

# Youth Risk Behavior Survey (YRBS)

## Item rationale for the 2001 questionnaire

### Behaviors That Result in Unintentional Injuries and Violence

#### QUESTION(S):

8. When you rode a motorcycle during the past 12 months, how often did you wear a helmet?
9. When you rode a bicycle during the past 12 months, how often did you wear a helmet?

#### RATIONALE:

These questions measure the frequency of helmet use while riding motorcycles and bicycles. Head injury is the leading cause of death in motorcycle and bicycle crashes.<sup>1,2</sup> Unhelmeted motorcyclists are more likely to incur a fatal head injury and three times more likely to incur a nonfatal head injury than helmeted riders.<sup>3</sup> Bicycle helmets substantially reduce the risk for serious head injuries during bicycle-related crashes.<sup>4</sup>

#### RELATED NATIONAL HEALTH OBJECTIVES FOR THE YEAR 2010

15-21      **Increase the proportion of motorcyclists using helmets to 79%.**

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#### QUESTION(S):

10. How often do you wear a seat belt when riding in a car driven by someone else?

#### RATIONALE:

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This question measures the frequency with which students wear seat belts when riding in a car. Use of seat belts is estimated to reduce the risk of a fatal motor vehicle injury by 45% and moderate to critical injuries by 50%.<sup>5</sup> Motor vehicle crash injuries are the leading cause of death among youth aged 15-24 in the United States.<sup>6</sup>

### RELATED NATIONAL HEALTH OBJECTIVES FOR THE YEAR 2010

15-19            Increase use of safety belts to 92%.

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#### QUESTION(S):

11.    During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?
12.    During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?

#### RATIONALE:

These questions measure the frequency with which students drive or ride as a passenger in a motor vehicle operated under the influence of alcohol or drugs. Approximately 30% of all motor vehicle crashes that result in injury involve alcohol,<sup>7</sup> and motor vehicle crashes are the leading cause of death among youth aged 15-24 in the United States.<sup>6</sup> The percentage of fatalities and injuries that occur in alcohol-involved motor vehicle crashes is 41% and 20%, respectively.<sup>8</sup>

### RELATED NATIONAL HEALTH OBJECTIVES FOR THE YEAR 2010

26-6            Reduce the proportion of adolescents who report that they rode, during the previous 30 days, with a driver who had been drinking alcohol.

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#### QUESTION(S):

13.    During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club?
14.    During the past 30 days, on how many days did you carry a gun?
15.    During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club on school property?
16.    During the past 30 days, on how many days did you not go to school because you felt you would be unsafe at school or on your way to or from school?

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17. During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club on school property?

### **RATIONALE:**

These questions measure violence-related behaviors and school-related violent behaviors. Approximately nine out of ten homicide victims in the United States are killed with a weapon of some type, such as a gun, knife, or club.<sup>9</sup> Homicide is the second leading cause of death among all youth aged 15-24 (14.8 per 100,000) and is the leading cause of death among black youth aged 15-24 (54.7 per 100,000).<sup>6</sup> During adolescence, homicide rates increase substantially from a negligible rate of 1.5 per 100,000 in youth aged 5-14 to 20.3 per 100,000 in youth aged 15-24.<sup>10</sup> Firearms markedly elevate the severity of the health consequences of violent behavior.<sup>11</sup> Firearm-related homicide and firearm-related suicide accounted for 44% and 51%, respectively, of all firearm injury deaths in 1995.<sup>10</sup> Unintentional firearm-related fatalities also are a critical problem among children and young adults in the United States.<sup>10</sup> During 1996-1997, there were approximately 190,000 fights that did not include a weapon, 115,000 thefts, and 98,000 incidents of vandalism in US schools.<sup>12</sup> Nearly 70% of school districts prohibit students from possessing and using a weapon in the school building or on school grounds.<sup>13</sup>

### **RELATED NATIONAL HEALTH OBJECTIVES FOR THE YEAR 2010**

- 15-39            Reduce weapon carrying by adolescents on school property to 6%.
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### **QUESTION(S):**

18. During the past 12 months, how many times were you in a physical fight?
19. During the past 12 months, how many times were you in a physical fight in which you were injured and had to be treated by a doctor or nurse?
20. During the past 12 months, how many times were you in a physical fight on school property?
21. During the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose?
22. Have you ever been physically forced to have sexual intercourse when you did not want to?

### **RATIONALE:**

These questions measure the frequency and severity of physical fights, school-related fights, and

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abusive behavior. Physical fighting is an antecedent for many fatal and nonfatal injuries.<sup>14</sup> During 1996-97, nearly 200,000 fights or physical attacks occurred at schools.<sup>12</sup> Nearly 60% of adolescents report at least one episode of dating violence<sup>15</sup>, while 20% report they had experienced forced sex.<sup>16</sup> Forced sex has been associated with suicidal ideation and attempts,<sup>17</sup> alcohol and drug use,<sup>18</sup> and increased risk of chronic diseases and somatic symptoms in both reproductive and nonreproductive organ systems.<sup>19</sup>

### RELATED NATIONAL HEALTH OBJECTIVES FOR THE YEAR 2010

15-38 Reduce physical fighting among adolescents.

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#### QUESTION(S):

23. During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?
24. During the past 12 months, did you ever seriously consider attempting suicide?
25. During the past 12 months, did you make a plan about how you would attempt suicide?
26. During the past 12 months, how many times did you actually attempt suicide?
27. If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?

#### RATIONALE:

These questions measure sadness, attempted suicides and the seriousness of those attempts. Suicide is the third leading cause of death among youth aged 15-24 and the second leading cause of death among white youth aged 15-24.<sup>6</sup> The suicide rate for persons aged 15-24 has tripled since 1950 and in 1997 was 11.1 per 100,000.<sup>6,20</sup>

### RELATED NATIONAL HEALTH OBJECTIVES FOR THE YEAR 2010

18-02 Reduce the rate of suicide attempts by adolescents to a 12-month average of 1%.

## Tobacco Use

### QUESTION(S):

28. Have you ever tried cigarette smoking, even one or two puffs?
29. How old were you when you smoked a whole cigarette for the first time?
30. During the past 30 days, on how many days did you smoke cigarettes?
31. During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?
32. During the past 30 days, how did you usually get your own cigarettes?
33. When you bought or tried to buy cigarettes in a store during the past 30 days, were you ever asked to show proof of age?
34. During the past 30 days, on how many days did you smoke cigarettes on school property?
35. Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?
36. During the past 12 months, did you ever try to quit smoking cigarettes?

### RATIONALE:

These questions measure smoking experimentation, current smoking patterns, age of initiation, adherence to Federal regulations regarding sale of cigarettes, smoking on school property, and attempt to quit smoking. Tobacco use is considered the chief preventable cause of death in the United States<sup>21</sup> with over 20% of all deaths attributable to tobacco use.<sup>22</sup> Cigarette smoking is responsible for heart disease; cancers of the lung, larynx, mouth, esophagus, and bladder; stroke; and chronic obstructive pulmonary disease.<sup>21</sup> In addition, there is evidence that cigarette smokers are more likely to drink alcohol and use marijuana and cocaine as compared to non smokers.<sup>21</sup> If current patterns of smoking behavior persist, an estimated 5 million U.S. persons who were aged 0–17 years in 1995 could die prematurely from smoking-related illnesses.<sup>23</sup> In 1996, the Food and Drug Administration issued regulations to implement the 1993 law known as the “Synar Amendment” which restricts the sale and distribution of cigarettes and smokeless tobacco to children and teenagers under age 18.<sup>24</sup> Over 80% of school districts prohibit tobacco use in the school building and on the grounds at all times.<sup>13</sup>

### RELATED NATIONAL HEALTH OBJECTIVES FOR THE YEAR 2010

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- 27-02a Reduce use of tobacco products in the past month by adolescents to 21%.
- 27-02b Reduce use of cigarettes in the past month by adolescents to 16%.
- 27-07 Increase tobacco use cessation attempts by adolescent smokers to 84%.

### RELATED LEADING HEALTH INDICATORS

#### Tobacco Use

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#### QUESTION(S):

- 37. During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip, such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen?
- 38. During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip, on school property?
- 39. During the past 30 days, on how many days did you smoke cigars, cigarillos, or little cigars?

#### RATIONALE:

These questions measure smokeless tobacco use, smokeless tobacco use on school property, and cigar use. Smokeless tobacco has been associated with leukoplakia, oral cancers, tooth and gum disease, and cardiovascular disease.<sup>21</sup> Smokeless tobacco use primarily begins in early adolescence.<sup>25</sup> Between 1970 and 1986, the prevalence of snuff use increased 15 times and chewing tobacco use increased four times among men aged 17-19.<sup>21</sup> Cigar smoking has been associated with cancers of the oral cavity, larynx, esophagus, and lung and with chronic obstructive lung disease.<sup>26</sup> In 1999, the prevalence of cigar use in the past month among high school students was 25.4% among males and 9.9% among females.<sup>27</sup>

### RELATED NATIONAL HEALTH OBJECTIVES FOR THE YEAR 2010

- 27-02c Reduce use of spit tobacco in the past month by adolescents to 9%.
- 27-02d Reduce use of cigars in the past month by adolescents to 22%.

## Alcohol and Other Drug Use

### QUESTION(S):

40. During your life, on how many days have you had at least one drink of alcohol?
41. How old were you when you had your first drink of alcohol other than a few sips?
42. During the past 30 days, on how many days did you have at least one drink of alcohol?
43. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?
44. During the past 30 days, on how many days did you have at least one drink of alcohol on school property?

### RATIONALE:

These questions measure frequency of alcohol use, age of initiation, heavy drinking, and drinking on school property. Alcohol is a major contributing factor in approximately half of all homicides, suicides, and motor vehicle crashes, which are the leading causes of death and disability among young people.<sup>28</sup> Heavy drinking among youth has been linked to multiple sexual partners, use of marijuana, and poor academic performance.<sup>29</sup>

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### QUESTION(S):

45. During your life, how many times have you used marijuana?
46. How old were you when you tried marijuana for the first time?
47. During the past 30 days, how many times did you use marijuana?
48. During the past 30 days, how many times did you use marijuana on school property?
49. During your life, how many times have you used any form of cocaine, including powder, crack, or freebase?
50. During your life, how many times have you sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high?
51. During the past 30 days, how many times have you sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high?

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52. During your life, how many times have you used heroin (also called smack, junk, or China White)?
53. During your life, how many times have you used methamphetamines (also called speed, crystal, crank, or ice)?
54. During your life, how many times have you used hallucinogenic drugs, such as LSD, acid, PCP, angel dust, ecstasy, mescaline, or mushrooms?
55. During your life, how many times have you taken steroid pills or shots without a doctor's prescription?
56. During your life, how many times have you used a needle to inject any illegal drug into your body?
57. During the past 12 months, has anyone offered, sold, or given you an illegal drug on school property?

### **RATIONALE:**

These questions measure the frequency of marijuana, cocaine, inhalant, heroin, methamphetamine, hallucinogens, steroid, and injected drug use. In addition to morbidity and mortality due to injury, drug abuse is related to suicide, early unwanted pregnancy, school failure, delinquency, and transmissions of sexually transmitted diseases (STD), including human immunodeficiency virus (HIV) infection.<sup>30,31</sup> Despite improvements in recent years, drug use is greater among high school students and other young adults in the U.S. than has been documented in any other industrialized nation in the world.<sup>32</sup>



## **Sexual Behaviors That Contribute to HIV Infection, Other Sexually Transmitted Diseases, and Unintended Pregnancies**

### **QUESTION(S):**

58. Have you ever had sexual intercourse?
59. How old were you when you had sexual intercourse for the first time?
60. During your life, with how many people have you had sexual intercourse?
61. During the past 3 months, with how many people did you have sexual intercourse?
62. Did you drink alcohol or use drugs before you had sexual intercourse the last time?
63. The last time you had sexual intercourse, did you or your partner use a condom?
87. Have you ever been taught about AIDS or HIV infection in school?

### **RATIONALE:**

These questions measure the prevalence of sexual activity, number of sexual partners, age at first intercourse, alcohol and drug use related to sexual activity, condom use, and whether students have received HIV education. Early sexual activity is associated with unwanted pregnancy and sexually transmitted diseases (STD), including HIV infection, and negative effects on social and psychological development.<sup>33</sup> Number of sexual partners and age at first intercourse are associated with increased risk for STD. Alcohol and other drug use may serve as predisposing factors for initiation of sexual activity and unprotected sexual intercourse.<sup>34</sup> AIDS is the 9th leading cause of death for youth aged 15-25.<sup>6</sup> Use of latex condoms by males, when used consistently and correctly, are highly effective at reducing the risk of HIV infection and other sexually transmitted diseases (STDs).<sup>35</sup> In 1994, 86% of middle/junior and senior high schools taught HIV prevention education in a required course.<sup>36</sup>

### **RELATED NATIONAL HEALTH OBJECTIVES FOR THE YEAR 2010**

- 25-11 Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active to 95%.

### **RELATED LEADING HEALTH INDICATORS**

Responsible sexual behaviors

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### QUESTION(S):

64. The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy?
65. How many times have you been pregnant or gotten someone pregnant?

### RATIONALE:

These questions measure use of contraception and identify whether a student has been pregnant or gotten someone pregnant. Pregnancies that occur during adolescence place both mothers and infants at risk for lifelong social and economic disadvantages.<sup>33</sup> In 1995, almost one million teenage girls in the United States became pregnant and just over 243,000 teenagers obtained an abortion.<sup>37</sup> In 1998, among female youth aged 15-19, nearly 390,000 gave birth and the birth rate was 51.1 per 1,000.<sup>38</sup> Sixty-six percent of all births among teenagers are the result of unintended pregnancy.<sup>39</sup>

## Unhealthy Dietary Behaviors

### QUESTION(S):

6. How tall are you without your shoes on?
7. How much do you weigh without your shoes on?
66. How do you describe your weight?
67. Which of the following are you trying to do about your weight?
68. During the past 30 days, did you exercise to lose weight or to keep from gaining weight?
69. During the past 30 days, did you eat less food, fewer calories, or foods low in fat to lose weight or to keep from gaining weight?
70. During the past 30 days, did you go without eating for 24 hours or more (also called fasting) to lose weight or to keep from gaining weight?
71. During the past 30 days, did you take any diet pills, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight? (Do not include meal replacement products such as Slim Fast.)
72. During the past 30 days, did you vomit or take laxatives to lose weight or to keep from gaining weight?

### RATIONALE:

These questions measure self-reported height and weight, self-perception of body weight status, and specific weight control behaviors. Data on self-reported height and weight can be used to calculate body mass index and provide a reasonable proxy measure of whether students are overweight. Although overweight prevalence estimates derived from self-reported data are likely to be low,<sup>40,41</sup> they can be useful in tracking trends over time. Prevalence trends from national surveys of adults using self-reported height and weight have been consistent with trend data from national surveys using measured heights and weights.<sup>42</sup> The prevalence of overweight among adolescents more than doubled from 5% in the late 1970s to 11% between 1988 and 1994.<sup>43</sup> Overweight or obesity acquired during childhood or adolescence may persist into adulthood and increase the risk later in life for coronary heart disease, gallbladder disease, some types of cancer, and osteoarthritis of the weight-bearing joints.<sup>44</sup> In adolescence, obesity is associated with hyperlipidemia, hypertension, abnormal glucose tolerance, and adverse psychological and social consequences.<sup>45</sup> Studies have shown high rates of body dissatisfaction and dieting among adolescent females, with many engaging in unhealthy weight control behaviors, such as fasting and self-induced vomiting.<sup>46-49</sup>

**QUESTION(S):**

73. During the past 7 days, how many times did you drink 100% fruit juices such as orange juice, apple juice, or grape juice? (Do not count punch, Kool-Aid, sports drinks, or other fruit-flavored drinks.)
74. During the past 7 days, how many times did you eat fruit? (Do not count fruit juice.)
75. During the past 7 days, how many times did you eat green salad?
76. During the past 7 days, how many times did you eat potatoes? (Do not count french fries, fried potatoes, or potato chips.)
77. During the past 7 days, how many times did you eat carrots?
78. During the past 7 days, how many times did you eat other vegetables? (Do not count green salad, potatoes, or carrots.)
79. During the past 7 days, how many glasses of milk did you drink? (Include the milk you drank in a glass or cup, from a carton, or with cereal. Count the half pint of milk served at school as equal to one glass.)

**RATIONALE:**

These questions measure food choices. Six of the questions address fruit and vegetable consumption, and one addresses consumption of milk. The fruit and vegetable questions are similar to questions asked of adults on CDC's Behavioral Risk Factor Survey.<sup>50</sup> Fruits and vegetables are good sources of complex carbohydrates, vitamins, minerals, and other substances that are important for good health. Dietary patterns with higher intakes of fruits and vegetables are associated with a variety of health benefits, including a decreased risk for some types of cancer.<sup>44,51</sup> Only 44% of male adolescents and 27% of female adolescents meet the minimum average daily goal of at least five servings of vegetables and fruits set by the *Dietary Guidelines for Americans*.<sup>52</sup> Milk is by far the largest single source of calcium for adolescents,<sup>53</sup> but it is estimated that about half of adolescent males and more than 80% of adolescent females do not meet dietary recommendations for calcium intake.<sup>54</sup> Calcium is essential for the formation and maintenance of bones and teeth;<sup>44</sup> low calcium intake during the first two to three decades of life is an important risk factor in the development of osteoporosis.<sup>55</sup>

## Physical Inactivity

### QUESTION(S):

80. On how many of the past 7 days did you exercise or participate in physical activity for at least 20 minutes that made you sweat and breathe hard, such as basketball, soccer, running, swimming laps, fast bicycling, fast dancing, or similar aerobic activities?
81. On how many of the past 7 days did you participate in physical activity for at least 30 minutes that did not make you sweat or breathe hard, such as fast walking, slow bicycling, skating, pushing a lawn mower, or mopping floors?
82. On how many of the past 7 days did you do exercises to strengthen or tone your muscles, such as push-ups, sit-ups, or weight lifting?
83. On an average school day, how many hours do you watch TV?
84. In an average week when you are in school, on how many days do you go to physical education (PE) classes?
85. During an average physical education (PE) class, how many minutes do you spend actually exercising or playing sports?
86. During the past 12 months, on how many sports teams did you play? (Include any teams run by your school or community groups.)

### RATIONALE:

These questions measure participation in physical activity, physical education classes, sports teams, and television watching. Participation in regular physical activity helps build and maintain healthy bones and muscles, control weight, build lean muscle, and reduce fat; reduces feelings of depression and anxiety; and promotes psychological well-being.<sup>56</sup> In the long term, regular physical activity decreases the risk of dying prematurely, dying of heart disease, and developing diabetes, colon cancer, and high blood pressure.<sup>56</sup> Major decreases in vigorous physical activity occur during grades 9-12, particularly for girls; by 11th grade, more than half of female students are not participating regularly in vigorous physical activity.<sup>56</sup> School physical education classes can increase adolescent participation in moderate to vigorous physical activity<sup>57,58</sup> and help adolescents develop the knowledge, attitudes, and skills they need to engage in lifelong physical activity.<sup>59</sup> Daily participation in physical education class has dropped from 42% in 1991 to 25% in 1995.<sup>56</sup> Television viewing is the principal sedentary leisure time behavior in the U.S. and studies have shown that television viewing in young people is related to obesity<sup>60</sup> and violent or aggressive behavior.<sup>61,62</sup>

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### RELATED NATIONAL HEALTH OBJECTIVES FOR THE YEAR 2010

- 22-06 Increase the proportion of adolescents who engage in moderate physical activity for at least 30 minutes on 5 or more of the previous 7 days to 30%
- 22-07 Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion to 85%.
- 22-09 Increase the proportion of adolescents who participate in daily physical activity to 50%.
- 22-10 Increase the proportion of adolescents who spend at least 50% of school physical education class time being physically active to 50%
- 22-11 Increase the proportion of children and adolescents who view television 2 or fewer hours per day to 75%.

### RELATED LEADING HEALTH INDICATORS

Physical Activity

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