

# 2011

## Youth Risk Behavior Survey (YRBS) Resource Guide



*“The awareness that health is dependent upon habits that we control makes us the first generation in history that to a large extent determines its own destiny.”*

*-Jimmy and Rosalynn Carter*



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## **YOUTH RISK BEHAVIOR SURVEY “WHERE TO FROM HERE?”**

Need help with interpreting results of the Youth Risk Behavior Survey (YRBS)? Need ideas for using the results? Need guidance on how to address the health-risk behaviors? The North Dakota Department of Public Instruction (DPI) has developed this publication as “Resource Guide” to assist you!

Whether you are an educator, state agency representative, member of a community organization or prevention initiative, or an interested citizen; this guide will serve as a valuable resource in understanding the results of the survey and in implementing plans or programs to address youth health-risk behaviors.

The Guide addresses the following:

- Purpose of the YRBS including its importance, how it is conducted, how the information is used, and limitations of the data.
- Suggestions for reviewing and interpreting the YRBS results.
- Ideas for selecting youth health-risk behaviors for which to implement a plan or program.
- Suggestions for implementing the plan or program.
- Success stories of schools that have implemented such a plan or program.
- Web page link examples of how schools, communities, prevention initiatives, and state agencies are using the YRBS results.
- List of supplemental data sources to combine with the YRBS results to present a clear and more complete picture of youth health-risk behaviors.

## **PURPOSE OF YOUTH RISK BEHAVIOR SURVEY (YRBS)**

### **What is the YRBS?**

The YRBS monitors the prevalence of priority health-risk behaviors among samples of middle and high school students. These health-risk behaviors, which contribute to the leading causes of morbidity and mortality, are often established during childhood and adolescence and extend into adulthood. The YRBS, first conducted nationally in 1990 and in North Dakota during 1995, is designed to answer the following questions:

- What is the prevalence of priority health-risk behaviors, such as:
  - Unintentional injuries and violence;
  - Tobacco use;
  - Alcohol and other drug use;
  - Sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STD's), including human immunodeficiency virus (HIV) infections;
  - Unhealthy dietary behaviors;
  - Physical inactivity, general health status and the prevalence of obesity; and
  - Asthma?
- To what extent have these health-risk behaviors among youth changed over time?
- What is the prevalence of multiple health-risk behaviors?

North Dakota's middle and high school YRBS questionnaires can be accessed at:  
<http://www.dpi.state.nd.us/health/YRBS/index.shtm>

### **Why is the YRBS important?**

YRBS data are used to measure progress toward achieving 14 national health objectives for *Healthy People 2020* and for five of the 10 leading health indicators, in order to assess trends in priority health-risk behaviors among middle and high school students and evaluate the impact of broad school and community interventions at the national, state, and local levels. *Healthy People 2020* can be accessed at:

[http://www.cdc.gov/nchs/healthy\\_people.htm](http://www.cdc.gov/nchs/healthy_people.htm)

### **How is the YRBS conducted?**

The YRBS is a state wide free survey that collects school-level data via self-administered paper-and-pencil questionnaires, conducted in classrooms, and completed by middle and high school students. It is conducted every odd-numbered year (2009, 2011, etc.). Completion of the survey is voluntary and confidential.

### **How is the YRBS data used?**

National, state and local education and health officials use the YRBS results in a variety of ways such as:

- Describing health-risk behaviors;
- Creating awareness among legislators, boards of education, school administrators, parents, community members, school staff, students, and media;

- Setting program goals for school health strategic plans, *Healthy People 2020* objectives, and the Centers for Disease Control's (CDC) *Performance Plan*;
- Developing school health programs and policies, programs and policies for youth in high-risk situations, instructional guides and materials, and professional development programs for teachers;
- Supporting health-related legislation; and
- Supporting funding requests to federal, state, and private agencies and foundations.

#### **What are the YRBS limitations?**

- YRBS data are self-reported, and the extent of under-reporting or over-reporting of health-risk behaviors is difficult to determine, however, every precaution is taken to ensure the reliability and validity of the results.
- School-based survey data apply only to youth and young adults who attend school and have parental permission to participate, consequently; the survey results may not be representative of all respondents in that age group.
- Survey is conducted in both randomly selected and volunteer schools during the school day and as a result, the survey may not capture those students who are chronically absent from school.
- Survey results measure the prevalence of specific health risk-behaviors, not the reason for exhibiting such behaviors.
- YRBS addresses only behaviors that contribute to the leading causes of morbidity and mortality among youth.
- YRBS is designed to produce information to help assess the effect of broad national, state, and local policies and programs; not to evaluate their effectiveness.

## **SUGGESTIONS FOR REVIEWING AND INTERPRETING RESULTS**

YRBS data is collected from randomly selected North Dakota public middle and high schools and classes within those schools. Schools not randomly selected have the opportunity to provide data as “volunteer” schools. The survey results provide factual information regarding the health-risk behaviors of middle and high school students. Although relatively similar, questions asked of middle and high school students vary somewhat. While reviewing the results, be attentive to outcomes and trends, those of a positive and negative nature. Also, be reminded that the results relate specifically to North Dakota’s youth, a group who will rapidly comprise a sizeable portion of the state’s adult population.

Because of the State’s high participation rate by the randomly selected middle and high schools, CDC is able to generate “weighted” data. This means that data for under-represented cases are “given more weight” to compensate for their small numbers. Weighting is used to assure that certain groups are represented in a sample. This allows the sample to better represent the overall population.

The tables included in this section provide examples of and recommendations for reviewing and interpreting YRBS results. Each table represents one or more survey questions and provides data for the responses to those questions. The responses are generally expressed as the percentage of students who engaged in a specific health-risk behavior.

Table 1 (weighted data) illustrates an example of statewide North Dakota high school results (actual data). North Dakota high school results can be accessed at:

<http://www.dpi.state.nd.us/health/YRBS/index.shtm>

Table 2 (unweighted data) offers an example of statewide, regional, and urban versus rural high school results (actual data), and can be accessed at:

<http://www.dpi.state.nd.us/health/YRBS/index.shtm>

Table 3 (unweighted data) portrays an example of a single middle school. So as to maintain strict confidentiality the example uses a bogus school name and school- specific results. School specific results are not accessible on the website.

National and state-specific results can be accessed at:

<http://www.cdc.gov/HealthyYouth/yrbs/index.htm>

**Table 1**  
**2009 Youth Risk Behavior Survey Results**  
**North Dakota High School Surveys**  
**Summary Table-- Weighted Data**

**(A) QN9: Percentage of students who never or rarely wore a seat belt when riding in a car driven by someone else.**

		Percentage	Total 95% Confidence Interval	N	Percentage	Male 95% Confidence Interval	N	Percentage	Female 95% Confidence Interval	N
<b>(B)</b>	<b>(C)</b>	<b>(D)</b>	<b>(E)</b>	<b>(F)</b>	<b>(G)</b>	<b>(H)</b>	<b>(I)</b>	<b>(J)</b>	<b>(K)</b>	<b>(L)</b>
	Total	17.0	(14.7-19.6)	1826	21.2	(17.4-25.6)	904	12.2	(9.9-15.0)	914
<b>Age</b>	15 or younger	13.6	(11.1-16.7)	651	14.4	(10.4-19.5)	289	12.8	(9.5-16.9)	361
	16 or 17	21.1	(16.6-24.3)	870	26.5	(20.7-33.2)	450	13.6	(10.3-17.7)	417
	18 or older	14.4	(10.1-20.1)	301	19.5	(20.7-28.8)	164	7	(3.6-13.2)	136

**(M)** Note: There were 12 students who were excluded from the analysis for QN9.  
N= Number of students

Table 1 illustrates results for the “Age” demographic of a typical North Dakota High School Survey Summary Table. For brevity, the results for “Grade” and “Race/Ethnicity” are excluded from the example. Their results, however, should be interpreted similar to those for “Age”.

The table consists of YRBS data collected from randomly selected North Dakota public high schools, and classes within the schools. It is important to note that since the results are weighted, they are representative of all North Dakota’s high school students (or middle school students).

- Prior to each question (marked **A** in the table) is either a QNxx or a QNword. The QNxx corresponds to the standard YRBS question number, the QNword corresponds to supplemental questions asked about behavior, while Q’s 88 and higher correspond to state-added YRBS, CDC approved questions.
- Column **B** represent the demographic characteristic (e.g. age, grade, and race/ ethnicity) of the respondents, while column **C** specifies the various demographic groups (e.g. total, all respondents, 15 or younger, 16 or 17, and 18 and older).
- Columns **D**, **G**, and **J** identifies the weighted data percentages, one for the total sample, one for the males, and one for the females. These columns represent the percentage of public high school students “at-risk” for never or rarely wearing a seat belt when riding in a car driven by someone else. Results are reported for each demographic characteristic of the respondents.

For example, 17% of all North Dakota high school students were at-risk in 2009. Correspondingly, 21.2% of the high school males, and 12.2% of the high school females were at risk.

- Column E, H, and K details the 95% confidence intervals, one for the total sample, one for the males, and one for the females. A confidence interval is a range of values within which the “true” percent lies. Since YRBS is a random sample of students rather than a survey of all students, confidence intervals are constructed. A 95% confidence interval means that if a survey were repeated many times (in all probability each survey would have different schools randomly selected) the “true” percent would fall within the interval 95% of the time. Be cautious about “wide” confidence intervals; these are common for YRBS “Race/Ethnicity” and “Age” groups. For example, “18 or older;” many schools do not have a large number of students in that particular age group.

The concept of 95% confidence intervals is important when looking at differences between groups or cohorts, or examining changes in youth health-risk behavior results over time. For example, differences between groups are considered to be statistically significant when the confidence intervals between the percentage at-risk estimates do not overlap. In Table 1 for example, the percentage of public school students in 2009 who reported that they never or rarely wore a seat belt when riding in a car with someone else was 21.2% for males and 12.2% for females. The 95% confidence interval for males was 17.4% to 25.5%, while the corresponding interval for females was 9.9% to 15.0%. Since these confidence intervals do not overlap, the difference between males and females for this specific health-risk behavior is considered to be statistically significant.

In general terms, a finding or result is described as statistically significant when it can be shown that the probability of obtaining such a result, by chance only, is relatively low. It is customary to describe results as statistically significant when they occur no more than five out of 100 times (0.05).

- Columns **F**, **I**, and **L** portrays the number of students (frequencies) responding to the seat belt question, one for the total sample, one for males, and one for females. (i.e., number of weighted responses)
- Footnotes (marked **M** in the table) provide information regarding the number of observations with missing data (i.e., the number of students who did not respond or whose response was deleted during the data editing process).

In some instances frequencies may total “incorrectly”, typically as a result of a respondent not answering a question(s). For example: in Table 1, 904 males and 914 females responded, totaling 1818. However, there were 1826 total respondents, suggesting that eight individuals did not report their gender.

**Table 2**  
**North Dakota 2009 High School (Grades 9-12) YRBS**  
**YRBS Results**  
**Summary of State, Regional, and Urban vs. Rural Results**

**(A) Unintended Injuries & Violence**

<b>(B)</b> Question	<b>(C)</b> 2009 CDC North Dakota Results	<b>(D)</b> Region 1 Williston Area	<b>(E)</b> Region 2 Minot Area	<b>(F)</b> Region 3 Devils Lake Area	<b>(G)</b> Region 6 Jamestown Area	<b>(H)</b> Region 8 Dickinson Area	<b>(I)</b> Urban (1000+ K-12 in town)	<b>(J)</b> Rural (<1000 K-12 in town)
Percentage of students who never or rarely wore a seat belt when riding in a car driven by someone else (ND QN9, CDC QN9).	17%	18.60%	18.50%	25.40%	19.70%	16%	14.70%	20.90%
Percentage of students who never or rarely wear a seat belt when driving a car (ND QN10, CDC QN89).	15.70%	18.70%	15.90%	23.30%	18.90%	15.80%	11.70%	20.10%

Table 2 illustrates results for a typical Summary of the Statewide, Regional, and Urban vs. Rural Results table. For brevity, the results for Regions 4, 5 and 7 are excluded. Their results, however, should be interpreted similar to those for Regions 1, 2, 3, 6, and 8.

The table consists of YRBS data collected from randomly selected North Dakota public high schools, and classes within the schools, and public high schools not randomly selected, but agreeing to participate as a “volunteer school”. Since the combined data is not random in nature and consequently not weighted by CDC, the data applies only to those schools participating in the survey. It is important to note that since the results are not weighted they are not representative of all North Dakota high schools (or middle schools).

- Item **A** specifies the nature of the questions that appear in the table.
- Column **B** identified the questions regarding unintended injuries and violence. Following each question is either a QNxx or a QNword. The QNxx corresponds to the standard YRBS question number, the QNword corresponds to supplemental questions asked about the behavior, while Q’s 88 and higher correspond to state-added YRBS, CDC approved questions. ND represents a North Dakota question while CDC a national question.
- Column **C** describes the percent of high school students “at-risk” in 2009.
- Columns **D, E, F, G,** and **H** depict the 2009 North Dakota percent of high school students “at-risk” in Regions 1, 2, 3, 6, and 8, respectively.

- Columns **I** and **J** provide the 2009 North Dakota results for the urban (1,000 or more K-12 students in a community) and rural (less than 1,000 K-12 students in a community) communities.
- For example, with respect to the first seat belt question in Table 1, 18.6%, 18.5%, 25.4%, 19.7%, and 16.0% of all high school students, residing in Regions 1, 2, 3, 6, and 8 (Williston, Minot, Devils Lake Area, Jamestown and Dickinson) respectively, reported never or rarely wearing a seat belt when riding in a car driven by someone else.

**Table 3**  
**20xx North Dakota Middle School YRBS Results**  
**Bogus Middle School-- Grades 7-8**

**(A) Tobacco Use**

**(B) Cigarette**

**(C)**

**(D)**

<b>Percent</b>	<b>Question</b>
1.90%	Percentage of students who smoked cigarettes on 20 or more if the past 30 days (CDC QNFRDIG).
3.10%	Amongst students who are current smokers, the percentage who smoked more than 10 cigarettes per day on the days they smoked during the past 30 days 9 ND Q23, CDC QN21).
31.60%	Percentage of students who ever tried cigarette smoking, even one or two puffs (NDQ20, CDC QN18).
7.30%	Percent of students who smoked a whole cigarette for the first time before the age 11 years (NDQ21, CDC QN19).
8.90%	Percentage of students who smoked cigarettes on one or more of the past 30 days (ND Q22, CDC QN20).
5.30%	Percentage of students who smoked cigarettes daily, that is, at least one cigarette every day

Table 3 illustrates results for a typical North Dakota Middle School Survey. It details outcomes for a single school for a series of questions relating to tobacco use. For brevity, the results for other tobacco related questions were excluded. Their results, however, should be interpreted similar to those for “Cigarette Use”. So as to maintain strict confidentiality the example uses a bogus school name and bogus school-specific results.

Table 3 consists of YRBS data collected from randomly selected North Dakota public middle schools, and classes within the schools, and public middle schools not randomly selected, but agreeing to participate as a “volunteer school”. Since the combined data is not random in nature and consequently not weighted by CDC, the data applies only to those schools participating in the survey. It is important to note that since the results are not weighted, they are not representative of all North Dakota middle schools (or high schools).

Due to federal and state confidentiality requirements, randomly selected and volunteer schools receive their school- specific results only if the school has 25 or more completed YRBS surveys. For individual questions, the school’s results are reported only if six or more students report the health-risk behavior being examined.

- Item **A** specifies the nature of questions that appear in the table, while **B** identifies the form of tobacco use.
- Column **C** details the percentage of Bogus Middle School students “at-risk” for the various tobacco use related behaviors presented in column **D**. For example, 1.9% of Bogus Middle School students reported smoking cigarettes on 20 or more of the past 30 days.

## **IDEAS FOR SELECTING BEHAVIORS FOR WHICH TO IMPLEMENT A PLAN OR PROGRAM**

The YRBS provides measures of the extent to which North Dakota youth engage in a variety of health risk-behaviors. Unfortunately, these measures cannot tell us everything that we would like to know about youth health-risk behaviors.

The data cannot predict which students who exhibit certain health-risk behaviors will eventually present a related condition. The data seldom tells us how to “fix” a particular health-risk behavior. It may tell us, for example, the percent of high school students who never or rarely wear a seat belt when riding in a car driven by someone else, however it cannot by itself, tell us how to increase seat belt use among students.

Data can help us rank problems based on their prevalence, geographic distribution, their seriousness, or the effectiveness of available solutions. It however cannot tell us which health-risk behavior is the most “important” or which behavior to address first. Although the data does not provide answers to all questions, it serves as an excellent starting point for decision makers in selecting health-risk behavior(s) for which to implement a plan or program.

### **When examining YRBS data:**

- Review the prevalence of the health-risk behaviors. Look at the percent of the youth at risk. Larger percentages suggest that more students are exhibiting that particular health-risk behavior.
- Look for connections. Female youths’ perceptions of their body image can be linked to unhealthy dietary behaviors. Comprehensive approaches to unhealthy behaviors can be developed when linkages are understood.
- Examine behaviors at different grade levels. Some behaviors are higher among younger students (e.g. percentage of students who watched three or more hours per day of TV on an average school day) and some are higher among older students (e.g. percentage of students who drove a car or other vehicle when they had been drinking alcohol one or more times during the past 30 days). Programs can be targeted toward certain age groups using age appropriate interventions.
- Identify differences based on gender. For example, we can determine which behaviors are higher among females (e.g. percentage of students who were trying to lose weight) and which behaviors are higher among males (e.g. percentage of students who never or rarely wore a seat belt when riding in a car driven by someone else). Some programs need to be tailored more toward a certain gender.
- Look at trends. Examining trends helps one focus on the behaviors which are changing as a result of school and community health programs, or lack thereof.

## **SUGGESTIONS FOR IMPLEMENTING THE PLAN OR PROGRAM**

Following the selection of a youth health risk-behavior(s) for which to implement a plan or program, organizations typically develop an action plan. The action plan is a strategy or blueprint for addressing the identified health-risk behavior(s). The action plan answers the question, “What can be done to resolve the identified health-risk behavior?” It focuses on setting priority goals and objectives, identifies the strategies to facilitate attainment of the goals and objective, specifies activities needed to complete each strategy, establishes timeframes, and identifies the evaluation procedures.

Goals are broad statements that identify outcomes the program is to achieve. After they have been identified, specific objectives are specified that will help facilitate the attainment of the goal. Objectives are those incremental steps that must be accomplished before the goal can be attained. Objectives identify the action to be performed and should be stated in specific, measurable terms or SMART (specific, measurable, achievable, realistic, and timely). Specific objectives are important because they will become the focus of the evaluation portion of the plan.

Subsequently the plan should detail specific strategies to achieve each objective. Strategies are sets of activities designed to bring about the desired change. They can take many forms, such as policy development, formal instruction, informal modeling of behavior, social support, facility modification, direct intervention, or mass media campaigns to change behavior.

As the action plan is implemented, attention to how well the plan is received and the progress of the plan vital. In this phase, there is an evaluation that provides guidance for the plan. If the plan is not proceeding according to schedule or if unexpected outcomes are discovered, revision and restructuring of the action plan may be warranted.

When developing the action plan, it is important to consider:

- Involving as many people as reasonably possible in the planning process. The more people who have ownership of the plan, the more likely they will support the plan when it is implemented;
- Identifying key stakeholders associated with the identified health-risk behavior and encouraging their involvement;
- Anticipating potential problems with the plan and develop contingency plans;
- Ensuring that the plan is communicated to everyone who will be affected by it; and
- Determining if the plan is manageable and reasonable.

General guidelines for implementing the action plan include:

- Identifying the appropriate resources at the state level, such as the North Dakota Department of Public Instruction, North Dakota Health Department, and at the local level, such as teachers, school administration, and area health professionals, etc.;

- Involving the appropriate individuals and organizations (e.g. teachers, school administrators, representatives of a State agency, members of prevention initiatives, concerned citizen, etc.), and if possible, the community and community leaders in implementation of the action plan;
- Communicating the plan to all persons who need to be involved;
- Building partnerships and develop interdisciplinary collaboration as needed; and
- Obtaining written agreement, if necessary, with all involved agencies and partners so that the role of each person/organization is clearly defined in the action plan.

The final component of the planning process is evaluation. The purpose of the evaluation is to appraise the effects of the health-risk behavior intervention program. Evaluation procedures should be developed during the planning process. Evaluation of the planning process is conducted to determine if the goals, objectives, strategies, activities, personnel, and time frames chosen were appropriate, attainable, comprehensive, congruent, and acceptable to community standards. Evaluation of the program's effectiveness focuses on planned and unplanned outcomes and the degree to which established goals were realized.

The basic steps in the evaluation process are:

- Developing questions that should be answered to determine whether the program is successful;
- Identifying procedures and persons to answer the questions;
- Obtaining information and data that specifically address the questions asked;
- Analyzing and interpreting collected information and data; and
- Using evaluation results to plan for future programs.

## **SUCCESS STORIES OF SCHOOLS AND ORGANIZATIONS**

### **1) Using Fundraising Activities and Rewards that Support Student Health--Williston Junior High School--Williston, North Dakota**

#### **What is the public health problem?**

- Need to make more healthful foods and beverages available and limit student access to competitive foods.

#### **How is Williston Junior High School responding to healthful food and beverage issue?**

- Junior high students had the option of purchasing candy from the candy cart in the morning before classes. This began as part of a fundraising effort for the student council.
- Changes to the candy cart began with a parent's comment. The parent, a nutritionist, had a discussion with her 7th grade son. She realized that the money he was taking to school was to purchase candy from the cart. Knowing that good nutrition affected the learning ability of students, she and other nutritionists discussed possible alternatives to the candy cart.
- As a group they had several meetings with the junior high principal. He eventually agreed that the nutritionists could make a presentation on healthier options to the student council; therefore, a meeting was set up by the council advisor. The presentation included reasons for the proposed change and suggestions for healthier options. The nutritionists offered student council members the chance to taste a variety of items, including "Grip n' Go" milks (regular and chocolate), 100% orange juice, and multigrain bars.
- The students enjoyed the taste testing and decided to sell the milk, juice, and breakfast bars. They also decided to rename their fundraiser the "breakfast cart." To increase sales of the new items, the Health Unit provided stickers, flying discs, and pencils as promotional incentives, and these were well received by the students.
- At the same time as the changes in the morning cart, the principal and school counselor decided to turn off all soft drink machines during the morning hours before school. Machines selling 100% juice were left on for student purchase.

#### **What is the health impact?**

- These changes have significantly reduced student access to high-fat/high-sugar foods at Williston Junior High School. Students now have the opportunity to start the school day with more nutritious foods and beverages.

#### **Quote:**

"Progress or change can begin with a single observation or conversation. Acting on a small change can be the beginning of something bigger—you never know how big the impact can be. Offering healthy alternatives in just one environment such as the breakfast cart can motivate the student to look for other nutritious food choices throughout the day. We feel it's important to get the students off to a healthy start in the morning."

—*Sue Grundstad, LRD, Public Health Nutritionist*

## **2) Establishing Nutrition Standards for Competitive Foods-Grand Forks Public Schools--Grand Forks, North Dakota**

### **What is the public health problem?**

- Establish nutrition standards for competitive foods.
- Make more healthful foods and beverages available.
- Adopt marketing techniques to promote healthful choices.
- Limit student access to competitive foods.
- Use fundraising activities and rewards that support student health.

### **How is Grand Forks Public Schools responding to nutrition standards issue?**

- As a first step in developing the school nutrition policy, a Team Nutrition group brought together educators (from elementary, secondary, and university levels), school nurses, school administrators, food service personnel, health care providers, parents, and students. They used *CDC's School Health Index* as a tool to conduct an in-depth assessment of the status of health policies and programs in the school district. The process helped the district target nutrition and fitness priorities.
- At Ben Franklin Elementary a fruits and vegetables only policy sprang from a newsletter article written by a dietitian from the Grand Forks Public Health Department. The idea was embraced at Ben Franklin Elementary, where it was presented at a staff in-service and as an all-school in-service to children (including a skit and taste-testing). All parents received letters orienting them to the changes. All staff received an in-service on the guidelines and all students had the opportunity to taste-test fruits and vegetables.

### **What is the health impact?**

- The Grand Forks School Board passed board policy 6175 on Nutrition Education Practices. The goal of the policy is to assure that school nutrition environments in Grand Forks are in line with health messages being taught in classrooms. It calls on school administrators to monitor fundraising activities and for school personnel to serve as role models for healthy lifestyles.
- An annual Community Nutrition Fair is held at South Middle School. Vendors supplied products for tasting that followed nutrition guidelines set by the child nutrition staff. During the fair, cook managers held focus group discussions on school menu items. Educational and wellness booths were set up by area educators and health providers. The fair is attended by school staff, families, and students.
- Soft drink machines were removed from the district's two large high schools. Only two machines remain on each high school campus.
- Candy machines were removed at Central High School. The school store underwent a "snack makeover," based on research and presentations by its high school marketing class. The store removed all candy and added peanuts, gum, breath mints, and baked chips. Administration also challenged staff and students to find creative ways to fundraise without selling candy bars and other non-nutritive foods.
- Red River High School removed 50% of the school's vending machines.
- The Child Nutrition Program purchased milk and deli machines, offering healthy options for both high schools.

- District staff were offered wellness classes for college credits. The child nutrition director, health department dietitian, and staff from the University of North Dakota at Grand Forks coordinated a series of classes in physical, mental, social, emotional, and spiritual wellness. Class attendance has exceeded the expectations of the coordinators.
- Ben Franklin Elementary School adopted an all-school classroom snack policy of “fruits or vegetables” only. Implementing the policy included an all-staff in-service, an all student in-service with fruit and vegetable taste testing, and parent letters orienting all parties to the rationale and importance of the policy. This policy has been well received by all involved and is now accepted school practice.
- Ben Franklin’s student Team Nutrition group, the *Sunny Side Ups*, promoted the selling of milk, bottled water, and baby carrots at extra-curricular school events. Since only soft drinks were sold previously, this effort helped make healthful choices the norm, and it also increased revenue from the fundraising events.
- Information packets on the School Nutrition Policy were prepared for school staff. Ongoing improvements to the school nutrition environment are expected.

**Quote:** “We take a common sense approach to issues, and everyone understands that. How can you argue with good nutrition when it makes good sense and it’s the right thing to do?”  
—Dr. Jeff Schatz, Former Principal, Central High School, Grand Forks

### 3) Promoting Physical Activity in the Classroom--Rockland County, New York<sup>20</sup>

#### **What is the public health problem?**

- Overweight adolescents who are not physically active often become obese adults and may then be at increased risk for diabetes and other chronic conditions.
- According to the 2005 Youth Risk Behavior Survey, 95.0% of Rockland County High School students did not attend physical education classes daily, and only 37.0% met the current recommended levels of physical activity.
- A program titled Steps to a Healthier US provides funds for innovative community-based programs that seek to adopt proven measures to reduce the burden of obesity, diabetes, and asthma-related complications, with a particular focus on youth.

#### **How is Steps to a Healthier US responding in promoting physical activity?**

- To help school-age children increase physical activity and reduce their future risks for obesity and other chronic diseases, Steps to a Healthier–Rockland County launched Learning in Motion: Physical Activity, the Brain, and Achievement.
- This innovative curriculum trains K–12 teachers to integrate physical activity into classroom lessons about language arts, math, social studies, science, and health.
- Teachers are trained to use proven, fun, interactive assignments to teach learning objectives and to use movement to improve memory and address students’ different learning styles.
- Teachers also learn about the importance of proper nutrition for optimal brain function.
- Goals of the program are to reduce sedentary behavior during the school day, to enhance students’ overall understanding of subject matter content, and to help students develop lifelong healthy behaviors such as being physically active.

### **What is the health impact?**

- Since 2004, more than 100 teachers in Rockland County's nine school districts have been trained to incorporate physical activity into their lesson plans.
- Many teachers also promote healthy snacks and celebrations in their classrooms.
- At the end of the school year following course attendance, 95.0% of those responding to a follow-up survey say they use physical activity in their classroom at least several times a week; 85.0% say they are using it daily or several times per day.
- According to teacher surveys, students reported feeling more energized, having better self-esteem, and being more alert during classes. Learning in Motion plays a critical role in enhancing academic performance while promoting healthy behaviors that will help reduce important risk factors that contribute to childhood overweight and obesity.

## **LIST OF SUPPLEMENTAL DATA SOURCES**

**Behavioral Risk Factor Surveillance System (BRFSS):** Established in 1984 by CDC, the BRFSS is a state-based system of health surveys that collects information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury. For many states, the BRFSS is the only available source of timely, accurate data on health-related behaviors, for adults 18 years of age and older. National and state-specific reports can be accessed at: <http://www.cdc.gov/brfss/>

**School Health Profiles (Profiles):** State and local education and health departments conduct biennially a School Health Profiles among a representative sample of middle schools and senior high schools. Profiles provides information about the provision of health education; the content of health education courses; school health policies related to HTV infection/AIDS, tobacco use prevention, unintentional injuries and violence, physical activity, and nutrition; physical education; asthma management activities; and family and community involvement. National results can be accessed at: <http://www.cdc.gov/healthyyouth/profiles/>  
North Dakota results can be accessed at: <http://www.dpi.state.nd.us/health/educprof/index.shtm>

**Morbidity and Mortality Data:** The CDC publishes annual mortality data on the 10 leading causes of death in the United States by age, sex, race, and ethnicity in National Vital Statistics Reports. Data can be accessed at: <http://www.cdc.gov/nchs/fastats/deaths.htm>

**Youth Tobacco Survey (YTS):** State and local health departments periodically conduct an YTS among a representative sample of high school students. National results can be accessed at: [http://www.cdc.gov/tobacco/data\\_statistics/surveys/nyts/](http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/)