

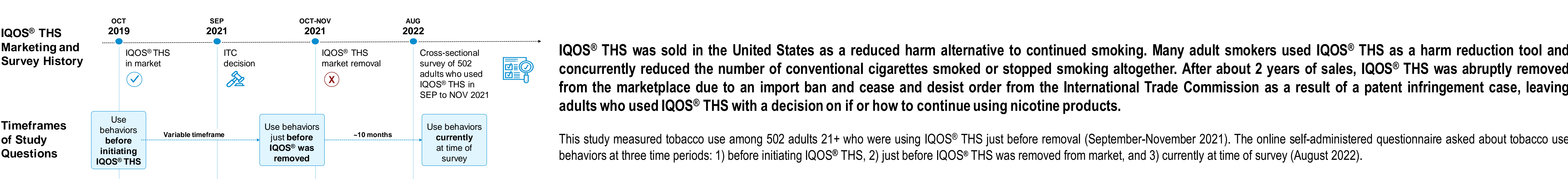
How Did the Removal of IQOS® Tobacco Heating System from the Market Impact Tobacco Harm Reduction?

Noggle, B.; Vansickel, A.; Ball, K.
Altria Client Services LLC, Richmond, VA 23219
Center for Research and Technology
College on Problems of Drug Dependence
June 21,2023

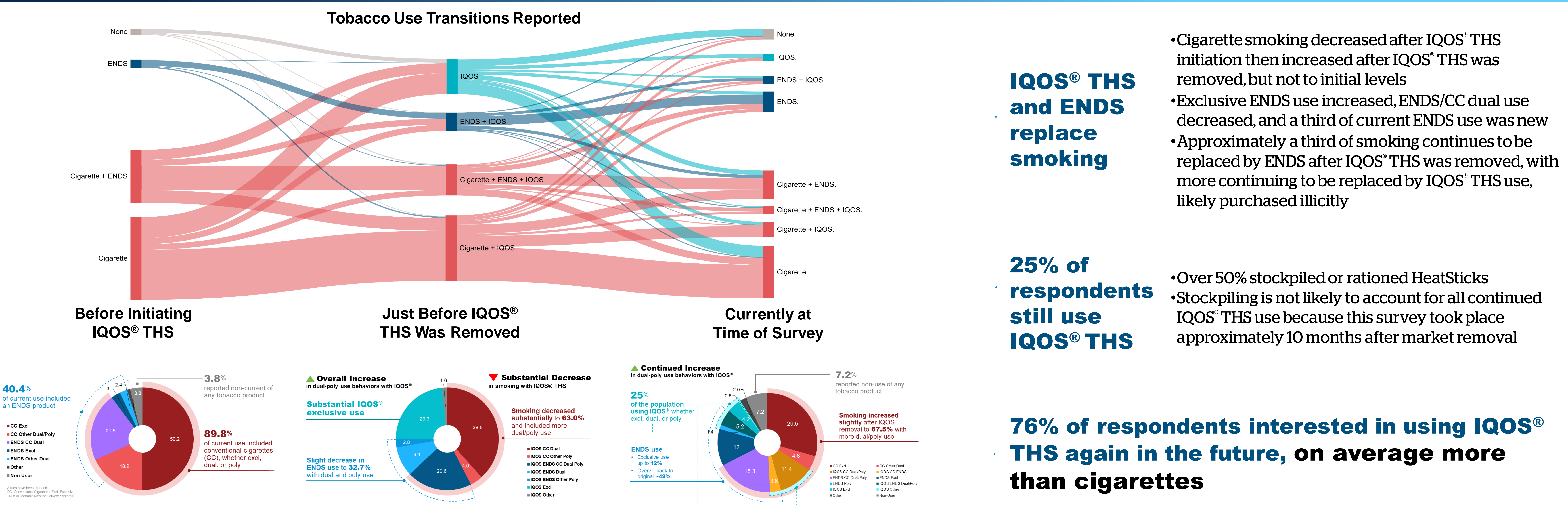
Abstract

Aim: We examined adult IQOS® Tobacco Heating System (THS) users' behaviors related to the removal of IQOS® THS from the marketplace. We hypothesized that many adults using IQOS® THS prior to its removal would return to cigarette smoking or use other tobacco products post-market removal. **Methods:** Adults who were using IQOS® THS prior to its U.S. market removal (n=502) completed an online survey to determine their tobacco use behaviors at three timepoints: pre-IQOS® THS use, just before market removal, and 9-10 months post-removal. Participants were divided into three groups who, at time of removal: used both IQOS® THS and cigarettes (63.0% of sample), used only IQOS® THS (21.7%), or used IQOS® THS and non-combustibles (15.3%). Descriptive and inferential statistics examined changes in cigarette and other tobacco use between timepoints. **Results:** Overall, significantly fewer adults smoked while using IQOS® THS than before they tried the product (63.0% vs. 89.9%, p-value<0.0001) and the number of cigarettes smoked per week (CPW) decreased (106.3 to 39.0, p-value<0.0001). After removal, the percent smoking increased non-significantly (63.0% to 67.5%, p-value=0.0544) while CPW increased significantly (39.0 to 76.6 CPW, p-value<0.0001). Post-removal, 56.9% of respondents who had used IQOS® THS exclusively and 27.3% who had used with other non-combustibles relapsed to smoking. CPW also increased among these two groups post removal (0 to 59.2 and 25.7 CPW, respectively). Nine to ten months after removal, over 25% of the total sample currently used IQOS® THS and electronic nicotine delivery device (ENDS) use increased significantly (27.4% increase, p-value<0.0001). **Conclusion:** This study demonstrates reduced combustible cigarette smoking during use of IQOS® THS and increased smoking after market-removal, albeit at lower levels. If unable to find satisfying alternatives, adults who smoke and transition to reduced harm products may return to smoking or purchase products illicitly if their preferred products are removed from the regulated market.

Introduction and Methodology



Results



Conclusion

REDUCED HARM PRODUCTS (RHP) CAN DISPLACE CIGARETTE USE

- Mounting evidence including these study results demonstrate reduction in combustible cigarette use associated with use of potential RHPs (e.g., heated tobacco, e-vapor)
- The transtheoretical model of behavior change would postulate that these adults likely experienced increases in self-efficacy and other processes of change such as consciousness raising, which may have discouraged reversion to cigarette smoking

REMOVING RHP OPTIONS FROM THE MARKET LEADS TO INCREASED HARM

- Combustible use increases after RHP options are removed
- Adults who smoke may return to smoking in the absence of appealing options
- Removing RHP options can push purchasing behavior to black market or adulterated products

DEMAND FOR RHP OPTIONS REMAINS EVEN AFTER MARKET REMOVAL

- Lingering demand sets the stage for black market
- FDA needs to authorize more RHPs to reduce harm and meet the needs of consumers in a timely manner

STRENGTHS AND LIMITATIONS

- This study includes actual reports of behaviors before and after RHP use among a sufficient sample of IQOS® THS users
- This study capitalizes on a rare natural experiment resulting from sudden nationwide removal of IQOS® THS
- Cross sectional design could lead to recall or other biases
- Other unknown motivations or beliefs could have impacted results

This scientific research is presented by Altria Client Services LLC (ALCS). ALCS affiliate companies are tobacco product manufacturers.

