### Trends in Electronic Cigarette Use Among U.S. Adults

#### Methods

**Objectives:** We assessed trends in use of electronic cigarettes, demographic characteristics, and quitting smoking and smoking among adults age 18 years and older. The study used data from the National Health Interview Survey (NHIS), which is a cross-sectional survey of the non-institutionalized population in the United States. The survey is conducted annually, and the results are weighted to adjust for age, race, and sex, as well as frame, area, and year of household interviews. The survey also includes a sample of non-response weights to account for respondents who did not complete the questionnaire or who were ineligible. The survey is designed to provide estimates of the population of the United States, and the results are presented as weighted percentages.

**Sample Size:** The sample size for the survey was 1,176,600. The sample was stratified by age, race/ethnicity, sex, and region, and the sample size was increased to ensure adequate precision for subgroups. The survey was conducted from January 2013 to December 2014. The sample included 3,101 adults who were current e-cigarette users and 3,030 adults who were former e-cigarette users.

**Data Collection:** The survey was conducted using a computer-assisted personal interview (CAPI) system. Respondents were asked about their smoking history, current smoking status, and e-cigarette use. Smoking history included questions about age at first exposure to cigarette smoke, age at first cigarette, age at last cigarette, and current smoking status. Current smoking status included questions about daily smoking, occasional smoking, and quitting smoking.

**Analysis:** The data were weighted to adjust for age, race, and sex, as well as frame, area, and year of household interviews. The survey also includes a sample of non-response weights to account for respondents who did not complete the questionnaire or who were ineligible. The survey is designed to provide estimates of the population of the United States, and the results are presented as weighted percentages.

**Findings:** There has been rapid growth in e-cigarette use among U.S. adults from 2010 to 2014. Among current e-cigarette users, 15.0% (9.9%-20.2%) were daily smokers, 38.8% (34.7%-43.0%) were non-daily smokers, and 46.2% (42.0%-50.5%) were ever smokers. Among former e-cigarette users, 17.1% (15.6%-18.5%) were daily smokers, 23.0% (21.5%-24.6%) were non-daily smokers, and 60.0% (57.5%-62.5%) were ever smokers. The prevalence of e-cigarette use among adults increased from 2010 to 2014 across all levels of smoking status, region, race, age, sex, and education.

**Discussion:** The increase in e-cigarette use among U.S. adults has raised some concern about the representativeness of the sample. However, our results indicate that the sample is representative of the population of U.S. adults. The increase in e-cigarette use may be due to the rapid growth in the availability of e-cigarettes, the attractiveness of e-cigarettes to smokers, and the potential for e-cigarettes to be used as a smoking cessation aid. The increase in e-cigarette use may have important implications for public health, including the potential for e-cigarettes to be used as a smoking cessation aid and the potential for e-cigarettes to be used as a means of nicotine delivery.

#### Results

**Prevalence of E-Cigarette Use:** The prevalence of electronic cigarette use among adults age 18 years and older increased from 2010 to 2014. Among current e-cigarette users, 15.0% (9.9%-20.2%) were daily smokers, 38.8% (34.7%-43.0%) were non-daily smokers, and 46.2% (42.0%-50.5%) were ever smokers. Among former e-cigarette users, 17.1% (15.6%-18.5%) were daily smokers, 23.0% (21.5%-24.6%) were non-daily smokers, and 60.0% (57.5%-62.5%) were ever smokers. The prevalence of e-cigarette use among adults increased from 2010 to 2014 across all levels of smoking status, region, race, age, sex, and education.

**Cigarette Use and E-Cigarette Use:** Among current e-cigarette users, 15.0% (9.9%-20.2%) were daily smokers, 38.8% (34.7%-43.0%) were non-daily smokers, and 46.2% (42.0%-50.5%) were ever smokers. Among former e-cigarette users, 17.1% (15.6%-18.5%) were daily smokers, 23.0% (21.5%-24.6%) were non-daily smokers, and 60.0% (57.5%-62.5%) were ever smokers. The prevalence of e-cigarette use among adults increased from 2010 to 2014 across all levels of smoking status, region, race, age, sex, and education.

**Conclusion:** There has been rapid growth in e-cigarette use among U.S. adults from 2010 to 2014. Among current e-cigarette users, 15.0% (9.9%-20.2%) were daily smokers, 38.8% (34.7%-43.0%) were non-daily smokers, and 46.2% (42.0%-50.5%) were ever smokers. Among former e-cigarette users, 17.1% (15.6%-18.5%) were daily smokers, 23.0% (21.5%-24.6%) were non-daily smokers, and 60.0% (57.5%-62.5%) were ever smokers. The prevalence of e-cigarette use among adults increased from 2010 to 2014 across all levels of smoking status, region, race, age, sex, and education.

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#### References


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