

## TRENDS OF YOUTH MULTIPLE TOBACCO AND/OR CIGARETTE PRODUCT USE IN THE UNITED STATES

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**Introduction:** *Multiple tobacco and e-cigarette product (MTEP) use, the concurrent use of two or more different types of tobacco and/or e-cigarettes products, is common among youth in the US.*

**Method:** *Multi-group latent class analysis (LCA) was applied to repeated cross-sectional data from the US National Youth Tobacco Survey of middle and high school students ( $N_{total}=77,402$ ) to allow for simultaneous identification of MTEP use patterns between 2014 and 2020. Logistic regression was used to predict correlates of class membership and bootstrapping mediation analysis was used to test the mediating role of lower perceptions of tobacco's danger in the association between exposure to product marketing and MTEP use.*

**Results:** *Over the seven-year period, LCA identified three patterns: minimal/non-users (MNU:~89.8%), mostly occasional e-cigarette and cigarette users (MOEC:~9%), and polytobacco users (POLY:~1.2%). The class proportions for MOEC and POLY decreased, however regular e-cigarette use increased in all three classes. Greater perceived exposure to product marketing reduced tobacco danger perceptions, which in turn, increased the odds of being MOEC and POLY. In logistic regression, being male, in high school, non-heterosexual, living with someone who uses tobacco at home, having cognitive difficulties, having lower perceptions of tobacco's danger and exposure to tobacco marketing were associated with MTEP use.*

**Conclusions:** *There was an increase in regular e-cigarette use in all three classes, but a corresponding decrease in the proportion of MTEP use. Frequent exposure to marketing reduces harm perception, which in turn increases the risk of using MTEPs.*

**Implications for Practice or Policy:** *Public health interventions to discourage uptake of e-cigarettes, such as tighter restrictions on marketing to minors are warranted.*