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MENTHOL MYTHS REVISITED

by Guy Bentley and Jacob James Rich

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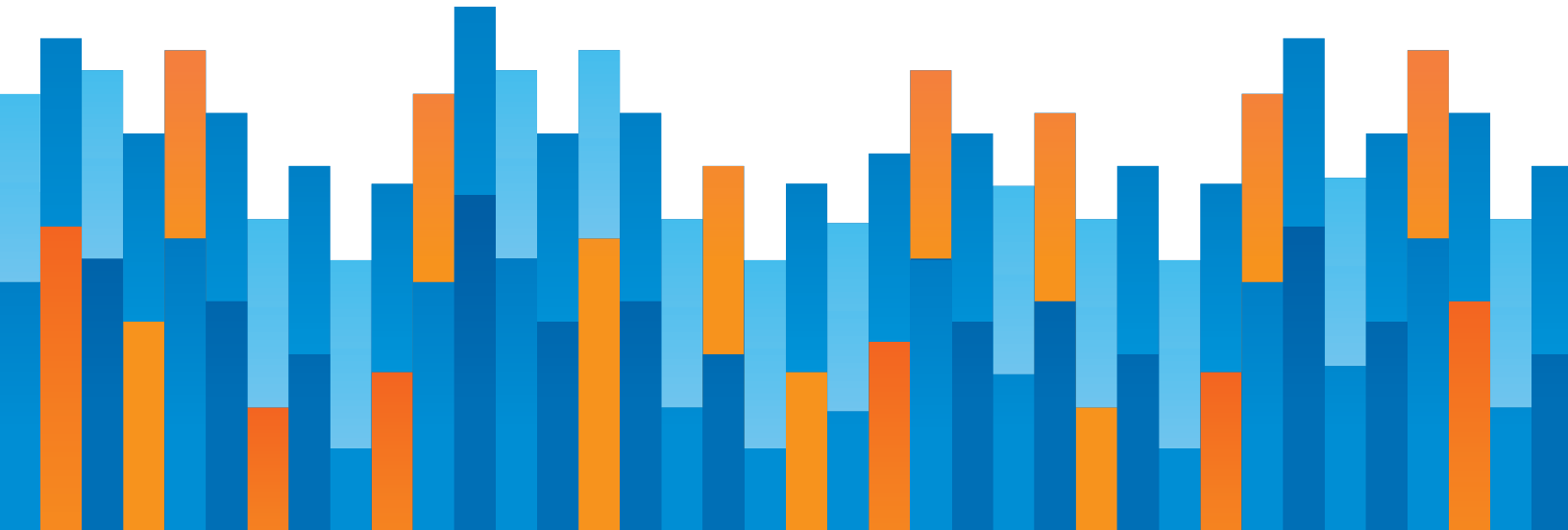

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Reason Foundation's nonpartisan public policy research promotes choice, competition, and a dynamic market economy as the foundation for human dignity and progress. Reason produces rigorous, peer-reviewed research and directly engages the policy process, seeking strategies that emphasize cooperation, flexibility, local knowledge, and results. Through practical and innovative approaches to complex problems, Reason seeks to change the way people think about issues, and promote policies that allow and encourage individuals and voluntary institutions to flourish.

EXECUTIVE SUMMARY

The Family Smoking Prevention and Tobacco Control Act (TCA) of 2009 outlawed the manufacture, distribution, and sale of cigarettes with "characterizing flavors" other than menthol. Supporters of the TCA claimed cigarettes flavored like candy, fruit, and clove disproportionately appeal to minors, facilitating smoking initiation and dependence. As a result of the TCA, regulating tobacco products was, for the first time, put under the purview of the Food and Drug Administration (FDA).

Partly the result of an extraordinary alliance between Philip Morris and the Campaign for Tobacco-Free Kids, the TCA erected enormous regulatory barriers to introducing new tobacco products. Raising costs for competitors and banning flavors, while exempting menthol cigarettes, mainly appeased Philip Morris, the only tobacco company in favor of the bill. Tobacco control activists viewed the exemption of menthol as a missed opportunity and have long sought to convince the FDA to ban menthol cigarettes outright. The Biden administration is now intent on delivering this policy. When the TCA was being considered, the president of the Campaign for Tobacco-Free Kids (CTFK), Matthew Myers, explained why he opposed banning menthol cigarettes."If you immediately withdrew a product, so many people use and are addicted to, you can't say for certain what the reaction will be," said Myers, who went on to warn that such a ban could lead to illegal trafficking.

Section 907 of the TCA authorizes the FDA to establish a product standard requiring tobacco manufacturers to eliminate menthol from their products if it is "appropriate for the protection of public health." To meet these criteria, the FDA must consider:

- The risks and benefits to the population as a whole, including users and non-users of tobacco products;
- The increased or decreased likelihood that existing users of tobacco products will stop using such products; and
- The increased or decreased likelihood that those who do not use tobacco products will start using such products.

To address these considerations, the Tobacco Products Scientific Advisory Committee (TPSAC), a creation of the TCA, was charged with reviewing the scientific evidence regarding menthol and recommending future regulation to the FDA. In 2011, the TPSAC published its review of menthol cigarettes, concluding that they have a negative effect on public health. A separate review by the FDA published in 2013 found: "Menthol in cigarettes is likely associated with increased initiation and progression to regular use of cigarette smoking." However, FDA's evaluation found "little evidence to suggest that menthol cigarettes are more or less toxic or contribute to more disease risk to the user than nonmenthol cigarettes."

Considering menthol cigarettes are not more dangerous than nonmenthols when it comes to their toxicological makeup, FDA must demonstrate why these products are deserving of prohibition compared to nonmenthol cigarettes, which are responsible for most of the smoking-related death and disease in the United States.

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On April 22, 2022, the FDA announced it would pursue a ban on the sale of menthol cigarettes. The announcement came as new data from the 2021 National Youth Tobacco

Survey (NYTS) revealed the current smoking rate among middle and high school students at a record low of 1.5%. Of those students who smoke the majority, 61%, use nonmenthol cigarettes.[1] Nevertheless, claims made against menthol should be considered and reviewed to see if critics' claims are borne out in the real world. Suppose the association between menthol cigarettes, increased youth initiation, and dependence is as strong as tobacco control activists suggest. In that case, there should be signs of it in the national data.

Employing National Survey on Drug Use and Health (NSDUH) data from the Substance Abuse and Mental Health Services Administration (SAMHSA) and industry distribution figures, Reason Foundation examined whether there was a strong positive relationship between the distribution of menthol cigarettes and youth cigarette smoking. The data covered all 50 states and Washington, D.C., for 2008–2020. The resulting analysis found:

- States with more menthol cigarette consumption relative to all cigarettes have lower rates of child smoking;
- States with higher per capita distribution levels of cigarettes of all types have higher rates of both adult and child smoking;
- In general, the metric analyses show consistent nonpredictive relationships between relative menthol cigarette consumption rates and use of any age group; and,
- The only predictive relationship is between adult and child smoking rates, and since we do not expect children to cause their parents to smoke, we conclude that states with higher rates of adult cigarette smoking cause higher rates of youth use.

> *The data demonstrate that menthol cigarette distribution does not increase youth smoking initiation any more than regular cigarette distribution.*

[1] A.S. Gentzke, T.W. Wang, M. Cornelius, et al. "Tobacco Product Use and Associated Factors Among Middle and High School Students—National Youth Tobacco Survey, United States, 2021." Centers for Disease Control and Prevention, March 11, 2022. 1-29. https://www.cdc.gov/mmwr/volumes/71/ss/ss7105a1.htm

The data demonstrate that menthol cigarette distribution does not increase youth smoking initiation any more than regular cigarette distribution. This study concludes that menthol cigarette availability does not pose a greater threat to public health than regular cigarette availability. From these findings, we can infer that the best way to lower the youth smoking rate is to reduce the adult smoking rate in concurrence with the public health literature. But any consideration of menthol prohibition should be made in the context of extremely low youth use of the product, the lack of association between menthol use rates in states and youth smoking, the costs of enforcing prohibition, especially for minority communities, and other less costly ways of reducing smoking, such as increasing the availability of safer nicotine alternatives like e-cigarettes and traditional smoking cessation services.

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PART 1

INTRODUCTION

The Family Smoking Prevention and Tobacco Control Act (TCA) of 2009 outlawed the manufacture, distribution, and sale of cigarettes with "characterizing flavors." Supporters of the TCA claimed cigarettes flavored like candy, fruit, and clove disproportionately appeal to minors, facilitating smoking initiation and dependence. As a result of the TCA, regulating tobacco products was, for the first time, put under the purview of the Food and Drug Administration (FDA).

Partly the result of an extraordinary alliance between Philip Morris and the Campaign for Tobacco-Free Kids, the TCA erected enormous regulatory barriers to introducing new tobacco products. Banning the flavors sold by Philip Morris' competitors and exempting menthol cigarettes mainly appeased Philip Morris, the only tobacco company in favor of the bill. Tobacco control activists viewed the exemption of menthol as a missed opportunity and have long sought to convince the FDA to ban menthol cigarettes outright. However, when the TCA was being considered, the president of the Campaign for Tobacco-Free Kids (CTFK), Matthew Myers, explained why he opposed banning menthol cigarettes.[2] "If you immediately withdrew a product, so many people use and are addicted to, you can't say for certain what the reaction will be," said Myers, who went on to warn that such a ban could lead to illegal trafficking.

[2] Allison Young. "Menthol-flavored cigarettes not on bills' banned list." *The Atlanta Journal Constitution*, May 29, 2008.

Section 907 of the TCA authorizes the FDA to establish a product standard requiring tobacco manufacturers to eliminate menthol from their products if it is "appropriate for the protection of public health." To meet these criteria, the FDA must consider:

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[3] "Preliminary Scientific Evaluation of the Possible Public Health Effects of Menthol Versus Nonmenthol Cigarettes." U.S. Food and Drug Administration, July 23, 2013. https://www.fda.gov/media/86497/download

On April 22, 2022, the FDA announced it would pursue a ban on the sale of menthol cigarettes. The announcement came as new data from the 2021 National Youth Tobacco Survey (NYTS) revealed the current smoking rate among middle and high school students at a record low of 1.5%. Of those students who smoke, the majority, at 61%, use nonmenthol cigarettes.[4] Nevertheless, claims made against menthol should be considered and reviewed to see if critics' claims are borne out in the real world. Suppose the association between menthol cigarettes, increased youth initiation, and dependence is as strong as tobacco control activists suggest. In that case, there should be signs of it in the national data.

[4] A.S. Gentzke, T.W. Wang, M. Cornelius, et al. "Tobacco Product Use and Associated Factors Among Middle and High School Students — National Youth Tobacco Survey, United States, 2021." Centers for Disease Control and Prevention, March 11, 2022. 1-29. https://www.cdc.gov/mmwr/volumes/71/ss/ss7105a1.htm

PART 2

FINDINGS

Employing National Survey on Drug Use and Health (NSDUH) data from the Substance Abuse and Mental Health Services Administration (SAMHSA) and industry distribution figures,[5] Reason Foundation examined whether there was a strong positive relationship between the distribution of menthol cigarettes and youth cigarette smoking. The data covered all 50 states and Washington, D.C., for years 2008–2020.

The resulting analysis found:

- States with more menthol cigarette consumption relative to all cigarettes have lower rates of child smoking on average.
- States with higher per capita distribution levels of cigarettes of all types have higher rates of both adult and child smoking on average.
- The only predictive relationship is between adult and child smoking rates, and since we do not expect children to cause their parents to smoke, we conclude a causal relationship exists between states with higher adult-use smoking rates causing higher rates of youth use.

From these findings, we can infer, in concurrence with the public health literature, that the best way to lower the youth smoking rate is to lower the adult smoking rate. Youth

[5] Reason Foundation asked Reynolds American Inc. Services Company (RAISC) to provide proprietary cigarette industry volume data from MSAi, a firm that provides industry data such as cigarette sales to tobacco manufacturers. RAISC provided the data to Reason, but was not involved in any way with the commissioning or writing of this paper.

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PART 3

ANALYSIS

This study employs National Survey on Drug Use and Health (NSDUH) data from the Substance Abuse and Mental Health Services Administration (SAMHSA) and fiscal-year industry distribution figures for the months October to September. Our panel model dataset is complete for all 50 states and Washington, D.C. for years 2008–2020, and evaluates:

- The number of packs of menthol and nonmenthol cigarettes distributed per capita;
- The percent of cigarettes distributed that are menthol; and
- The smoking rates for ages 12-17, 18 and older, and 12 and older.

With these data we use standard descriptive statistics and metric techniques to analyze the relationship between the distribution of various types of cigarettes and use among different age groups in the population.

Correlation coefficients among the variables are published in Table 1. The correlation coefficient between cigarettes distributed per capita ages 12 and above and cigarette past month use ages 12 and above is 0.722, signaling a proxy-level relationship. This suggests that the surveys measuring use reflect market patterns and likely lack an exact one-to-one relationship due to the variance in how many cigarettes are consumed on average during any given amount of time among cigarette smokers nationwide.

TABLE 1: VARIABLE CORRELATION COEFFICIENTS

	Percent packs menthol	Total packs	Total menthol packs	Packs per capita 12 and older	Menthol packs per capita 12 and older	Cigarette use past month 12 and older	Cigarette use past month 12 to 17	Cigarette use past month 18 and older
Percent packs menthol	1							
Total packs	0.150	1						
Total menthol packs	0.359	0.940	1					
Packs per capita 12 and older	-0.211	0.095	0.050	1				
Menthol packs per capita 12 and older	0.503	0.247	0.372	0.679	1			
Cigarette use past month 12 and older	-0.199	0.105	0.047	0.722	0.454	1		
Cigarette use past month 12 to 17	-0.358	0.057	-0.036	0.590	0.224	0.794	1	
Cigarette use past month 18 and older	-0.196	0.115	0.058	0.721	0.462	0.999	0.773	1

Table 2 reports the average number of packs of cigarettes consumed per year for smokers age 12 and older. By dividing the total number of cigarette packs sold for each flavor by the number of associated smokers for each year, measured by multiplying NSDUH smoking percentage estimates for individuals reporting they have smoked at least once a month by the included Census Bureau population estimates for that age group, we estimate the number of cigarette packs regular, menthol, and all smokers consume each year. According to these methods, the most recent year of data from 2020 suggest menthol smokers consume 24.3% fewer cigarettes than regular smokers. Given that the NSDUH asks "Were the cigarettes you smoked during the past 30 days menthol?" without asking whether menthol cigarettes are the primary type of cigarette smoked, the denominator for the number of menthol smokers is underestimated. However, smokers who smoke primarily nonflavored cigarettes sometimes smoke menthol cigarettes, meaning that the numerator for the number of packs smoked by menthol smoker is also overestimated. From 2008 to 2014, cigarette consumption per smoker gradually decreased, but in 2015 jumped 8.6%, which was then followed by another gradual decrease until 2020. The COVID-19 pandemic was accompanied by a 12.2% increase in total cigarette sales and was the highest rate of consumption since 2008.

TABLE 2: AVERAGE NUMBER OF CIGARETTE PACKS SMOKED PER YEAR BY SMOKERS BY PREFERED FLAVOR

Year	Packs per Year: All Smokers	Menthol Smokers	Nonflavored Smokers
2008	272.99	233.26	293.42
2009	250.42	227.79	261.57
2010	243.13	210.99	260.85
2011	248.46	212.30	269.82
2012	234.28	200.85	254.60
2013	231.00	198.95	251.03
2014	222.85	193.48	241.43
2015	242.11	217.98	256.82
2016	236.13	215.13	249.02
2017	238.83	216.83	252.82
2018	233.23	209.81	248.52
2019	224.99	201.24	240.96
2020	252.44	213.48	281.98

The regression section employs an elementary robustness analysis, utilizing two different specifications: ordinary least squares (OLS) with no controls and an OLS "panel" analysis with fixed effects (γ_i), time effects (λ_t), and state linear time trends ($\delta_i T$). The panel model dummy variables account for unobserved factors that vary over time, constantly between states, and change uniquely in each state. If the variables pass the robustness tests, signaled by overly consistent results in both models, the panel model coefficients equal the predictive effects. The panel model clusters standard errors by state and all observations are weighted by the state population. Variables in the panel model are in their natural log form and their coefficients are elasticities. The below equations represent the relationship between smoking (s_{it}) and cigarette distribution (d_{it}):

$$\underline{\text{OLS:}} \quad s_{it} = \beta_0 + \beta_d d_{it} + \epsilon_{it}$$
$$\underline{\text{Panel:}} \quad s_{it} = \beta_0 + \beta_d d_{it} + \lambda_t + \gamma_i + \delta_i T + \epsilon_{it}$$

Table 3 reports the coefficients (β_d) from the OLS. Relationships of interest include adult and child past month cigarette use as a function of percent of cigarettes distributed that are menthol, and separately, packs of menthol and all cigarettes distributed per capita (population age 12 and older). We also evaluate the relationship between child (age 12 to 17) and adult smoking rates.[6]

[6] Angrist, Joshua and Pischke, Jörn-Steffn. "Mostly Harmless Econometrics: An Empiricist's Companion." Princeton University Press. 2008.

TABLE 3: OLS REGRESSION ANALYSIS RESULTS

Dependent Variable	Independent Variable	Estimate	Standard Error	t-statistic	p-value	95% CI: (High	Low)
Youth Smoking Rate	Proportion Menthol	-0.498	0.081	-6.177	0.000	-0.657	-0.340
Adult Smoking Rate	Proportion Menthol	-0.026	0.028	-0.916	0.360	-0.082	0.030
Youth Smoking Rate	Cigarette packs per capita	0.821	0.039	21.081	0.000	0.745	0.898
Adult Smoking Rate	Cigarette packs per capita	0.364	0.010	36.589	0.000	0.345	0.384
Youth Smoking Rate	Menthol cigarette packs per capita	0.464	0.039	11.891	0.000	0.387	0.540
Adult Smoking Rate	Menthol cigarette packs per capita	0.258	0.011	23.805	0.000	0.237	0.279
Youth Smoking Rate	Adult monthly smoking rate	2.425	0.062	38.814	0.000	2.302	2.548

In general, OLS reports average relationships that describe typical states without confirming causal relationships. States that increase their menthol distribution relative to all cigarettes reduce their rates of child past-month cigarette use, while states with higher distribution per capita of either type of cigarette have higher rates of use for both children and adults. States that experience a 1% increase in adult smoking on average increase their child smoking rates by 2.4%. This observation is consistent with the literature that finds 25% of children with parents who smoke cigarettes eventually initiate smoking themselves, as oppose to 8% of children from stable nonsmokers.[11]

Table 4 presents the results from the panel regressions. Although some estimates remain statistically significant, their signs often switch directions relative to the OLS model, meaning that the relationships are overly sensitive to which control variables are chosen and don't communicate a predictive effect. The only associations that are robust enough to claim a causal relationship are increases in adult smoking rates causing an increase in youth smoking and increases in cigarette sales increasing youth smoking. After controlling for unobserved factors, a 1% decrease in adult smoking causes a 0.492% decrease in child smoking. We do not expect reverse causality to explain this relationship, since it is not likely that children will influence their parents to initiate smoking. The relationship is significant above the 99.9% confidence level, which is reasonable given the near-perfect correlation coefficient of 0.999 from Table 1. This finding indicates that one of the best ways to reduce child smoking rates is to help their parents quit, which can be achieved via traditional smoking cessation programs or safer alternatives to cigarettes, such as e-cigarettes, oral nicotine, and heated tobacco products.

TABLE 4: PANEL REGRESSION ANALYSIS RESULTS

Dependent Variable	Independent Variable	Estimate	Standard Error	t-statistic	p-value	95% CI: (High	Low)
Youth Smoking Rate	Proportion Menthol	0.513	0.199	2.580	0.010	0.122	0.904
Adult Smoking Rate	Proportion Menthol	-0.004	0.076	-0.059	0.953	-0.154	0.145
Youth Smoking Rate	Cigarette packs per capita	0.281	0.091	3.085	0.002	0.102	0.460
Adult Smoking Rate	Cigarette packs per capita	-0.063	0.035	-1.802	0.072	-0.131	0.006
Youth Smoking Rate	Menthol cigarette packs per capita	0.252	0.073	3.443	0.001	0.108	0.395
Adult Smoking Rate	Menthol cigarette packs per capita	-0.041	0.028	-1.470	0.142	-0.096	0.014
Youth Smoking Rate	Adult monthly smoking rate	0.492	0.110	4.467	0.000	0.276	0.708

PART 4

DISCUSSION

The data demonstrate that menthol cigarette distribution does not increase youth smoking initiation any more than regular cigarette distribution. Areas with higher rates of menthol cigarette consumption relative to the entire cigarette market have lower smoking rates for both adults and youth. Additionally, while menthol cigarette distribution and popularity relative to the entire cigarette market increased during the study period, child use of menthol cigarettes relative to regular cigarettes fell. Since increasing or decreasing the percentage of the cigarette market that is menthol does not predict any changes in smoking rates, we attribute the average relationship between higher menthol use and lower child smoking rates to a spurious correlation based on consumer preferences in each state.

> *… [W]hile menthol cigarette distribution and popularity relative to the entire cigarette market increased during the study period, child use of menthol cigarettes relative to regular cigarettes fell.*

In terms of the net impact on public health, nonmenthol cigarettes pose a greater threat to public health than menthol simply because they are used by the majority of both adult and youth smokers. Menthol cigarette smokers also tend to consume fewer cigarettes than regular smokers in any given year, which is illustrated for all years in Table 2. This means that targeting the number of menthol smokers will not be as effective at combating

smoking-related illnesses as reducing the number of nonmenthol cigarette smokers. Note, the NSDUH allows consumption to be broken down by age, but there are so few youth menthol smokers in the sample population that the estimates are unreliable. From these observations, we conclude that menthol cigarette availability does not pose a greater threat to public health than regular cigarette availability. Accordingly, this study concludes that the most effective way to reduce youth smoking and overall smoking initiation is to reduce the adult smoking rate.

From these observations, we conclude that menthol cigarette availability does not pose a greater threat to public health than regular cigarette availability.

Since supply restrictions do increase costs to consumers, menthol cigarette prohibition would likely have a significant impact on menthol cigarette consumption. However, the decrease in youth smoking from such a ban would be mostly influenced by the number of adults who choose to quit smoking after losing access to their preferred product—not because menthol cigarettes are relatively more attractive to children. A likely consequence of menthol prohibition would be the creation of a black market for menthol cigarettes, the emergence of mechanisms to circumvent the ban, and mass switching to equally harmful nonmenthol cigarettes as the experience of other jurisdictions implementing menthol bans demonstrates.[7]

On June 1, 2021, Massachusetts became the first U.S. state to ban the sale of menthol cigarettes as well as other flavored tobacco products. A Reason Foundation analysis found that in the year following the ban, the state sold 29.96 million fewer cigarette packs compared to the prior period. However, a total of 33.36 million additional cigarette packs were sold during the same post-ban period in the counties bordering Massachusetts.[8] Given decreasing rates of smoking in all five bordering states between 2019 and 2020, the

7 Gemma Mullin. "Tobacco firm's new Rizla cards to get round 2020 menthol cigarette ban slammed by charity." *The Sun*, January 3, 2020. https://www.thesun.co.uk/news/10662092/new-rizla-cards-menthol-cigarette-ban-slammed/

8 Jacob James Rich. "Estimates of Cross-Border Menthol Cigarette Sales Following the Comprehensive Tobacco Flavor Ban in Massachusetts." medRxiv. April 24, 2022. https://www.medrxiv.org/content/10.1101/2022.04.24.22274236v1

increase in border-state cigarette sales following the flavor ban should be interpreted as a lower-bound estimate for cigarettes that were ultimately consumed in Massachusetts. According to the 2023 Massachusetts Multi-Agency Illegal Tobacco Task Force, cross-border smuggling of untaxed flavored tobacco products is the primary challenge for the state's tobacco enforcement.[9] "Inspectors and investigators are routinely encountering or seizing menthol cigarettes, originally purchased in surrounding states, and flavored ENDS products and cigars purchased from unlicensed distributors operating both within and outside the Commonwealth," says the report.

In 2020, the European Union banned the sale of menthol cigarettes. Before the E.U's ban on menthol cigarettes, Poland's cigarette market had the largest share of menthol of any member state at 28%. A study funded by the Norwegian Cancer Society in partnership with the Polish Health Ministry found there was no statistically significant change in cigarette sales.[10] According to a survey of European smokers conducted by the Foundation for a Smoke-Free World six months before and six months after the ban, 92% of menthol smokers continued to smoke, significantly more than the pre-ban surveys indicated.[11]

Thanks to prohibition, the European market is awash with mechanisms for consumers to adulterate their products to achieve a menthol taste. These include menthol and fruit-flavored infusion cards, menthol filter sprays, menthol drops, menthol capsules, menthol flavor stones, loose mint filter tips for cigarettes with recessed filters, and roll your own filter tips.[12]

Canada provides another example of menthol prohibition producing underwhelming results. Menthol's share of the Canadian cigarette market was relatively small before the ban, comprising around 11% of smokers. An analysis of the ban found that 78.5% of menthol smokers continued smoking, compared to 86% of nonmenthol smokers. What's more, 19.5% of menthol smokers who continued smoking found a way to keep consuming

9 "Annual Report of Multi-Agency Illegal Tobacco Task Force." Massachusetts Illegal Tobacco Task Force, February 28, 2023. https://www.mass.gov/doc/task-force-fy23-annual-report/download

10 Alex C. Liber, Michal J. Stoklosa, David Levy, Luz María Sánchez-Romero, Christopher J. Cadham, and Michael Pesko. "A Bite-Style Model to Evaluate Poland's Menthol Cigarette Ban." Available at SSRN, October 27, 2021. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3946277

11 "EU Menthol Cigarette Ban Survey." Foundation for a Smoke-Free World, January 29, 2021. https://www.smokefreeworld.org/eu-menthol-cigarette-ban-survey-executive-summary/

12 A. Brink, A.S. Glahn, N.T. Kjaer, "Tobacco companies' exploitation of loopholes in the EU ban on menthol cigarettes: a case study from Denmark." *Tobacco Control*, 21 March 2022. https://tobaccocontrol.bmj.com/content/early/2022/03/20/tobaccocontrol-2021-057213

menthol cigarettes.[13] The study's authors found menthol smokers did have higher odds of making a quit attempt after the ban than nonmenthol, but menthol smokers did not differ significantly from nonmenthol smokers in quit success, with successful quitters defined as those who had quit completely or cut down smoking to less than once a month. Menthol bans as implemented in the real world thus far appear to fall short of their supporters' ambitions, with the vast majority of menthol smokers continuing to use cigarettes.

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The Biden administration dismisses arguments that menthol prohibition will result in more criminal penalties for ordinary Americans as possession and responds that use of these products will not be criminalized. But as a result of the TCA, it's a felony to sell or distribute a prohibited tobacco product, and 36 states already ban the possession of untaxed cigarettes. Criminal charges have already been filed against individuals in Massachusetts and New York who breached those states' bans on flavored tobacco.[14] The Volsted Act, which ushered in the era of alcohol prohibition, did not ban the possession or consumption of alcohol, but the policy was still regarded as a failure even though it did reduce overall alcohol consumption. The U.S. menthol market is substantially larger than the European or Canadian markets and menthols are disproportionately the choice of black smokers, with 85% opting for a menthol product.[15] Prohibition in the U.S. context presents significant risks of overcriminalization of minority populations where the illicit menthol market is most likely to be concentrated.

13 J. Chung-Hall, G.T. Fong, G. Meng, et al, "Evaluating the impact of menthol cigarette bans on cessation and smoking behaviours in Canada: longitudinal findings from the Canadian arm of the 2016–2018 ITC Four Country Smoking and Vaping Surveys." *Tobacco Control*, 31 April 5, 2021. 556-553. https://tobaccocontrol.bmj.com/content/31/4/556

14 Jacob Grier. "Who Will Be the First Person To Go to Prison for Selling Flavored Tobacco or E-Cigarettes?" *Reason.com,* 18 March, 2022. https://reason.com/2022/03/18/who-will-be-the-first-person-to-go-to-prison-for-selling-flavored-tobacco-or-e-cigarettes/

15 "FDA Commits to Evidence-Based Actions Aimed at Saving Lives and Preventing Future Generations of Smokers." U.S. Food and Drug Administration FDA News Release. April 29, 2021. https://www.fda.gov/news-events/press-announcements/fda-commits-evidence-based-actions-aimed-saving-lives-and-preventing-future-generations-smokers

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Instead of risking the unintended consequences of prohibition, the Biden administration should adopt a strategy of tobacco harm reduction to assist those smokers who would like to quit but are currently unable to do so. To that end, the FDA should encourage smokers to consider switching to products like e-cigarettes, snus, nicotine pouches, and heated tobacco products, as well as considering traditional nicotine replacement therapies like nicotine patches and smoking cessation services. Promoting safer alternatives to cigarettes is critical, as the modeling FDA relied upon to calculate the potential benefits of a ban on menthol cigarettes shows that nearly half of the benefits derived from a menthol cigarette ban come from smokers switching to reduced-risk nicotine products in menthol flavors.[16]

[16] Michelle Minton. "The FDA's deadly menthol miscalculation." Reason Foundation, August 3, 2022. https://reason.org/commentary/the-fdas-deadly-menthol-miscalculation/

ABOUT THE AUTHORS

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