**2017 Epidemiological Profile: Tobacco and ENDs**

**Consumption**

According to the National Survey of Drug Use and Health (NSDUH) and the Youth Risk Behavior Surveillance Survey (YRBSS), cigarette use has decreased for all age groups, but particularly for 12-17 year olds in Connecticut over the past decade. NSDUH data show that use among youth 12-17 has decreased from 13.5% in 2002-03 to 4.5% in 2014-15, which is in line with the national trend rates for this age group. The category Tobacco includes cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, pipe tobacco, hookah and other alternate tobacco products. According to the 2015 NSDUH, young adults 18-25 continue to have the highest rates of cigarette use of any age group. Smoking rates also rose slightly for young adults (30.4%) in comparison to 2014 (29.5%).

Despite significant decreases over the past decade, smoking remains a health concern for youth in Connecticut, due to the serious adverse physical effects of tobacco use. According to the 2015 Youth Risk Behavior Surveillance (YRBS) survey, 10.3 percent of high school students reported smoking at least one cigarette in the last 30 days. The rates were highest for 12th graders (12.4%) and 11th graders (11.9%). Males reported a higher rate of use (12.3%) than females (8.2%). The YRBS also showed that White and Hispanic students (10.4% and 10.6%) have higher reported cigarette use than Black students (7.4%).

The Datahaven Community Wellbeing Survey from 2015 showed that out of the Five Connecticuts (Connecticut towns by community type), Urban Core (34%) and Urban Periphery (29%) had the highest percentages of reported daily cigarette smoking. Wealthy communities having the lowest (9%). The age group reporting highest in smoking daily was 18-34 (39%). Hispanics had highest reporting (36%) with Blacks following closely behind with 32%. Those with highest level education being high school or less had higher reporting of daily smoking (44%) and 45% of people making under $15k a year reported daily smoking.

A hookah, another form of tobacco use, is a water pipe used to smoke tobacco through cooled water. The tobacco is heated in the bowl at the top of the hookah and the smoke is filtered through the water in the base of the hookah. This method of smoking tobacco is growing in popularity among young adults in Connecticut and all over the nation.[[1]](#footnote-1)

ENDS

Electronic nicotine delivery systems (ENDS) are metal or plastic tubes that contain liquids, usually with nicotine, that are vaporized by a battery-powered heating element. The resulting aerosol, is inhaled by the user and exhaled into the environment. There are many types of electronic smoking devices, including, e-hookah, vape pen, e-cigarette, and hookah pen. The liquid that is poured inside the device is called “e-juice” and can come in a variety of flavors and nicotine levels.

Alternate tobacco products such as e-cigarettes are an emerging problem nationally and in Connecticut as rates are rising at a rapid pace. According to the Connecticut 2015 Behavioral Risk Factor Surveillance Survey (BRFSS), 14.9% of adults in Connecticut had tried e-cigarettes in their lifetime. 15.4% of whites have ever tried e-cigarettes, as compared to 13.8 black and 12.4% Hispanics. The age group with highest percent of people having ever tried e-cigarettes is ages 18-34 with a percent of 30.8%, as compared to 29.7% in 2014.

4.9% of adults reported as current e-cigarette users, indicating use in the last 30 days. Rates for those who make less than $25,000 per year were highest at 8.9%, and lowest for those who make over $75,000 per year. Those without a high school diploma were also at a high risk (9.9%) in comparison to those with a college degree (2.3%). Hispanics reported the highest rate of usage at 5.7%, followed white Non-Hispanic White (5.0%), and Non-Hispanic Black (3.3%).

According to the Youth Tobacco Survey, in Connecticut, 1.4% of middle school and 7.2% of high school students currently use electronic cigarettes (e-cigs). From 2011 to 2015, there has been a 2.4%-7.2% increase in the percent of students currently using e-cigs. 5.9% of middle school and 25.1% of high school students have ever tried vaping using a vapor pen, v-pen, e-vapor, or e-cig. Out of those high school students who have ever tried vaping, 28.4% were White, 12.6% were Black and 25.2% were Hispanic. Of those students who have never tried vaping, 1.8% of middle school and 5.7% of high school students think they will try it in the next year. [[2]](#footnote-2)

12.0% of all adults have tried ENDs at least once in their lifetime and 4.0% of adults currently use ENDs (4.2% males and 3.8% females). ENDs use is highest among adults in the 25-34 years of age range, followed by those in the 18-24 years of age range.[[3]](#footnote-3)

According to the Datahaven Community Wellbeing Survey, in 2015, 19% of participating males reported having tried e-cigs even just once, along with 13% of females. 31% of adults who have tried e-cigs even just once reported being in the age range of 18-34 years old. As age categories increase, the percent of adults having tried e-cigs decreases, dropping down to 15% for 35-49 years old and 5% for adults ages 65 and older. 19% of Hispanics reported trying e-cigs even just once, followed by 16% white and 15% Black. [[4]](#footnote-4)

**At-Risk Populations**

* According to the Datahaven Community Wellbeing Survey, at risk populations for smoking cigarettes include:
  + Adults ages 18-34
  + Hispanics and blacks
  + Those with a less than a high school education
  + Low income individuals
  + Persons living in urban communities (urban core and urban periphery)
* Populations most at-risk for using electronic nicotine delivery devices are:
  + Those living in urban type communities
  + Males
  + 18-34 year olds
  + Hispanics
  + Adults 18-34 years old
  + Men
  + Adults from households earning less than $35,000
  + Adults with disabilities
  + Those with a high school diploma or less
  + Adults without health insurance
* Current cigarette smokers are more likely to try alternate tobacco methods than non-smokers and former-smokers of cigarettes.

**Consequences**

* Cigarette smoking kills an estimated 440,000 U.S. citizens each year—more than alcohol, illegal drug use, homicide, suicide, car accidents, and AIDS combined.
* Smoking increases the risk of heart disease, cancer, stroke, and chronic lung disease. Heart disease is the leading cause of death in the US and in Connecticut, and the leading cause of heart disease is smoking.
* Smoking is also associated with cancers of the mouth, pharynx, larynx, esophagus, stomach, pancreas, cervix, kidney, bladder, and acute myeloid leukemia.
* In Connecticut, the leading cause of cancer death was lung cancer, accounting for more than one in every four cancer deaths in both men and women. Active smoking is responsible for close to 90 percent of lung cancer cases.
* Approximately 90% of chronic obstructive pulmonary (COPD) and emphysema deaths are attributable to smoking.
* Environmental tobacco smoke increases the risk for heart disease and lung cancer among nonsmokers.
* The economic costs per year of tobacco use in the Connecticut are estimated to be $2.03 billion in 2017, including those costs attributed to lost productivity and medical expenditures.
* E-cigarettes are harmful, both through introducing new young users to nicotine addiction and through direct effects upon the lung.The aerosol contains nicotine and ultrafine particles, including metals and chemicals such as Benzene, Formaldehyde, and Toluene which are known carcinogens[[5]](#footnote-5)
* Short term use of ENDs has been shown to increase respiratory resistance and impair lung function, which may result in difficulty breathing.[[6]](#footnote-6)
* Diacetyl and acetyl propionyl are present in many sweet-flavored e-cigs. High doses of diacetyl have been shown to cause acute-onset bronchiolitis obliterans, an irreversible obstructive lung disease
* Aerosols contain levels of carbonyls which can result in cardiovascular toxicity[[7]](#footnote-7)

**Selected Indicators**

* Synar Retailer Violation rate
* Wholesale number of cigarettes taxed\*
* Lung disease, lung cancer, cardiovascular disease and COPD deaths
* NSDUH
* Connecticut School Health Survey (YRBSS)
  + Youth Tobacco Survey
* BRFSS
* Datahaven Community Wellbeing Survey

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1. http://www.health.umd.edu/sites/default/files/Hookah%20Brochure-%20Final\_0.pdf [↑](#footnote-ref-1)
2. 2015 Youth Tobacco Survey, DPH, CT http://www.ct.gov/dph/lib/dph/hems/tobacco/pdf/fact\_sheets/2015\_ctyts\_report\_rev.pdf [↑](#footnote-ref-2)
3. State of Connecticut, Department of Public Health Tobacco Use Prevention and Control Program. Adults and Tobacco Use in

   Connecticut. Fact Sheet. September 2014 (data from the Behavioral Risk Factor Surveillance System; 201 [↑](#footnote-ref-3)
4. Datahaven Community Wellbeing Survey <http://www.ctdatahaven.org/sites/ctdatahaven/files/DataHaven2015%205CT%20Crosstabs%20Pub.pdf> [↑](#footnote-ref-4)
5. Goniewicz, M.L.; Knysak, J.; Gawron, M.; Kosmider, L.; Sobczak, A.; Kurek, J.; Prokopowicz, A.; Jablonska-Czapla, M.; Rosik-

   Dulewska, C.; Havel, C.; Jacob, P.; Benowitz, N., "Levels of selected carcinogens and toxicants in vapour from electronic

   cigarettes," *Tobacco Control* [Epub ahead of print], March 6, 2013. [↑](#footnote-ref-5)
6. Vardavas, C.I.; Anagnostopoulos, N.; Kougias, M.; Evangelopoulou, V.; Connolly, G.N.; Behrakis, P.K., "Short-term

   pulmonary effects of using an electronic cigarette: impact on respiratory flow resistance, impedance, and exhaled nitric

   oxide," *Chest* 141(6): 1400-1406, June 2012. [↑](#footnote-ref-6)
7. American Nonsmokers Rights Foundation: “Electronic Smoking Devices and Secondhand Aerosol”; 2014. [↑](#footnote-ref-7)