

Tobacco Regulatory Science Investigating the Intersections of Products with Diverse Populations

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Overall Center Abstract:

Overall Tobacco products are increasingly diverse. Non-cigarette products now garner a large market share; their use and health impact varies across populations. Youth and young adult non-users of tobacco products are vulnerable to initiation of e-cigarettes—a product posing risks both of nicotine dependence and of combustible tobacco uptake. Yet, middle-aged/older adults may switch from combustible to e-cigarette products with potential health benefits. The FDA is required to consider how regulatory policy has differing impact across subgroups to ensure protection of the ‘population as a whole.’ Research addressing population diversity is scant. Through its theme, the Intersections of Products with Populations, the University of Southern California Tobacco Center of Regulatory Science (USC-TCORS) will conduct research on the use and health effects of specific e-cigarette products across populations. We will study e-cigarette product characteristics and marketing approaches hypothesized to increase tobacco product attraction, use, and addiction in youth and young adult non-smokers and have little impact on tobacco product use in older smokers. These e-cigarette products include: (a) non-tobacco flavorings; (b) constituents and devices that produce large vapor clouds; (c) modifiable devices; (d) device designs not resembling cigarettes; (e) cartoons in packaging and advertising; (f) candy flavors or other youth-oriented marketing themes. Product standards and marketing requirements limiting non-combustible products with these features to protect young people, while minimizing collateral effects on switching in adult smokers, would satisfy FDA’s mission to protect the overall population. We will provide evidence to forecast whether such requirements would have equitable impact across vulnerable groups defined by ethnicity, socioeconomic status, and sex that are affected by widening tobacco disparities. Four complementary research projects employing differing methodologies will test shared hypotheses on variation of the impact of e-cigarette product diversity on tobacco product use by age, combustible tobacco use, and sociodemographic diversity: (1) characterization of publicly available social media postings of e-cigarette product characteristics and marketing themes that will be linked prospectively with tobacco product use behavior in youth and young adults, (2) intercept interviews with customers at vape shops to assess the impact of scenarios of e-cigarette regulation on tobacco product use, (3) cohort studies of associations of e-cigarette product characteristics and marketing exposures with tobacco product use and dependence across 10 years of early life, (4) laboratory tests of the impact of e-cigarette product characteristics and marketing exposure manipulations on product appeal, abuse liability, and other outcomes. Supported by a Center-wide scientific and career development infrastructure, USC-TCORS will provide the FDA with a robust body of evidence to assess how various regulatory approaches to e-cigarettes are likely to affect the health of vulnerable groups and the whole population. Scientific Domains: Addiction, Behavior, and Marketing.