

# Impact of Flavored Tobacco Restrictions: The Massachusetts Experience



In June 2020, Massachusetts implemented its first-in-the-nation law ending the sale of all flavored tobacco products, including menthol cigarettes. Data show that the statewide law is working as intended:

- Menthol and overall cigarette sales as well as total e-cigarette sales declined significantly, without significant impacts on cross-border sales.
- Youth tobacco use and adult cigarette smoking declined.
- Retailer inspections demonstrate high compliance with the law.

## 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.

## Youth and Adult Tobacco Use Decreased

### Impact of Law on Youth Tobacco Use

Data show that the law is working as intended to reduce youth access to and use of tobacco products, particularly e-cigarettes.

- According to the Massachusetts Youth Health Survey, from 2019 to 2023, youth e-cigarette use declined from 32% to 16%, cigarette smoking declined from 4.3% to 3.2%, and cigar smoking declined from 4.7% to 2.1%.<sup>1</sup>
- Using data from the Youth Risk Behavior Survey and Behavioral Risk Factor Surveillance System, a study found that Massachusetts' flavored restriction was associated with significant declines in youth and young adult e-cigarette use.<sup>2</sup>

### Impact of Law on Adult Tobacco Use

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.

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- Using data from the Behavioral Risk Factor Surveillance System (BRFSS) survey, researchers found that ending the sale of menthol cigarettes reduced smoking prevalence in Massachusetts by 11.9% between June 2020 and January 2023.<sup>3</sup>
- Researchers estimate that smoking declines due to the law will save the state nearly \$200 million dollars in health care costs over the first ten years. These savings will come from reductions in lung cancer cases, heart attacks, and strokes, as well as fewer smoking-related birth/pregnancy complications and medical costs for their children during their first year of life. They also estimated that the law will reduce Medicaid costs by over \$43 million within ten years.<sup>4</sup>
- Data from the BRFSS also shows that the proportion of adult smokers in Massachusetts using menthol cigarettes has declined from 37.5% in 2019 to 22.2% in 2023.<sup>5</sup>
- 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%).<sup>6</sup> 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.<sup>7</sup> 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.<sup>8</sup>



## Tobacco Sales Declined Without Increasing 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, compared to control states.<sup>9</sup> The decline in total e-cigarette sales suggests that many users did not just simply switch to tobacco-flavored products, but quit altogether.

### Impact on Cigarette Sales

In the first year following Massachusetts' menthol cigarette restriction, total cigarette sales decreased by 17.2% (18.5 million packs) compared to the previous year, including a 97.1% decrease in menthol cigarette sales.<sup>10</sup> Compared to other states, Massachusetts' statewide menthol ban was associated with a **statistically significant decrease in state-level menthol as well as overall cigarette sales**.<sup>11</sup> 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.

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 that 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."**<sup>12</sup>

- 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**.<sup>13</sup> In fact, total tobacco product sales in New Hampshire were actually lower in the second year than before the policy was enacted.<sup>14</sup> Convenience is key to most consumers, so smokers who did not quit likely returned to in-state purchasing.

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- 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**.<sup>15</sup>
- 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.<sup>16</sup>
- 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. They concluded that, "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."<sup>17</sup>

### 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).<sup>18</sup> Since 2023, the number of tobacco retailers has increased by another 8.7%.<sup>19</sup> An analysis of the effects of flavored tobacco restrictions on retailers in states in the Northeast found no evidence that flavored tobacco sales restrictions have a negative effect on the number of stores that sell tobacco products, the number of employees, and the wages paid to employees.<sup>20</sup> 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 retailers<sup>21</sup> or have a negative impact on employment in convenience stores.<sup>22</sup>

### Enforcement Infrastructure is Critical to Law's Success

Massachusetts' law focuses enforcement on retailers and does not prohibit the possession, use, or purchase (PUP) of tobacco products. The tobacco industry and its allies claim that laws prohibiting the sale of flavored tobacco products will lead to increased policing, especially in the Black community, even though the law is not intended to target individual consumers. The Massachusetts law has been in place for several years with no evidence that it has led to increased negative interactions with police or increased incarceration rates.<sup>23</sup>

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, but the FY2026 annual report from Massachusetts' Multi-Agency Illegal Tobacco Task Force<sup>24</sup> shows the effectiveness and success of the state's resources in addressing illegal sales, with seizures of untaxed tobacco and e-cigarettes declining since they began tracking in 2021.<sup>25</sup> Massachusetts has invested in

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additional actions to enforce state law, including more inspections and improved record-keeping to better track enforcement efforts. The Department of Revenue has increased the number of annual inspections by approximately 24% since FY20 and local boards of health have increased the number of inspections by 38.74% since FY21. Local boards of health reported over 95% compliance with flavor regulations in FY25.<sup>26</sup>

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- <sup>1</sup> Massachusetts Department of Public Health, <https://www.mass.gov/info-details/tobacco-use-behaviors-and-secondhand-smoke-exposure#youth-tobacconicotine-use>.
  - <sup>2</sup> Cheng, D., et al. (2025). State E-Cigarette Flavor Restrictions and Tobacco Product Use in Youths and Adults. *JAMA Network Open*, 8(7), e2524184-e2524184.
  - <sup>3</sup> Tauras, J.A. and Chaloupka, F.J. "Health Care Cost Savings Associated with the Massachusetts Flavored Tobacco Restriction on Menthol Cigarettes," <https://www.mass.gov/doc/health-care-cost-savings-associated-with-the-massachusetts-flavored-tobacco-restriction-on-menthol-cigarettes/download>.
  - <sup>4</sup> Tauras, J.A. and Chaloupka, F.J. "Health Care Cost Savings Associated with the Massachusetts Flavored Tobacco Restriction on Menthol Cigarettes," <https://www.mass.gov/doc/health-care-cost-savings-associated-with-the-massachusetts-flavored-tobacco-restriction-on-menthol-cigarettes/download>.
  - <sup>5</sup> Massachusetts Department of Public Health, "Adult tobacco/nicotine use," <https://www.mass.gov/info-details/tobacco-use-behaviors-and-secondhand-smoke-exposure#adult-tobacconicotine-use>.
  - <sup>6</sup> 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>.
  - <sup>7</sup> 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>.
  - <sup>8</sup> 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>.
  - <sup>9</sup> 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.
  - <sup>10</sup> CDC Foundation "Changes in US and State Cigarette Sales Following Flavored Tobacco Sales Restrictions," <https://www.cdcfoundation.org/programs/monitoring-e-cigarette-use-among-youth>. Data from Circana, 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.
  - <sup>11</sup> Asare, S, et al., "Association of Cigarette Sales with Comprehensive Menthol Flavor Ban in Massachusetts," *JAMA Internal Medicine*, published online January 4, 2021.
  - <sup>12</sup> Tauras, J.A. & Chaloupka, F.J. (2023). The Impact of Tobacco Flavor Bans on Cross-Border Sales. *Tobacconomics*. <https://www.tobacconomics.org/research/the-impact-of-tobacco-flavor-bans-on-cross-border-sales/>
  - <sup>13</sup> 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.
  - <sup>14</sup> 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>.
  - <sup>15</sup> 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.
  - <sup>16</sup> Ali FRM, et al., "Impact of Massachusetts law prohibiting flavored tobacco products sales on cross-border cigarette sales." *PLoS ONE*, 2022, 17(9): e0274022.
  - <sup>17</sup> Commonwealth of Massachusetts, *Annual Report of the Multi-Agency Illegal Tobacco Task Force*, February 28, 2023, <https://www.mass.gov/doc/task-force-fy23-annual-report/download>.
  - <sup>18</sup> 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>.
  - <sup>19</sup> Commonwealth of Massachusetts, *Annual Report of the Multi-Agency Illegal Tobacco Task Force*, February 25, 2026, <https://www.mass.gov/doc/task-force-fy26-annual-report/download>.
  - <sup>20</sup> Tauras, J.A. and Chaloupka, F.J. "The Effects of Tobacco Flavor Restrictions on Tobacco Retail Businesses in Massachusetts and States in the Northeast Region of The United States," <https://www.mass.gov/doc/the-effects-of-tobacco-flavor-restrictions-on-tobacco-retail-businesses-in-massachusetts-and-states-in-the-northeast-region-of-the-united-states/download>.
  - <sup>21</sup> 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.
  - <sup>22</sup> 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.
  - <sup>23</sup> Phillips, L, "Mass. tobacco law is working. Take note, federal officials." February 9, 2024, *The Boston Globe*, <https://www.bostonglobe.com/2024/02/09/opinion/letters-to-the-editor-tobacco-law/#:~:text=In%202019%20Massachusetts%20menthol%20and,restriction%20of%20flavored%20tobacco%20products..>
  - <sup>24</sup> 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. \
  - <sup>25</sup> Commonwealth of Massachusetts, *Annual Report of the Multi-Agency Illegal Tobacco Task Force*, February 25, 2026, <https://www.mass.gov/doc/task-force-fy26-annual-report/download>.
  - <sup>26</sup> Commonwealth of Massachusetts, *Annual Report of the Multi-Agency Illegal Tobacco Task Force*, February 25, 2026, <https://www.mass.gov/doc/task-force-fy26-annual-report/download>.