

Integrated Health, Behavioral and Economic Research on Current and Emerging Tobacco Products

Institution: University of California, San Francisco

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PROJECT 5: IMPACT OF CHANGING TOBACCO PRODUCT USE ON HEALTHCARE COSTS FOR GENERAL AND VULNERABLE POPULATIONS

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Project 5 Abstract:

Healthcare costs play a central role in FDA regulatory impact analysis. Many factors contribute to tobacco-attributable healthcare costs, including changing tobacco product use patterns, sociodemographic characteristics, health status, and socioeconomic status (SES). **The central goal of this project is to develop economic models that analyze the impact of new patterns of tobacco product use on healthcare costs for different populations including those that are particularly vulnerable.** The project focuses on cigarette smoking, e-cigarette use, and polytobacco use as common tobacco use patterns today, and on rural/urban status, low SES, medical co-morbidities, and youth as examples of factors that cause population groups to be particularly vulnerable to tobacco use. The goal will be accomplished by addressing four **specific aims**: (1) Develop microeconomic models to estimate the healthcare costs attributable to e-cigarette use; (2) Estimate healthcare costs attributable to cigarette smoking and e-cigarette use for vulnerable populations: people with low SES, rural populations, people with medical co-morbidities, and youth; (3) Develop microeconomic models to estimate the healthcare costs attributable to the most common combinations of tobacco product use: dual use of cigarettes and e-cigarettes; dual use of cigarettes and cigars; and polyuse of cigarettes, e-cigarettes, and other tobacco products; and (4) Analyze potential scenarios to determine the likely impact of regulatory changes on healthcare costs based on findings from research conducted by UCSF TCORS colleagues in laboratory and controlled human studies. Tobacco-attributable healthcare costs will be estimated using econometric models and a factual/counterfactual approach, in which costs among users of the product(s) of interest (i.e., the factual case) are compared with costs among people with identical characteristics as the users except that they are assumed to be never tobacco users or sole cigarette smokers, depending on the relevant comparison group (i.e., the counterfactual case). This project addresses the UCSF TCORS theme that “understanding combined **health effects, behavior, and impact analysis** will provide actionable information for regulation of and public communications about current and emerging tobacco products” by developing **economic** models of the impact of tobacco use on health outcomes and healthcare costs and integrating **health effects** from laboratory and human studies in simulations of the impact on healthcare utilization and costs from changes in product characteristics and availability. The relationship of tobacco use **behavior** and lost school days among rural youth will also be modeled. This information is incorporated into economic models to improve **impact analyses**. The healthcare cost estimates from this project will be useful metrics for measuring the impact of tobacco use on public health, allowing a comparison of the relative magnitude of health effects of different tobacco products on specific populations.