Response to: Appropriate policy implications of the fact that high content and flavored e-cigarettes have higher abuse liability

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We thank Dr. Stanton Glantz on his input on our article. To summarize, our systematic review examined the possible effects of nicotine concentration and flavor on measures of abuse potential and appeal of e-cigarettes in adult current and former cigarette and e-cigarette users. Results from our narrative synthesis of 104 studies suggested that higher nicotine concentration and access to a variety of flavors is likely associated with higher abuse potential and appeal of e-cigarettes. We further stated that products higher abuse potential and product appeal “may help facilitate complete switching from cigarettes to e-cigarettes” for cigarette smokers unwilling or unable to quit using current cessation aids such as nicotine replacement therapies or other medications.

While Glantz agreed that “The major substance of the scientific review is thorough and represents an important contribution to our understanding of how nicotine levels and flavors impact abuse liability of e-cigarettes,” he raised concern with the framing of possible health and policy implications of our findings.

The main concern raised by Glantz, it seems, is that in the U.S. e-cigarettes are marketed and generally used as a consumer product rather than as a medical product to quit smoking, and as such he believes that our findings point to a need for higher restriction, such as making e-cigarettes available only as prescription cessation medications. He points out that the studies that demonstrated that e-cigarettes result in higher cessation rates than nicotine replacement therapies were based on clinical trials. He is correct in pointing out the advantages of having e-cigarettes as medicinal products—smokers are instructed on how to use the product and are encouraged to receive behavioral counseling. However, in the current conservative regulatory environment, there is uncertainty as to whether a product like e-cigarettes with even a moderately high abuse potential and with less exposure to carcinogens and toxicants but not safe would be approved as a medicinal product.

Furthermore, from a harm-reduction perspective, it does not make sense that the most toxic and highly addictive tobacco product (cigarettes) remains a consumer product, whereas greater restrictions are imposed on e-cigarettes that result in substantially less exposure to harmful constituents. If highly addictive cigarettes continue to be marketed, having e-cigarettes that are as accessible as cigarettes to adult smokers and can serve as a substitute seems warranted. While few clinical trials have been conducted, several epidemiological studies using longitudinal survey data show non-tobacco flavored products lead to greater complete switching or smoking cessation than tobacco flavors. Although few studies have been conducted examining nicotine concentrations, one clinical trial showed higher concentrations resulting in greater switching compared to no e-cigarette use, with lower nicotine concentrations showing no effect.

Youth uptake of e-cigarettes is a major public health concern. It is relevant to note that according to the 2021 National Youth Tobacco Survey (NYTS) youth e-cigarette use has been declining; however, at present it not clear whether this is a true decline or a reflection of methodological changes in the NYTS due to the COVID-19 pandemic. The challenge is how to balance minimizing uptake of e-cigarettes among our youth while at the same time allowing access to products that promote complete switching away from cigarettes among adult smokers. Before instituting a ban on all non-tobacco e-cigarette flavors (which might have unintended consequences) or a cap on nicotine concentration or limiting ease of access to e-cigarettes for adult
smokers, we believe that alternative approaches should be carefully considered to avoid negative ramifications of policy decisions, especially if e-cigarettes have the potential to reduce cigarette related mortality. So in conclusion, within the current tobacco landscape, the state of evolving knowledge and hopefully the declining prevalence of e-cigarette use among youth, access to e-cigarettes as a consumer product which could serve as a viable alternative to cigarettes, is likely to have greater reach and public health impact among smokers than placing greater restrictions on e-cigarettes relative to cigarettes. However, we also believe in engaging in continued dialogue on optimal strategies that, if possible, would minimize harm for all populations.

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DECLARATION OF INTERESTS
The authors have no declarations of interests.
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