

Quantitative Assessment of the Population Benefit of Adults Who Smoke Switching to Nicotine Pouch Products Against the Risk of Youth Initiation Using Tipping Point Analyses

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— FAMILY OF COMPANIES —

October 25, 2023

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on!® Harm Reduction Opportunity

on!® pouches have the most variety of any nicotine pouch currently on the market

SEVEN VARIETIES



5 NICOTINE STRENGTHS



NO TOBACCO LEAF



Nicotine pouches

All flavors are available for purchase through e-commerce. Select SKUs are available in retail.



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Scientific Framework

CONSTITUENT REDUCTION



THE PRODUCT

- Chemistry Manufacturing and Controls
- Product Stability
- Chemical Characterizations

INDIVIDUAL RISK REDUCTION



EXPOSURE and HEALTH RISK

- Toxicology & Risk Assessment
- Health Risk Assessment (Absolute and Relative)
- Human Studies
- Human Factors Assessment

POPULATION HARM REDUCTION



IMPACT on the POPULATION

- Risk Perceptions (Absolute and Relative)
- Impact of Product on Users
- Impact of Product on Non-users
- Overall Impact on the Population
- Environmental Assessment




Population Modeling



NET BENEFIT TO THE POPULATION

Risk
of using the
new tobacco
product relative
to smoking



Benefit/Risk

Changes
in product use
patterns due to
the introduction
of the product



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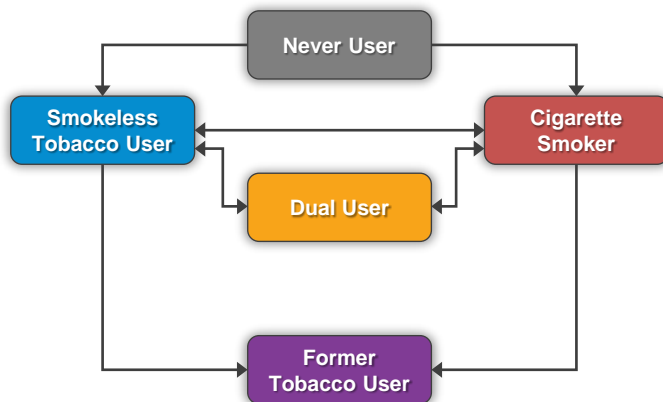
Modeling Framework



NET BENEFIT TO THE POPULATION

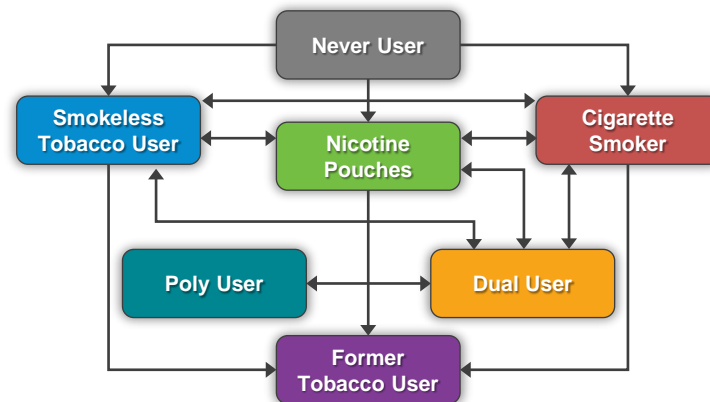
BASE CASE Cigarettes and Smokeless Tobacco

Simulation period: 2000-2100



MODIFIED CASE Introduction of Nicotine Pouches into the Market

Introduction of NP in 2020



The impact on the population as a whole is determined based on the difference in tobacco use prevalence and all-cause mortality (premature deaths prevented) between the Base and Modified Case scenarios



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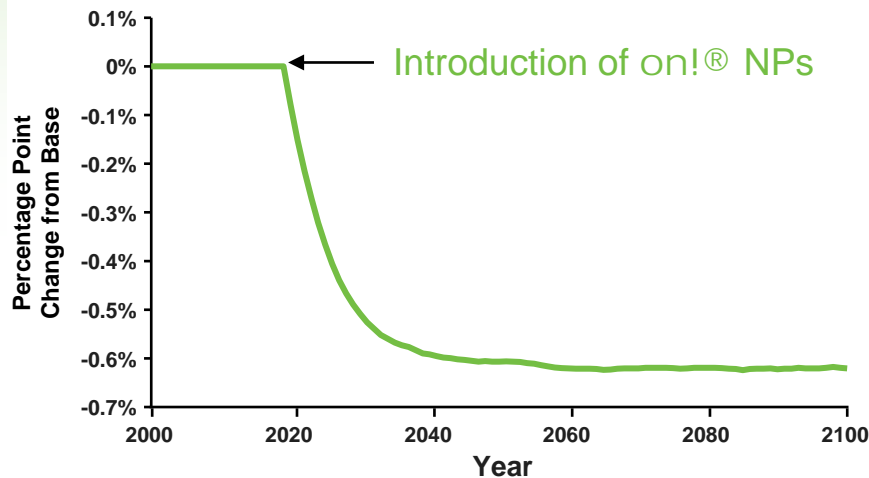
Muhammad-Kah, M.; Hannel, T. Cheng, H.; Sarkar, M., "Assessing the Potential Population Health Impact of a Market Authorization of an Oral Nicotine Pouch Product in the U.S.". Poster presented at the 27th Society for Research on Nicotine and Tobacco (SRNT), Virtual Conference, February 24-27, 2021 <https://sciences.altria.com/-/media/Project/Altria/Sciences/presentations/2021/Muhammad-Kah-Assessing-the-Potential-Population-Health-Impact-of-a-Market-Authorization.mp4>.

Impact on the Population as a Whole

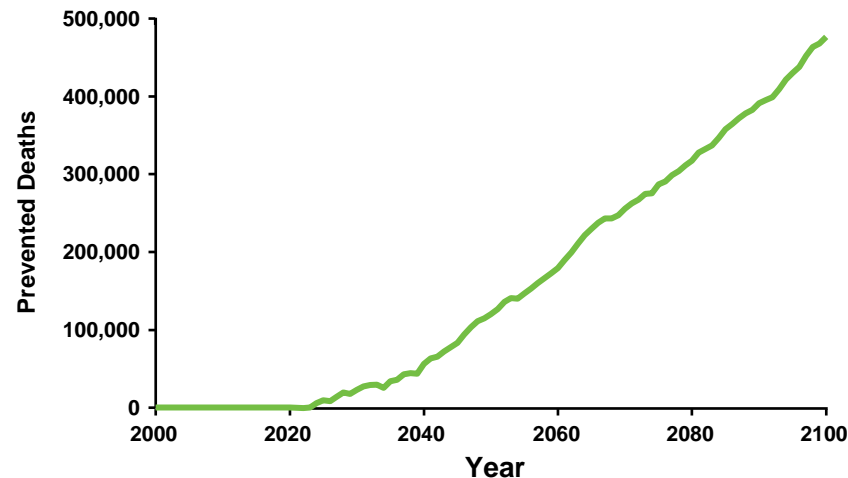


NET BENEFIT TO THE POPULATION

Additional Declines In Adult Smoking Prevalence



Cumulative Premature Deaths Prevented



Modeling
Predicts

- **Reduction** in cigarette prevalence by 0.62%
- **Prevention** of 476,000 premature deaths

Over 80 years
with the inclusion
of NPs



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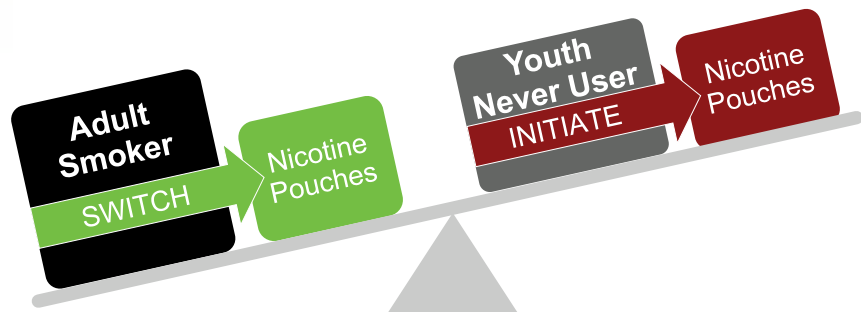
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Tipping Point Sensitivity Analyses

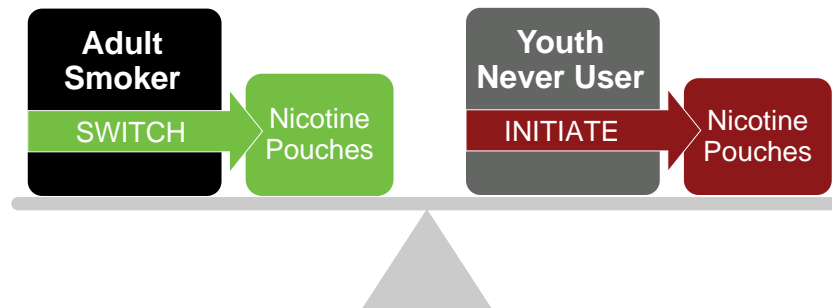


NET BENEFIT TO THE POPULATION

PUBLIC HEALTH BENEFIT



PUBLIC HEALTH RISK



Tipping point can be used to evaluate the risk of initiation versus the benefit from AS switching



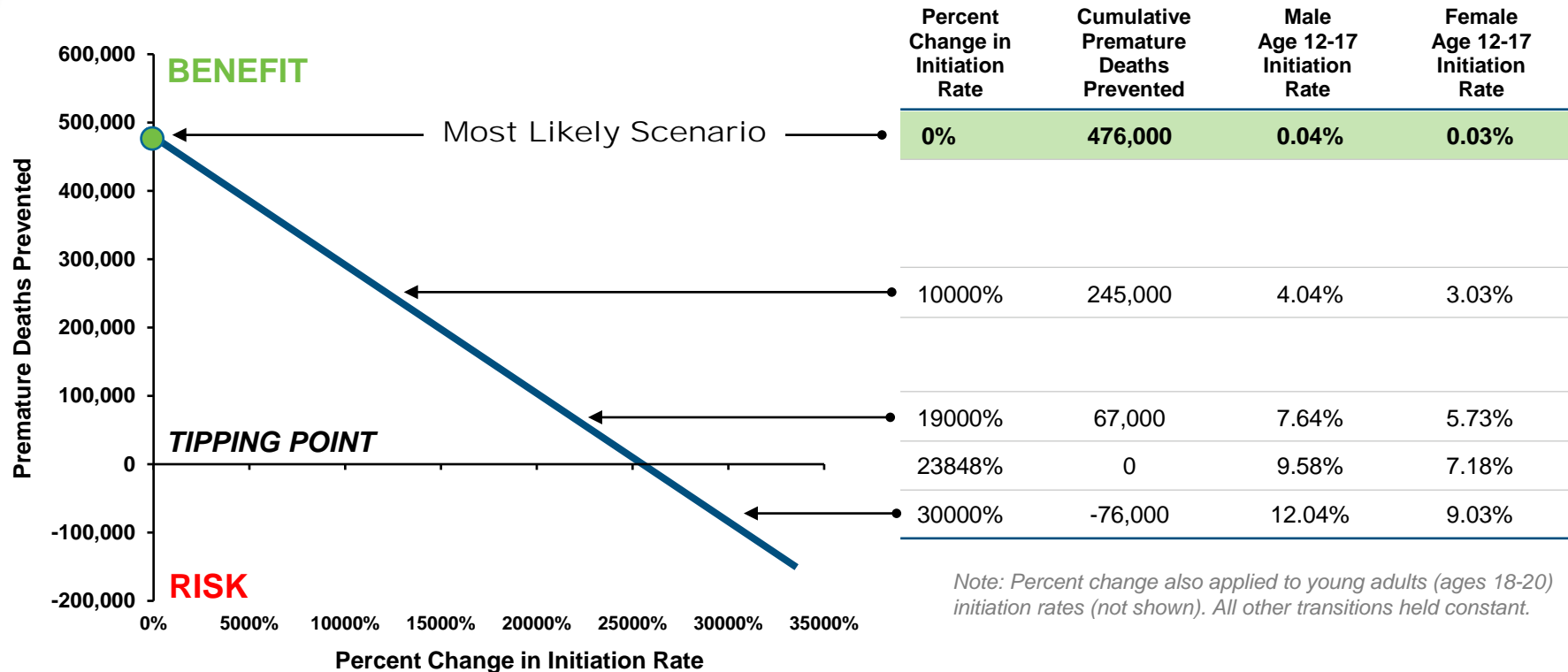
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Tipping Point Analyses



NET BENEFIT TO THE POPULATION



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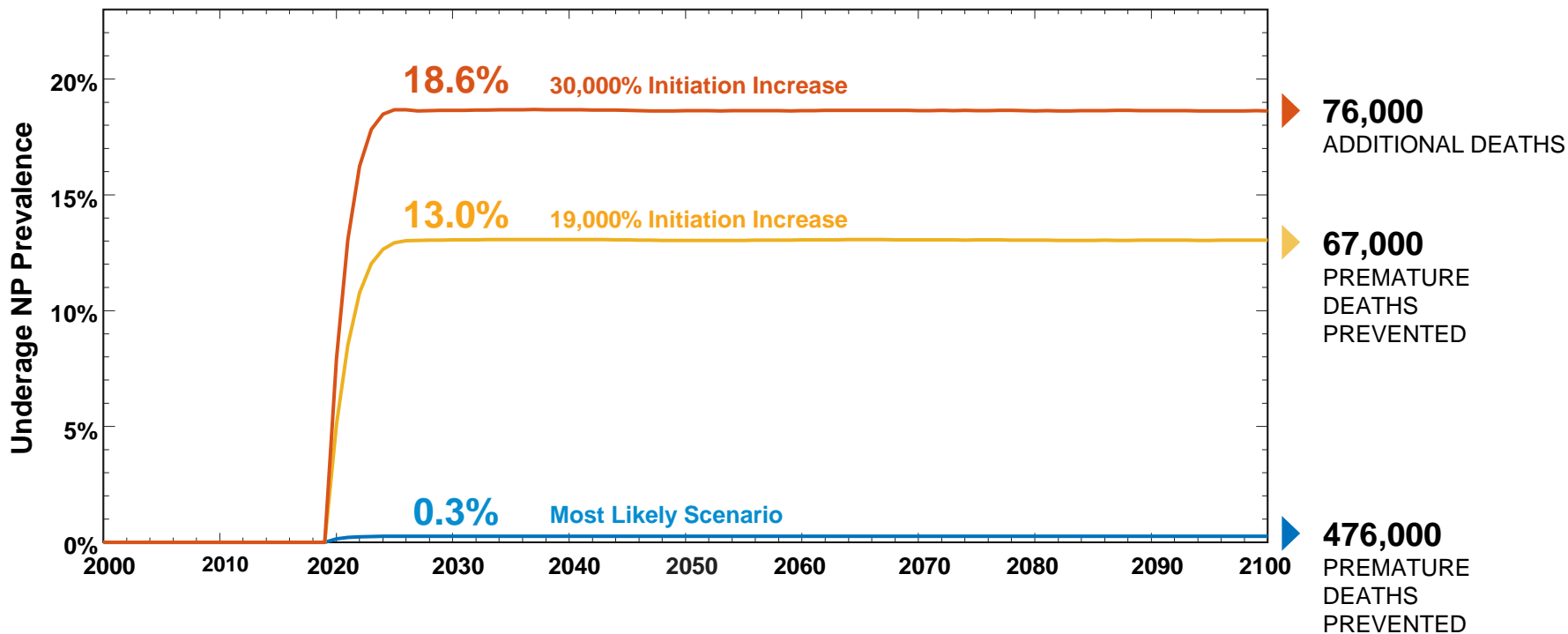
Source: The Population Assessment of Tobacco and Health (PATH) Study (<https://pathstudyinfo.nih.gov/>)
ALCS Analysis Wave 1 and Wave 2 data



Tipping Point Prevalence Projections



NET BENEFIT TO THE POPULATION



NP prevalence shown for ages 12-20

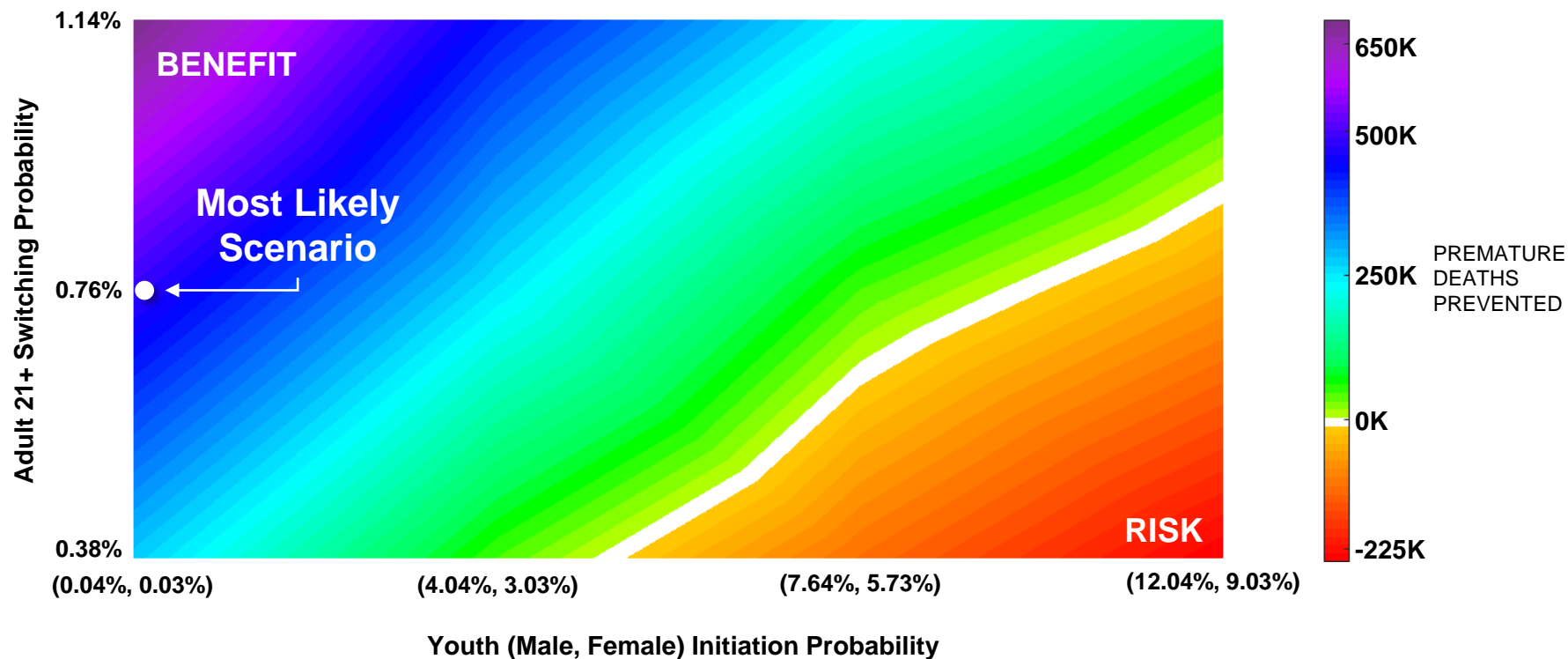


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Bivariate Sensitivity Analyses



NET BENEFIT TO THE POPULATION



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All other transitions held constant



Summary & Conclusions

Modeling indicates that the market authorization of on!® NPs will likely result in a population health benefit



Tipping point analysis provides an estimate of the impact of potential changes in youth initiation on the net population benefit in the presence of adult switching



To preserve the harm reduction opportunity of on!® NPs for adults who smoke, we must take steps to prevent and monitor youth initiation of potentially reduced harm products



Tipping point analyses during post-market surveillance can provide signals when youth initiation may start to offset adult switching





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