



IMPACT OF RESTRICTING THE SALE OF FLAVORED TOBACCO PRODUCTS: THE MASSACHUSETTS EXPERIENCE

In November 2019, Massachusetts became the first state to restrict the sale of all flavored tobacco products, including menthol cigarettes. Preliminary data show that the statewide law is working as intended:

- Menthol and overall cigarette sales as well as total e-cigarette sales declined significantly in Massachusetts and there was a net decrease in cigarette sales across Massachusetts and its bordering states.
- Youth tobacco use and youth access to tobacco products was reduced.
- Adult cigarette smoking declined.

Background and Timeline

Between 2014 and the fall of 2019, more than 160 cities and towns across Massachusetts, covering over 60% of the state population, passed policies to restrict the sales of flavored tobacco products, although many had loopholes for adult-only locations, mint, menthol, and wintergreen products, or both. This local movement laid the groundwork and ultimately built support for a statewide law to prohibit the sale of all flavored tobacco products:

- In September 2019, in response to skyrocketing rates of youth e-cigarette use and the EVALI (E-cigarette, or Vaping Product, Use Associated Lung Injury) outbreak, Massachusetts Governor Charlie Baker instituted a temporary emergency ban on all e-cigarettes.
- In November 2019, Governor Baker [signed into law](#) the nation's first statewide comprehensive law prohibiting the sale of all flavored tobacco products, which:
 - Effective immediately, prohibited all flavored e-cigarettes and limited the sale of e-cigarettes with nicotine content greater than 35 mg/mL to specialty tobacco stores and smoking bars.
 - Effective June 2020, prohibited all other flavored tobacco products, including menthol cigarettes, and implemented a 75% wholesale price tax on e-cigarettes.

Preliminary Data Show Declines in Tobacco Use

Impact of Law on Youth Tobacco Use

Preliminary data from the Massachusetts Youth Health Survey show declines in youth tobacco use after implementation of the policy:

- From 2019 to 2021, youth cigarette smoking declined from 4.3% to 2.9%, cigar smoking from 4.7% to 2.0% and e-cigarette use from 32.0% to 17.6%.
- Fewer youth report accessing tobacco products from retail stores. From 2019 to 2021, the proportion of current high school tobacco users who reported accessing tobacco products from a store declined from 16.7% to 11.9% and from a vape shop declined from 17.4% to 13.0%.¹

Impact of Law on Adult Tobacco Use and Cessation

To maximize the impact of the flavor law on cessation, the act also required the provision of cessation counseling and FDA-approved products to a broad range of covered groups. In addition, the Massachusetts Tobacco Control Program funded communications campaigns to educate residents about the law and available cessation resources and funded incentives for menthol users who completed coaching calls through the state's Quitline vendor, National Jewish Health. As a result, research shows declines in cigarette smoking among Massachusetts adults.

- Using data from the Behavioral Risk Factor Surveillance System survey, a study found that the law was associated with an additional one percentage point decrease in smoking among adults aged 25 and older, compared to states without flavor restrictions.²
- Reducing smoking saves lives and health care dollars. In Massachusetts, each one percentage point decline in adult smoking rates translates to over 56,000 fewer adult smokers, 13,200 adults prevented from dying prematurely from smoking and approximately \$477 million in long-term health care costs savings.³
- A Massachusetts Department of Public Health online survey found that Black smokers were significantly more likely than white smokers to make a past year quit attempt in 2022 (55% vs. 30%).⁴ The survey also found that 57% of Black smokers and 53% of white smokers reported that the law made it more difficult to access menthol products.⁵ BRFSS data also show that there has been an increase in successful cessation among Black and Hispanic smokers. Finally, the law led to an increase in menthol smokers who completed coaching calls through the Quitline.⁶

Massachusetts' Law Reduced Tobacco Sales without Substantial Increases in Cross-Border Sales

Impact on E-Cigarette Sales

According to a study in *JAMA Network Open*, Massachusetts' prohibition on flavored e-cigarettes was associated with an **88.91% reduction in total e-cigarette sales** between December 2019 and December 2020, controlling for COVID-19 and EVALI measures and compared to control states.⁷ The decline in total e-cigarette sales suggests that many users did not just simply switch to tobacco-flavored products, but quit altogether. The most recently available e-cigarette sales data show that as of December 2022, only 0.4% of all e-cigarette sales in Massachusetts retail-tracked channels are for prohibited flavored products, indicating high compliance.⁸

Impact on Menthol Cigarette Sales

The statewide menthol ban was associated with a **statistically significant decrease in state-level menthol as well as overall cigarette sales**. As with e-cigarettes, this suggests that many menthol smokers quit or switched to other non-cigarette tobacco products, rather than switching to non-menthol cigarettes. Adjusted 4-week sales of cigarettes in Massachusetts, compared to comparison states that had not passed flavor policies, decreased by 372.27 packs per 1000 people for menthol cigarettes and increased by 120.25 packs per 1000 people for nonflavored cigarettes. Overall, the adjusted 4-week sales of all cigarettes decreased by 282.65 packs per 1000 people in Massachusetts vs. the comparison states.⁹

The tobacco industry and industry-funded groups, like the Reason Foundation and Tax Foundation, argue that rather than reducing cigarette smoking, the Massachusetts law led consumers to purchase menthol cigarettes in bordering states. The industry funded an analysis that concluded the increases in cigarette sales in bordering states negate the sales declines in Massachusetts. Conversely, a review of the evidence issued by economists John Tauras, Ph.D. and Frank Chaloupka, Ph.D. at the University of Illinois at Chicago concluded that, **"With the exception of an unpublished, tobacco industry-sponsored, short brief, the evidence from peer-reviewed journals is clear and compelling – the Massachusetts flavor ban did not lead to statistically significant increases in cross-border sales."**¹⁰

- While menthol sales increased in some bordering states during the first few months after the policy was implemented—especially in New Hampshire due to its proximity to the Boston metropolitan area—**this upward trend in bordering states was short-lived**.¹¹ In fact, total tobacco product sales in New Hampshire were actually lower in the second year than before the policy was enacted.¹² Convenience is key to most consumers, so smokers who did not quit likely returned to in-state purchasing.
- **The decline in cigarette sales in Massachusetts dramatically outweighed any increase in border states**, showing that the policy is working as intended to reduce access to and use of menthol cigarettes. Contrary to the Reason Foundation's analysis, which was not peer-reviewed or rigorous, and did not control for all confounding factors, a study published in *JAMA Network Open* found that total monthly cigarette sales declined in Massachusetts by approximately 2.45 million packs and increased in Massachusetts bordering states by only about 0.13 million packs, for a **net decrease of 2.32 million packs per month**.¹³
- Another study that controlled for confounding factors concluded that the law had **"no significant impact on cross-border sales in neighboring states where menthol cigarettes are sold."** The study found that menthol and overall cigarette sales in border states did not significantly change and were not significantly different from patterns in non-border states.¹⁴
- Massachusetts' Multi-Agency Illegal Tobacco Task Force found declines in tobacco revenues in New Hampshire and Rhode Island in FY 2022, after initial increases following the policy implementation, and stated, "The tobacco revenue decreases in the neighboring states could indicate the stabilization of the cross-border smuggling market due to the regulatory and criminal enforcement efforts of the Task Force."¹⁵

Massachusetts' Law Did Not Harm State Businesses

Contrary to claims by the tobacco industry and its allies that the law would put stores out of business, data from the state Department of Public Health shows that the number of tobacco retailers did not decrease because of the law. In February 2020 (prior to COVID-19 restrictions), there were 6,258 tobacco retailers (of which 3,767 were convenience stores), and as of April 2022, there were 6,491 tobacco retailers (including 3,994 convenience stores).¹⁶ This is consistent with other research on the impact of tobacco control policies that shows that when tobacco users quit, the money spent on tobacco products in state retail stores does not disappear from the economy but simply shifts to consumer spending on other products or services. Declines in tobacco use do not reduce the number of retailers¹⁷ or have a negative impact on employment in convenience stores.¹⁸

Massachusetts' Enforcement Infrastructure is Critical to Law's Success

The law focuses enforcement on retailers and does not prohibit the possession, use, or purchase (PUP) of tobacco products. The law established a fining structure beginning at \$1,000 for a first offense and up to \$5,000 for a third offense and allowed for a suspension of sales of tobacco products for any second or subsequent offense. The Massachusetts Association of Health Boards developed educational materials for retailers, including mailings, in-person retailer visits and online trainings. Massachusetts' success can be credited to a robust enforcement infrastructure that includes local permit systems, dedicated funding for tobacco retailer education and enforcement, technical assistance to support compliance and enforcement, and increased inspections.

The tobacco industry and its allies claim that Massachusetts' law led to skyrocketing illicit trade, which is an exaggeration and misrepresentation of the findings and recommendations of Massachusetts' Multi-Agency Illegal Tobacco Task Force¹⁹ Annual Report. Massachusetts has invested in additional actions to enforce state law, including more inspections, which have resulted in the seizure of more illegal tobacco products. State agencies have also improved their record-keeping to better track enforcement efforts. Reports of large volumes of illegal tobacco product seizures therefore should not be seen as a failure of the law, but rather attributable to improvements in Massachusetts' enforcement infrastructure. Further, FY 2022 was the first full year that the Task Force could comprehensively compile seizure data, so any assertions about increases in seizures incorrectly compare incomplete partial-year data to full-year data. Additionally, claims have been made that the Task Force recommends criminal enforcement against individual consumers, but that is a distortion of what was actually stated in the report. In truth, the Task Force's reference to individuals is to those illegally trafficking tobacco products, not consumers using the products for personal consumption.

Campaign for Tobacco-Free Kids, July 3, 2023 / Laura Bach

¹ Massachusetts Department of Public Health, Evaluation of An Act Modernizing Tobacco Control: Overview and Preliminary Results, presented September 28, 2022, <https://www.mass.gov/doc/illegal-tobacco-task-force-public-meeting-fifty-one-minutes/download>.

² Asare S, et al. Association of Comprehensive Menthol Flavor Ban With Current Cigarette Smoking in Massachusetts From 2017 to 2021. *JAMA Internal Medicine*. Published online February 27, 2023.

³ Population estimates: U.S. Census Bureau; Adult quitters have a 10 to 37 percent chance of dying from smoking, anyway. Midpoint of 10 to 37% = 23.5%. [MMWR 45(44): 971-974, <http://www.cdc.gov/mmwr/preview/mmwrhtml/00044348.htm>, November 8, 1996.] Future Savings: Hodgson, TA, "Cigarette Smoking and Lifetime Medical Expenditures," *Milbank Quarterly* 70(1), 1992 [average smoker's lifetime health care costs are \$16,000 (in 2018 dollars) more than nonsmoker's despite earlier death; but the savings per each adult quitter are less than that because adult smokers have already been significantly harmed by their smoking and have already incurred or extra, smoking-caused health costs. Average lifetime health care cost savings for adults who quit are approximately \$8,500 (in 2018 dollars)]

⁴ Kingsley, M. Data presented on March 22, 2023 webinar, "Flavored Tobacco Sales Restrictions: Successes, Challenges, and Best Practices." Available at <https://vimeo.com/811069091/de13044c0e>.

⁵ Massachusetts Department of Public Health, Evaluation of An Act Modernizing Tobacco Control: Overview and Preliminary Results, presented September 28, 2022, <https://www.mass.gov/doc/illegal-tobacco-task-force-public-meeting-fifty-one-minutes/download>.

⁶ Kingsley, M. Data presented on March 22, 2023 webinar, "Flavored Tobacco Sales Restrictions: Successes, Challenges, and Best Practices." Available at <https://vimeo.com/811069091/de13044c0e>.

⁷ Ali, FMR, et al., "Evaluation of Statewide Restrictions on Flavored e-Cigarette Sales in the US From 2014 to 2020," *JAMA Network Open*, 2022;5(2):e2147813.

⁸ CDC Foundation & Information Resources, Inc., "Monitoring U.S. E-Cigarette Sales: State Trends," <https://www.cdcfoundation.org/programs/monitoring-e-cigarette-use-among-youth>. Data from Information Resources, Inc. (IRI), which includes e-cigarette sales data from convenience stores, gas stations and other retail store chains. Sales from the internet and tobacco-specialty stores, including vape shops, are not included.

⁹ Asare, S, et al., "Association of Cigarette Sales with Comprehensive Menthol Flavor Ban in Massachusetts," *JAMA Internal Medicine*, published online January 4, 2021.

¹⁰ Tauras, J.A. & Chaloupka, F.J. (2023). The Impact of Tobacco Flavor Bans on Cross-Border Sales. *Tobacco Economics*. <https://www.tobaccoeconomics.org/research/the-impact-of-tobacco-flavor-bans-on-cross-border-sales/>

¹¹ Kingsley M., et al., "Impact of Massachusetts' Statewide Sales Restriction on Flavored and Menthol Tobacco Products on Tobacco Sales in Massachusetts and Surrounding States, June 2020," *Am J Public Health*, vol. 112, no. 8, pp. 1147-1150, Aug. 2022.

¹² Massachusetts Department of Public Health, Evaluation of An Act Modernizing Tobacco Control: Overview and Preliminary Results, presented September 28, 2022, <https://www.mass.gov/doc/illegal-tobacco-task-force-public-meeting-fifty-one-minutes/download>.

¹³ Asare S, et al. Spatial Analysis of Changes in Cigarette Sales in Massachusetts and Bordering States Following the Massachusetts Menthol Flavor Ban. *JAMA Network Open*. 2022 Sep 1;5(9):e2232103.

¹⁴ Ali FRM, et al., "Impact of Massachusetts law prohibiting flavored tobacco products sales on cross-border cigarette sales." *PLoS ONE*, 2022, 17(9): e0274022.

¹⁵ Massachusetts Multi-Agency Illegal Tobacco Task Force, *Annual Report of the Multi-Agency Illegal Tobacco Task Force*, February 28, 2023, <https://www.mass.gov/doc/task-force-fy23-annual-report/download>.

¹⁶ See Massachusetts Department of Health, Comments in Docket No. FDA-2021-N-1349 (87 Fed. Reg. 26454, May 4, 2022) Tobacco Product Standard for Menthol in Cigarettes, at 13. <https://www.regulations.gov/comment/FDA-2021-N-1349-175763>.

¹⁷ Golden, SD, et al., "Trends in the Number and Type of Tobacco Product Retailers, United States, 2000-2017," *Nicotine & Tobacco Research*, Online ahead of print, doi: 10.1093/ntr/ntab150, July 24, 2021.

¹⁸ Ribisl, KM, Evans, WN, & Feighery, EC, "Falling cigarette consumption in the U.S. and the impact upon tobacco retailer employment," in Bearman, P, Neckerman, K, & Wright, L, eds. *Social and Economic Consequences of Tobacco Control Policy*, New York: Columbia University Press, 2011.

¹⁹ The Task Force was created in 2015 to focus on issues related to unpaid excise taxes on tobacco products and is comprised of representatives from various state agencies including the Department of Revenue, Department of Public Health, Attorney General, and state police. The Task Force holds public meetings and issues annual reports that provide data on revenue collections, enforcement activities, and recommendations.