

Poster #10

Research Study

Title: “Adolescent Vaping and Concomitant Tobacco Use”

Mathew Pendo; Ammar Khan; Aaron Spiegelman; Pura Rodriguez, MPH; Juan Lozano, MD, MSc

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Introduction and Objective. In recent years, the popularity of electronic cigarettes (E-cigs) has increased, particularly among adolescents. While the long-term health effects of E-cig use are still unknown, the health harms of other tobacco products are well described. The purpose of this study is to evaluate the relationship between the current use of E-cigs and the simultaneous use of other tobacco products by US high school students.

Methods. A cross-sectional study was conducted using secondary data analysis from the 2019 National Youth Tobacco Survey (NYTS). This study characterized the frequency of current traditional tobacco product use amongst current high school student E-cig users as compared to non-E-cig users. Potential confounders included age, sex, race, and the use of E-cigs in the household. Multivariable analysis was used to measure the association controlling for potential confounders. Stratified analysis was then performed to evaluate the potential effect modification by sex.

Results. The final sample size consisted of 9,995 students, of which 26.9% of students reported E-cig use during the last 30 days. Students who reported current E-cig use were more likely to be older, white, and have household members use E-cigs ($p < 0.001$). The consumption of other tobacco products was much higher among E-cig users than among non-users (37.6% vs 5.3%, $p < 0.001$). Adjusted analysis revealed the odds of current use of ‘other’ tobacco products for students who reported E-cig use was 10.9 times higher than that in nonusers (aOR 10.9, 95% CI 8.9-13.5, $p < 0.001$). Sex was revealed as an important effect modifier of this association. Male E-cig users were 13.2 times more likely to report the use of other tobacco products (95% CI 10.0-17.4), whereas females were 8.4 times more likely to report concomitant use of other tobacco products (95% CI 6.4-11.1).

Conclusions-Implications. Current E-cig use is strongly associated with the use of other tobacco products in US high school students. Sex was revealed as an important effect modifier of this relationship. While the long-term health effects of E-cigs are unknown, the association between E-cig use and the use of other tobacco products with known health harms is concerning.