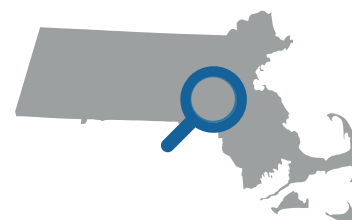


MetroWest Adolescent Health Survey Regional Highlights Report

*Informing data-driven school and community
health policies and practices*



2018 | MetroWest Region High School Youth

GRADES 9-12



METROWEST
HEALTH
FOUNDATION



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Highlights from the 2018 MetroWest Adolescent Health Survey

MetroWest Region High School Report

Background

The MetroWest Adolescent Health Survey (MWHAS), an initiative of the MetroWest Health Foundation, signifies a deep commitment to improving adolescent health and wellness by supporting data-driven advancements in prevention efforts, programs, and policies. The 2018 survey is the 7th administration of the MWAHS, which has been administered every other year since 2006 in the region served by the MetroWest Health Foundation. In 2018 alone, over 41,000 middle and high school students in all 25 communities in the region participated in the survey. By monitoring trends in adolescent health and risk behaviors for well over a decade, the survey data has strengthened the efforts of schools and communities to better understand, prioritize, and address the most pressing physical and mental health challenges facing youth today.

Methodology

The 2018 high school MWAHS was administered to a census of students in grades 9 through 12 in all 26 high schools in the MetroWest region served by the MetroWest Health Foundation. As in previous survey waves, local procedures were followed to inform parents/guardians of the survey and give them the choice to opt out their child(ren). Students were also informed that their participation was voluntary and that no names or other identifying information were being collected. Data collection at each school was guided by a protocol that protected the privacy of students' responses.

In total, 24,746 students in grades 9 through 12 completed the 2018 survey, representing 88% of the youth in all 26 high schools. This report summarizes current youth behaviors on key health indicators in the areas of substance use, violence, bullying, mental health, sexual behavior, and physical activity, including new information on emerging trends such as use of electronic vapor products (including e-cigarettes) and areas of heightened concern, such as stress and anxiety, and social media use. The data allow for an examination of behavioral trends across seven time points from 2006 to 2018. Current data from 2018 are provided by sex and grade, and trends over the seven waves of the MWAHS are highlighted.

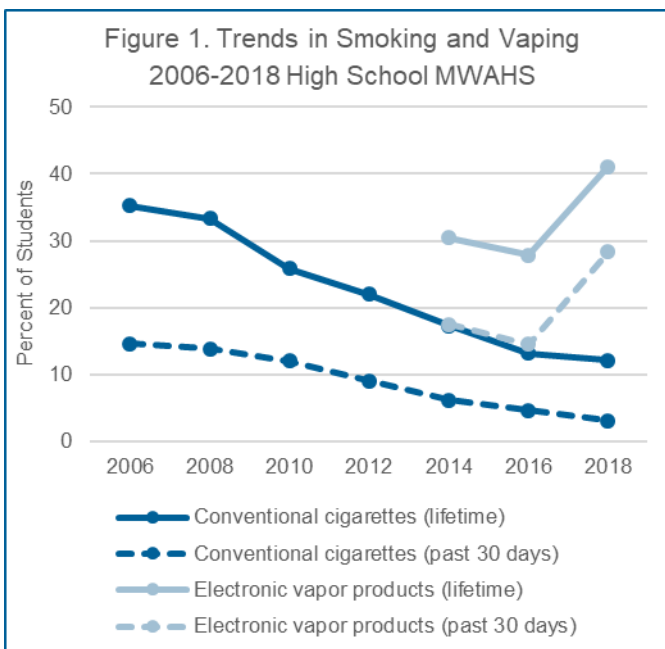
Key Findings: Substance Use

Cigarette Smoking and Use of Electronic Vapor Products

While use of conventional cigarettes continued to decline to the lowest numbers in the history of the MWAHS, lifetime use of electronic vapor products (EVPs), such as e-cigarettes, has risen from 28% in 2016 to 41% in 2018. This rapid increase is consistent with recent national data.¹

Cigarette Smoking (Conventional)

- » Lifetime conventional cigarette smoking has declined steadily, from 35% in 2006 to 12% in 2018 [Figure 1].
- » Current use of conventional cigarettes decreased from 15% in 2006 to 5% in 2016, and fell further to 3% in 2018.
- » Reports of lifetime smoking continue to be higher among males than females (14% vs. 11%); however, there have been substantial declines among both sexes since 2006.
- » The proportion of youth who initiate smoking more than triples from 9th grade (6%) to 12th grade (20%).
- » Cigarette smoking continues to be markedly lower in MetroWest compared with the state and nation. For example, only 12% of MetroWest high school youth have ever smoked, compared with 20% of youth in Massachusetts² and 29% in the United States.³



Use of Electronic Vapor Products*

- » Two in five MetroWest high school youth (41%) have used EVPs in their lifetime.
- » Nearly three in ten high school students (28%) have used EVPs in the past 30 days.
- » While there is a continued decrease in use of conventional cigarettes, lifetime EVP use increased from 28% in 2016 to 41% in 2018, and current EVP use nearly doubled from 15% to 28% over the same two-year period [Figure 1]. 2014 was the first year that data were collected on EVP use.
- » There are substantial increases in EVP use from 2016 to 2018 among both females and males. Whereas more males than females used EVPs in 2016, EVP use rose more among females. For example, lifetime use increased from 31% to 40% among males, and nearly doubled among females, from 24% to 42%.
- » Current EVP use in 2018 is similar by sex (around 28% for both females and males); in contrast, current use in 2016 was higher among males than females (18% vs. 11%).
- » EVP use is prevalent, even in early years of high school: One in four 9th grade students (25%) report ever using EVPs, with lifetime use more than doubling to 56% in 12th grade.
- » 12% of high school youth have used EVPs on school property at least once in the past 30 days.
- » One in twenty youth (5%) report using EVPs daily in the past 30 days. Nearly one in ten 12th grade students (9%) report daily use.

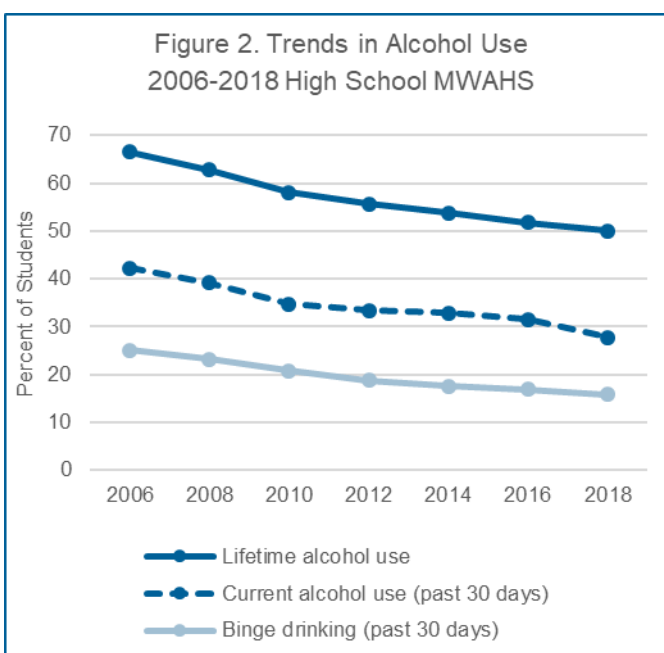
* Electronic vapor products (EVPs) include electronic cigarettes (e-cigarettes) like JUUL, Phix, Vuse, MarkTen, and blu, and other electronic vapor products, like vapes, vape pens, e-cigars, e-hookahs, hookah pens, and mods.

- » Nearly two-thirds of youth (67%) perceive moderate or great risk in using EVPs, with higher perceptions of risk among females and younger students. Despite the increase in EVP use, perception of risk rose steadily since 2014, from 42% to 67%.
- » Lifetime EVP use in MetroWest (41%) is similar to the most recent state (41%)² and national (42%)³ Youth Risk Behavior Survey (YRBS) data collected in spring 2017. However, current EVP use is higher in MetroWest (28%), compared with the state (20%)² and national (13%)³ YRBS. The 2018 National Youth Tobacco Survey¹ indicates a recent and rapid rise in EVP use, so data from the upcoming 2019 state and national YRBS will likely be more comparable to 2018 MWAHS data.

Alcohol Use

Alcohol use among high school youth has steadily declined at every time point since the MWAHS began. Lifetime drinking decreased from 67% in 2006 to 52% in 2016, further declining to 50% in 2018. Current drinking and binge drinking during the past 30 days follow similar downward trends, consistent with state and national data. Nonetheless, alcohol remains the most commonly used substance among youth, and one in six youth report recent binge drinking.

- » Reports of current drinking decreased from 42% in 2006 to 28% in 2018 [Figure 2].
- » Binge drinking (during the past 30 days) has steadily declined by one-third, from 25% in 2006 to 16% in 2018.*
- » Consistent with the past two survey administrations, females report higher levels than males for lifetime drinking (52% vs. 48%) and current drinking (30% vs. 26%). 16% of both females and males report recent binge drinking.
- » While alcohol use has consistently declined over time among both females and males, the decline is slightly greater among males. For example, whereas 42% of both females and males reported current drinking in 2006, reports in 2018 declined to 26% among males and 30% among females.
- » Current alcohol use nearly quadruples from 9th grade (12%) to 12th grade (45%). By 12th grade, nearly one in three high school students reports recent binge drinking (30%).
- » About one in twenty high school youth (6%) reports drinking alone in the past 30 days, an indication of problem drinking. Drinking alone is associated with elevated risk of mental health problems, including more than double the risk of depressive symptoms, and triple the risk of self-injury and suicidal thoughts.
- » Lifetime alcohol use in MetroWest (50%) continues to be lower than in Massachusetts² (56%) and in the nation (60%).³ Current drinking follows a similar pattern. However, reports of binge drinking (16%) are consistent with state data² and slightly higher than national data (14%).³

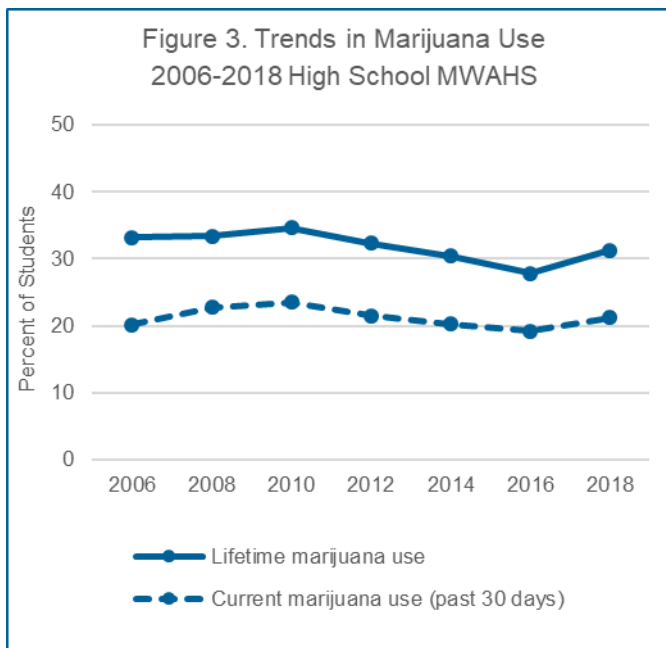


* Binge drinking in recent surveys is defined as four or more drinks in a row for females, or five or more drinks in a row for males at least once in the past 30 days. This does not take into account other factors, like body weight, that influence intoxication.

Marijuana Use

After past declines, reports of marijuana use in high school are slightly higher in 2018. Lifetime use declined from a high of 35% in 2010 to 28% in 2016, with the 2018 data showing a slight rise to 31%. Future data will determine if this increase represents the beginning of a trend, especially in the context of recent marijuana legalization and opening of recreational marijuana dispensaries.

- » Both lifetime and current use of marijuana declined from 2010 to 2016, but reports are slightly higher in 2018 [Figure 3].
- » Males are more likely than females to report both lifetime marijuana use (32% vs. 30%) and current use (23% vs. 19%).
- » Marijuana use among both sexes has increased: from 2016 to 2018, lifetime use increased from 26% to 30% among females, and from 29% to 32% among males.
- » Initiation of marijuana use increases from 13% in 9th grade to 50% in 12th grade. By 12th grade, one in three students report current use (34%).
- » 6% of youth have used marijuana on school property in the past 30 days (7% of males and 4% of females).
- » One in four high school youth (26%) have used marijuana in an EVP in their lifetime. Among youth who have used EVPs, three out of five (60%) have used them to vape marijuana.
- » Nearly two out of three youth (64%) report it is “fairly easy” or “very easy” to obtain marijuana. This is slightly lower than 2016 (66%), when these data were first collected. It will be important to monitor access in future waves given the legalization of recreational marijuana.
- » Nearly half of youth (44%) think there is either “no risk” or “slight risk” of using marijuana once or twice a week. Lower risk perception is related to increased use.
- » Marijuana use continues to be lower in MetroWest than in the state and the nation: 31% of MetroWest youth have used marijuana in their lifetime, compared with 38% in Massachusetts² and 36% in the U.S.³



Prescription Drug Misuse

Prescription drug misuse has continued to decline: Lifetime reports of using prescription drugs without a doctor's prescription were similar from 2006 to 2010 at 10-11% and have steadily decreased to a low of 5% in 2018. This decline is consistent with national trends.⁴

- » Current misuse of prescription drugs has decreased from 5-6% in 2008-2012 to just under 3% in 2018.*
- » Prescription drug misuse has declined notably among females and males. For example, from 2006 to 2018, lifetime use decreases from 12% to 5% among males, and from 10% to 5% among females.

* Prescription drug misuse includes using prescription drugs without a doctor's prescription, such as using someone else's prescription or obtaining the medicine illegally.

- » In 2018, prescription drug misuse is similar among females and males for both lifetime use (5% for each) and current use (just under 3% for each).
- » As with other substance use, lifetime prescription drug misuse increases during the high school years, from 3% in 9th grade to 7% in 12th grade.
- » Just under 3% of youth have misused prescription pain medicine in the past 30 days; consistent with wording on the national YRBS,³ prescription pain medicine includes use of opioids like without a prescription including codeine, Vicodin, Oxycontin, Hydrocodone, and Percocet.
- » The decline in prescription drug misuse is consistent with findings from the Monitoring the Future survey,⁴ which has found decreases in use of prescription drugs like Vicodin and Oxycontin over a period when great attention has been called to the negative consequences of opioid misuse and opioid-related deaths.

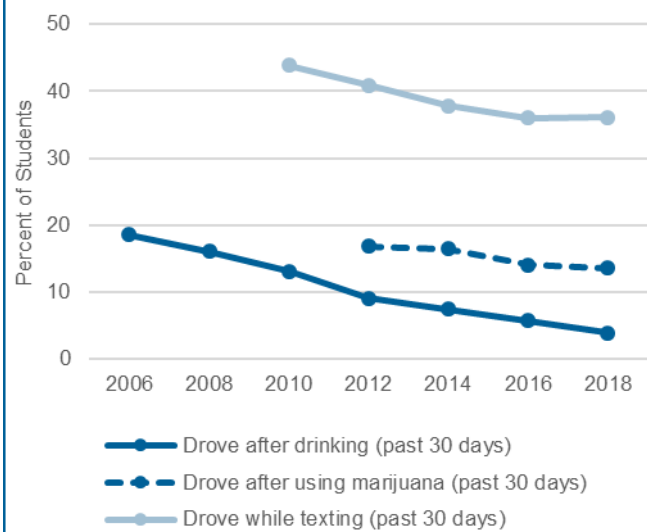
Key Findings: Impaired and Distracted Driving

Driving after drinking in the past 30 days has continued to decline, with reports decreasing steadily from 19% in 2006 to 4% in 2018. Many more youth report driving after using marijuana (14%), which has slowly decreased from 17% in 2012, when these data were first collected. Texting while driving has remained steady since 2016, a risk reported by more than one in three high school drivers (36%) in the past 30 days.*

Impaired Driving

- » 5% of students report riding as a passenger in a car with a high school driver who had been drinking in the past 30 days, a decrease from 10% in 2012, when this question was first asked.
- » Driving after using marijuana was steady from 2016 to 2018 at 14%, after declining from 17% in 2012 [Figure 4]. Reports of riding as a passenger with a high school driver who used marijuana are similar at 14-15% over the past two surveys.
- » Males are more likely than females to report current driving after drinking (5% vs. 3%) and driving after using marijuana (18% vs. 10%). Reports of riding as a passenger with a driver who has been using substances are similar by sex.
- » Drivers in 12th grade are more than twice as likely as drivers in 11th grade to drive after using alcohol or marijuana.
- » Reports of driving after drinking are lower in MetroWest (4%) compared with the state and nation (6%),^{2,3} while reports of driving after using marijuana are similar in MetroWest (14%) and the US (13%). (Note: State data are not available for this measure.)

Figure 4. Trends in Impaired and Distracted Driving
2006-2018 High School MWAHS



* Measures of driving while impaired and driving while distracted are restricted to 11th and 12th grade drivers.

Distracted Driving

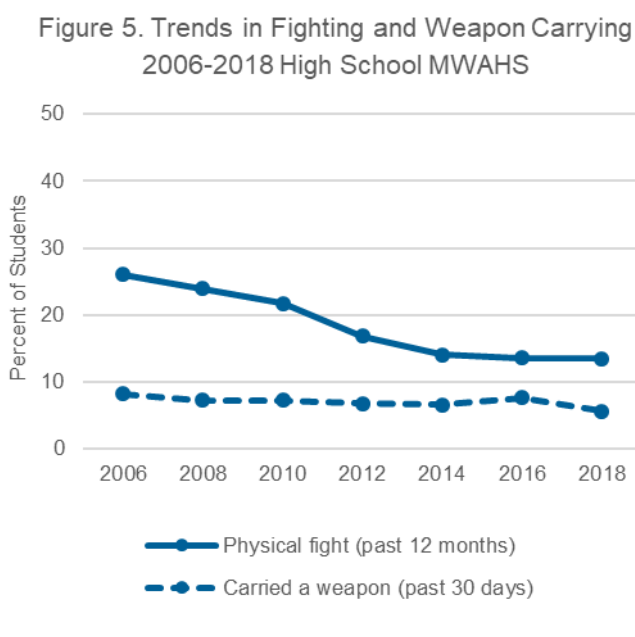
- » Over one-third of drivers (36%) report texting, messaging, or emailing while driving in the past 30 days.
- » Driving while texting declined from 44% in 2010 to 36% in 2016 and remains at that level in 2018 [Figure 4].
- » Reports of texting while driving are similar among females (37%) and males (36%), and more than double from 11th grade (23%) to 12th grade (50%).
- » Texting and driving reports are the same in MetroWest and Massachusetts (36% for each),² and slightly lower than in the nation (39%).³

Key Findings: Violence

Physical fighting, including fighting on school property, has declined by nearly half since 2006: Overall reports of fighting in the past 12 months decreased from 26% in 2006 to 14% in 2014 and remained at that level over the last two surveys. Weapon carrying is slightly lower in 2018 after showing little change in prior surveys.

Physical Fighting

- » Consistent with overall trends, fighting on school property in the past 12 months declined from 2006 to 2014 (from 9% to 4%) and remained at that level over the past two surveys [Figure 5].
- » Over three times as many males (20%) as females (7%) report fighting, but there have been substantial reductions in fighting among both sexes. From 2006 to 2018, overall reports of fighting decreased from 36% to 20% among males, and from 16% to 7% among females.
- » While many risk behaviors increase by grade, fighting is highest in 9th grade (17%), decreasing to 11-13% in grades 10 through 12. Reports of fighting on school property show a similar pattern by grade.
- » Fighting in MetroWest (14%) continues to be lower than in the state (18%)² and nation (24%).³ Reports of fighting have declined substantially in the region, state, and nation over the past decade.



Weapon Carrying

- » 6% of youth carried a weapon in the past 30 days; 2006-2016 levels ranged from 7-8% [Figure 5].
- » Weapon carrying on school property declined from 3% in 2006 to 1% in 2018.
- » 6% of youth report being threatened or injured with a weapon in the past 12 months, which is similar to recent surveys, and down from 9% in 2006.
- » Consistent with patterns for physical fighting, current weapon carrying is more than four times higher among males (9%) than females (2%). Weapon carrying among males decreased from 13% in 2006 to 9% in 2018, whereas weapon carrying among females has been steady at 2-3% over the seven surveys.

- » Reports of weapon carrying increase slightly by grade, from 5% in 9th grade to 7% in 12th grade.
- » Weapon carrying in MetroWest (6%) is much lower than in the state (11%)² and nation (16%).³ The small decline in MetroWest is consistent with state and national trends.

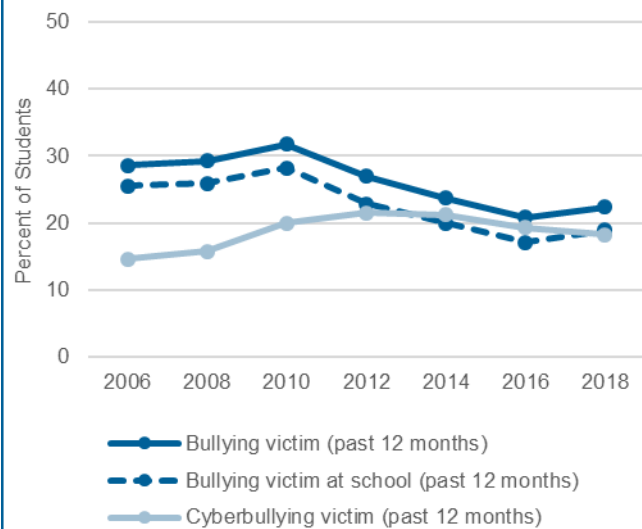
Key Findings: Bullying and Cyberbullying

After declining from a peak of 28% in 2010 to 17% in 2016, reports of school bullying victimization are slightly higher in 2018 at 19%. Cyberbullying victimization has decreased from a high of 22% in 2012 to 18% in 2018. These trends will be monitored in future surveys to see if there are changes or further decreases in patterns of bullying behaviors.

Bullying

- » Bullying victimization in the past 12 months decreased from 32% in 2010 to 21% in 2016, leveling at 22% in 2018 [Figure 6].
- » Consistent with prior years, females are more likely than males to be bullied (26% vs. 18%) and to be bullied on school property (22% vs. 16%).
- » Males are more likely than females to report bullying someone else at school (7% vs. 5%).
- » Bullying victimization decreases by grade: For example, victimization at school decreases from 23% in 9th grade to 15% in 12th grade.
- » 15% of all students reported being verbally harassed in the past 12 months due to their race, ethnicity, or culture, 6% due to their sexual orientation or gender identity, and 7% due to a disability they have or others think they have. These numbers are similar to 2016 reports when these data were first collected.
- » LGBTQ youth are particularly vulnerable to both harassment and bullying: 28% of LGBTQ youth have been verbally harassed due to their sexual orientation or gender identity, and 32% have been bullied in the past year, compared with 21% of heterosexual cisgender youth.
- » Youth with physical and/or learning disabilities are also at heightened risk of victimization: 18% of youth with physical and/or learning disabilities have been verbally harassed due to their disabilities, and 33% have been bullied in the past year, compared with 20% of youth without disabilities.
- » Many bullying victims do not seek help from adults: Among students who were bullied at school in the past 12 months, only 30% talked to a school adult and 47% talked to a parent/adult outside of school about being bullied. These reports are consistent with prior years.
- » 23% of youth have tried to stop a student from bullying someone else at school in the past 12 months, and 8% told an adult at school that someone else was being bullied.
- » School bullying in MetroWest (19%) in 2018 is higher than recent state levels (15%)² and similar to national levels (19%).³ While school bullying has declined since 2007 in the state, school bullying in the United States has not changed notably in the last decade.

Figure 6. Trends in Bullying and Cyberbullying
2006-2018 High School MWAHS



Cyberbullying

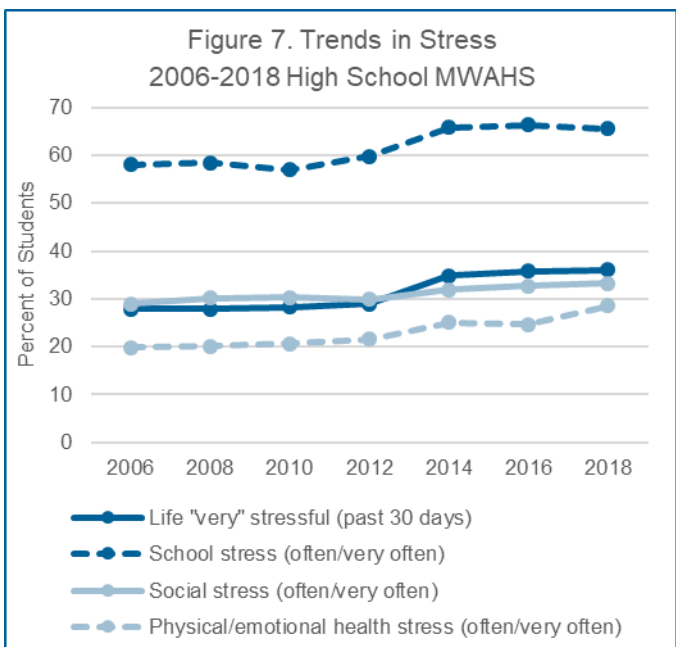
- » Nearly one in five youth (18%) were victims of cyberbullying in the past 12 months.
- » Reports of cyberbullying victimization increased steadily from 15% in 2006 to 22% in 2012, but have declined over the last three surveys to 18% [Figure 6].
- » Females continue to report more cyberbullying victimization than males (22% vs. 14%). However, from 2012 to 2018, there was a notable decline among females, from 28% to 22%, whereas cyberbullying among males remained steady at 14-15%.
- » 7% of females and 8% of males report cyberbullying someone else in the past 12 months.
- » Reports of cyberbullying victimization decrease by grade, from 21% in 9th grade to 16% in 12th grade.
- » Few cyberbullying victims seek help from adults: Among students who were cyberbullied in the past 12 months, only 16% talked to an adult at school and 29% talked to a parent or other adult outside of school about being cyberbullied. These numbers are lower than those reported by school bullying victims and have not changed in recent surveys.
- » 12% of youth have tried to stop a student from cyberbullying someone else, with more females than males (15% vs. 9%) reporting this prosocial behavior.
- » Cyberbullying victimization in MetroWest (18%) remains somewhat higher than in Massachusetts (14%)² and the United States (15%).³ However, levels of cyberbullying have recently declined in the region, whereas they have not changed substantially in the state or nation.

Key Findings: Mental Health

After rising from 28% in 2006 to 36% in 2016, reports of life being “very stressful” in the past 30 days remain steady at 36% in 2018. Further, reports of mental health problems continue to raise serious concern: One in five youth (20%) report depressive symptoms in 2018, up slightly from 2016, and more than one in seven (13%) have considered suicide in the past 12 months.

Stress and Anxiety

- » In 2018, twice as many females (48%) as males (23%) report that their lives have been “very stressful” in the past 30 days.
- » Reports of stress among females rose steadily from 35% in 2006 to 49% in 2016, leveling at 48% in 2018. By comparison, reports among males are only slightly higher overall than when the MWAHS began (21% in 2006 and 23% in 2018).
- » As reported in prior surveys, stress increases during the high school years, nearly doubling from 26% in 9th grade to 48% in 12th grade. This pattern of increasing stress by grade holds true for both females and males.
- » School continues to be the most common source of stress, reported by 66% of youth. This is followed by stress related to social issues (33%). There is a

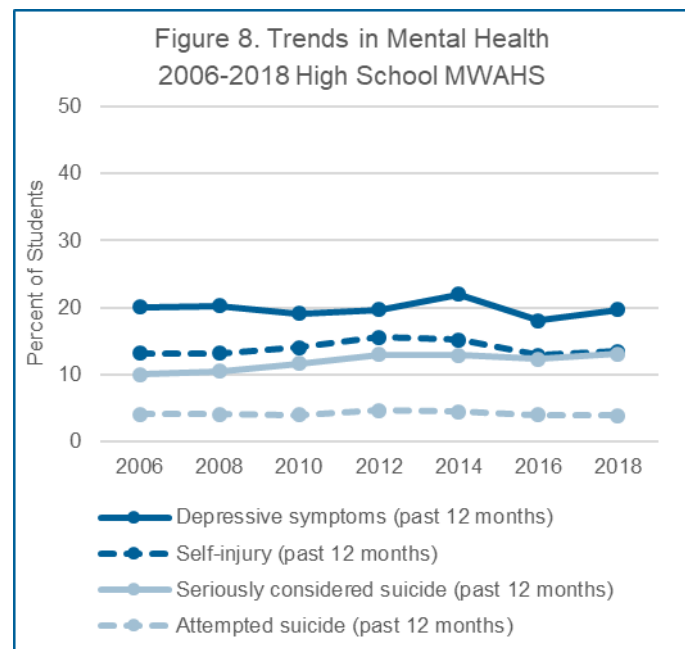


noteworthy increase in stress related to students' physical and/or emotional health, increasing from 20% in 2006 to 25% in 2016 and further to 29% in 2018.

- » More than one-third of students (35%) report feeling nervous, anxious, or on edge on at least half the days in the past two weeks, and 27% report feeling unable to stop or control worrying. Reports of anxiety symptoms are more than twice as high among females and increase for both sexes over the high school years.
- » 37% of youth report feeling tired or having little energy, 28% report sleeping problems (having trouble falling/staying asleep or sleeping too much), 26% report having trouble concentrating in school, and 24% report eating problems (having a poor appetite or eating too much). These reports not only indicate that students are experiencing stress, but that it may be impacting their physical health and academic engagement in addition to their mental wellness.

Depressive Symptoms, Self-Injury, and Suicidality

- » Depressive symptoms in the past 12 months are slightly higher in 2018 (20%) compared with 2016 (18%).^{*} Future data will show whether this slight increase in depressive symptoms over the last two years is indicative of a trend for both females and males [Figure 8].
- » 13% of youth reported self-injury in the past 12 months, which is similar to 2016 levels and slightly lower than 2012-2014 levels (15-16%).[†]
- » Reports of suicidal thoughts and behaviors have not changed notably in recent surveys. After rising from 10% in 2006 to 13% in 2012, the proportion of youth seriously considering suicide in the past 12 months has since been similar at 12-13%. Reports of attempting suicide in the past 12 months have been steady in the range of 4-5% since 2006.



- » Females continue to report depressive symptoms and self-injury around twice as much as males. For example, in 2018, self-injury was reported by 19% of females and 8% of males. Females are also more likely to report suicidal thoughts and attempts, though the difference is not as great.
- » Reports of self-injury and suicidality are similar by grade in high school, whereas there is a slight increase in depressive symptoms from 9th grade (18%) to 12th grade (22%).
- » LGBTQ youth report elevated levels of mental health problems. Compared with heterosexual cisgender youth, they are more than 2.5 times as likely to report depressive symptoms (41% vs. 16%) and more than three times as likely to report self-injury (35% vs. 10%), seriously considering suicide (32% vs. 10%), and attempting suicide (10% vs. 3%).
- » Youth with physical and/or learning disabilities are at higher risk of mental health problems. They are around twice as likely as youth without disabilities to report depressive symptoms (32% vs. 17%), self-injury (23% vs. 11%), considering suicide (23% vs. 11%), and attempting suicide (8% vs. 3%).

^{*} Depressive symptoms are defined as feeling sad or hopeless almost every day for two or more weeks during the past 12 months.

[†] Self-injury is defined as cutting, burning, or bruising oneself on purpose in the past 12 months.

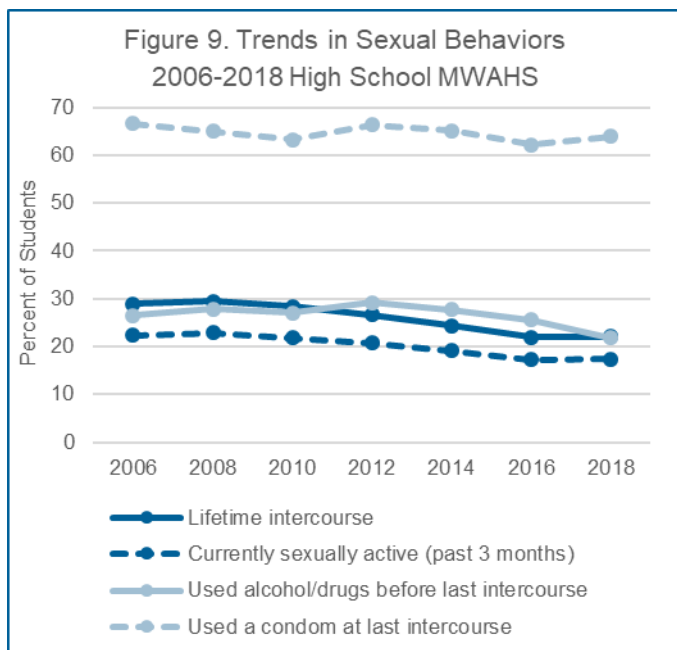
- » Many students who report mental health problems are not receiving mental health services. Among students reporting depressive symptoms in the past 12 months, 38% talked to a school counselor, therapist, or psychologist at school and 13% talked to a school nurse. 41% of students with depressive symptoms talked to a therapist, psychologist, or other mental health professional outside of school.
- » Reports of depressive symptoms in 2018 continue to be notably lower in MetroWest (20%) than in Massachusetts (27%)² and the United States (32%).³ Reports of seriously considering suicide are similar in MetroWest (13%) and the state (12%), and lower than national reports (17%).

Key Findings: Sexual Behaviors

After declining over the last decade from 29% in 2006 to 22% in 2016, reports of lifetime sexual intercourse among MetroWest high school students remain steady at 22% in 2018. More than one in three sexually active youth (36%) did not use a condom the last time they had intercourse.

Sexual Intercourse and Sexting

- » By 12th grade, 42% of high school youth have had sexual intercourse.
- » The proportion of youth who are currently sexually active (had intercourse in the past 3 months) has remained steady since 2016 at 17%, after declining from a high of 21-22% [Figure 9]. One in three (34%) 12th grade youth is currently sexually active.
- » Reports of condom use at last intercourse (64%) are slightly higher than in 2016 (62%), but are not substantially different from previous surveys.
- » While one in five sexually active youth (22%) used alcohol or drugs before the last time they had intercourse, reports have steadily decreased from a high of 29% in 2012, consistent with the decline in alcohol use.
- » The proportion of youth who have ever had intercourse continues to be markedly lower in MetroWest (22%) than in the state (35%)² and nation (40%).³ The decline in sexual intercourse among students in the region is consistent with state and national declines.
- » Sexting has been measured in MetroWest since 2010.* The proportion of youth reporting feeling pressured by a boyfriend, girlfriend, or date to send a “sext” of themselves increased from 8-9% in 2010-2016 to 12% in 2018, with nearly triple the number of females as males reporting this potential risk (17% vs. 6%).
- » Reports of sending a sext of oneself increased from 11% in 2012 to 18% in 2016 and remained at that level in 2018. 21% of females and 15% of males report sending a sext message.
- » Reports of sexting increase during the high school years, with one in four 12th grade youth (24%) reporting they sent a sext of themselves.



* Sexting is defined as sending or forwarding nude, sexually suggestive, or explicit photos or videos of someone you know using the Internet, cell phones or other electronic communications in the past 12 months.

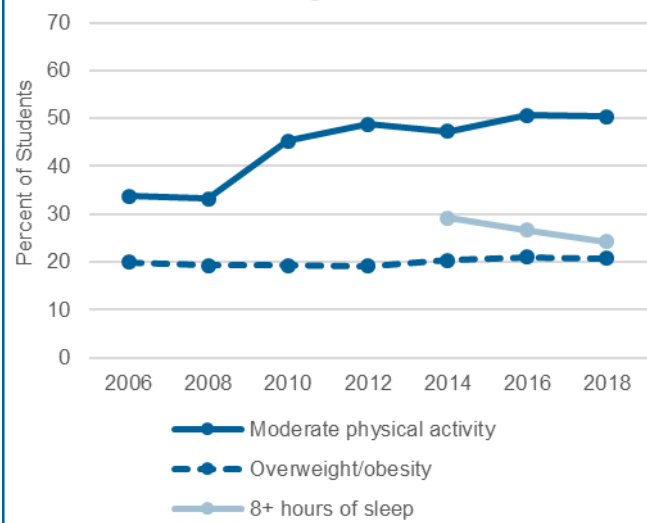
Key Findings: Physical Activity, Overweight/Obesity, and Sleep

Half of MetroWest high school youth report exercising moderately on at least five days in the past week, which is similar to 2016 levels and up from a low of 34% in 2006. In contrast, only one in four youth (24%) get eight or more hours of sleep on the average school night, down from 29% in 2014.

Physical Activity

- » There were substantial increases in reports of moderate exercise from 2006 to 2018 among both females (from 28% to 44%) and males (from 40% to 58%).*
- » Vigorous physical activity is reported by 68% of youth, up slightly from 65% in 2006.†
- » 48% of high school youth report exercising to strengthen or tone their muscles on three or more of the past 30 days.
- » As in prior surveys, more males than females engage in both moderate (58% vs. 44%) and vigorous (73% vs. 63%) physical activity.
- » Students report less physical activity as they get older: 75% of 9th grade students report engaging in vigorous activity, compared with 61% of 12th grade students. This reinforces the need to encourage physical activity at all grade levels.
- » Despite the overall increase in reports of physical activity, 13% of all high school youth (15% of females and 11% of males) report no moderate physical activity in the past 7 days. Reports of no physical activity nearly double from 9% in 9th grade to 16% in 12th grade.
- » The proportion of students who exercised moderately on five or more days in the past week is slightly higher in MetroWest (50%) than the state (46%)² and the nation (47%).³

Figure 10. Trends in Physical Activity, Body Weight, and Sleep
2006-2018 High School MWAHS



Overweight/Obesity

- » Although physical activity has increased, overweight/obesity has not changed substantially since 2006. One in five (21%) youth are overweight or obese in 2018; prior years were in the range of 19-21% [Figure 10].‡
- » Consistent with prior surveys, more males (23%) than females (18%) are overweight/obese.
- » The prevalence of overweight/obesity is relatively similar throughout the high school years.
- » Fewer MetroWest youth are overweight/obese (21%) compared with the state (26%)² and the nation (30%).³

* Moderate physical activity is defined as activity that increases your heart rate and makes you breathe hard for at least one hour on 5 or more of the past 7 days.

† Vigorous physical activity is defined as exercising for at least 20 minutes that makes you sweat and breathe hard on 3+ of the past 7 days.

‡ Overweight/obesity is based on self-reported height and weight, which is used to calculate body mass index. Overweight/obesity is defined as being in the 85th percentile or above for body mass index by age and gender, based on reference data.

Sleep

- » Only one in four high school youth (24%) sleeps eight or more hours on an average school night. Reports of sleep time have declined since 2014 (29%), when data on sleep time were first collected [Figure 10].
- » Males are more likely than females to get eight or more hours of sleep (28% vs. 21%); 2018 reports are lower than past years among both males and females.
- » The proportion of youth who sleep eight or more hours on an average school night decreases by more than half from 9th grade (34%) to 12th grade (16%).
- » As noted earlier, 28% of youth – representing 38% of females and 18% of males – report sleep issues related to being stressed, anxious, or worried.
- » Youth who sleep less than eight hours per night are more likely to report poor mental health, including depressive symptoms (22% vs. 12%), self-injury (15% vs. 8%), and seriously considering suicide (15% vs. 8%).

Key Findings: Online Behavior

The proportion of youth spending three or more hours online each day has more than doubled from 2010 (29%) to 2018 (65%). Nearly one in three youth (28%) now spends three or more hours daily on social media.

- » Increases in time online are similarly large for both sexes: High use (three or more hours daily) increased from 30% in 2006 to 68% in 2018 among females, and from 28% to 62% among males.
- » Differences in online behaviors by sex are notable: Females are more likely to spend three or more hours on social media specifically (34% vs. 22%), whereas males are much more likely to spend three or more hours playing online games, known as “gaming” (22% vs. 3%).
- » Youth report both positive and negative attitudes towards social media. On the positive side, social media helps youth feel more connected to peers (60%), provides a source of social support (31%), and helps them find people with common interests and hobbies (54%). On the negative side, social media makes a sizeable minority of students feel badly about themselves or excluded (25%), keeps them from doing important things like homework or family responsibilities (32%), and has hurt relationships with peers (11%).
- » 43% of all youth feel they spend too much time on social media (53% of females and 33% of males).
- » Youth who spend three or more hours on social media daily are more likely to report cyberbullying victimization (26% vs. 15%) and perpetration (12% vs. 6%).
- » Youth who spend more time on social media are more likely to report substance use and mental health problems. For example, high users of social media are more likely to report current alcohol use (35% vs. 24%) and marijuana use (29% vs. 17%). They are also more likely to report depressive symptoms (28% vs. 16%) and seriously considering suicide (18% vs. 11%).

Key Findings: Protective Factors

Three out of four high school youth (75%) have an adult at school to talk to if they have a problem, an increase from 66% in 2006. Despite the availability of school support, some indicators of school attachment are lower in 2018. Outside of school, nine out of ten youth (90%) have a supportive parent or other adult to talk with about things that are important, which is similar to past surveys.

Adult Support

- » There have been notable increases in adult support at school over time among both females (from 69% in 2006 to 77% in 2018) and males (from 63% to 73%).
- » Reports of having a supportive adult at school are higher among older students, rising from 68% in 9th grade to 83% in 12th grade.
- » Consistently over time, 88-91% of youth report having at least one adult outside of school to talk to about things that are important. This is similar for males and females and does not differ by grade.
- » While most MetroWest youth have adult support in their lives, youth without support – either at school and/or outside of school – are more likely to report a variety of risk behaviors. For example, youth without adult support at home are more likely to report binge drinking (20% vs. 15%), current marijuana use (28% vs. 20%), depressive symptoms (41% vs. 18%), and having seriously considered suicide (32% vs. 11%).

School Attachment and Engagement

- » About two-thirds of youth feel engaged in and connected with their school, as indicated by their agreement with statements such as: “I feel like I am part of this school” (67%), “I am happy to be at this school” (63%), and “I feel safe in my school” (74%).
- » While levels of school attachment have been similar across all prior surveys, several indicators are lower in 2018. For example, the proportion of students reporting that they feel happy to be at their school decreased from 69% in 2016 to 63% in 2018, and the proportion reporting that they feel like a part of their school decreased from 71% to 67%. In addition, student reports of feeling safe in their school decreased from 83% to 74%. These findings may reflect perceptions of physical and/or emotional safety, which may, in turn, be related to national concerns regarding school violence.
- » Males report slightly higher levels of school attachment than females. There are similar declines in school attachment from 2016 to 2018 among both sexes.
- » Youth with higher levels of school attachment are less likely to report harmful behaviors, including substance use, fighting, bullying, and mental health problems.

Conclusions

Now having completed the 7th administration, the MWAHS is an invaluable tool for guiding schools and communities across the region to take data-driven approaches to improve adolescent health. The 2018 survey data identifies areas of concern while also highlighting important progress that has been made.

Steady and positive improvement is reported in many areas, showing considerable progress in some critical aspects of adolescent health:

- » Use of conventional cigarettes has continued to decline to record-low numbers in the region. Despite growing concerns about nicotine addiction related to use of EVPs, the region has not seen a rise in conventional smoking.
- » Alcohol use continues to drop, along with reports of drinking and driving. While alcohol remains the most widely-used substance and high-risk drinking is still a major concern, great progress has been made in the region, with current drinking and binge drinking cut by more than one-third.
- » Fewer youth are sexually active now than in earlier years of the survey. In addition, sexually active youth are reporting fewer partners, and lower use of alcohol or drugs before intercourse. While condom use has not changed substantially over the course of the MWAHS, it is positive that there are fewer youth engaging in intercourse and several associated risk behaviors.
- » Distracted driving has decreased since earlier surveys, yet still more than one-third of youth drivers report having texted while driving in the past 30 days. Given the context of increasing time spent online, including use of smartphones, it is important to maintain efforts in this area.

The 2018 data suggest that the following areas need to be monitored closely; these are areas of increasing interest based on the MWAHS data as well as issues drawing concern locally and nationally:

- » Use of EVPs has quickly emerged as a prevalent and unsafe behavior in MetroWest as well as in the nation, with reports of current use nearly doubling in a two-year period. While the health effects of nicotine addiction on the developing adolescent brain have been known for some time, evidence is building regarding the potentially harmful effects of other chemicals inhaled through EVPs.⁵ On a positive note, perceptions of risk of EVP use have increased, as educators and policymakers take action to curb youth use, such as by increasing prevention programming and banning sales of flavored e-cigarettes.
- » Marijuana use must be examined closely as the state climate adjusts to legalization. After several years of declining use, the 2018 data show slightly higher levels, corresponding with Massachusetts' widely-publicized legalization of recreational cannabis, which went into effect in December, 2016. As more recreational marijuana retail outlets open, it will be important to monitor trends in youth marijuana use and driving after using marijuana, as well as ease of access, methods of access, and perception of risk. Future data will determine whether the small increase from 2016 to 2018 is indicative of a trend.
- » Misuse of prescription drugs has declined to less than one-half the levels reported when the MWAHS began. Fewer than one in thirty youth currently misuse prescription pain medicine, including opioids. However, concerns about use in the young adult population, in particular, suggest the need to monitor these data closely in future years as the nation and local communities mount initiatives to reduce misuse and drug-related deaths.
- » School bullying victimization is slightly higher for the first time in the past decade, and there is a potential correlation with noted decreases in school attachment. However, it is also noteworthy that bullying victimization at school in 2018 is still much less than when it peaked in 2010, and reports of physical fighting

and weapons on school property are also down. It is important to watch these numbers in future surveys in the context of national concerns about school safety and the influence of social media on bullying and other violent behaviors.

- » Time spent online has more than doubled since the MWAHS began. It is essential to consider not only this increase in quantity but also the quality of online experiences – both positive and negative – and the effect of online behavior on sleep, which has decreased since 2014. Both cyberbullying and mental health problems are more common among youth who spend more time online, and on social media specifically. While cyberbullying has slowly declined over recent years, it will be critical to continue monitoring online behaviors as well as their associations with various benefits and harms, including cyberbullying, mental health problems, and lack of sleep.
- » Mental health remains a top concern in the region. Reports of stress remained high in 2018, with more than one in three youth reporting that their life was “very stressful” in the past month. This year’s survey also shows a slight increase in depressive symptoms, returning to earlier levels. Further, many youth suffering from mental health problems are not seeking help from adults, either at school or outside of school. While the influences on teen mental health are varied and complex, efforts like mental health screening, wellness programming, transition programs for students returning to school after hospitalization, and coordination of school and community mental health programs and services are important in addressing concerns about adolescent mental health in the region.

In sum, the 7th administration of the MWAHS in 2018 shows substantial and meaningful progress in reducing harm among adolescents, as well as identifying areas requiring consistent and increased efforts. The MWAHS continues to draw attention to the most pressing adolescent health issues, and provides data to inform sound decision-making and programming that meets the unique needs of individual schools and communities. The MetroWest Health Foundation further supports local efforts in all 25 communities, stimulating positive changes in adolescent health and wellness.

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High School Key Indicators

2006–2018 Trends
2018 Patterns by Sex
2018 Patterns by Grade

MetroWest Region High School Students (Grades 9-12)

2006-2018 Trends in Key Indicators

MetroWest Adolescent Health Survey

	Year of Survey (%)						
	2006 (16,680)	2008 (20,406)	2010 (23,187)	2012 (24,459)	2014 (24,355)	2016 (24,385)	2018 (24,746)
SUBSTANCE USE							
Lifetime cigarette smoking	35.3	33.3	25.9	22.0	17.3	13.2	12.2
Current cigarette smoking (past 30 days)	14.7	13.9	12.1	9.1	6.2	4.7	3.2
Lifetime electronic vapor product use*	—	—	—	—	30.5	27.9	41.1
Current electronic vapor product use (past 30 days)*	—	—	—	—	17.5	14.6	28.4
Lifetime alcohol use	66.5	62.8	58.0	55.6	53.8	51.7	50.0
Current alcohol use (past 30 days)	42.2	39.1	34.7	33.4	32.9	31.5	27.7
Binge drinking (past 30 days) [†]	25.1	23.2	20.8	18.7	17.5	16.9	15.8
Rode with driver who had been drinking (past 30 days)	25.2	25.8	22.5	19.5	16.7	14.1	13.5
Lifetime marijuana use	33.2	33.4	34.6	32.3	30.4	27.8	31.3
Current marijuana use (past 30 days)	20.2	22.8	23.5	21.5	20.3	19.2	21.2
Lifetime prescription drug misuse [‡]	11.0	10.1	10.1	8.8	7.3	5.8	4.8
VIOLENCE							
Physical fighting (past 12 months)	26.0	23.9	21.7	16.8	14.1	13.6	13.5
Physical fighting on school property (past 12 months)	8.7	8.3	7.4	5.5	4.2	3.9	4.0
Carried a weapon (past 30 days)	8.2	7.3	7.3	6.8	6.6	7.6	5.6
Carried a weapon on school property (past 30 days)	3.3	3.1	3.0	2.5	2.0	1.9	1.4
BULLYING VICTIMIZATION							
Bullying victim (past 12 months)	28.6	29.3	31.8	27.0	23.7	20.8	22.4
Bullying victim on school property (past 12 months)	25.5	25.9	28.2	22.9	20.0	17.1	18.9
Cyberbullying victim (past 12 months)	14.6	15.8	20.0	21.5	21.2	19.3	18.3
MENTAL HEALTH							
Life "very" stressful (past 30 days)	27.9	27.9	28.3	28.9	34.9	35.8	36.0
Depressive symptoms (past 12 months)	20.1	20.3	19.1	19.7	22.0	18.1	19.7
Self-injury (past 12 months)	13.2	13.2	14.0	15.6	15.2	12.9	13.5
Considered suicide (past 12 months)	10.0	10.5	11.6	13.0	12.9	12.3	13.1
Attempted suicide (past 12 months)	4.1	4.1	4.0	4.7	4.5	4.0	3.9
SEXUAL BEHAVIOR							
Lifetime sexual intercourse	28.9	29.4	28.3	26.6	24.3	21.9	22.1
Currently sexually active (past 3 months)	22.3	22.9	21.8	20.7	19.1	17.3	17.4
Condom use at last intercourse [§]	66.6	65.0	63.2	66.3	65.1	62.2	63.9
PHYSICAL ACTIVITY AND BODY WEIGHT							
Exercised for ≥60 minutes on 5 or more days/week	33.7	33.2	45.3	48.8	47.3	50.6	50.4
Overweight or obese ^{**}	19.9	19.3	19.3	19.2	20.3	21.0	20.7

* Includes electronic cigarettes (e-cigarettes) like JUUL, Phix, Vuse, MarkTen, and blu, and other electronic vapor products, like vapes, vape pens, e-cigars, e-hookahs, hookah pens, and mods

† From 2006 to 2014, binge drinking was defined as 5 or more drinks in a row on one or more occasion for all students. Since 2016, binge drinking has been defined as 4 or more drinks in a row for females and 5 or more drinks in a row for males.

‡ Without a doctor's prescription

§ Among currently sexually active youth

**Students who were ≥85th percentile for body mass index by age and gender, based on reference data

MetroWest Region High School Students (Grades 9-12)

2018 Key Indicator Patterns by Sex

MetroWest Adolescent Health Survey

	Sex (%)		Total (%)
	Female (12,260)	Male (12,154)	(24,746)
SUBSTANCE USE			
Lifetime cigarette smoking	10.6	13.8	12.2
Current cigarette smoking (past 30 days)	2.4	4.0	3.2
Lifetime electronic vapor product use*	41.9	40.2	41.1
Current electronic vapor product use (past 30 days)*	28.5	28.2	28.4
Lifetime alcohol use	52.0	48.0	50.0
Current alcohol use (past 30 days)	29.5	25.7	27.7
Binge drinking (past 30 days) [†]	15.7	15.7	15.8
Rode with driver who had been drinking (past 30 days)	13.7	13.1	13.5
Lifetime marijuana use	30.1	32.5	31.3
Current marijuana use (past 30 days)	19.0	23.4	21.2
Lifetime prescription drug misuse [‡]	5.0	4.6	4.8
VIOLENCE			
Physical fighting (past 12 months)	6.9	20.1	13.5
Physical fighting on school property (past 12 months)	1.8	6.1	4.0
Carried a weapon (past 30 days)	2.4	8.7	5.6
Carried a weapon on school property (past 30 days)	0.7	2.0	1.4
BULLYING VICTIMIZATION			
Bullying victim (past 12 months)	26.2	18.1	22.4
Bullying victim on school property (past 12 months)	21.5	16.0	18.9
Cyberbullying victim (past 12 months)	22.4	14.1	18.3
MENTAL HEALTH			
Life "very" stressful (past 30 days)	48.3	23.2	36.0
Depressive symptoms (past 12 months)	25.2	13.8	19.7
Self-injury (past 12 months)	18.5	7.9	13.5
Considered suicide (past 12 months)	16.1	9.8	13.1
Attempted suicide (past 12 months)	4.7	3.1	3.9
SEXUAL BEHAVIOR			
Lifetime sexual intercourse	20.0	24.1	22.1
Currently sexually active (past 3 months)	16.3	18.4	17.4
Condom use at last intercourse [§]	61.7	66.1	63.9
PHYSICAL ACTIVITY AND BODY WEIGHT			
Exercised for ≥60 minutes on 5 or more days/week	43.6	57.9	50.4
Overweight or obese ^{**}	18.1	23.4	20.7

* Includes electronic cigarettes (e-cigarettes) like JUUL, Phix, Vuse, MarkTen, and blu, and other electronic vapor products, like vapes, vape pens, e-cigars, e-hookahs, hookah pens, and mods

† From 2006 to 2014, binge drinking was defined as 5 or more drinks in a row on one or more occasion for all students. Since 2016, binge drinking has been defined as 4 or more drinks in a row for females and 5 or more drinks in a row for males.

‡ Without a doctor's prescription

§ Among currently sexually active youth

**Students who were ≥85th percentile for body mass index by age and gender, based on reference data

MetroWest Region High School Students (Grades 9-12)

2018 Key Indicator Patterns by Grade

MetroWest Adolescent Health Survey

	Grade (%)				Total (%)
	9 th (6,426)	10 th (6,327)	11 th (6,100)	12 th (5,595)	(24,746)
SUBSTANCE USE					
Lifetime cigarette smoking	6.3	9.1	14.3	20.1	12.2
Current cigarette smoking (past 30 days)	1.6	2.3	3.4	5.7	3.2
Lifetime electronic vapor product use*	24.9	37.4	48.1	55.9	41.1
Current electronic vapor product use (past 30 days)*	16.5	25.1	33.4	39.8	28.4
Lifetime alcohol use	31.3	44.4	58.0	69.1	50.0
Current alcohol use (past 30 days)	11.8	22.8	33.5	44.8	27.7
Binge drinking (past 30 days) [†]	3.9	11.3	19.5	30.2	15.8
Rode with driver who had been drinking (past 30 days)	12.0	13.1	14.0	14.6	13.5
Lifetime marijuana use	12.5	25.2	39.7	50.4	31.3
Current marijuana use (past 30 days)	8.2	16.9	27.5	34.0	21.2
Lifetime prescription drug misuse [‡]	3.3	3.8	5.1	7.4	4.8
VIOLENCE					
Physical fighting (past 12 months)	16.9	12.9	12.0	11.5	13.5
Physical fighting on school property (past 12 months)	5.1	3.9	3.7	3.0	4.0
Carried a weapon (past 30 days)	4.9	5.1	5.6	6.6	5.6
Carried a weapon on school property (past 30 days)	0.8	1.1	1.5	2.0	1.4
BULLYING VICTIMIZATION					
Bullying victim (past 12 months)	26.9	22.4	20.6	18.6	22.4
Bullying victim on school property (past 12 months)	22.8	19.2	17.6	14.9	18.9
Cyberbullying victim (past 12 months)	20.6	18.3	17.9	16.2	18.3
MENTAL HEALTH					
Life "very" stressful (past 30 days)	25.8	32.6	39.4	47.9	36.0
Depressive symptoms (past 12 months)	17.8	18.4	21.0	21.8	19.7
Self-injury (past 12 months)	14.0	12.7	13.3	13.6	13.5
Considered suicide (past 12 months)	12.5	12.0	13.8	14.1	13.1
Attempted suicide (past 12 months)	4.0	3.6	3.8	4.2	3.9
SEXUAL BEHAVIOR					
Lifetime sexual intercourse	7.7	14.6	26.3	42.4	22.1
Currently sexually active (past 3 months)	5.8	11.4	20.5	34.3	17.4
Condom use at last intercourse [§]	65.3	68.4	68.7	58.9	63.9
PHYSICAL ACTIVITY AND BODY WEIGHT					
Exercised for ≥60 minutes on 5 or more days/week	58.3	52.4	47.1	43.0	50.4
Overweight or obese**	21.1	19.9	21.2	20.7	20.7

* Includes electronic cigarettes (e-cigarettes) like JUUL, Phix, Vuse, MarkTen, and blu, and other electronic vapor products, like vapes, vape pens, e-cigars, e-hookahs, hookah pens, and mods

† From 2006 to 2014, binge drinking was defined as 5 or more drinks in a row on one or more occasion for all students. Since 2016, binge drinking has been defined as 4 or more drinks in a row for females and 5 or more drinks in a row for males.

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