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. 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, and in 2014, 13.4% of middle and high school students used e-cigarettes in the past 30 days. 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

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. The potential for e-cigarette use to renormalize tobacco use is worrisome—particularly among Alaska’s youth. Alaska data on adolescent use of e-cigarettes will be available for the first time in Fall 2015.

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. As such, e-cigarettes should be included in all smoke and tobacco-free policies.

References
3. CDC. Tobacco use among middle and high school students—United States, 2011–2014. MMWR 2015;64(14):381-385. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6414a3.htm

(Coordinated by Andrea Fenaughty, PhD, and Allison Kulas, MSPH, Section of Chronic Disease Prevention and Health Promotion; and Deborah Hull-Jilly, MPH, Section of Epidemiology)