-cigarettes are not regulated by the FDA.</p> <ul style="list-style-type: none"> <li>• There is a lack of mandatory manufacturing standards for ENDS, and few quality controls are in place.</li> <li>• Measured amounts of nicotine in e-cigarettes have been found to vary from package labeling in some cases.             <ul style="list-style-type: none"> <li>◦ Source: <a href="http://tobaccocontrol.bmj.com/content/23/suppl_2/ii11.abstract">http://tobaccocontrol.bmj.com/content/23/suppl_2/ii11.abstract</a></li> </ul> </li> <li>• The FDA has proposed regulations, but it may take years for any regulations to take effect.</li> </ul> <p>Ingredients approved for ingestion may not be safe for inhalation.</p> <ul style="list-style-type: none"> <li>• The Flavor and Extract Manufacturers Association of America (FEMA), the organization which assigns most of the “generally recognized as safe” (or “GRAS”) designations, specifically warns its members to ensure that workers are protected from <i>inhaling flavors while working with them</i>.             <ul style="list-style-type: none"> <li>◦ Source: <a href="http://tobacco.ucsf.edu/flavor-manufacturers-warn-companies-breathing-heated-flavors-can-be-dangerous-relevant-e-cigs">http://tobacco.ucsf.edu/flavor-manufacturers-warn-companies-breathing-heated-flavors-can-be-dangerous-relevant-e-cigs</a></li> </ul> </li> </ul>

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	<p>E-cigarettes release chemicals, carcinogens, and toxicants</p> <ul style="list-style-type: none"> <li>• “Quitlines should inform callers, as appropriate, that aerosol from some e-cigarettes has been found to contain carcinogens and toxicants, including carbonyl compounds, volatile organic compounds, tobacco-specific nitrosamines, and metals. Additionally, ultrafine particles produced by e-cigarettes are comparable in size and number to those produced by cigarettes, and may pose the same cardiovascular risk” (NAQC, p. 12-13). (Source: NAQC statement on cessation treatment and e-cigs. <a href="http://c.ymcdn.com/sites/naquitline.site-ym.com/resource/resmgr/ECigarettes/ECigarettesReportFinal.pdf?utm_source=Tobacco+Cessation+Digest+-+December+2014&amp;utm_campaign=TC+Digest&amp;utm_medium=email">http://c.ymcdn.com/sites/naquitline.site-ym.com/resource/resmgr/ECigarettes/ECigarettesReportFinal.pdf?utm_source=Tobacco+Cessation+Digest+-+December+2014&amp;utm_campaign=TC+Digest&amp;utm_medium=email</a>)</li> </ul> <p>Liquid nicotine is dangerous</p> <ul style="list-style-type: none"> <li>• “Liquid nicotine is toxic in doses as small as a half-teaspoon, and even a small splash of the substance on children's skin can make them very ill, according to the American Academy of Pediatrics” (Source: <a href="http://www.timesunion.com/local/article/Lethal-side-of-liquid-nicotine-5984416.php">http://www.timesunion.com/local/article/Lethal-side-of-liquid-nicotine-5984416.php</a>).</li> <li>• Poison control centers have reported increases in calls regarding e-cigarettes. “E-cigarette exposure calls per month increased from one in September 2010 to 215 in February 2014. ... E-cigarettes accounted for an increasing proportion of combined monthly e-cigarette and cigarette exposure calls, increasing from 0.3% in September 2010 to 41.7% in February 2014” (Chatham-Stevens, et al., 2014) <ul style="list-style-type: none"> <li>○ <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6313a4.htm?_cid=mm6313a4_w">http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6313a4.htm?_cid=mm6313a4_w</a></li> <li>○ News article on poison control center reports: <a href="http://www.cbsnews.com/news/sharp-rise-in-liquid-nicotine-poisonings-in-children/">http://www.cbsnews.com/news/sharp-rise-in-liquid-nicotine-poisonings-in-children/</a></li> </ul> </li> <li>• One child died during 2014 after swallowing liquid nicotine. (Source: <a href="http://thehill.com/regulation/229398-ny-toddlers-death-revives-push-for-e-cigarette-regulation">http://thehill.com/regulation/229398-ny-toddlers-death-revives-push-for-e-cigarette-regulation</a>)</li> </ul> <div data-bbox="683 1444 1177 1671" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="font-size: small; margin: 0;">HOME   REGULATION</p> <h3 style="margin: 0;">Toddler's death renews push for e-cig regs</h3> <p style="font-size: x-small; margin: 0;"> <span>Facebook 74</span> <span>Reddit 87</span> <span>Twitter 82</span> <span>LinkedIn 5</span> <span>Comments 13</span> </p> <p style="font-size: x-small; margin: 0;">By Lydia Wheeler - 01/13/15 04:41 PM EST</p> <p style="font-size: x-small; margin: 0;">Sen. Bill Nelson (D-Fla.) is reviving calls for regulations on e-cigarettes following the death a toddler in upstate New York last month.</p> <p style="font-size: x-small; margin: 0;">The Mohawk Valley 1-year-old died after he swallowed liquid nicotine, the chemical used in electronic cigarettes, according to media reports.</p> </div> <p>Nicotine affects the development of the adolescent brain, and most e-cigarettes contain nicotine</p> <ul style="list-style-type: none"> <li>• “There are also striking differences in the way nicotine affects adolescent and adult smokers. Nicotine results in cell damage and loss throughout the brain at any age, but in teenagers the damage is worse in the hippocampus,</li> </ul>

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Anticipated argument	Response/data
	<p>the mind's memory bank. Compared to adults, teen smokers experience more episodes of depression and cardiac irregularities, and are more apt to become quickly and persistently nicotine-dependent" (Source: <a href="http://www.jhsph.edu/research/centers-and-institutes/center-for-adolescent-health/includes/Effects_of_Drugs_Standalone.pdf">http://www.jhsph.edu/research/centers-and-institutes/center-for-adolescent-health/ includes/Effects_of_Drugs_Standalone.pdf</a>).</p> <ul style="list-style-type: none"> <li>• "Smoking during adolescence increases the risk of developing psychiatric disorders and cognitive impairment in later life" (<a href="http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3543069/">http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3543069/</a>).</li> </ul> <div data-bbox="483 554 1382 1167" style="border: 1px solid black; padding: 10px;">  <p><b>Key Messages for Patients and the Public</b></p> <p><b>Overview</b></p> <p>Researchers are still trying to understand the links between smoking and the impact it has on adolescents. Studies have found that nicotine and tobacco may have a more serious and lasting impact on young people because their brains are still developing.</p> <p><b>The Link between Smoking and Adolescent Brain Development</b></p> <ul style="list-style-type: none"> <li>• Research done with animals found that adolescents who are exposed to nicotine develop problems with attention and controlling impulses that continue into adulthood.<sup>1,2</sup> The toxic effect may be most harmful when smoking begins during early adolescence.<sup>3</sup></li> <li>• Research with human adolescents<sup>4</sup> found that the cortical region of the brain may be harmed by heavy smoking. The cortex is the part of the brain that is used for problem-solving, complex thought and controlling behaviour.</li> </ul> </div> <p>(Source: <a href="https://www.nicotinedependenceclinic.com/English/teach/SiteAssets/Pages/Smoking-Fact-Sheets/Adolescent%20Brain%20Development%20and%20Smoking%20Fact%20Sheet%20for%20Patients.pdf">https://www.nicotinedependenceclinic.com/English/teach/SiteAssets/Pages/Smoking-Fact-Sheets/Adolescent%20Brain%20Development%20and%20Smoking%20Fact%20Sheet%20for%20Patients.pdf</a>)</p> <p>Although rare, there have been 25 separate reports of incidents of explosion and fire involving an e-cigarette in the U.S. between 2009 and August 2014. (Source: <a href="https://www.usfa.fema.gov/downloads/pdf/publications/electronic_cigarettes.pdf">https://www.usfa.fema.gov/downloads/pdf/publications/electronic_cigarettes.pdf</a>)</p> <ul style="list-style-type: none"> <li>• Nine injuries were associated with these 25 incidents, and 2 of the injuries were serious burns.</li> <li>• "Most of the incidents occurred while the battery was charging. The shape and construction of e-cigarettes can make them more likely than other products with lithium-ion batteries to behave like 'flaming rockets' when a battery fails." (Source: <a href="https://www.usfa.fema.gov/downloads/pdf/publications/electronic_cigarettes.pdf">https://www.usfa.fema.gov/downloads/pdf/publications/electronic_cigarettes.pdf</a>)</li> </ul> <p>More adverse events have been reported to the FDA Center for Tobacco Products (CTP) regarding e-cigarettes than any other type of tobacco product.</p>

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Anticipated argument	Response/data
	<ul style="list-style-type: none"> <li>Since the late 1980s, over 100 AE reports on tobacco products have been submitted to FDA and approximately half of these reports concern electronic cigarettes (electronic cigarettes, <math>n = 47</math>; cigarettes, <math>n = 36</math>; smokeless tobacco, <math>n = 14</math>; other tobacco, <math>n = 5</math>) (Chen, 2013).</li> </ul>
E-cigarettes emit only water vapor, not secondhand smoke	<p>Emissions from e-cigarettes are more than just water vapor.</p> <ul style="list-style-type: none"> <li>Although chemical analyses have compared the levels of various components (carcinogens and chemicals) and found cigarette smoke to have higher levels of these components, these studies have identified chemicals and carcinogens present in e-cigarette emissions (Review article by Oh and Kacker, 2014 at: <a href="http://onlinelibrary.wiley.com/doi/10.1002/lary.24750/full">http://onlinelibrary.wiley.com/doi/10.1002/lary.24750/full</a>)</li> <li>Secondhand aerosol from electronic smoking devices contain nicotine, ultrafine particles and low levels of toxins that are known to cause cancer. (Source: Americans for Nonsmokers' Rights: <a href="http://no-smoke.org/pdf/ecigarette-secondhand-aerosol.pdf">http://no-smoke.org/pdf/ecigarette-secondhand-aerosol.pdf</a>)</li> <li>E-cigarettes are not regulated by FDA, so there are no rules governing the manufacture of these products or inspections to ensure that any specific standards are being met.</li> <li>In an article summarizing a study of e-cigarette emissions, researchers reported, "The concentration of putative carcinogenic PAH in indoor air increased by 20% to 147 ng/m<sup>3</sup>, and aluminum showed a 2.4-fold increase. PNC ranged from 48,620 to 88,386 particles/cm<sup>3</sup> (median), with peaks at diameters 24–36 nm. FeNO increased in 7 of 9 individuals. The nicotine content of the liquids varied and was 1.2-fold higher than claimed by the manufacturer....Our data confirm that <b>e-cigarettes are not emission-free and their pollutants could be of health concern for users and secondhand smokers</b>" (Schober et al., 2014, emphasis added).</li> </ul>

### References

- Chatham-Stephens, K., Law, R., Taylor, E., Melstrom, P., Bunnell, R., Wang, B., ... & Schier, J. G. (2014). Notes from the Field: Calls to Poison Centers for Exposures to Electronic Cigarettes—United States, September 2010–February 2014. *MMWR. Morbidity and mortality weekly report*, 63(13), 292-293.
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Oh AY & Kacker A. Do electronic cigarettes impart a lower potential disease burden than conventional tobacco cigarettes?: Review on e-cigarette vapor versus tobacco smoke. *Laryngoscope*. 2014; 124: 2702–2706. doi: 10.1002/lary.24750.

Schober W, Szendrei K, Matzen W, Osiander-Fuchs H, Heitmann D, Schettgen T, et al. Use of electronic cigarettes (e-cigarettes) impairs indoor air quality and increases FeNO levels of e-cigarette consumers. *Int J Hygiene Env Hlth*. 2014; 217:628-637. doi:10.1016/j.ijheh.2013.11.003

Wu Q, Jiang D, Minor M, Chu HW (2014) Electronic Cigarette Liquid Increases Inflammation and Virus Infection in Primary Human Airway Epithelial Cells. *PLoS ONE* 9(9): e108342. doi:10.1371/journal.pone.0108342.




## E-cigarettes: Data and resources for the Center

### E -cigarette regulations

Center staff asked several questions regarding e-cigarette regulations. The following table provides some summary information regarding regulation of e-cigarettes.

Question	Answer
<p>Which states include e-cigarettes in their smoke-free indoor air law?</p>	<p>Twenty-seven states have comprehensive smoke-free laws that prohibit smoking in restaurants, worksites, and bars, but only three limit indoor electronic nicotine delivery systems (ENDS) use: New Jersey, North Dakota, and Utah.</p> <ul style="list-style-type: none"> <li>• Source: (CDC, 2014; <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6349a1.htm?mobile=nocontent">http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6349a1.htm?mobile=nocontent</a>)</li> </ul> <div style="text-align: center;"> <p><b>U.S. State and Local Laws Regulating Use of Electronic Cigarettes</b>  <b>American Nonsmokers' Rights Foundation</b>  <i>As of January 1, 2015</i></p> <p>Note: American Indian and Alaska Native sovereign tribal laws are not reflected on this map.</p> <p><b>State and Commonwealth/Territory Law Type</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #add8e6; border: 1px solid black; margin-right: 5px;"></span> Law Restricts E-cigarette Use in 100% Smokefree Venues</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #d3d3d3; border: 1px solid black; margin-right: 5px;"></span> No E-cigarette Restriction in 100% Smokefree Venues</li> </ul> <p><b>Locality Type</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">▲</span> City</li> <li><span style="color: green;">●</span> County</li> </ul> </div> <p>Source: <a href="http://www.no-smoke.org/pdf/ecigsmap.pdf">http://www.no-smoke.org/pdf/ecigsmap.pdf</a></p>
<p>Which states apply tax to e-cigarettes?</p>	<p>Minnesota taxes e-cigarettes as tobacco products (<a href="http://www.revenue.state.mn.us/businesses/tobacco/Documents/ecigarette_flyer.pdf">http://www.revenue.state.mn.us/businesses/tobacco/Documents/ecigarette_flyer.pdf</a>; <a href="http://www.revenue.state.mn.us/businesses/tobacco/Pages/e-Cig.aspx">http://www.revenue.state.mn.us/businesses/tobacco/Pages/e-Cig.aspx</a>)</p> <p>North Carolina taxes liquid nicotine (<a href="http://www.reuters.com/article/2014/05/29/us-usa-cigarettes-north-carolina-idUSKBN0E92C020140529">http://www.reuters.com/article/2014/05/29/us-usa-cigarettes-north-carolina-idUSKBN0E92C020140529</a>) However, NC applied a low level of tax (5 cents per milliliter of nicotine liquid) and some tobacco companies supported this tax.</p> <p>Legislation is pending in Michigan, New Jersey, and Ohio. In 2014, taxes were proposed but not enacted in 15 states. (List of legislative tax proposals available</p>

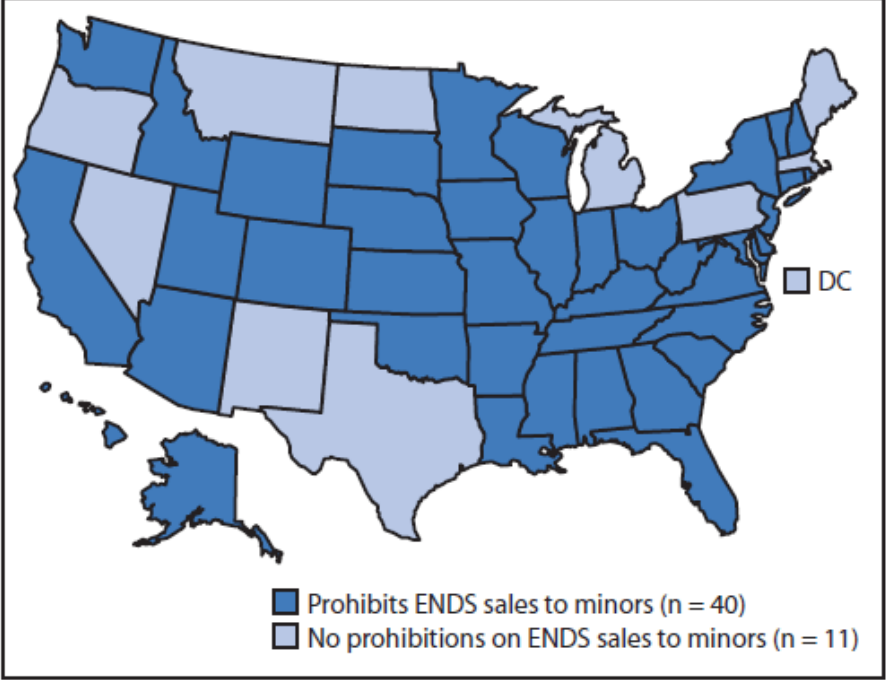
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Question	Answer
	<p>from National Conference of State Legislatures January 2015 Magazine webpage at <a href="http://www.ncsl.org/research/fiscal-policy/vaporized.aspx">http://www.ncsl.org/research/fiscal-policy/vaporized.aspx</a>).</p>
<p>Which states have current or proposed laws regarding childproofing liquid nicotine containers?</p>	<p>E-cigarette liquid is often packaged in small, attractive containers, which can be appealing to children. However, the contents are harmful to children if ingested, so some are pursuing childproof regulations.</p> <div data-bbox="1029 338 1287 552" style="text-align: center;">  </div> <p>Minnesota, New York, and Vermont have enacted legislation requiring childproof packaging for e-liquid (Source: <a href="http://www.publichealthlawcenter.org/sites/default/files/resources/tclc-fs-e-liquid-packaging-2014_0.pdf">http://www.publichealthlawcenter.org/sites/default/files/resources/tclc-fs-e-liquid-packaging-2014_0.pdf</a>)</p> <p>In general, federal law requires child-resistant packaging for some items “to reduce the risk of poisoning in children via the ingestion of potentially hazardous items including certain prescription and over-the-counter (OTC) medications, pesticides, and household chemicals” (Source: <a href="http://www.chpa.org/CRP.aspx">http://www.chpa.org/CRP.aspx</a>).</p> <p>A federal bill is currently in the legislative process in the United States Congress to require child safety packaging for liquid nicotine containers, S.2581 - Child Nicotine Poisoning Prevention Act of 2014. (Source: <a href="https://www.congress.gov/bill/113th-congress/senate-bill/2581/all-actions">https://www.congress.gov/bill/113th-congress/senate-bill/2581/all-actions</a> <a href="https://www.congress.gov/crec/2014/07/10/CREC-2014-07-10.pdf">https://www.congress.gov/crec/2014/07/10/CREC-2014-07-10.pdf</a>)</p> <p>The American Vaping Association backs proposed legislation that would require childproof packaging for liquid nicotine. Source: <a href="http://thehill.com/policy/healthcare/212131-e-cig-group-backs-bill-ordering-safety-caps">http://thehill.com/policy/healthcare/212131-e-cig-group-backs-bill-ordering-safety-caps</a>)</p>

## E-cigarettes: Data and resources for the Center

Question	Answer																
Which states require e-cigarette vendors to be licensed?	Some <b>states</b> have licensing requirements:																
	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Minnesota</td> <td>Retailers who sell e-cigs and juices must be licensed by city or county government. (<a href="http://www.revenue.state.mn.us/businesses/tobacco/Pages/e-Cig.aspx">http://www.revenue.state.mn.us/businesses/tobacco/Pages/e-Cig.aspx</a><a href="http://www.revenue.state.mn.us/businesses/tobacco/Pages/e-Cig.aspx">http://www.revenue.state.mn.us/businesses/tobacco/Pages/e-Cig.aspx</a>)</td> </tr> <tr> <td>Kansas</td> <td>Retail Cigarette/E-Cigarette Dealer’s License (<a href="http://www.ksrevenue.org/pdf/cg109.pdf">http://www.ksrevenue.org/pdf/cg109.pdf</a>)</td> </tr> <tr> <td>Iowa</td> <td>“The law, which took effect July 1, requires businesses selling such products to have a tobacco license, and prohibits selling the items to people under age 18. Before, there were no restrictions.” (<a href="http://www.desmoinesregister.com/story/news/2014/09/13/e-cigarette-law-shop-des-moines/15564759/">http://www.desmoinesregister.com/story/news/2014/09/13/e-cigarette-law-shop-des-moines/15564759/</a>)</td> </tr> <tr> <td>Louisiana</td> <td>A permit is required to sell electronic cigarettes, alternative nicotine products and vapor products at retail in and within this State. (<a href="http://www.atc.rev.state.la.us/TobaccoFAQs.php">http://www.atc.rev.state.la.us/TobaccoFAQs.php</a>)</td> </tr> <tr> <td>Vermont</td> <td>Requires tobacco license to retail tobacco substitutes. (<a href="http://www.leg.state.vt.us/statutes/fullchapter.cfm?Title=07&amp;Chapter=040">http://www.leg.state.vt.us/statutes/fullchapter.cfm?Title=07&amp;Chapter=040</a>)</td> </tr> </table>	Minnesota	Retailers who sell e-cigs and juices must be licensed by city or county government. ( <a href="http://www.revenue.state.mn.us/businesses/tobacco/Pages/e-Cig.aspx">http://www.revenue.state.mn.us/businesses/tobacco/Pages/e-Cig.aspx</a> <a href="http://www.revenue.state.mn.us/businesses/tobacco/Pages/e-Cig.aspx">http://www.revenue.state.mn.us/businesses/tobacco/Pages/e-Cig.aspx</a> )	Kansas	Retail Cigarette/E-Cigarette Dealer’s License ( <a href="http://www.ksrevenue.org/pdf/cg109.pdf">http://www.ksrevenue.org/pdf/cg109.pdf</a> )	Iowa	“The law, which took effect July 1, requires businesses selling such products to have a tobacco license, and prohibits selling the items to people under age 18. Before, there were no restrictions.” ( <a href="http://www.desmoinesregister.com/story/news/2014/09/13/e-cigarette-law-shop-des-moines/15564759/">http://www.desmoinesregister.com/story/news/2014/09/13/e-cigarette-law-shop-des-moines/15564759/</a> )	Louisiana	A permit is required to sell electronic cigarettes, alternative nicotine products and vapor products at retail in and within this State. ( <a href="http://www.atc.rev.state.la.us/TobaccoFAQs.php">http://www.atc.rev.state.la.us/TobaccoFAQs.php</a> )	Vermont	Requires tobacco license to retail tobacco substitutes. ( <a href="http://www.leg.state.vt.us/statutes/fullchapter.cfm?Title=07&amp;Chapter=040">http://www.leg.state.vt.us/statutes/fullchapter.cfm?Title=07&amp;Chapter=040</a> )						
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	Some <b>cities</b> also require tobacco licenses or permits to retail e-cigs:																
	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">West Fargo, ND</td> <td>Defines e-cigarettes as tobacco products and requires license (<a href="http://westfargond.gov/Portals/0/Documents/Ordinances/business_regulations.pdf">http://westfargond.gov/Portals/0/Documents/Ordinances/business_regulations.pdf</a>)</td> </tr> <tr> <td>Wahpeton, ND</td> <td>(Source: ND Center for Tobacco Prevention and Control Policy)</td> </tr> <tr> <td>Philadelphia, PA</td> <td>Requires a tobacco permit (<a href="http://www.phila.gov/health/pdfs/EcigFactSheetforMerchants82013.pdf">http://www.phila.gov/health/pdfs/EcigFactSheetforMerchants82013.pdf</a>)</td> </tr> <tr> <td>Chicago, OH</td> <td>Effective 8/5/14 (<a href="http://www.cityofchicago.org/city/en/depts/bacp/supp_info/tobaccoregulations.html">http://www.cityofchicago.org/city/en/depts/bacp/supp_info/tobaccoregulations.html</a>)</td> </tr> <tr> <td>Boston, MA</td> <td>license to sell nicotine delivery products is required (<a href="http://www.bphc.org/whatwedo/tobacco-free-living/Documents/Tobacco_Sale_Permit_Application.pdf">http://www.bphc.org/whatwedo/tobacco-free-living/Documents/Tobacco_Sale_Permit_Application.pdf</a>)</td> </tr> <tr> <td>Westminster, MA</td> <td>Requires permit (<a href="http://www.sentinelenterprise.com/news/ci_27123000/westminster-require-permit-fee-e-cigarette-sales">http://www.sentinelenterprise.com/news/ci_27123000/westminster-require-permit-fee-e-cigarette-sales</a>)</td> </tr> <tr> <td>Cranston, RI</td> <td>requires tobacco retail license (<a href="http://www.health.ri.gov/publications/plans/TobaccoRetailerLicensing.pdf">http://www.health.ri.gov/publications/plans/TobaccoRetailerLicensing.pdf</a>)</td> </tr> <tr> <td>Long Beach, CA</td> <td>requires tobacco retail permit (<a href="http://www.longbeach.gov/civica/filebank/blobdload.asp?BlobID=39727">http://www.longbeach.gov/civica/filebank/blobdload.asp?BlobID=39727</a>)</td> </tr> </table>	West Fargo, ND	Defines e-cigarettes as tobacco products and requires license ( <a href="http://westfargond.gov/Portals/0/Documents/Ordinances/business_regulations.pdf">http://westfargond.gov/Portals/0/Documents/Ordinances/business_regulations.pdf</a> )	Wahpeton, ND	(Source: ND Center for Tobacco Prevention and Control Policy)	Philadelphia, PA	Requires a tobacco permit ( <a href="http://www.phila.gov/health/pdfs/EcigFactSheetforMerchants82013.pdf">http://www.phila.gov/health/pdfs/EcigFactSheetforMerchants82013.pdf</a> )	Chicago, OH	Effective 8/5/14 ( <a href="http://www.cityofchicago.org/city/en/depts/bacp/supp_info/tobaccoregulations.html">http://www.cityofchicago.org/city/en/depts/bacp/supp_info/tobaccoregulations.html</a> )	Boston, MA	license to sell nicotine delivery products is required ( <a href="http://www.bphc.org/whatwedo/tobacco-free-living/Documents/Tobacco_Sale_Permit_Application.pdf">http://www.bphc.org/whatwedo/tobacco-free-living/Documents/Tobacco_Sale_Permit_Application.pdf</a> )	Westminster, MA	Requires permit ( <a href="http://www.sentinelenterprise.com/news/ci_27123000/westminster-require-permit-fee-e-cigarette-sales">http://www.sentinelenterprise.com/news/ci_27123000/westminster-require-permit-fee-e-cigarette-sales</a> )	Cranston, RI	requires tobacco retail license ( <a href="http://www.health.ri.gov/publications/plans/TobaccoRetailerLicensing.pdf">http://www.health.ri.gov/publications/plans/TobaccoRetailerLicensing.pdf</a> )	Long Beach, CA	requires tobacco retail permit ( <a href="http://www.longbeach.gov/civica/filebank/blobdload.asp?BlobID=39727">http://www.longbeach.gov/civica/filebank/blobdload.asp?BlobID=39727</a> )
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## E-cigarettes: Data and resources for the Center

Question	Answer
<p>Which states prohibit e-cigarette sales to minors?</p>	<p>“A total of 40 state laws prohibit [electronic nicotine delivery systems] ENDS sales to minors; sales are prohibited to persons aged &lt;18 years in 36 states and &lt;19 years in Alabama, Alaska, New Jersey, and Utah. Twelve states enacted such laws effective during 2010–2012, compared with 12 states in 2013, and 16 states by November 30, 2014. Approximately 16 million children aged &lt;18 years can legally purchase ENDS in the remaining 11 states, including the District of Columbia.” (Marynak, et al., 2014; Table with full list at <a href="http://www.cdc.gov/mmwr/pdf/wk/mm6349.pdf">http://www.cdc.gov/mmwr/pdf/wk/mm6349.pdf</a>)</p>  <p>A summary of state actions (including the legislative wording excerpts and links) is available from the National Conference of State Legislatures at <a href="http://www.ncsl.org/research/health/alternative-nicotine-products-e-cigarettes.aspx#1">http://www.ncsl.org/research/health/alternative-nicotine-products-e-cigarettes.aspx#1</a></p>

### References

Centers for Disease Control and Prevention (CDC). State Laws Prohibiting Sales to Minors and Indoor Use of Electronic Nicotine Delivery Systems — United States, November 2014. *MMWR Morb Mortal Wkly Rep.* 2014; 63(49):1145-1150.

Marynak, K., Holmes, C.B., King, B.A., Promoff, G., Bunnell, R., & McAfee T. State laws prohibiting sales to minors and indoor use of electronic nicotine delivery systems—United States, November 2014. *MMWR Morb Mortal Wkly Rep* 2014; 63; 1145-1150.

## E-cigarettes: Data and resources for the Center

### Additional resources:

- American Nonsmokers' Rights Foundation lists state and local laws regulating e-cigarette use in a variety of venues, including workplaces, schools, and others: <http://no-smoke.org/pdf/ecigslaws.pdf>
- The National Conference of State Legislatures provides a list of regulatory actions by states: <http://www.ncsl.org/research/health/alternative-nicotine-products-e-cigarettes.aspx>
- Infographic that includes states that prohibit indoor use of e-cigarettes. Source: CDC: <http://www.prevent.org/data/files/actiontoquit/mmwr%20ends%20infographic,%2012-12-14.jpg>
- The Public Health Law Center "Regulating Electronic Cigarettes and Similar Devices" - Suggests a possible method for local government regulation of e-cigarettes is to require e-cigarette retailers and vaping lounges to be licensed as tobacco retailers: <http://www.publichealthlawcenter.org/sites/default/files/resources/tclc-guide-reg-ecigarettes-2014.pdf>
- A summary of the World Health Organization's recommended options for regulating e-cigarettes (2014), written by the Tobacco Control Legal Consortium: [http://www.publichealthlawcenter.org/sites/default/files/resources/tclc-fs-who-recommendations-e-cigs-2014\\_0.pdf](http://www.publichealthlawcenter.org/sites/default/files/resources/tclc-fs-who-recommendations-e-cigs-2014_0.pdf)
- San Francisco just launched a campaign against electronic cigarettes: <http://abc11.com/health/san-francisco-launches-campaign-warning-public-of-dangers-of-vaping/463743/>
- National Association of City and County Health Officials supports policy that requires retailers to be licensed to sell e-cigs: <http://www.naccho.org/advocacy/positions/upload/12-04-e-Cigarettes.pdf>