



Massachusetts Department of Public Health

MONITORING THE IMPACT OF THE MASSACHUSETTS STATEWIDE FLAVORED TOBACCO RESTRICTION LAW: OVERVIEW AND PRELIMINARY RESULTS

Massachusetts Health Officers Association
Annual Conference
October 26, 2022

Outline

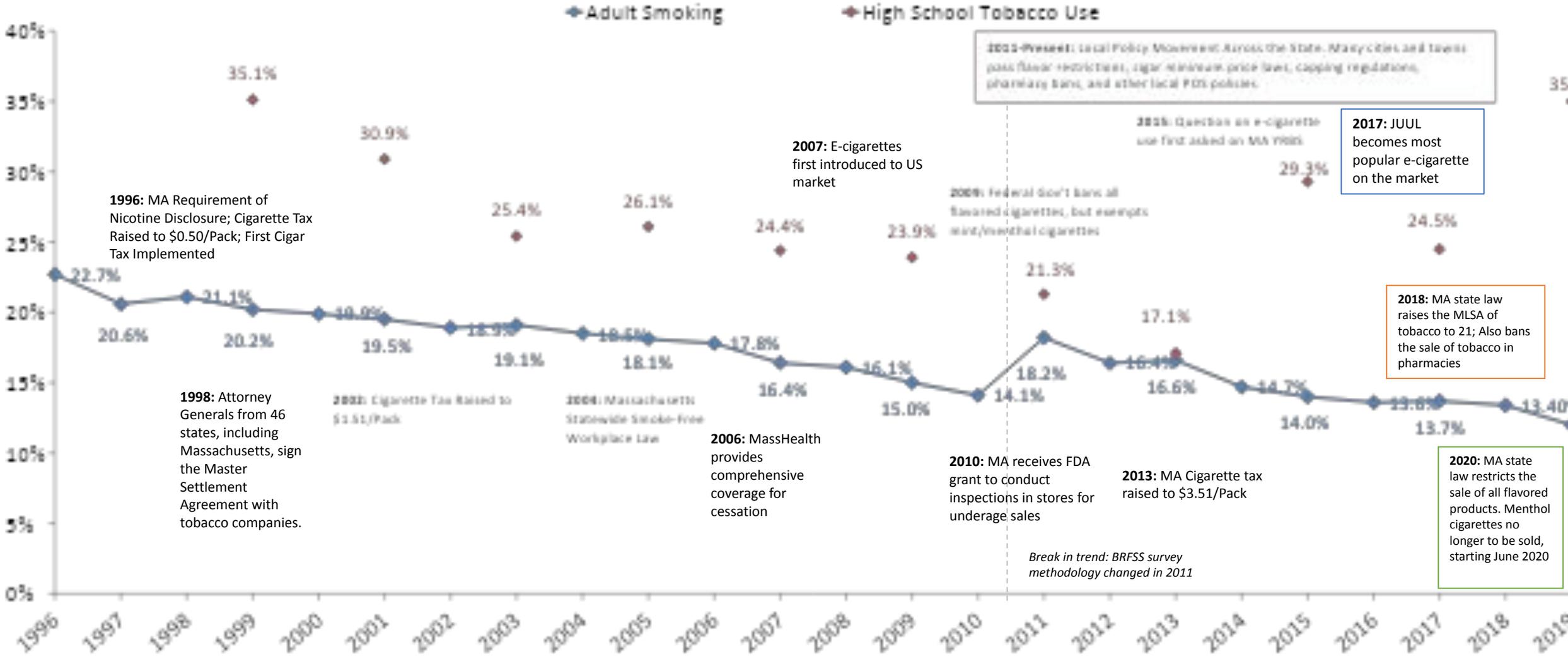
Background: Precedence to Massachusetts Statewide Flavored Tobacco Restriction & Provisions of the Law

Framework for Evaluating the Law

Data Sources and Results

Precedence to Massachusetts Statewide Flavored Tobacco Restriction

Despite major progress in reducing youth and adult tobacco use over the past 25 years, youth tobacco use is now at a historic high (due to the vaping epidemic)



Note: From 1999-2015 high school tobacco use includes current (past-30-day) use of any cigarettes, cigars, smokeless. From 2015-2019, the definition was expanded to include e-cigarettes.

Data Sources: Adult smoking: Behavioral Risk Factor Surveillance System; Youth Tobacco Use 1997-2017: MYRBS; 2019: HS MYHS

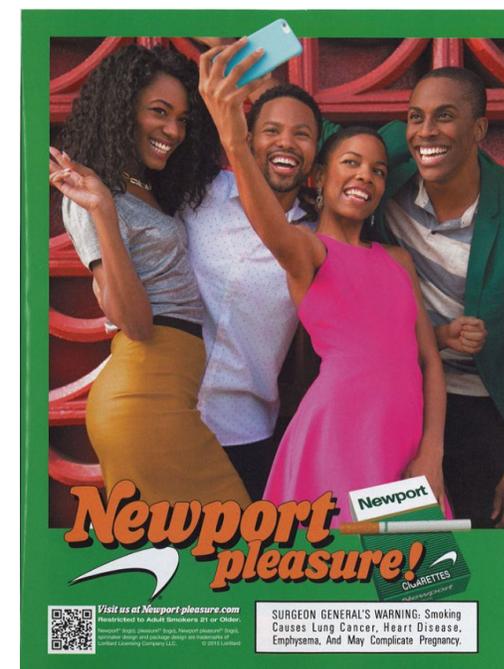
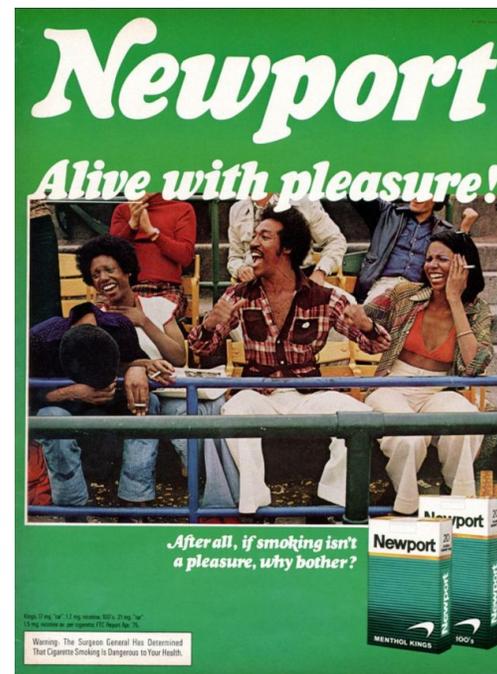
Menthol is a Racial Justice Issue



Tobacco industry has targeted menthol cigarettes to black people and communities.

The tobacco industry worked to expand their market by targeting menthol products in urban, *segregated*, black communities.

- Tobacco-sponsored events (i.e. jazz concerts)
- Use of Black models and positive images in ads
- Tobacco industry giving money to black organizations to gain trust
- Provision of free products directly in black communities

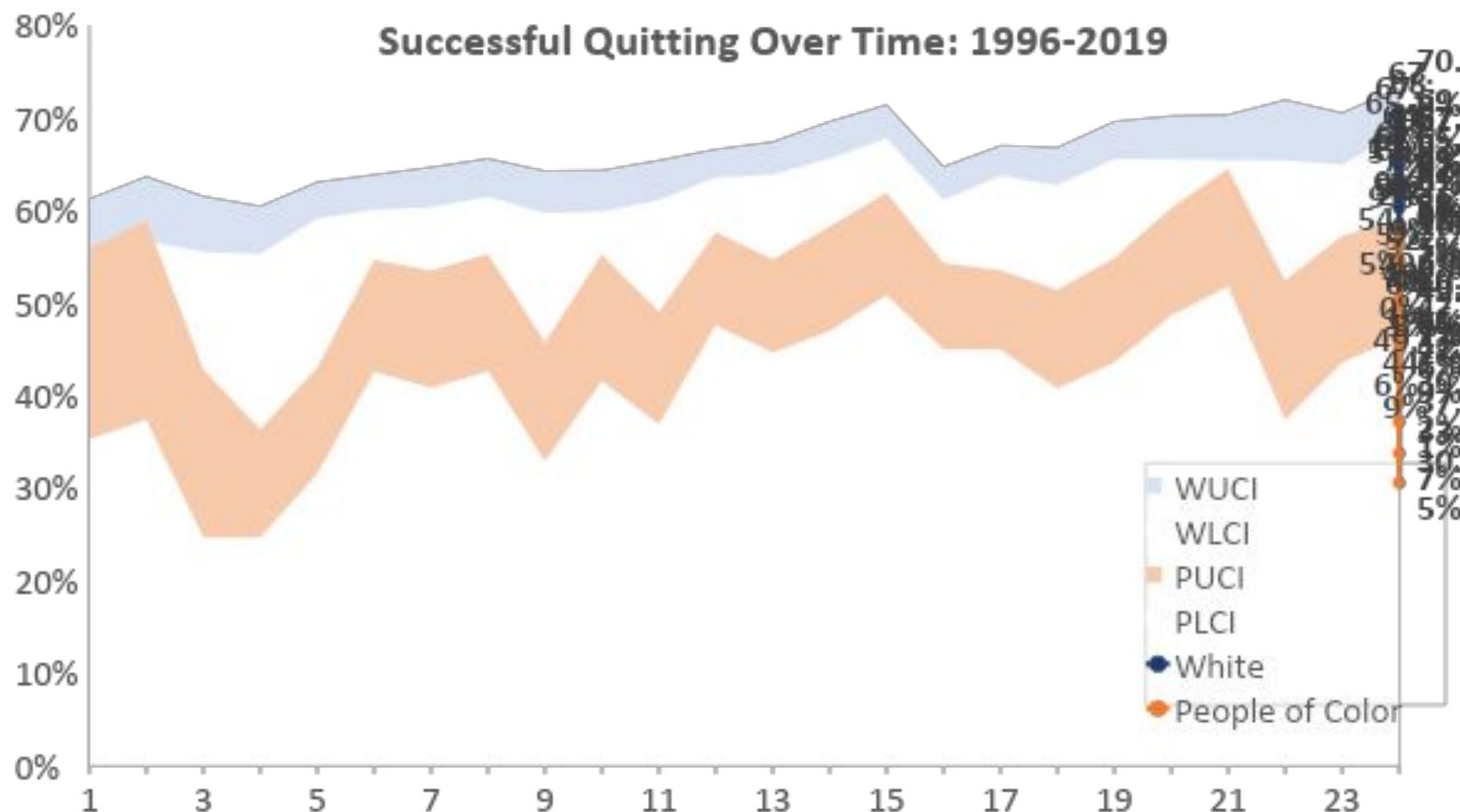


Menthol is a Racial Justice Issue: Cessation

Mint and menthol cigarettes are **biologically more addictive and harder to quit.**

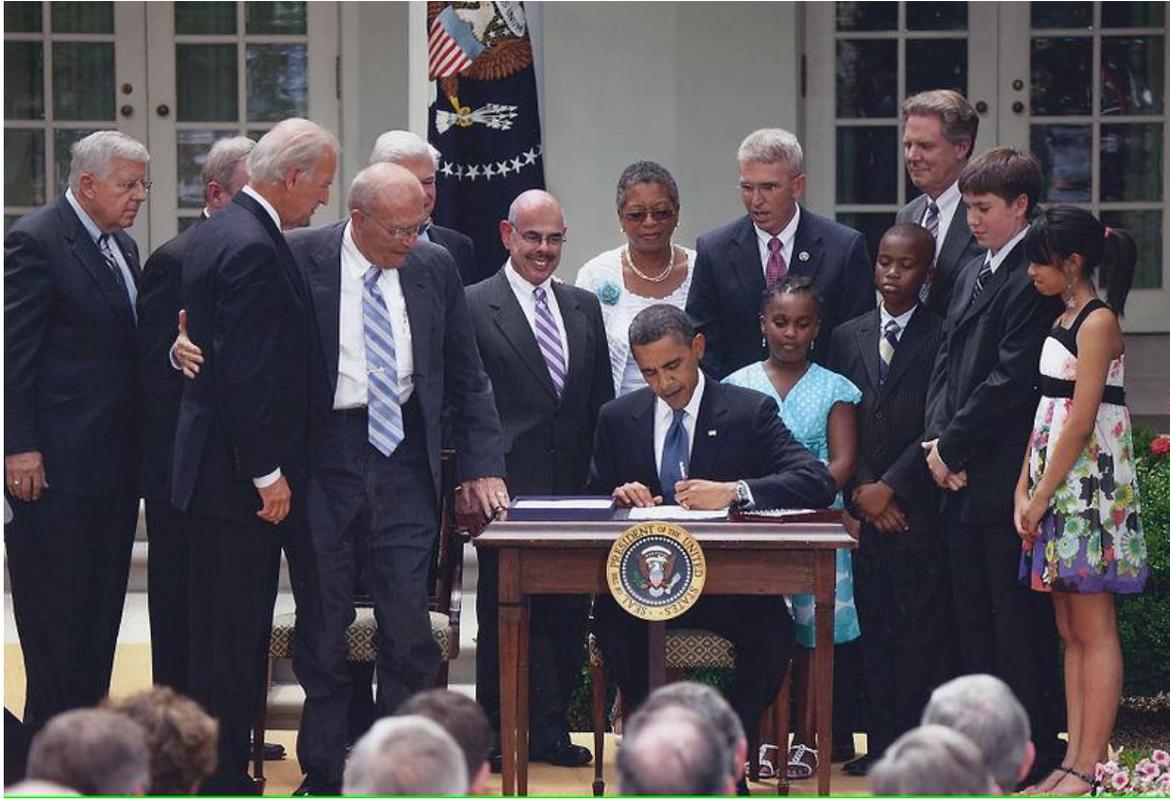
Despite having similar rates of smoking and quit attempts compared to White people, **Black people and Hispanic/Latinx people in Massachusetts** consistently have **lower rates of successful quitting**, even after adjusting for income.

Beyond menthol use, racial inequities in cessation have resulted from **racism and marginalization in housing, education, employment, built and social environments, and healthcare**



Note: Shaded areas represented 95% confidence intervals. Break in trend due to a change in survey weighting methodology in 2011
Source: Massachusetts BRFSS

Menthol is a Racial Justice Issue: Policy



President Obama signing the "Family Smoking Prevention and Tobacco Control Act" (2009)

Banned the sale of any flavored cigarettes **except mint and menthol** as flavored cigarettes are appealing to youth



Massachusetts Governor Charlie Baker signing "An Act Modernizing Tobacco Control" (2019)

Effectively closes loophole in the FSPTCA by restricting the sale of menthol tobacco products, including menthol cigarettes, to smoking bars for on-site consumption, only.

Local Enforcement

The Massachusetts Tobacco Cessation and Prevention Program (MTCP) provides funding for enforcement activities in 16 Collaboratives (100% of retailers in these collaboratives)

To ensure equitable enforcement of the law:

- The Department of Public Health regulations name local boards of health as the primary enforcement agent for the point-of-sale components of this law
- The law does not include purchase, use, or possession (PUP) penalties
- The law requires that penalties are enforced against businesses (not individuals)
- The law requires that all penalties are non-criminal

Key Evaluation Questions



Retail Environment:

Has the new law decreased sales and availability of menthol and other flavored tobacco?
How has it impacted overall tobacco sales?

Awareness/

Perceptions: Are adults aware of the law? Do they support it?



Tobacco Use:

Has the new law decreased menthol and other flavored tobacco use among youth and adults? Has it decreased tobacco use overall?



Cessation: Has the new law increased rates of tobacco treatment and use of evidence-based resources?



Racial Equity: Has the new law decreased sales/availability of menthol and other flavored tobacco, decreased tobacco use, and increased rates of tobacco treatment in communities of color?

MTCP Data Sources: Existing Data

Retail Environment

Retailer information

- Address, type of store (convenience, vape shop, tobacconist, gas station, grocery store, etc), contact information
- Used to monitor retail density and for any place-based analysis

Compliance Checks

- Tracks underage youth tobacco sales
- 100% of all MA retailers receive at least one visit per year; retailers in funded communities get more
- Demographic of youth, whether illegal sale was made

Inspection Visits

- Tracks violations to point-of-sale policies (other than underage sales), as well as topics discussed with retailers and materials distributed (e.g. signs, copy of regulations, etc.)
- Conducted in **100% retailers in MTCP-funded communities** every year

Pricing Survey

- Tracks availability and price of select flavored and non-flavored tobacco products, including cigarettes, cigars, smokeless, and vape products
- Conducted in **100% retailers** every year

MTCP Data Sources: Existing Data

Tobacco Use

Youth Health Survey (YHS)/Youth Risk Behavior Survey (YRBS)

- Conducted on odd years to a sample of middle schools (YHS only) and high schools (both) in Massachusetts
- Used to monitor statewide youth prevalence on tobacco use, access, perception of risks, etc.

Behavioral Risk Factor Surveillance System (BRFSS)

- Telephone survey conducted annually to Massachusetts adults
- Used to monitor statewide adult prevalence on tobacco use, quitting behavior, SHS exposure, etc.

Cessation

MassHealth Claims

- Claims database which includes claims for NRT, cessation medication, and counseling

Massachusetts Quitline

- National Jewish Health, the Quitline vendor for Massachusetts, maintains a database of Quitline service information from referral to counseling completion to outcomes evaluation. NJH provides monthly summary reports, as well as raw data files, to MTCP

MDPHnet

- EHR data which includes tobacco use status. Can create a cohort and assess changes in tobacco use status over time

MTCP Data Collection: New Data Sources

Topic	Data Source
 Retail Environment	<ul style="list-style-type: none">Nielsen and IRI data (UPC scanner data)
 Awareness/ Perceptions	
 Tobacco Use	<ul style="list-style-type: none">Adult panel survey in communities of color
 Cessation	<ul style="list-style-type: none">Longitudinal youth surveys (collaboration with MGH Center for Addiction Medicine)- <i>Results TBD</i>

**Did the State Law Result in
Reductions in Flavored and
Menthol Sales in
Massachusetts?**

Methods

- MTCP obtained **quarterly Nielsen data** for retail sales of tobacco products in **Massachusetts** and **neighboring states (New Hampshire, New York, Rhode Island, Vermont)** from **June 2017 (3 years pre-law implementation)** to date
- MTCP obtained **quarterly IRI data** from **Massachusetts and New Hampshire** from **June 2019 (1 year pre-law implementation)** to date

Population

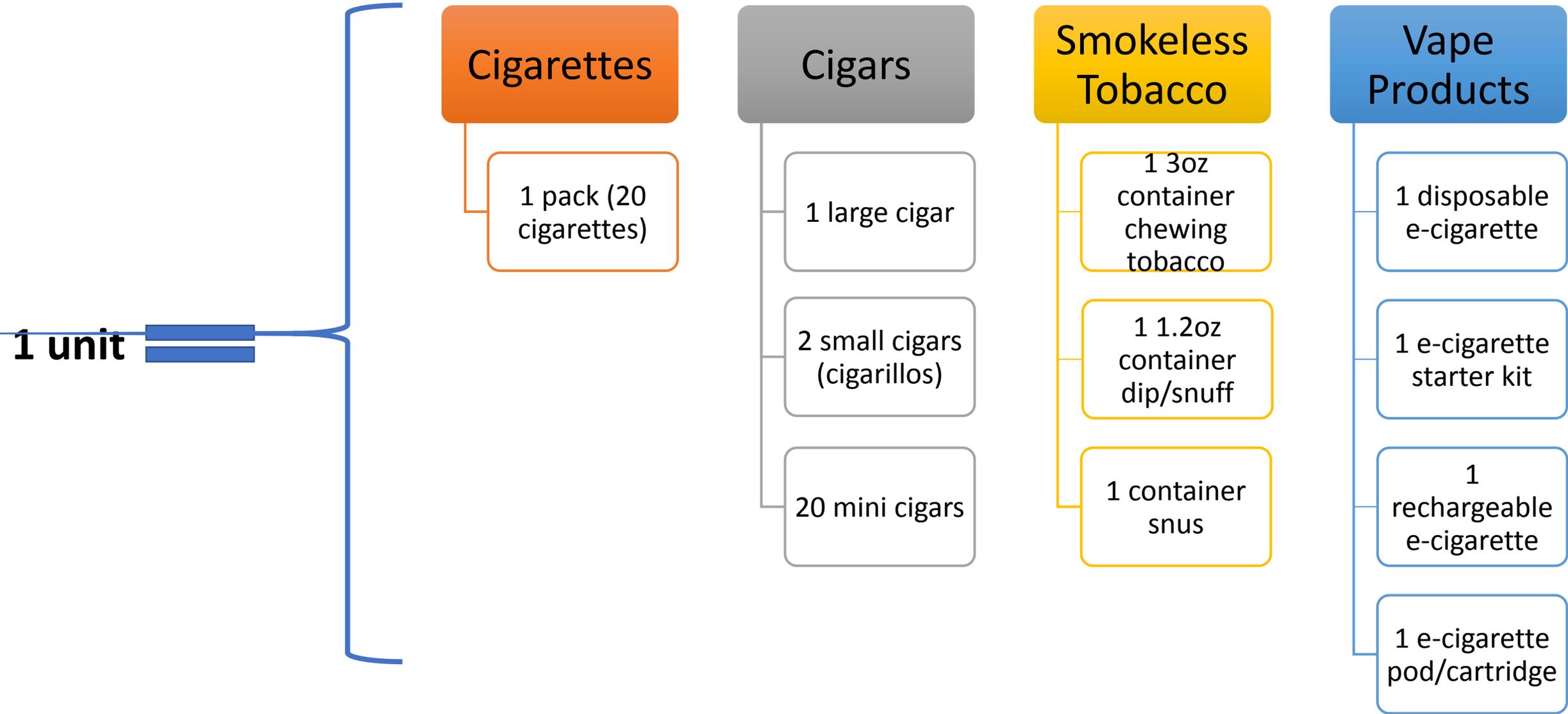
Nielsen: Sales data from **large retailers** (~25% of all tobacco retailers in Massachusetts)

IRI: Sales data from 90% of large retailers and 25% of convenience stores in Massachusetts

Outcomes

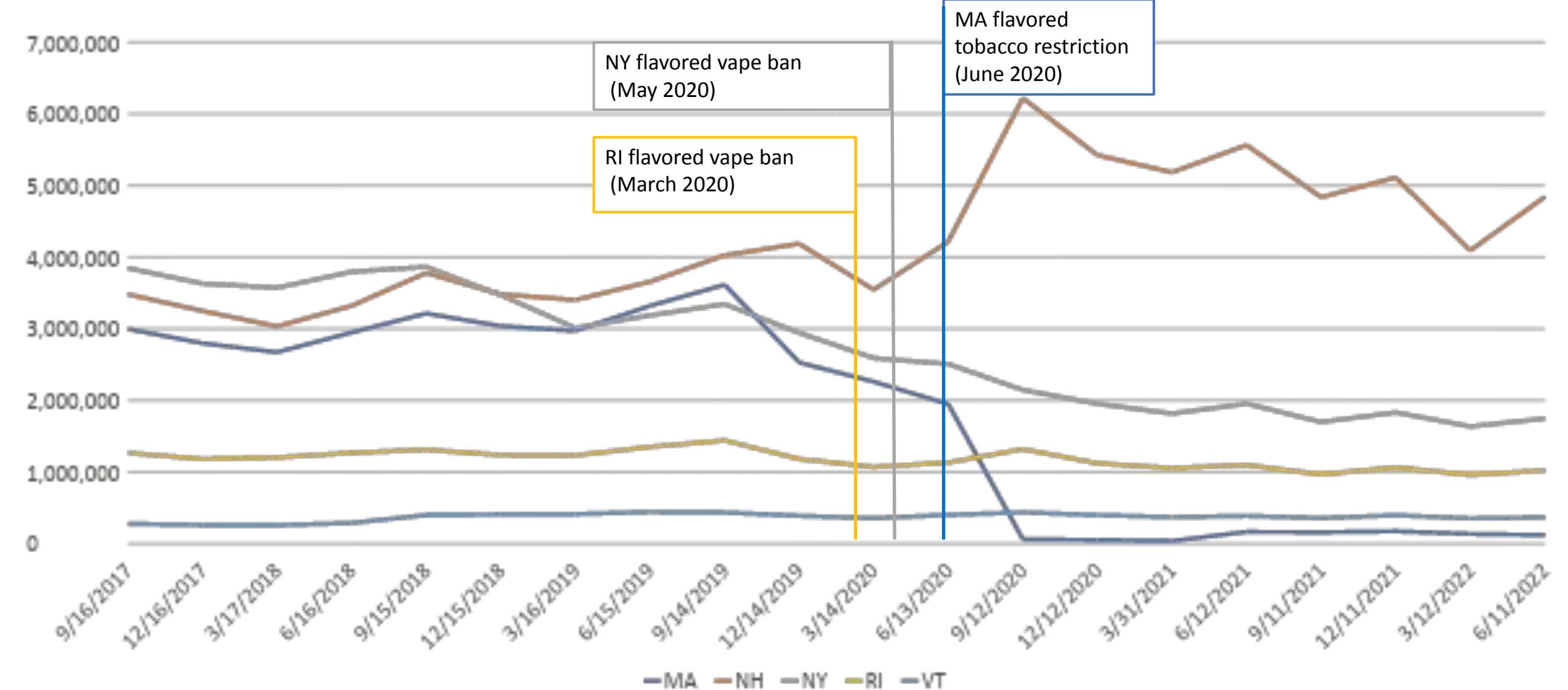
Unit sales of menthol, other flavored, and non-flavored tobacco products (includes sales of cigarettes, cigars/cigarillos, smokeless tobacco, and vape products)

Tobacco Retail Sales Data Analysis: Standardization



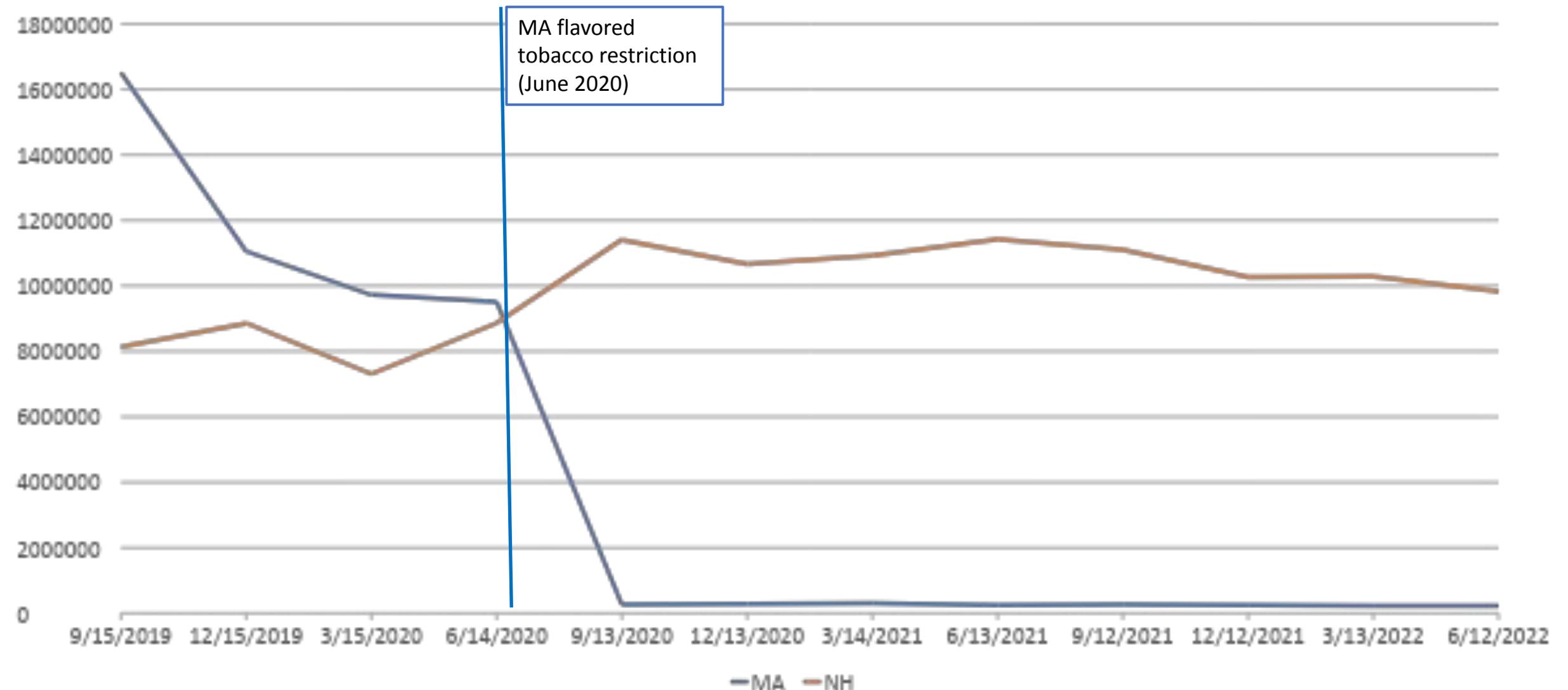
Units of Menthol Tobacco Sold-Nielsen Data

Following MA flavored tobacco restriction, sales of menthol products decreased in MA and increased in NH. Sales in NH have continued to decline towards pre-law levels. Sales in other states did not change following the law.



Units of Menthol Tobacco Sold- *IRI Data*

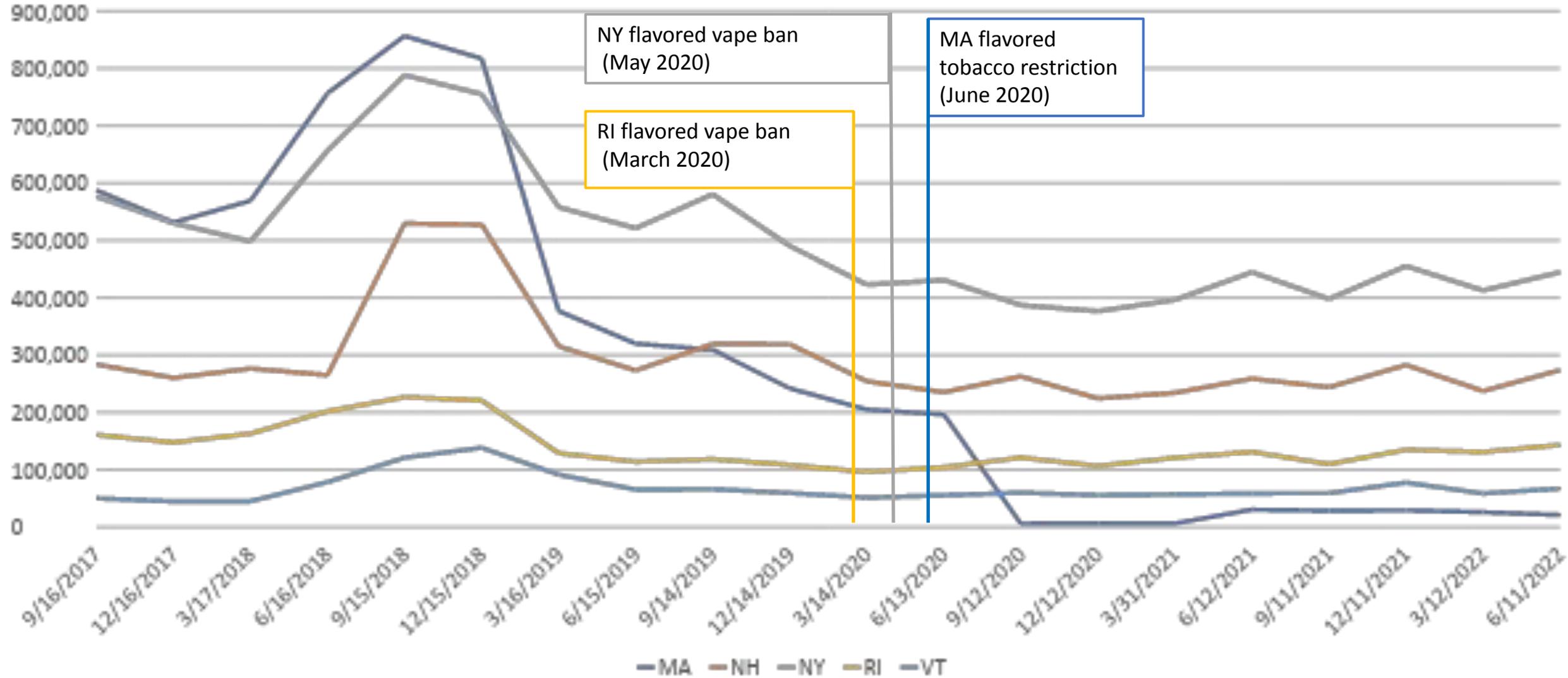
Following MA flavored tobacco restriction, sales of menthol products decreased in MA and temporarily increased in NH



Source: IRI Market Advantage, Massachusetts Multi-Outlet and Convenience

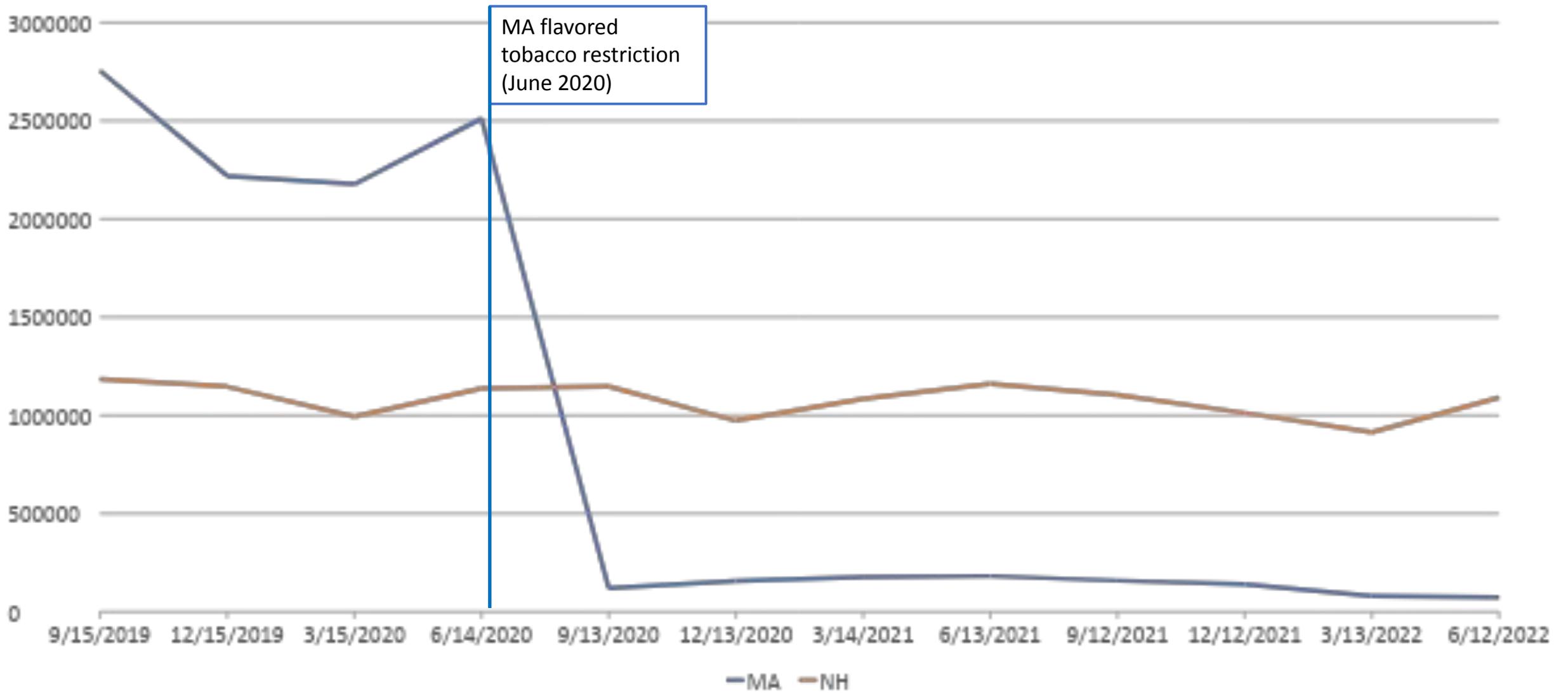
Units of Flavored Tobacco Sold- *Nielsen Data*

Following MA flavored tobacco restriction, sales of flavored tobacco decreased in MA without large increases in neighboring states



Units of Flavored Tobacco Sold (Excluding Menthol): *IRI Data*

Following MA flavored tobacco restriction, sales of flavored tobacco decreased sharply in MA and did not increase in NH



Source: IRI Market Advantage, Massachusetts Multi-Outlet and Convenience

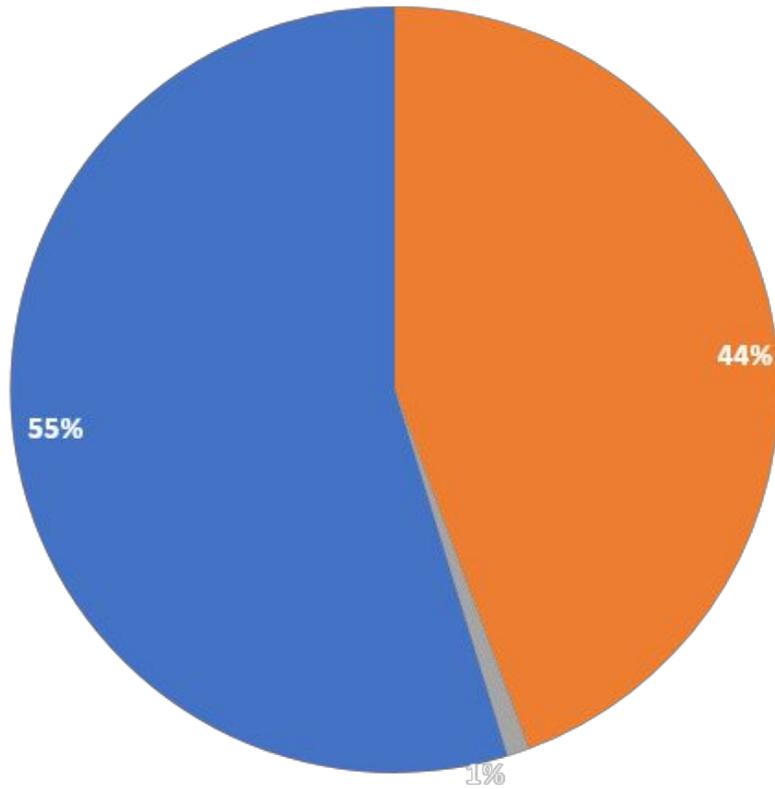
**What is Driving Menthol
Sales in New Hampshire?**

Cigarette Sales by Pack Size- *Nielsen Data*

Percent of carton sales are much higher in NH than in Massachusetts

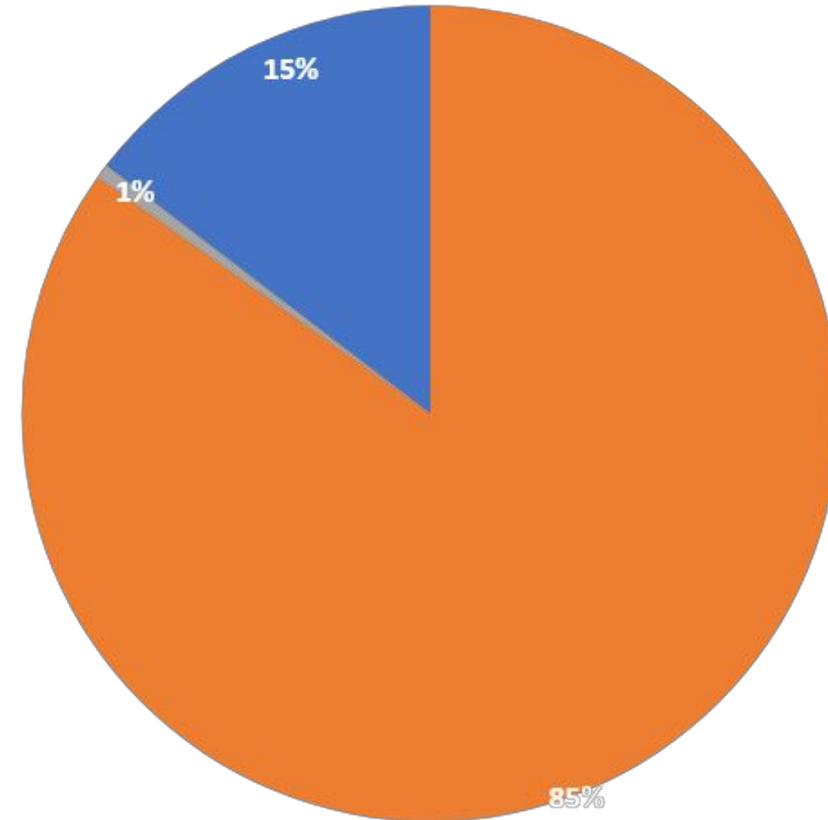
NH sales by pack size

■ single pack ■ multi pack ■ carton



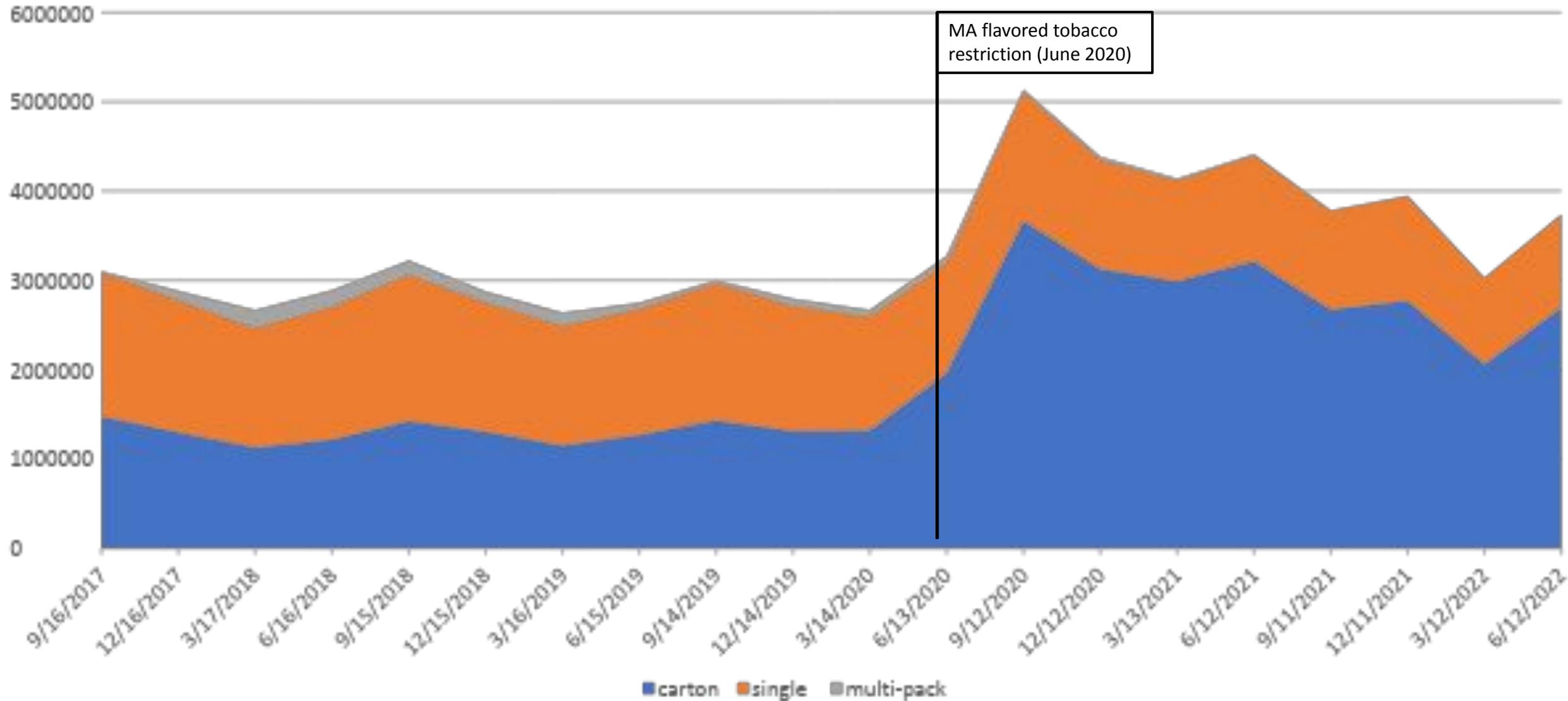
MA SALES by pack size

■ single pack ■ multi pack ■ carton



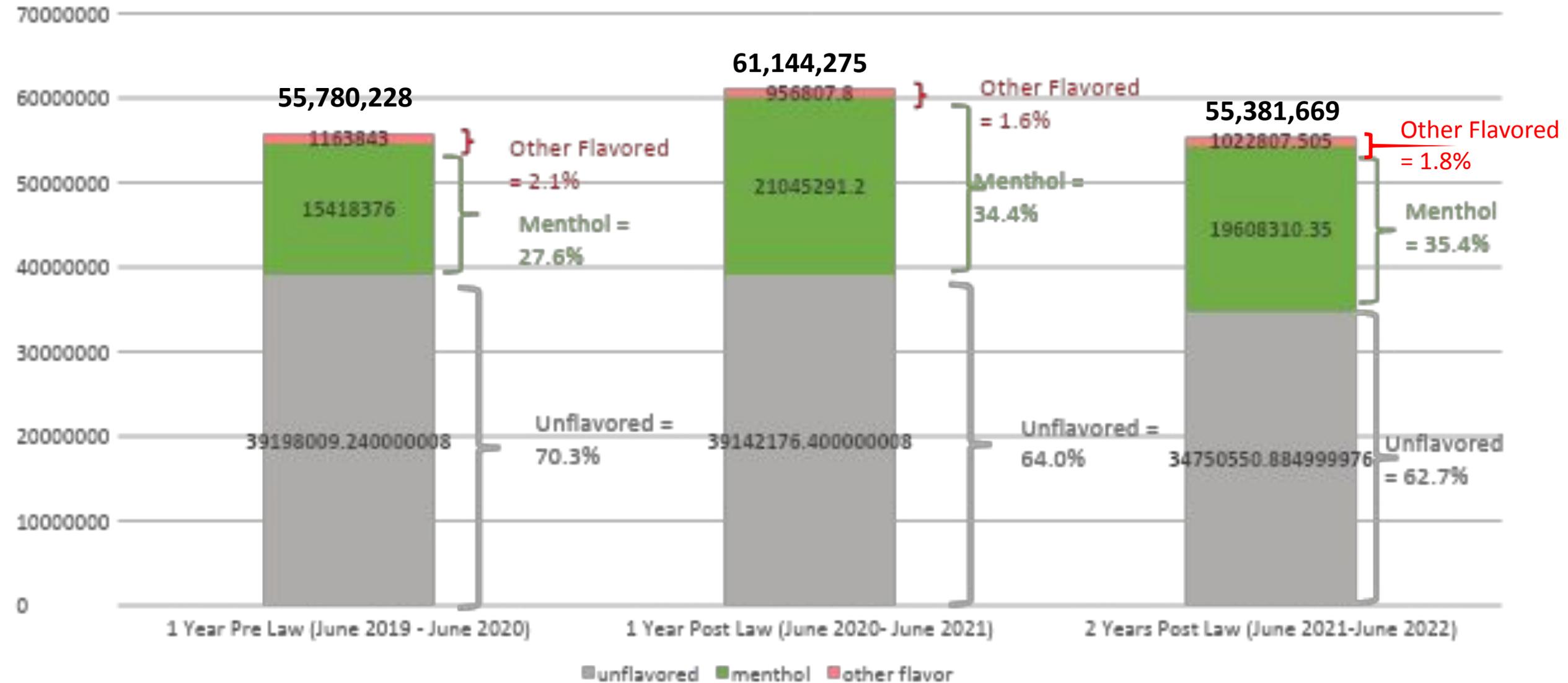
Menthol Cigarettes Sold in NH by Pack Size- *Nielsen Data*

Carton sales in NH increased following the law implementation in MA



Tobacco Units Sold in New Hampshire- *Nielsen Data*

Proportion of tobacco sales that are menthol increased in NH after the law, but total units sold has now returned to pre-law levels. Increase in menthol sales in NH did not make up for total decrease in MA (net decrease in overall menthol sales)



Sales Data Summary

Drastic reductions in unit sales of menthol and other flavored tobacco products have been seen in Massachusetts post-law implementation; substantial increases have not been seen in most neighboring states

An increase in menthol sales was seen in NH immediately post-law implementation. This increase was not sustained, and total tobacco sales in NH have changed minimally. Menthol sales in NH are primarily driven by cigarette cartons

High retailer compliance can be attributed in part to MTCP's long history of supporting local tobacco policy movement and rigorous enforcement infrastructure:

- Letters and guidance tools created for retailers (translated into multiple languages)
- Educational trainings provided to all retailers

Publications: MTCP Study

Impact of Massachusetts' Statewide Sales Restriction on Tobacco Sales in Massachusetts and Surrounding States, June 2020.

<https://ajph.aphapublications.org/doi/10.2105/AJPH.2022.306879>

- **Major findings:**

- Nielsen sales data from 3 years pre-law implementation (June 2017-June 2020) 1 year post-law implementation (June 2020-June 2021) indicate high retailer compliance in Massachusetts, with drastic decreases seen in sales of both menthol and other flavored tobacco.
- Most neighboring states assessed (Vermont, Rhode Island, New York) did not see increases in overall tobacco sales, although New Hampshire saw an initial increase in menthol sales in the 3 months following implementation, which was not sustained. Furthermore, when comparing changes in menthol sales in NH and MA in the year following implementation, a net decrease in menthol sales was seen.

Publications: External Studies

American Cancer Society: Association of Cigarette Sales With Comprehensive Menthol Flavor Ban in Massachusetts.

<https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2787781>

- **Major findings:** Nielsen sales data from 3.5 years pre-law implementation (January 2017-May 2020) to 1 year post-law implementation (June 2020-July 2021) indicate significantly greater decreases in overall cigarette sales and menthol cigarette sales per 1000 people in Massachusetts compared to 27 other states without state or local flavor bans

American Cancer Society: Spatial Analysis of Changes in Cigarette Sales in Massachusetts and Bordering States Following the Massachusetts Menthol Flavor Ban. <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2796282>

- **Major findings:** Sales data from the US Department of Treasury from 3.5 years pre-law implementation (January 2017-May 2020) to 1 year post-law implementation (June 2020-July 2021) indicate that monthly cigarette sales per 1000 people decreased in Massachusetts by 350.02 packs and increased by 9.51 packs in bordering states for a net decrease of 340.51 packs per 1000 people

CDC Foundation: Impact of Massachusetts law prohibiting flavored tobacco products sales on crossborder cigarette sales.

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0274022#:~:text=disparities%20%5B17%5D-,Laws%20prohibiting%20the%20sale%20of%20flavored%20tobacco%20products%2C%20including%20menthol,where%20menthol%20cigarettes%20are%20sold>

- **Major Findings:** IRI sales data from 6 months before (January 2020-May 2020) and after (June 2020-December 2020) law implementation indicate that there were no statistically significant changes in menthol cigarette sale in bordering states (New Hampshire, Connecticut, Vermont, Rhode Island) compared to 28 non-bordering states after the law was implemented. These findings did not change after adjusting for product prices, tobacco control policies, COVID, sociodemographic factors, and fixed effects

Is the law decreasing access
to and use of flavored
tobacco among adults?

Adult Panel Survey Data: Overview

Methods

MTCP conducted an online survey that was disseminated in 11 Massachusetts communities with higher-than-state average Black, Indigenous, or People of Color (BIPOC) populations. Surveys were administered through both an online panel and direct household mailings in four languages: English, Spanish, Portuguese, and Haitian Creole. Surveys were disseminated during the summer of 2021 and 2022

Population

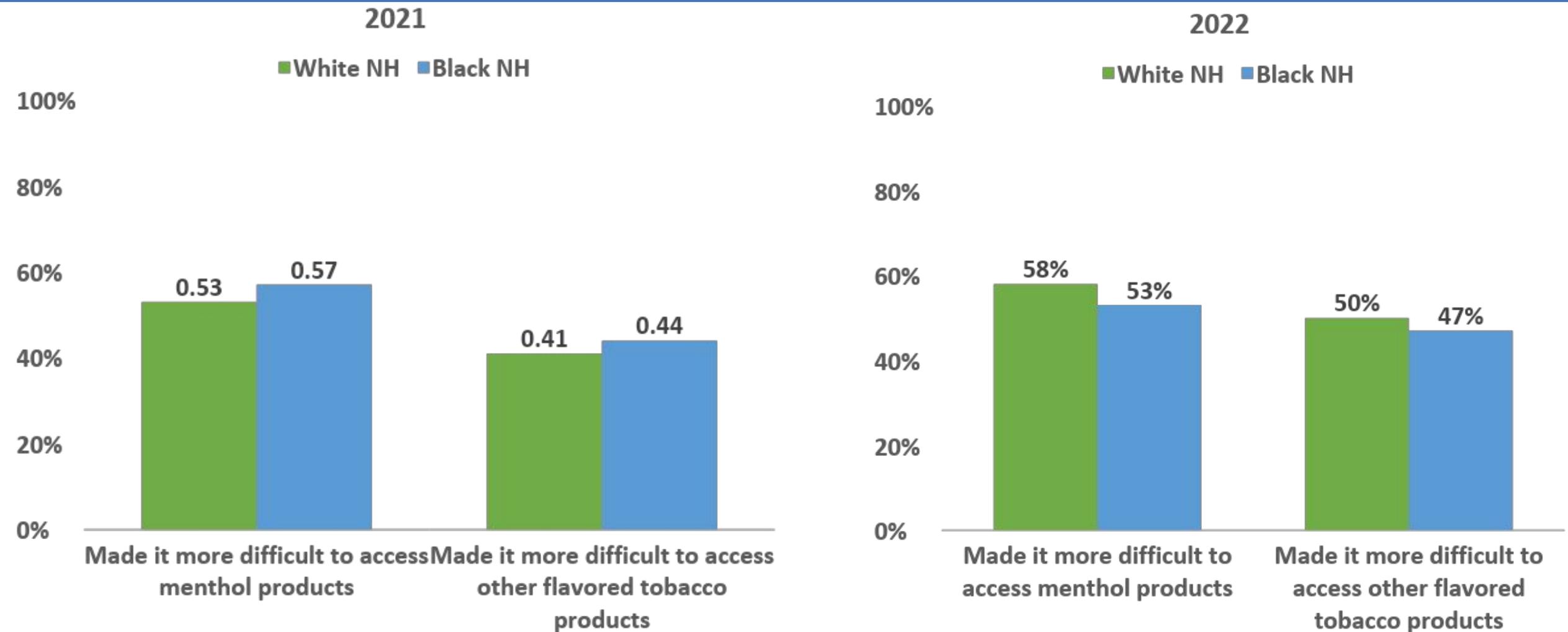
Adults (21+) that used tobacco products in the past year. The analytic sample included residents who reported using flavored or menthol tobacco products who identified as Black (n=63 in 2021; n=44 in 2022) or White non-Hispanic (n=231 in 2021; n=543 in 2022)

Outcomes

- Awareness and perceptions of the law
- Perceptions of community impact
- Sources of tobacco access (in and out of state)
- Impact of the law on quitting
- Barriers to quitting

Difficulty in Accessing Restricted Tobacco Products

Almost half of both White and Black respondents reported that the law made it more difficult to access menthol and other flavored tobacco products*

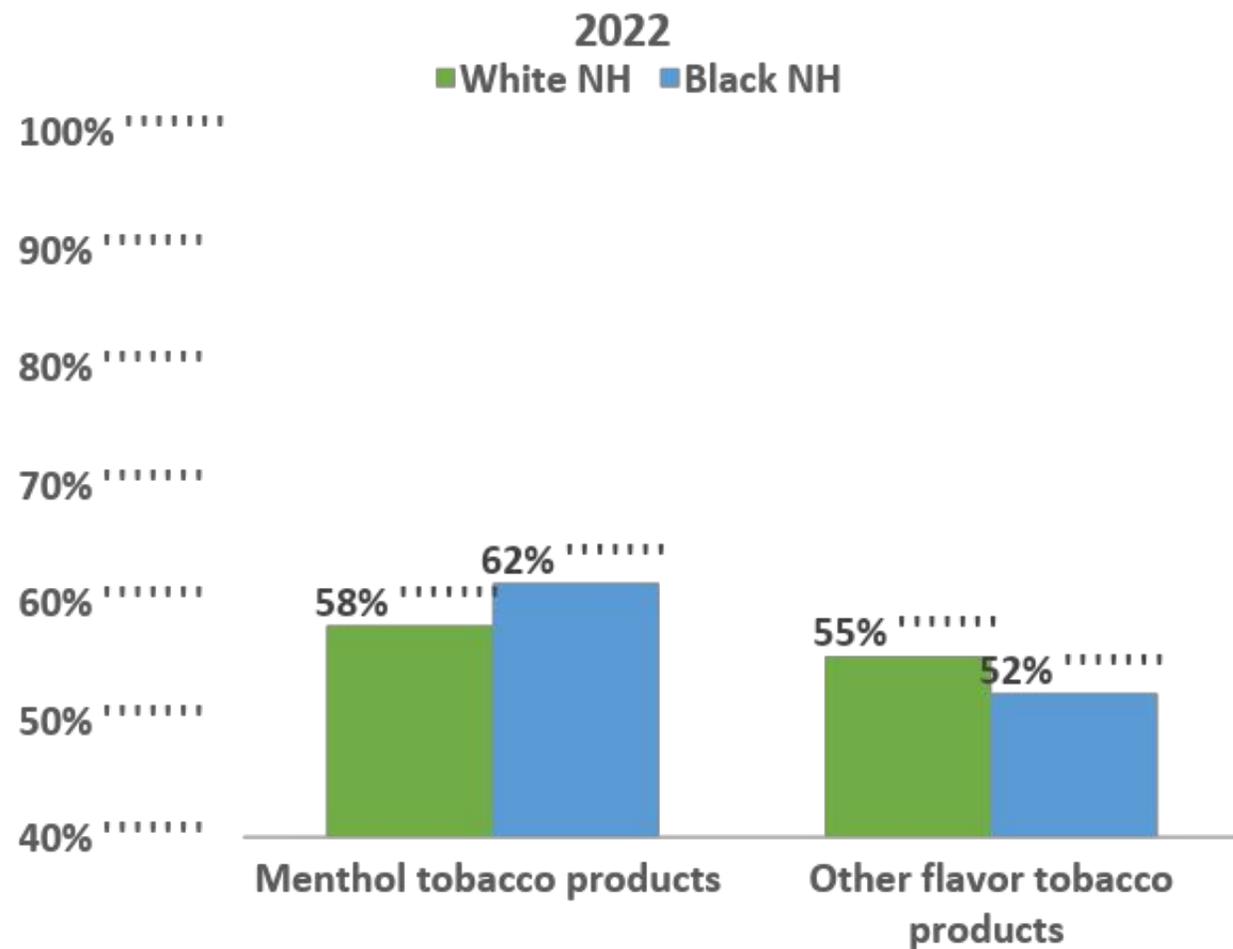
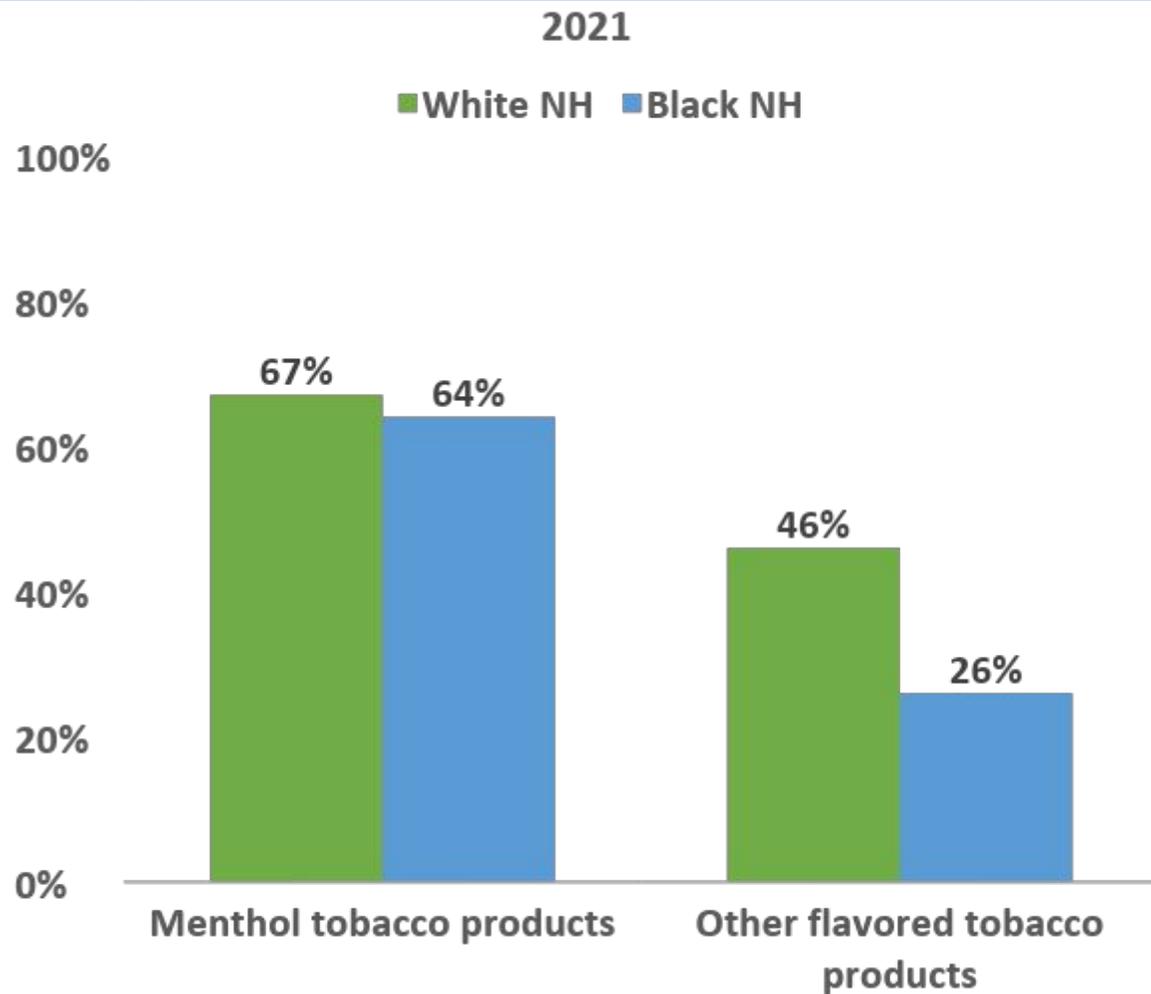


*No statistically significant differences for either year between Black and White respondents

Source: MA Online Panel Survey, 2021 & 2022

Out of State Access to Restricted Tobacco Products

Many respondents reported purchasing menthol and other flavored tobacco products out of state*. More respondents reported purchasing menthol than other flavored tobacco products out of state



*No statistically significant differences for either year between Black and White respondents

Source: MA Online Panel Survey, 2021 & 2022

Concern For Increased Policing

In 2021, 41% of white respondents and 44% of black respondents reported concern for increased policing due to the law

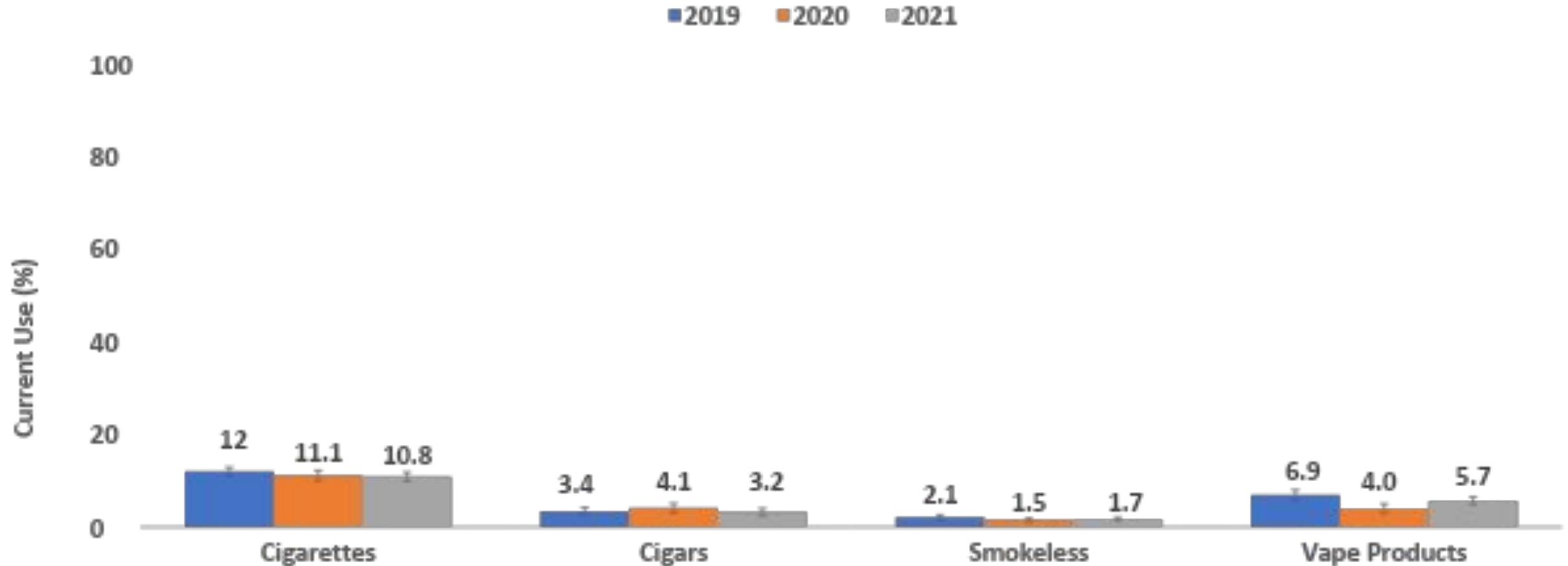
In 2022, 6% of white respondents and 7% of black respondents reported having seen or heard of police interactions related to the menthol law

Note: Question about concern for increased policing was not asked in 2022; Question about seeing or hearing about police interactions was not asked in 2021

Source: MA Online Panel Survey, 2021 & 2022

**Is the law increasing rates
of successful quitting
among adults?**

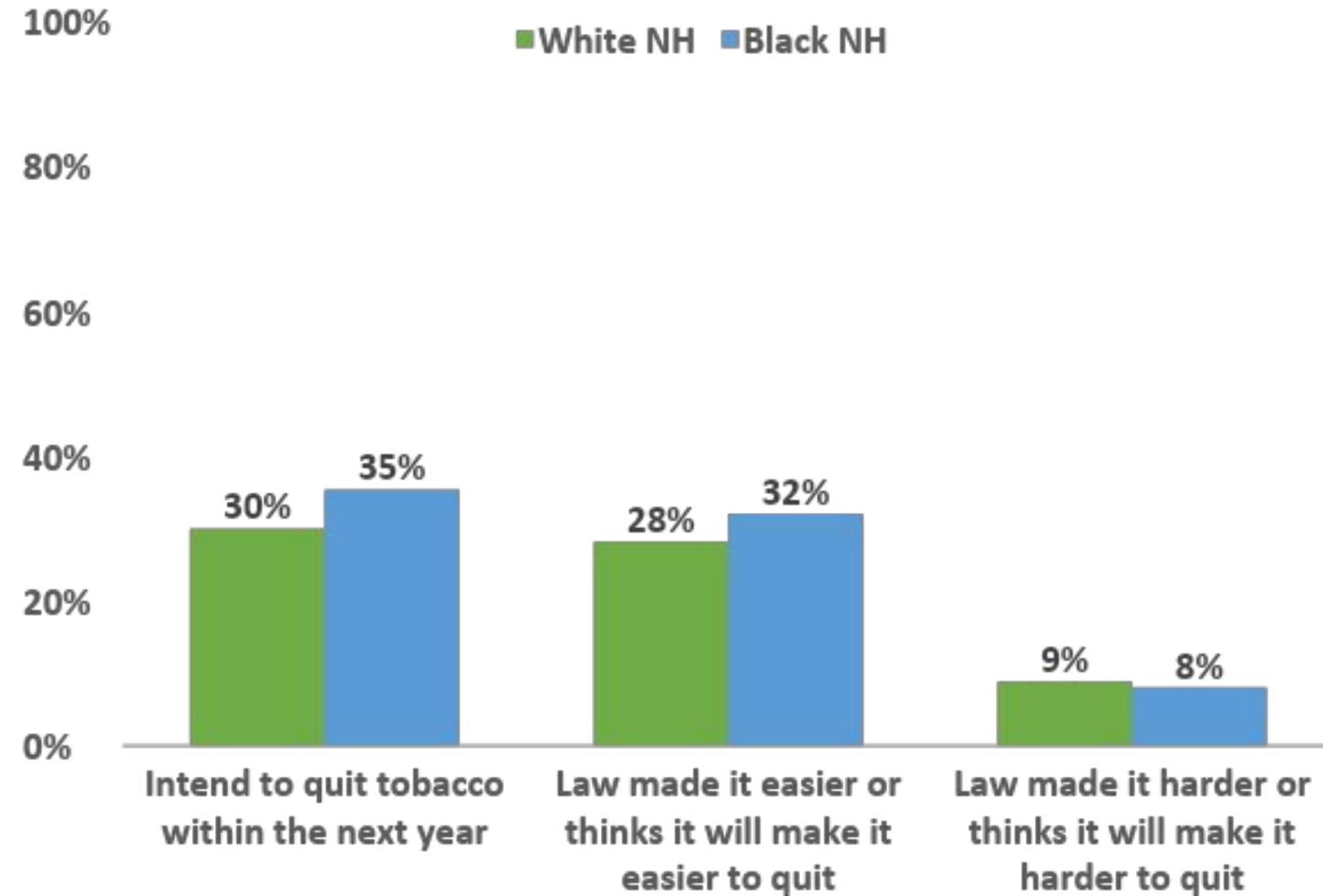
BRFSS: Tobacco Use Rates for Most Tobacco Products Decreasing



Source: Massachusetts BRFSS, 2019-2021

Impact of the Law on Quitting: 2021

Around a third of respondents believe the law will make it easier to quit smoking, and about a third intend to quit tobacco use within the next year



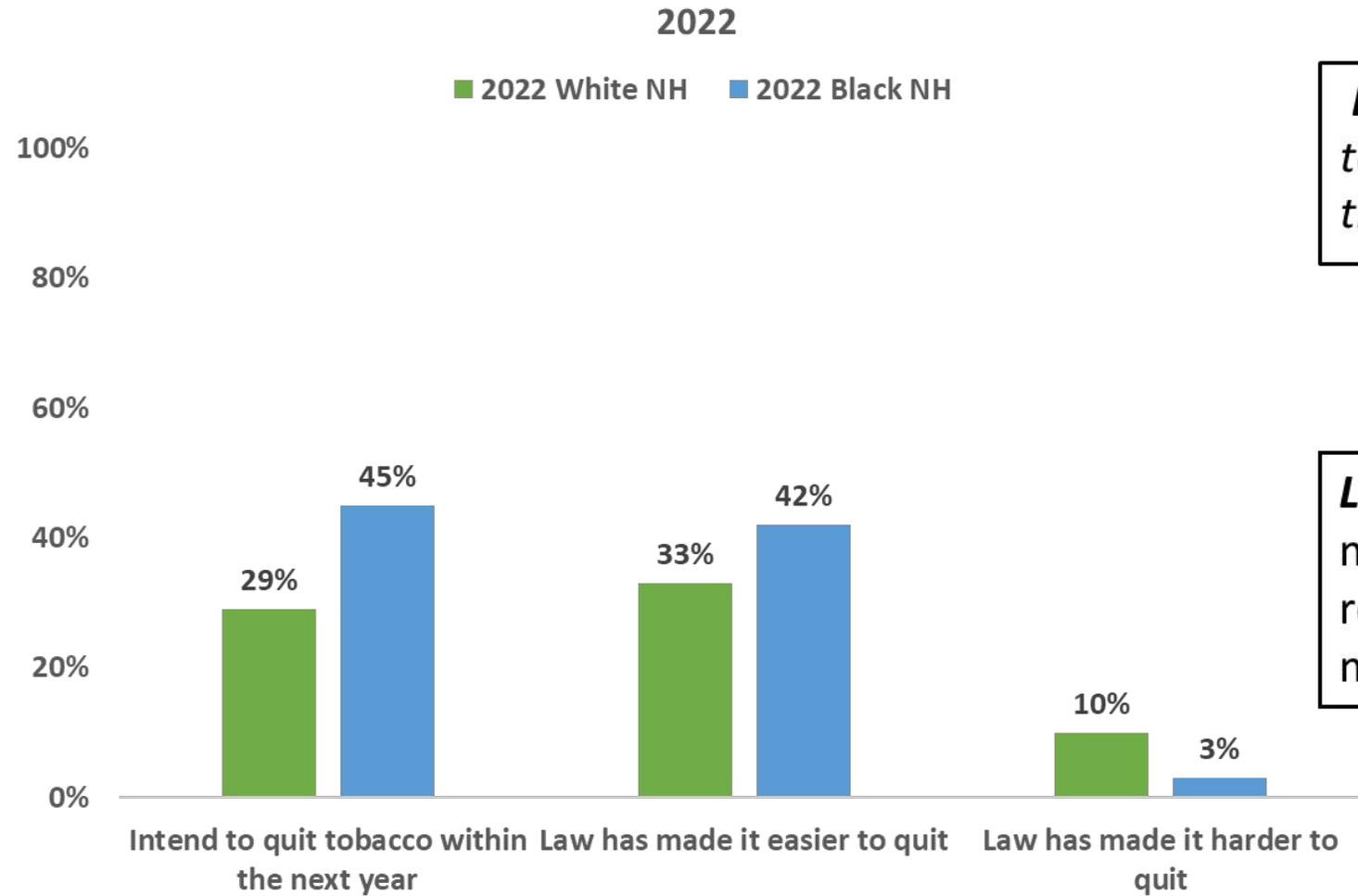
Law will make it easier: “more of a pain to get them so less likely to go get them ”

Law will make it harder: “these products aren’t hard to find. If they were completely wiped out then yes I would try to quit. But its very easy to get all of these products.”

*No statistically significant differences between Black and White respondents
Source: MA Online Panel Survey, 2021

Impact of the Law on Quitting: 2022

A greater percentage of blacks report intending to quit tobacco and that the law has made it easier to quit (compared to 2021)



Law will make it easier: *“Made it easier for me to quit because I wont see the brand of cigarettes that I smoke in the stores at all.”*

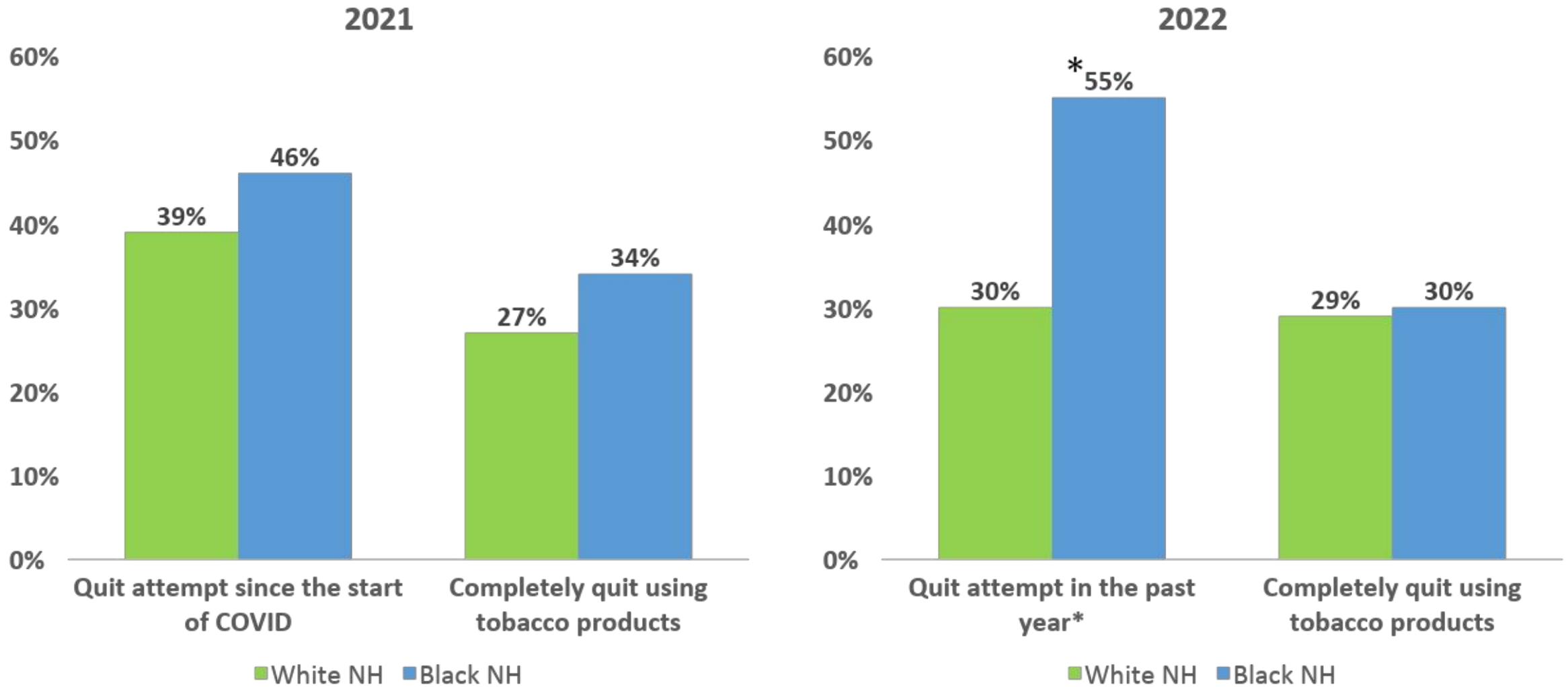
Law will make it harder: *“Because all it did was make me switch from menthol cigarettes to regular tobacco cigarettes and I still smoke just as much as I did with menthol.”*

*Intent to quit within the next year approaching significance for Black and White respondents

Source: MA Online Panel Survey 2022

Quitting Behavior

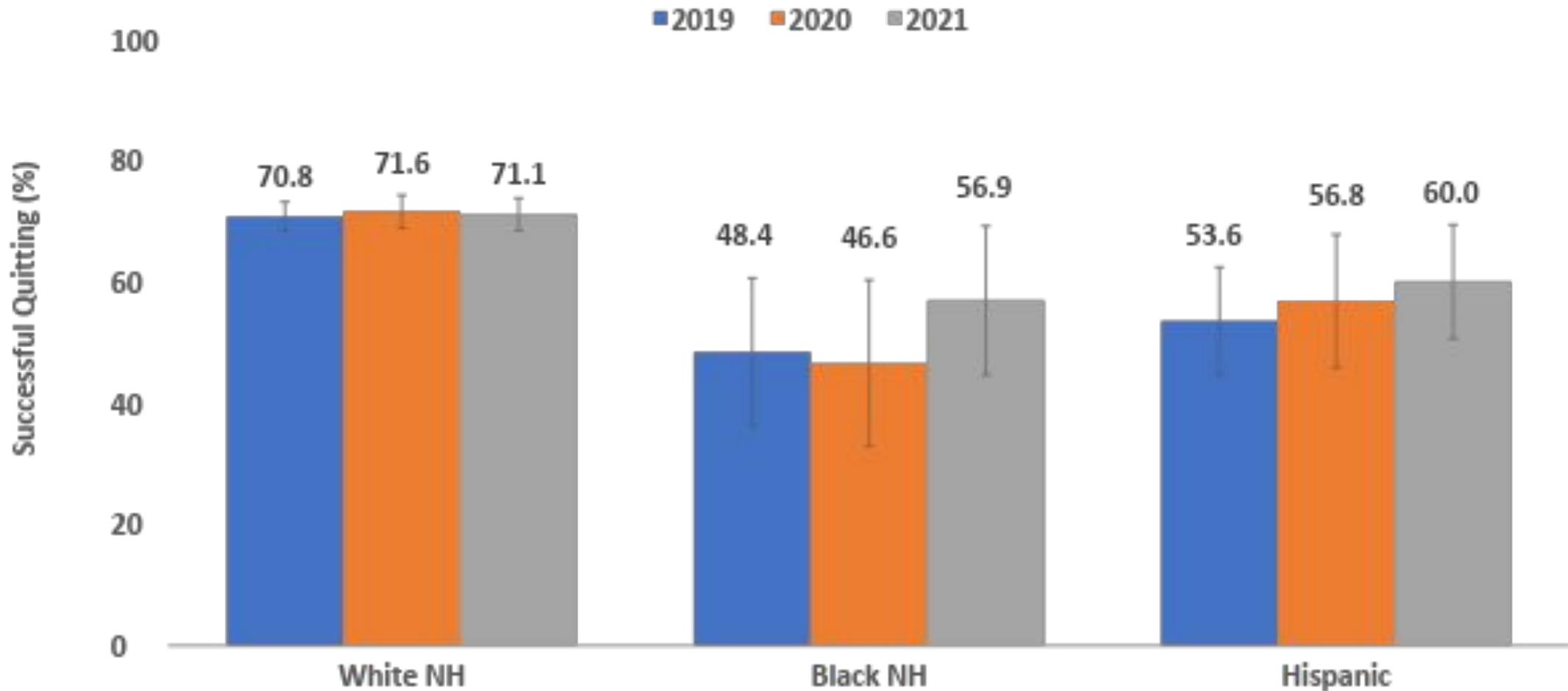
More blacks than whites report making a quit attempt in the past year. Rates of successful quitting are similar between blacks and whites.



*Statistically significantly different between blacks and whites

Source: MA Online Panel Survey 2021 & 2022

BRFSS: Successful Smoking Cessation Increasing among Blacks and Hispanics



Source: Massachusetts BRFSS, 2019-2021

Flavored Tobacco Restrictions Are Not Sufficient on Their Own to Support Cessation

Panel survey data suggest that over 1 in 3 menthol and other flavored tobacco users are interested in quitting tobacco and believe the law will make it easier to quit

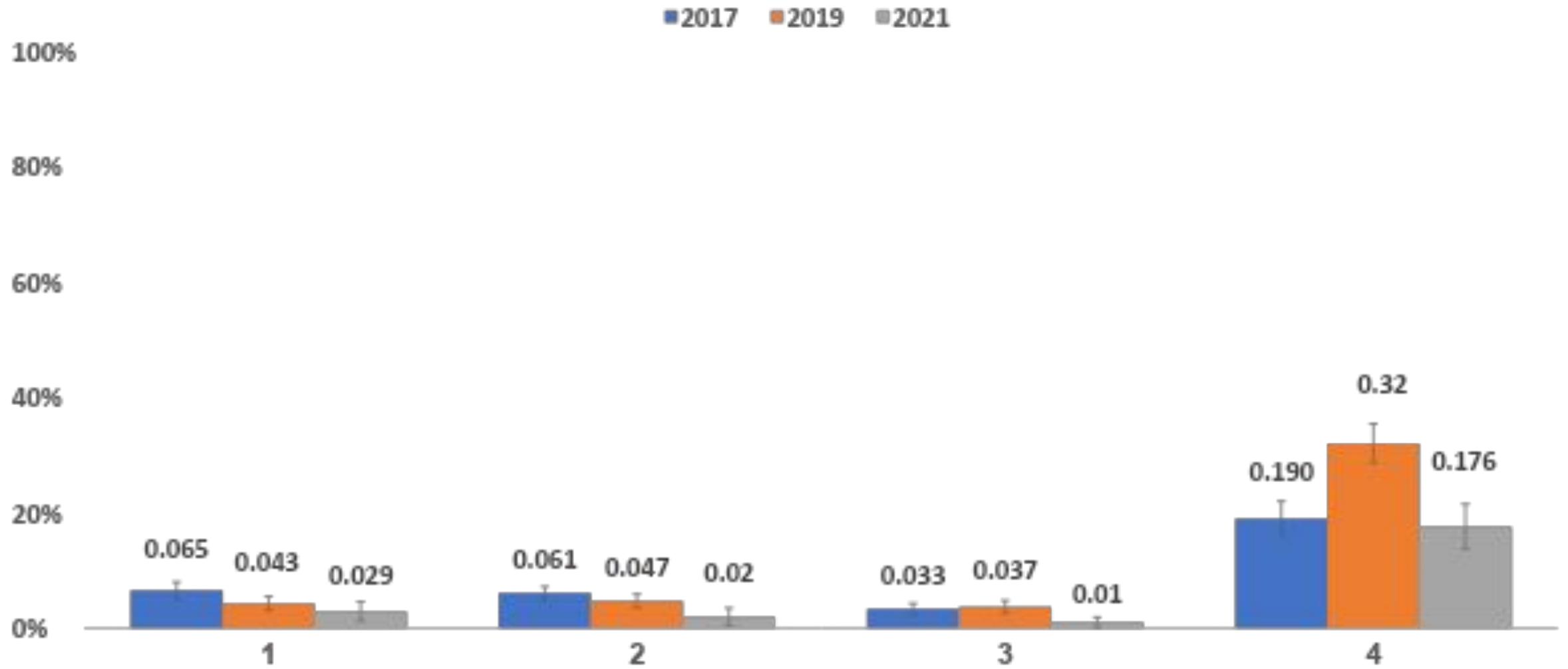
Panel survey data suggest about 1 in 3 menthol and other flavored tobacco users report having completely quit tobacco products

However, barriers to quitting still exist, especially among BIPOC populations. Tobacco product restriction policies should be paired with initiatives to support treatment among tobacco users

- Massachusetts flavored tobacco restriction law requires insurers to cover tobacco counseling and at least one FDA-approved tobacco cessation product
- Massachusetts Quitline menthol incentive program

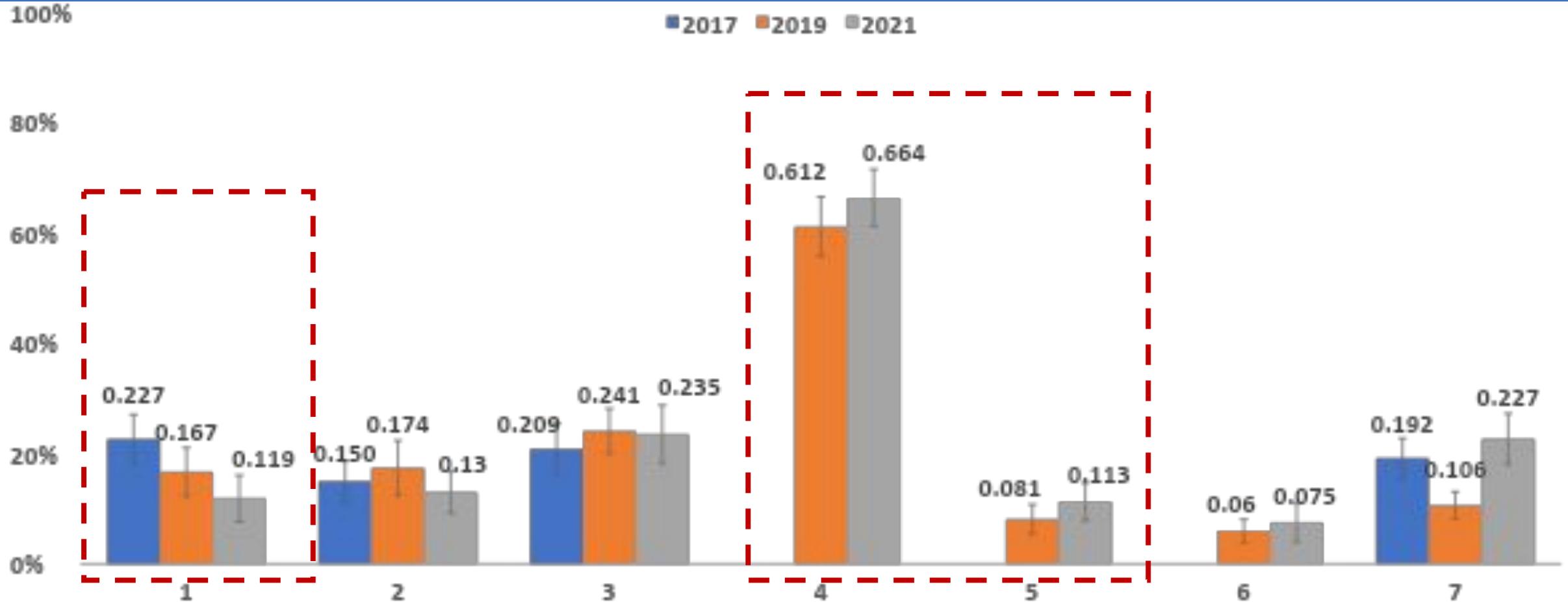
**Is the law decreasing
tobacco access and use
among youth?**

YHS: Current tobacco use rates are decreasing among high school students



Source: Massachusetts YHS, 2017-2021

YHS: High school students who are current (past 30-day) tobacco users are less likely to access tobacco products from stores



* Response option not included in 2017

Source: Massachusetts YHS, 2017-2021



Massachusetts Department of Public Health

Thank You!

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