

1999 Michigan Youth Risk Behavior Survey

Executive Summary

Michigan State Board of Education
2000

Michigan State Board of Education

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The Youth Risk Behavior Survey: Michigan 1999

The 1999 Youth Risk Behavior Survey (YRBS) in Michigan was the second scientific study of a broad range of health practices among a cross-section of the state's high school students. With findings from the 1999 survey, trends in these behaviors among the state's students can be assessed. Although the 1999 results show few changes in risk behaviors among Michigan students since 1997, the changes that did occur reflect increased numbers of students making healthy choices. If these positive trends continue, more improvements may be evident in the 2001 survey. Nevertheless, many of the secondary students in Michigan still act in ways that compromise their health and well-being.

What is the Youth Risk Behavior Survey?

The Centers for Disease Control and Prevention (CDC) developed the Youth Risk Behavior Survey (YRBS), to track the extent of health-risk behaviors among the nation's youth. These behaviors that contribute to the leading causes of injury and death among youth and adults are often established during adolescence. The national version of the survey, launched in 1990, has been implemented every other year since 1991. A majority of the states and several large cities also conduct a YRBS, based on the national survey.

Who Were the Student Respondents?

In 1999, Michigan was successful in obtaining a weighted sample of students and schools so that survey results could be generalized to all high school students in Michigan. School buildings and students were selected by a scientific process. Of the 45 randomly selected Michigan public high school buildings, 38 (84%) participated, and 2,690 (79%) of the selected students completed the survey. Parents were notified in advance and given the option to exclude their children.

Survey respondents mirrored the age, gender and race/ethnic distribution of Michigan's high school students. Females and males each represented half of respondents. Across grade levels the numbers of student respondents declined steadily, with ninth graders representing 29 percent of the sample; tenth graders, 26 percent; eleventh graders, 23 percent; and twelfth graders, 21 percent. White students represented 75 percent of respondents; African Americans, 16 percent; Hispanic or Latino, 4 percent; all other races, 4 percent; and multiple races, 2 percent.¹

What Questions Were Asked?

The 1999 Michigan survey included 99 questions covering behaviors grouped by the CDC into six general health risk areas: 1) unintentional and intentional injury; 2) tobacco use; 3) alcohol and other drug use; 4) sexual behaviors that contribute to unintended pregnancy or disease; 5) dietary behaviors; and 6) physical inactivity. The state added 14 questions to the 85-item national survey. Most of the additional questions related to the illegal use of specific substances, such as barbiturates, tranquilizers, and narcotics other than heroin.

The CDC made several changes to the national survey in 1999. New content was included and the wording on some questions altered. Some of the new questions asked about forced sex, relationship violence, and time spent watching television. The most substantial changes were made in the questions related to nutrition. Subsequently, about half (52) of the total 99 questions on the Michigan survey duplicate those in the 1997 version. While new or altered questions cannot be analyzed for trends this year, they do provide valuable information and may be analyzed in the future for trends.

What Are the Limitations of the YRBS Findings?

The results of this survey may not represent *all* high school-aged youth because the sample did not include youth who have dropped out of school or who attend alternative education programs. Studies of alternative education students² and dropouts have reflected a significantly higher incidence of risk behaviors. This survey does accurately reflect the extent of these behaviors among the large numbers of youth who do attend public high schools in the state.

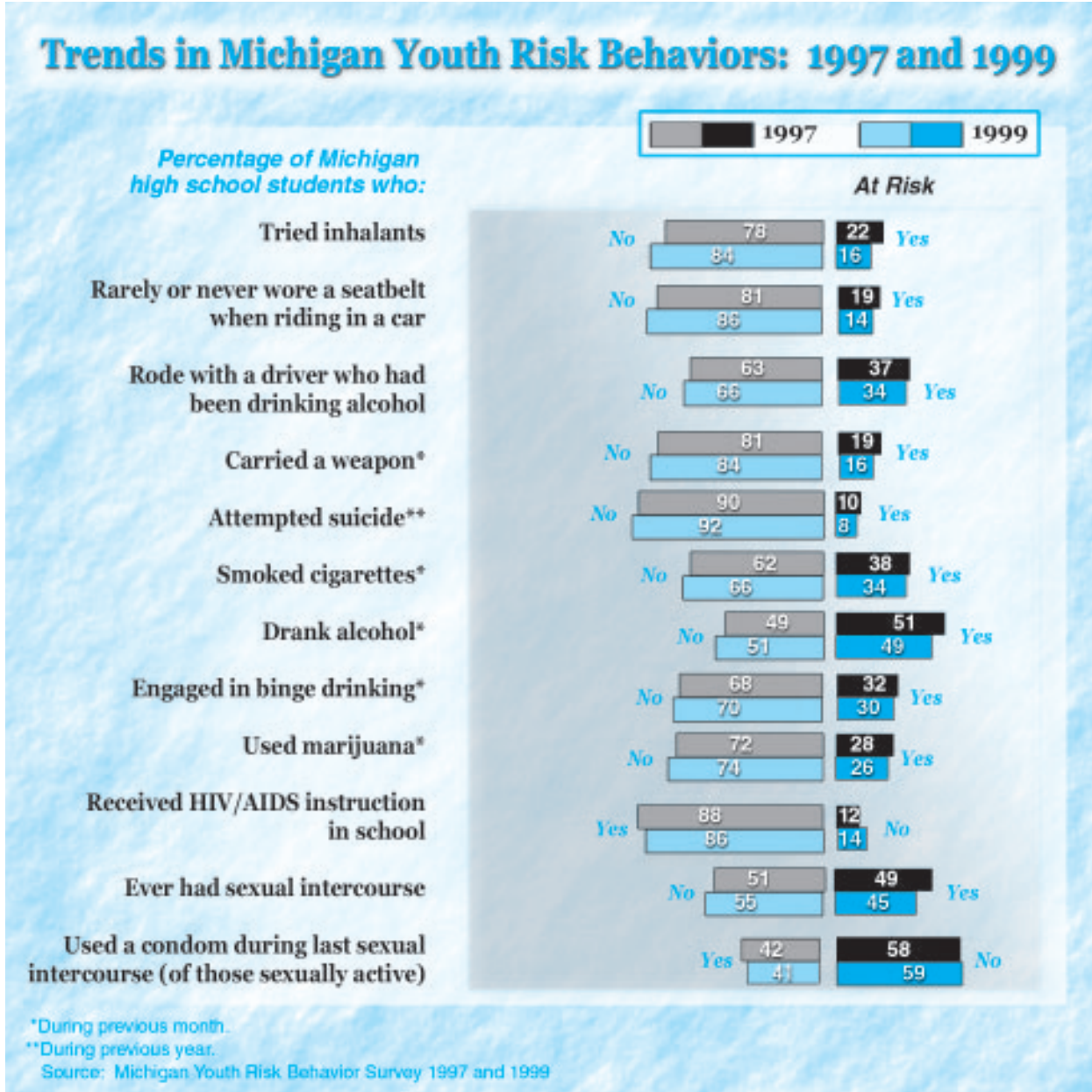
¹ To correct for any difference between the YRBS sample and the overall Michigan high school population, data were statistically weighted by the CDC. The weighted results accurately reflect the gender, grade, and race/ethnicity distribution of public high school students in the state.

² <http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/ss4807a1.htm>



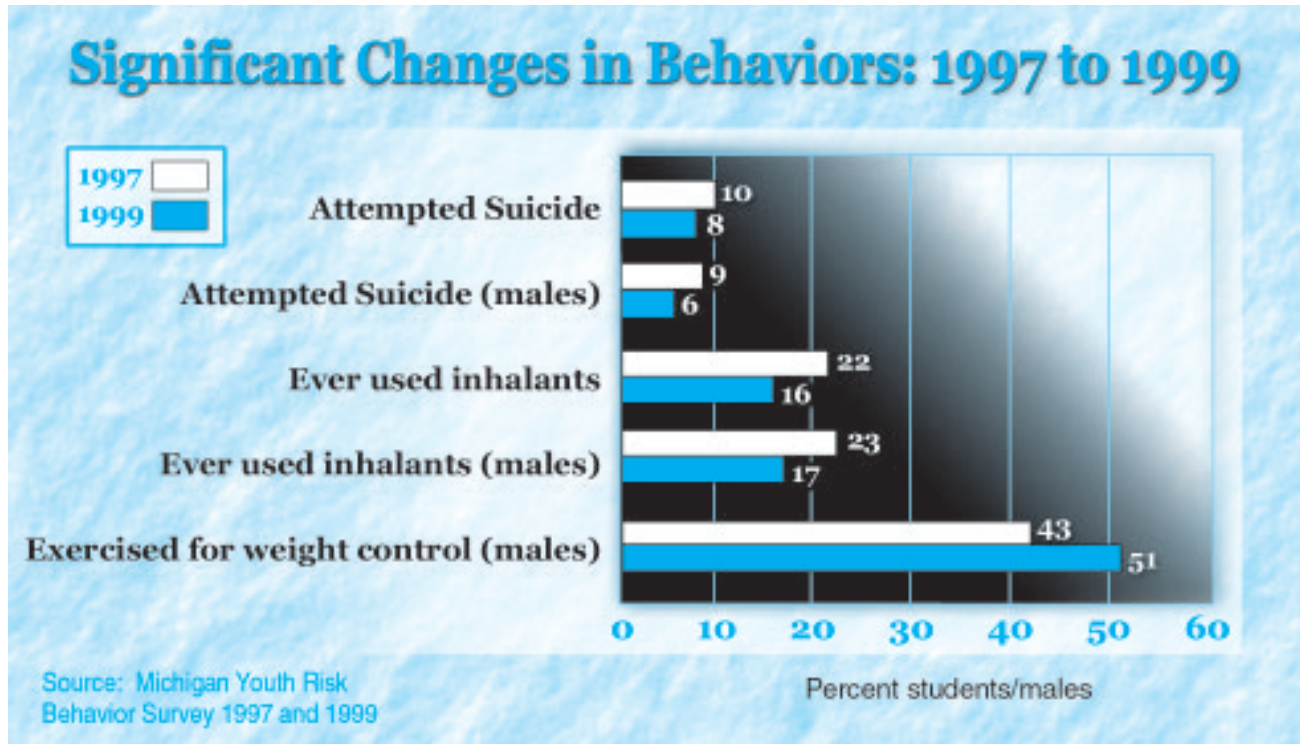
YRBS

What are the Michigan Trends?



YRBS

Of the 52 behaviors that could be compared for Michigan students between 1997 and 1999, most remained steady over the two years. The few that reflected improvements at statistically significant levels ($p < .05$) included:



- **Decrease in suicide attempts³**—from 10 to 8 percent among all students, and **among males** from 9 percent to 6 percent.
- **Decrease in experimentation with inhalants⁴**—from 22 percent to 16 percent, and **among males**—from 23 percent to 17 percent.
- **Increase in exercise for weight control**—**among males** from 43 percent to 51 percent.

³ The question asked about one or more attempts in the previous year.

⁴ Inhalants were defined as ever sniffing glue, breathing contents of aerosol spray cans, paint or paint spray to get high.

Overview of the Summary

The discussion of the Michigan findings is organized into the CDC's six categories of risk behaviors. Overall findings are presented for most questions. Differences among males and females, grade levels, and racial/ethnic groups are only highlighted if they are statistically "significant," that is, unlikely to have occurred by chance or error.⁵ Among racial/ethnic groups, only white and African American students could be compared because of the overall sample size and the relatively small percentages of Michigan high school students identifying themselves as another race/ethnicity.⁶

Intentional and Unintentional Injury Behaviors

Vehicle Safety: Ninth graders and males report much higher levels of most behaviors that lead to injuries from automobile or motorcycle accidents.

- **Seat Belt Use:** 14 percent of Michigan high school students *rarely* or *never* wore a seat belt as a passenger in a car. Males (18%) were more likely than females (10%) to report this behavior, as were African American students (23%) compared to whites (12%).
- **Helmet Use:** Of the 29 percent of students who had ridden a motorcycle in the previous year, one quarter (24%) *rarely* or *never* wore a helmet. Males (28%) were twice as likely to report such behavior as females (14%). In contrast, although most students (80%) rode a bicycle in the previous year, almost all (93%) of them *rarely* or *never* wore a helmet.

Depression and Suicide: Females, particularly ninth graders, are at higher risk for both feelings of depression and suicide attempts.

- **Depression:** Over one quarter (27%) of students reported feeling so sad and hopeless almost every day for two weeks or more in a row within the previous year that they stopped doing some usual activities. Females (34%) were more likely to have had this experience than males (21%), as were ninth graders (30%) compared to twelfth graders (23%).
- **Suicide Attempts:** 8 percent of students attempted suicide in the previous year. Females (10%) were more likely than males (6%) to have made an attempt.

Violence: Males were much more likely to be involved in most of these behaviors than females.

- **Weapons:** Among Michigan high school students, 16 percent carried a gun, knife or club during the previous month. Males (26%) were four times more likely to report this as females (6%), and African Americans (21%) more likely than whites (14%). Almost 8 percent of students reported carrying a weapon *on school property* in the previous month: males (12%) were four times as likely as females (3%) to engage in this behavior.
- **Threat or Injury With a Weapon on School Property:** 9 percent of students reported being threatened or injured with a weapon *on school property* in the previous year. Males (12%) were more likely than females (7%), and ninth graders (12%) more likely than twelfth graders (7%) to have had this experience.
- **Sense of Safety to/from or at School:** One of twenty students (5%) reported not going to school on one or more days in the previous month because of safety concerns on the way to or from or in school. Ninth graders (8%) were almost three times as likely to avoid school for this reason as twelfth graders (3%), and African American students (10%) were more than twice as likely as white students (4%).
- **Fights on School Property:** 14 percent of students were in at least one fight *on school property* in the previous year. Males (19%) were more than twice as likely to be involved as females (8%), as were ninth graders (20%) compared to twelfth graders (9%).

⁵ Differences were considered statistically significant if $p < .05$.

⁶ Specific survey results for students identifying as Hispanic/Latino, Asian/Pacific Islander, American Indian/Alaskan Native or other, could not be included due to small sample sizes that yield relatively imprecise results—with large margins of error.



YRBS

Tobacco Use

While no difference occurs by gender, grade or racial/ethnicity in the percentage of students who have ever tried smoking cigarettes, white students were more likely than African American students to be recent or regular smokers.

- **Recent Cigarette Use:** One third (34%) of Michigan high school students smoked cigarettes in the previous month. White students (36%) were more likely than African American students (20%) to report this behavior.
- **Recent Cigar Use:** One fifth (20%) of students reported smoking cigars, cigarillos or little cigars in the previous month. Males (28%) were more than twice as likely as females (11%) to smoke cigars.
- **Frequent Cigarette Use:** 17 percent of students reported smoking cigarettes on 20 or more of the previous 30 days. White students (19%) were more than twice as likely as African American students (8%) to report frequent smoking.
- **Smoking Cessation:** Among the 72 percent of students who had ever smoked, almost half (47%) reported having tried to quit. White students (49%) were more likely to have tried to quit than African American students (35%).
- **Cigarette Sales:** One half (51%) of students who reported buying cigarettes from a store were not asked for proof of age.

Alcohol and Other Drug Use

Males were more at risk for the use of alcohol and several other drugs, such as marijuana, inhalants, steroids, and cocaine. Overall, white students were more likely to be current alcohol drinkers, engage in binge drinking, and have ever used cocaine. For all drugs except alcohol, cocaine and inhalants, no differences for lifetime or current use occurred among students by grade level or racial/ethnic group.

- **Recent Alcohol Use:** One half (49%) of Michigan high school students reported having at least one alcoholic drink in the previous month. Twelfth graders (55%) were more likely to drink than ninth graders (44%), as were white students (51%) compared to African American students (38%).
- **Recent Binge Drinking:** Almost one third (30%) of students reported having five or more drinks of alcohol in a row during the previous month. Males (34%) were more likely than females (26%) to binge drink, as were twelfth graders (37%) compared to ninth graders (23%).
- **Riding With an Impaired Driver:** During the previous month one third (34%) of students rode with a driver who had been drinking.
- **Driving Under the Influence:** One of eight (13%) students drove a car or other vehicle in the previous month after drinking alcohol. Males (17%) were almost twice as likely as females (9%) to drink and drive.



Other Drugs: While females were as likely as males to have ever tried various illegal substances, they were less likely to report recent use.

- **Marijuana:** Nearly half (46%) of Michigan high school students had tried marijuana, and one quarter (26%) had used it in the previous month.
- **Cocaine⁷:** 8 percent of students reported ever trying cocaine. Males (10%) were more likely to have tried cocaine than females (6%). White students (8%) were almost three times as likely as African American students (3%) to report ever having tried cocaine. 3 percent of students reported using cocaine during the previous month. Males (5%) were more than twice as likely than females (2%) to report recent use.
- **Inhalants:** 16 percent of students reported trying an inhalant at least once during their lives. 4 percent of students reported recent use. Ninth graders (19%) were more likely than twelfth graders (12%) to have ever tried inhalants, as well as report recent use, 6 percent compared to 3 percent.
- **Other Drug Use:** 10 percent of students had tried barbiturates; 9 percent, methamphetamines; 9 percent, narcotics other than heroin; 7 percent, tranquilizers (without a doctor's prescription); 4 percent, heroin; and 4 percent, steroids.
- **Illegal Drugs on School Property:** One third (34%) of students reported being offered, sold, or given an illegal drug *on school property* within the previous year. Males (40%) were more likely to report this occurrence than females (28%).

Sexual Behaviors

African American students reported higher risk for most sexual behaviors such as early initiation, multiple partners, recent sexual intercourse, and pregnancy. Female students were more likely to have had conversations with parents or other adults about expectations for sexual behavior, had first intercourse with someone three or more years older, and have been forced to have sex.

- **HIV/AIDS Education:** 14 percent of Michigan high school students reported never having been taught in school about HIV/AIDS.
- **Family Expectations:** Almost one third (31%) of students reported never having talked with parents or other adults in their families about expected sexual behavior. More males (36%) than females (26%) had not had this discussion.
- **Early Sexual Intercourse:** 7 percent of students had experienced sexual intercourse before age 13. Males (10%) were twice as likely as females (4%) to report this experience, and African Americans (19%) almost four times as likely as whites (5%).
- **Sexual Intercourse:** Almost half (45%) of students reported having had sexual intercourse. The percentage increases across grade levels: ninth graders (38%), tenth graders (37%), eleventh graders (48%), and twelfth graders (59%). African American students (67%) were more likely to have had sexual intercourse than white students (40%).
 - **Older Partner With First Sexual Intercourse:** One quarter (26%) of students who ever had sexual intercourse had their first experience with someone three or more years older. Females (39%) were almost three times more likely than males (14%) to have had this experience.

⁷ Cocaine includes all forms: powder, crack and freebase.



- **Recent Intercourse:** Nearly one third (31%) of students reported having had sexual intercourse at least once in the past three months. Twelfth graders (45%) were more likely to have had recent intercourse than ninth graders (25%), tenth graders (26%), and eleventh graders (34%). African American males (53%) were almost twice as likely as white males (27%) to have had recent intercourse.
 - **Sex Under the Influence:** One quarter of students (24%) having intercourse in the last three months used alcohol or drugs beforehand.
 - **Risk Reduction:** Almost three of five students (59%) who had had sexual intercourse in the last three months reported using a condom. Ninth graders (70%) were more likely to have used condoms than twelfth graders (52%). One of every five students (20%) who had intercourse in the last three months reported the use of birth control pills, with white students (24%) twice as likely as their African American peers (13%) to use this method of risk reduction.
- **Forced Sex:** One in ten (10%) students reported having been forced to have sexual intercourse. Females (13%) were more likely than males (7%) to have had this experience.
- **Multiple Partners:** One in seven students (14%) reported having had sexual intercourse with four or more people. African American students (28%) were almost three times more likely than white students (10%) to report this experience.
- **Pregnancy:** 5 percent of students reported having been pregnant or having gotten someone pregnant in the previous year. African American youth (9%) were more than twice as likely as whites (4%) to report this event.

Weight and Nutrition

With the addition of height and weight questions to this survey, a body mass index for each student respondent could be calculated so the numbers of youth with perceived and actual overweight⁸ can be compared. Perception and reality were highly inconsistent for many students. Females and white students were more likely to see themselves as overweight when, in fact, they were less likely to be so than their male and African American counterparts. Females were also more likely to be using all strategies to lose weight, such as exercise, dieting, fasting, vomiting and for taking diet pills or laxatives.

- **Weight—Perception versus Actuality:** One third (32%) of Michigan high school students described themselves as slightly or very overweight. Females (39%) were more likely than males (24%) to see themselves as overweight. Based on self-reported height and weight information, 10 percent of students were considered overweight, with males (12%) more likely to be overweight than females (8%), and African Americans (16%) more likely than whites (9%). African American females (18%) were three times more likely to be overweight than white females (6%).
- **Weight Loss:** Almost half (45%) of the students reported trying to lose weight. Females (63%) were more than twice as likely as males (27%) to report this effort.
- **Healthy Weight Control:** Three of five students (60%) reported exercising within the previous month for weight control. Females (70%) were more likely to report such effort than males (51%). More than two of every five (43%) of students reported dieting (i.e., reducing their food or caloric intake) with females (58%) more than twice as likely to use this method as males (28%).

⁸ Overweight is defined by the Centers for Disease Control and Prevention as a Body Mass Index greater than 95 percent.

- **Unhealthy Weight Control:** During the previous month, 13 percent of students fasted at least 24 hours to lose or keep from gaining weight; 8 percent used diet pills or powders without medical supervision; and 6 percent vomited or used laxatives. Females were roughly twice as likely as males to report all these behaviors.
- **“Five a Day”:** One fifth (19%) of students reported eating five or more servings of fruits and vegetables each day during the previous week.⁹
- **Milk Consumption:** One fifth (21%) of students reported drinking three or more glasses of milk each day during the previous week.

Physical Inactivity

African American students were less likely than their white counterparts to participate in physical education classes, physical exercise, and sports. They were more likely to report spending relatively large amounts of time watching television. Ninth graders were more likely than students in other grades to be enrolled in physical education classes and to have engaged in aerobic exercise.

- **Recent Aerobic Exercise:** Almost two-thirds (64%) of Michigan high school students participated in aerobic physical activities lasting at least 20 minutes on three or more of the past seven days. White students (66%) were more likely to report such exercise than African American youth (51%), as were ninth graders (70%) compared to twelfth graders (59%).
- **Watching Television¹⁰:** Thirty seven percent of students reported watching television three or more hours on an average school day. Ninth (47%) and tenth (39%) graders were more likely than twelfth graders (27%) to watch this much television. African American students (62%) were almost twice as likely as white students (32%) to report this amount of television.

- **Some Physical Education:** Over one third (35%) of high school students reported having a physical education (PE) class one or more days during an average school week. Males (41%) were more likely to be enrolled in PE than females (28%). More than twice as many ninth graders (60%) were enrolled in PE than any other grade: tenth (25%), eleventh (20%), or twelfth (25%). Of Michigan students attending PE classes, four of five (82%) reported exercising or playing sports more than 20 minutes during an average class.
- **Daily Physical Education:** Over one quarter (27%) of students reported having PE classes every day. Ninth graders (48%) were twice as likely to have such classes as any other grade: tenth (19%), eleventh (16%), and twelfth (19%).
- **Sports Teams:** Two of five students (42%) reported not participating in any team sports during the previous year. Females (47%) were more likely to have not participated in sports than males (36%), and African American females (56%) compared to white females (41%).
- **Injury from Physical Activity:** Almost two of five students (37%) reported sustaining an injury during exercise, physical activity, or sports that required medical attention in the previous year. Males (42%) were more likely to report such an injury than females (32%).

Annual Check-Up or Physical Exam:

Many young people do not see a doctor or other health care provider unless they are injured or ill.

Almost two of every five (38%) students reported not having an annual check-up or physical exam within the previous year. Almost 13 percent reported having had a check-up between 12 and 24 months ago; 7 percent, more than two years ago; and 6 percent, never.

⁹ This composite measure cannot be compared to the 1997 indicator because the questions that made up the composite were worded differently.

¹⁰ Research has shown that those who habitually watch television are less likely to be physically active.



Summary & Recommendations

While the 1999 Michigan findings for the YRBS show positive trends on all significant changes since 1997, they also reveal that relatively large percentages of the state's high school students continue to engage in risk behaviors. Overall, the practices of risk behaviors among Michigan students mirror those of their national counterparts. The analysis of trends and patterns in these behaviors among the state's youth can guide the use of limited resources for prevention and intervention programs. School- and community-based programs have a critical role to play in the promotion of healthy behaviors and alternatives for youth. The YRBS findings and the larger body of research regarding effective programming point to the following recommendations.

1 Michigan should continue and expand age-appropriate and research-based prevention, including health education. The state trends are moving in the right direction; this overall finding suggests that current initiatives should be reinforced and expanded. Previous studies indicate that students need not only information but the necessary skills to make healthy choices. Risk behaviors compromise students' health and their capacity to be successful learners.

2 Health education and prevention programs need to start early. Large numbers of Michigan high school students initiate risky behaviors early. Before age 13, one third of students reported having had their first full drink of alcohol; one quarter, their first cigarette; and 12 percent, marijuana. Early prevention and health education programs—during the elementary and middle school years—may help prevent such early experimentation. Once begun, such practices can be difficult to change.

3 Prevention and health education programs should continue throughout the high school years. Programs often stop at ninth or tenth grade just when many behaviors begin to escalate. Such behaviors as smoking, binge drinking, multiple sexual partners, and physical inactivity are more prevalent among twelfth graders than ninth graders. The data also show critical interventions are needed for ninth graders who are more likely to be involved in fighting, experiencing depression, and seriously planning as well as attempting suicide.

4 Parents and communities have critical roles in promoting healthy behaviors among children and youth. Parents and other significant adults serve as role models and can encourage children and adolescents to practice healthy behaviors. Relatively large numbers of students are not participating in sports or other physical activities, and too many are spending their leisure time watching television. Access to supervised activities and caring adults in non-school hours provides healthy alternatives for young people and opportunities to enhance their physical, mental, and emotional well-being.

5 Prevention efforts can focus on the specific needs of students by grade, gender and race to achieve maximum impact. While it is necessary to address a broad array of health-related issues, research has demonstrated that programs geared to the *specific* needs of participants are often most effective. Almost all the measures on the YRBS show significant differences in behavior by gender, grade and race/ethnicity.

6 Schools should continue to implement programs and enforce policies to eliminate violent behavior and the use of tobacco, alcohol, and other drugs on school property. Current state and local policies address some of these issues, but strategies should also focus on offering in-school prevention and intervention programs that help reduce these behaviors.

7 State and local health and education agencies need to use available data to take action. Whenever possible, communities should use existing data and direct scarce resources into programming. Schools and communities do not always need to conduct additional surveys in order to develop and implement action plans to improve the health and well-being of youth.



Requests for Information:

Michigan Department of Education
School Health Programs Unit
P.O. Box 30008
Lansing, MI 48909

(517) 335-7252

<http://www.mde.state.mi.us/>

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