Communication from Public

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Comments for Public Posting: The attached article in Tobacco Control estimates the excess smoking prevalence, smoking initiation and premature death from 1980-2018 due to the availability of menthol cigarettes. To quantify the harm caused by menthol cigarettes, researchers modelled a scenario in which menthol cigarettes were not available between 1980 and 2018. Researchers used the same model that was used in the 2011 TPSAC report to estimate the public health harm that menthol cigarettes caused from 1980–2018, measured as excess premature death, excess smoking initiation, smoking prevalence and life years lost. Ø Results show that menthol cigarettes caused significant population harm from 1980-2018. Ø Specifically, researchers estimate that menthol cigarettes were responsible for 10.1 million additional new smokers, 378,000 premature deaths and nearly 3 million life years lost during that nearly 40 year period (1980-2018). This amounts to nearly 10,000 premature deaths and over 265,000 new smokers each year over the 38 year period. Ø The analysis shows that without menthol cigarettes, the overall smoking prevalence in the United States would have been 2.6 percentage points lower in 2018 (11.1% vs. 13.7%). Ø Researchers conclude that menthol cigarettes have had a significant detrimental impact on the public's health and continue to pose a substantial health risk. The researchers found that the two biggest drivers of the results are the impact that menthol cigarettes have on moving from experimentation to regular smoking and cessation (compared to non-menthol cigarettes). Smokers who experiment with menthol cigarettes are more likely to become regular smokers and smokers who use menthol cigarettes are less likely to quit smoking. The finding shows that menthol cigarettes are harmful to both youth (who can transition more easily from experimentation to regular smoking because of menthol) and adults (who have a harder time quitting due to menthol). Importantly, researchers acknowledge the important role that menthol can plan in other nicotine products. The article includes the following: "It is true that cigarette smoking has been declining for decades now and is at historically low levels, but menthol in other nicotine delivery products could exert the same effect as in cigarettes, stimulating their diffusion and permanence. As the FDA has expressed interest in the evaluation of a potential menthol flavour ban on

some or all tobacco products, our findings can serve to illustrate to the agency the magnitude of the public health problem directly attributable to retaining menthol."

An estimation of the harm of menthol cigarettes in the United States from 1980 to 2018

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ABSTRACT

Background Menthol cigarettes are thought to encourage smoking initiation among youths and young adults and make it more difficult for smokers to quit, thus increasing cigarette harm. However, no study to date has quantified the damage that menthol cigarettes have caused the US population.

Objective To estimate the excess smoking prevalence, smoking initiation, and mortality in the US from 1980 through 2018 that can be attributed to menthol cigarettes.

Methods Using a well-established simulation model of smoking prevalence and health effects and data from the National Health Interview Survey (NHIS), we first reproduced the overall US adult smoking prevalence between 1980 and 2018 (pseudo-R^2=0.98) and associated mortality. Then we re-ran the model, assuming that menthol cigarettes were not present in the market over the same period. Finally, we compared both scenarios to quantify the public health harm attributable to menthol over the 1980–2018 period.

Results From 1980 to 2018, we found that menthol cigarettes were responsible for slowing down the decline in smoking prevalence by 2.6 percentage points (13.7% vs 11.1% in 2018). Our results also show that menthol cigarettes were responsible for 10.1 million extra smokers, 3 million life years lost and 378 000 premature deaths during that period.

Conclusions With millions of excess smoking initiators and thousands of smoking-related deaths due to mentholated cigarettes from 1980 through 2018, our results indicate that these products have had a significant detrimental impact on the public's health and could continue to pose a substantial health risk. Our findings can assist the Food and Drug Administration in evaluating potential regulatory actions for mentholated tobacco products.

INTRODUCTION

Menthol cigarettes were first created in 1925 by Lloyd Spud Hughesand[1] and became widespread in the period between 1957 and 1962.[2] Menthol causes a cooling sensation in the throat and airways, reducing the irritation and harshness of cigarette smoke. This characteristic of menthol cigarettes is thought to encourage youth and young adults to initiate smoking and delay smoking cessation.[3–5] The 2009 Family Smoking Prevention and Tobacco Control Act gave the Food and Drug Administration (FDA) the authority to regulate the manufacture, distribution and marketing of tobacco products. In particular, it gave the FDA the power to ban menthol in cigarettes. In 2011, the FDA Tobacco Products Scientific Advisory Committee (TPSAC) menthol report[6] was submitted to the FDA commissioner and indicated that the availability of menthol cigarettes in the market harmed public health by increasing the number of smokers, with resulting premature death and morbidity.[7] In 2013 and again in 2018, the FDA sought public comment, research results and other information on the impact of menthol cigarettes on smoking initiation, prevalence and other factors to inform regulatory actions that the FDA might take for mentholated cigarettes. However, no specific actions for menthol cigarettes have yet been made.

The conclusions of the 2011 TPSAC menthol report were supported by a simulation analysis that compared a projected status quo scenario over the period from 2010 to 2050 with a scenario in which menthol cigarettes were not available over the same time period. To complement that study, we use the same model as in the TPSAC report to estimate the public health harm (measured as excess mortality, smoking initiation and prevalence) that menthol cigarettes have already caused over 1980–2018, a period similar in length to that in the TPSAC report. Our analysis puts in perspective the magnitude of the harm that menthol cigarettes have already caused in the USA and provides the FDA with additional information about the potential danger of those products.

METHODS

In this study, we use a well-stablished simulation model of smoking prevalence and health effects (the Mendez-Warner model) to quantify the health impact of menthol cigarettes on the US population during the period from 1980 through 2018. This dynamic model was first introduced by Mendez *et al*[8] and used extensively in other studies[6 9–11] to project the US adult smoking prevalence and smoking-related mortality under different scenarios depicting the impact of potential smoking control policies. A complete description of the model (as modified for the menthol report) is provided in the appendix to the TPSAC menthol report,[6] and available also as an online supplemental file to this study. Most of the model parameters were recalibrated and updated to capture accurately the prevalence of menthol and non-menthol smoking in the US adult population over 1980–2018.

Figure 1 shows the modified Mendez-Warner model used in the TPSAC menthol report and this study. The blue boxes represent the major compartments of the model, tracking the number of adult never smokers, current menthol smokers, current non-menthol smokers and former smokers over time. The circles correspond to the model's parameters (red for menthol-specific parameters, and

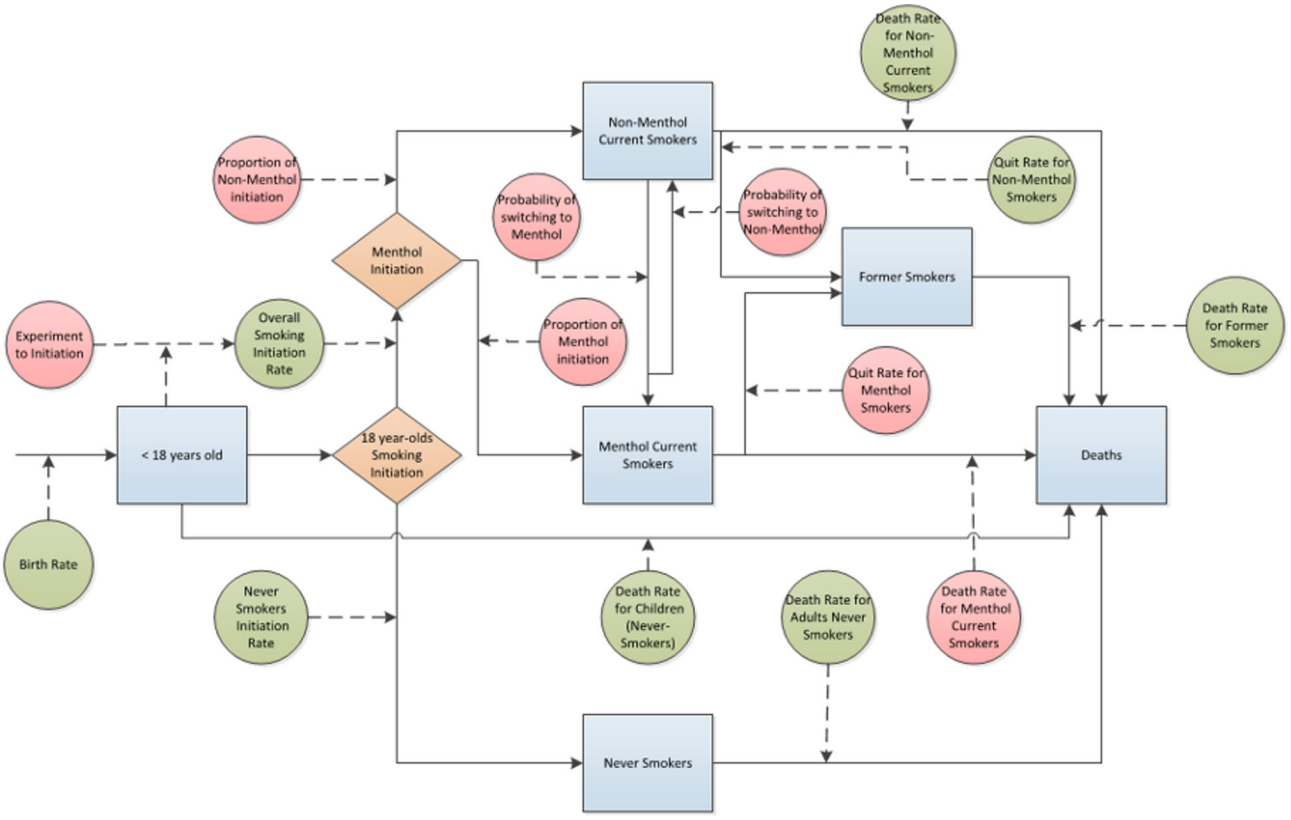

Figure 1 The dynamics of the menthol cigarettes model.

green for the rest); the orange diamonds indicate the events of individuals becoming adult menthol, and adult non-menthol, regular smokers.

The dynamics of the model are as follows. A birth cohort corresponding to each calendar year over the period of 1980 to 2018 is introduced into the model using corresponding data from the national vital statistics reports.[12 13] Teens are assumed to experiment with cigarette smoking (menthol and non-menthol). Those who never experimented with cigarette smoking, or quit permanently before age 18, are considered never smokers when they reach the age of 18. On the other hand, those who continue smoking into adulthood are given the opportunity to become menthol or non-menthol regular smokers at age 18, regardless of whether they experimented or not with menthol cigarettes as teens. However, those who experimented with menthol as teens have a higher chance of becoming regular smokers (of either menthol or non-menthol cigarettes) at age 18.[14]

We chose 18 as the age at which to concentrate adult smoking initiation, and used the year-specific National Health Interview Survey (NHIS) reported smoking prevalence for the 18-24 year-olds group (inflated by 20%) as the smoking initiation rate for that year. While most regular smoking had started by age 18, by slightly inflating the 18–24 year old smoking prevalence we capture the small proportion of those who initiated regular smoking after age 18. Those who started to smoke regularly before age 18 are subsumed in the smoking prevalence at age 18.

After age 18, the model keeps track of the number of individuals in each compartment every year, further distinguishing them by age (up to 100) and, in the case of former smoker, by years since they quit (up to 30). Every year, all individuals in the model age by 1 year or die. Additionally, smokers are allowed to switch between menthol and non-menthol cigarettes or quit smoking. The model uses permanent quit rates (net of relapses).

Mortality rates are specific for age and smoking status, further adjusted for years since quitting in the case of former smokers. We did so by combining the age-specific death rates for the general population with relative risks of death due to smoking that are specific for age and smoking status (and specific for years since quitting, in the case of former smokers), derived from Cancer Prevention Study II data.[15] The overall death rates by age for the general population were taken from the United States Life Tables and updated every 2 or 3 years over the entire 1980–2018 period. Consistent with Centers for Disease Control and Prevention practice, we assumed no smoking-related mortality before age 35.[16]

For our analysis, we employed the smoking cessation rates by age estimated by Mendez *et al*[8] for the 1980 to 1989 period, and the overall smoking cessation rates estimated in Mendez *et al*[17] for 1990–2018. Since the latter study did not estimate cessation rates by age, we scaled the age-specific cessation rates in Mendez *et al*,[8] to match the average values estimated in Mendez *et al*.[17] Then, we further differentiated the cessation rates for menthol and non-menthol cigarettes, as discussed later.

Menthol-specific parameters (red circles in figure 1) were obtained from published sources. The rates of menthol and non-menthol initiation were computed by applying the proportion of menthol smokers among initiators aged between 18 and 24 years to the overall adult initiation rate using the 1980–2018 NHIS data. The proportion of menthol experimentation was estimated among youths aged 15 to 17 from the National Survey on Drug Use and Health data over 2004–2018. The remaining menthol parameters were kept constant throughout 1980–2018

Table 1 Menthol specific parameters with 95% CIs

Parameters	Minimum	Baseline	Maximum
Ratio of yields from experimenter to smoker	1.02	1.8	3.16
Menthol cessation multiplier	0.63	0.76	0.91
Menthol mortality multiplier	0.8	1	1.2
Switch rate from menthol to non-menthol	0.0135	0.018	0.0225
Low switch rate from non-menthol to menthol	0.006	0.008	0.01

and are shown in table 1 together with their 95% confidence intervals (CIs) or ±25% of the parameters' baseline values (for cases without reported CIs).

In table 1, the 'ratio of yields from experimenter to smoker' (the ratio of the proportion of menthol experimenters who become established smokers to the proportion of non-menthol experimenters who become established smokers) indicates how much more likely a menthol experimenter is to become a regular smoker at age 18 than a non-menthol experimenter. The second parameter in the table is the 'menthol cessation multiplier' (the ratio of menthol-smoking cessation rates to non-menthol-smoking cessation rates), which measures how likely a menthol smoker is to quit compared to a non-menthol smoker. The 'menthol mortality multiplier', in row 3 of the table, measures the increased risk of death for a menthol cigarette smoker compared with a non-menthol one (taken directly from the TPSAC menthol report.) Finally, the last two rows show the annual switching rates between menthol and non-menthol brands for a particular smoker. These switching rates were taken from the TPSAC menthol report. Menthol and non-menthol smoking cessation rates are age-specific and were calculated using the overall cessation rate, the proportion of menthol smokers among all smokers, and the menthol cessation multiplier (0.76, 95% CI 0.63 to 0.91).[18]

For this study, we updated all the parameter values used in the TPSAC menthol report, except for the switching rates between menthol and non-menthol cigarettes and the menthol mortality multiplier, for which we could not find more appropriate values.

We used the model to estimate the number of smoking-attributable deaths, life years lost and new smokers for which menthol was responsible between 1980 and 2018. To do so, we first developed a simulation scenario using retrospective NHIS data to reproduce the US smoking trends from 1980 to 2018 (the *status quo ante* scenario). Then, over the same period, we constructed an alternative (counterfactual) scenario in which menthol cigarettes were assumed to be non-existent over 1980–2018. The smoking initiation rate in the counterfactual case was derived by assuming the same number of experimenters as in the *status quo ante* scenario but, since now everyone is experimenting with non-menthol cigarettes, a smaller proportion of experimenters become regular smokers at age 18, according to the ratio of yields from experimenters to smokers. In this study, the ratio of yields from experimenters to smokers was taken from the study by Nonnemaker *et al* (1.80, 95% CI 1.02 to 3.16)[14] .

Besides the *status quo ante* and counterfactual scenarios, in which menthol parameters were set at their baseline values, we performed a sensitivity analysis for each parameter shown in table 1, by setting them at their lower and upper limits indicated in the table. These limits are set by taking the 95% CI for the estimated parameter value, or ±25% of the parameter's baseline value (for cases without reported CIs). We also performed a Monte Carlo analysis with all parameters being sampled simultaneously from independent normal distributions to produce a 95% confidence band around the estimated smoking prevalence in the counterfactual scenario.

In addition, we examined the individual contributions of changes in initiation and cessation due to menthol to the excess smoking-related deaths and life years lost. To do so, we performed two additional simulation runs, in which we set first the initiation, and then the cessation rate, in the counterfactual scenario to their respective values in the *status quo ante* scenario.

For each scenario, we computed the number of smoking-attributable deaths as the excess number of deaths for current and former smokers as compared with never smokers.[19] The cumulative difference in smoking-attributable deaths between the *status quo ante* and counterfactual scenarios is an estimate of premature deaths due to mentholated cigarettes. The harm of menthol in cigarettes is also quantified by the cumulative number of life years lost, which is obtained from the cumulative difference in the total population between the two scenarios.

RESULTS

The estimated US smoking prevalence under the *status quo ante* and counterfactual scenarios, together with the reported NHIS smoking prevalence over 1980–2018, are presented in figure 2. The estimated *status quo ante* scenario aligns very closely with the observed NHIS data (pseudo-R^2=0.98).

The figure shows that, in the absence of menthol cigarettes, the overall US smoking prevalence would have declined from 33.2% to 11.1%, compared with the observed 13.7% in 2018[20] (a difference of 2.6 percentage points).

Table 2 presents the results of our analysis. The entries in column 1 describe the different scenarios we considered in our simulation runs. Columns 2, 3 and 4 show, for each scenario, the number of excess smoking initiators, cumulative excess premature deaths, and cumulative life years lost, from 1980 to 2018, due to menthol smoking. Row 1 shows the results corresponding to our baseline scenario (i.e., all the model parameters set at their baseline values). Rows 2–11 present the results of the sensitivity analysis for the model's menthol input parameters (the ratio of yields from experimenter to established smoker, the menthol cessation multiplier, the menthol mortality multiplier, and the switching rates from menthol to non-menthol cigarettes and vice versa). Finally, rows 12 and 13 present the independent contributions of changes in initiation and cessation due to menthol to the results. Scenario 12 displays the impact of the menthol-caused reduction in smoking cessation (by setting the initiation rate of the counterfactual identical to that of the status quo ante), while scenario 13 shows the contribution of increased initiation due to menthol (by setting the cessation rate in the counterfactual identical to that of the status quo ante).

The figures within parentheses below the numbers in all the cells, show the ratio of such numbers to their corresponding baseline values in row 1. Our results show that menthol cigarettes were responsible for 10.1 million extra smokers over 1980–2018 (row 1)—that is, approximately 266 000 additional smokers every year, for the past 38 years. Moreover, nearly 3 million life years and 378 000 smoking-related deaths (i.e., about 9900 premature deaths per year) were caused by menthol cigarettes over the period 1980–2018.

Row 2 shows that the ratio of yields has a considerable impact on the magnitude of the number of new smokers, as well as on the number of premature deaths and life years lost. For instance, a 1.8-fold increase in the ratio of yields (from 1.80 to 3.16) could lead to an approximately 90% increase in the cumulative number of new smokers and a 40% increase in the cumulative number of

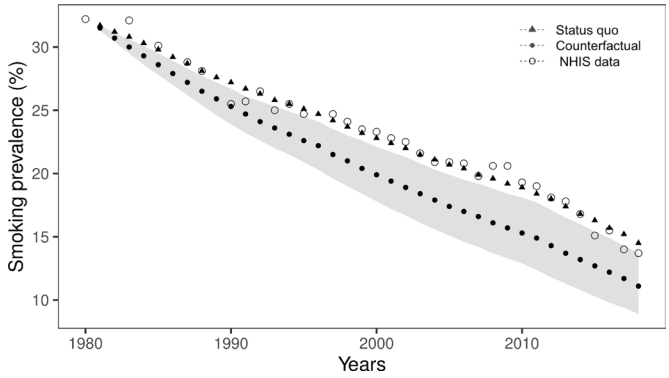

Figure 2 Simulated smoking prevalence under *status quo ante* and counterfactual scenarios and reported NHIS smoking prevalence over 1980–2018. The shaded region shows the 95% confidence band of the estimated prevalence in the counterfactual scenario.

smoking-related deaths. Furthermore, the analysis shows that the number of smoking-related deaths as well as the number of life years lost are sensitive to the menthol cessation multiplier and the menthol mortality multiplier but not the switching rates. Other things being equal, the decrease in smoking cessation due to menthol cigarettes makes up about 56% of the total number of smoking-related deaths and 65% of the cumulative life years lost due to menthol, while the increase in smoking initiation attributed to menthol cigarettes is responsible for 44% and 36% of the excess deaths and life years-lost due to menthol, respectively.

Table 2 Estimates of cumulative excess smoking initiation, smoking-related deaths and life years lost due to menthol cigarettes over the period 1980–2018

Scenarios	Cumulative excess smoking initiators	Cumulative excess deaths	Cumulative excess life years lost
1 Baseline values	10 137 808 (100%)	377 528 (100%)	2 951 533 (100%)
2 Low yield from experimenter to smoker (1.02)	336 487 (3%)	218 674 (58%)	1 943 341 (66%)
3 High yield from experimenter to smoker (3.16)	19 251 975 (190%)	529 035 (140%)	3 913 101 (133%)
4 Low menthol cessation (0.63)	10 137 808 (100%)	512 545 (136%)	4 156 195 (141%)
5 High menthol cessation (0.91)	10 137 808 (100%)	240 936 (64%)	1 723 153 (58%)
6 Low menthol mortality risk (0.8)	10 137 808 (100%)	−237 899 (−63%)	−7 818 738 (−265%)
7 High menthol mortality risk (1.2)	10 137 808 (100%)	902 765 (239%)	12 265 394 (416%)
8 Low switch rate menthol to non-menthol (1.35%)	10 137 808 (100%)	386 884 (102%)	3 018 626 (102%)
9 High switch rate menthol to non-menthol (2.25%)	10 137 808 (100%)	368 786 (98%)	2 888 179 (98%)
10 Low switch rate non-menthol to menthol (0.6%)	10 137 808 (100%)	368 726 (98%)	2 885 345 (98%)
11 High switch rate non-menthol to menthol (1%)	10 137 808 (100%)	386 100 (102%)	3 016 384 (102%)
12 Cessation impact. Identical initiation rates (yield from experimenter to smoker=1)	0 (0%)	213 299 (56%)	1 909 239 (65%)
13 Initiation Impact. Identical cessation rates (menthol cessation multiplier=1)	10 137 808 (100%)	167 113 (44%)	1 055 222 (36%)

DISCUSSION

The purpose of this study is to show the magnitude of harm caused by menthol cigarettes in the past as a cautionary tale of the potential future adverse impact of menthol flavour in tobacco products.

Our results show that menthol cigarettes have caused significant population harm over 1980–2018. During that period, we estimate that menthol cigarettes were responsible for approximately 378 000 smoking-related premature deaths, 3 million life years lost and 10.1 million new smokers. Additionally, our sensitivity analysis indicates that the two most important drivers of our results are the relative impact of menthol versus non-menthol experimentation on the transition to regular smoking (the ratio of yields) and the menthol cessation multiplier. While intrinsic differential mortality rates between menthol and non-menthol cigarettes could cause a significant impact on the results, a review of the literature did not reveal direct harm caused by the menthol compound to an individual at the levels found in menthol cigarettes (and other tobacco products). On the other hand, results from empirical research show that individuals who experiment with menthol cigarettes are more likely to become regular smokers, and those who smoke menthol cigarettes are less likely to quit smoking. Thus, our findings imply that the negative impact of menthol on the population's health is the result of an increase in the initiation rate and a decrease in smoking cessation rate due to menthol (that is, not an individual, but a population health impact). Both changes in initiation and cessation rates contribute significantly to the total harm of menthol cigarettes: smoking related deaths (56% cessation, 44% initiation) and life years lost, (65% cessation, 35% initiation) as shown in table 2. This finding shows that menthol is harmful to both adults (for whom menthol makes quitting more difficult) and youths (who can transition more easily from experimenters to regular smokers and thus nicotine addiction).

Our results indicate that menthol cigarettes have caused significant public health harm across the entire population age spectrum, acting through different pathways. It is true that cigarette smoking has been declining for decades now and is at historically low levels, but menthol in other nicotine delivery products could exert the same effect as in cigarettes, stimulating their diffusion and permanence. As the FDA has expressed interest in the evaluation of a potential menthol flavour ban on some or all tobacco products, our findings can serve to illustrate to the agency the magnitude of the public health problem directly attributable to retaining menthol.

Several factors lend confidence to our results. We used a well-established model in our analysis and provided the model's detailed formulation to the reviewers and readers of the article; our model calibration produced an almost perfect fit to the NHIS prevalence data over 1980–2018 (pseudo-R^2=0.98); and the specific parameters related to menthol came from empirical studies and were obtained after a careful literature search.

However, while we believe that our results reflect accurately the magnitude of the menthol-associated harm to the population, we acknowledge some limitations to our study.

First, we recognise that our results depend on the effect of menthol on the initiation and cessation of tobacco product use. While our sensitivity analysis shows that our results are robust, the uncertainty limits on some of the parameters produce a significant variation in the results. For example, the variability reported for the 'ratio of yields from experimenter to regular smoker'[14] implies a range of uncertainty in the number of deaths averted, ranging from 58% to 140% of its baseline value. This

range of uncertainty is not uncommon in simulation studies, but our results should be taken qualitatively as indicators of the magnitude of the overall menthol harm as opposed to precise values. As empirical research provides updated information about the sensitive parameters in the model, we will incorporate them in the analysis to reduce the uncertainty in the results.

Second, we assumed that switching rates between menthol to non-menthol cigarettes remain constant with age, which is not likely to be the case, since older smokers are likely to be more settled in their smoking preferences. However, our analysis shows that our results are not very sensitive to plausible levels of uncertainty on the switching rates.

Finally, we modelled the US general population, and thus our results are applicable to such a group. It is well known that the prevalence of menthol cigarettes is disproportionally high among African Americans. Therefore, menthol harm is certain also to be disproportionally higher among that group. We plan to examine this issue in future research.

What this paper adds

- No study to date has quantified the harm that menthol cigarettes have already caused to the US population.
- We estimate that menthol cigarettes were responsible for 10.1 million extra smokers, 3 million life years lost and 378 000 premature deaths over the period 1980–2018.
- Our results show that menthol in cigarettes is harmful across all age groups.

Contributors TTTL and DM conceptualised the project. TTTL calibrated the model, performed the simulations. DM developed the original model and supervised the work. Both authors contributed to writing of the manuscript.

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Disclaimer The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH or the Food and Drug Administration.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available in a public, open access repository. This study was carried out based on publicly available data sources.

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A Population Dynamics Model of the Consequences of Menthol Cigarettes for Smoking Prevalence and Disease Risks[1]

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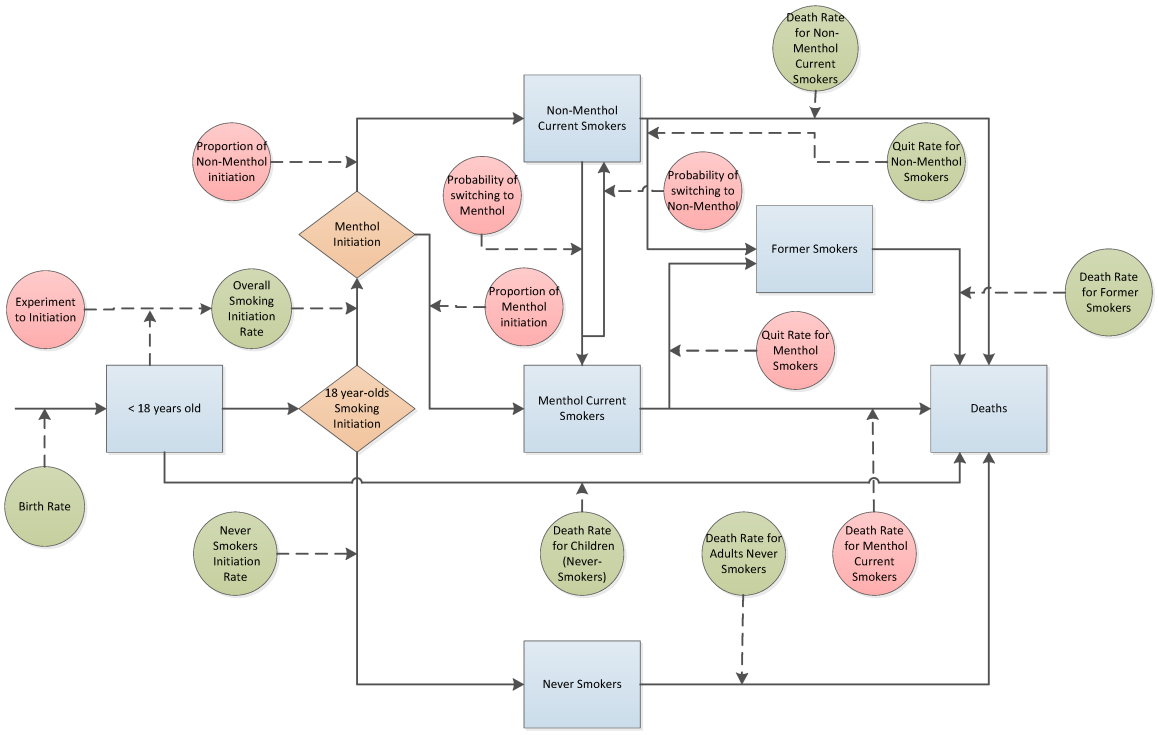
March 2011

A Population Dynamics Model of the Consequences of Menthol Cigarettes for Smoking Prevalence and Disease Risks

This document describes the constructs of, and results from, the model commissioned by the Tobacco Products Scientific Advisory Committee (TPSAC) to estimate the consequences of menthol cigarette smoking on the U.S population. The model is an extension and modification of a population dynamics model previously developed to track smoking prevalence and smoking related risks, which has been extensively discussed in the literature.[1-7] The following figure shows the general organization of the model, as modified to address menthol cigarettes:

Menthol Model Block Simulation Diagram



The boxes (compartments) represent the stock of individuals in different categories at a given time; the arrows represent the flow between compartments; and the circles represent

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parameters that modify the flow. Red circles refer to parameters related to menthol smoking while green circles refer to the other parameters. Diamonds represent the event of smoking initiation, concentrated at a single age.

Following is a description of the constructs of the model:

Definition of dynamic (time-dependent) variables:

$P(a,t) = US\ population\ of\ age\ a\ in\ year\ t$

$N(a,t) = Population\ of\ never-smokers\ of\ age\ a\ in\ year\ t$

$F(a,t,q) = Population\ of\ former-smokers\ of\ age\ a, in\ year\ t, that\ quit\ q\ years\ ago$

$C(a,t) = Population\ of\ current-smokers\ of\ age\ a\ in\ year\ t$

$C_m(a,t) = Population\ of\ current\ menthol-smokers\ of\ age\ a\ in\ year\ t$

$C_n(a,t) = Population\ of\ current\ non-menthol-smokers\ of\ age\ a\ in\ year\ t$

$\pi_N(a,t) = Prevalence\ of\ never-smokers\ of\ age\ a\ in\ year\ t$

$\pi'_N(t) = Adult\ prevalence\ of\ never-smokers\ in\ year\ t$

$\pi_F(a,t) = Prevalence\ of\ former-smokers\ of\ age\ a\ in\ year\ t$

$\pi'_F(t) = Adult\ prevalence\ of\ former-smokers\ in\ year\ t$

$\pi_C(a,t) = Prevalence\ of\ current-smokers\ of\ age\ a\ in\ year\ t$

$\pi'_C(t) = Adult\ prevalence\ of\ curent-smokers\ in\ year\ t$

$\pi_{C_m}(a,t) = Prevalence\ of\ current\ menthol\ -smokers\ of\ age\ a\ in\ year\ t$

$\pi'_{C_m}(t) = Adult\ prevalence\ of\ current\ menthol-smokers\ in\ year\ t$

$\pi_{C_n}(a,t) = Prevalence\ of\ current\ non-menthol\ -smokers\ of\ age\ a\ in\ year\ t$

$\pi'_{C_n}(t) = Adult\ prevalence\ of\ current\ non-menthol-smokers\ in\ year\ t$

$D(t) = Total\ deaths\ in\ year\ t$

Le TTT, Mendez D. *Tob Control* 2021;0:1–5. doi: 10.1136/tobaccocontrol-2020-056256

Definition of Non-dynamic variables and parameters:

$\mu(a) = Overall\ death\ rate\ for\ individuals\ of\ age\ a$

$\mu_N(a) = Death\ rate\ among\ non-smokers\ of\ age\ a$

$\mu_F(a,q) = Death\ rate\ among\ former-smokers\ of\ age\ a\ \ who\ quit\ q\ years\ ago$

$\mu_C(a) = Death\ rate\ among\ current-smokers\ of\ age\ a$

$\mu_{C_m}(a) = Death\ rate\ among\ current\ menthol-smokers\ of\ age\ a$

$\mu_{C_n}(a) = Death\ rate\ among\ current\ non-menthol-smokers\ of\ age\ a$

$\rho(a) = Overall\ smoking\ quit\ rate\ for\ individuals\ of\ age\ a$

$\rho_{C_m}(a) = Smoking\ quit\ rate\ for\ menthol\ smokers\ of\ age\ a$

$\rho_{C_n}(a) = Smoking\ quit\ rate\ for\ non-menthol\ smokers\ of\ age\ a$

$S_{m2n} = Switching\ rate\ from\ menthol\ to\ non-menthol\ among\ current\ menthol\ smokers$

$S_{n2m} = Switching\ rate\ from\ non-menthol\ to\ menthol\ among\ current\ menthol\ smokers$

$I = Smoking\ initiation\ age$

$\gamma = Overall\ smoking\ initiation\ rate$

$\gamma_{C_m} = Smoking\ initiation\ rate\ for\ menthol\ smokers$

$\gamma_{C_n} = Smoking\ initiation\ rate\ for\ non-menthol\ smokers$

$RR(a,q) = Relative\ risk\ of\ death\ for\ a\ former\ smoker\ of\ age\ a\ who\ quit\ q\ years\ ago - q = 0\ implies\ current\ smoker$

$K_1 = Mortality\ risk\ ratio\ \left(\frac{Menthol}{Non-Menthol}\right)$

$K_2 = Quit\ rates\ ratio\ \left(\frac{Menthol}{Non-Menthol}\right)$

$K_3 = Proportion\ of\ Menthol\ among\ Initiators$

$K_4 = Proportion\ of\ Menthol\ among\ Experimenters$

Le TTT, Mendez D. *Tob Control* 2021;0:1–5. doi: 10.1136/tobaccocontrol-2020-056256

$$K_5 = Ratio\ of\ Yields\ from\ Experimenter\ to\ Established\ Smoker\ \left(\frac{Menthol}{Non-Menthol}\right)$$

Dynamic (time-dependent) relationships:

$$N(0,t) = P(0,t)$$

$$N(a,t) = N(a-1,t-1) \times \left(1-\mu_N(a)\right)\ \ for\ a \neq I$$

$$N(a,t) = N(a-1,t-1) \times \left(1-\mu_N(a)\right) \times \left(1-\gamma_{C_m}-\gamma_{C_n}\right)\ \ for\ a = I$$

$$F(a,t,q) = 0\ \ \ for\ a-q \leq I$$

$$F(a,t,1) = C_m(a-1,t-1) \times \left(1-\mu_{C_m}(a-1)\right) \times \rho_{C_m}(a-1) + C_n(a-1,t-1) \times \left(1-\mu_{C_n}(a-1)\right) \times \rho_{C_n}(a-1)\ for\ a-q > I$$

$$F(a,t,q) = F(a-1,t-1,q-1) \times \left(1-\mu_{C_F}(a-1,q-1)\right)\ \ for\ a-q > I\ and\ q > 1$$

$$C_m(a,t) = 0\ for\ a < I$$

$$C_m(a,t) = \gamma_{C_m} \times N(a-1,t-1) \times \left(1-\mu_N(a-1)\right)\ \ for\ a = I$$

$$C_m(a,t) = C_m(a-1,t-1) \times \left(1-\mu_{C_m}(a-1)\right) \times \left(1-\rho_{C_m}(a-1)\right) \times \left(1-S_{m2n}(a-1)\right) + C_n(a-1,t-1) \times \left(1-\mu_{C_n}(a-1)\right) \times \left(1-\rho_{C_n}(a-1)\right) \times\ S_{n2m}\ \ for\ a > I$$

$$C_n(a,t) = 0\ for\ a < I$$

$$C_n(a,t) = \gamma_{C_n} \times N(a-1,t-1) \times \left(1-\mu_N(a-1)\right)\ \ for\ a = I$$

$$C_n(a,t) = C_n(a-1,t-1) \times \left(1-\mu_{C_n}(a-1)\right) \times \left(1-\rho_{C_n}(a-1)\right) \times \left(1-S_{n2m}(a-1)\right) + C_m(a-1,t-1) \times \left(1-\mu_{C_m}(a-1)\right) \times \left(1-\rho_{C_m}(a-1)\right) \times\ S_{m2n}\ for\ a > I$$

$$P(a,t) = N(a,t) + \sum_{q=1}^{q=30+} F(a,t,q) + C_m(a,t) + C_n(a,t)$$

$$\pi_N(a,t) = \frac{N(a,t)}{P(a,t)}$$

$$\pi'_N(t) = \frac{\sum_{a=18}^{a=100} N(a,t)}{\sum_{a=18}^{a=100} P(a,t)}$$

Le TTT, Mendez D. *Tob Control* 2021;0:1–5. doi: 10.1136/tobaccocontrol-2020-056256

$$\pi_F(a,t) = \frac{\sum_{q=1}^{q=30+} F(a,t,q)}{P(a,t)}$$

$$\pi'_F(t) = \frac{\sum_{a=18}^{a=100}\sum_{q=1}^{q=30+} F(a,t,q)}{\sum_{a=18}^{a=100} P(a,t)}$$

$$\pi_{C_m}(a,t) = \frac{C_m(a,t)}{P(a,t)}$$

$$\pi'_{C_m}(t) = \frac{\sum_{a=18}^{a=100} C_m(a,t)}{\sum_{a=18}^{a=100} P(a,t)}$$

$$\pi_{C_n}(a,t) = \frac{C_n(a,t)}{P(a,t)}$$

$$\pi'_{C_n}(t) = \frac{\sum_{a=18}^{a=100} C_n(a,t)}{\sum_{a=18}^{a=100} P(a,t)}$$

$$D(t) = \sum_{a=0}^{a=100} N(a,t) \times \mu_N(a) + \sum_{a=0}^{a=100}\sum_{q=1}^{q=30+} F(a,t,q) \times \mu_F(a,q) + \sum_{a=0}^{a=100} C_m(a,t) \times \mu_{C_m}(a) + \sum_{a=0}^{a=100} C_n(a,t) \times \mu_{C_n}(a)$$

Non-dynamic relationships:

- Expressions related to mortality risks and derivation of death rates for current-, former- and never-smokers given overall death rates $\mu(a)$ in 2010.

$$K_1 = \frac{\mu_{C_m}(a)}{\mu_{C_n}(a)}$$

$$\mu_F(a,q) = \mu_N(a) \times RR(a,q)$$

$$\mu_{C_m}(a) = K_1 \times \mu_N(a) \times RR(a,0)$$

$$\mu_{C_n}(a) = \mu_N(a) \times RR(a,0)$$

Le TTT, Mendez D. *Tob Control* 2021;0:1–5. doi: 10.1136/tobaccocontrol-2020-056256

$$\mu(a) = \mu_N(a) \times \pi_N(a, 2010) + \left(\sum_{q=1}^{q=30+} \mu_N(a) \times RR(a, q) \times \pi_F(a, 2010, q) \right)$$
$$+ K_1 \times \mu_N(a) \times RR(a, 0) \times \pi_{C_m}(a, 2010)$$
$$+ \mu_N(a) \times RR(a, 0) \times \pi_{C_n}(a, 2010) \quad \rightarrow$$

$$\mu_N(a) = \frac{\mu(a)}{\pi_N(a, 2010) + \sum_{q=1}^{q=30+} \left(RR(a, q) \times \pi_F(a, 2010, q) \right) + K_1 \times RR(a, 0) \times \pi_{C_m}(a, 2010) + RR(a, 0) \times \pi_{C_n}(a, 2010)}$$

Expressions related to quit rates and derivation of quit rates for menthol and non-menthol smokers given overall quit rates $\rho(a)$ in 2010.

$$K_2 = \frac{\rho_{C_m}(a)}{\rho_{C_n}(a)}$$

$$\rho_{C_m}(a) = K_2 \times \rho_{C_n}(a)$$

$$\rho(a) = K_2 \times \rho_{C_n}(a) \times \pi_{C_m}(a, 2010) + \rho_{C_n}(a) \times \pi_{C_n}(a, 2010) \quad \rightarrow$$

$$\rho_{C_n} = \frac{\rho(a)}{K_2 \times \pi_{C_m}(a, 2010) + \pi_{C_n}(a, 2010)}$$

- Expressions related to the initiation rate and derivation of initiation rate under the counterfactual scenario (in which menthol cigarettes do not exist) given overall smoking initiation rate γ in 2010.

$$\gamma = \gamma_{C_m} + \gamma_{C_n}$$

$$\gamma_{C_m} = K_3 \times \gamma$$

$$\gamma_{C_n} = (1 - K_3 \times \gamma)$$

Le TTT, Mendez D. *Tob Control* 2021;0:1–5. doi: 10.1136/tobaccocontrol-2020-056256

Let W be the size of a cohort of potential experimenters, E the proportion of experimenters in that cohort, Y_m the proportion of menthol experimenters that become established smokers, and Y_n the proportion of non − menthol experimenters that become established smokers; then, $W \times E \times K_4$ is the number of menthol experimenters and $W \times E \times (1 - K_4)$ is the number of non − menthol experimenters.

It follows that:

$$W \times E \times K_4 \times Y_m + W \times E \times (1 - K_4) \times Y_n = W \times \gamma$$

Given that $\frac{Y_m}{Y_n} = K_5$, *then*

$$W \times E \times K_4 \times K_5 \times Y_n + W \times E \times (1 - K_4) \times Y_n = W \times \gamma \quad or$$

$$Y_n = \frac{\gamma}{E \times \left(K_4 \times K_5 + (1 - K_4)\right)}$$

Let γ' be the initiation rate under the counterfactual, then, assuming the same proportion of experimenters as in the status − quo scenario:

$$W \times E \times Y_n = W \times \gamma' \quad or$$

$$\gamma' = E \times Y_n = \frac{E \times \gamma}{E \times \left(K_4 \times K_5 + (1 - K_4)\right)} = \frac{\gamma}{K_4 \times K_5 + (1 - K_4)}$$

Le TTT, Mendez D. *Tob Control* 2021;0:1–5. doi: 10.1136/tobaccocontrol-2020-056256

Communication from Public

Name: Breathe Southern CA
Date Submitted: 03/02/2021 09:51 AM
Council File No: 18-1104
Comments for Public Posting: Please end the sale of flavored tobacco products in Los Angeles.

BREATHE SOUTHERN CALIFORNIA

BreatheSoCal.org

5858 Wilshire Blvd., Suite 300
Los Angeles, CA 90036
P: (323) 935-8050
F: (323) 935-1873

February 16, 2021

The Honorable Eric Garcetti, Mayor of Los Angeles
The Honorable Mike Feuer, Los Angeles City Attorney
The Honorable Members of the Los Angeles City Council
Los Angeles City Hall
200 North Main Street
Los Angeles, CA 90012

Dear Mayor Garcetti, City Attorney Feuer, and Members of the Los Angeles City Council:

Breathe Southern California (Breathe SoCal) urges you to implement a comprehensive ordinance that ends the sale of flavored tobacco products. Such a comprehensive ordinance should include a ban on menthol-flavored tobacco products but contain no exemption for hookah or adult-only tobacco shops.

Breathe SoCal is a nonprofit organization promoting clean air and healthy lungs through research, education, advocacy, and technology. For over 50 years, we have been a leader in lung health improvement efforts in California. As a proud member of the L.A. Families Fighting Flavored Tobacco, we are a part of an active coalition working to protect children and communities of color from Big Tobacco's deceptive marketing tactics.

We worked with the California State Legislature last year to pass Senate Bill 793, which was a bold step in protecting the health of our community members by ending the sale of flavored tobacco products. However, Big Tobacco is financing a statewide referendum on that legislation, so it currently on hold, and if Big Tobacco has its way, the law will not go into effect if the referendum is successful. The tobacco industry is spending obscene amounts of money to hook our kids on the wide diversity of tobacco products in the marketplace: flavored e-cigarettes, menthol cigarettes, hookah tobacco, premium cigars, and pipe tobacco.

All tobacco products, including flavored products, contain nicotine, which is a highly addictive chemical that can cause long-term damage to the adolescent brain. Menthol and flavored tobacco products are driving tobacco-related diseases and deaths throughout the country. Moreover, any exemptions would undermine this effort and create opportunities for young people to obtain flavored tobacco products making it much more likely they will ultimately become traditional cigarette smokers.

At least 99 jurisdictions in California, including Burbank, Beverly Hills, and unincorporated areas of Los Angeles County, have restricted the sale of flavored tobacco products. A tough law prohibiting the sale of flavored tobacco products in the City of Los Angeles can protect young people and our vulnerable populations by cutting off access to the key products that is leading

many to cigarettes, and potentially a lifetime of tobacco addiction. We urge you to act swiftly and decisively so that a law is in place in the state's largest city since the state ban is currently on hold and, if Big Tobacco's spending is successful, could be overturned at the next election.

Should you have any questions or comments regarding this matter, please feel free to contact me at MCarrel@breathesocal.org or at (323) 935-8050 x250. Thank you for your consideration.

Sincerely,

Marc Carrel
President & CEO

Communication from Public

Name: Breathe Southern CA
Date Submitted: 03/02/2021 09:52 AM
Council File No: 18-1104
Comments for Public Posting: Please end the sale of flavored tobacco products in Los Angeles.

BREATHE SOUTHERN CALIFORNIA

BreatheSoCal.org

5858 Wilshire Blvd., Suite 300
Los Angeles, CA 90036
P: (323) 935-8050
F: (323) 935-1873

February 16, 2021

The Honorable Eric Garcetti, Mayor of Los Angeles
The Honorable Mike Feuer, Los Angeles City Attorney
The Honorable Members of the Los Angeles City Council
Los Angeles City Hall
200 North Main Street
Los Angeles, CA 90012

Dear Mayor Garcetti, City Attorney Feuer, and Members of the Los Angeles City Council:

Breathe Southern California (Breathe SoCal) urges you to implement a comprehensive ordinance that ends the sale of flavored tobacco products. Such a comprehensive ordinance should include a ban on menthol-flavored tobacco products but contain no exemption for hookah or adult-only tobacco shops.

Breathe SoCal is a nonprofit organization promoting clean air and healthy lungs through research, education, advocacy, and technology. For over 50 years, we have been a leader in lung health improvement efforts in California. As a proud member of the L.A. Families Fighting Flavored Tobacco, we are a part of an active coalition working to protect children and communities of color from Big Tobacco's deceptive marketing tactics.

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many to cigarettes, and potentially a lifetime of tobacco addiction. We urge you to act swiftly and decisively so that a law is in place in the state's largest city since the state ban is currently on hold and, if Big Tobacco's spending is successful, could be overturned at the next election.

Should you have any questions or comments regarding this matter, please feel free to contact me at MCarrel@breathesocal.org or at (323) 935-8050 x250. Thank you for your consideration.

Sincerely,

Marc Carrel
President & CEO

Communication from Public

Name:	American Lung Association
Date Submitted:	03/02/2021 09:53 AM
Council File No:	18-1104
Comments for Public Posting:	The American Lung Association encourages you to move decisively to pass a comprehensive ordinance that ends the sale of flavored tobacco, including menthol flavored tobacco products, and that does not include exemptions for hookah or adult only tobacco shops.

American Lung Association

February 12, 2021

The Honorable Eric Garcetti, Mayor of Los Angeles
The Honorable Mike Feuer, Los Angeles City Attorney
Members of the Los Angeles City Council
Los Angeles City Hall
200 North Main Street
Los Angeles, CA 90012

Dear Mayor Garcetti and City of Los Angeles Councilmembers,

The American Lung Association encourages you to move decisively to ***pass a comprehensive ordinance that ends the sale of flavored tobacco, including menthol flavored tobacco products, and that does not include exemptions for hookah or adult only tobacco shops*.**

Last year, the California State Legislature acted to protect children and communities of color from Big Tobacco's predatory marketing of candy flavored tobacco. These marketing practices have been proven to lure new users, particularly young people, to their dangerous products. The passage of SB793 was a bold step forward to protect the health of California's young people, especially because it also ended the sale of menthol flavored products.

Now – the tobacco industry is gearing up to spend enormous amounts of money to reverse our progress by filing a referendum. We need local governments to stand with the state legislature and do even more to protect our kids by ending the sale of flavored e-cigarettes, menthol cigarettes, hookah tobacco, premium cigars, and pipe tobacco.

We stand with civil rights groups and our fellow health advocates to say that the purposeful targeting of menthol flavored tobacco to the African American community and other populations is wrong and needs to be stopped. The evidence is clear. Decades of predatory marketing practices have led to 85% of African American smokers using menthol flavored tobacco.

We are in full support of the Los Angeles City Attorney's recommendation to enact an ordinance to ***restrict the sale of all flavored tobacco products, including menthol flavored products, and without exception for products such as flavored hookah.***

We proudly join the L.A. Families Fighting Flavored Tobacco coalition led by our organization, the American Cancer Society Cancer Action Network, and the American Heart Association, and a growing number of Angelenos who are standing up to Big Tobacco to protect the progress we have made in California.

Thank you,

Deb Brown
Chief Mission Officer

Communication from Public

Name:	American Academy of Pediatrics
Date Submitted:	03/02/2021 09:57 AM
Council File No:	18-1104
Comments for Public Posting:	The Southern California Chapter 2 of the American Academy of Pediatrics is among the growing number of coalition members to L.A. Families Fighting Flavored Tobacco. We encourage you to move decisively to pass a comprehensive ordinance that ends the sale of flavored tobacco, including menthol flavored tobacco products and without exemptions for hookah or adult only tobacco shops.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™ ® Incorporated in California
California Chapter 2 - Kern | Los Angeles | Riverside | San Bernardino
San Luis Obispo | Santa Barbara | Ventura

February 19, 2021

AAP-CA Chapter 2
P.O. Box 94127
Pasadena, CA 91109
Tel. (818) 422-9877
Fax: (888) 838-1987
www.aapca2.org

The Honorable Eric Garcetti, Mayor of Los Angeles
The Honorable Mike Feuer, Los Angeles City Attorney
Members of the Los Angeles City Council
Los Angeles City Hall
200 North Main Street
Los Angeles, CA 90012

Re: Pediatricians in favor of a Flavored Tobacco Ban – including Menthol

Dear Mayor Garcetti and City of Los Angeles Councilmembers,

The Southern California Chapter 2 of the American Academy of Pediatrics is among the growing number of coalition members to L.A. Families Fighting Flavored Tobacco. We encourage you to move decisively to ***pass a comprehensive ordinance that ends the sale of flavored tobacco, including menthol flavored tobacco products and without exemptions for hookah or adult only tobacco shops*.**

Last year, the California State Legislature acted to protect children and communities of color from Big Tobacco's deceptive marketing of candy flavored tobacco. These marketing practices have been proven to lure new users to their dangerous products. The passage of SB-793 was a bold step forward to protect the health of this state's young people, especially because it also ended the sale of menthol-flavored products.

Now – the tobacco industry is gearing up to spend enormous amounts of money to reverse our progress. We need local governments to stand with the State Legislature and do even more to protect our kids by ending the sale of flavored e-cigarettes, menthol cigarettes, hookah tobacco, premium cigars, and pipe tobacco.
We stand with civil rights groups and health advocates to say that the purposeful targeting of menthol flavored tobacco to the African American community and other populations is wrong and needs to be stopped. The evidence is clear. Decades of predatory marketing practices have led to 85% of African American smokers using menthol-flavored tobacco.

We are in full support of the Los Angeles City Attorney's recommendation to enact an ordinance to ***ban the sale of all flavored tobacco products, including menthol flavored products, and without exception for products such as flavored hookah.***

We proudly join the L.A. Families Fighting Flavored Tobacco coalition led by the American Cancer Society Cancer Action Network, the American Heart Association and the American Lung Association, and a growing number of Angelenos who are standing up to Big Tobacco to protect the progress we have made in California.

Sincerely,

Tomás Torices, MD
Executive Director
American Academy of Pediatrics - California Chapter 2

Communication from Public

Name:	Promesa Boyle Heights
Date Submitted:	03/02/2021 09:58 AM
Council File No:	18-1104
Comments for Public Posting:	Our collaborative, Promesa Boyle Heights, is among the growing number of coalition members to L.A. Families Fighting Flavored Tobacco. We encourage you to move decisively to pass a comprehensive ordinance that ends the sale of flavored tobacco, including menthol flavored tobacco products and without exemptions for hookah or adult only tobacco shops.

promesa BOYLE HEIGHTS

February 19, 2021

The Honorable Eric Garcetti, Mayor of Los Angeles
The Honorable Mike Feuer, Los Angeles City Attorney
Members of the Los Angeles City Council
Los Angeles City Hall
200 North Main Street
Los Angeles, CA 90012

Dear Mayor Garcetti and City of Los Angeles Councilmembers,

Our collaborative, Promesa Boyle Heights, is among the growing number of coalition members to L.A. Families Fighting Flavored Tobacco. We encourage you to move decisively to ***pass a comprehensive ordinance that ends the sale of flavored tobacco, including menthol flavored tobacco products and without exemptions for hookah or adult only tobacco shops.***

Promesa Boyle Heights is a collaborative of 60+ adult and young residents and 20+ schools and local organizations working together to realize a vision where: 1. Every individual has access to a range of supports in the home, in our schools, and in the community to foster school and life success; 2. Organizations are collaborating, well-functioning, and closing the opportunity gap amongst the most marginalized and underserved populations in our community, and; 3. A powerful, resident-led collaborative is winning system-level policy changes that create a safer, healthier, and more stable Boyle Heights.

Last year, the California State Legislature acted to protect children and communities of color from Big Tobacco's deceptive marketing of candy flavored tobacco. These marketing practices have been proven to lure new users to their dangerous products. The passage of SB-793 was a bold step forward to protect the health of this state's young people, especially because it also ended the sale of menthol flavored products.

Now – the tobacco industry is gearing up to spend enormous amounts of money to reverse our progress. We need local governments to stand with the State Legislature and do even more to protect our kids by ending the sale of flavored e-cigarettes, menthol cigarettes, hookah tobacco, premium cigars, and pipe tobacco.

We are in full support of the Los Angeles City Attorney's recommendation to enact an ordinance to ***ban the sale of all flavored tobacco products, including menthol flavored products, and without exception for products such as flavored hookah.***

We proudly join the L.A. Families Fighting Flavored Tobacco coalition led by the American Cancer Society Cancer Action Network, the American Heart Association and the American Lung Association, and a growing number of Angelenos who are standing up to Big Tobacco to protect the progress we have made in California.

Thank you.

Azucena 'Susy' Hernandez
Co-Director for Community Transformation
ahernandez@proyectopastoral.org

Communication from Public

Name:	United Parents and Students
Date Submitted:	03/02/2021 09:59 AM
Council File No:	18-1104
Comments for Public Posting:	Our organization, United Parents and Students (UPAS), is among the growing number of coalition members to L.A. Families Fighting Flavored Tobacco. We encourage you to move decisively to pass a comprehensive ordinance that ends the sale of flavored tobacco, including menthol flavored tobacco products and without exemptions for hookah or adult only tobacco shops.

United PARENTS& STUDENTS

February 19, 2021

The Honorable Eric Garcetti, Mayor of Los Angeles

The Honorable Mike Feuer, Los Angeles City Attorney

Members of the Los Angeles City Council

Los Angeles City Hall

200 North Main Street

Los Angeles, CA 90012

Dear Mayor Garcetti and City of Los Angeles Councilmembers,

Our organization, United Parents and Students (UPAS), is among the growing number of coalition members to L.A. Families Fighting Flavored Tobacco. We encourage you to move decisively to ***pass a comprehensive ordinance that ends the sale of flavored tobacco, including menthol flavored tobacco products and without exemptions for hookah or adult only tobacco shops*.**

Last year, the California State Legislature acted to protect children and communities of color from Big Tobacco's deceptive marketing of candy flavored tobacco. These marketing practices have been proven to lure new users to their dangerous products. The passage of SB-793 was a bold step forward to protect the health of this state's young people, especially because it also ended the sale of menthol flavored products.

Now – the tobacco industry is gearing up to spend enormous amounts of money to reverse our progress. We need local governments to stand with the State Legislature and do even more to protect our kids by ending the sale of flavored e-cigarettes, menthol cigarettes, hookah tobacco, premium cigars, and pipe tobacco.

We are in full support of the Los Angeles City Attorney's recommendation to enact an ordinance to ***ban the sale of all flavored tobacco products, including menthol flavored products, and without exception for products such as flavored hookah.***

We proudly join the L.A. Families Fighting Flavored Tobacco coalition led by the American Cancer Society Cancer Action Network, the American Heart Association and the American Lung Association, and a growing number of Angelenos who are standing up to Big Tobacco to protect the progress we have made in California.

Thank you,

United Parents and Students

1149 S. Hill St., Suite 600

Los Angeles, CA 90015

www.unitedparentsandstudents.org

Communication from Public

Name:	American Cancer Society Cancer Action Network
Date Submitted:	03/02/2021 10:01 AM
Council File No:	18-1104
Comments for Public Posting:	The American Cancer Society Cancer Action Network is among the growing number of members to the Los Angeles Families Fighting Flavored Tobacco coalition. We encourage you to move decisively to draft and enact a comprehensive ordinance that ends the sale of ALL flavored tobacco, including menthol cigarettes and without exemptions for hookah, cigars or adult only tobacco shops.

February 23, 2021

The Honorable Eric Garcetti, Mayor of Los Angeles
The Honorable Mike Feuer, Los Angeles City Attorney
Members of the Los Angeles City Council
Los Angeles City Hall
200 North Main Street
Los Angeles, CA 90012

Dear Mayor Garcetti and Councilmembers:

The American Cancer Society Cancer Action Network is among the growing number of members to the Los Angeles Families Fighting Flavored Tobacco coalition. We encourage you to move decisively to **draft and *enact a comprehensive ordinance that ends the sale of ALL flavored tobacco, including menthol cigarettes and without exemptions for hookah, cigars or adult only tobacco shops.***

For decades, Big Tobacco has targeted children and communities of color with the deceptive marketing of candy and fruit flavored tobacco. These marketing practices have been proven to lure new users to their dangerous products.

Now – the tobacco industry hasn't stopped, and they continue to spend enormous amounts of money to reverse our progress. We need local governments, like the City of Los Angeles to protect our residents, especially our vulnerable residents by ending the sale of menthol cigarettes, flavored e-cigarettes, cigarettes, hookah shisha, cigars, pipe and smokeless tobacco.

We are in full support of the Los Angeles City Attorney's 2019 recommendation report to enact an ordinance to ***prohibit the sale of all flavored tobacco products, including menthol flavored products, and without exception for products such as flavored shisha.***

The Los Angeles Families Fighting Flavored Tobacco coalition is led by the American Cancer Society Cancer Action Network, the American Heart Association and the American Lung Association, and a growing number of Angelenos who are standing up to Big Tobacco to protect the progress we have made in California.

Sincerely,

Primo J. Castro

Primo J. Castro
Director, Government Relations
American Cancer Society Cancer Action Network

American Cancer Society Cancer Action Network
100 Corporate Pointe, Suite 4350 ▪ Culver City, CA 90230
909.677.0600 ▪ FAX: 626.568.2888 ▪ Primo.Castro@Cancer.org

Communication from Public

Name:	Parents Against Vaping E-cigarettes (PAVe)
Date Submitted:	03/02/2021 10:02 AM
Council File No:	18-1104
Comments for Public Posting:	As two cofounders of Parents Against Vaping E-cigarettes (PAVe), a national organization founded in 2018 as a grassroots response to the youth vaping crisis, we write today to express our strong support for ending the sale all flavored tobacco products in the City of Los Angeles.

February 22, 2021

Re: Flavored Tobacco Products and OUR KIDS

Dear Honorable Mayor Garcetti and City of Los Angeles Council members,

As two cofounders of Parents Against Vaping E-cigarettes (PAVe), a national organization founded in 2018 as a grassroots response to the youth vaping crisis, we write today to express our strong support for ending the sale all flavored tobacco products in the City of Los Angeles.

PAVe's passionate parent volunteers have successfully advocated for such comprehensive legislation all across California, including in San Francisco; Sacramento, and the County of Los Angeles. Last fall, alongside our important partners in the county, city, and state anti-tobacco coalitions, we helped pass SB793, the state law ending the sale of all flavored tobacco products. Together, we will fight Big Tobacco's insidious attempts to overturn that law with a referendum that could take place as early as this coming November.

According to the 2020 National Youth Tobacco Survey (NYTS), 3.6 million young people are regularly vaping, and the research has proven that flavors are hooking our kids. The latest figures show that 8 out of 10 teens who vape choose flavors. With 40% of high-school users using an e-cigarette on 20 or more days out of the month, we must take action immediately to protect these teens from becoming an entire generation of nicotine addicts. This issue is made even more urgent in light of COVID; a recent Stanford-led study reports that teens who vape are 5-to-7 times more likely to contract the virus.

And that's why it is essential that the City of Los Angeles end the sale of all flavored tobacco, with no exemptions, to protect all kids from the predatory behavior of Big Tobacco, an industry that has historically used flavors to target young people. The use of flavored disposable products, the new teen favorite, has increased by 1000% among teens who vape over the last year. And almost 40% are using menthol flavor, a figure that is likely much higher given that it does not include the trendy mentholated "iced" flavors.

We need leaders in cities like Los Angeles to take strong action to prevent California's kids from getting their hands on these highly-addictive flavored nicotine products that Big Tobacco using to create its next generation of lifetime customers. That's why we urge you to immediately end the sale of all flavored tobacco products with no exemptions for any flavors, nor any products like hookah.

Should you have any questions about our position, please do not hesitate to contact PAVe Co-Founders Dorian Fuhrman and Meredith Berkman at (646) 838-7718.

Sincerely,
Dorian Fuhrman and Meredith Berkman
Co Founders PAVe 105 West 86th st. NY NY 10024 https://www.parentsagainstvaping.org/articles-about-vap

Communication from Public

Name:	The Campaign for Tobacco-Free Kids & the Tobacco-Free Kids Action Fund
Date Submitted:	03/02/2021 10:04 AM
Council File No:	18-1104
Comments for Public Posting:	The Campaign for Tobacco-Free Kids & the Tobacco-Free Kids Action Fund are pleased to submit this letter in support of your efforts in the City of Los Angeles to reduce tobacco use, particularly among youth. The Campaign for Tobacco-Free Kids is the nation's largest non-profit, non-governmental advocacy organization solely devoted to reducing tobacco use and its deadly toll by advocating for public policies that prevent kids from using tobacco, and help smokers quit. We commend Los Angeles for being a national leader in its commitment to reducing the death and disease from tobacco use. It is encouraging to see cities and counties in California continue to take thoughtful, evidenced-based steps to reduce the number of kids who start using tobacco and help tobacco users quit.

1400 EYE STREET, N.W. • SUITE 1200 • WASHINGTON, DC 20005
PHONE (202) 296-5469 • FAX (202) 296-5427

The Honorable Eric Garcetti, Mayor of Los Angeles
The Honorable Mike Feuer, Los Angeles City Attorney
Members of the Los Angeles City Council
Los Angeles City Hall
200 North Main Street
Los Angeles, CA 90012

Re: Tobacco-Free Kids Urges Support for a Comprehensive Flavored Tobacco Ban

February 25, 2021

Dear Mayor Garcetti and City of Los Angeles Councilmembers,

The Campaign for Tobacco-Free Kids & the Tobacco-Free Kids Action Fund are pleased to submit this letter in support of your efforts in the City of Los Angeles to reduce tobacco use, particularly among youth. The Campaign for Tobacco-Free Kids is the nation's largest non-profit, non-governmental advocacy organization solely devoted to reducing tobacco use and its deadly toll by advocating for public policies that prevent kids from using tobacco, and help smokers quit. **We commend Los Angeles for being a national leader in its commitment to reducing the death and disease from tobacco use.** It is encouraging to see cities and counties in California continue to take thoughtful, evidenced-based steps to reduce the number of kids who start using tobacco and help tobacco users quit.

While California has made great strides in reducing tobacco use, tobacco use remains the number one preventable cause of premature death and disease in Los Angeles and the nation, killing 480,000 Americans annually. **As you discuss policy options, we stand with dozens of other national health organizations to urge you to end the sale of *all* flavored tobacco products including *candy-flavored e-cigarettes, sweet-flavored cigarillos, and menthol cigarettes.***

Prohibiting the sale of all flavored tobacco products in all tobacco retailers is a critical step that will help protect children living in Los Angeles from the unrelenting efforts by the tobacco industry to hook them to a deadly addiction. Flavored tobacco products are designed

to alter the taste and reduce the harshness of tobacco products so they are more appealing and easy for beginners, who are almost always kids. These products are pervasive and are marketed and sold in a variety of kid-friendly flavors. With their colorful packaging and sweet flavors, flavored tobacco products are often hard to distinguish from the candy displays near which they are frequently placed in retail outlets. **Nationally,** seven out of ten of current youth tobacco users have used a flavored tobacco product in the past month.[1]

Menthol Cigarettes Increase Smoking Among Youth

No other flavored product contributes more to the death and disease caused by tobacco use than menthol cigarettes. We applaud your decision not to exempt menthol cigarettes from your ordinance. Menthol delivers a pleasant minty taste and imparts a cooling and soothing sensation. These characteristics successfully mask the harshness of tobacco, making it easier for beginner smokers and kids to tolerate smoking. The FDA's Tobacco Product Scientific Advisory Committee (TPSAC) has reported that:

- Menthol cigarettes increase the number of children who experiment with cigarettes and the number of children who become regular smokers, increasing overall youth smoking.
- Young people who initiate using menthol cigarettes are more likely to become addicted and become long-term daily smokers.
- The availability of menthol cigarettes reduces smoking cessation in some populations, especially among Black Americans, and increases the overall prevalence of smoking among Black Americans.
- Menthol cigarettes are marketed disproportionately to younger smokers and are disproportionately marketed per capita to Black Americans.

After a thorough review of the evidence, TPSAC concluded that "Removal of menthol cigarettes from the marketplace would benefit public health in the United States."[2]

Flavored Tobacco Products Are Pervasive

A 2009 federal law, the Family Smoking Prevention and Tobacco Control Act, prohibited the sale of cigarettes with characterizing flavors other than menthol or tobacco, including candy and fruit flavors. While overall cigarette sales have been declining since the 2009 law, the proportion of

smokers using *menthol* cigarettes (the only remaining flavored cigarette) has been increasing.[3] Menthol cigarettes comprised 36 percent of the market in 2018.[4]

The Tobacco Control Act's prohibition on characterizing flavors did not apply to other tobacco products, and as a result, tobacco companies have significantly stepped up the introduction and marketing of flavored non-cigarette tobacco products. In fact, the overall market for flavored tobacco products is actually growing. In recent years, there has been an explosion of sweet-flavored tobacco products, especially e-cigarettes and cigars. These products are available in a wide assortment of flavors – like gummy bear, cotton candy, peanut butter cup, cookies 'n cream and pop rocks for e-cigarettes and chocolate, watermelon, lemonade and cherry dynamite for cigars. Tobacco companies are making and marketing deadly and addictive products that look and taste like a new line of flavors from a Ben and Jerry's ice cream store.

As of 2017, researchers had identified more than 15,500 unique e-cigarette flavors available online.[5] Flavors are not just a critical part of the product design, but are a key marketing ploy for the industry. The 2016 Surgeon General Report on e-cigarettes concluded, "E-cigarettes are marketed by promoting flavors and using a wide variety of media channels and approaches that have been used in the past for marketing conventional tobacco products to youth and young adults."[6] The 2019 National Youth Tobacco Survey found that 69.3% of middle and high school students—over 18.2 million youth—had been exposed to e-cigarette advertisements from at least one source.[7]

Sales of cigars (i.e., large cigars, cigarillos, and small cigars) have more than doubled between 2000 and 2019, and much of the growth is attributable to smaller types of cigars, many of which are flavored and inexpensive.[8] The number of unique cigar flavor names more than doubled from 2008 to 2015, from 108 to 250.[9] The top five most popular cigar brands among 12- to 17-year olds who have used cigars – Black & Mild, Swisher Sweets, White Owl, Backwoods, and Dutch Masters – all come in flavor varieties.[10] These products are often sold singly or can be priced as low as 3 or 4 for 99 cents, making them even more appealing to price-sensitive youth. Note that cigar smoke is composed of the same toxic and carcinogenic constituents found in cigarette smoke.[11]

Although tobacco companies claim to be responding to adult tobacco users' demand for variety, it's clear that flavored tobacco products play a key role in enticing new users, particularly kids, to a lifetime of addiction. This growing market of flavored tobacco products is undermining progress in reducing youth tobacco use.

Flavored Tobacco Products Are Popular Among Youth

These sweet products have fueled the popularity of e-cigarettes and cigars among youth. A government study found that **81 percent of kids who have ever used tobacco products started with a flavored product.** Across all tobacco products, the data is clear: flavored tobacco products are overwhelmingly used by youth as a starter product, and preference for flavors declines with age.

The 2020 National Youth Tobacco Survey shows that among high school students, e-cigarette use declined to 19.6% in 2020, after increasing by an alarming 135 percent from 2017 to 2019 (from 11.7% to 27.5%).[12] While the significant decline in youth users since 2019 is a sign of progress, youth e-cigarette use remains a public health crisis. 3.6 million kids still use e-cigarettes – the same number as when the U.S. Surgeon General called youth e-cigarette use an "epidemic." [13].

The 2020 NYTS found that an increasing proportion of youth e-cigarette users reported using flavored products in 2020 (82.9%, up from 68.8% in 2019). Among high school students who currently used any type of flavored e-cigarette, the most commonly used flavor types were fruit (73.1%), mint (55.8%), menthol (37.0%), and candy, desserts, or other sweets (36.4%).[14] Data from an earlier survey found that youth cite flavors as a major reason for their current use of non-cigarette tobacco products, with 70.3% say they use e-cigarettes "because they come in flavors I like."[15]

Almost all e-cigarettes contain nicotine, a highly addictive drug. Young people are especially vulnerable to nicotine addiction.[16] The Surgeon General has concluded that, "The use of products containing nicotine in any form among youth, including in e-cigarettes, is unsafe."[17] The manufacturer of JUUL, a popular e-cigarette among youth, claims that each JUUL pod contains as much nicotine as a pack of twenty cigarettes. Since the introduction of Juul, many youth are now using products that effectively deliver massive doses of nicotine and it is clear that large numbers of teen e-cigarette users are struggling with nicotine addiction.

Youth e-cigarette users are also at risk of smoking cigarettes. A 2018 report from the National Academies of Science, Engineering & Medicine found that "There is substantial evidence that e-cigarette use increases risk of ever using combustible tobacco cigarettes among youth and young adults."[18] More recent research confirms this finding.[19] Therefore, it is critical for any policy restricting sales of flavored tobacco products to include e-cigarettes.

In January 2020, the FDA restricted some flavors in cartridge-based e-cigarettes, but exempted all menthol-flavored e-cigarettes and left flavored e-liquids and disposable e-cigarettes widely available in every imaginable flavor. New data show that the market share of these products has grown substantially and that youth quickly migrated to the flavored products that were exempt from the FDA's policy.[20] In addition, 80% of 10th and 12th grade e-cigarette users report that they can still easily obtain nicotine solutions in flavors other than tobacco or menthol.[21] Only the elimination of all flavored e-cigarettes can end the youth e-cigarette epidemic.

As the only flavored cigarette left on the market, it's also no surprise that menthol cigarettes are popular among youth. Menthol cools and numbs the throat, reducing the harshness of cigarette smoke, thereby making menthol cigarettes more appealing to youth who are initiating smoking. About half of youth smokers use menthol cigarettes.[22] The popularity of menthol flavored cigarettes is also evidenced by brand preference among youth. According to data from the National Survey on Drug Use and Health, one in five smokers ages 12-17 prefers Newport cigarettes, a heavily marketed menthol cigarette brand. Preference for Newport is even higher among African-American youth smokers (69.1 percent) because of targeted marketing by the tobacco industry.[23] As noted previously, young people who initiate using menthol cigarettes are more likely to become addicted and become long-term daily smokers.[24]

Tobacco companies have a long history of targeting and marketing flavored tobacco products to Black Americas and youth. Tobacco industry marketing, often targeted at minority communities, has been instrumental in increasing the use of menthol products and in the disproportionate use of menthol products by minority groups and youth. TPSAC concluded that menthol cigarettes are marketed disproportionately to younger smokers and Black Americans.[25] Dating back to the 1950s, the tobacco industry has targeted these communities with marketing for menthol cigarettes through sponsorship of community and music events, targeted magazine advertising, youthful imagery, and marketing in the retail environment. This targeting continues today: Black neighborhoods have more tobacco retailers and Newport cigarettes are priced cheaper in those neighborhoods.[26] As a result of this targeting, 85 percent of Black American smokers smoke menthol cigarettes, compared to 29 percent of white smokers.[27]

Menthol cigarettes are a major reason why Black Americans suffer disproportionately from tobacco use. Tobacco use is the number one cause of preventable death among Black Americans, claiming 45,000 Black lives every year.[28] Tobacco use is a major contributor to three of the leading causes of death among Black Americans - heart disease, cancer and stroke.[29] The higher rates of some tobacco-caused diseases among Black Americans result, in part, from their greater use of menthol cigarettes, which are associated with reduced cessation.[30] TPSAC

estimated that by 2020, 4,700 excess deaths in the Black community will be attributable to menthol cigarettes, and over 460,000 Black Americans will have started smoking because of menthol in cigarettes.

Advancing tobacco retail policies has *not* led to an uptick in arrests related to possession of cigarettes. The ordinance would prohibit the sale of flavored tobacco products, not prohibit the possession of these products. Adoption of the proposed ordinance will not lead to police having any greater interaction with youth. Cities across California with similar policies such as Compton, Oakland, Beverly Hills, and Sacramento have passed and implemented these ordinances without incidents.

The scientific evidence leaves no doubt that menthol cigarettes and other flavored tobacco products increase the number of people, particularly kids, who try the product, become addicted and die a premature death as a result. Prohibiting the sale of menthol cigarettes and other flavored tobacco products is an important step toward protecting our children from the tobacco industry's aggressive efforts to hook children to a deadly, addictive product.

This issue is about protecting our kids and vulnerable populations. By prohibiting the sale of all flavored tobacco products, Los Angeles would join over ***seventy cities and counties*** in California, including fourteen within LA County, that have already enacted these flavored tobacco polices. In addition, the California legislature passed a bill to prohibit the sale of flavored tobacco products, including menthol cigarettes. The bill passed with extremely strong support and was signed into law immediately. However, the tobacco industry is now effectively delaying implementation by referring it to the ballot for voter approval. While the industry forces us to wait for that vote to occur, local youth in Los Angeles continue to have access to these deadly and addictive products. For this reason, we cannot wait to act.

Thank you for considering a strong and comprehensive policy *without exemptions*. This ordinance will save lives in Los Angeles.

Sincerely,

Annie Tegen, MPH
Director, U.S. Western Region
Campaign for Tobacco-Free Kids
ategen@tobaccofreekids.org

Appendix

A1: Examples of Flavored Tobacco Products

A2: Examples of Menthol Marketing

Source: TrinketsandTrash.org, CounterTobacco.Org

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[3] Villanti, A., et al., "Changes in the prevalence and correlates of menthol cigarette use in the USA, 2004–2014," *Tobacco Control*, 25(Suppl 2):ii14-ii20, 2016.
[4] U.S. Federal Trade Commission (FTC), *Cigarette Report for 2018*, 2019, https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-cigarette-report-2018-smokeless-tobacco-report-2018/p114508cigarettereport2018.pdf [data for top 5 manufacturers only].
[5] Zhu, S-H, et al., "Evolution of Electronic Cigarette Brands from 2013-2014 to 2016-2017: Analysis of Brand Websites," Journal of Medical Internet Research, 20(3), published online March 12, 2018.
[6] HHS, *E-Cigarette Use Among Youth and Young Adults. A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2016.
[7] Wang, TW, et al., "Tobacco Product Use and Associated Factors Among Middle and High School Students—United States, 2019," MMWR, 68(12): December 6, 2019, https://www.cdc.gov/mmwr/volumes/68/ss/pdfs/ss6812a1-H.pdf.
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[13] Office of the Surgeon General, "Surgeon General's Advisory on E-Cigarette Use Among Youth," December 18, 2018, https://e-cigarettes.surgeongeneral.gov/documents/surgeon-generals-advisory-on-e-cigarette-use-among-youth-2018.pdf.
[14] Wang, TW, et al., "E-cigarette Use Among Middle and High School Students – United States, 2020," MMWR, Volume 69, September 9, 2020, https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6937e1-H.pdf.
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[16] HHS, *E-Cigarette Use Among Youth and Young Adults. A Report of the Surgeon General*.
[17] HHS, *E-Cigarette Use Among Youth and Young Adults. A Report of the Surgeon General*.
[18] National Academies of Sciences, Engineering, and Medicine (NASEM), *Public Health Consequences of E-Cigarettes*, 2018, http://nationalacademies.org/hmd/Reports/2018/public-health-consequences-of-e-cigarettes.aspx.
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[22] Wang, TW, et al., "Tobacco Product Use and Associated Factors Among Middle and High School Students—United States, 2019," *MMWR* 68(12), December 6, 2019, https://www.cdc.gov/mmwr/volumes/68/ss/pdfs/ss6812a1-H.pdf.
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Communication from Public

Name:	Equality California
Date Submitted:	03/02/2021 10:06 AM
Council File No:	18-1104
Comments for Public Posting:	Dear Mayor Garcetti and City of Los Angeles Councilmembers, Some of the most well-known statistics surrounding tobacco use focuses on Big Tobacco's targeted marketing to marginalized communities (Black, Latinx, LGBTQ+, and women) and youth when it comes to flavored tobacco use. Less well known are the effects of these flavors coupled with tobacco on the human body. In this letter we have curated some of the most significant findings of the last decade in regard to the impact of tobacco product flavor additives, including in hookah and combustible menthol cigarettes, on public health. We have provided a brief summary of the findings from each publication. Please contact us if you would like pdf files of any of the articles listed.

FOR ALL

EQUALITY CALIFORNIA

The Honorable Eric Garcetti, Mayor of Los Angeles
The Honorable Mike Feuer, Los Angeles City Attorney
Members of the Los Angeles City Council
Los Angeles City Hall
200 North Main Street
Los Angeles, CA 90012

Dear Mayor Garcetti and City of Los Angeles Councilmembers,

Some of the most well-known statistics surrounding tobacco use focuses on Big Tobacco's targeted marketing to marginalized communities (Black, Latinx, LGBTQ+, and women) and youth when it comes to flavored tobacco use. Less well known are the effects of these flavors coupled with tobacco on the human body. In this letter we have curated some of the most significant findings of the last decade in regard to the impact of tobacco product flavor additives, including in hookah and combustible menthol cigarettes, on public health. We have provided a brief summary of the findings from each publication. Please contact us if you would like pdf files of any of the articles listed.

We appreciate your continued time and consideration in addressing the impact of flavored tobacco products on the lives of those within each of your districts, especially those who are disproportionality affected by the use of flavored products. Big Tobacco has historically preyed upon communities of color, preyed upon the LGBTQ+ community, and targeted youth and young adults to replace a dying customer base. Many emerging tobacco products have not undergone product safety review by the FDA, including e-cigarettes and oral use products like ZYN. This means that Big Tobacco has been marketing to our young people and marginalized communities leading to an environment where these communities are essentially test subjects for the safety and health impact of these products. It is imperative that the evidence against these companies as well as the evidence against flavorings be considered when weighing whether or not to address a clear and present public health crisis that is costing lives; LGBTQ+ lives, Black lives, Latinx lives.

Sincerely,

Shannon Kozlovich, PhD
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Marisa London
Program Associate
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Equality California Institute
Los Angeles County Tobacco Control Program Team

Equality California Institute
3701 Wilshire Blvd, Suite 725

Overview of notable research findings:

1. Food and Drug Administration. Preliminary scientific evaluation of the possible public health effects of menthol versus nonmenthol cigarettes. Government Document. https://www.fda.gov/media/86497/download

This menthol report was submitted to the FDA in 2011. The report was a review of peer-reviewed science as well as industry provided research. The scientific review committee concluded that **menthol poses a public health risk above that seen with non-menthol tobacco products** finding that menthol products are an entry to a life-long nicotine addiction and continued use of menthol flavored tobacco products makes it harder to quit.

2. Centers for Disease Control and Prevention. Lesbian, Gay, Bisexual, and Transgender Persons and Tobacco Use. https://www.cdc.gov/tobacco/disparities/lgbt/index.htm

The CDC regularly compiles study results and updates statistics regarding tobacco usage by the LGBTQ community. **1 in 5 lesbian, gay and bisexual adults use tobacco**, compared to 1 in 6 adults in the general public, these statistics are even worse among transgender adults, with 1 in 3 transgender adults who smoke. Approximately 36% of LGBT smokers report smoking menthol cigarettes compared to 29% of heterosexual/straight smokers.

3. Kramlinger VM, von Weymarn LB, Murphy SE. Inhibition and inactivation of cytochrome P450 2A6 and cytochrome P450 2A13 by menthofuran, beta-nicotyrine and menthol. *Chem Biol Interact*. 30 May 2012. 197(2-3):87-92. Doi: 10.1016/j.cbi.2012.03.009

This 2012 study uncovers the 'how' behind menthol's ability to increase nicotine addiction. The enzymes studied in this publication as the ones in the lung and liver that turn nicotine into cotinine. Slowing down the activity of these enzymes will slow down the removal of nicotine from the human body when nicotine and menthol are in the same tobacco product. This action **increases nicotine addiction**.

4. St Helen G, Dempsey DA, Havel CM, Jacob P 3rd *et al*. Impact of e-liquid flavors on nicotine intake and pharmacology of e-cigarettes. *Drug Alcohol Depend*. September 2017. doi: 10.1016/j.drugalcdep.2017.05.042

In 2017, it was discovered that flavors in electronic cigarettes influence nicotine exposure. This publication analyzed nicotine levels in people who used both tobacco flavor and strawberry flavored e-liquid. They showed that nicotine levels were higher with the use of strawberry flavored e-liquid. The conclusions were that the difference in flavor additives affect nicotine absorption to contribute to an increase in heart rate. **Flavored tobacco products increase addiction** and may increase heart disease risk with long term use.

5. Chaiton MO, Nicolau I, Schwartz R*, et al.* Ban on menthol-flavoured tobacco products predicts cigarette cessation at 1 year: a population cohort study *Tobacco Control* Published Online First: 30 May 2019. doi: 10.1136/tobaccocontrol-2018-054841

In 2019, preliminary research from Ontario, Canada reviewed quit attempts before and after the province-specific menthol ban and were able to show that quit rates increased for daily and occasional menthol smokers one year after the ban was put in-place. Thus, the authors concluded that restrictions on menthol may lead to significant improvements in public health. **Restricting the sale of Menthol tobacco products will increase quit rates** among Menthol smokers.

6. Kozlovich S, Chen G, Watson CJW, *et al*. The role of L- and D-menthol in the glucuronidation and detoxification of the major lung carcinogen, NNAL *Drug Metab Dispo* Published Online First: October 2019. doi: 10.1124/dmd.119.088351

This 2019 study uncovers one possible 'how' behind the increase in negative health effects from menthol as a tobacco additive. Menthol has been showed to slow down a biological process called detoxification where the studied enzymes turn the most potent cancer-causing compound in tobacco into a harmless product. Additionally, many of the enzymes studied here also interact with nicotine. Slowing down the activity of these enzymes may increase both addiction and harm from the use of mentholated tobacco products. **Menthol in tobacco products increases the harm tobacco products cause**.

7. Omaiye E, McWhirter K, Luo W, *et al*. High-nicotine Electronic Cigarette Products: Toxicity of JUUL Fluids and Aerosols Correlates Strongly with Nicotine and Some Flavor Chemical Concentrations. *Chem Res Toxicol.*6 January 2019. doi: 10.1021/acs.chemrestox.8b00381

The FDA does not currently require the disclosure of all ingredients in nicotine e-liquids. This 2019 study analyzed eight e-cigarette flavored liquids to identify the flavor additives in popular high-nicotine products. This analysis identified 59 flavor compounds in the e-liquids tested. **Some of the identified flavor additives were shown to kill human cells at the levels found in these e-cigarette aerosols.**

8. Acosta-Deprez V, Gorman F, Ai M, *et al.* Perceptions About Flavored Tobacco Policies and Smoking Behaviors by Age, Gender and Sexual Orientation in the LGBTQ Population in Los Angeles County. *Archives of Healthcare.*30 January 2020. doi: 10.1057/ahc000005

Equality California conducted public intercept surveys at Los Angeles Pride in **Los Angeles County** in June 2018. The surveys asked participants about their knowledge and perceptions regarding tobacco and health as well as their attitudes on the adoption of ordinances to prohibit or restrict the sale and distribution of all flavored tobacco products and restrict the redemption of coupons, rebates and other tobacco promotional activities. Survey analysis found that members of the LGBTQ community smoked at higher rates than their non-LGBTQ counterparts. **Nearly 40% of LGBTQ respondents reported using tobacco and 80% of trans women reported using tobacco**.

9. Alexander . Research, data on transgender tobacco use needed. 30 December 2020 https://qvoicenews.com/2020/12/30/research-data-on-transgender-tobacco-use-needed/

Los Angeles transgender advocate Luckie Alexander wrote an op ed for Q Voice news, in which he outlines the necessity for sexual orientation and gender identity (SOGI) data collection in all tobacco research. Alexander provides a person account of his exposure to tobacco and journey to quitting. **This article highlights the specific issues and complications faced by the transgender community in relation to tobacco use.**

Communication from Public

Name:	OUT Against Big Tobacco Coalition
Date Submitted:	03/02/2021 10:08 AM
Council File No:	18-1104
Comments for Public Posting:	The OUT Against Big Tobacco Coalition supports restricting the sale of all flavored tobacco products without exception to protect our communities. We are an alliance of LGBTQ+ individuals, allies, and community organizations collectively working to address tobacco control and health inequity issues within Los Angeles County's LGBTQ+ community.

February 25, 2021

The Honorable Eric Garcetti, Mayor of Los Angeles
The Honorable Mike Feuer, Los Angeles City Attorney
Members of the Los Angeles City Council
Los Angeles City Hall
200 North Main Street
Los Angeles, CA 90012

Re: Flavored Tobacco Sales

Dear Mayor Garcetti and City of Los Angeles Councilmembers

The OUT Against Big Tobacco Coalition supports restricting the sale of all flavored tobacco products without exception to protect our communities. We are an alliance of LGBTQ+ individuals, allies, and community organizations collectively working to address tobacco control and health inequity issues within Los Angeles County's LGBTQ+ community.

Our coalition strongly supports a restriction on the sale of all flavored tobacco products with no exemptions in the City of Los Angeles. We urge the Council to pass a comprehensive ordinance that ends the sale of flavored tobacco, including menthol flavored tobacco products and without exemptions for hookah or adult only tobacco shops.

When Congress passed the 2009 Tobacco Control Act, they restricted the sale of all flavored cigarettes except for menthol. Menthol being the flavor that is used most heavily within communities of color and by 70% of LGBTQ+ young people. This flavor is known to *increase addiction* to tobacco and *increase the harms* from the use of tobacco products. Yet, the federal government didn't think our communities deserved equal protection from the tobacco industry.

In 2020, California attempted to correct this federal oversight and passed a bill to restrict the sale of flavored tobacco products. But big tobacco stepped in to protect their profits over the health of the people by forcing a 2-year delay. This delay will make them a billion dollars in Menthol product sales alone! We deserve better. Our lives should not be traded for a profit margin.

Restricting the sale of flavored tobacco ensures that tobacco users who want to quit are set up for success. Flavors not only mask the harsh taste and feel of a tobacco product, but they also *increase tobacco addiction*. Removing them from the shelves also adds an additional barrier to non-tobacco users by no longer allowing Big Tobacco to hide their dangerous products behind pleasant tastes and smells.

Nearly 24% of California's LGBTQ+ population uses tobacco products, compared to just 17% of adults who don't identify as LGBTQ+. Estimates of smoking rates among LGBTQ+ youth range from 38% to 59%, compared to just 28% to 35% of youth generally. Local research from Los Angeles County indicate that up to 38% of the local LGBTQ+ community are tobacco users, including up to 80% of transgender women.

Tobacco advertisements leverage LGBTQ+ values (e.g. pride, freedom, acceptance) and cultural elements (e.g. rainbow flag, same sex couples, drag queens, etc.) in order to appeal to LGBTQ+ people and make us feel like using tobacco is a key part of our LGBTQ+ identity. Big Tobacco funds AIDS/HIV and LGBTQ+ nonprofit organizations and sponsors pride celebrations and events at gay bars to portray themselves as "friends" of our community — even as they harm our health and undermine our progress.

These messages, in combination with tactics that appeal to younger members of the LGBTQ+ community, like promotions in bars and clubs, have placed LGBTQ+ youth and young adults at higher risk than their non-LGBTQ+ counterparts. In fact, understanding this trend led the FDA to develop *This Free Life*, the first national LGBTQ+ tobacco prevention campaign to educate LGBTQ+ young adults about living a tobacco-free life. Restricting the sale of all flavors in all tobacco products will protect upcoming generations of LGBTQ+ people by removing the products from the market that hook them in the first place.

San Francisco, Beverly Hills, West Hollywood, and the County of Los Angeles have already passed city/countywide bans on the sale of flavored tobacco products, including all Menthol products. The OUT Against Big Tobacco Los Angeles coalition strongly encourages **you** to protect the local community in ways that the FDA has refused to, and California was unable to by restricting the sale of *all* flavors in *all* tobacco products. Policies that prohibit the sale of flavored tobacco products, including all menthol products, offer the strongest protection for our youth and our communities from a lifetime of addiction and a preventable premature death.

Sincerely,

Eddie Martinez
Coalition Chair
OUT Against Big Tobacco

OUT Against Big Tobacco Coalition

The OUT Against Big Tobacco Coalition, staffed by Equality California Institute, is an alliance of LGBTQ individuals, allies and community organizations collectively working to address tobacco control and health inequity issues within Los Angeles County's LGBTQ community. We advocate for common sense policies that protect LGBTQ people — especially the most vulnerable members of our community — from Big Tobacco's predatory marketing tactics.

Communication from Public

Name:	Campaign for Tobacco Free Kids
Date Submitted:	03/02/2021 10:15 AM
Council File No:	18-1104
Comments for Public Posting:	New Report Details Tobacco Industry's Predatory Marketing of Menthol Cigarettes to Black Americans and the Devastating Health Impact. A new report released today details the tobacco industry's decades-long targeting of Black communities, especially kids, with marketing for menthol cigarettes and the devastating impact on the health and lives of Black Americans. The report documents how menthol cigarettes – which are more addictive, easier for kids to start using and harder for smokers to quit – are a major reason why tobacco use is the number one cause of preventable death among Black Americans and Black Americans die at disproportionately high rates from tobacco-related diseases such as cancer, heart disease and stroke. Full report can be found at: https://www.tobaccofreekids.org/assets/content/what_we_do/industry_watch/menthol-report/2021_02_tfk-menthol-report.pdf