

## **Tobacco Regulatory Science Investigating the Intersections of Products with Diverse Populations**

Institution: University of Southern California

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### **Project 1: Effects of Social Media Marketing and Messages on Tobacco Transitions**

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#### **Project 1 Abstract:**

Social media is a ubiquitous channel of exposure to novel e-cigarette products, particularly for youth. Yet, there is little evidence characterizing e-cigarette product diversity portrayed on social media and the impact of social media exposure to products on tobacco product use. P1 aims to provide FDA with targets for regulation using social media as a platform to understand e-cigarette product diversity, and to inform regulation that benefits the 'population as a whole' by protecting vulnerable young non-users while also considering impact on adult smokers who have switched (or are interested in switching) to e-cigarettes. Method: Two complementary studies will address two aims. Aim 1. To analyze continuously collected social media posts with e-cigarette and other tobacco product-related keywords to determine patterns of occurrences that indicate trends in product marketing, conversations about e-cigarette products, and their diverse product characteristics. To this end, Aim 1 will examine new keywords and themes that co-occur with youth-oriented posts aimed at non-tobacco-users, and health-oriented posts aimed at current smokers regarding switching to e-cigarettes. P1 tests the hypothesis that there will be postings on e-cigarette products with youth-oriented themes (i.e., about e-cigarette flavors, vape clouds, discounts, and cartoons) that tend to co-occur with one another, and that such themes will be unlikely to co-occur with postings on e-cigarette products with health-oriented themes (e.g., claims about reduced harm of e-cigarettes to self and others, or about smoking cessation). P1 also tests the hypothesis that messages with youth-oriented themes will produce more user engagement (likes) and dissemination (retweets, shares) than messages without them. Aim 2. To determine whether participation (e.g., posting, liking, sharing) in e-cigarette-related social media, especially posts that contain youth-oriented themes described above, is associated with tobacco product susceptibility and use among youth and young adults. P1 will analyze publicly available e-cigarette-related social media postings generated by participants in the TCORS' Center-Wide cohort (recruited with support from the Population Core) and link the data to survey responses on tobacco product use. P1 tests the hypothesis that participants who engage with and disseminate youth-oriented tobacco messages about e-cigarettes will subsequently be more likely to report transitions to higher levels of tobacco product use. Integration with "Intersections of Products with Populations" theme: P1 will study domains of product diversity studied in other USC-TCORS projects. P1 also is likely to identify novel domains of product diversity in Aim 1. P1 will address population diversity from a thematic perspective in social media messages by contrasting postings with themes meant to engage populations interested in switching to a lower risk product vs. vulnerable youth who are not using tobacco products.