



*Results of the*  
**MetroWest  
Adolescent Health Survey**

# **MetroWest Regional High School Report**

## **EXECUTIVE SUMMARY**



**2008**

*Funded by*

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METROWEST  
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*Submitted by*

Health and Human Development Division  
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**EDC**

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# MetroWest Region High School Students EXECUTIVE SUMMARY

*Results from the 2008 MetroWest Adolescent Health Survey*

## **INTRODUCTION**

In 2006, the MetroWest Community Health Care Foundation embarked on a ten-year initiative to provide communities with timely, local data on the health and risk behaviors of youth. To accomplish this goal, the **MetroWest Adolescent Health Survey (MWAHS)** is being administered every other year to middle and high school students in the MetroWest region.

The current report provides data from the second administration of the MWAHS in the Fall of 2008. For the first time, the report includes multiple waves of data. This will allow communities across the region to monitor emergent issues and trends, identify priorities, and measure progress towards achieving a healthier adolescent population.

District participation in the MWAHS has been high since its inception. In 2006, 18 of the 25 MetroWest communities participated in high school surveys. In 2008, the number of participating districts increased to 22 (88%). This high level of participation shows a strong commitment to using data to drive community-level decision-making, programming, and policy change. It also allows for the creation of a highly representative regional MetroWest dataset. Individual school districts can compare their results to this regional dataset.

The MWAHS development, coordination of survey administration, analysis, and reporting are carried out by the Health and Human Development Division at Education Development Center, Inc.

## **METHODS**

Students in 22 high schools in the MetroWest region participated in the 2008 MWAHS. Rather than surveying a sample of students, a census was conducted of all students in grades 9 through 12 who were present on the days of the survey. Therefore, the results described in this report truly reflect the range of students in the region.

The MWAHS is anonymous and voluntary. Parents/guardians are informed of the survey in advance and given the opportunity to opt out their child(ren), if desired. Students are also informed of the voluntary nature of the survey and can decide whether or not to participate. Very few students (1.7%) did not participate for either of these two reasons.

The survey administration protocol takes numerous steps to protect students' anonymity and provide privacy. Such steps have been shown to result in valid and reliable youth reporting.<sup>1,2,3</sup>

In total, 20,406 high school students in the MetroWest region participated in the MWAHS, representing 88.1% of students in the 22 school districts.

*The MWAHS is largely based on the Youth Risk Behavior Surveillance System (YRBSS), a program of the Centers for Disease Control and Prevention.<sup>4</sup> The YRBSS monitors national and state trends in the prevalence of risk behaviors contributing to the leading causes of morbidity and mortality among adolescents, including:*

- ◆ *Tobacco use*
- ◆ *Alcohol and other drug use*
- ◆ *Unhealthy dietary behaviors*
- ◆ *Inadequate physical activity*
- ◆ *Sexual behaviors*
- ◆ *Suicide*
- ◆ *Violence.*

*In addition, the MWAHS incorporates topics of particular interest to the MetroWest communities. Based on feedback from school district personnel, the MWAHS also assesses:*

- ◆ *Prescription drug misuse*
- ◆ *Stress and mental health*
- ◆ *School attachment and adult support*
- ◆ *Dating violence*
- ◆ *Bullying.*

*Throughout this report, national, state, and MetroWest regional data are presented to provide a context for districts to examine demographic patterns and trends in their students' health and risk behaviors.*

## SUBSTANCE USE

### OVERALL PATTERNS

Alcohol is the most commonly used substance in MetroWest, with 39% of youth drinking in the last 30 days\* and 23% “binge” drinking, defined as having five or more drinks in a row within the past 30 days. By 12<sup>th</sup> grade, over half (56%) currently use alcohol and 38% “binge” drink. Further, 15% of student drivers say they have recently driven after drinking; similar proportions (16%) say they have been passengers with drivers *under the age of 21* who had been drinking in the past 30 days.

More students report current use of marijuana (23%) than cigarettes (14%), and 6% of youth have misused prescription drugs in the past 30 days. These behaviors increase by grade: current cigarette smoking more than doubles from 9<sup>th</sup> grade (8%) to 12<sup>th</sup> grade (20%), and current marijuana use triples during this time from 11% to 35%. Use of these substances is more prevalent among males; for example, 28% of males and 18% of females report current marijuana use. By contrast, similar proportions of males (40%) and females (38%) have used alcohol recently.

### OVERALL TRENDS FROM 2006 TO 2008

There are positive trends in alcohol use, including small but consistent decreases in current alcohol use (from 42% to 39%), “binge” drinking (from 25% to 23%), and the proportion of students who had their first drink before age 13 (from 16% to 14%). There has also been a small decrease in driving after drinking (from 17% to 15%) among youth drivers.

While downward trends in alcohol use are promising, there are indications that marijuana use may be increasing. Although lifetime marijuana use remained steady from 2006 to 2008 at 33%, current marijuana use increased from 20% to 23%, with a somewhat greater increase among males than females.

Use of tobacco products remains relatively constant: a slight decrease in lifetime cigarette use is countered by small increases in cigar smoking and smokeless tobacco use, particularly among males. Use of other illicit drugs and misuse of prescription drugs have not changed substantially.

*Lifetime cigarette, alcohol, and marijuana use are lower for MetroWest (MW) than for the state and nation. For example, 63% of MW youth drank alcohol in their lifetime, compared with 73% of MA youth and 75% of US youth.*

*MetroWest is lower than the state in current marijuana use (23% compared with 25%), but both are higher than the US (20%).*

*While figures indicate that alcohol use has decreased slightly in MW over the past two years, alcohol use nationwide has actually increased. The MW decrease is consistent with state figures. For example, current alcohol use decreased in MW (from 42% to 39%) and MA (from 48% to 46%), but increased from 43% to 45% in the US.*

*In contrast, current marijuana use has increased in MW (from 20% to 23%), but remained similar in MA and the US.*

*Current cigarette smoking has decreased somewhat in MA and nationally in recent years. While current smoking in MW has remained similar over the past two years, it is still lower than in MA and the US.*

\* Substance use on one or more of the past 30 days is also referred to as 30-day use or “current” use throughout this report, consistent with terminology used by the Centers for Disease Control and Prevention.

## CURRENT PATTERNS

- ◆ **Cigarette smoking is low relative to alcohol and marijuana use, yet remains a concern.** One in three students (33%) smoked cigarettes in their lifetime, 14% smoked in the past 30 days, and 8% smoked regularly at some point in their lifetime, defined as *smoking every day for at least 30 days*.
- ◆ **A small number of youth start smoking at an early age.** 6% of students report smoking a whole cigarette before the age of 13.
- ◆ **Despite school policies restricting tobacco use, 5% of students report smoking on school property in the past 30 days.**
- ◆ **Cigar smoking is a popular form of tobacco use.** 15% of youth smoked a cigar in the past 30 days; 6% used smokeless tobacco.
- ◆ **22% of students used a tobacco product in the past 30 days.** This includes cigarettes, cigars, and/or smokeless tobacco.
- ◆ **A substantial proportion of student smokers buy their own cigarettes.** Of students who smoke, 24% usually obtain cigarettes by buying them in a store, and 24% give someone else money to buy the cigarettes for them. Most students (28%) borrow or “bum” cigarettes, 8% are given cigarettes by an adult, and 5% take them from a store or family member.
- ◆ **Males are more likely to use all forms of tobacco.** For example, 15% of males are current cigarette smokers compared with 12% of females. Cigar use is much higher among males (23%) than females (6%). Males are also more likely to initiate smoking before they were 13 years old (7%) than females (4%).
- ◆ **Older students are more likely to report lifetime and regular tobacco use.** Lifetime smoking increases from 9<sup>th</sup> grade (21%) to 12<sup>th</sup> grade (47%). By 12<sup>th</sup> grade, 33% have used one or more forms of tobacco in the past 30 days, and 13% have smoked cigarettes regularly at some point in their life.

*Fewer MW youth report current smoking (14%) than their state (18%) and national (20%) peers.*

*Lifetime regular cigarette use in MW (8%) is also lower than the state and national prevalence (both 12%).*

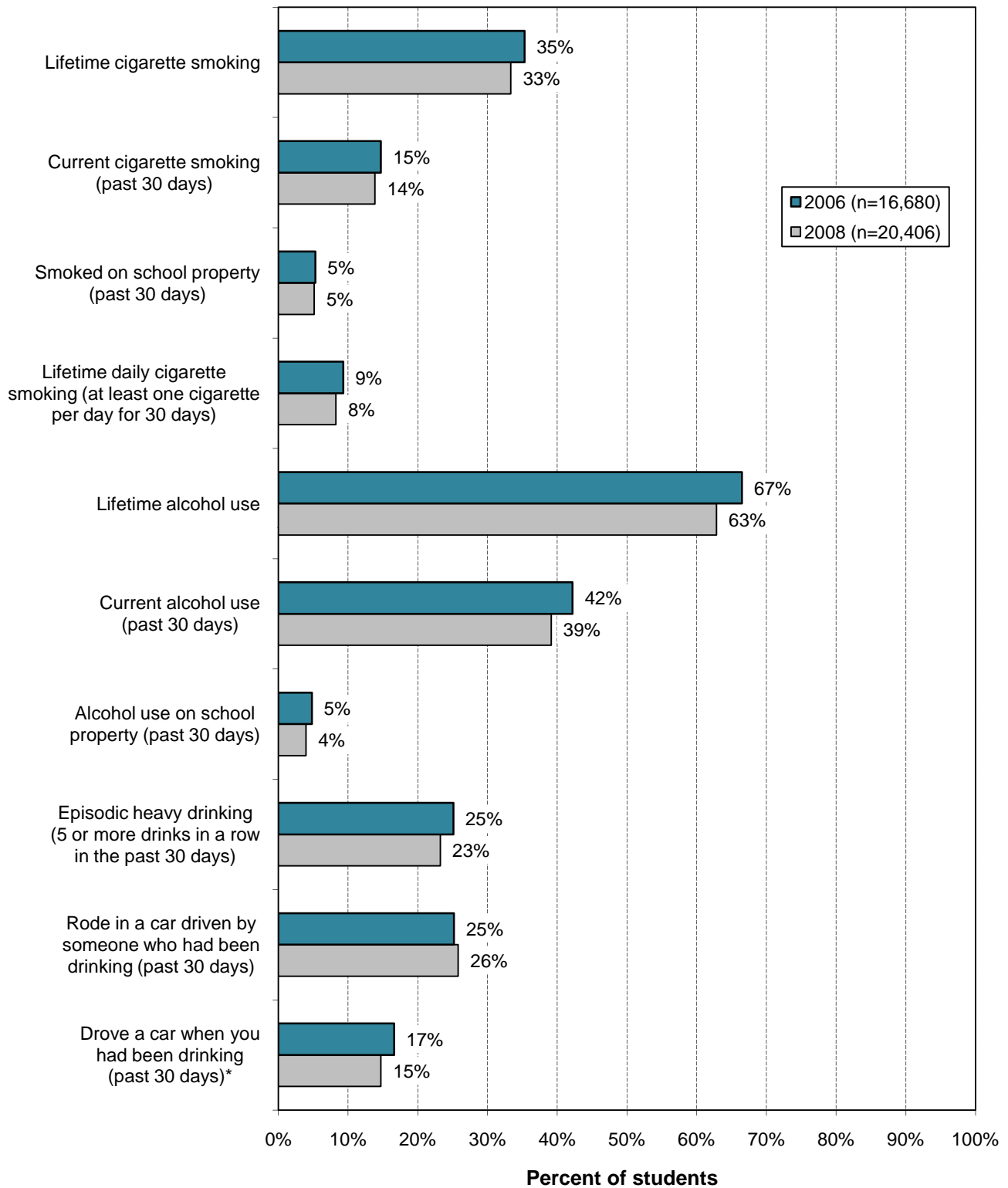
## TRENDS FROM 2006 TO 2008

- ◆ **There is a slight decrease in lifetime smoking prevalence.** The proportion of youth who ever smoked decreased from 35% to 33%. Current smoking did not change substantially. Future data will confirm whether small declines are indicative of a trend in cigarette smoking
- ◆ **Small decreases in cigarette smoking may be countered by small increases in cigar and smokeless tobacco use, particularly among males.** Among males, use of chewing tobacco increased from 9% to 12%, and cigar smoking increased from 21% to 23%.
- ◆ **The overall proportion of youth who report using tobacco products remains unchanged.** The proportion of youth who are current cigarette or cigar smokers or who use smokeless tobacco remains steady at 22%. Use of tobacco products increased slightly for males, from 28% to 30%, but is steady for females at 15%.

*Over two years, lifetime smoking decreased in the US (from 54% to 50%), in Massachusetts (from 51% to 46%), and in MetroWest (from 35% to 33%).*

*Current cigarette smoking also declined in MA (from 21% to 18%) and the US (from 23% to 20%). The decrease in MW was smaller (from 15% to 14%), but the proportion of current smokers is still lowest in MW.*

**Tobacco Use, Alcohol Use, and Impaired Driving in 2006 and 2008**  
**MetroWest Region High School Students**  
*MetroWest Adolescent Health Survey, 2008*



\*Among students who drove a car in the past 30 days

## CURRENT PATTERNS

- ◆ **Alcohol is the substance most frequently used by high school students.** Nearly two-thirds of youth (63%) report lifetime use, and 39% report current use.
- ◆ **A concerning number of youth report recent episodic heavy (“binge”) drinking.** Nearly one-quarter of youth (23%) report “binge” drinking in the past 30 days, and 28% were drunk during this period. *“Binge” drinking is defined as having five or more drinks in a row on one occasion. This does not take into account the lower average body weight among females, and the fact that youth may be impaired before they have consumed 5 drinks.*
- ◆ **Alcohol use on school property or associated with school events is a concern:** 12% consumed alcohol before or during a school event in the past 12 months. 4% of students drank on school property in the past 30 days.
- ◆ **Driving after drinking is a dangerous consequence of youth alcohol use.** 26% of students have been passengers in a car driven by someone who had been drinking alcohol in the past 30 days, and 16% rode with a driver *under the age of 21* who had been drinking. Among youth drivers, 15% drove after drinking in the past 30 days.
- ◆ **Parties are the most frequent source of alcohol use.** Of youth who drank in the past 30 days, 39% obtained their alcohol at a party. Other common ways students access alcohol include: 19% have someone buy it for them, 13% get it from a friend, 9% get it from home – *with* their parent’s knowledge, and another 9% get it from home – *without* their parent’s knowledge.
- ◆ **In high school, alcohol use is similar among males and females.** While fewer females (11%) than males (16%) report alcohol use before age 13, by high school, females are as likely as males to drink. For example, 62% of females and 63% of males report lifetime use, and 38% of females and 40% of males used alcohol in the past 30 days. “Binge” drinking is lower among females (21%) than males (26%), but this does not take into account the lower number of drinks at which females typically become impaired.
- ◆ **Alcohol use increases dramatically by grade.** For example, current use more than doubles from 22% in 9<sup>th</sup> grade to 56% in 12<sup>th</sup> grade. “Binge” drinking quadruples from 9% in 9<sup>th</sup> grade to 38% in 12<sup>th</sup> grade.

*Despite alcohol being the most common substance of choice in MW, students drink less than their state and national peers. For example, 39% of MW youth have used alcohol in the past 30 days, compared with 46% in MA and 45% in the US.*

*“Binge” drinking in MW (23%) is lower than in MA (28%) and the US (26%).*

*29% of US youth, compared with 26% of MA and MW youth, have ridden in a car driven by someone who had been drinking alcohol in the past 30 days.*

## TRENDS FROM 2006 TO 2008

- ◆ **While alcohol remains the most commonly used substance, there are some indications that levels of alcohol use may have declined.** The proportion of youth reporting lifetime alcohol use decreased from 67% to 63%. Current use decreased from 42% to 39%, and early initiation (drinking before age 13) decreased from 16% to 14%.
- ◆ **“Binge” drinking may also have declined slightly.** 23% of students report episodic heavy drinking (or “binge” drinking), which is lower than the 2006 prevalence of 25%. Among 12<sup>th</sup> grade students, binge drinking decreased from 41% to 38%.
- ◆ **Decreases in alcohol use were observed for both genders, with greater decreases among females.** Lifetime drinking decreased more for females (from 67% to 62%) than males (from 66% to 63%). Similarly, current drinking decreased from 42% to 38% for females, and from 42% to 40% for males. Early initiation and “binge” drinking decreased similarly for both males and females.
- ◆ **Driving after drinking may also be decreasing.** The percentage of youth drivers who drove after drinking decreased slightly, from 17% to 15%. The proportion of students who rode in a car driven by anyone who had been drinking remained steady. *Note: the driver may be a parent, other adult, or youth, and the item does not ask about impairment.*

*Drinking in MA and MW decreased in recent years. For example, from 2006 to 2008, lifetime alcohol use decreased from 76% to 73% in the state, and from 67% to 63% in MW. During this same time, youth drinking in the US remained close to 75%.*

*“Binge” drinking in MW decreased from 25% to 23% in the past two years, while it remained steady in MA and the US.*

*Riding with a driver who had been drinking has not changed substantially in MW, MA, or the US in recent years.*





## MARIJUANA USE

### CURRENT PATTERNS

- ◆ **More students use marijuana than cigarettes.** Lifetime marijuana use (33%) is similar to lifetime cigarette smoking (33%), but current marijuana use (23%) is substantially higher than current cigarette smoking (14%).
- ◆ **Experimentation with marijuana starts early.** 5% of youth used marijuana before age 13.
- ◆ **A small number of youth are using marijuana and cigarettes on school property.** 8% of youth report current marijuana use and/or current cigarette smoking on school property.
- ◆ **Unlike alcohol use, marijuana use is higher among males than females.** Males are twice as likely as females to use marijuana before age 13 than females (7% vs. 3%), and more males (38%) than females (29%) report lifetime use. In the past 30 days, 28% of males and 18% of females used marijuana.
- ◆ **Older youth are more likely to use marijuana.** Lifetime marijuana use triples from 9<sup>th</sup> grade (16%) to 12<sup>th</sup> grade (52%). Similarly, current use triples from 11% to 35% over the high school years.

*Lifetime marijuana use is lower in MW (33%) than in the state (41%) and nation (38%). However, current use in MW (23%) and MA (25%) is higher than in the US (20%).*

### TRENDS FROM 2006 TO 2008

- ◆ **Reports of current marijuana use suggest that it might be on the rise.** While lifetime marijuana use remained steady at 33% over the past two years, current marijuana use increased from 20% to 23%.
- ◆ **Marijuana use has increased most among males and older students.** Current marijuana use increased from 24% to 28% for males and from 17% to 18% for females. Among 12<sup>th</sup> grade students, current use increased from 31% to 35%.

*While current marijuana use has remained nearly steady in the nation (20% both years) and in MA (around 25%) it has increased from 20% to 23% in MetroWest, with larger increases among males and older students.*



## PRESCRIPTION DRUG MISUSE

### CURRENT PATTERNS

- ◆ **Misuse of prescription drugs is a concern,** with 10% of youth reporting lifetime misuse, and 6% reporting misuse in the past 30 days. *Misuse is defined as using drugs like Ritalin, Adderall, OxyContin, or Vicodin without a doctor's prescription.*
- ◆ **Most youth (54%) who misuse prescription drugs say they got them from a friend.** The next most common source was taking them from parents, *without* their knowledge (12%). Few youth purchased the drugs: 3% bought them on the Internet, and 5% bought them somewhere else.
- ◆ **Current misuse of prescription drugs is higher among males (7%) than females (4%).**
- ◆ **Prescription drug misuse is higher among older students.** By 12<sup>th</sup> grade, 16% of students have misused prescription drugs in their lifetime (19% of males and 14% of females).

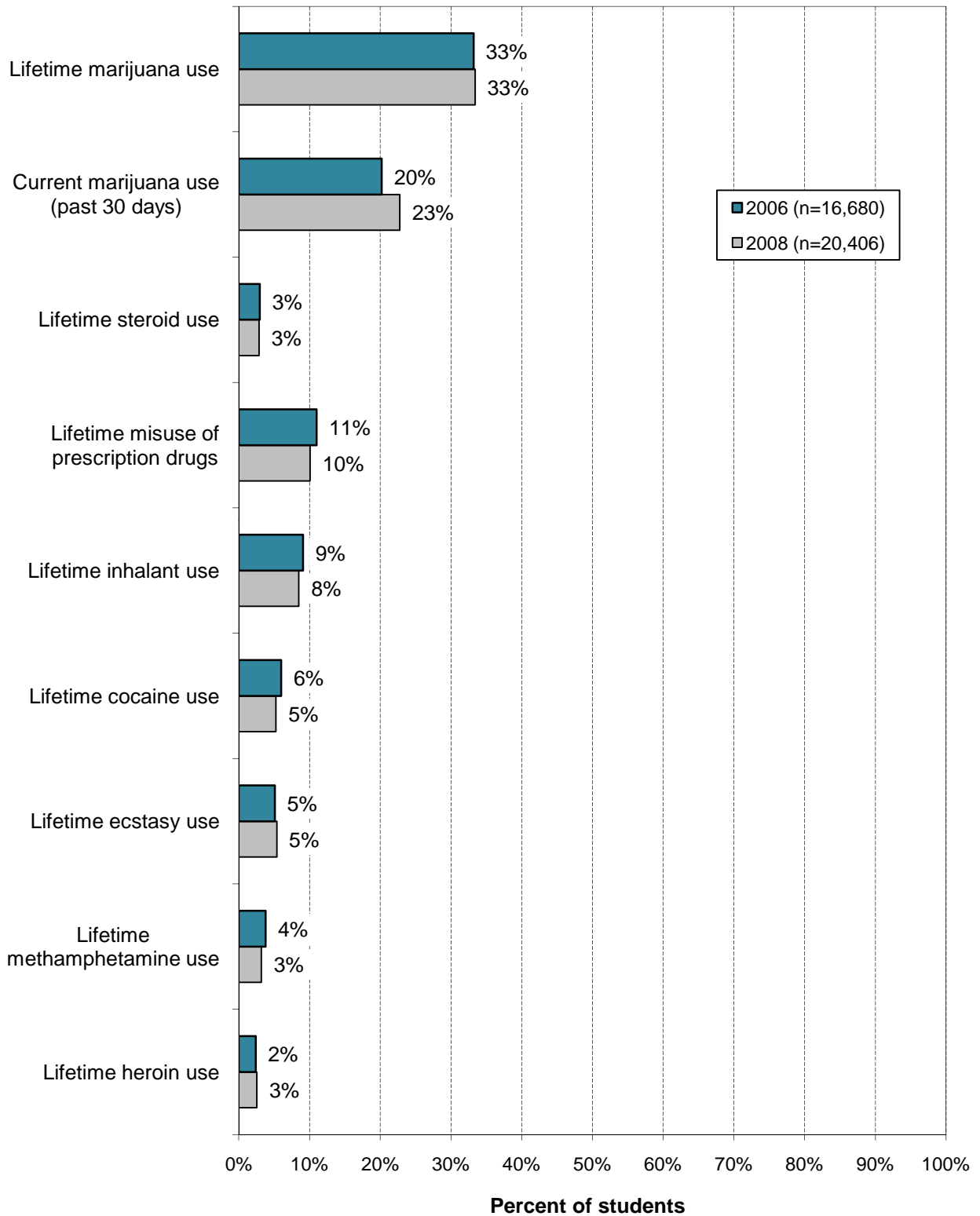
*No state or national data is available from the YRBSS on prescription drug misuse. However, the National Survey on Drug Use and Health<sup>5</sup> shows that 3% of 13-14 year-olds and 5% of 16-17 year-olds misused prescription drugs in the past 30 days. This is slightly lower than in MW (6%).*

### TRENDS FROM 2006 TO 2008

- ◆ **Lifetime prescription drug misuse has remained steady at about 10-11%.** (Current misuse was not assessed in 2006).

*Data from the national Monitoring the Future survey shows that misuse of most prescription drugs has not changed in recent years, and levels of misuse remain near their recent peaks.<sup>6</sup>*

**Marijuana and Other Substance Use in 2006 and 2008**  
**MetroWest Region High School Students**  
*MetroWest Adolescent Health Survey, 2008*





## STEROID USE

### CURRENT PATTERNS

- ◆ **Steroid use is a problem for a small minority of youth.** 3% of high school youth have used steroids in their lifetime.
- ◆ **Males are twice as likely to use steroids as females.** 4% of males and 2% of females have used steroids in their lifetime.

*Nationally and in MA, 4% of youth report use of steroids without a doctor's prescription. In MetroWest, 3% of students have used steroids.*

### TRENDS FROM 2006 TO 2008

- ◆ **Steroid use remained steady at 3% at both time points.**

*Steroid use has remained steady in recent years in MW, MA, and the US.*

## INHALANT USE

### CURRENT PATTERNS

- ◆ **Inhalants are used by a small proportion of youth.** 8% of students have used inhalants in their lifetime, and 3% have used inhalants in the past 30 days.
- ◆ **Similar proportions of males and females use inhalants.** 8% of females and 9% of males have used inhalants in their lifetime.
- ◆ **In contrast to other substances, inhalant use does not increase from 9<sup>th</sup> to 12<sup>th</sup> grade.** For example, current use decreases from 4% in 9<sup>th</sup> grade to 3% in 12<sup>th</sup> grade.

*Fewer youth in MW have used inhalants in their lifetime (8%) compared with youth across the nation (13%). Data from MA is not available.*

### TRENDS FROM 2006 TO 2008

- ◆ **Lifetime and current inhalant use have remained steady in the past two years.** Lifetime inhalant use was 9% and current inhalant use was about 3-4% at both time points.

*As in MetroWest, inhalant use in the US and MA have been steady over the past two years. National data is consistent with our findings that younger students are more likely to use inhalants.*

## OTHER SUBSTANCE USE

### CURRENT PATTERNS

- ◆ **Use of other illegal substances is a concern for a small group of students.** Lifetime ecstasy and cocaine use are most prevalent (5% for each), followed by methamphetamines and heroin (3% for each).
- ◆ **For these substances, use among males is almost twice as high as among females.** For example, lifetime cocaine and ecstasy use are each 7% for males and 4% for females.
- ◆ **Illegal substance use increases by grade for all substances.** From 9<sup>th</sup> grade to 12<sup>th</sup> grade, lifetime cocaine use more than doubles from 3% to 8%. Other substances follow a similar pattern.

*Cocaine and ecstasy are the most commonly used other substances in MW, MA, and the nation, with the lowest prevalences for MW. For example, lifetime cocaine use is 5% for MW, 9% for MA, and 7% for the US. Lifetime ecstasy use is also lowest for MW (5%) relative to MA (7%) and the US (6%).*

### TRENDS FROM 2006 TO 2008

- ◆ **Cocaine, ecstasy, methamphetamine, and heroin use have remained steady in the past two years.**

*There have been no notable trends in the use of other illegal substances in recent years for MW, MA, and the US.*

### CURRENT PATTERNS

- ◆ **A substantial proportion of youth have access to substances on school property.** In the past 12 months, more youth were offered, sold, or given marijuana, pills, or other drugs on school property (18%) than tobacco or alcohol (14%).
- ◆ **Males are more likely than females to have access to illegal substances at school.** For example, 22% of males and 14% of females were offered, sold, or given marijuana, pills, or other drugs on school property in the past year.
- ◆ **The availability of substances on school property jumps substantially from 9<sup>th</sup> to 10<sup>th</sup> grade.** Availability of tobacco and alcohol increases from 12% in 9<sup>th</sup> grade to 16% in 10<sup>th</sup> grade, but decreases slightly in the following years. For marijuana, pills, and other drugs, availability increases from 13% in 9<sup>th</sup> grade to 20% in 10<sup>th</sup> grade, and then is steady through 12<sup>th</sup> grade.

*Availability of marijuana, pills, and other drugs on school property is lower for MW (18%), than MA (27%) and the US (22%). No state or national data is available on tobacco and alcohol availability on school property.*

### TRENDS FROM 2006 TO 2008

- ◆ **In the past two years, availability of tobacco and alcohol on school property has decreased, while availability of marijuana, pills, or other drugs has increased.** These findings are consistent with trends in use of these substances:
  - ◆ The decrease in student alcohol use is accompanied by a decrease in the proportion of students who were offered alcohol or tobacco at school, from 16% to 14%.
  - ◆ Consistent with increases in student marijuana use, there was an increase in the proportion of youth who were offered marijuana, pills, or other drugs at school, from 16% to 18%.

*While availability of marijuana, pills, and other drugs increased slightly in MW (from 16% to 18%), availability of these substances decreased in MA (from 30% to 27%) and in the US (from 25% to 22%).*

## VIOLENCE AND RELATED BEHAVIORS

### OVERALL PATTERNS

Bullying—being repeatedly teased, threatened, hit, kicked, or excluded by another student or group of students—is the most common form of violence experienced by MetroWest youth. Almost one in three high school students (29%) were victims of bullying in the past 12 months, and 27% were perpetrators. Bullying in general as well as electronic bullying—using the Internet, phone, or other electronic communications to bully, tease or threaten—decline as students get older. There is a greater decrease by grade in bullying (37% in 9<sup>th</sup> grade and 20% in 12<sup>th</sup> grade) than in electronic bullying (17% in 9<sup>th</sup> grade and 13% in 12<sup>th</sup> grade). This pattern is consistent with the proportion of youth getting into a physical fight in the past year, which declines from 28% in 9<sup>th</sup> grade to 20% in 12<sup>th</sup> grade. However, the proportion of students who carried a weapon (such as a gun, knife, or club) is consistent across grades at 7%.

Experiences of violence vary by gender. For example, males are more likely to report bullying perpetration than females (31% vs. 22%), and females report somewhat higher levels of victimization than males (31% vs. 27%). More males than females report being in a physical fight in the past 12 months (34% vs. 14%) and carrying a weapon in the past 30 days (12% vs. 3%).

Dating violence is another form of violence that is not uncommon. Consistent with research on dating violence, reports of lifetime physical dating violence victimization is similar among males (9%) and females (10%). However, it is important to note that females, in general, are more likely to be seriously injured by intimate partner violence.<sup>7</sup> Also with regard to dating violence, 7% of females say they have been forced to have intercourse in their lifetime, and 13% say they have been forced to do other sexual things. Sexual coercion is also reported by a smaller proportion of males.

### OVERALL TRENDS FROM 2006 TO 2008

The prevalence of all forms of violence—physical fighting, weapon carrying, bullying, and dating violence—have remained relatively constant. Although electronic bullying has garnered recent media attention, reports of victimization and perpetration have not changed substantially. While there are some fluctuations over time in prevalence of violence across grades, no clear trends emerge.

*Bullying on school property in the past 12 months is higher in MW (26%) than in MA (22%). Comparison data from MA and the US is not available for other bullying measures.*

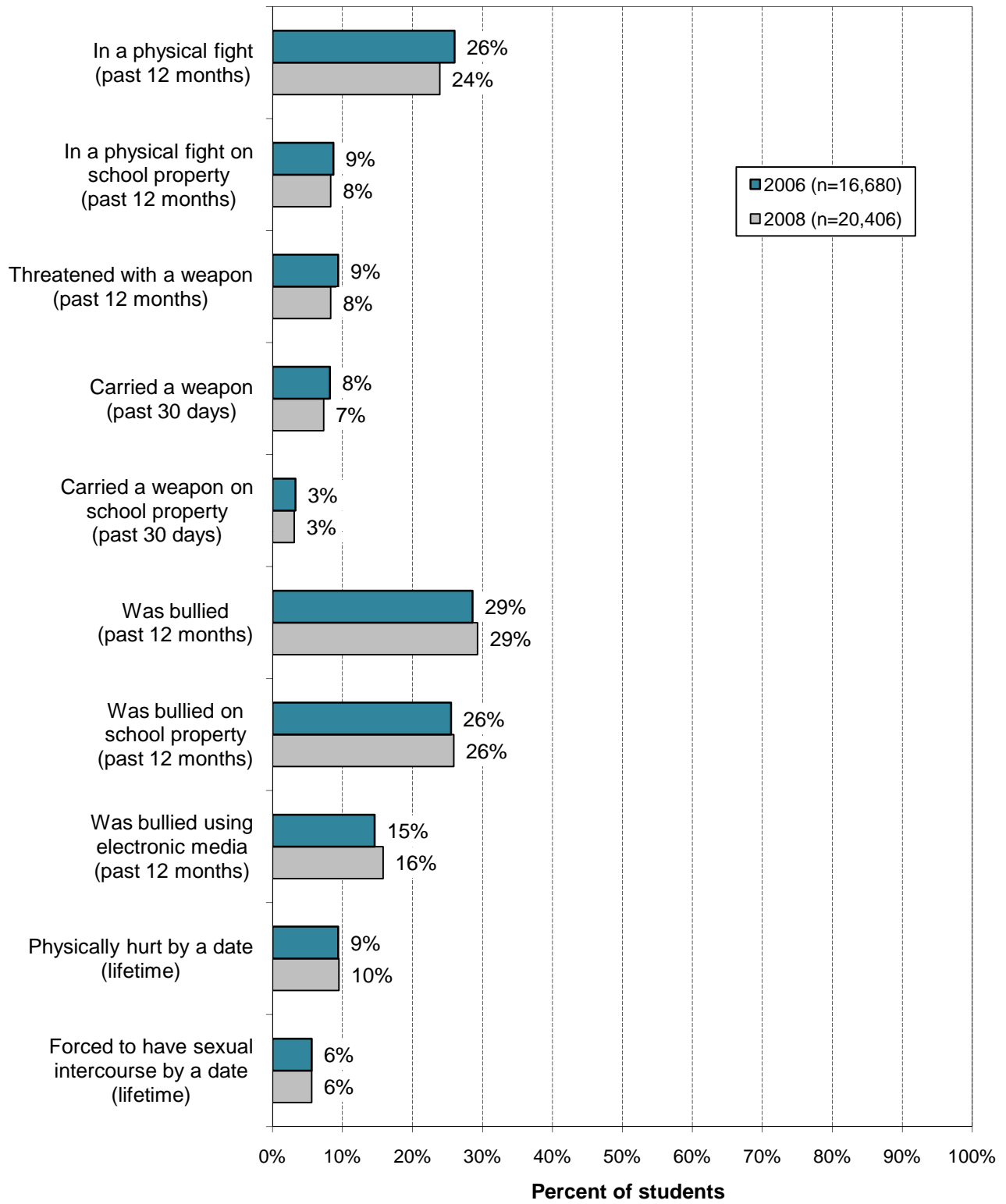
*Physical fighting and weapon carrying are much lower in MetroWest, compared with MA and the US. For example, 12-month physical fighting is 24% for MW, compared with 28% in MA and 36% in the US. Similarly, 30-day weapon carrying is 7% in MetroWest, and over double that in MA (15%) and the US (18%).*

*12-month physical dating violence is lower in MW (7%), compared with the US (10%). MA data is not available.*

*Consistent with MetroWest, there have been no significant trends in physical fighting, weapon carrying, or dating violence in MA or the US.*

*MA data on 12-month bullying on school property shows a slight decline from 24% to 22%, whereas MW remained steady at 26%.*

**Physical Fighting, Weapon Carrying, Bullying, and Dating Violence in 2006 and 2008**  
**MetroWest Region High School Students**  
*MetroWest Adolescent Health Survey, 2008*





## PERSONAL SAFETY AT SCHOOL

### CURRENT PATTERNS

- ◆ **Fears about school safety impact attendance for a small group of youth.** 4% of students did not attend school in the past 30 days on at least one occasion because they felt they would be unsafe at school or on the way to or from school. This proportion is similar across all grades and genders.
- ◆ **Theft and damage of personal property at school are common occurrences.** 21% of students had their property (such as clothing or books) stolen or deliberately damaged at school in the past 12 months. More males report this (24%) than females (17%), and it occurs slightly less among older students.

*The proportion of youth not attending school due to safety concerns is slightly lower in MW (4%) relative to MA (5%) and the US (6%).*

*The prevalence of property damage or theft is lower in MW and MA (21% for each) than in the US (27%).*

### TRENDS FROM 2006 TO 2008

- ◆ **There have been no changes in these safety concerns.**

*Like in MW, there have been no notable changes in MA or the US in the proportion of youth who skip school due to safety concerns or suffer property damage/theft at school.*



## PHYSICAL FIGHTING

### CURRENT PATTERNS

- ◆ **Physical fighting is common, both on and off school property.** 24% of students have been in a physical fight in the past 12 months, and 8% have been in a physical fight on school property during this time.
- ◆ **Males are far more likely than females to engage in physical fighting.** Over twice as many males as females (34% vs. 14%) were in a physical fight in the past 12 months, and over three times as many males (13% vs. 4%) were in a fight on school property.
- ◆ **Younger students are more likely to be involved in physical fights.** Overall 12-month fighting is substantially higher for 9<sup>th</sup> grade students (28%) than for 12<sup>th</sup> grade students (20%), and fighting on school property is nearly twice as high among 9<sup>th</sup> grade students (10%) compared with 12<sup>th</sup> grade students (6%).

*Physical fighting in the past 12 months is substantially lower in MW (24%) compared to MA (28%) and the US (36%). Likewise, fighting on school property is also lowest for MetroWest (8%) relative to MA (9%) and the US (12%).*

### TRENDS FROM 2006 TO 2008

- ◆ **Overall, physical fighting has remained similar in the past two years.** Reports of fighting in the past 12 months decreased slightly, from 26% to 24%. However, this difference was not accompanied by decreases in other physical fighting measures. Data from future years will determine whether this is indeed a trend.

*Physical fighting has not changed substantially in MW, MA, or the US in recent years.*

## WEAPONS

### CURRENT PATTERNS

- ◆ **A substantial proportion of youth are exposed to weapons, such as guns, knives, or clubs, either through threats or by carrying them themselves.** 8% of youth were threatened or injured with a weapon in the past 12 months, 7% of youth carried a weapon in the past 30 days, and 3% carried a gun in the past 30 days.
- ◆ **A small but concerning number of youth are impacted by weapons on school property.** 5% of youth were threatened or injured with a weapon on school property in the past 12 months, and 3% of youth carried a weapon on school property in the past 30 days.
- ◆ **Males are substantially more likely to carry weapons or be involved in weapons-related threats or injuries.** For example, 12% of males carried a weapon in the past 30 days, compared with only 3% of females.
- ◆ **Weapon carrying remains steady through the high school years.**

*The percentage of youth who carried a weapon in the past 30 days in the MetroWest region (7%) is substantially lower than in the state (15%) and nation (18%).*

### TRENDS FROM 2006 TO 2008

- ◆ **Weapon-carrying and weapon-related threats and injuries have remained relatively steady.** At both time points, about 7-8% of youth carried a weapon and 3% carried a weapon on school property in the past 30 days.

*Similar to trends in the MetroWest region, weapon carrying has remained steady in MA and the US in recent years.*

## BULLYING

### CURRENT PATTERNS

- ◆ **Many youth are victims of some form of bullying, defined as being repeatedly teased, threatened, hit, kicked, or excluded by another student or group of students.** 29% of MetroWest youth were bullied in the past 12 months, and nearly as many (26%) were bullied on school property. A similar number of youth were perpetrators of bullying (27%).
- ◆ **Electronic bullying is relatively common, defined as using the Internet, phone, or other electronic communications to bully, tease, or threaten.** 16% of youth were bullied electronically in the past 12 months, and 11% were perpetrators of electronic bullying.
- ◆ **Often, the same youth are both victims and perpetrators.** 16% of all youth report being both a bullying victim and perpetrator. 7% are both victims and perpetrators of electronic bullying.
- ◆ **Males and females report similar levels of bullying victimization (27% and 31%), but males are more likely to be perpetrators (31% vs. 22%).** A similar pattern exists for electronic bullying.
- ◆ **Bullying victimization is highest in the lower grades.** Nearly twice as many 9<sup>th</sup> grade students (37%) as 12<sup>th</sup> grade students (20%) were bullying victims. Electronic bullying victimization lowers from 17% in 9<sup>th</sup> grade to 13% in 12<sup>th</sup> grade.

*Bullying on school property in the past 12 months is higher in MW (26%) than in MA (22%). Data on other bullying measures is not available for MA or the US.*

### TRENDS FROM 2006 TO 2008

- ◆ **All forms of bullying have remained steady in the past two years.** Bullying victimization in the past 12 months was steady at 29%, and electronic bullying victimization was about 15-16% at both time points.

*While bullying on school property in MW stayed steady at 26% in recent years, it decreased from 24% to 22% in MA.*



### CURRENT PATTERNS

- ◆ **One in ten students are victims of physical dating violence** *defined as having been hit, slapped, or physically hurt on purpose by a boyfriend/girlfriend, date, or someone they were going out with.* 9% have experienced physical dating violence in their lifetime, and 7% have been victims in the past 12 months.
- ◆ **Physical dating violence is similar among males and females.** For example, similar proportions of females (10%) and males (9%) were physically hurt on purpose by a date in their lifetime. This finding is consistent with gender patterns in national data; however, these figures do not take into account the fact that females are more likely to experience more serious injuries during partner violence.
- ◆ **Sexual dating violence is reported by a concerning number of youth.** In their lifetime, 6% of students were forced by a date to have sexual intercourse, and 9% were forced to do other sexual things.
- ◆ **Females are more likely to be victims of sexual dating violence.** Over twice as many females as males (13 vs. 5%) have been forced to do sexual things (non-intercourse) by a date in their lifetime.
- ◆ **Lifetime dating violence experiences accumulate over the high school years.** Lifetime physical dating violence is 7% among 9<sup>th</sup> grade students and 12% among 12<sup>th</sup> grade students. 4% of 9<sup>th</sup> grade students and 7% of 12<sup>th</sup> grade students have been forced to have sexual intercourse by a date. *Dating violence figures do not include experiences of forced intercourse that may have occurred in other contexts, such as childhood sexual abuse.*

*Physical dating violence in the past 12 months is experienced by fewer MW youth (7%) than US youth (10%). MA data is not available.*

*Lifetime forced sexual intercourse is also slightly lower in MW (6%) relative to the US (8%).*

### TRENDS FROM 2006 TO 2008

- ◆ **There have been no notable changes in the prevalence of physical or sexual dating violence.**

*Physical and sexual dating violence have remained similar in the US and in MW in recent years. No trend data is available for MA.*

## BEHAVIOR RELATED TO UNINTENTIONAL INJURY

### OVERALL PATTERNS

The proportion of youth who ride with impaired drivers or drive after drinking themselves is a serious concern, given the prevalence of youth alcohol use and the potential consequences of traffic accident injuries and fatalities. While lower for MetroWest than nationally, one in four (26%) high school youth rode with someone who had been drinking in the past 30 days, and one in six (16%) rode with someone *under the age of 21* who had been drinking. Further, among students who drive, 15% drove after drinking in the past 30 days.

More male drivers (17%) drove after drinking than females (12%). Males are also more likely to engage in other behaviors that increase chances of unintentional injury, including never or rarely wearing a helmet when riding a bicycle (67% of male riders, 55% of female riders), and never or rarely wearing a seatbelt when riding in a car driven by someone else (9% vs. 5%).

### OVERALL TRENDS FROM 2006 TO 2008

While reports of riding with an impaired driver has remained steady, there has been a small decrease in driving after drinking, from 17% to 15% among drivers. This is consistent with lower alcohol use reported by students. There have been no changes in seatbelt or helmet use.

*Youth in MetroWest report fewer behaviors related to unintentional injury than youth nationally.*

*26% of youth in MW and MA have ridden with an impaired driver in the past 30 days. In the US, this figure is 29%.*

*Fewer MW youth fail to wear seatbelts (7%) compared with MA (15%) and the US (11%).*

*Lack of helmet use on bicycles in MW (61%) is substantially lower than in the US (85%). MA data is not available.*

*There have also been no notable changes in behaviors related to unintentional injury in MA and the US in recent years.*

## SEATBELT AND HELMET USE

### CURRENT PATTERNS

- ◆ **Most students (85%) wear seatbelts most or all of the time.** Only 7% never or rarely wear a seatbelt when riding in a car driven by someone else.
- ◆ **However, most students do not wear helmets when riding a bicycle.** Among those who ride a bicycle, 61% never or rarely wear a helmet.
- ◆ **Males are more likely than females to put themselves at risk of injury by not wearing seatbelts or bicycle helmets.** 9% of males never or rarely use seatbelts, compared to 5% of females; two-thirds of males (67%) and just over half of females (55%) never or rarely use helmets when riding a bicycle.
- ◆ **Seatbelt use is steady across grades, but helmet use declines as students get older.** In 9<sup>th</sup> grade, 55% of student bikers never or rarely wear a helmet. By 12<sup>th</sup> grade, this number rises to 67%.

*Helmet use in MW is substantially higher than in the US. 61% of youth bicycle riders in MW never or rarely wore a helmet, compared with 85% in the US. Current MA data is not available.*

*Seatbelt use in MetroWest is also higher. Only 7% of MW students never or rarely wear a seatbelt, whereas 15% of MA youth and 11% of US youth report minimal seatbelt use.*

### TRENDS FROM 2006 TO 2008

- ◆ **The proportions of students regularly wearing seatbelts and helmets have remained steady.**

*There have been no notable changes in seatbelt or helmet use in MW, MA, and the US in recent years.*

## DRIVING AFTER DRINKING

### CURRENT PATTERNS

- ◆ **Driving after drinking is a serious and frequent consequence of alcohol use in high school.** 16% of all students rode with someone *under the age of 21* who had been drinking in the past 30 days. 15% of student drivers (all underage) said they had driven after drinking in the past 30 days.
- ◆ **Males are more likely than females to drive after drinking.** 17% of male drivers and 12% of female drivers drove after drinking in the past 30 days.
- ◆ **Older students are much more likely to ride with a driver *under the age of 21* who had been drinking.** The proportion of youth who rode with an underage driver who had been drinking triples from 8% in 9<sup>th</sup> grade to 26% in 12<sup>th</sup> grade.

*Somewhat fewer youth in MW and MA (26%) have ridden with an impaired driver in the past 30 days, compared with US youth (29%).*

*Youth in MW are also less likely to drive after drinking (8%) compared with MA and the nation (both 11%). (These proportions include all students, not just drivers.)*

### TRENDS FROM 2006 TO 2008

- ◆ **There may be a slight decrease in driving after drinking (from 17% to 15% among drivers).** This is notable primarily because it is consistent with other decreases in youth alcohol use. The decrease is greatest among 12<sup>th</sup> grade students, where reports of drinking among drivers decreased from 24% to 20%.
- ◆ **Riding with a driver who had been drinking has remained steady at 26% over the past two years.** Note that this could include driving with parents/guardians or other adults as well as youth. Trend data is not available for riding with a driver under 21; this question was new to the 2008 survey.

*There have been no notable changes in riding with impaired drivers in MW, MA, and the US in recent years.*

*Driving after drinking has remained relatively steady in MA and the US. However, there is a small decrease in MW, especially among 12<sup>th</sup> grade students.*

# STRESS, MENTAL HEALTH, AND SUICIDE

## OVERALL PATTERNS

Over a quarter of youth (28%) report their life was “very” stressful in the past 30 days. Females are more likely to experience stress (36% vs. 20%), as are students in the older grades. Reports of life being “very” stressful double from 9<sup>th</sup> grade (19%) to 12<sup>th</sup> grade (38%). A majority of students (59%) were often worried about school issues (grades, homework, tests). About one in three students were worried about social issues, appearance issues, and family issues.

In the past year, one in five students (20%) say they have experienced symptoms of depression in the past 12 months, and 11% say they have seriously considered suicide during this time. 4% report a suicide attempt. Females are more likely than males to report depressive symptoms (25% vs. 15%) and thoughts of suicide (13% vs. 8%); however, suicide attempts are reported by 5% of females and 4% of males. This pattern is consistent with gender differences nationwide. In contrast to stress, which becomes more common in later grades, depressive symptoms, suicidal ideation, and suicide attempts fluctuate only slightly by grade.

## OVERALL TRENDS FROM 2006 TO 2008

Reports of students experiencing stress, depressive symptoms, suicidal ideation, and making a suicide attempt have remained steady in the past two years.

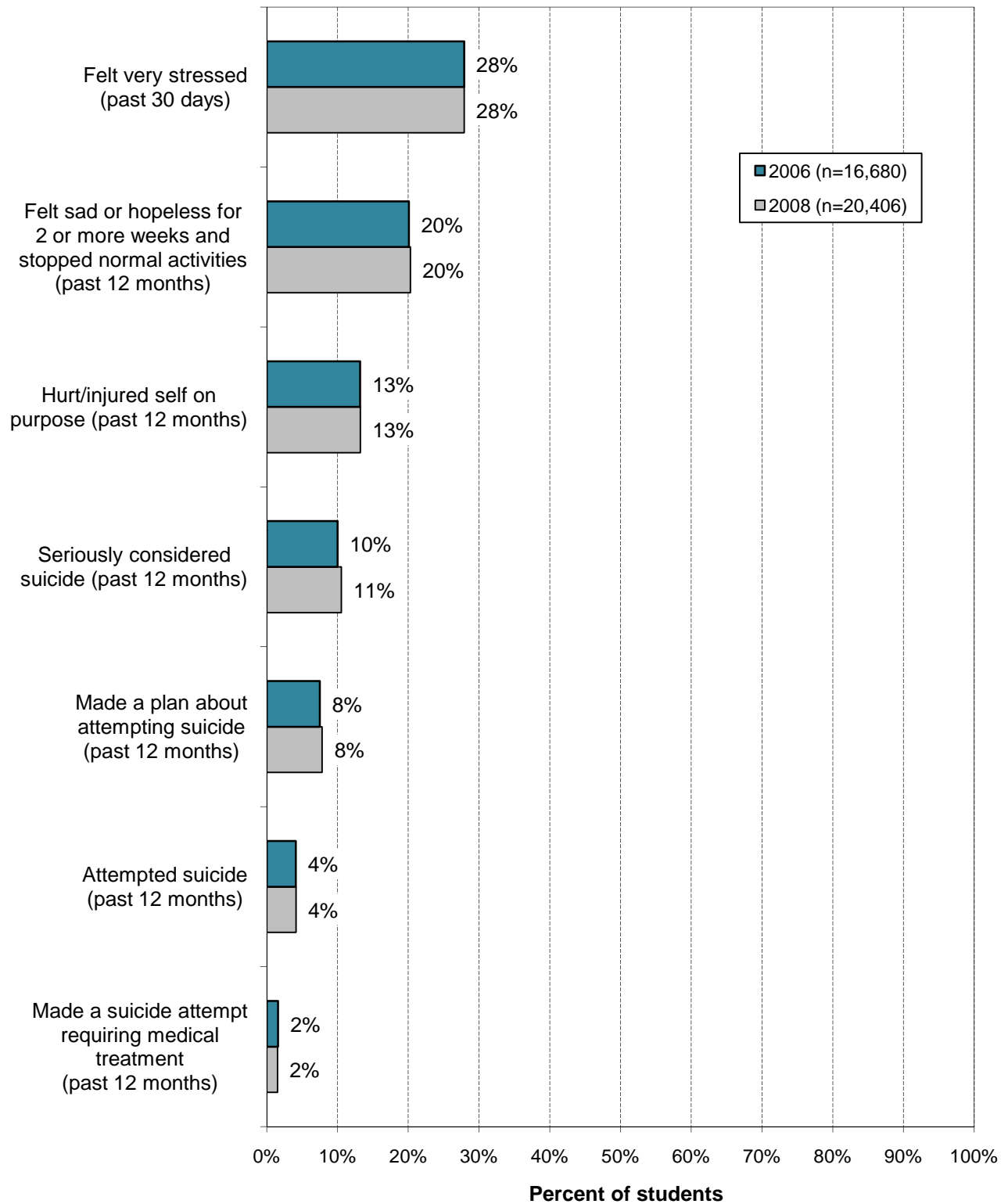
*Fewer youth in MetroWest report depressive symptoms in the past 30 days (20%) compared to MA (24%) and the nation (29%).*

*Suicide attempts in the past 12 months in MW (4%) are substantially lower than in the state (8%) and the US (7%).*

*Patterns in which females are more likely to report symptoms of depression and suicidal ideation are consistent across MW, MA, and the US. Data on stress for MA and the US is not available.*

*Nationally, there is a slight downward trend in suicidal ideation and attempts. While reports in MetroWest have stayed relatively constant, MW youth report less depression and suicidality than their state and national peers.*

**Stress, Mental Health, and Suicide in 2006 and 2008**  
**MetroWest Region High School Students**  
*MetroWest Adolescent Health Survey, 2008*





### CURRENT PATTERNS

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- ◆ **Stress is common**, with 28% reporting that their life was “very” stressful in the past 30 days.
- ◆ **The greatest source of stress is concerns about school.** Over half of students (59%) worry “often” or “very often” about school (grades, homework, tests).
- ◆ **Other frequent causes of stress include social issues, appearance issues, and family issues.** Just under a third of students worry about social issues like friendships, dating, or teasing (30%), appearance issues like their weight and how they look (28%), and family issues like their relationship with their parents, family’s financial situation, or family health concerns (29%). 20% of students worry about their physical or emotional health.
- ◆ **A small number of students experience stress from feeling unsafe.** 4% of youth worry about violence or fear for their safety at home, at school, or in their neighborhood.
- ◆ **Females report more stress than males.** Overall, 36% of females report their life was “very” stressful, compared with 20% of males. Females report higher levels of stress across most areas of concern, including: school issues (69% for females vs. 48% for males), family issues (36% vs. 22%), and appearance issues (40% vs. 15%). The only topic on which males and females experience a similar amount of stress is safety issues (3% for females; 4% for males).
- ◆ **Stress and worrying are greatest in 11<sup>th</sup> and 12<sup>th</sup> grade.** Stress about school issues increases from 51% in 9<sup>th</sup> grade to 58% in 10<sup>th</sup> grade. It peaks in 11<sup>th</sup> grade at 64% and then remains steady in 12<sup>th</sup> grade. Worrying due to other topics follows a similar pattern.

*No MA or US data is available on stress. However, findings from research literature are consistent with our MW data showing that adolescent females are more likely to report stress and worrying than males.<sup>8</sup>*

*Further, stress has been linked in the literature to engagement in other risk behaviors, including smoking, alcohol, and other substance use.<sup>9</sup>*

### TRENDS FROM 2006 TO 2008

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- ◆ **Reports of stress and worrying have remained steady.** 28% of youth reported that their life was “very” stressful in the past 30 days at both time points. The only slight difference is an increase in stress due to family issues, from 27% to 29%.

*No state or national data is available on longitudinal trends in adolescent stress and worrying.*





### CURRENT PATTERNS

- ◆ **A substantial number of youth report symptoms of depression.** One in five students (20%) report that they felt sad or hopeless almost every day for two or more weeks in the past 12 months.
- ◆ **Suicidal ideation is also prevalent.** 11% of students seriously considered suicide in the past 12 months, and 8% made a plan about attempting suicide during that time.
- ◆ **Many youth engage in self-injury.** 13% have deliberately injured themselves in the past 12 months. *This includes hurting or injuring themselves on purpose by cutting, burning, or bruising themselves.*
- ◆ **While somewhat lower than the state and national data, a concerning number of youth in MetroWest have attempted suicide.** In the past 12 months, 4% of students attempted suicide, and 2% reported a suicide attempt requiring medical treatment.
- ◆ **Females are more likely to report depressive symptoms, self-injury and suicidal ideation. This gender gap narrows when it comes to suicide attempts.** For example, more females than males report depressive symptoms (25% vs. 15%), seriously considering suicide (13% vs. 8%) and self-injury (17% vs. 9%). However, suicide attempts are similar among females (5%) and males (4%).
- ◆ **Depressive symptoms, suicidal ideation, self-injury, and suicide attempts do not vary by grade.** There are slight fluctuations across grades, but no notable patterns.

### TRENDS FROM 2006 TO 2008

- ◆ **Reports of depressive symptoms, self-injury, suicidality and suicide attempts have remained relatively steady.** At both time points, 20% of students reported depressive symptoms, 13% reported self-injury, about 10-11% seriously considered suicide, and 4% reported making a suicide attempt in the past 12 months.

*MetroWest is lower than the state and nation with respect to depression, suicidal ideation, self-injury, and suicide attempts.*

*For example, fewer MW youth (20%) report feeling depression symptoms relative to MA (24%) and the nation (29%).*

*MetroWest youth are also less likely to plan a suicide attempt (8%) compared with MA and the US (11%).*

*Suicide attempts in the past 12 months are reported by 4% of MW youth, compared with 8% of MA youth and 7% of youth nationally.*

*In the US and MA, there have been some slight decreases in some mental health measures in recent years, but no consistent trends have emerged. Despite the fact that there have been no changes in depression or suicidality in MW, youth in MW report better mental health than their state and national peers.*

## SEXUAL BEHAVIOR

### OVERALL PATTERNS

While fewer high school youth in MetroWest are sexually active compared with Massachusetts and United States, three out of ten (29%) have had sexual intercourse in their lifetime, and 23% are currently sexually active (*had intercourse in the past 3 months*). Among those who are sexually active, 28% used alcohol or drugs prior to having intercourse the last time.

Following national patterns, males are more likely than females to have had sexual intercourse prior to age 13 (6% vs. 2%). Males are also more likely to have had four or more sexual partners in their lifetime (10% vs. 6%). Yet the proportion of sexually active males (24%) and females (22%) is similar.

The proportion of youth who are currently sexually active quadruples from 9<sup>th</sup> grade (11%) to 12<sup>th</sup> grade (41%). The relationship between alcohol/drug use and sexual activity, however, does not change: throughout grades 9 through 12, among youth who are sexually active, alcohol/ drug use prior to last intercourse is in the 27-31% range. Among sexually active youth, use of birth control pills doubles from 9<sup>th</sup> grade (25%) to 12<sup>th</sup> grade (51%), while condom use slowly declines from 68% to 64%.

### OVERALL TRENDS FROM 2006 TO 2008

There have been no notable changes in the proportion of youth who report lifetime or current sexual activity. Among sexually active youth, there are slight fluctuations in use of condoms and birth control pills, but future data will be necessary to determine whether these are meaningful trends.

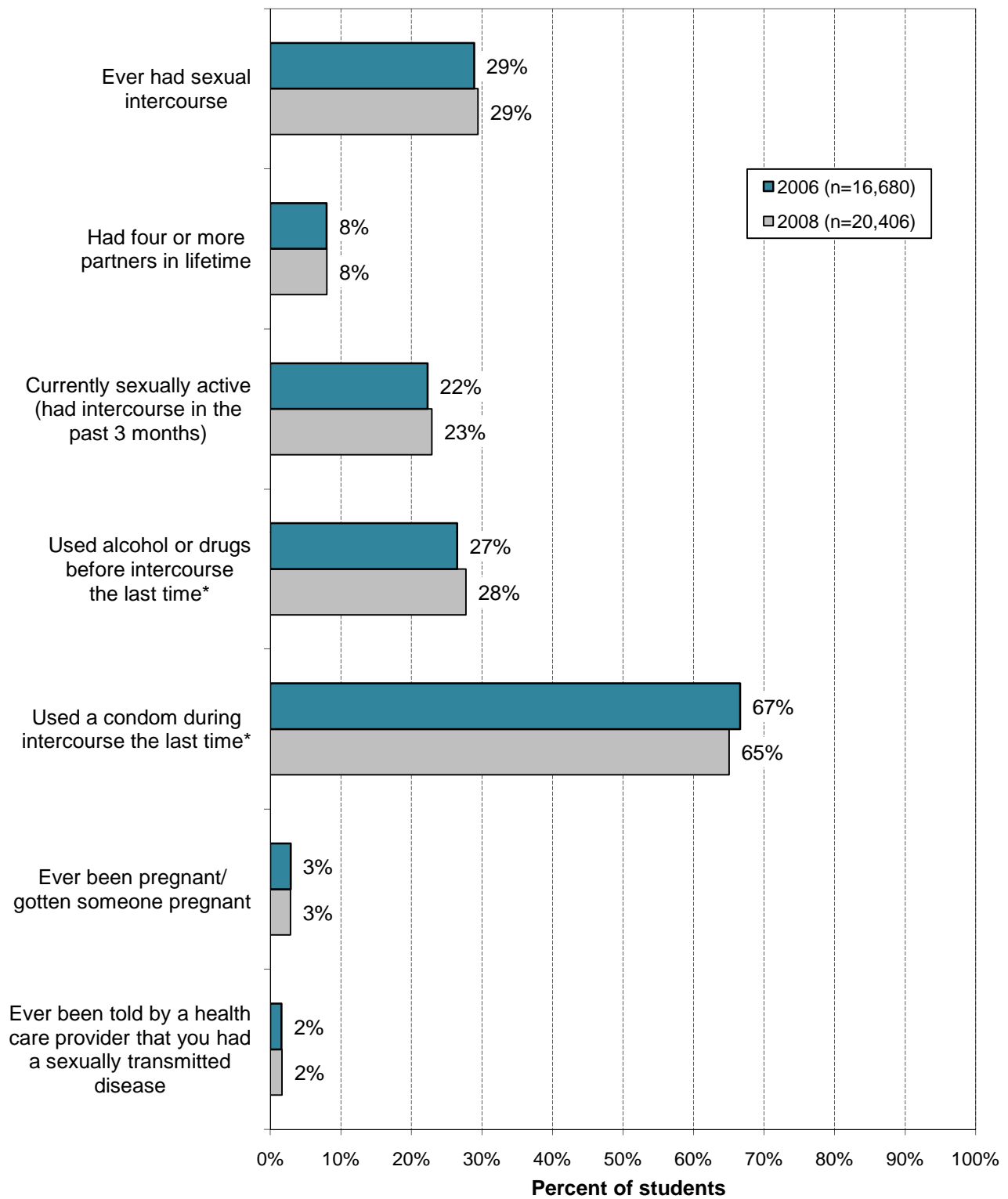
*Youth in MetroWest are far less likely to be sexually active compared with the state and nation. 29% of MW youth had sexual intercourse in their life, compared with 44% of MA youth and 48% of US youth.*

*MetroWest youth also have fewer partners. 8% of MW youth have had four or more partners in their life; this figure is 12% for MA and 15% for the US.*

*However, more youth in MW report alcohol/drug use prior to their last intercourse (28%) relative to MA (25%) and the US (23%).*

*The proportion of sexually active youth in MW, MA and the US has remained steady in recent years. In MA, there has been a decrease in condom use among sexually active youth (from 65% to 61%), and in MW, a smaller decrease was observed (from 67% to 65%).*

**Sexual Behaviors in 2006 and 2008**  
**MetroWest Region High School Students**  
*MetroWest Adolescent Health Survey, 2008*



\*Among youth who are currently sexually active (had sexual intercourse in the past 3 months)

## LIFETIME AND CURRENT SEXUAL ACTIVITY

### CURRENT PATTERNS

- ◆ **While lower than in Massachusetts and the United States, a substantial number of MetroWest youth have had sexual intercourse and are currently sexually active.** 29% have had intercourse in their lifetime, and 23% have had sexual intercourse in the past 3 months. 8% of youth have had sexual intercourse with four or more partners in their lifetime.
- ◆ **Following national patterns, more males (6%) than females (2%) report sexual intercourse prior to age 13.** Males are also more likely to report having four or more partners in their lifetime (10% vs. 6%).
- ◆ **In high school, more males than females are sexually active, but the differences are relatively small.** 32% of males and 27% of females have had intercourse in their lifetime. Indeed, current sexual activity is almost the same: 24% of males and 22% of females had sexual intercourse in the past 3 months.
- ◆ **Sexual activity increases substantially from 9<sup>th</sup> to 12<sup>th</sup> grade.** For example, the proportion of youth who have had sexual intercourse in their lifetime triples from 15% in 9<sup>th</sup> grade to 49% in 12<sup>th</sup> grade. By 12<sup>th</sup> grade, 41% are currently sexually active, and 15% of males and 11% of females have had four or more lifetime sexual partners.

*The proportion of students who are currently sexually active is substantially lower in MetroWest (23%) than MA (33%) and the US (35%).*

*Fewer MetroWest youth (4%) also have had sexual intercourse prior to age 13. In MA and the US, these figures are 6% and 7%, respectively.*

### TRENDS FROM 2006 TO 2008

- ◆ **Reports of lifetime sexual intercourse, current sexual activity, and number of sexual partners have neither increased nor decreased.** Lifetime sexual intercourse was steady at 29%, and current intercourse was about 22-23% at both time points. Further, reports of four or more sexual partners were steady at 4%.

*Reports of lifetime intercourse, current sexual activity, lifetime partners, and early initiation have remained steady in MW, MA, and the US in recent years.*

## ALCOHOL AND DRUG USE BEFORE INTERCOURSE

### CURRENT PATTERNS

- ◆ **Among sexually active youth, alcohol or drug use before intercourse is relatively common.** Among the 23% of youth who have had intercourse in the past 3 months, 28% used alcohol or drugs before intercourse the last time.
- ◆ **Males are more likely to use alcohol or drugs before intercourse.** Among sexually active youth, 33% of males and 23% of females used alcohol or drugs before they had intercourse the last time.
- ◆ **Alcohol/drug use before intercourse is a problem throughout high school.** The proportion of sexually active youth who used alcohol or drugs before intercourse is similar throughout high school, in the 27-31% range.

*Despite the fact that fewer MW youth are sexually active compared with students across the US, more sexually active MW youth (28%) used alcohol or drugs before intercourse the last time compared with MA youth (25%) and US youth (23%).*

### TRENDS FROM 2006 TO 2008

- ◆ **There has been no change in alcohol/drug use before intercourse.** At both surveys, 27-28% reported alcohol or drug use before intercourse the last time.

*Alcohol/drug use prior to intercourse has remained steady in the US at 23% and in MW at about 27-28%. In MA, it has increased slightly from 23% to 25%.*

## BIRTH CONTROL AND PROTECTION AGAINST SEXUALLY TRANSMITTED INFECTIONS

### CURRENT PATTERNS

- ◆ **A substantial proportion of sexually active youth are not using condoms to protect themselves against sexually transmitted infections (STIs) or pregnancy.** Among sexually active youth, only 65% used a condom during intercourse the last time.
- ◆ **A worrying number of sexually active youth did not use an effective method of birth control the last time they had intercourse.** 13% used withdrawal, 13% used no method, and 5% were not sure whether birth control was used (9% of males and 2% of females). On the other hand, 41% of sexually active students said they used birth control pills to prevent pregnancy.
- ◆ **Condom use decreases slightly by grade, while use of birth control pills rises substantially.** From 9<sup>th</sup> to 12<sup>th</sup> grade, condom use among sexually active youth decreases from 68% to 64%, and use of birth control pills doubles from 25% to 51%.
- ◆ **A small proportion of youth report a pregnancy experience during high school.** In their lifetime, 4% of all females have been pregnant and 2% of all males report they have gotten someone pregnant.
- ◆ **A small proportion of youth have been told by a health provider that they have an STI.** In their lifetime, 2% of high school youth have been told by a health care provider that they have an STI. *Note: Some common STIs, including Chlamydia, may be asymptomatic, and both males and females may be infected without knowing it.*

*Condom use at last intercourse is slightly higher among sexually active MW youth (65%) than MA (61%) and US (62%) youth. Use of birth control pills is twice as high in MW (41%) than in the nation (16%).*

*Pregnancy is higher in MA (5%) than in MW (3%). A slight difference also exists in the lifetime prevalence of STIs (3% for MA, 2% for MW). US data is not available.*

### TRENDS FROM 2006 TO 2008

- ◆ **Reports of pregnancy and STIs have remained steady and are relatively low compared with state statistics.**

*In recent years, the proportion of youth involved in a pregnancy has stayed steady in MA (5%), and in MW (3%).*

*The lifetime prevalence of STIs has decreased in MA from 5% to 3%, and stayed steady in MW at 2%.*

# WEIGHT, NUTRITION, AND PHYSICAL ACTIVITY

## OVERALL PATTERNS

MetroWest youth are less likely to be overweight or obese than youth in Massachusetts and the United States: 12% are overweight, *defined as being in the 85<sup>th</sup> to 95<sup>th</sup> percentile for body mass index (BMI) by age and gender*, and 7% are obese, *defined as being in the 95<sup>th</sup> or above percentile*. BMIs are calculated from self-reported height and weight,

Males are more likely than females to be overweight (14% vs. 10%) or obese (11% vs. 4%), consistent with state and national data. Males are also more likely to report unhealthy eating behaviors, such as daily consumption of fast food (9% vs. 4%) and non-diet soda (25% vs. 14%). Females, on the other hand, are more likely to report unhealthy weight perception and weight control behaviors: 27% of females describe themselves as slightly or very overweight, and 55% are trying to lose weight. Further, twice as many females as males are dieting (48% vs. 21%) or fasting (11% vs. 5%) to lose weight or keep from gaining weight.

While males are more likely to report unhealthy eating, they also engage in more physical activity: 40% of males, compared with 26% of females, meet the currently recommended level of physical activity, *defined as being physically active for 60 minutes per day on five or more of the past 7 days*. It is notable that fewer students are physically active later in high school: 7% of 9<sup>th</sup> grade students, but 12% of 12<sup>th</sup> grade students report no moderate or vigorous physical activity. This parallels decreasing participation in physical education (PE) class, from 69% attending once or more a week in 9<sup>th</sup> grade to 41% in 12<sup>th</sup> grade.

## OVERALL TRENDS FROM 2006 TO 2008

There have not been any notable changes in overweight/obesity, weight perception, weight control, nutrition, or physical activity.

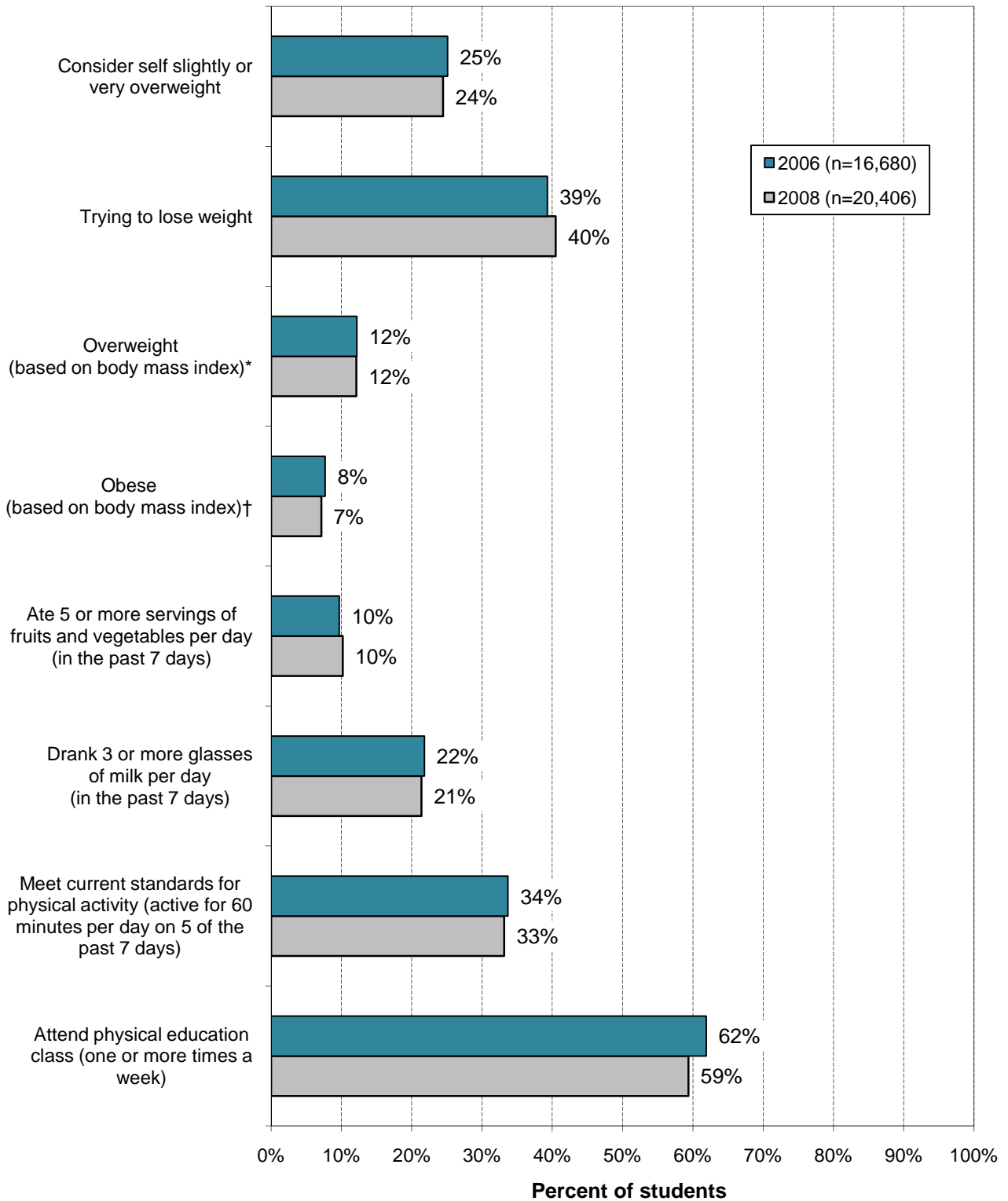
*MW youth are less likely to be overweight or obese. 19% of MW youth have BMIs in the overweight or obese range, compared with 26% of MA youth and 29% of youth nationally.*

*Despite this, fewer MW youth (33%) meet the current recommended level of physical activity, compared with 41% of MA youth and 35% of US youth.*

*Overweight and obesity have remained steady in MW, MA, and the US in recent years. Similarly, there have been no notable changes in available nutrition and physical activity measures.*



**Weight Perception, Body Weight, Nutrition, and Physical Activity in 2006 and 2008**  
**MetroWest Region High School Students**  
*MetroWest Adolescent Health Survey, 2008*



\*Students who were ≥85th percentile but <95th percentile for body mass index by age and sex, based on reference data

†Students who were ≥95th percentile for body mass index by age and sex, based on reference data

## OVERWEIGHT, WEIGHT PERCEPTION, AND WEIGHT CONTROL

### CURRENT PATTERNS

- ◆ **Although much lower than the state and national figures, one in five (19%) students are overweight or obese.** 12% are overweight (85<sup>th</sup> to 95<sup>th</sup> percentile BMI for age and sex), and 7% are obese (95<sup>th</sup> or higher percentile BMI). This information is based on self-reported height and weight data.
- ◆ **Many youth report exercising or dieting to control their weight.** Over half (56%) exercised in the past 30 days to lose weight or keep from gaining weight, and a third (35%) dieted in the past 30 days.
- ◆ **More males than females are overweight or obese.** 10% of females and 14% of males are overweight; 4% of females and 11% of males are obese.
- ◆ **Females more frequently perceive themselves as overweight.** While 14% are classified as overweight or obese, nearly double (27%) describe themselves as “slightly” or “very” overweight, and even more (55%) are trying to lose weight. Among males, overweight/obesity (24%) is similar to the proportion who perceive they are overweight (22%) and who are trying to lose weight (25%).
- ◆ **Females are also more likely to engage in weight control behaviors.** In the past 30 days, females are more likely than males to diet (48% vs. 21%), fast (11% vs. 5%), and take laxatives/vomit (5% vs. 3%).
- ◆ **In the older grades, fewer students exercise to lose weight or keep from gaining weight and more students are on a diet.** 58% of 9<sup>th</sup> grade students exercise, lowering to 53% in 12<sup>th</sup> grade. On the other hand, 30% of 9<sup>th</sup> grade students diet, and by 12<sup>th</sup> grade, 37% report this behavior. Other weight control behaviors do not show clear patterns by grade.

*Obesity is much lower in MW (7%) than MA (11%) and the US (13%). Similarly, fewer MW youth are overweight (12%) relative to MA (15%) and the US (16%).*

*Consistent with lower rates of obesity and overweight, fewer MW youth perceive of themselves as overweight and are trying to lose weight. Fewer MW youth also engage in behaviors to control their weight.*

### TRENDS FROM 2006 TO 2008

- ◆ **There have been no substantial changes in overweight, obesity, weight perception, or weight control behaviors.** One in five students were classified as overweight or obese at both time points.

*In recent years, overweight and obesity have remained similar in MW, MA, and the US. Weight control behaviors also have not changed.*

## NUTRITION

### CURRENT PATTERNS

- ◆ **Few youth eat recommended amounts of fruits, vegetables, and dairy.** Only 10% consumed the recommended five or more servings of fruits and vegetables per day in the week preceding the survey, and only 21% consumed 3 or more glasses of milk per day.
- ◆ **A substantial number of youth report daily consumption of non-diet soda and fast food.** 19% drank non-diet soda every day in the past week, and 7% ate fast food daily.
- ◆ **Consistent with gender patterns in overweight and obesity, males are more likely to report unhealthy eating.** Fewer males ate vegetables or green salad daily (45% vs. 54%), but twice as many males ate fast food (9% vs. 4%) and drank non-diet soda (25% vs. 14%).
- ◆ **Most food consumption behaviors are similar across grades.** However, consumption of 3 or more glasses of milk daily decreases from 26% in 9<sup>th</sup> grade to 17% in 12<sup>th</sup> grade.

*MA (25%) and US (34%) youth are more likely to consume non-diet soda daily compared with MW youth (19%). MW youth, on the other hand, are more likely to drink 3 glasses of milk per day (21%) than MA youth (15%) and US youth (14%).*

*No other comparable data is available on nutrition patterns.*

### TRENDS FROM 2006 TO 2008

- ◆ **There has been a decrease in daily non-diet soda consumption,** from 24% in 2006 to 19% in 2008.
- ◆ **Other consumption patterns have remained steady.**

*No notable changes in consumption have occurred in MA and the US for available measures.*

## PHYSICAL ACTIVITY

### CURRENT PATTERNS

- ◆ **Most youth do not meet the currently recommended level of physical activity.** Only 33% of youth are physically active for at least 60 minutes per day on five or more of the past 7 days. However, 65% participated in vigorous physical activity on three or more days in the past week.
- ◆ **Most participate in sports and/or take physical education (PE) class.** 68% report that they played on one or more sports teams in the past 12 months, and 59% attend PE class on one or more days per week.
- ◆ **A small number of youth engage in no physical activity.** 9% of youth did not participate in any moderate or vigorous physical activity in the past 7 days.
- ◆ **Males are more likely to be physically active.** For example, 40% of males and 26% of females meet the currently recommended level of physical activity.
- ◆ **Physical activity decreases as students get older.** For example, 36% of 9<sup>th</sup> grade students meet the currently recommended level of physical activity, compared with 30% of 12<sup>th</sup> grade students. The proportion of students getting no exercise is 7% in 9<sup>th</sup> grade and 12% by 12<sup>th</sup> grade.

*The proportion of youth meeting the currently recommended level of physical activity is lower in MW (33%) than MA (41%) and the US (35%).*

*However, more MW youth have played on a sports team in the past 12 months (68%) than their MA (60%) and national peers (56%).*

*Participation in PE class at least once a week is similar in MW (59%) and MA (60%). Both are higher than PE participation in the US (54%).*

### TRENDS FROM 2006 TO 2008

- ◆ **Participation in PE class has decreased slightly.** In 2006, 62% attended PE at least once a week. In 2008, this figure was 59%.
- ◆ **Other measures of physical activity remain unchanged.** At both time points, about one third of youth met the currently recommended level of physical activity.

*Sports team participation increased in MA from 55% to 60%, yet stayed steady in MW and the US.*

*No other notable changes occurred in other available physical activity measures.*

# SCHOOL ATTACHMENT AND ADULT SUPPORT

## OVERALL PATTERNS

Protective factors promote resiliency and healthy behaviors. Findings show that a majority of youth have positive school attachments, shown by their agreement with statements such as: “I feel like I am a part of this school” (72% agreement) and “I feel safe in this school” (81% agreement). Two-thirds (67%) say they have at least one teacher or other adult at school to talk to if they have a problem (69% of females and 65% of males). This figure increases by grade, with 58% of 9<sup>th</sup> grade students and 78% of 12<sup>th</sup> grade students saying they have a supportive adult at school.

Outside of school, even more youth (88%) have an adult they can talk to about things that are important (90% of females and 87% of males). Yet despite these high numbers, there is a small minority of students (8%) who do not have a supportive adult either at school or home. Analyses show that these individuals are far more likely to engage in multiple forms of risk behaviors, including substance use, violence, sexual activity, and suicide-related thoughts and behavior.

## OVERALL TRENDS FROM 2006 TO 2008

Levels of school attachment and adult support (at school or outside of school) have stayed constant.

*No state or national data is available on school attachment from the YRBSS. However, research literature shows that school attachment is associated with lower levels of deviant behavior, including less substance use, violence, and delinquency.<sup>10</sup>*

*Similarly, the presence of a supportive adult has been shown in the literature to be associated with fewer risks including less suicidality<sup>11</sup>, risky sexual activity<sup>12</sup> and substance use.<sup>13</sup>*

*Slightly fewer students in MW (67%) than in MA (69%) have a supportive adult at school. No MA or US data is available on the presence of a supportive adult outside of school.*

*No trend data is available on school attachment or adult support outside of school, other than in MW.*

## SCHOOL ATTACHMENT

### CURRENT PATTERNS

- ◆ **The majority of students in MetroWest feel positively connected with their schools, as measured by agreement with the following statements regarding school attachment:**
  - ◆ 81% feel safe in their school.
  - ◆ 75% feel close to people at school.
  - ◆ 72% feel like they are part of their school.
  - ◆ 71% are happy to be at their school.
  - ◆ 61% feel that teachers at their school treat students fairly.
- ◆ **There are no notable gender differences in overall school attachment.** This analysis is based on a five-item school attachment scale combining responses to the five statements above.
- ◆ **Overall school attachment is highest in 9<sup>th</sup> grade, and lower for the older grades.** For example, more 9<sup>th</sup> grade students (75%) than 12<sup>th</sup> grade students (69%) feel that they are happy to be at their school, with three of the four other statements following this pattern. The exception is that older students are more likely to feel safe at school, with 78% of 9<sup>th</sup> grade students and 85% of 12<sup>th</sup> grade students agreeing.

*School attachment is a protective factor that reflects a student's sense of connection with the school community. It has been shown in the literature to promote academic success and healthy behaviors.<sup>14,15,16,17,18,19</sup>*

*In MetroWest, higher levels of school attachment are consistently and strongly associated with lower levels of substance use (tobacco, alcohol, marijuana, and other drugs), violence, sexual behavior, and suicidality.*

### TRENDS FROM 2006 TO 2008

- ◆ **Overall school attachment, as measured by the five-item scale, has not changed.**

*No trend data is available on school attachment in MA or the US.*

## ADULT SUPPORT

### CURRENT PATTERNS

- ◆ **A majority of students have supportive adults in their lives.** Two-thirds (67%) have at least one teacher or other adult at school to talk to if they have a problem, and even more (88%) have at least one adult outside of school they can talk to about things that are important to them.
- ◆ **Most students have a parent or other family member they can talk to.** 45% of youth have a parent or family member they can talk to, and 37% have adults both in and outside of their family that they can talk to.
- ◆ **Reports of adult support are relatively similar among males and females.** 69% of females and 65% of males have a supportive adult at school, and 90% of females and 87% of males have a supportive adult at home.
- ◆ **Students are more to have a supportive adult at school as they get older.** 58% of 9<sup>th</sup> grade students have a supportive adult at school. By 12<sup>th</sup> grade, 78% have a supportive adult at school. The proportion of students who have a supportive adult outside of school is steady in the 89% range throughout high school.
- ◆ **A small minority of students have no supportive adults in their lives.** 8% of MetroWest youth have neither an adult at school nor outside of school that they can talk to. These individuals are at far greater risk of engaging in many forms of risk behaviors.

*The proportion of youth who have a supportive adult at school are the same in MA and MW (67%). MA data is not available for adult support outside of school.*

*The MW AHS data shows that students who do not have a supportive adult in their lives (either at school or outside of school) are significantly more likely to engage in substance use, violence, sexual activity, and suicidality. Students least likely to engage in these risks are those who have adult support both in and outside of school.*

### TRENDS FROM 2006 TO 2008

- ◆ **There have been no changes in the presence of supportive adults at or outside of school.** At both time points, two-thirds of youth had a supportive adult at school, and nine out of ten had a supportive adult outside of school.

*In MA and MW, the proportion of youth with adult support at school has not changed in recent years.*

## CONCLUSIONS

The MWAHS initiative provides a valuable look into the risk and health behaviors of youth across MetroWest, and the 2008 data has provided a first glimpse at trends in risk behaviors in the region. While most behaviors have remained steady since 2006, there are a few notable exceptions. Student reports show a small but promising decrease in alcohol use that is consistent across measures of lifetime use, current use, “binge” drinking. The decrease in alcohol use was particularly noticeable among females. There also may be a small decrease in drinking after driving. However, marijuana use may be on the rise, particularly among males.

Other topic areas—violence, bullying, unintentional injury, mental health, sexual behaviors, physical activity, and nutrition—showed little or no change over time. Protective factors like school attachment and adult support also remained similar from 2006 to 2008.

Data from future administrations of the MWAHS will allow us to further explore these areas, and additional patterns will likely emerge as we are able to examine the data over a longer period of time.

## REFERENCES

- <sup>1</sup> Brener, N.D., Kann, L., McManus, T.L., Kinchen, S., Sundberg, E.C., & Ross, J.G. (2002). Reliability of the 1999 Youth Risk Behavior Survey Questionnaire. *Journal of Adolescent Health, 31*, 336-342.
- <sup>2</sup> Brener, N.D., McManus, T., Galuska, D.A., Lowry, R., & Wechsler, H. (2002). Reliability and validity of self-reported height and weight among high school students. *Journal of Adolescent Health, 32*, 281-287.
- <sup>3</sup> Brener, N.D., Billy, J.O.G., & Grady, W.R. (2003). Assessment of factors affecting the validity of self-reported health risk behavior among adolescents: Evidence from the scientific literature. *Journal of Adolescent Health, 33*, 436-457.
- <sup>4</sup> Centers for Disease Control. (2008). *Youth Risk Behavior Surveillance – United States, 2007*. Morbidity and Mortality Weekly Report, 57 (SS-4). Atlanta, GA: U.S. Government Printing Office.
- <sup>5</sup> Substance Abuse and Mental Health Services Administration. (2008). *Results from the 2007 National Survey on Drug Use and Health: National Findings*. Rockville, MD: U.S. Government Printing Office.
- <sup>6</sup> Monitoring the Future. (2008, December 11). *Various stimulant drugs show continuing gradual declines among teens in 2008, most illicit drugs hold steady*. Retrieved from <http://www.monitoringthefuture.org/pressreleases/08drugpr.pdf>.
- <sup>7</sup> Foshee, V.A. (1996). Gender differences in adolescent dating abuse prevalence, types and injuries. *Health Education Research, 11*, 275-286.
- <sup>8</sup> Simmons, R.G., Burgeson, R., Carlton-Ford, S., & Blyth, D. (1987). The Impact of Cumulative Change in Early Adolescence. *Child Development, 58*, 1220-1234.
- <sup>9</sup> Byrne, D.G., & Mazanov, J. (1999). Sources of Adolescent Stress, Smoking, and the Use of Other Drugs. *Stress Medicine, 15*, 215-227.
- <sup>10</sup> Lee, V., & Burkam, D.T. (2003). Dropping out of High School: The Role of School Organization and Structure. *American Education Research Journal, 40*, 353-393.
- <sup>11</sup> O'Donnell, L., Stueve, A., Wardlaw, D., & O'Donnell, C. (2003). Adolescent Suicidality and Adult Support: The Reach for Health Study of Urban Youth. *American Journal of Health Behavior, 27*, 633-644.
- <sup>12</sup> Evans, A.E., Griffin, S.F., Vincent, M.L., & Valois, R.F. (2004). An exploration of the relationship between youth assets and engagement in risky sexual behaviors. *Journal of Adolescent Health, 35*, 424.e21-30.
- <sup>13</sup> Wills, T.A. & Vaughan, R. (1989). Social Support and substance use in early adolescence. *Journal of Behavioral Medicine, 12*, 321-339.
- <sup>14</sup> Battistich, V., & Horn, A. (1997). The relationship between students' sense of their school as a community and their involvement in problem behaviors. *American Journal of Public Health, 87*, 1997-2001.
- <sup>15</sup> Bazron, B., Osher D., & Fleischman S. (2005). Creating Culturally Responsive Schools, *Educational Leadership, 63*(1), 83-84.
- <sup>16</sup> Bonny, A. E., Vritto M.T., Klosterman, B.K., Hornung, R.W., & Slap, G.B. (2000). School disconnectedness: identifying adolescent risk. *Pediatrics, 106*, 1017-1021.
- <sup>17</sup> McNeely, C.A., Nonnemaker J.M., & Blum, R. (2002). Promoting student connectedness to school: Evidence from the National Longitudinal Study of Adolescent Health. *Journal of School Health, 72*(4), 138-147.
- <sup>18</sup> National Research Council and the Institute of Medicine. (2004). *Engaging schools: Fostering high school students' motivation to learn*. Board on Children, Youth and Families, Division of Behavioral and Social Sciences and Education, Washington, DC: The National Academies Press.
- <sup>19</sup> Osterman, K.F. (2000). Students' need for belonging in the school community. *Review of Educational Research, 70*, 323-367.