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## Adult Electronic-Cigarette Use in Alaska

### Background

Electronic- or e-cigarettes are federally unregulated, battery-powered devices that typically provide doses of nicotine to the user in an aerosol form.<sup>1,1</sup> In addition to nicotine, e-cigarette cartridges also contain an aerosolizing compound such as propylene glycol and often a flavoring agent. In 2013, 8.5% of U.S. adults were estimated to have ever used e-cigarettes,<sup>2</sup> and in 2014, 13.4% of middle and high school students used e-cigarettes in the past 30 days.<sup>3</sup> This Bulletin describes the estimated prevalence of e-cigarette use among Alaska adults.

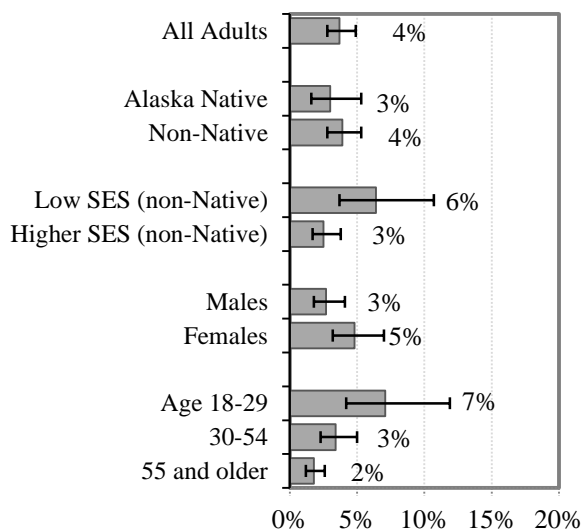
### Methods

The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing, random-digit-dial survey of non-institutionalized Alaska adults aged 18 years and older. BRFSS data are weighted to be representative of the Alaska adult population. BRFSS has included a question on the use of e-cigarettes since 2010. Due to collinearity between race (for this analysis, Alaska Native people and all non-Native races) and socioeconomic status (SES; a combination of poverty status and education level) as related to tobacco use, the Alaska Tobacco Prevention and Control Program examines SES only among non-Natives. Confidence intervals (CI) and P-values were calculated using SAS. P-values <0.05 were considered to be significant.

### Results

In 2013, 4% of Alaska adults reported using e-cigarettes in the past 30 days; this was a statistically significant increase from 1% reported in 2010 ( $p < 0.001$ ). Women were significantly more likely to report e-cigarette use than were men ( $p < 0.05$ ). Other statistically significant disparities exist by age group ( $p < 0.01$ ) and socioeconomic status ( $p < 0.05$ ; Figure). Though e-cigarette use was not significantly associated with region overall (using the 6 BRFSS-defined regions of Alaska), significantly lower e-cigarette use was seen in the northern region (0.4%) compared to the Anchorage (4.4%) and Gulf Coast (3.6%) regions.

**Figure. Percent of Adults Who Used E-Cigarettes in the Past 30 Days, by Selected Demographic Factors – Alaska, 2013**



<sup>1</sup> While e-cigarettes are unregulated by the FDA, current Alaska law prohibits e-cigarettes from being sold or given to persons under 19 years of age (Alaska Statute 11.76.109).

### Dual Use of E-cigarettes and Combustible Cigarettes

- 85% of e-cigarette users also reported being current cigarette smokers.
- 14% of current cigarette smokers and 1% of non-smokers ( $p < 0.001$ ) reported current use of e-cigarettes.
- 72% of dual users reported using e-cigarettes in place of combustible cigarettes, either as a way of reducing or quitting combustible cigarette use or to use when smoking cigarettes is not allowed.

### Discussion

The use of e-cigarettes is increasing in Alaska. Women, young adults, and non-Native Alaskans of low socioeconomic status are using at higher rates than their peers. The strong uptake among young adults is not unexpected given the proliferation of e-cigarette marketing strategies that specifically target youth.<sup>5</sup> The potential for e-cigarette use to renormalize tobacco use is worrisome—particularly among Alaska's youth.<sup>6</sup> Alaska data on adolescent use of e-cigarettes will be available for the first time in Fall 2015.

The vast majority of current e-cigarette users also smoke cigarettes, and most of these dual users report using e-cigarettes as a way to replace combustible cigarettes. While e-cigarettes may play a role in smoking cessation, efficacy and long-term health benefits of e-cigarette use for this purpose has not been clearly and consistently established.<sup>6</sup> Only FDA-regulated and approved smoking cessation aids are proven to be effective, including products such as patches, lozenges, gum, and prescription medications like Chantix® and Zyban®. Health care providers should advise patients to quit tobacco and e-cigarettes completely and provide information on cessation resources such as Alaska's Tobacco Quit Line, 1-800-QUIT NOW.

E-cigarettes may pose less health risks than combustible cigarettes; however, there are no long-term studies on exposure to these products, including their solutions, cartridges, or flavors to confirm this. Additional research is needed to determine what ingredients are contained in e-cigarettes and the long-term health implications they pose. Some of the contents of e-cigarette aerosols constitute a threat to indoor air quality.<sup>4</sup> As such, e-cigarettes should be included in all smoke and tobacco-free policies.

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