

Review of: "Switching Away From Smoking and Reduction in Cigarette Consumption among US Adult Purchasers of the JUUL System across 24 Months Including Diverse Subpopulations Disproportionately Affected by Cigarette Smoking"

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Potential competing interests: No potential competing interests to declare.

Introduction: The introduction of the study presents a detailed overview of the background, emphasizing the ongoing challenges associated with cigarette smoking and the disparities that exist among different demographic groups. It effectively establishes the context for the research by highlighting the continuum of risk in nicotine-delivery products and the potential benefits of switching to electronic nicotine delivery systems (ENDS), specifically JUUL. The identification of subgroups vulnerable to smoking-related harm sets the stage for the subsequent analysis.

Methods: It seems like the study's methodology is quite robust, involving a large cohort of adult smokers who purchased JUUL Starter Kits. The inclusion criteria and baseline assessments are well-defined, ensuring a representative sample. The use of repeated follow-up assessments over 24 months enhances the longitudinal nature of the study. The study employs clear and relevant outcome measures, focusing on switching and substantial reduction in cigarette consumption. Sociodemographic characteristics and subgroups are meticulously defined, allowing for a detailed analysis of vulnerable populations. The statistical analysis, conducted using repeated-measures logistic regression, is appropriate for assessing the associations between interindividual factors and switching over time. The inclusion of interaction terms and adjustments for baseline characteristics strengthen the validity of the results.

Results: It seems like the study provides a detailed description of the sample characteristics, including key sociodemographic factors such as race/ethnicity, income, education, and mental health status. The presentation of temporal trends in switching, dual use, and exclusive smoking over 24 months is clear and supported by relevant figures, showing a consistent increase in switching rates and a concurrent decrease in dual use. The analysis of factors associated with complete switching across 24 months is thorough, with the identification of mental health conditions as a significant factor influencing switching being noteworthy. Additionally, the examination of temporal trends across populations disproportionately affected by smoking is informative, with slight differences in switching rates among racial/ethnic minorities, income levels, and sexual minorities at 24 months providing valuable insights into the potential impact of ENDS use.

Discussion: It seems like the discussion section provides a nuanced interpretation of the findings, emphasizing the continuous increase in switching rates and the potential harm reduction benefits of ENDS, particularly JUUL. The

acknowledgment of disparities in adoption rates among certain subpopulations adds a critical perspective to the overall conclusions. The conclusion succinctly summarizes the key findings, highlighting the positive impact of ENDS on switching away from smoking and the study's contribution to harm reduction strategies, especially among vulnerable populations. The manuscript is well-structured, with a clear and logical flow of information, addressing the research questions systematically, and presenting the results with clarity. The study's limitations are acknowledged, providing transparency about potential biases, and overall, the manuscript demonstrates a high level of rigor and contributes valuable insights to the field of smoking cessation and harm reduction.

The paper could be further strengthened by addressing the following areas for improvement:

- **Statistical Analysis Section:** Providing more details on the statistical methods employed, especially regarding the choice of covariates and the rationale behind including specific variables in the models, could help readers better understand the adjustments made in the analyses.
- **Missing Data Handling:** Elaborating on how missing data were handled in the analysis, specifying whether imputation methods were used, and discussing potential biases introduced by missing data would be helpful.
- **Discussion of Limitations:** While the discussion section acknowledges limitations, expanding on the potential impact of these limitations on the study's findings and discussing how these limitations might affect the generalizability of the results would be beneficial.
- **Cohort Representativeness:** Emphasizing the potential limitations associated with the cohort's representativeness and discussing how the cohort of JUUL purchasers might differ from the broader population of smokers and the implications for generalizing the findings would be useful.
- **Causal Inference:** Clearly articulating the study's limitations regarding causal inference, explicitly stating that causal relationships cannot be established given the observational nature of the study, and highlighting that the findings are associations would be important.
- **Consistency in Terminology:** Ensuring consistency in the use of terminology throughout the paper, such as using the same terms for racial/ethnic minorities consistently and considering standardizing terminology related to socioeconomic status, would be helpful.
- **Visual Presentation of Results:** While the results are presented clearly, including additional visual aids such as tables or graphs to help readers grasp key findings more efficiently would be beneficial.
- **Ethical Considerations:** Providing a brief discussion of the ethical considerations associated with the study, particularly concerning the use of ENDS, including considerations related to informed consent, potential biases, and the ethical implications of studying a product associated with public health debates, would be important.
- **Future Research Implications:** Expanding on the implications of the study for future research and discussing specific areas where additional research is needed to address remaining questions or uncertainties highlighted in the paper would be valuable.