



Background

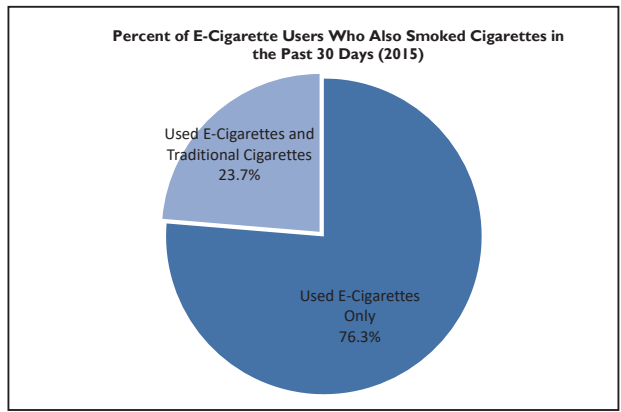
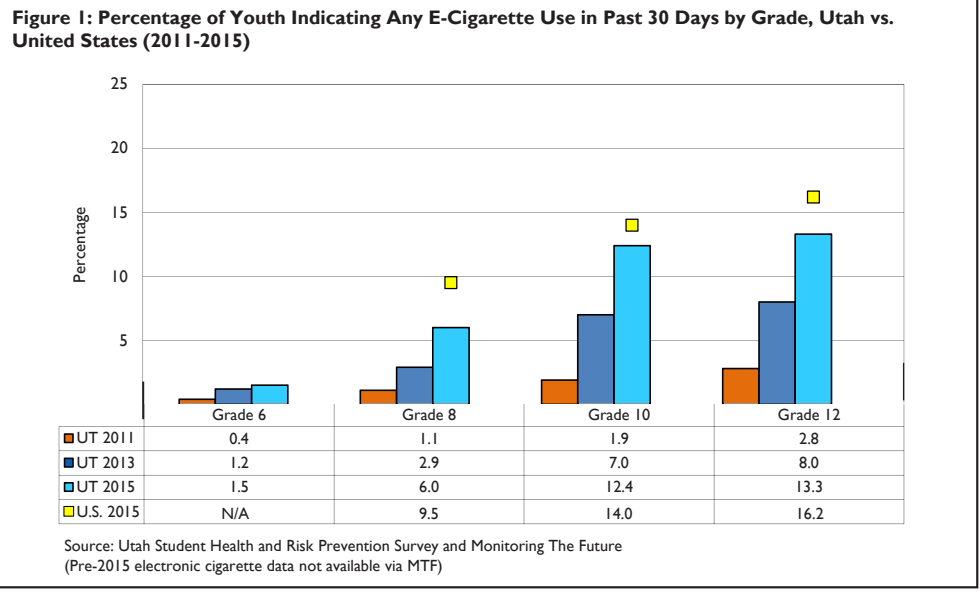
Electronic cigarettes (or e-cigarettes) are battery powered devices that vaporize nicotine infused liquid for inhalation, and their use by individuals in Utah has grown dramatically in the last several years. E-cigarette manufacturers often tout their products for providing nicotine without the dangerous chemicals associated with traditional cigarettes, and some have claimed e-cigarettes to be an effective aid in the cessation of smoking. Unlike traditional cigarettes, there are far fewer regulations regarding the manufacturing of e-cigarette materials. At the present time, the FDA has not es-

tablished the safety of using e-cigarettes, and the long term effects of their use are unknown. According to the Utah Department of Health, the nicotine concentration levels across e-cigarette solutions can vary widely, possibly increasing the risk of nicotine overdose or poisoning. Unfortunately, these products are potentially attractive to youth given manufacturers' claims and misleading advertising about the safety of using e-cigarettes, and the availability of flavored solutions that can appeal to youth (e.g., grape, bubble gum, cherry, strawberry, etc.).

E-Cigarette Use Rates and Comparisons of E-Cigarette and Traditional Cigarette Users

While many things about e-cigarettes remain unknown, one thing that is certain is that use of these products by youth has been increasing at a rapid rate in Utah (as well as nationally), despite the fact that youth substance use rates in general have been declining over the last several years. According to the Utah Student Health and Risk Prevention (SHARP) survey¹, the percentage of Utah youth (grades 6, 8, 10 and 12 combined) indicating past 30 day use of e-cigarettes quintupled from 2011 to 2015 (from 1.5% to 8.1%). In fact, the rise of e-cigarette use has been so dramatic, that in 2015, it became the first substance ever to displace alcohol as the most widely used substance among Utah youth (the 30 day alcohol use rate among youth was 6.5%). As expected, youth rates of e-cigarettes are highest for high school aged youth. In 2015, 12.4% of Utah 10th graders indicated using e-cigarettes in the past 30 days, and 13.3% of Utah 12th graders indicated using (see Figure 1).

Interestingly, it is clear from the data that for most youth users, e-cigarettes are the only form of cigarette being used. Specifically, only 24% of youth who used e-cigarettes in the past 30 days also used traditional cigarettes during that same timeframe according to the 2015 SHARP survey. This suggests that e-cigarette use is a potential gateway to nicotine addiction for many individuals, possibly increasing the likelihood of future tobacco product use.

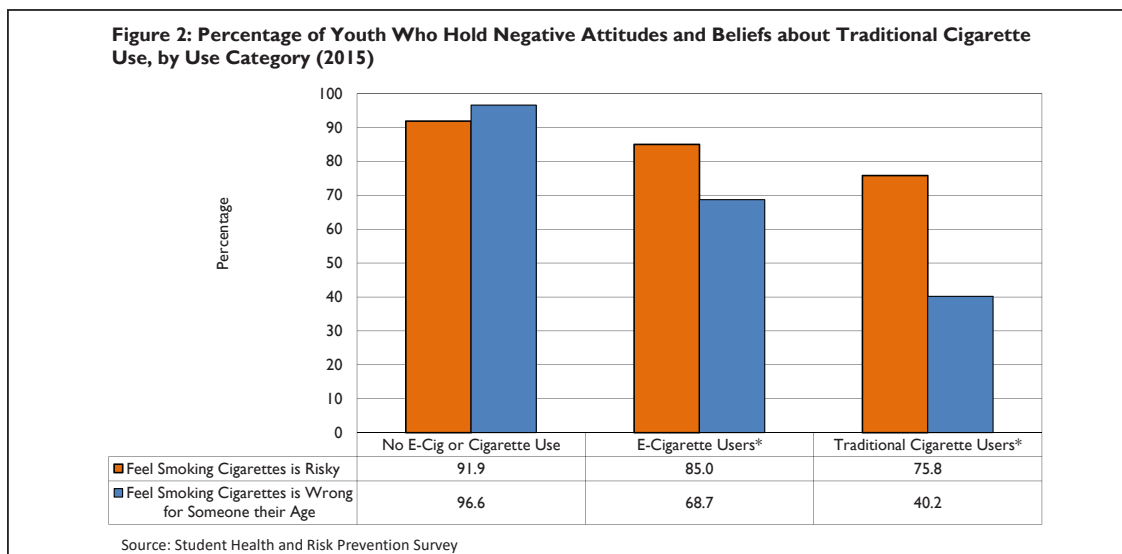


¹ The SHARP survey is a survey that measures substance use and other problem behaviors as well as risk and protective factors. The survey is administered across the state every other year to Utah students in grades 6, 8, 10 and 12.

E-Cigarette Use Rates and Comparisons of E-Cigarette and Traditional Cigarette Users, Cont.

Why has youth e-cigarette use increased so dramatically? Part of the explanation is that given the novelty of e-cigarettes, youth attitudes and norms about e-cigarettes are not as clearly formed as attitudes toward traditional cigarettes. Overwhelmingly, youth in Utah hold negative attitudes and beliefs about the use of traditional cigarettes, but these attitudes may not necessarily apply to e-cigarettes to the same extent. Over 90% of Utah youth indicated that: a) it was wrong for someone their age to smoke cigarettes, and b) smoking a pack of cigarettes or more per day presents a moderate or great risk of harm. These negative attitudes and beliefs about traditional cigarettes predict the low cigarette use rates

among youth in our state. Unfortunately, the SHARP survey does not provide data on these same attitudes regarding e-cigarettes. However, comparing attitudes toward traditional cigarettes among non-cigarette users (electronic and traditional), e-cigarette users, and traditional cigarette users shows that e-cigarette users' have more negative attitudes about traditional cigarettes than cigarette users, but not as negative as non-users (see Figure 2). Specifically, 85% of e-cigarette users felt smoking cigarettes was risky (vs. 76% of cigarette users and 92% of non-users), while 69% felt it was wrong or very wrong for someone their age to smoke cigarettes (vs. 40% of cigarette users and 97% of non-users).



Rates of E-Cigarette Use Across the State

Table 1 presents lifetime and 30 day e-cigarette use rates for each of the 13 regions in the state. In 2013, youth e-cigarette use rates varied widely across the regions, with generally higher use along the Wasatch Front compared to areas with smaller populations. In 2015, it appears that rates in the smaller population areas of the state have largely caught up with rates along the Wasatch Front. In 2013, there were three regions with 30 day e-cigarette use rates below 2%. In 2015, the three lowest observed rates were all approximately 5.5%. More disturbing, is that many areas saw exponential increases in rates from 2013 to 2015 (e.g., Central, Four Corners, Northeastern, Southwest, Tooele, etc.). The only silver lining in the data is that the areas with the highest rates in 2013 (Weber & Davis Counties) actually showed small declines in use in 2015, perhaps signaling the plateau points for those counties.

Table 1. Percentage of Youth (Grades 6, 8, 10 & 12 Combined) Indicating Lifetime & Past 30 Day Use of E-Cigarettes, by Region (2013-2015)

Region	% Lifetime Use		% Past 30 Day Use	
	2013	2015	2013	2015
Bear River	8.0%	12.0%	4.2%	5.7%
Central	7.3%	14.7%	1.4%	7.1%
Davis County	11.3%	13.7%	7.3%	6.6%
Four Corners	10.9%	22.0%	3.4%	10.9%
Northeastern	10.6%	18.5%	3.2%	10.8%
Salt Lake County	10.7%	22.0%	4.3%	9.7%
San Juan County	2.4%	12.8%	0.4%	5.5%
Southwest	6.1%	18.7%	2.4%	8.5%
Summit County	11.4%	16.0%	3.4%	6.4%
Tooele County	10.0%	18.8%	4.4%	10.3%
Utah County	3.4%	11.9%	1.4%	5.7%
Wasatch County	6.5%	14.0%	3.5%	5.8%
Weber/Morgan	23.7%	23.9%	15.3%	12.0%
State	9.6%	17.4%	4.7%	8.1%