RESULTS OF THE MASSACHUSETTS YOUTH HEALTH SURVEY 2021

Health Survey Program
Office of Data Management and Outcomes Assessment
Massachusetts Department of Public Health

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Table of Contents

Introduction 2
Executive Summary 3
Demographic Characteristics of the 2021 MYHS 4
Protective Factors 5
Mental Health and Suicidality 10
Tobacco Use 13
Alcohol Use 19
Marijuana Use 25
Terms, Definitions and Statistical Methodology 31
Limitations 33

Introduction

The following report presents analyses of health-related behaviors for both middle and high school youth in Massachusetts from the Massachusetts Youth Health Survey (MYHS). The report presents comparative descriptive analyses of health behaviors by sex, race/ethnicity, and grade of middle and high school students. It provides a picture of the current health behaviors of Massachusetts students with the goal of identifying high risk population groups with a particular focus on race/ethnic disparities. It aims to assess the association between certain health behaviors and the demographic structure of student populations. The information obtained in these surveys assist in identifying the need for youth programs, interventions, and health policies.

In interpreting these results, it is critical to recognize that the social, economic, behavioral and physical factors experienced by populations where they live and work have a profound impact on their health. Disparities in outcomes by race, for example, are much more often due to social factors and the legacy of racial discrimination than biologic causes. The social determinants of health (SDOH) are rooted in systems, and therefore public health action to reduce and prevent health inequities must be directed at systems change. The Massachusetts Department of Public Health (MDPH) focuses on the six SDOH to eliminate inequities and achieve the vision of health and wellbeing for all residents of the Commonwealth. More information about Social Determinants of Health can be found on the Population Health Information Tool (PHIT) website [Population Health Information Tool | Mass.gov].

Note: The survey has historically been conducted during spring of odd-numbered years. However, due to the COVID-19 global pandemic, most schools nationwide, including those in Massachusetts, began their 2020-2021 school year with students learning remotely; the decision was therefore made to defer the administration until the fall of 2021. The pandemic clearly impacted students' lives and social connections, as many of these social connections are made while in school. While students who took the survey were at school, this may have impacted the results seen here. In addition, there are developmental changes and social connections that develop over the course of the school year, so moving the survey to the fall could have impacted results, particularly for tobacco, alcohol, and other substance use and perceptions. Finally, the high school survey was offered online, rather than only on paper, for the first time. Since all of these factors could affect results, a comparison with data from the previous administration (spring of 2019) is included.

Executive Summary

This report presents key indicators of the health behaviors reported by middle and high school students on the Massachusetts Youth Health Survey (MYHS). These indicators provide important information about the health, safety, and well-being of youth across the state. In 2021, 60 high schools participated, with 2,645 students completing the YHS high school survey. 79 middle schools participated in 2021, with 2,876 students completing the YHS middle school survey. Surveys were administered in schools between the months of September and December of 2021. The statistics presented are weighted to be representative of all Massachusetts public middle and high school students.

Highlights

Data provided by the MYHS are used throughout the department for program planning, monitoring and evaluation. Several topics of policy relevance were selected to highlight.

Protective Factors: Despite the influence of the COVID-19 pandemic, 2021 rates of protective factors have remained similar to 2019 rates. However, in 2021, we found that Black and Hispanic/Latino students were less likely than White students to engage in many protective factors, including volunteer/community work, organized activities, and to sit down to dinner with their families. All other racial/ethnic groups were less likely than White students to report feeling that their neighborhood was safe from crime, feeling safe with their parents/caregivers and feeling that they belong at school. In addition, students who identified as LGBTQ were less likely to sit down to dinner with their families and were less likely to feel like they belonged at school than their straight, cisgender counterparts.

Mental Health and Suicidality: **The rate of both high school and middle school youth who intentionally injured themselves increased in 2021 compared to 2019. However, the rates of youth feeling sad or hopeless and those considering suicide remained steady in 2021 compared to 2019.** Additionally, in 2021, we found that females and LGBTQ students were more likely than male and straight/cisgender students to report intentional self-injury, report feeling sad or hopeless, and seriously consider suicide. Hispanic/Latino students were more likely than other racial/ethnic groups to report feeling sad or hopeless and consider suicide.

Tobacco Use: Among high school students, rates of vaping decreased dramatically in 2021, compared to 2019. Additionally, in 2021, we found that LGBTQ students were more likely than straight/cisgender students to report ever smoking cigarettes or using a vape product in the prior 30 days, and, among middle schoolers, Hispanic/Latino students were more likely than White students to report ever smoking cigarettes and using vape products.

Alcohol Use: Recent alcohol use decreased 25% from 2019 to 2021 among high school youth. Additionally, in 2021, we found that, among high schoolers, White students were more likely than Hispanic/Latino or Asian students to report alcohol use in the prior 30 days. Nearly 2/3 of high schoolers thought it would be very or fairly easy to get alcohol. This sentiment was higher among White students than Black, Hispanic/Latino, or Asian students. Over half of high school students who reported ever drinking alcohol said they got it from their friends and at parties. Finally, among middle schoolers, females were more likely than males to report riding in a car with someone who had been drinking alcohol.

Marijuana Use: Use decreased dramatically for high school students in 2021, compared to 2019. Additionally, in 2021, we found that, among high schoolers, Asian students were less likely than any other racial/ethnic group to report using marijuana and LGBTQ students were more likely than straight/cisgender students to report ever using marijuana. Half of high school students thought it would be very or fairly easy to get marijuana. LGBTQ students were more likely than straight/cisgender students to hold this opinion. Among middle school students, females were more likely than males to report riding in a vehicle driven by someone who had been using marijuana. Hispanic/Latino students were more likely than White students to report that it would be very or fairly easy for them to get marijuana.

Demographic Characteristics of the 2021 MYHS

	Middle School (N=2,876)	**High School** (N=2,645)
Sex		
Male	1,425 (51.2%)	1,265 (51.0%)
Female	1,320 (48.8%)	1,341 (49.0%)
Missing	131	39
Grade		
6th grade	779 (31.9%)	--
7th grade	1,049 (34.0%)	--
8th grade	1,024 (34.1%)	--
9th grade	--	724 (25.5%)
10th grade	--	737 (25.3%)
11th grade	--	494 (24.8%)
12th grade	--	681 (24.5%)
Ungraded or Other	2	3
Missing	22	6
Race/Ethnicity [a]		
White	1,257 (56.4%)	1,379 (58.9%)
Black	240 (9.6%)	226 (9.3%)
Hispanic or Latino	712 (22.8%)	667 (21.2%)
Asian	141 (5.1%)	178 (5.7%)
Other or Multiple Race	159 (6.1%)	149 (4.9%)
Missing	367	46
Sexual Orientation and Gender Identity [b]		
LGBTQ	--	688 (25.4%)
Straight / Cisgender	--	1851 (74.6%)

([a]) Students were allowed to indicate multiple race categories. If Hispanic/Latino was indicated as an ethnic identification, the student was categorized as Hispanic/Latino regardless of race. The Other or Multiple Race category includes American Indian, Alaska Natives or Pacific Islander and youth who indicated more than one race Hispanic/Latino.

([b]) Students were asked sexual orientation and gender identity in separate questions. Those who responded gay or lesbian, bisexual, questioning/not sure, or other to sexual orientation, or responded they were transgender or not sure to the gender identity question were included in the category LGBTQ. Students who indicated that they did not know what either question was asking were excluded.

Protective Factors

While epidemiology often focuses on factors that increase risk of illness, death, or other poor health outcomes, there are also protective factors that promote health and wellbeing. For youth, these protective factors are centered on positive interactions with family, school, and community. Previous research has demonstrated links between these protective factors and decreased tobacco use, better general health, decreased engagement in gun violence, decreased risk of suicidal ideation, and decreased alcohol use.

Students were asked the following six questions:

1. During the past 7 days, on how many days did you do volunteer work, community service or help people outside of your home without getting paid?
2. During the past 7 days, on how many days did you take part in organized activities (including sports teams, school clubs, music, art or dance lessons, church groups, or other supervised activities)?
3. During the past 7 days, on how many days did you sit down to dinner with your family?
4. How safe from crime do you consider your neighborhood to be?
5. How true is the following statement: I feel safe when I am with my family/caregiver(s)?
6. How true is the following statement: I feel that I belong at my school?

Key Findings:

- There was no significant difference between 2021 and 2019 data for these indicators.
- Among high school students, Black and Hispanic/Latino students were less likely than White students to engage in many protective factors, including volunteer/community work, organized activities, and sitting down to dinner with their families. All other racial/ethnic groups were less likely than White students to report feeling that their neighborhood was safe from crime, feeling safe with their parents/caregivers and feeling that they belong at school. High school students who identified as LGBTQ were less likely to sit down to dinner with their families and were less likely to feel like they belonged at school than their straight, cisgender counterparts

Percentage of Massachusetts students who reported:	**Doing volunteer work or community service in past week**	**Taking part in organized activities in past week**	**Sitting down to dinner with family one or more times in past week**	**Feeling their neighborhood was safe from crime**
2019 High School Estimate	37.1 %	61.2 %	79.1 %	90.0 %
2019 95% Confidence Interval	(34.1 - 40.1)	(57.1 - 65.4)	(75.9 - 82.4)	(87.0 - 92.9)
2021 High School Estimate	34.7 %	64.5 %	80.0 %	91.3 %
2021 95% Confidence Interval	(31.3 – 38.1)	(59.9 – 69.2)	(77.7 – 82.3)	(88.4 - 94.2)
2019 Middle School Estimate	35.5 %	68.4 %	86.1 %	91.4 %
2019 95% Confidence Interval	(32.7 - 38.3)	(64.7 - 72.1)	(83.5 - 88.7)	(89.0 - 93.8)
2021 Middle School Estimate	32.3 %	70.4 %	87.0 %	92.0
2021 95% Confidence Interval	(30.4 - 34.2)	(67.4 - 73.5)	(84.7 - 89.2)	(90.0 - 94.0)

PROTECTIVE FACTORS – MASSACHUSETTS HIGH SCHOOL STUDENTS (PART 1 OF 2)

Percentage of Massachusetts high school students who reported:		Doing volunteer work or community service in past week	Taking part in organized activities in past week	Sitting down to dinner with family one or more times in past week
Overall (95% Confidence Interval)		**34.7 (31.3 - 38.1)**	**64.5 (59.9 - 69.2)**	**80.0 (77.7 - 82.3)**
Grade	**9th Grade**	31.2 (25.9 - 36.5)	66.1 (60.6 - 71.7)	83.8 (79.6 - 87.9)
	10th Grade	34.3 (29.8 - 38.8)	65.9 (58.9 - 72.9)	81.1 (77.6 - 84.7)
	11th Grade	34.4 (28.0 - 40.7)	63.7 (55.8 - 71.5)	77.9 (72.9 - 82.9)
	12th Grade	38.8 (32.8 - 44.8)	62.6 (54.2 - 71.0)	77.3 (73.7 - 80.9)
Sex	**Male**	31.0 (27.5 - 34.6)	62.8 (58.5 - 67.1)	81.2 (78.3 - 84.2)
	Female	38.7 (33.9 - 43.5)	66.7 (60.9 - 72.5)	79.0 (76.0 - 82.0)
Race/Ethnicity	**White**	37.3 (33.5 - 41.1)	71.5 (66.7 - 76.2)	85.4 (83.1 - 87.6)
	Black	26.5 (20.3 - 32.7)	57.9 (49.4 - 66.4)	58.3 (51.4 - 65.3)
	Hispanic or Latino	28.6 (24.3 - 32.8)	46.4 (41.0 - 51.8)	73.4 (69.6 - 77.3)
	Asian	44.4 (33.3 - 55.4)	69.6 (60.3 - 78.9)	83.7 (76.1 - 91.3)
	Other/Multiracial	33.3 (23.5 - 43.2)	61.8 (50.6 - 73.1)	74.6 (66.1 - 83.2)
Sexual Orientation and Gender Identity	**LGBTQ**	31.6 (26.6 - 36.6)	60.8 (54.8 - 66.8)	75.3 (70.3 - 80.2)
	Straight / Cisgender	36.2 (32.5 - 39.9)	66.3 (61.6 - 71.1)	82.0 (79.7 - 84.3)

PROTECTIVE FACTORS – MASSACHUSETTS HIGH SCHOOL STUDENTS (PART 2 OF 2)

Percentage of Massachusetts high school students who reported:		**Feeling their neighborhood was safe from crime**	**Feeling safe with family/caregivers a lot or quite a bit**	**Feeling they belong at school a lot or quite a bit**
Overall (95% Confidence Interval)		**91.3 (88.4 - 94.2)**	**91.1 (89.6 - 92.5)**	**60.5 (57.5 - 63.5)**
Grade	**9th Grade**	92.6 (88.5 - 96.8)	90.9 (88.5 - 93.3)	61.8 (57.1 - 66.5)
	10th Grade	90.9 (86.9 - 95.0)	92.0 (89.7 - 94.3)	56.1 (50.6 - 61.6)
	11th Grade	90.6 (86.6 - 94.6)	89.7 (87.0 - 92.4)	61.0 (55.1 - 66.9)
	12th Grade	90.9 (86.6 - 95.3)	91.5 (88.8 - 94.3)	63.2 (58.3 - 68.1)
Sex	**Male**	91.4 (88.6 - 94.3)	92.7 (91.0 - 94.5)	66.2 (62.9 - 69.5)
	Female	91.3 (88.1 - 94.5)	89.6 (87.6 - 91.6)	55.6 (51.6 - 59.5)
Race/Ethnicity	**White**	96.5 (94.8 - 98.2)	93.7 (92.3 - 95.1)	65.3 (61.8 - 68.8)
	Black	79.4 (71.3 - 87.4)	86.3 (82.3 - 90.4)	55.3 (48.0 - 62.5)
	Hispanic or Latino	82.5 (77.8 - 87.2)	88.3 (85.4 - 91.1)	53.6 (49.0 - 58.1)
	Asian	86.6 (78.7 - 94.5)	87.5 (82.3 - 92.7)	52.4 (43.7 - 61.2)
	Other/Multiracial	88.7 (82.8 - 94.5)	83.5 (77.7 - 89.4)	50.7 (41.2 - 60.1)
Sexual Orientation and Gender Identity	**LGBTQ**	90.4 (86.9 - 93.9)	83.9 (80.7 - 87.2)	44.2 (38.9 - 49.5)
	Straight / Cisgender	91.9 (89.0 - 94.9)	93.8 (92.6 - 94.9)	66.7 (63.3 - 70.0)

PROTECTIVE FACTORS – MASSACHUSETTS MIDDLE SCHOOL STUDENTS (PART 1 OF 2)

Percentage of Massachusetts middle school students who reported:		**Doing volunteer work or community service in past week**	**Taking part in organized activities in past week**	**Sitting down to dinner with family one or more times in past week**
Overall (95% Confidence Interval)		**32.3 (30.4 - 34.2)**	**70.4 (67.4 - 73.5)**	**87.0 (84.7 - 89.2)**
Grade	**6th Grade**	31.6 (27.7 - 35.4)	70.6 (65.8 - 75.4)	90.0 (86.7 - 93.2)
	7th Grade	31.2 (28.0 - 34.4)	71.1 (66.7 - 75.5)	85.6 (82.1 - 89.2)
	8th Grade	33.8 (30.1 - 37.5)	70.1 (65.8 - 74.4)	85.8 (82.4 - 89.2)
Sex	**Male**	31.3 (28.6 - 34.1)	70.6 (67.2 - 74.0)	88.4 (86.1 - 90.6)
	Female	32.9 (30.0 - 35.8)	70.4 (66.7 - 74.2)	85.6 (82.6 - 88.7)
Race/Ethnicity	**White**	34.4 (31.7 - 37.2)	76.7 (73.7 - 79.7)	91.6 (89.9 - 93.4)
	Black	28.3 (22.5 - 34.1)	63.7 (56.9 - 70.4)	68.7 (60.7 - 76.6)
	Hispanic or Latino	32.1 (28.5 - 35.6)	60.3 (55.8 - 64.7)	82.8 (78.9 - 86.7)
	Asian	32.7 (24.2 - 41.1)	69.4 (58.5 - 80.3)	91.7 (85.5 - 97.8)
	Other/Multiracial	32.5 (24.8 - 40.2)	65.1 (56.5 - 73.6)	83.4 (77.0 - 89.8)

PROTECTIVE FACTORS – MASSACHUSETTS MIDDLE SCHOOL STUDENTS (PART 2 OF 2)

Percentage of Massachusetts middle school students who reported:		**Feeling their neighborhood was safe from crime**	**Feeling safe with family/caregivers a lot or quite a bit**	**Feeling they belong at school a lot or quite a bit**
Overall (95% Confidence Interval)		**92.0 (90.0 - 94.0)**	**92.5 (91.1 - 93.8)**	**65.7 (62.3 - 69.0)**
Grade	**6th Grade**	92.3 (89.1 - 95.5)	94.7 (92.7 - 96.6)	71.0 (65.7 - 76.3)
	7th Grade	92.5 (90.0 - 94.9)	91.8 (89.6 - 93.9)	65.8 (61.0 - 70.5)
	8th Grade	91.5 (88.7 - 94.3)	91.4 (89.1 - 93.6)	61.3 (56.8 - 65.9)
Sex	**Male**	93.2 (91.4 - 95.0)	94.7 (93.2 - 96.3)	70.9 (67.4 - 74.5)
	Female	91.1 (88.5 - 93.6)	91.7 (89.9 - 93.5)	62.7 (58.8 - 66.6)
Race/Ethnicity	**White**	95.3 (93.8 - 96.8)	93.8 (92.3 - 95.4)	70.7 (66.5 - 75.0)
	Black	88.4 (82.0 - 94.9)	91.1 (87.4 - 94.9)	51.1 (44.6 - 57.7)
	Hispanic or Latino	84.1 (80.2 - 88.0)	89.5 (86.8 - 92.2)	58.6 (54.4 - 62.8)
	Asian	94.8 (91.0 - 98.7)	93.8 (89.5 - 98.2)	62.3 (53.4 - 71.1)
	Other/Multiracial	86.8 (81.6 - 92.1)	93.7 (89.2 - 98.2)	63.1 (55.1 - 71.1)

Mental Health and Suicidality

Youth with better mental health are physically healthier, demonstrate more socially positive behaviors, and engage in fewer risky behaviors; whereas youth with mental health problems, such as depression, are more likely to engage in health risk behaviors. Suicide is a significant yet largely preventable public health problem. The MDPH Suicide Prevention Program provides support to community agencies, education and training for professionals and caregivers, and funds programs working with youth, veterans and older adults. The program also supports and encourages communities to collaborate across disciplines to prevent suicide and suicide attempts across the lifespan. More information about the program as well as suicide prevention resources can be found at: Suicide Prevention Program | Mass.gov

Students were asked the following three questions:

1. During the past 12 months, how many times did you hurt or injure yourself on purpose without wanting to die? (For example, by cutting, burning, or bruising yourself on purpose.)
2. During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?
3. During the past 12 months, did you ever seriously consider attempting suicide?

Key Findings:

- The rate of both high school and middle school youth who intentionally injured themselves increased in 2021 compared to 2019.
- The rates of youth feeling sad or hopeless and those considering suicide remained stable in 2021 compared to 2019.
- Among both middle and high school students, females were more likely than males to report intentional self-injury, feeling sad or hopeless, and seriously considering suicide.
- Hispanic/Latino high school students were more likely than their White counterparts to report feeling sad or hopeless. Among middle schoolers, Hispanic/Latino students were more likely than White students to report intentional self-injury, feeling sad or hopeless, and seriously considering suicide.
- High school students who identified as LGBTQ were more likely to report intentional self-injury, feeling sad or hopeless, and seriously considering suicide than were students who identified as straight/cisgender.

Percentage of Massachusetts students who reported:	**Injuring oneself intentionally without wanting to die, past year**	**Feeling sad or hopeless for 2+ weeks that they stopped doing usual activities, past year**	**Seriously considering suicide, past year**
2019 High School Estimate	15.4 %	30.4 %	12.8 %
2019 95% Confidence Interval	(13.7 - 17.1)	(27.7 - 33.0)	(11.1 - 14.5)
2021 High School Estimate	20.5 %	33.6 %	14.5 %
2021 95% Confidence Interval	(18.7 - 22.3)	(30.9 - 36.3)	(12.8 - 16.3)
2019 Middle School Estimate	21.0 %	24.3 %	11.3 %
2019 95% Confidence Interval	(18.9 – 23.1)	(21.1 – 27.5)	(9.5 – 13.1)
2021 Middle School Estimate	26.5 %	29.3 %	12.6 %
2021 95% Confidence Interval	(24.2 - 28.9)	(26.3 - 32.3)	(10.9 - 14.3)

MENTAL HEALTH AND SUICIDALITY – MASSACHUSETTS HIGH SCHOOL STUDENTS

Percentage of Massachusetts high school students who reported:		Injuring oneself intentionally without wanting to die, past year	Feeling sad or hopeless for 2+ weeks that they stopped doing usual activities, past year	Seriously considering suicide, past year
Overall (95% Confidence Interval)		**20.5 (18.7 - 22.3)**	**33.6 (30.9 - 36.3)**	**14.5 (12.8 - 16.3)**
Grade	**9th Grade**	19.9 (17.1 - 22.7)	29.0 (24.2 - 33.9)	15.3 (12.0 - 18.7)
	10th Grade	23.1 (20.7 - 25.6)	34.8 (30.7 - 39.0)	13.8 (11.5 - 16.1)
	11th Grade	21.1 (16.5 - 25.7)	36.0 (30.5 - 41.6)	14.9 (11.1 - 18.7)
	12th Grade	17.7 (14.2 - 21.2)	34.6 (29.4 - 39.7)	13.7 (10.2 - 17.2)
Sex	**Male**	13.6 (11.7 - 15.4)	22.7 (19.3 - 26.0)	8.8 (6.9 - 10.7)
	Female	27.3 (24.5 - 30.1)	44.3 (40.3 - 48.3)	19.8 (17.3 - 22.3)
Race/Ethnicity	**White**	19.3 (16.7 - 22.0)	30.1 (26.3 - 33.9)	13.4 (11.0 - 15.8)
	Black	23.0 (16.7 - 29.4)	36.2 (28.7 - 43.6)	13.4 (8.6 - 18.3)
	Hispanic or Latino	22.8 (19.0 - 26.6)	40.5 (36.0 - 45.1)	17.3 (13.7 - 20.9)
	Asian	16.1 (9.5 - 22.6)	34.7 (25.7 - 43.6)	14.7 (9.2 - 20.2)
	Other/Multiracial	24.6 (17.5 - 31.8)	36.9 (26.4 - 47.4)	18.6 (11.5 - 25.7)
Sexual Orientation and Gender Identity	**LGBTQ**	41.5 (37.3 - 45.8)	58.6 (53.7 - 63.4)	34.4 (30.7 - 38.2)
	Straight / Cisgender	13.5 (11.7 - 15.2)	25.6 (22.8 - 28.3)	7.9 (6.5 - 9.3)

MENTAL HEALTH AND SUICIDALITY – MASSACHUSETTS MIDDLE SCHOOL STUDENTS

Percentage of Massachusetts middle school students who reported:		**Injuring oneself intentionally without wanting to die, past year**	**Feeling sad or hopeless for 2+ weeks that they stopped doing usual activities, past year**	**Seriously considering suicide, past year**
Overall (95% Confidence Interval)		**26.5 (24.2 - 28.9)**	**29.3 (26.3 - 32.3)**	**12.6 (10.9 - 14.3)**
Grade	**6th Grade**	25.8 (22.1 - 29.4)	27.1 (22.2 - 32.0)	9.0 (6.6 - 11.3)
	7th Grade	27.4 (23.1 - 31.7)	29.0 (24.7 - 33.3)	13.0 (10.3 - 15.7)
	8th Grade	25.7 (22.4 - 29.1)	30.8 (27.2 - 34.4)	15.5 (12.8 - 18.2)
Sex	**Male**	18.4 (15.6 - 21.1)	18.1 (15.7 - 20.4)	7.1 (5.7 - 8.6)
	Female	33.2 (29.5 - 36.8)	38.9 (34.5 - 43.2)	16.8 (14.1 - 19.5)
Race/Ethnicity	**White**	23.7 (20.4 - 27.1)	23.9 (20.3 - 27.6)	10.3 (8.2 - 12.3)
	Black	29.0 (23.1 - 34.9)	33.0 (26.6 - 39.3)	17.5 (12.4 - 22.6)
	Hispanic or Latino	31.5 (27.3 - 35.8)	42.3 (38.0 - 46.5)	16.1 (12.6 - 19.7)
	Asian	21.3 (13.5 - 29.0)	27.3 (17.3 - 37.4)	11.9 (6.5 - 17.4)
	Other/Multiracial	33.2 (25.0 - 41.3	33.5 (25.5 - 41.4)	17.2 (10.8 - 23.5)

Tobacco Use

Tobacco use, including cigarettes, cigars, electronic vape products, and smokeless tobacco, remains the leading preventable cause of death in the United States. Nationally, tobacco product use is started and established primarily during adolescence with nearly 9 out of 10 adults who smoke cigarettes daily first try smoking by age 18.[1] The Massachusetts Tobacco Cessation and Prevention Program's (MTCP) mission is to reduce 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. More information and resources on prevention and quit aids can be found at Massachusetts Tobacco Cessation and Prevention Program (MTCP) | Mass.gov

Students were asked the following questions:

1. How old were you when you first tried cigarette smoking, even one or two puffs? (HS)[2] or Have you ever tried cigarette smoking, even one or two puffs? (MS)[3]
2. How old were you when you first tried a vape product, even one or two puffs? (HS) or Have you ever tried a vape product, even one or two puffs? (MS)
3. During the past 30 days, on how many days did you use a vape product?
4. How much do you think people risk harming themselves if they occasionally use: Conventional tobacco (including cigarettes, cigars, chew, dip, snus, pipe tobacco, etc.)?
5. How much do you think people risk harming themselves if they occasionally use: Vape products (including JUUL, Puff Bar, Fruyt Stik, e-cigarettes, e-cigars, vape pipes, vaping pens, e-hookahs, hookah pens, etc.)?
6. During the past 30 days, how did you get your tobacco products (this includes vape products, cigarettes, cigars, smokeless tobacco)? (Choose all that apply)
7. During the past 30 days, what flavor(s) did the tobacco product(s) (including vape products, cigarettes, cigars, smokeless tobacco) you used contain? (Choose all that apply)

Key Findings:

- Among high school students, rates of vaping decreased dramatically in 2021 compared to 2019. Although not as dramatic, the percent of middle school students ever trying a vape product also decreased.
- Among both middle and high school students, females were more likely than males to report use of vape products.
- LGBTQ high school students were more likely than straight/cisgender students to report ever smoking cigarettes and use a vape product in the prior 30 days.
- Among middle schoolers, Hispanic/Latino students were more likely than White students to report ever smoking cigarettes and using vape products.
- Only 2/3 of high school students thought that there was a moderate or great risk of harm from using either conventional tobacco or vape products. Hispanic students were less likely than White students to think using vape products was harmful.
- The vast majority of high school students who reported using tobacco products also reported that these products contained flavorings. Fruit, alcohol, or candy flavoring was the most commonly reported.

Percentage of Massachusetts students who reported:	Ever smoking cigarettes	Ever trying a vape product	Using a vape product, pas 30 days
2019 High School Estimate	15.1%	51.1%	32.0%
2019 95% Confidence Interval	(13.1– 17.1)	(47.9 – 54.3)	(28.5 – 35.4)
2021 High School Estimate	11.8%	30.9%	17.6%
2021 95% Confidence Interval	(10.1 - 13.4)	(28.4 - 33.5)	(15.7 - 19.6)
2019 Middle School Estimate	5.2%	14.7%	*
2019 95% Confidence Interval	(4.0 – 6.3)	(11.8 – 17.6)	*
2021 Middle School Estimate	4.4%	10.1%	4.6
2021 95% Confidence Interval	(3.3 - 5.5)	(7.9 - 12.2)	(3.3 - 5.9)

[1] Source: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/index.htm

[2] HS = high school

[3] MS = middle school

TOBACCO USE – MASSACHUSETTS HIGH SCHOOL STUDENTS (PART 1 OF 2)

Percentage of Massachusetts high school students who reported:		**Ever smoking cigarettes**	**Ever trying a vape product**	**Using a vape product, past 30 days**
Overall (95% Confidence Interval)		**11.8 (10.1 - 13.4)**	**30.9 (28.4 - 33.5)**	**17.6 (15.7 - 19.6)**
Grade	**9th Grade**	8.2 (6.0 - 10.5)	21.0 (16.6 - 25.4)	11.8 (9.1 - 14.6)
	10th Grade	8.5 (6.0 - 11.0)	27.7 (23.7 - 31.8)	16.4 (12.3 - 20.4)
	11th Grade	13.4 (9.9 - 16.9)	33.3 (28.2 - 38.4)	19.8 (16.1 - 23.6)
	12th Grade	17.1 (13.0 - 21.1)	41.9 (37.5 - 46.3)	22.5 (18.5 - 26.5)
Sex	**Male**	11.7 (9.6 - 13.8)	26.7 (23.2 - 30.1)	15.1 (12.1 - 18.1)
	Female	11.7 (9.1 - 14.3)	35.1 (31.5 - 38.6)	20.1 (17.5 - 22.7)
Race/Ethnicity	**White**	11.9 (9.9 - 14.0)	30.8 (27.4 - 34.1)	17.8 (15.4 - 20.2)
	Black	**	31.0 (22.9 - 39.0)	17.3 (10.3 - 24.3)
	Hispanic or Latino	12.0 (8.1 - 15.9)	34.5 (30.1 - 39.0)	18.2 (14.7 - 21.6)
	Asian	8.5 (4.4 - 12.5)	19.9 (11.6 - 28.2)	**
	Other/Multiracial	15.1 (8.1 - 22.1)	30.9 (22.0 - 39.8)	21.2 (11.3 - 31.1)
Sexual Orientation and Gender Identity	**LGBTQ**	17.0 (13.5 - 20.5)	35.4 (30.5 - 40.4)	22.8 (18.8 - 26.8)
	Straight / Cisgender	10.0 (8.4 - 11.6)	29.4 (26.3 - 32.5)	15.8 (13.5 - 18.1)

TOBACCO USE – MASSACHUSETTS HIGH SCHOOL STUDENTS (PART 2 OF 2)

Percentage of Massachusetts high school students who reported:		Thinking the risk of harm from occasionally use conventional tobacco is moderate to great	Thinking the risk of harm from occasionally use vape products is moderate to great
Overall (95% Confidence Interval)		**65.7 (62.6 - 68.7)**	**64.1 (61.6 - 66.6)**
Grade	**9th Grade**	62.7 (58.0 - 67.5)	62.3 (57.3 - 67.2)
	10th Grade	66.8 (61.8 - 71.8)	65.8 (61.6 - 69.9)
	11th Grade	65.6 (59.7 - 71.6)	62.5 (57.6 - 67.4)
	12th Grade	67.2 (62.0 - 72.4)	65.6 (60.5 - 70.6)
Sex	**Male**	62.6 (59.0 - 66.2)	61.0 (57.8 - 64.2)
	Female	68.8 (64.6 - 72.9)	67.4 (64.2 - 70.6)
Race/Ethnicity	**White**	64.1 (59.8 - 68.3)	64.0 (60.6 - 67.4)
	Black	71.5 (65.0 - 78.0)	70.3 (63.0 - 77.5)
	Hispanic or Latino	65.6 (61.0 - 70.2)	59.7 (55.0 - 64.5)
	Asian	71.8 (63.8 - 79.9)	69.4 (60.4 - 78.5)
	Other/Multiracial	66.8 (57.8 - 75.7)	68.2 (59.4 - 76.9)
Sexual Orientation and Gender Identity	**LGBTQ**	64.2 (59.0 - 69.4)	64.6 (60.4 - 68.8)
	Straight / Cisgender	66.5 (63.3 - 69.7)	64.2 (61.2 - 67.1)

All high school respondents were asked “During the past 30 days, how did you get your tobacco products (this includes vape products, cigarettes, cigars, smokeless tobacco)?” and could select multiple response options. A distribution of responses is presented below.

	%	95% CL
I did not use any tobacco products in past 30 days	76.4	73.7 - 79.1
Buy from a supermarket or convenience store	1.8	1.1 - 2.6
Bought from a vape shop or vapor store	2.0	1.3 - 2.7
Bought from another state	1.1	0.5 - 1.7
Gave someone else money to buy them for me	3.6	2.7 - 4.6
Got from friends	10.3	8.9 - 11.7
Got them from a family member	1.7	1.2 - 2.3
Got them online	1.2	0.6 - 1.7
Got them some other way	3.5	2.7 - 4.3
Missing	8.0	5.5 - 10.6

All high school students were also asked “During the past 30 days, what flavor(s) did the tobacco product(s) (including vape products, cigarettes, cigars, smokeless tobacco) you used contain?” and could select multiple response options.

	%	95% CL
I did not use any tobacco products in past 30 days	73.1	70.2 - 76.0
Fruit, alcohol, or candy flavors	11.9	10.3 - 13.5
Mint, menthol, or wintergreen flavors	6.6	5.3 - 7.9
Clove or spice	0.6	0.2 - 0.9
Other flavor not listed	2.0	1.3 - 2.7
Not sure	2.6	2.0 - 3.2
No flavors	2.2	1.5 - 2.8
Missing	8.1	5.8 - 10.4

TOBACCO USE – MASSACHUSETTS MIDDLE SCHOOL STUDENTS (PART 1 OF 2)

Percentage of Massachusetts middle school students who reported:		**Ever smoking cigarettes**	**Ever trying a vape product**	**Using a vape product, past 30 days**
Overall (95% Confidence Interval)		**4.4 (3.3 - 5.5)**	**10.1 (7.9 - 12.2)**	**4.6 (3.3 - 5.9)**
Grade	**6th Grade**	2.0 (0.8 - 3.2)	4.1 (2.5 - 5.7)	**
	7th Grade	4.8 (3.0 - 6.5)	9.2 (6.4 - 11.9)	4.2 (2.5 - 5.8)
	8th Grade	6.1 (4.2 - 8.0)	16.1 (12.2 - 19.9)	7.8 (5.1 - 10.5)
Sex	**Male**	3.5 (2.4 - 4.6)	8.2 (6.2 - 10.2)	3.4 (2.3 - 4.6)
	Female	4.9 (3.3 - 6.6)	11.5 (8.5 - 14.5)	5.5 (3.7 - 7.3)
Race/Ethnicity	**White**	3.6 (2.2 - 4.9)	8.0 (5.4 - 10.6)	3.0 (1.6 - 4.4)
	Black	**	14.9 (8.3 - 21.6)	8.1 (3.9 - 12.4)
	Hispanic or Latino	7.8 (5.3 - 10.4)	17.3 (13.2 - 21.4)	9.2 (6.1 - 12.3)
	Asian	**	**	**
	Other/Multiracial	**	14.2 (7.8 - 20.7)	**

TOBACCO USE – MASSACHUSETTS MIDDLE SCHOOL STUDENTS (PART 2 OF 2)

Percentage of Massachusetts middle school students who reported:		**Thinking the risk of harm from occasionally use conventional tobacco is moderate to great**	**Thinking the risk of harm from occasionally use vape products is moderate to great**
Overall (95% Confidence Interval)		**68.0 (65.8 - 70.1)**	**68.4 (66.0 - 70.7)**
Grade	**6th Grade**	70.9 (67.3 - 74.5)	73.2 (68.7 - 77.7)
	7th Grade	69.1 (65.5 - 72.7)	68.9 (65.5 - 72.3)
	8th Grade	64.1 (60.6 - 67.5)	63.6 (60.4 - 66.7)
Sex	**Male**	66.7 (63.5 - 69.9)	68.7 (65.7 - 71.6)
	Female	69.0 (65.7 - 72.2)	67.8 (64.6 - 71.0)
Race/Ethnicity	**White**	66.8 (63.0 - 70.6)	69.6 (66.5 - 72.8)
	Black	76.4 (71.2 - 81.7)	69.7 (62.9 - 76.4)
	Hispanic or Latino	65.6 (61.8 - 69.3)	59.0 (54.7 - 63.3)
	Asian	79.3 (72.0 - 86.6)	77.8 (71.1 - 84.5)
	Other/Multiracial	61.9 (53.4 - 70.4	64.3 (55.4 - 73.2

Alcohol Use

Among youth, the use of alcohol is associated with adverse effects on normal brain development and cognitive functioning and has been linked to unintentional injuries, physical fights, risky sexual behavior, academic and occupational problems, and illegal behavior. Alcohol use is a major contributor to the leading causes of adolescent death (i.e., motor vehicle crashes, homicide, and suicide) in the United States.[4]

The MDPH Bureau of Substance Addiction Services (BSAS) oversees the statewide system of prevention, intervention, treatment, and recovery support services for individuals, families, and communities affected by substance addiction. For information on prevention or treatment/recovery see Bureau of Substance Addiction Services | Mass.gov

Students were asked the following questions:

1. During your life, on how many days have you had at least one drink of alcohol?
2. During the past 30 days, on how many days did you have at least one drink of alcohol?
3. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?
4. During the past 30 days, did you drive a car or other vehicle when you had been drinking alcohol? (HS) or During the past 30 days, did you ever ride in a car or other vehicle driven by someone who had been drinking alcohol? (MS)
5. How much do you think people risk harming themselves (physically or in other ways) if they have five or more drinks in a row?
6. How easy or difficult would it be for you to get each of the following: Beer, wine, or other alcohol?
7. There are many different ways to get beer, wine coolers, wine, or liquor. Which of the following are how you get alcohol?

Key Findings:

- Recent alcohol use decreased 25% from 2019 to 2021 among middle and high school youth.
- Among high schoolers, White students were more likely than Hispanic/Latino or Asian students to report alcohol use in the prior 30 days.
- Although a decrease from 72.3% in 2019, nearly 2/3 of high school students thought it would be fairly easy or very easy to get alcohol.
- Over half of high school students who reported ever drinking alcohol, said they got it from their friends and at parties.
- Among middle schoolers, females were more likely than males to report riding in a car with someone who had been drinking alcohol.

Percentage of Massachusetts students who reported:	**Drinking alcohol, past 30 days**	**Binge drinking, past 30 days***
2019 High School Estimate	29.9 %	14.4 %
2019 95% Confidence Interval	(26.6 - 33.3)	(11.8 - 16.9)
2021 High School Estimate	22.3 %	10.5 %
2021 95% Confidence Interval	(19.4 - 25.3)	(8.6 - 12.4)
2019 Middle School Estimate	4.4 %	0.9 %
2019 95% Confidence Interval	(3.1 – 5.6)	(0.4 – 1.4)
2021 Middle School Estimate	3.1 %	0.7 %
2021 95% Confidence Interval	(2.3 - 3.9)	(0.3 - 1.2)

[4] Source: https://www.cdc.gov/alcohol/fact-sheets/underage-drinking.htm

ALCOHOL USE – MASSACHUSETTS HIGH SCHOOL STUDENTS (PART 1 OF 2)

Percentage of Massachusetts high school students who reported:		Drinking alcohol, past 30 days	Binge drinking, past 30 days	Driving a car after drinking alcohol, past 30 days (among those who drive and used alcohol in past 30 days)
Overall (95% Confidence Interval)		**22.3 (19.4 - 25.3)**	**10.5 (8.6 - 12.4)**	**5.0 (2.8 - 7.2)**
Grade	**9th Grade**	11.6 (9.0 - 14.2)	4.9 (3.3 - 6.5)	**
	10th Grade	18.2 (14.8 - 21.5)	6.0 (3.8 - 8.2)	**
	11th Grade	23.0 (17.7 - 28.3)	12.3 (7.6 - 16.9)	**
	12th Grade	36.5 (30.2 - 42.7)	19.0 (15.0 - 23.0)	**
Sex	**Male**	19.3 (16.2 - 22.4)	10.6 (8.2 - 13.1)	**
	Female	25.2 (22.0 - 29.4)	10.4 (8.0 - 12.9)	5.9 (2.6 - 9.1)
Race/Ethnicity	**White**	25.7 (22.0 - 29.4)	12.2 (9.6 - 14.7)	**
	Black	16.2 (9.3 - 23.1)	**	**
	Hispanic or Latino	18.4 (14.9 - 21.8)	9.7 (6.9 - 12.4)	**
	Asian	13.2 (6.2 - 20.2)	**	**
	Other/Multiracial	18.6 (10.9 - 26.3)	**	**
Sexual Orientation and Gender Identity	**LGBTQ**	24.5 (20.4 - 28.6)	10.8 (7.9 - 13.8)	**
	Straight / Cisgender	21.8 (18.5 - 25.1)	10.6 (8.4 - 12.8)	4.0 (2.1 - 6.0)

ALCOHOL USE – MASSACHUSETTS HIGH SCHOOL STUDENTS (PART 2 OF 2)

Percentage of Massachusetts high school students who reported:		**Thinking the risk of harm from binge drinking is moderate to great**	**Thinking it's very or fairly easy to get alcohol**
Overall (95% Confidence Interval)		**76.0 (73.5 - 78.5)**	**63.5 (60.4 - 66.5)**
Grade	**9th Grade**	74.1 (69.7 - 78.5)	52.0 (46.5 - 57.5)
	10th Grade	79.0 (74.9 - 83.0)	63.3 (59.1 - 67.6)
	11th Grade	74.3 (69.4 - 79.2)	66.3 (60.7 - 72.0)
	12th Grade	76.6 (71.9 - 81.2)	72.0 (67.8 - 76.2)
Sex	**Male**	72.0 (68.9 - 75.0)	60.1 (55.8 - 64.3)
	Female	79.8 (76.6 - 83.0)	66.4 (63.0 - 69.8)
Race/Ethnicity	**White**	76.4 (73.1 - 79.7)	68.4 (65.4 - 71.5)
	Black	74.8 (66.5 - 83.1)	48.9 (38.7 - 59.1)
	Hispanic or Latino	71.1 (67.7 - 74.4)	58.2 (52.4 - 63.9)
	Asian	82.7 (76.8 - 88.6)	51.1 (40.2 - 62.0)
	Other/Multiracial	83.8 (76.8 - 90.8)	61.8 (51.9 - 71.7)
Sexual Orientation and Gender Identity	**LGBTQ**	80.6 (76.9 - 84.2)	70.5 (65.0 - 76.0)
	Straight / Cisgender	75.0 (72.2 - 77.7)	61.3 (57.9 - 64.6)

High school students who reported that they had ever had at least one drink of alcohol were asked “There are many different ways to get beer, wine coolers, wine, or liquor. Which of the following are how you get alcohol?” and were asked to respond Yes/No for each option.

	%	**95% CL**
Buy it from a supermarket or convenience store	6.8	4.6 - 8.9
Buy it from a liquor store or package store	9.1	7.2 - 11.0
Buy it from bars, clubs or restaurants	3.6	2.1 - 5.1
Have someone else buy it for me	35.9	31.5 - 40.4
Get it through my friends	50.5	45.8 - 55.2
Get it at home	37.4	33.7 - 41.1
Get it at parties	52.6	48.2 - 56.9
Missing (all blank or all No)	21.6	18.3 - 24.9

ALCOHOL USE – MASSACHUSETTS MIDDLE SCHOOL STUDENTS (PART 1 OF 2)

Percentage of Massachusetts middle school students who reported:		**Drinking alcohol, past 30 days**	**Binge drinking, past 30 days**	**Rode in a car driven by someone who had been drinking alcohol, past 30 days**
Overall (95% Confidence Interval)		**3.1 (2.3 - 3.9)**	**0.7 (0.3 - 1.2)**	10.1 (8.9 - 11.4)
Grade	**6th Grade**	**	**	8.2 (6.0 - 10.4)
	7th Grade	2.2 (1.3 - 3.1)	**	12.2 (10.0 - 14.3)
	8th Grade	5.1 (3.3 - 6.9)	**	9.7 (7.9 - 11.6)
Sex	**Male**	2.4 (1.5 - 3.2)	**	7.9 (6.3 - 9.5)
	Female	3.5 (2.2 - 4.8)	**	12.3 (10.4 - 14.3)
Race/Ethnicity	**White**	3.1 (2.1 - 4.1)	**	10.1 (8.1 - 12.2)
	Black	**	**	12.6 (7.8 - 17.3)
	Hispanic or Latino	4.8 (2.8 - 6.9)	**	11.5 (9.2 - 13.7)
	Asian	**	**	**
	Other/Multiracial	**	**	7.7 (3.5 - 11.9)

ALCOHOL USE – MASSACHUSETTS MIDDLE SCHOOL STUDENTS (PART 2 OF 2)

Percentage of Massachusetts middle school students who reported:		**Thinking the risk of harm from binge drinking is moderate to great**	**Thinking it's very or fairly easy to get alcohol**
Overall (95% Confidence Interval)		**75.9 (73.6 - 78.3)**	**35.5 (32.7 - 38.2)**
Grade	**6th Grade**	73.0 (68.0 - 77.9)	23.1 (18.6 - 27.6)
	7th Grade	76.4 (72.8 - 80.1)	35.2 (30.7 - 39.7)
	8th Grade	78.1 (74.6 - 81.6)	45.4 (41.3 - 49.5)
Sex	**Male**	75.0 (71.9 - 78.2)	32.2 (29.3 - 35.1)
	Female	76.7 (73.7 - 79.6)	38.2 (34.1 - 42.3)
Race/Ethnicity	**White**	79.8 (76.8 - 82.8)	38.9 (35.4 - 42.4)
	Black	76.3 (70.7 - 81.9)	31.1 (22.9 - 39.3)
	Hispanic or Latino	69.1 (64.8 - 73.5)	30.6 (25.0 - 36.2)
	Asian	80.6 (75.3 - 85.9)	25.5 (15.4 - 35.5)
	Other/Multiracial	72.5 (64.5 - 80.6)	38.7 (29.2 - 48.2)

Marijuana Use

Marijuana can have permanent effects on the developing brain when use begins in adolescence, especially with regular or heavy use. Negative effects of teen marijuana use include difficulty thinking and problem-solving, problems with memory and learning, reduced coordination, difficulty maintaining attention, and problems with school and social life.[5]

The MDPH Bureau of Substance Addiction Services (BSAS) oversees the statewide system of prevention, intervention, treatment, and recovery support services for individuals, families, and communities affected by substance addiction. For information on prevention or treatment/recovery see Bureau of Substance Addiction Services | Mass.gov

Students were asked the following questions:

1. How old were you when you tried marijuana for the first time?
2. During the past 30 days, how many times did you use marijuana?
3. During the past 30 days, did you ever drive a car or other vehicle when you had been using marijuana? (HS) or During the past 30 days, did you ever ride in a car or other vehicle driven by someone who had been using marijuana? (MS)
4. How much do you think people risk harming themselves if they occasionally use: Marijuana (also called dope, grass, hashish, herb, joint, pot, weed, or reefer)?
5. How easy or difficult would it be for you to get each of the following: Marijuana (also called dope, grass, hashish, herb, joint, pot, weed, or reefer)?
6. During the past 30 days, how did you use marijuana?
7. During the past 30 days, how did you get the marijuana that you used?

Key Findings:

- Marijuana use decreased dramatically for high school students in 2021, compared to 2019. While rates also decreased for middle school youth, the change was not significant.
- Among high schoolers, Asian students were less likely than any other racial/ethnic group to report using marijuana.
- LGBTQ high school students were more likely than straight/cisgender students to report ever using marijuana.
- Among middle school students, females were more likely than males to report riding in a vehicle driven by someone who had been using marijuana.
- Half of high school students thought it would be very or fairly easy to get marijuana. LGBTQ students were more likely than straight/cisgender students to think this.
- Only approximately half of high school students reported thinking the risk of harm from using marijuana was moderate or great. This was higher among Asians than Whites and lower among LGBTQ students than straight/cisgender students.
- Among middle schoolers, Hispanics were more likely than Whites to report that it would be very or fairly easy for them to get marijuana.

Percentage of Massachusetts students who reported:	**Ever using marijuana**	**Using marijuana, past 30 days**
2019 High School Estimate	44.4 %	30.2 %
2019 95% Confidence Interval	(41.1 - 47.7)	(27.1 - 33.4)
2021 High School Estimate	27.9 %	17.8 %
2021 95% Confidence Interval	(25.4 - 30.5)	(16.0 - 19.7)
2019 Middle School Estimate	7.0 %	3.0 %
2019 95% Confidence Interval	(5.4 – 8.7)	(2.1 – 3.9)
2021 Middle School Estimate	4.8 %	2.5 %
2021 95% Confidence Interval	(3.5 - 6.2)	(1.7 - 3.3)

[5] Source: https://www.cdc.gov/marijuana/health-effects/teens.html

MARIJUANA USE – MASSACHUSETTS HIGH SCHOOL STUDENTS (PART 1 OF 2)

Percentage of Massachusetts high school students who reported:		Ever using marijuana	Using marijuana, past 30 days	Driving a car after using marijuana, past 30 days (among those who drive and used marijuana in past 30 days)
Overall (95% Confidence Interval)		**27.9 (25.4 - 30.5)**	**17.8 (16.0 - 19.7)**	**24.8 (18.9 - 30.8)**
Grade	**9th Grade**	15.8 (11.9 - 19.7)	10.6 (7.8 - 13.4)	**
	10th Grade	18.1 (14.8 - 21.4)	11.5 (8.6 - 14.4)	**
	11th Grade	33.7 (29.1 - 38.2)	21.9 (18.4 - 25.5)	**
	12th Grade	44.8 (40.0 - 49.6)	27.6 (23.5 - 31.7)	22.5 (15.7 - 29.3)
Sex	**Male**	25.0 (21.7 - 28.3)	15.9 (13.1 - 18.7)	29.3 (19.7 - 38.9)
	Female	30.9 (27.8 - 34.1)	19.9 (17.2 - 22.6)	20.0 (14.6 - 25.3)
Race/Ethnicity	**White**	27.7 (24.6 – 30.9)	17.9 (15.6 – 20.1)	20.7 (13.4 – 27.9)
	Black	33.5 (26.2 – 40.8)	19.2 (12.5 – 26.0)	**
	Hispanic or Latino	30.1 (25.2 – 35.1)	19.8 (16.1 – 23.4)	**
	Asian	11.6 (6.3 – 16.9)	6.4 (2.7 – 10.0)	**
	Other/Multiracial	32.2 (23.4 – 41.0)	21.4 (13.6 – 29.2)	**
Sexual Orientation and Gender Identity	**LGBTQ**	34.2 (29.4 – 39.0)	24.4 (20.3 – 28.5)	**
	Straight / Cisgender	26.2 (23.6 – 28.9)	15.9 (14.1 – 17.7)	23.5 (16.7 – 30.2)

MARIJUANA USE – MASSACHUSETTS HIGH SCHOOL STUDENTS (PART 2 OF 2)

Percentage of Massachusetts high school students who reported:		**Thinking it's very or fairly easy to get marijuana**	**Thinking the risk of harm from occasionally using marijuana is moderate to great**
Overall (95% Confidence Interval)		**50.2 (47.1 – 53.3)**	**51.2 (48.4 – 54.0)**
Grade	**9th Grade**	30.8 (25.6 – 36.1)	61.0 (57.0 – 65.0)
	10th Grade	46.0 (40.3 – 51.8)	54.8 (50.0 – 59.5)
	11th Grade	56.9 (51.9 – 61.9)	48.0 (42.9 – 53.2)
	12th Grade	66.7 (62.5 – 70.9)	40.3 (36.0 – 44.5)
Sex	**Male**	49.4 (45.4 – 53.4)	48.1 (44.7 – 51.4)
	Female	50.8 (46.6 – 55.0)	54.6 (51.0 – 58.3)
Race/Ethnicity	**White**	51.8 (47.7 - 55.8)	48.7 (45.0 - 52.4)
	Black	47.6 (37.8 - 57.4)	58.6 (50.7 - 66.5)
	Hispanic or Latino	51.4 (46.1 - 56.7)	52.7 (48.1 - 57.4)
	Asian	30.4 (18.9 - 41.9)	63.9 (55.9 - 72.0)
	Other/Multiracial	53.2 (41.3 - 65.1)	46.8 (37.1 - 56.4)
Sexual Orientation and Gender Identity	**LGBTQ**	59.2 (53.7 - 64.6)	43.1 (38.0 - 48.3)
	Straight / Cisgender	47.2 (44.0 - 50.4)	54.2 (51.7 - 56.7)

High school respondents who reported that they had ever used marijuana were asked “During the past 30 days, how did you get the marijuana that you used?” and could select multiple response options.

	%	95% CL
I did not use marijuana in past 30 days	27.0	23.6 - 30.5
I bought it from a store	4.3	2.6 - 6.0
I bought it from someone else	25.8	22.2 - 29.3
I got it at home with permission from a parent or family member over the age of 21	8.3	5.7 - 10.9
I took it from home without permission of a parent or adult family member over the age of 21	4.1	2.5 - 5.8
I took it from some other place without permission	4.0	2.1 - 5.9
I got it from friends	39.9	35.9 - 44.0
I got it at parties	17.5	14.3 - 20.7
I got it some other way	14.5	11.5 - 17.5
Missing	15.8	11.1 - 20.4

High school respondents who reported that they had ever used marijuana were asked “During the past 30 days, how did you use marijuana?” and could select multiple response options.

	%	95% CL
I did not use marijuana in past 30 days	28.3	24.5 - 32.1
Smoked it in a cigar or blunt wrap	22.6	19.4 - 25.8
Smoked it in a joint, pipe, bong, or dab	38.8	34.0 - 43.6
Ate it (brownies, cookies, candy, etc)	20.6	17.3 - 23.8
Drank it (tea, cola, alcohol, etc)	2.4	1.0 - 3.9
Vaped it	32.0	27.4 - 36.5
Used some other way	3.5	1.9 - 5.0
Missing	15.3	10.4 - 20.2

MARIJUANA USE – MASSACHUSETTS MIDDLE SCHOOL STUDENTS (PART 1 OF 2)

Percentage of Massachusetts middle school students who reported:		**Ever using marijuana**	**Using marijuana, past 30 days**	**Rode in a car driven by someone who had been using marijuana, past 30 days**
Overall (95% Confidence Interval)		**4.8 (3.5 - 6.2)**	**2.5 (1.7 - 3.3)**	**6.6 (5.3 - 7.9)**
Grade	**6th Grade**	**	**	4.2 (2.3 - 6.2)
	7th Grade	4.1 (2.3 - 5.8)	2.3 (1.2 - 3.4)	7.3 (5.4 - 9.2)
	8th Grade	8.2 (5.4 - 11.1)	4.3 (2.5 - 6.0)	8.0 (5.5 - 10.4)
Sex	**Male**	3.4 (2.2 - 4.5)	1.7 (0.9 - 2.4)	4.8 (3.4 - 6.2)
	Female	5.8 (3.8 - 7.8)	3.2 (2.0 - 4.5)	8.1 (6.2 - 10.0)
Race/Ethnicity	**White**	3.5 (2.1 - 4.9)	2.0 (0.9 - 3.1)	5.4 (3.7 - 7.0)
	Black	**	**	10.0 (6.2 - 13.8)
	Hispanic or Latino	7.4 (4.6 - 10.2)	4.0 (2.5 - 5.6)	11.1 (8.0 - 14.3)
	Asian	**	**	**
	Other/Multiracial	**	**	**

MARIJUANA USE – MASSACHUSETTS MIDDLE SCHOOL STUDENTS (PART 2 OF 2)

Percentage of Massachusetts middle school students who reported:		**Thinking it's very or fairly easy to get marijuana**	**Thinking the risk of harm from occasionally using marijuana is moderate to great**
Overall (95% Confidence Interval)		**12.0 (9.5 - 14.5)**	**74.9 (72.1 - 77.8)**
Grade	**6th Grade**	4.0 (1.7 - 6.2)	81.7 (77.8 - 85.7)
	7th Grade	11.1 (7.5 - 14.8)	75.9 (71.5 - 80.3)
	8th Grade	19.1 (14.8 - 23.3)	68.7 (64.3 - 73.1)
Sex	**Male**	10.2 (7.9 - 12.5)	74.4 (71.3 - 77.5)
	Female	13.6 (10.1 - 17.0)	75.1 (71.2 - 79.0)
Race/Ethnicity	**White**	9.6 (6.7 - 12.5)	75.4 (71.6 - 79.1)
	Black	19.8 (9.6 - 30.0)	69.8 (59.6 - 80.0)
	Hispanic or Latino	17.6 (13.0 - 22.2)	71.5 (66.8 - 76.2)
	Asian	**	87.4 (81.9 - 92.8)
	Other/Multiracial	14.5 (7.6 - 21.5)	68.2 (59.7 - 76.7

Terms, Definitions and Statistical Methodology

This report contains data from the Massachusetts Youth Health Survey (MYHS). The MYHS is conducted separately at both the middle school (grades 6-8) and high school (grades 9-12) levels. The high school survey was conducted among 2,645 students in 60 schools and the middle school survey was conducted among 2,876 students in 79 schools.

The MYHS data is **weighted** to represent the population of students enrolled in Massachusetts public high schools and middle schools. Weighting makes the sample representative in two ways:

- It adjusts for differences in the probability of selection due to school size
- It adjusts for school and student non-participation

The underlying **sample size (N)** in each cell of the presented tables is the number of students who responded to the specific MYHS question(s). These are unweighted numbers. These numbers exclude students who reported "don't know" or had no response coded (missing or skipped).

The **crude percentage** is the weighted proportion of respondents in a particular category. When percentages are reported in the text of this report, they are referring to crude percentages. The crude percentage of respondents used in this report reflects the burden of a certain health status indicator in a specific group of the population, e.g. grade, sex, or race/ethnicity.

The data presented here are univariate, descriptive percentages. No multivariate analysis was performed on this data. In addition, all data presented here are cross-sectional and thus this report contains no inferences about causality.

The **95% confidence interval (95% CI)** is a range of values determined by the degree of variability of the data within which the true value is likely to lie. The confidence interval indicates the precision of a calculation; the wider the interval the less precision in the estimate. The 95% confidence intervals used in this report for crude and age-adjusted percentages are the indicators of reliability (or stability) of the estimate. Smaller population subgroups or smaller numbers of respondents yield less precise estimates.

Statistical significance (at the 95% probability level) was considered as a basis when we used the terms “more likely” or “less likely.” Differences between percentages for respective subgroups are presented when a difference is statistically significant. We considered the difference between two percentages to be statistically significant (with 95% probability) if the calculated p-value was <0.05.

Suppression of the presented estimates:

a) Estimates and their 95% confidence intervals are not presented in the tables if the underlying sample size is less than 100 respondents.
b) Following recommendations of the National Center for Health Statistics, data are not presented in the tables if a ratio of standard error to the estimate itself exceeds 30% (relative standard error of greater than 30%). Standard error of the estimate is a measure of its variability. Larger standard errors yield wider confidence intervals and less reliable estimates.

Due to a need for this data in weighting, male and female are the only **sex** options on the survey. We acknowledge that male and female are insufficient options for residents who do not fall into either and thus may be mis-represented or included in “missing.”

Race-ethnicity categories in this report include White, Black, Hispanic, Asian, and Other/Multiracial. When referring to White, Black, Asian, or Other/Multiracial, these categories include only non-Hispanic/non-Latino respondents. All respondents reporting Hispanic/Latino ethnicity are included in the Hispanic/Latino category regardless of race. Due to small sample sizes, data on American Indian/Alaska Natives and Native Hawaiians/Other Pacific Islanders are collapsed into the Other/Multiple Race category.

Students were asked **sexual orientation and gender identity** in separate questions. Those who responded gay or lesbian, bisexual, questioning/not sure, or other to sexual orientation or responded they were transgender or not sure to gender identity question were included in the category LGBTQ. Students who indicated that they did not know what either question was asking were excluded. We recognize that combining these groups into one category is not ideal, however, we find it necessary to do so to be able to provide stable, reliable estimates.

Limitations

There are some limitations that should be considered when interpreting results from the MYHS, based on the nature of the survey data:

- The data estimated from the MYHS pertain to middle school (grades 6-8) and high school (grades 9-12) students enrolled in a Massachusetts public school. Students who attend private or religious schools or are home-schooled, as well as youth not attending school are not included and results cannot be generalized to these groups.
- All data collected on the MYHS are based on self-report from respondents. By its nature, self-reported data may be subject to error for several reasons. An individual may have difficulty remembering events that occurred a long time ago or the frequency of certain behaviors. Some respondents may over or under report behaviors they deem to be socially desirable or undesirable.
- Because MYHS data is based on a random sample of schools, these results may differ from another random sample to some extent simply due to chance.
- The MYHS is only conducted in English. Students for whom English is a second language may have difficulty completing the survey in the allotted class time.