Trends in Tobacco/Nicotine Use and Exposure: Data from the 2023 Massachusetts Behavioral Risk Factor Surveillance System

Massachusetts Tobacco Cessation and Prevention Program

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About This Report

This report aims to present a comprehensive overview of tobacco/nicotine-related risk behavior, exposure, and health outcomes in Massachusetts based on annual survey data from the Massachusetts Behavioral Risk Factor Surveillance System (BRFSS).

The tobacco/nicotine-related metrics included in this report are split into four broad categories:

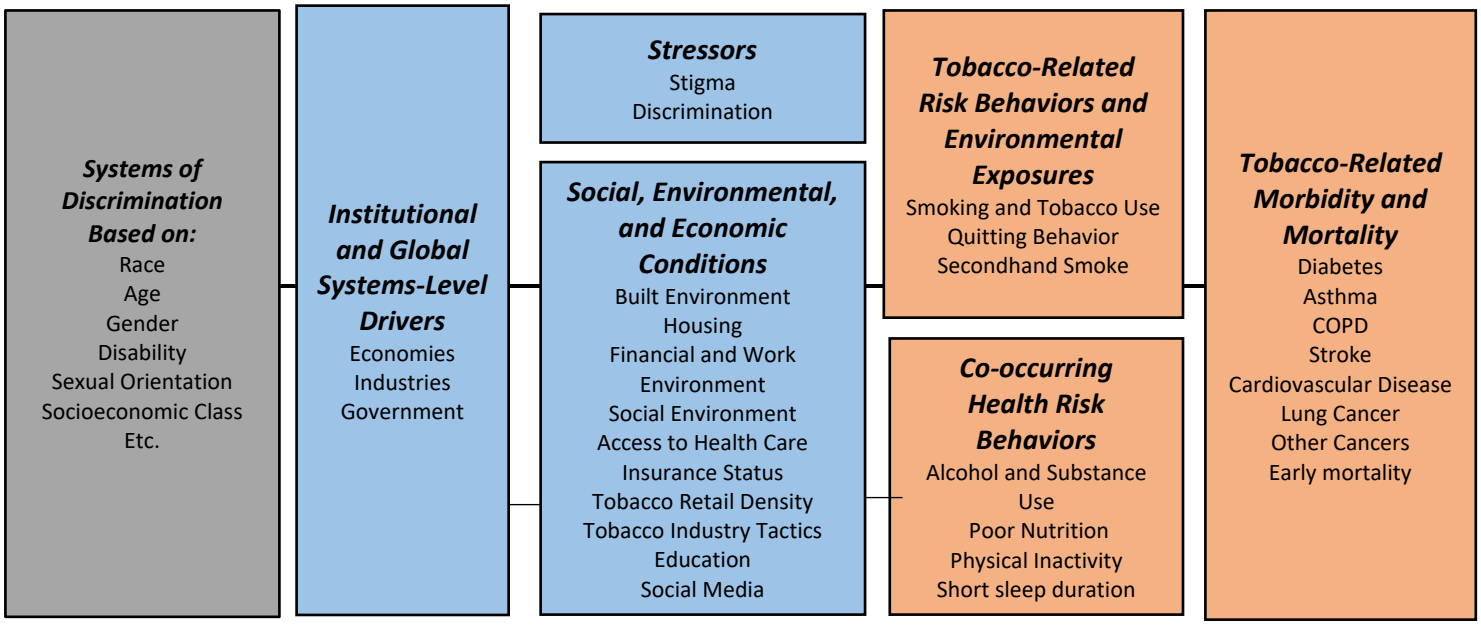
- Smoking and Tobacco Use: Who Smokes and Why
- Cessation: Who Quits and Why
- Smoking Co-Morbidities
- Exposure to Secondhand Smoke at Home

Tobacco/nicotine use is often framed and perceived exclusively as a matter of personal choice and responsibility. As a result, historically, many prevention and cessation interventions have focused on promoting individual behavior change alone, which has proven to be necessary but not sufficient. In reality, a broad range of complex social, environmental, and economic conditions, which originate from larger societal forces and historical policies, shape tobacco-related behaviors and outcomes (Figure 1). Differences in these conditions have made it significantly more difficult for some populations to prevent tobacco initiation and secondhand smoke exposure and to successfully quit tobacco use.

In addition to Massachusetts BRFSS data, this report leverages extensive historical context and rigorous peer-reviewed research to explain how inequitable and persistent exposure to adverse social, environmental, and economic conditions have in turn put certain populations more at risk of tobacco/nicotine-related risk behavior, exposure, and diseases. Identification of these broader institutional drivers and conditions can help inform more upstream tobacco control strategies and policies to effectively reduce inequities in downstream tobacco-related outcomes.

A summary of evidence-based tobacco control strategies and resources currently employed by the Massachusetts Tobacco Cessation and Prevention Program (MTCP) is presented at the end of the report.

Figure 1. Conceptual Framework Explaining Tobacco-Related Inequities



About BRFSS

The **Massachusetts Behavioral Risk Factor Surveillance System (BRFSS)** is an annual phone survey of Massachusetts adults (18+) that looks at health-related behavioral risk factors, chronic health conditions, and use of preventative services. All data in BRFSS is self-reported by respondents. People who chose to participate in the survey may be different from those who did not participate. As BRFSS is conducted through telephone, the sample may not adequately capture those who are institutionalized, incarcerated, or live in places or households that do not have a telephone.

Priority Populations

Many populations have long been disproportionately impacted by adverse tobacco-related outcomes. This report highlights the experiences of some of these populations, which are defined as outlined below:

Race and Ethnicity

For the purpose of this report, data is often reported for three broad racial and ethnic categories:

- White, Non-Hispanic – hereby referred to as "White"
- Black or African-American, Non-Hispanic – hereby referred to as "Black"
- Hispanic or Latino/a of any race, which includes several ethnicities (e.g. Mexican, Puerto Rican, Cuban) – hereby referred to as "Hispanic"

Data is often not shown or reported for Non-Hispanic Asians or Pacific Islanders, Native Americans, American Indians, or Alaskan Natives due to small sample sizes. However, these racial and ethnic subgroups may be included under the broad population category of "Black, Indigenous, and People of Color" (BIPOC).

Socioeconomic Status

BRFSS captures self-reported data on years of education completed and income. Those with lower incomes, with unstable employment, and less education tend to experience a wide range of health inequities. In this report, inequities data is presented for those with incomes below $25,000 and those with a high school education or less.

Sexual Orientation and Gender Identity

Respondents for the BRFSS are asked their biological sex (i.e. binary: male or female), if they are transgender, and their sexual orientation. Those who identify as Lesbian, Gay, Bisexual or Transgender (LGBT) tend to experience significant tobacco/nicotine-related inequities. Those with sexual identities that do not fit into these broad categories have the option to choose "Other." As with certain racial and ethnic groups, data is not disaggregated by sexual orientation or gender identity due to small sample sizes.

Self-reported "Not Good" Mental Health

Respondents who reported 15 or more days of "not good" mental health in the past month represent a group with significant tobacco-related inequities. This data is self-reported and may include both individuals with and without a clinical diagnosis.

Disability

Those with a disability are classified as such from a combination of several questions on the BRFSS. In this report, an individual is considered as having a disability if they report being limited in any activities due to physical, mental, or emotional problems; use special equipment such as a cane or wheelchair; are blind or have difficulty seeing; are deaf or have serious difficulty hearing; experience difficulty walking or climbing stairs; experience difficulty bathing or dressing; and experience difficulty doing errands alone. Those with severe limitations or disabilities may be unable to participate in the BRFSS and therefore may not be represented.

Shared Definitions

Developing shared definitions for foundational health equity concepts is key to understanding the root causes of the differences in outcomes experienced by different population groups. Key equity terms that are used throughout this report are defined below:

Health Disparities or Inequalities

Differences between the health of one population and another in measures of who gets disease, who has disease, who dies from disease, and other adverse health conditions that exist among specific population groups.

Health Inequities

Differences in health status and mortality rates across population groups that are systemic, avoidable, unfair, and unjust. These differences are rooted in social and economic injustice, and are attributable to social, economic and environmental conditions in which people live, work, and play.

Structural Racism

A system of advantage based on a socially constructed concept of race and skin color, created to justify and sustain a social, political, and economic hierarchy. Structural racism describes oppression and discrimination on the societal level and explains the harms of racism without blaming individuals.

Social Determinants of Health (SDOH)

The circumstances in which people are born, grow, live, work, play, and age that influence access to resources and opportunities that promote and support health. The social determinants of health include housing, education, employment, environmental exposure, health care, public safety, food access, income, and health and social services. In this report, SDOH are described as social, environmental, and economic conditions.

*Definitions adapted from the **Living Glossary for Racial Justice, Equity & Inclusion** compiled by **Southern Jamaica Plain Health Center and Racial Reconciliation and Healing***

Introduction

Smoking remains the leading cause of preventable death and disease in Massachusetts.

Smoking remains the leading cause of preventable death and disease in Massachusetts, with 9,300 adults dying each year from smoking-related illnesses.[1] Smoking affects nearly every organ in the body and is associated with multiple preventable chronic diseases including coronary heart disease, stroke, type 2 diabetes, chronic obstructive pulmonary disease (COPD), asthma, and numerous types of cancer.[2] Nicotine is addictive and has the potential to severely compromise the long-term health of the brain, particularly for individuals under the age of 26 for whom the brain is still developing.[3]

In Massachusetts, the total medical cost incurred from smoking is more than $4.5 billion annually, $1.36 billion is incurred by Medicaid alone as a result of the high proportion of people who smoke covered by MassHealth insurance. This amount does not include health costs caused by exposure to secondhand smoke, smoking-caused fires, and use of other tobacco products such as smokeless tobacco, cigars, and pipe tobacco. Additionally, smoking-caused productivity losses in Massachusetts are estimated at $7 billion annually. These losses are from smoking-caused premature death and illness that prevent people from working. [4,5]

Significant gaps in the prevalence of smoking, tobacco/nicotine use, and quitting exist among different populations. Higher smoking rates, lower quit rates, and/or higher rates of tobacco-related health outcomes are reported more for the following groups of people than the Massachusetts overall population:

- Individuals who identify as Black and/or Hispanic
- Individuals who have MassHealth insurance
- Individuals with lower income
- Individuals with less than a high school education
- Individuals with disabilities
- Individuals experiencing 15 or more days of “not good” mental health in the past month
- Individuals who identify as LGBT

Social, environmental, and economic conditions of health such as education, employment, access to health care and quality of care, support from families and peers, and the built environment and housing impact health risk behaviors and long-term health outcomes. Differences in these conditions can make it more difficult for people to achieve healthy behaviors and good health. Historical policies that have perpetuated segregation and wealth inequities have led to inequities in many social, environmental, and economic conditions, such as greater tobacco retail density in neighborhoods of color, and decreased access to health insurance and quality health care among people of color.

Over the past 20 years, Massachusetts has passed statewide and local tobacco policies and protections that have reduced the availability of tobacco products and tobacco advertising and decreased smoke in the air. However, there are still inequities in coverage of these policies; people of color and other groups experiencing systemic discrimination still are more likely to be exposed to secondhand smoke at home and live in areas with high tobacco retail density contributing to the inequities we continue to see in smoking rates, quitting rates, exposure to secondhand smoke, and smoking-attributable disease.

Who Smokes and Why?

Smoking is often shaped by a broad range of unequal social and environmental factors beyond an individual's choice.

Current Cigarette Smoking Rates

In 2023, 9.8% of Massachusetts adults (or an estimated 554,676 residents) reported currently smoking cigarettes, a historic low.

Gender

- 12.4% (95% CI: 10.7%-14.1%) of men smoke.
- 7.5% (95% CI: 6.4%-8.6%) of women smoke.

Race and Ethnicity

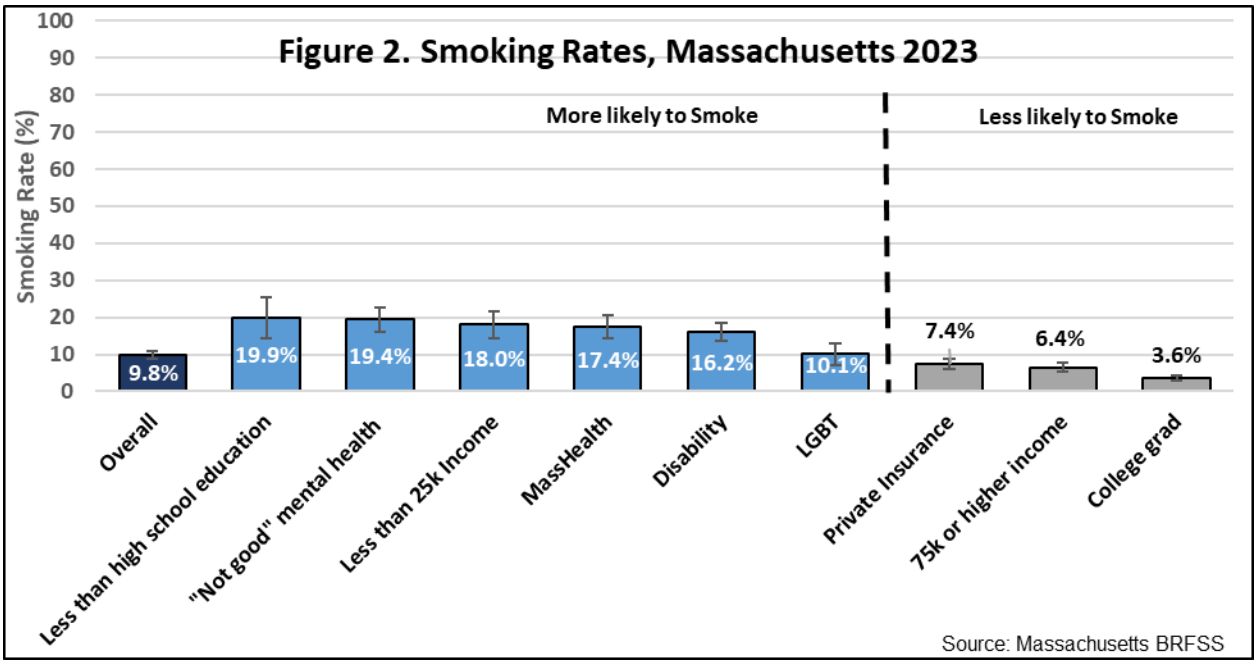
- 9.6% (95% CI: 8.5%-10.7%) of White people smoke.
- 11.7% (95% CI: 5.5%-18.0%) of Black people smoke.
- 9.5% (95% CI: 7.0%-12.0%) of Hispanic people smoke.
- 5.0% (95% CI: 1.4%-8.7%) of Asian people smoke.

Age

- 14.4% (95% CI: 11.4%-17.4%) of adults ages 35-44 smoke, the highest of any age group.
- 3.5% (95% CI: 1.8% - 5.3%) of adults ages 18-24 smoke. However, this rate does not reflect use of other tobacco/nicotine products (e.g. little cigars, e-cigarettes, etc.), which may be more prevalent among this age group.[6]

Smoking Inequities

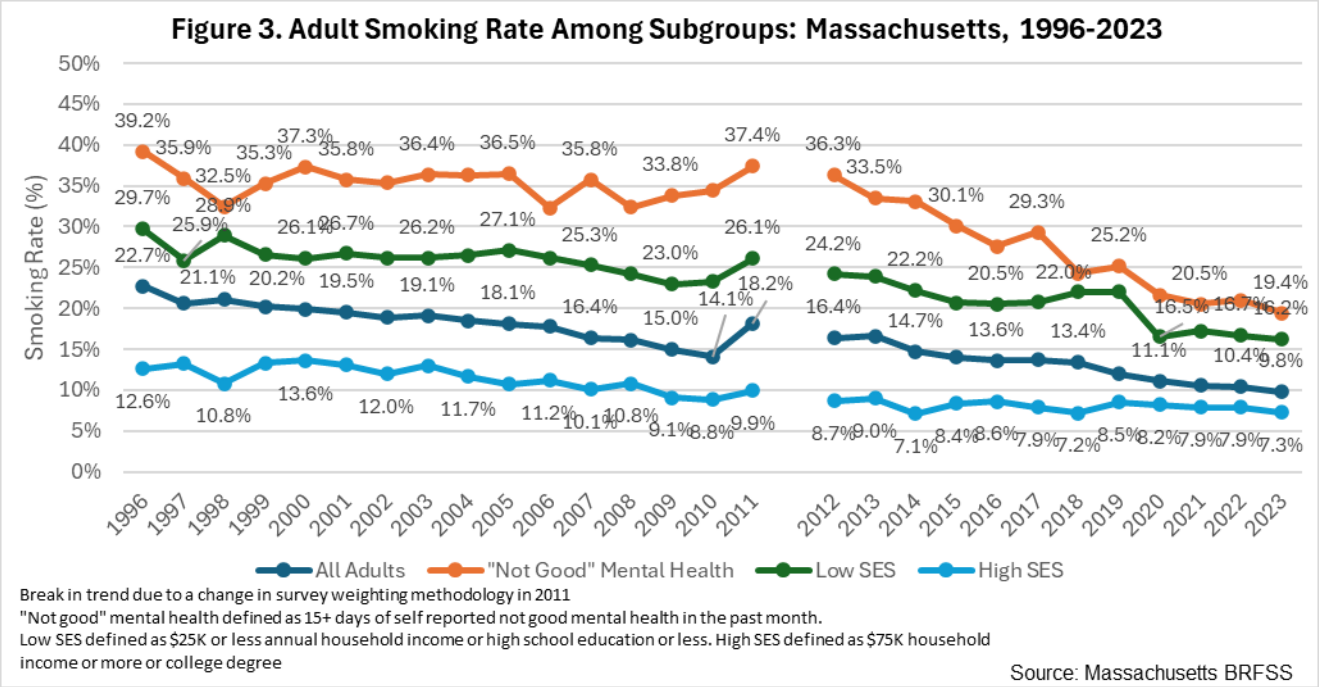
Smoking rates are highest among people who report "not good" mental health, low socioeconomic status (high school or less education or an income less than $25,000), people with MassHealth insurance, people with disabilities, people living in multi-unit housing (MUH) and people who identify as LGBT (Figure 2). All subgroup smoking rates other than LGBT and having private health insurance are significantly different from the rate for all Massachusetts adults.



Cigarette Smoking Trends Over Time

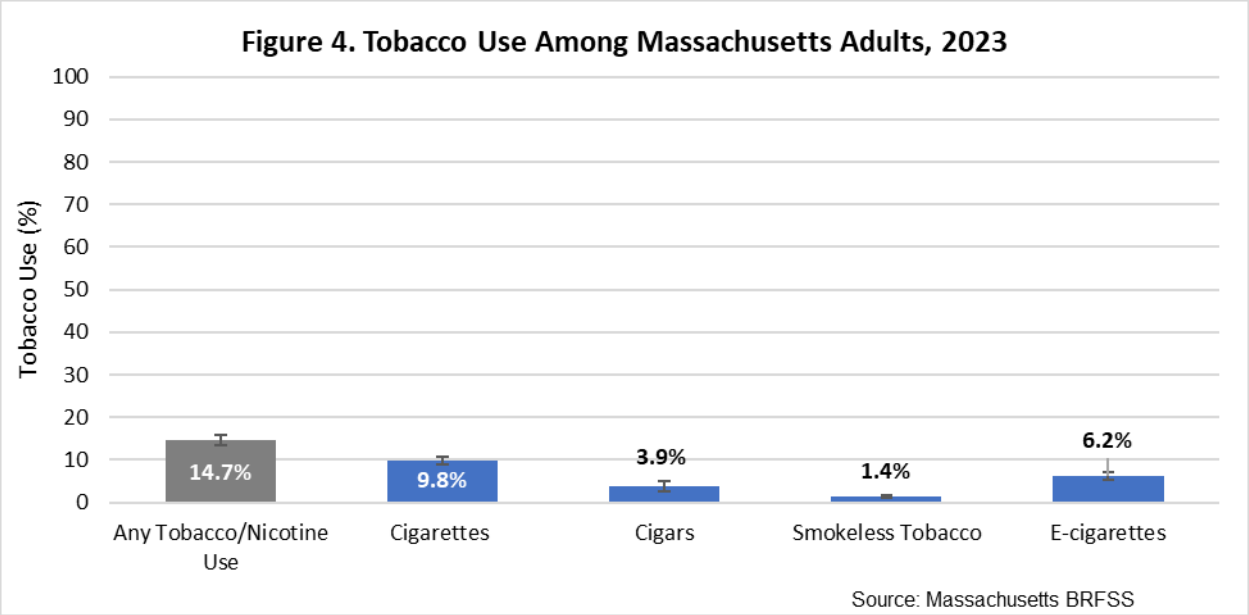
Although all smoking rates have declined since 1996, some population subgroups report consistently higher rates compared to the state average, including people who report that their mental health was "not good" in 15 or more days in the past month and low socioeconomic status (Figure 3). Due to methodological changes in the survey, recent estimates of smoking are not directly comparable to data collected before 2011.[7]

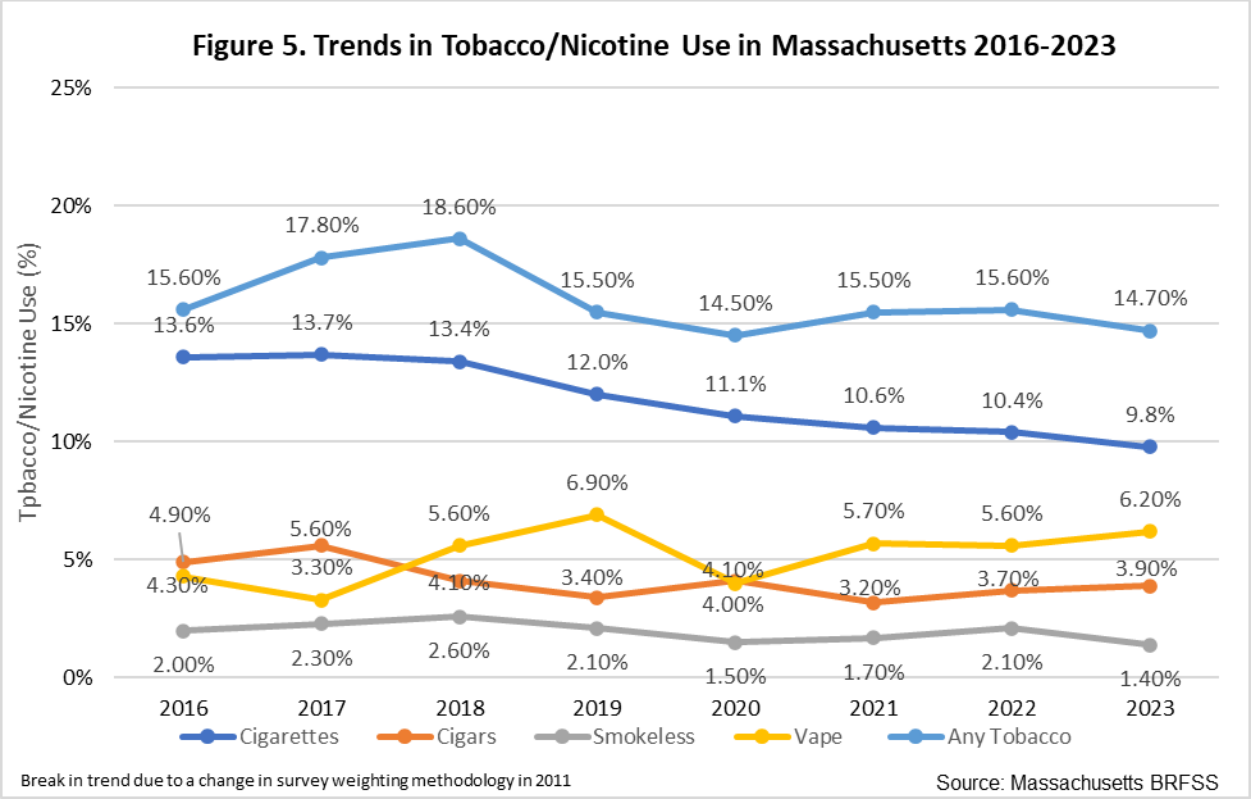
Smoking rates are also higher for people with disabilities, the LGBT population, and people with MassHealth insurance, but trends for these subgroups are not reported below due to insufficient sample sizes, underreporting, and/or changes in eligibility criteria (MassHealth), from year to year. These populations may face barriers in accessing the health care system for cessation benefits or education on how to quit smoking (See: Who Quits and Why).



Use of Other Tobacco Products

While smoking rates among adults have declined, adults still report using cigarettes at higher rates than any other type of tobacco/nicotine product (**Figure 4**). Overall, 14.7% of adults reported current use of any tobacco product (defined as cigarettes, cigars, smokeless tobacco and e-cigarettes). Only 6.2% of adults reported using electronic cigarettes in the past 30 days despite a high prevalence among youth users. While trends in cigarette use have decreased since 2016, use of other products like vape products, cigars, and smokeless tobacco have remained steady (Figure 5).





Segregation and Tobacco Industry Targeting

Since the 19th century, state and federal governments have engaged in systematic efforts, such as redlining, to segregate people into distinct neighborhoods based on race. These policies resulted in the systematic divestment of resources, such as education, employment, and health care, away from communities of color. Segregated neighborhoods have made it possible for tobacco companies to more easily target people of color, such as the marketing of menthol cigarettes to Black people. Consequently, these conditions have led to disproportionate rates of smoking-attributable illness and mortality among these populations.[8] These inequities due to systems of oppression still exist today, MTCP continues to work towards reversing unjust policies and health inequities.

Tobacco Industry Targeting of Specific Populations

Tobacco industry documents reveal the deliberate targeting of the LGBT population, low-income communities and communities of color.[9,10,11] High rates of cigarette use within the LGBT community are due in part to the aggressive marketing tactics by tobacco companies that sponsored events and advertised in LGBT spaces such as gay bars, pride parades, and gay magazines.[11] Similarly, the industry also targeted Black people in magazine advertisements, event sponsorships, and the provision of funding for Black organizations.[12] In particular, historical policies such as segregation have made it possible for tobacco companies to target menthol cigarettes to people of color in the places where they live.[13]

Spotlight on Menthol Cigarettes

National data indicates that Black people smoke menthol cigarettes at higher rates than Whites.[14] In Massachusetts, in 2021 and 2022 BRFSS data combined, **49.8% of BIPOC people who smoke** reported using menthol cigarettes "most of the time" compared to 28.5% of White people who smoke. Menthol use data are not reportable due to small sample sizes for individual race groups (Black, Hispanic, etc.) alone therefore, are

combined into the BIPOC category. One analysis of national data found that those who identified as LGBT had higher odds of using menthol cigarettes than their heterosexual counterparts. This was also seen for Black LGBT people who smoke.[14]

Higher rates of menthol use among BIPOC and LGBT populations are concerning as menthol cigarettes are more addictive and harder to quit than non-menthol cigarettes. Studies have shown that people who smoke menthol reported greater difficulty in refraining from smoking in smoke-free environments, as well as greater social and environmental cues to smoke.[14]

POLICY SPOTLIGHT

In November 2019, resulting in part from local momentum, advocacy coalitions, and youth and community engagement efforts, Massachusetts passed An Act Modernizing Tobacco Control (https://www.mass.gov/guides/2019-tobacco-control-law), a first in the nation statewide law that restricts the sales of all flavored tobacco (including menthol) to adult-only smoking bars for onsite consumption only. This law also includes an excise tax on vape products and prohibits retailers from advertising the sale of flavored tobacco and vape products.

Pricing and Availability

Cigarettes remain the most widely available tobacco product in Massachusetts (available at 98% of tobacco retailers). Other products such as multi-pack cigars and smokeless tobacco are available at 76% and 43% of retailers respectively. Newer products such as e-cigarettes/vapes and nicotine pouches have been increasing in availability and in 2023 were available in 50% of retailers. For more information, please view data from the Massachusetts Tobacco Availability and Pricing Survey at Tobacco reports and publications | Mass.gov.

Retail Density and Targeting in Massachusetts

Neighborhoods of color have greater numbers of tobacco retailers, more tobacco marketing, and extensive marketing of menthol products. Studies in Boston, the state of Massachusetts, and nationally have shown there is more tobacco marketing in predominately Black neighborhoods. Menthol advertisements are more common in areas with greater proportions of Black people and low-income populations.[14] A 2010 study in the city of Boston found that tobacco retail density near schools was higher in low-income communities and in BIPOC communities.[15] Another study examining tobacco availability and advertising in BIPOC communities found that there was more tobacco availability, tobacco advertising, and menthol advertising in predominately Black or Hispanic neighborhoods in a sample of Massachusetts neighborhoods.[16] Additionally, a 2019 study of block groups in the city of Boston found a significant decrease in the price of menthol cigarettes as the proportion of Black residents increased (note that this study was conducted prior to An Act Modernizing Tobacco Control[17][18]

Poorer Health Outcomes

Deliberate tobacco industry targeting of menthol to Black people has contributed to a higher use rate of menthol cigarettes as well as inequities in cessation and smoking-attributable death and disease, as Black adults are less likely to successfully quit smoking and disproportionately suffer from smoking attributable diseases such as asthma, lung cancer, heart disease and stroke (See: *Who Quits and Why*).

Who Quits and Why?

Why are some people who smoke less likely to quit than others?

Despite an overall increase in successful quitting over the past 20 years, some population subgroups consistently quit smoking at much lower rates than the general population in Massachusetts. Similar to smoking initiation, an individual's ability to quit and stay quit is determined by more than just personal choice.

Social, economic, and environmental conditions that impact quitting

Many individuals live at the intersection of multiple adverse conditions that make quitting smoking much more difficult to attain.

Financial and Work Environment

Completing fewer years of education can reduce an individual's ability to secure stable, high paying jobs. Economic instability can lead to increased stress and may help sustain smoking behaviors as a coping mechanism.[19]

Built Environment

Tobacco retail density is higher in lower-income neighborhoods, and neighborhoods with a higher proportion of BIPOC residents, which increases exposure to tobacco and environmental cues to smoke.[20] In addition, there is increased advertising, and lower prices of menthol cigarettes in neighborhoods with more BIPOC residents.[21] Menthol cigarettes are more addictive and harder to quit than non-menthol cigarettes.[22]

Social Environment

Population subgroups living in government-subsidized multi-unit housing (MUH), such as those experiencing lower socioeconomic status, and some racial and ethnic groups, are more likely to live near other smokers and be exposed to secondhand smoke.[23] These factors serve as environmental cues that help sustain smoking behaviors.

Healthcare Environment

Many population subgroups, such as those experiencing "not good" mental health or low socioeconomic status, are less likely to receive support for quitting from a health care or service provider.[24] In addition, Black people who smoke are less likely to receive screening for tobacco use and evidence-based treatments for cessation from a health care professional compared to other races and ethnicities.[25]

Quitting Rates

In 2023, 52% of people who smoke cigarettes in Massachusetts made a quit attempt (stopped smoking one day or longer) in the past year and 71% of adults who ever smoked have now successfully quit smoking (have smoked 100+ cigarettes in their lifetime but no longer smoke).

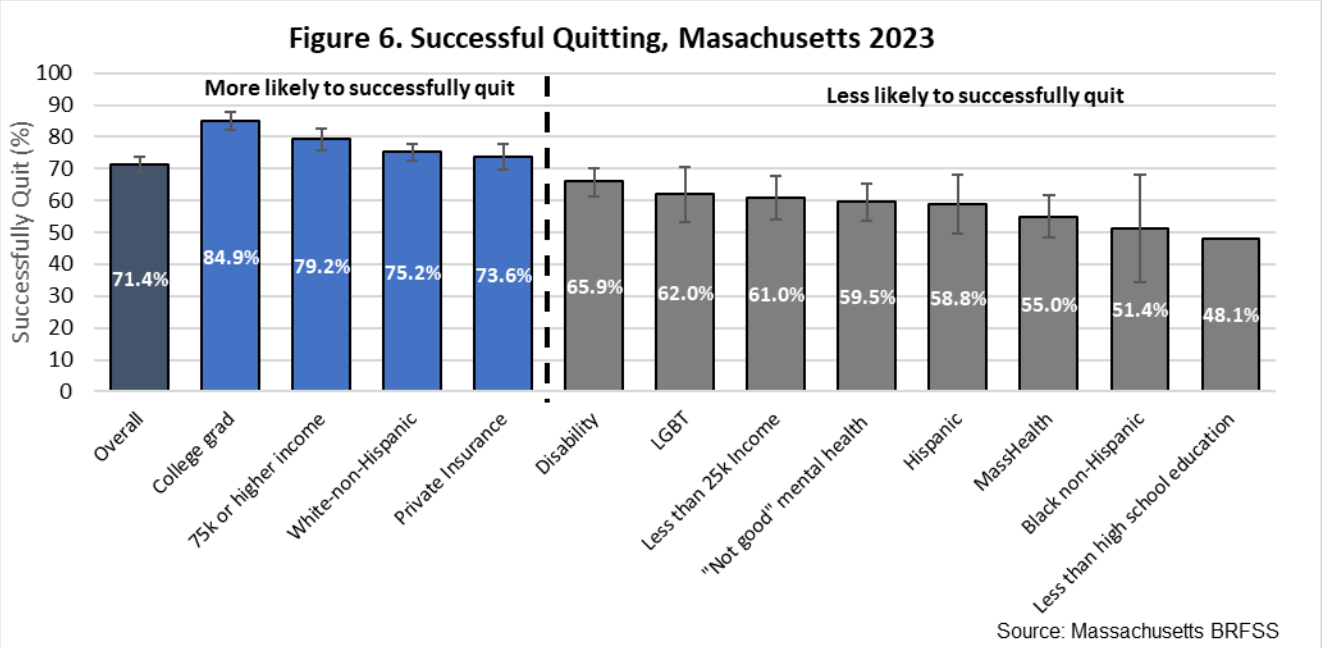
Successful quitting is dependent on a variety of factors including social support, the presence of environmental triggers, stresses that help sustain smoking behavior, and access to appropriate, culturally responsive, evidence-based care that is trauma informed. In Massachusetts:

- Sub-groups with disproportionately higher smoking rates (See: *Who Smokes and Why)* also have lower rates of successfully quitting compared to the general population (Figure 6).

- Those with a low socioeconomic status or who reported that their mental health was “not good” in 15 or more days in the past month tend to have lower quit rates than average, a trend seen over time (Figure 7).
- Trends over time indicate that people of color are consistently less likely to report successful smoking cessation compared to White people who smoke (Figure 8). This trend sustains over time, despite people of color smoking at similar rates and making similar numbers of quit attempts to White people (See: *Who Smokes and Why*).

Inequities in Quitting

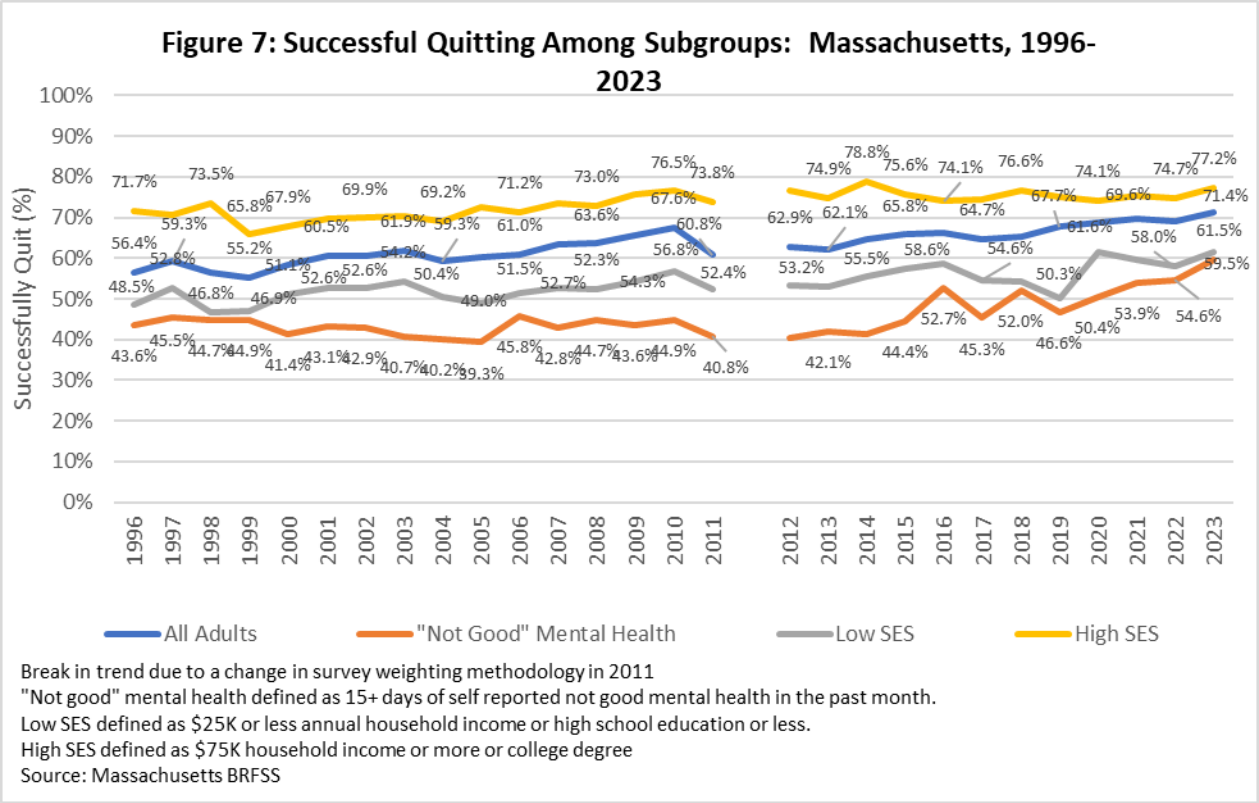
Some population subgroups consistently quit smoking at much lower rates than the general population in Massachusetts (Figure 6). Successful rates of quitting are lower among people who smoke who report 15 or more days of “not good” mental health in the past month , MassHealth insurance, low socioeconomic status, those with a disability, those who identify as LGBT, and those who identify as Black or Hispanic.



Quitting Trends Over Time

While all rates of successful quitting have increased since 1996, some subgroups report consistently lower rates compared to the state average, including people who smoke who report 15 or more days of “not good” mental health in the past month and low socioeconomic status (Figure 7). Barriers to quitting for these subgroups are similar and include using smoking as a coping mechanism for stress, not receiving support for quitting from health care providers, and community acceptance of smoking behaviors.[26]

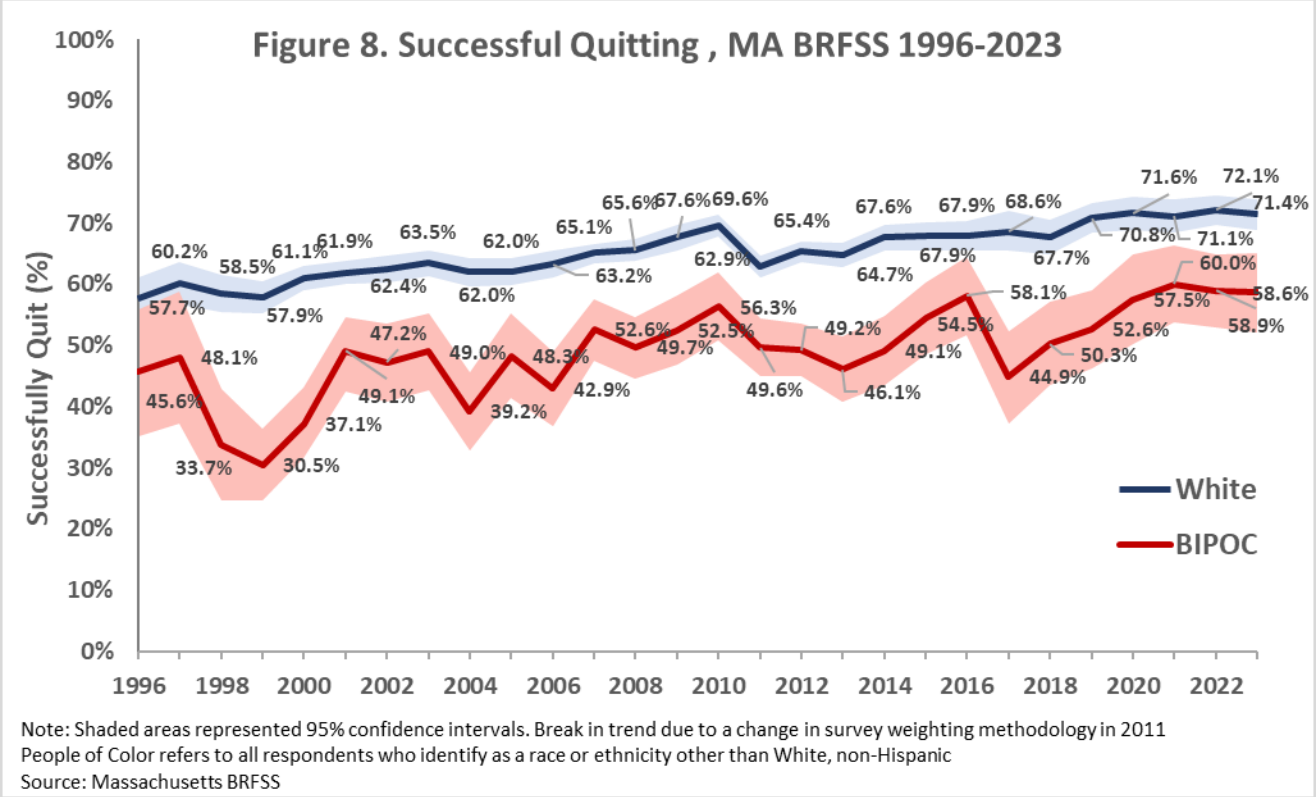
Quitting rates are also lower for people who smoke that have a disability, with MassHealth insurance, and those who identify as LGBT, but trends for these subgroups are not reported below due to insufficient sample sizes, underreporting, and/or changes in eligibility criteria (MassHealth), from year to year. These subgroups also report consistently higher smoking rates compared to the state average, and barriers to quitting may be similar to factors leading to initiation, such as coping with stress and difficulties in accessing health care (See: *Who Smokes and Why*).



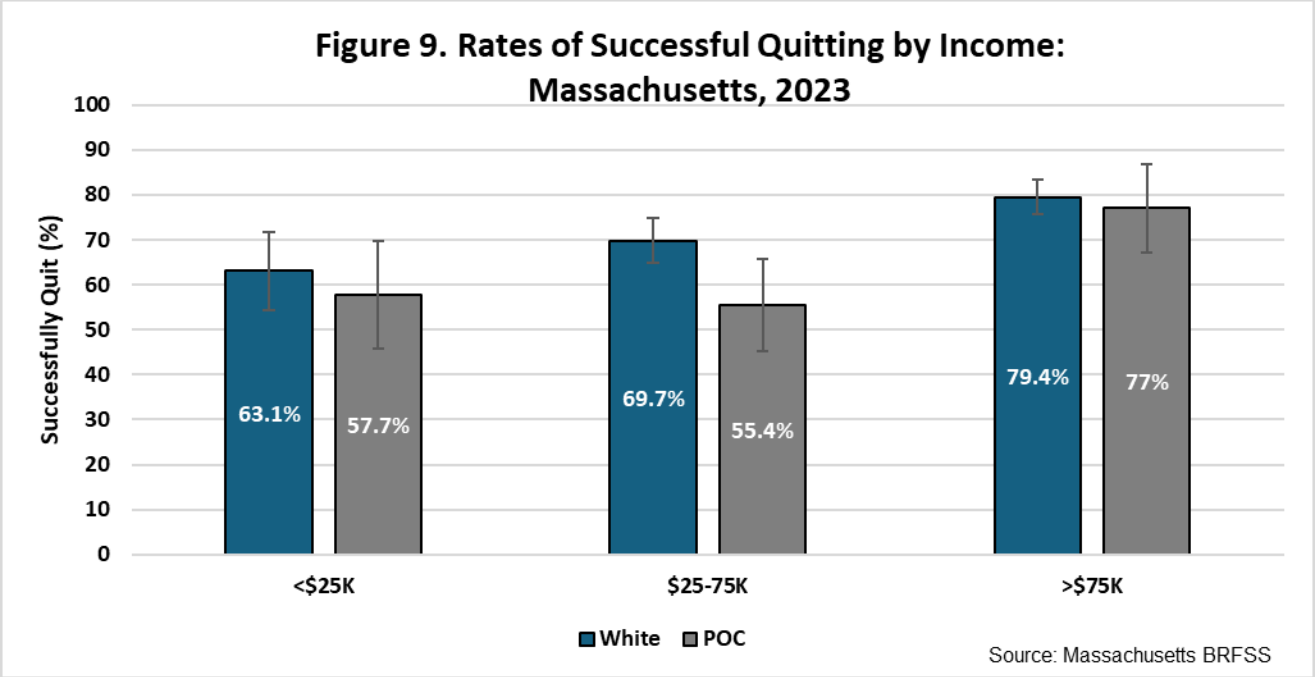
Break in trend due to a change in survey weighting methodology in 2011
"Not good" mental health defined as 15+ days of self reported not good mental health in the past month.
Low SES defined as $25K or less annual household income or high school education or less.
High SES defined as $75K household income or more or college degree
Source: Massachusetts BRFSS

Racial Inequities in Quitting

BRFSS data does not allow for analysis of quitting rates by individual racial and ethnic categories due to small sample sizes within each category. However, data does allow for comparisons between White and BIPOC adults (all other racial and ethnic categories combined). BIPOC adults do not smoke at higher rates than those who identify as White (See: *Who Smokes and Why*). Furthermore, BIPOC adults attempt to quit smoking at rates comparable (or higher) than White adults. In 2023, 54.7% (95%CI: 43.8 – 65.7%) of BIPOC adults reported making a quit attempt compared to 52.7% (95%CI: 46.6 – 58.9) of White adults. However, despite similar rates of quit attempts, trends over time show that BIPOC adults have consistently lower rates of *successful* quitting than White adults (Figure 8), even after adjusting for income (Figure 9). National literature echo these results: even after adjusting for income, studies have shown that Black people who smoke are less likely to have successfully quit smoking, compared to White people who smoke.[27]



Note: Shaded areas represented 95% confidence intervals. Break in trend due to a change in survey weighting methodology in 2011
People of Color refers to all respondents who identify as a race or ethnicity other than White, non-Hispanic
Source: Massachusetts BRFSS



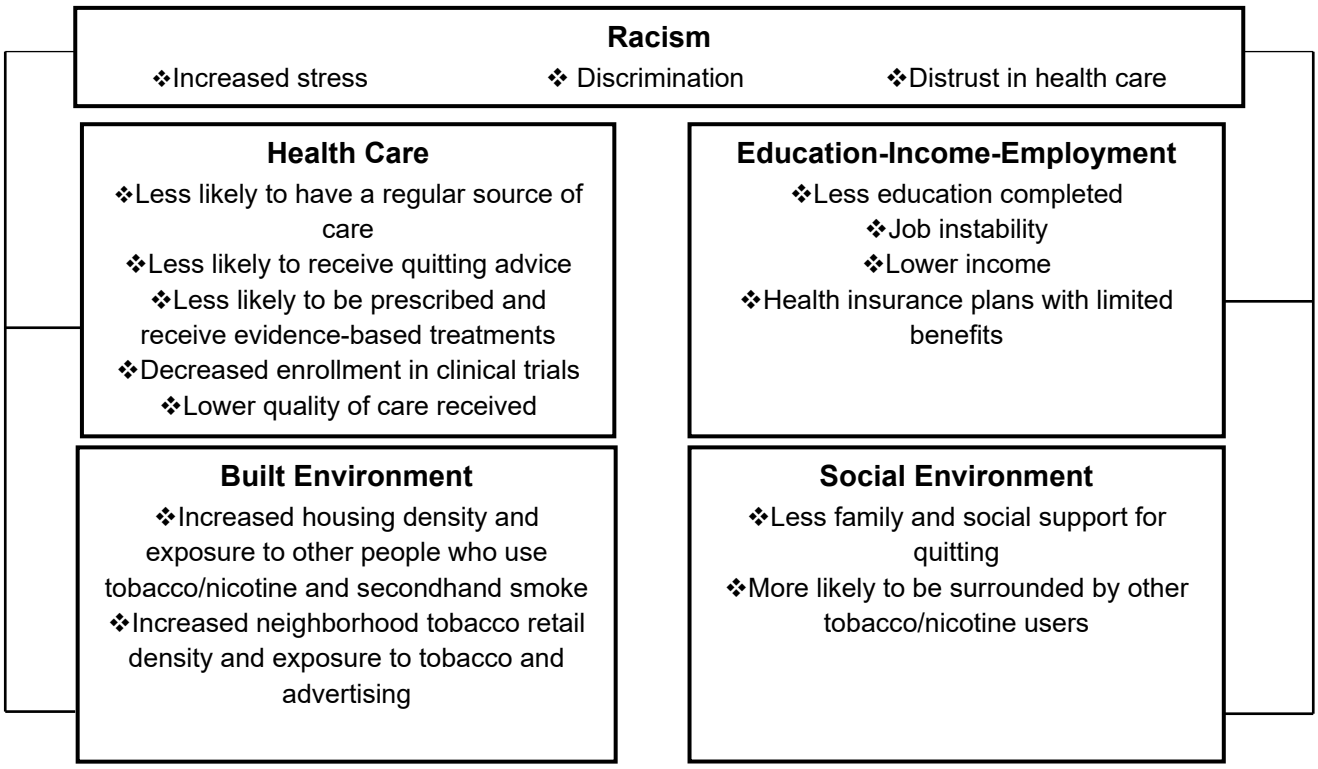
Factors leading to racial inequities in quitting success

Several environmental, economic, and social factors can contribute to lower rates of quitting among BIPOC adults compared to White adults (Figure 10). Structural racism is embedded in all social determinants of health, such as increased stress and discrimination among BIPOC populations compared to White populations, which can lead to not only tobacco/nicotine initiation but also difficulties with quitting.[28] BIPOC adults are also more likely to have lower access to equitable educational and employment opportunities leading to greater economic stress than White adults, which can help sustain smoking behaviors.[29] In addition, menthol cigarettes are disproportionately marketed towards Black populations, which has led to a higher rate of

menthol cigarette use compared to any other racial and ethnic group.[30] Menthol cigarettes are biologically more addictive and harder to quit (for more information on menthol cigarettes, see *Who Smokes and Why*).[31]

Racial and ethnic differences in access to health care and quality of care also exist. Nationally, BIPOC populations are less likely to receive quitting advice from a health care professional and are less likely to be prescribed and use evidence-based cessation treatments, such as nicotine-replacement therapy (NRT), compared to White people[32]. In Massachusetts in 2023, among those who smoked within the past year, only 17.8% of BIPOC adults reported using NRT, compared to 21% of White adults.

Figure 10. Factors Leading to Racial Inequities in Quitting Success [33]



Quitting, healthcare and health outcomes

Racial and ethnic inequities in quitting and access to/quality of health care also lead to inequities in health outcomes. Rates of many tobacco and smoking-related chronic conditions and diseases are higher among BIPOC adults compared to White adults. In addition, BIPOC adults are more likely to be diagnosed with disease at increased stages of severity than White adults and are more likely to die earlier from disease than White adults (for more information, see *Smoking Co-morbidities*).

Smoking Co-morbidities

It is well-established that smoking is the *leading* cause of a multitude of preventable diseases and contributes to or co-occurs with many other health risk behaviors and diseases. However, not all people who smoke have the same level of risk for engaging in other health risk behaviors and for developing adverse health outcomes. Just as the built, social, healthcare, economic, and other environments directly impact tobacco exposure, use,

and quitting, these conditions also directly impact other health risk behaviors and health outcomes. People who smoke that live at the intersection of multiple adverse conditions tend to have worse health outcomes. [34]

Social, environmental, and healthcare conditions contributing to co-morbidities

Built Environment

Structural racism and practices such as redlining have influenced where BIPOC populations live. In addition to increased tobacco retail density (See: *Who Quits and Why*), lower income neighborhoods and neighborhoods with greater proportions of BIPOC residents, are more likely to have a higher fast-food outlet density, higher alcohol retail density, and fewer safe outdoor spaces to walk and exercise, which can also increase the likelihood of chronic disease.[35,36, 37] With different industries all allocating resources to target to already vulnerable/under resourced populations, it makes it much harder for these communities and populations to thrive.

Social Environment

BIPOC people are more likely to report experiencing emotional and physical stress due to treatment based on race, compared to White people. Experiencing stress as a result of perceived racism is associated with poor physical health or mental health.[38]

Healthcare Environment

People with lower paying or unstable employment are more likely to have health insurance with prohibitive costs, or to not have health insurance at all, which can lead to delayed treatment of disease, and lower quality of care received. In addition, BIPOC people may wait longer than White people to seek out care, are less likely to receive recommendations for surgery, and are also less likely to be enrolled in clinical trials (limiting research on the most effective race-specific treatments).[39]

Health risk behaviors

In Massachusetts, significantly more people who currently smoke who report15 or more days of “not good” mental health in the past month , being heavy drinkers, and engaging in less physical exercise compared to people who formerly smoked and people who have never smoked (Figure 11).

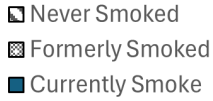
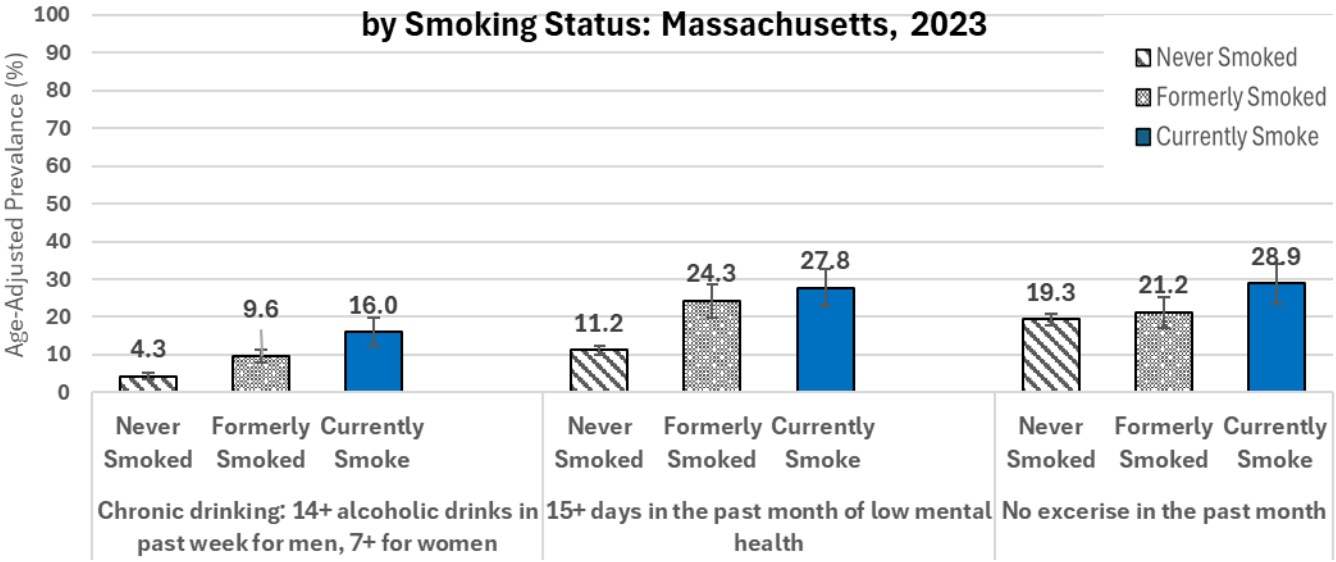


Figure 11. Age-Adjusted Prevalence Rates* of Select Health Risk Behaviors by Smoking Status: Massachusetts, 2023

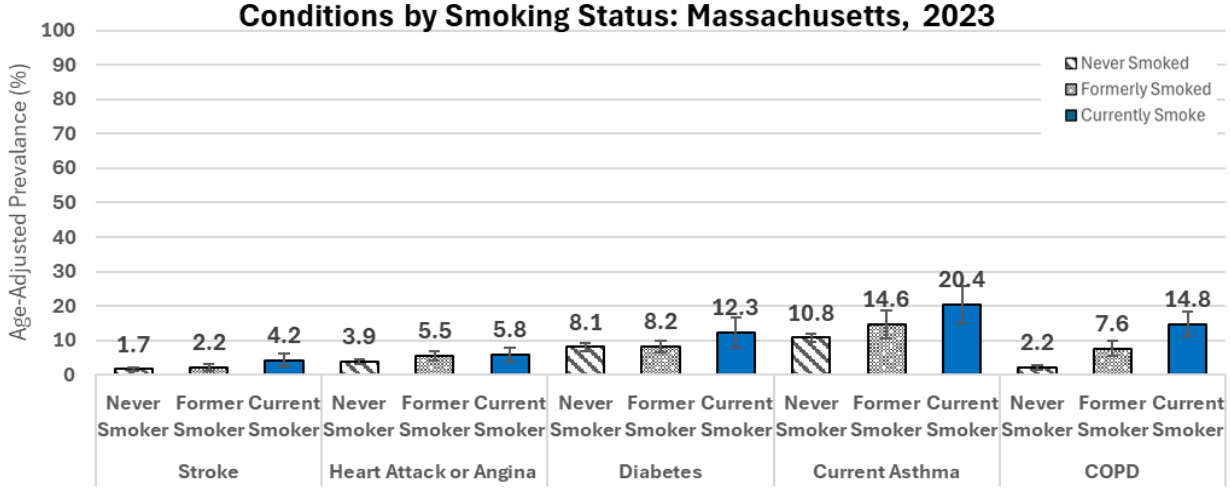


*Adjusted to control for older average age of former smokers (compared to current and never smokers). Rates are based on six age groups (18-24, 25-34, 35-44, 45-54, 55-64, 65+), and standard age proportions were calculated using 2000 Census data. Source: Massachusetts BRFSS

Smoking-attributable Disease

Prevalence of select smoking-attributable diseases is also higher among people who currently smoke (Figure 12). Prevalence of most smoking-attributable diseases is higher for people who formerly smoked compared to people who have never smoked , but the risk of developing these diseases is lower for people who formerly smoked compared to those who currently smoke. Between people who formerly smoke and those who currently smoke, the difference in prevalence of COPD is statistically significant However, this is likely due to people changing their smoking behavior after diagnosis; one study found that about 50% of people who smoke quit after being diagnosed with cardiovascular disease.[40]

Figure 12. Age-Adjusted Prevalence Rates* of Select Health Conditions by Smoking Status: Massachusetts, 2023



*Adjusted to control for older average age of former smokers (compared to current and never smokers). Rates are based on six age groups (18-24, 25-34, 35-44, 45-54, 55-64, 65+), and standard age proportions were calculated using 2000 Census data.

Source: Massachusetts BRFSS

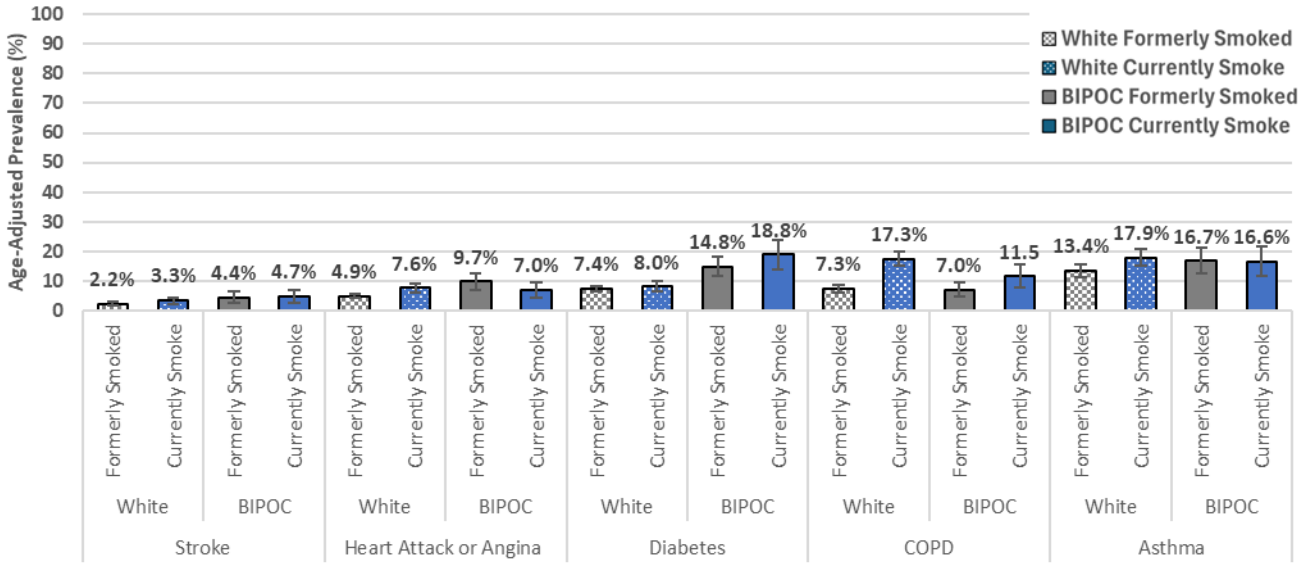
Racial inequities in smoking-attributable disease

Structural racism contributes to inequities in smoking-attributable morbidity and mortality. In health care institutions, diagnosis and treatment can vary for people of different races. Black and Hispanic people are also less likely to be on health insurance plans with comprehensive health benefits compared to White people, and may be less likely to seek out treatment.[41] This is reflected in Massachusetts data; in 2023, 83.6% of White people reported having an annual check-up, compared to 81.5% of Black people and 77.0% of Hispanic people. Inequities also exist in non-routine visits, Black people (10.7%) and Hispanic people (14.8%) are significantly more likely than White people (5%) to report cost as a reason that they could not see a doctor at some point in the past year. Additional barriers to care among BIPOC populations include lack of culturally competent care, distrust of health care providers and/or the health care system, and lack of transportation to services.[42]

BRFSS data does not allow for analysis of smoking co-morbidities by individual racial and ethnic categories (e.g. Black, Hispanic, Asian), due to small sample sizes within each category. However, data does allow for comparisons between BIPOC and White people after aggregating multiple years of data:

- Among people who currently and formerly smoke, rates of diabetes are significantly higher for BIPOC people than for White people (Figure 13; 2021-2023 age-adjusted rates)
- In addition, though COPD rates are higher for White people who smoke compared to BIPOC people who smoke, among people who formerly smoked , rates of COPD drop by 81% in White people, but only by 47% among BIPOC people.

Figure 13. Age-Adjusted Prevalence Rates* of Selected Health Conditions by Smoking Status (2021-2023 estimates)



*Adjusted to control for older average age of former smokers (compared to current and never smokers). Rates are based on six age groups (18-24, 25-34, 35-44, 45-54, 55-64, 65+), and standard age proportions were calculated using 2000 Census data.

Source: Massachusetts BRFSS

Similarly, when looking at cancer outcomes, Black people have lower survival rates than White people. These differences may be attributed in part to later diagnosis of cancer when treatment options are less effective and higher rates of co-morbid health conditions among Black people compared to White people.[43]

Secondhand Smoke at Home

Housing is one environmental condition that contributes to an individual's health status. Historically, housing patterns in Massachusetts have been linked to practices such as segregation and racial redlining that resulted in the systematic divestment of resources, such as education, employment, and health care away from BIPOC communities.[44] These practices have historically, and continue to, contribute to poor housing conditions that have been linked to health risk behaviors, such as smoking and tobacco/nicotine use, as well as exposure to harmful elements such as secondhand smoke.[45]

Where do people live and why?

Segregation and racial redlining have influenced where BIPOC populations live.[46] A lack of affordable housing may limit choices in where they can live in Massachusetts and a lack of income and good credit can prevent home ownership among certain populations.[47] In Massachusetts, those who are Black, Hispanic, low-income, have less education, have MassHealth insurance, have a disability, or identify as LGBT are more likely to report living in multi-unit housing (figure 14).

Many of these same populations who live in MUH also report more exposure to secondhand smoke at home (Figure 15). BIPOC people and low-income people are more likely to rent instead of own. Renters may lack control over their housing environment, including differential quality and exposure to hazards, such as environmental smoke.

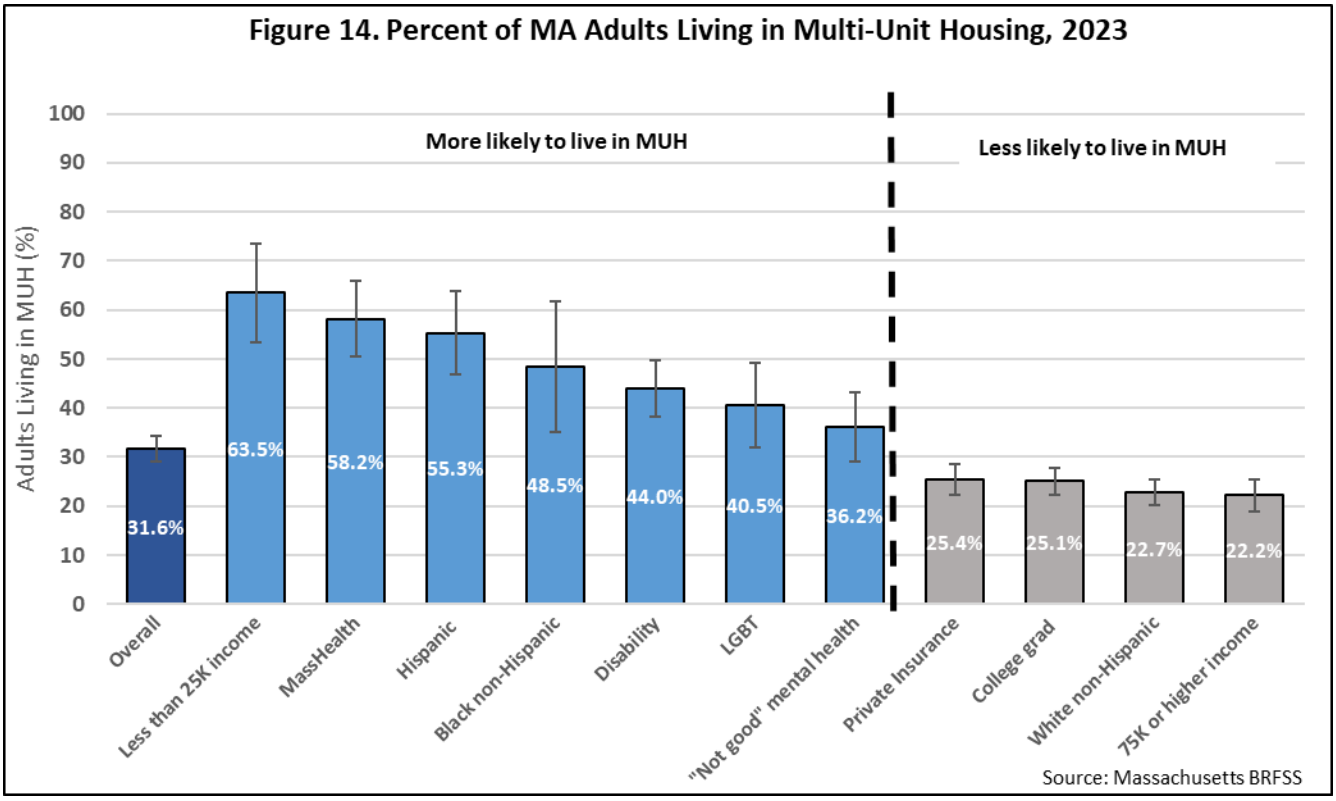
Secondhand smoke exposure and health

Although Massachusetts established a Smoke-Free Workplace Law in 2004 that has drastically reduced the amount of exposure to secondhand smoke for residents of the Commonwealth, many people are still exposed to secondhand smoke in their homes. Among those who allow smoking inside their single-family homes and those who live in MUH without a smoke-free policy, over 1.5 million adults may still be exposed to secondhand smoke at home according to the Centers for Disease Control and Prevention, the home remains the primary exposure to secondhand smoke for both adults and children.[48] This represents an important public health issue as there is no safe amount of exposure to secondhand smoke. Secondhand smoke can cause a number of adverse effects in infants, children and adults that have never smoked including cardiovascular disease, lung cancer, sudden infant death syndrome, asthma and bronchitis.[49]

Where are people exposed to secondhand smoke?

Those who live in MUH are 1.40 times more likely to be exposed to secondhand smoke at home than those in single-family homes [50] . In 2023, almost a third of Massachusetts BRFSS respondents reported that they lived in MUH, such as apartments, condos or duplexes (31.6%, 95%CI: 29.1%-34.2%)). Those who live in MUH are especially vulnerable to secondhand smoke because 56.7% of these residents did not live in buildings with a smoke-free policy in place in 2023.

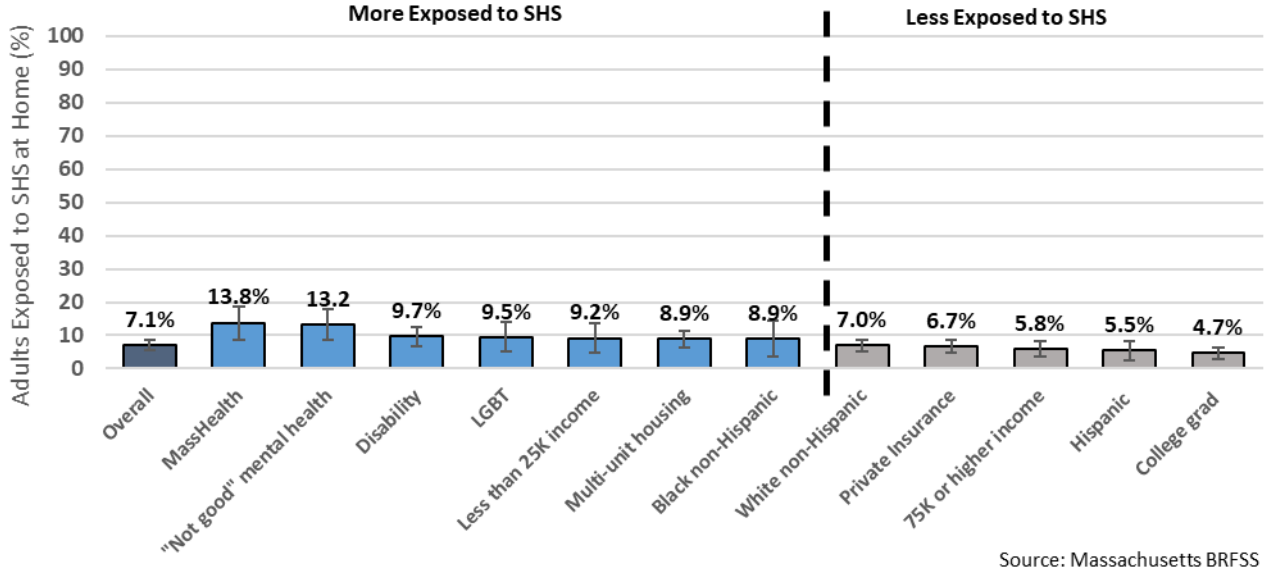
Examining housing type is important, as housing in Massachusetts is not equitably accessible to everyone. Certain populations are more likely to live in MUH than in single-family homes (Figure 14). In 2023, 63.5% of low-income respondents and 56.0% of respondents with less than a high school education reported living in MUH. Additionally, 55.3% of Hispanic and 48.5% of Black people reported living in MUH compared to 22.7% of White people.



Inequities in exposure to secondhand smoke at home

Given policies such as redlining and residential segregation, data shows that BIPOC and other populations are more likely to live in MUHs.[51] Accordingly, exposure to secondhand smoke at home is greater among Black adults, low socioeconomic groups, those with MassHealth insurance, those reporting "not good" mental health, those with disabilities, and those who identify as LGBT (Figure 14).

Figure 15. Percent of MA Adults Exposed to Secondhand Smoke at Home, 2023



Source: Massachusetts BRFSS

PROTECTIVE FACTOR SPOTLIGHT

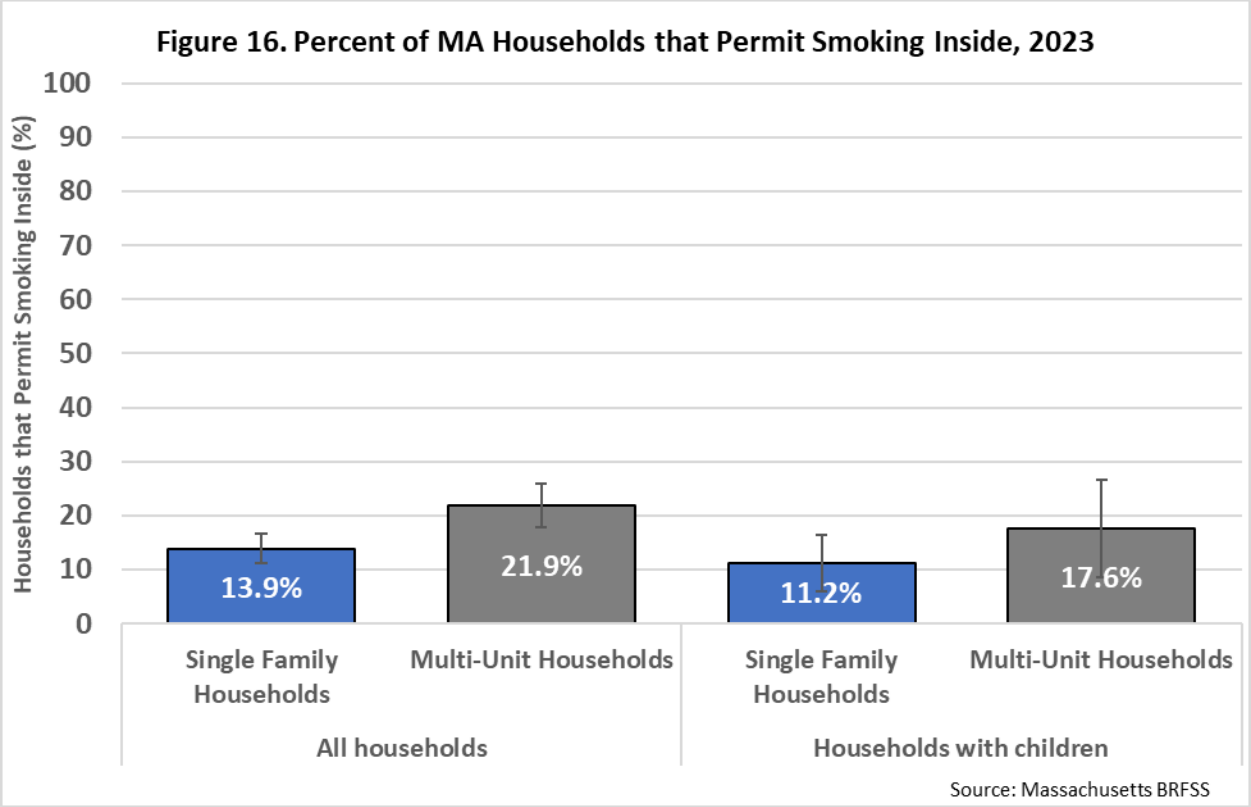
Although the majority of Hispanic respondents reported living in MUH in Massachusetts, fewer than 1 in 10 Hispanic respondents reported exposure to secondhand smoke at home. Qualitative data collection from a California study found that Hispanic respondents who lived in multi-unit housing favored smoke-free policies. Cultural values such as *familismo* (dedication and loyalty to family) and *respeto* (respect) motivated respondents to protect their families from secondhand smoke. Those who smoked favored separate smoking areas away from the home.[52]

Home smoking rules

In 2023, 83.4% of Massachusetts BRFSS respondents and 87.4% of respondents with children in the household did not permit any kind of smoking inside their homes. While a large majority of respondents protect their homes from secondhand smoke, there are still those who may permit smoking in some places inside their homes. Total home bans of smoking may delay the initiation of youth smoking and reduce exposure to secondhand smoke.[53]

Individuals with a high school level education and those with "not good" mental health were significantly more likely to allow smoking in some places or anywhere in the home. Differences in cultural norms or differential exposure to messaging about secondhand smoke may explain why some populations are less likely to have a total home smoking ban.[54]

Home smoking rules vary by housing type; those in single family homes report lower rates of permitting smoking inside compared to MUH (Figure 16). Adults in MUH are 1.74 times more likely to allow smoking inside as those in single-family homes (CI: 1.23-2.41, p <0.01).



Smoke-free Housing

An increasing number of private and public properties have instituted smoke-free policies that prohibit smoking indoors in an effort to curb home exposure to secondhand smoke. Residents of MUHs who do not allow smoking within their unit remain at risk from secondhand smoke from other units if their building does not have a smoke-free policy in place. In recent years, support for smoke-free policies has increased among residents (MA BRFSS 2020):

- 85% of those living in smoke-free housing support a policy that bans smoking in all personal living spaces.
- 55% of those not currently living in smoke-free housing would support this type of policy.

With assistance from MTCP, many municipal housing authorities across the state have already implemented a smoke-free policy that prohibits smoking inside any unit.

As of May 2025:

- 228 local housing authorities have implemented smoke-free policies.

For more information on smokefree housing and secondhand smoke exposure please visit Smoke-free environments | Mass.gov.

Policy Action

- As of August 1, 2018, the US Department of Housing and Urban Development (HUD) requires all federally-aided housing authority buildings to be smoke-free. In April 2014, the Massachusetts Department of Housing and Community Development encouraged housing authorities to make all of their buildings smoke-free.
- The statewide smoke-free workplace law was changed in 2018 and includes all electronic nicotine delivery or vaping devices as of December 31, 2018. The use of electronic nicotine delivery or

vaping devices is prohibited in all enclosed common entrance ways, stairways, and hallways in multiunit buildings. Many towns and cities have passed similar restrictions at the local level.

Future Directions

Strategies that focus on the reduction of secondhand smoke at home need to acknowledge that built environment and housing quality can often determine who is and is not exposed. While changing social norms may influence an individual's behavior of smoking inside the home, and rules around smoking within the home, the vast majority of those exposed at home lack control over their living conditions and exposure to secondhand smoke at home. Future directions should look to mitigate the effects of racial residential segregation and promote smoke-free housing policies.

Strategies and Resources

MTCP focuses on reducing the health and economic burden of tobacco use by preventing young people from starting to use tobacco and nicotine products, helping current tobacco and nicotine users to quit, protecting children and adults from secondhand smoke, and identifying and eliminating tobacco-related disparities.

MTCP invests in and works with communities, especially with historically-oppressed communities, to reverse unjust policies, share decision-making power, and build community capacity to live a life free of commercial tobacco and nicotine.

Prevention

Local policies

Strategies aimed at preventing youth initiation of tobacco products include local policies that change the retail environments that youth frequent. Municipalities can pass policies that raise the minimum price of cigars, limit the number of tobacco retailers in their community, ban smoking bars, and even restrict the sale of tobacco/nicotine products to people born after a certain date (Nicotine Free Generation). To learn more about policies in your community, visit the website for your local Board of Health.

Statewide policies

In December 2018, a statewide Minimum Legal Sales Age (MLSA) of 21 and pharmacy ban law took effect. This law raised the minimum legal sales age of tobacco in Massachusetts from 18 to 21 and banned the sale of tobacco in healthcare institutions such as pharmacies. In June 2020, An Act Modernizing Tobacco Control took full effect, which is a statewide law that includes the following provisions: a restriction on sales of all flavors (including mint and menthol) for all types of tobacco products (including vape products) to adult-only smoking bars; a restriction on sales of high-nicotine (>35 mg/ml; e.g. 5% JUUL) vape products to adult-only retailers and smoking bars; a ban on advertisements for tobacco products that a retailer cannot sell. For more information on the statewide law, visit: https://www.mass.gov/guides/2019-tobacco-control-law.

In 2022, BRFSS respondents were asked if they would be in favor of moving all tobacco products including cigarettes, cigars, cigarillos, smokeless tobacco, and vape products to adult-only tobacco retailers and smoking bars where you have to be at least 21+ to enter and 74.8% (95% CI 70.5%-79.1%) of respondents indicated they would support a policy like this.

Youth Engagement

Another strategy to decrease youth initiation of tobacco products includes youth engagement in tobacco prevention work. The 84 Movement is the statewide tobacco prevention program for Massachusetts middle and high school aged youth. It consists of Chapters in a school or community organization who fight back against the tobacco and vaping industries. When the movement started in 2007, 84% of Massachusetts high

school youth did not smoke cigarettes. As of 2023, that number is almost 97%, and 84% of high school youth do not vape. Youth that are part of The 84 work to educate their peers and adults about the tobacco and vaping industries' deceptive marketing tactics through events, PSAs, and flyers; help to create change locally and statewide to reduce the influence of tobacco in their communities by speaking at local board of health meetings and meeting with their local legislators; participate in workshops and statewide events like Youth Power Summit and ENUFF (Ending Nicotine Use For the Future) Youth day of Action to learn more about tobacco and racial justice; get funding to complete projects related to public health in their communities; and host their own events in their schools and communities. To learn more about The 84, visit https://the84.org/.

Tobacco cessation

Quit Now

Quitting or reducing tobacco use, at any age, reduces risk of disease. The Massachusetts Quitline (1-800-QUIT-NOW) is the state sponsored quitline offering free evidence-based counseling and nicotine replacement therapy to all Massachusetts residents. The Quitline has special programs for youth, young adults, people who use menthol tobacco/nicotine products, people with behavioral health conditions, pregnant and parenting people, and American Indians. QuitWorks is a patient referral and reporting service that allows healthcare and other providers to easily refer patients who use tobacco/nicotine to the Quitline . Additionally, Since the Health Care Reform Act was implemented in 2006, all MassHealth members are eligible for FDA approved cessation medication and counseling.

- For more information about the QuitWorks program, visit QuitWorks | Mass.gov.
- For more information about the Massachusetts Quitline, visit mass.gov/quitting, go directly to the Quitline website (https://ma.quitlogix.org/en-US/),or call 1-800-QUIT-NOW.
- For more information on chronic disease prevention, visit: https://www.mass.gov/info-details/bureau-of-community-health-and-prevention-directory.
- For more information on cessation resources for youth, visit https://ma.mylifemyquit.org/en-US.
- For more information on lung cancer screening, visit Project CONNECT.

Smoke-free environments

Due to the dangers of secondhand smoke exposure, Massachusetts workplaces are largely smoke-free, as well as an increasing amount of housing facilities. Just like prohibiting pets, landlords and condo associations can prohibit smoking. Smoke-free policies are not discriminatory. The policy only prohibits smoking in the building or on the property and does not prohibit smokers from living in the building.

The Smoke-Free Housing Project provides free information and technical assistance to landlords and condo associations interested in implementing a smoke-free rule. For more information, contact the Massachusetts Smoke-Free Housing Project's toll-free line at 877-830-8795. Tenants calling the number can receive additional information about their rights and can receive referrals to organizations that may be able to help. For more information on smoke-free environments, including smoke-free housing, visit:
Smoke-free environments | Mass.gov.

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