INDIAN HEALTH DIABETES BEST PRACTICE

School Health: Promoting Healthy Eating and Physical Activity and Managing Diabetes in the School Setting

Revised April 2011

Note! Please review the Best Practice Addendum, which provides the most current information on the Required Key Measures along with examples of ways to obtain the measures. The Best Practice Addendum can be found here: http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Tools/BestPractices/BP_2011_Table_RKM_508c.pdf

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Instructions for Using This Best Practice

The Best Practices are organized into topics on how to plan for and successfully implement a Best Practice in your community.

- **Part 1** provides background information on planning for your program and evaluation, Key Recommendations, and Key Measures.
- **Part 2** provides details on implementation of the Key Recommendations.
- **Part 3** includes appendices, tools, and resources.
- **Part 4** provides a list of references.

As you prepare to select, implement, and evaluate a Best Practice, consider these planning guidelines:

- Meet with your diabetes team to discuss which Best Practice(s) is best suited for your situation and resources.
- Use data from your *Diabetes Care Outcomes and Audit* and/or from a community needs assessment to guide your selection of the Best Practice(s).
- Determine your program goal(s) as a team. For example, your team may decide to work toward increasing the number of people who receive eye exams.
- Print out at least Part 1 of the Best Practice(s) your team feels is most appropriate to implement.
- Work with your diabetes team to review and discuss the Best Practice(s). You may choose to read it together as a team.
- Choose at least one Best Practice after carefully considering your goals and resources (funding, staff, and time).
- **Review the entire Best Practice(s) you have selected with your diabetes team:**
  - Confirm that you have selected a Best Practice(s) appropriate for your community needs and resources and that you are confident that your team can successfully implement, evaluate (measure), and document progress and outcomes.
  - Target the population your team wants to improve outcomes for with the Best Practice(s). Remember, you probably do not have resources to do everything for everyone.
  - Carefully consider the Key Recommendations. The recommendations are based on evidence and have been proven to be effective. You may already be doing some of the recommendations and can easily fit these into your plan, or you may want to consider some new recommendations to enhance and strengthen your program. Identify those your team can implement.
  - Carefully review the Key Measures. Choose those that best fit with your goals and the Key Recommendations you have chosen to implement.
  - If one Best Practice does not fit, then review another Best Practice until you find one that fits.

Throughout the document you will find links that draw your attention to important items within the Best Practice pdf. Here is a list of the items:

- **Action!** Indicates a **link**. Please use the link to access more detailed descriptions.
- **Note!** Indicates an **important** item. Pay special attention to this **important** item.

Summary of Key Recommendations and Key Measures

These are evidence-based actions that will lead to improved outcomes for school-age youth in the community. **Action! See Part 2** for details on the implementation of each key recommendation.
1. Involve the family and community in school health. 2. Screen for overweight and obesity in all school-age youth. 3. Promote healthy eating and physical activity behaviors. 4. Improve the school environment to support health-enhancing behaviors. 5. Provide diabetes disease management in the school setting through a multidisciplinary school health team. 6. Identify and use resources and partners for behavioral and mental health risk intervention.

These are specific measures that can be used to document changes in outcomes related to implementing the Best Practice. **Note! All SDPI grant programs that choose this Best Practice must report as required in the terms and conditions attached to the notice of award on the indicated Measures. Programs may report on other measures as well.**
*The following measures are of primary importance: 1. Number of family and community members with documented participation in a school health advisory group within the past twelve months. 2. *Percent of students with a BMI calculated within the past twelve months. 3. Percent of staff completing training on promoting healthy eating and physical activity behaviors in school-age youth within the past twelve months. 4. Percent of students in target population reporting improvements in healthy eating and physical behaviors within the past twelve months. 5. *Percent of youth with a BMI greater than the 85th percentile who are referred to their health care team within the past twelve months. 6. *The school's score on the School Health Index within the past twelve months. 7. Percent of students with diabetes who have health care plans completed by a multidisciplinary school health team within the past twelve months. 8. Percent of students who have participated in behavioral and mental health risk reduction programs within the past twelve months.

Part 1 Essential Elements of Implementing This Best Practice

Purpose and Target Population

This Best Practice provides guidance for individuals and groups seeking to promote healthy eating and physical activity behaviors, prevent overweight, prevent type 2 diabetes, and provide effective diabetes management for school-age youth (K-12) in the school setting.

Action! See Part 3 – Appendix A. Supplemental Information for discussion of the importance of a school health program.

Intended Users of This Best Practice

The intended users of this Best Practice include:

- School staff and school health program staff,
- Health staff,
- Community youth programs,
- Leaders of health care organizations, and
- Diabetes teams.

Action! See Part 3 – Appendix A. Supplemental Information for discussion of the benefits and risks of implementing this Best Practice.

Goals of This Best Practice

- To increase collaboration among parents, schools, health care organizations, and Tribes.
- To increase the number of school-age youth screened for overweight and obesity.
- To promote healthy eating and physical activity behaviors.
- To ensure students with diabetes receive effective diabetes management while at school.
- To improve the school environment to support healthy food choices and daily physical activity.
- To increase student access to behavioral and mental health risk reduction resources.

Note! Interventions for school-age youth that aim to screen for diabetes risk, prevent diabetes, and provide effective diabetes management in the school setting are part of a **coordinated school health program (CSHP)**. A coordinated school health program uses a systematic team approach in collaboration with school, family, and community to support the adoption of health-enhancing behaviors by students and improve their health and learning.

Action! See Part 3 – Appendix A. Supplemental Information for more discussion of the goals and components of a **coordinated school health program**. See also *Healthy Youth* http://www.cdc.gov/HealthyYouth/ and *Health Is Academic: A Guide to Coordinated School Health Programs* http://www.ashaweb.org/store/products.

Key Recommendations

These are evidence-based actions that can lead to improved outcomes for school-age youth in the community.

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1. Involve the family and community in school health. 2. Screen for overweight and obesity in all school-age youth. 3. Promote healthy eating and physical activity behaviors. 4. Improve the school environment to support health-enhancing behaviors. 5. Provide diabetes disease management in the school setting through a multidisciplinary school health team. 6. Identify and use resources and partners for behavioral and mental health risk intervention.

Action! See Part 2 for details on the implementation of each key recommendation.

Program and Evaluation Planning

Key Action Steps include:

1. **Identify your program's goal(s).** There are many program goals consistent with the Key Recommendations of this practice. Choose program goals that fit with the Key Recommendations and your resources. Examples of program goals include:
   - Identify school-age youth who are overweight/obese and refer them for care
   - Establish school policies that help students with healthy food choices and daily physical activity
2. **Define program objectives** that will be met to reach the program goal(s) in the **SMART format** (specific, measurable, action-oriented, realistic, and time-bound).

   Examples of SMART objectives for this Best Practice:
   - Increase the percentage of middle and high school students who have height and weight measured and BMI calculated from 70% to 90% during the current school year.
   - 100% of school vending machines will not contain calorically sweetened beverages by the end of the current school year.
   - All elementary school students will have access to at least 30 minutes of physical activity every school day during the current school year.

3. **Use Key Measures.** The following **Key Measures** can be used to monitor progress and the effectiveness of implementing the school health Best Practice. Results of measures will indicate the degree of success in implementing the **Key Recommendations** and meeting program goals.

   Measures of progress need to occur before the intervention (baseline) and at designated times thereafter. Measurement needs to be frequent enough to provide meaningful information for planning and evaluation.

Key Measures

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Note! All SDPI grant programs that choose this Best Practice must report as required in the terms and conditions attached to the notice of award on the indicated Measures. Programs may report on other measures as well.

*The following measures are of primary importance:

1. Number of family and community members with documented participation in a school health advisory group within the past twelve months.
2. *Percent of students with a BMI calculated.
3. Percent of staff completing training on promoting healthy eating and physical activity behaviors in school-age youth.
4. Percent of students in target population reporting improvements in healthy eating and physical behaviors.
5. *Percent of youth with a BMI greater than the 85th percentile who are referred to their health care team.
6. *The school's score on the School Health Index.
7. Percent of students with diabetes who have health care plans completed by a multidisciplinary school health team.
8. Percent of students who have participated in behavioral and mental health risk reduction programs.

4. **Collect, record, and analyze data** on an ongoing basis; share with the team and the organization leadership.

5. **Use creative ways to display data** for Key Measures, such as graphs or charts. This helps the team understand the data and know whether there are improvements.

6. **Think about what the data are telling you**. What changes are you seeing? Are they improvements? Use data for planning next steps.

Action! See the following resources to help your program improve.

See Part 3 – Appendix B. Key Measures Example to assist you with identifying ways to choose Key Measures that incorporate your community data.

See Part 3 – Appendix C. Improving School Health Programs Example to assist you with applying Key Recommendations and Key Measures to a program plan.

Note! You can also link to an online training and a workbook to get more ideas about setting goals and objectives, and developing a program plan. Available from: http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Training/WebBased/Basics/Creating/Workbook.pdf (see pages 23-28).

Team Notes:

Part 2 Key Recommendations

Note! Part 2 provides important detail on the "why?" and "how?" of implementation of each Key Recommendation.

Key Recommendation 1. Involve the family and community in school health.

Why?

Parents play a critically important role in shaping the lives of their adolescent children and in assuring that they receive needed health care information and services. An extensive body of national survey literature, for example, shows that adolescents who report parental oversight, connectedness, communication, or support are less likely to engage in various health risk behaviors (Fox H et al., 2010).

Other benefits of involving parents in school health include:

- Increased communication between parent and child
- Reinforcement of health promotion messages
- Increased communication between school and home
- Better health outcomes for youth and families

The benefits of involving the community include:

- Increased communication between school and community
- Increased access to resources for youth, school, and community
- Increased learning and service opportunities for youth
- Increased expertise and assistance for program planning
- Improved coordination of community health-promotion efforts with school programs
- Better health outcomes for youth, families, and the community

(Reference: http://education.stateuniversity.com/pages/2035/Health-Education-School.html)

How to Implement the Key Recommendation

A. **Inform community members**

Share school health policies, goals, and activities. For example, include them in:

- newsletters
- back-to-school night
- special events

Share information on healthy eating and physical activity for youth and families. For example, include:

- fact sheets with report cards
- tips with school menus
- articles in newsletters

B. **Educate parents and community members**

Conduct parent and community forums or talking circles to discuss:

- healthy eating and physical activity guidelines and strategies for youth and families
- issues and concerns related to reducing risk for diabetes in youth and management of youth with diabetes in the school setting

C. **Increase involvement of parents and community**

Work through existing parent groups like the PTO

Invite parents and community leaders to:

- serve on the school health council/advisory group
- help with fundraisers

Ask parents to help:

- plan and organize special health events
- plan and organize before- and after-school activities, such as Family Fitness
- with class parties and after-school snacks

D. **Empower**

- Educate parents on ways they can advocate for change and influence policy decisions.
- Work with parent and community organizations to seek financial support for equipment and incentives for school health efforts, such as healthy snacks for special events or pedometers for physical education class

Action! **See** http://www.safehealthyschools.org/ for information on parent and community involvement in school health programs.

Team Notes:

Key Recommendation 2. Screen for overweight and obesity in all school-age youth.

Why?

Early case finding and diagnosis of youth at risk for developing, or having, type 2 diabetes, as well as referral of youth and parents into the health care system, may prevent type 2 diabetes and its complications (Rosenbloom and Silverstein, 2003).

How to Implement the Key Recommendation

A. **Introduce screening program to school staff, parents, and community.**

B. **Obtain parental consent for screening.**

C. **Train school staff in a standard measurement protocol.**

D. **Develop a protocol for height and weight measurement that includes:**

- accurate measurement, including checking heights and weights twice
- use of standardized accurate equipment (scales and stadiometers [height measurement tool])
- data collection procedure
- periodic quality control checks
- data collection forms
- calculations and interpretation of data
- distribution of completed data forms
- communications with parents. Note! Communication about a child's weight status to parents should be conveyed carefully and with sensitivity.

Action! See Part 3 – Appendix D. Considerations for Educators When Providing Information About Healthy Weight

Action! See tutorial at
http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsAnthroHowto

E. **Designate a qualified staff member, such as a school nurse, to receive all completed data forms and convert the data into BMI percentiles for sex, age, and gender.**

Action! See CDC BMI Percentile Calculator for Children and Adolescents at: http://apps.nccd.cdc.gov/dnpabmi.

Action! See Part 3 – Appendix E. Steps for Calculating and Interpreting BMI using the BMI Percentile Calculator.

Note! Communication about a child's weight status to parents should be conveyed carefully and with sensitivity.

Action! See Part 3 – Appendix D. Considerations for Educators When Providing Information about Healthy Weight.

F. **BMI may also be calculated by:**

$$BMI = Wt(kg) \div Ht(m)^2$$

(BMI equals weight in kilograms divided by height in meters squared)

G. **Use the BMI percentile to assess youth at-risk for diabetes and need for referral** (Nsiah-Kumi et al., 2010). BMI is a reliable indicator of body fatness for most children and teens. BMI does not measure body fat directly, but research has shown that BMI correlates to direct measures of body fat. BMI can be considered an alternative for direct measures of body fat. Additionally, BMI is an inexpensive and easy-to-perform method of screening for weight categories that may lead to health problems. http://www.cdc.gov/healthyweight/assessing/bmi/childrens-bmi/about-childrens-bmi.html

H. **Refer all youth with a BMI greater than the 85th percentile** to their health care provider for diagnostic testing, assessment of eating and physical activity behaviors, and an age-appropriate multi-disciplinary education and prevention plan.

I. **Provide normal screening results to the youths' health care providers.** An annual BMI calculation should be part of normal health supervision (Peterson et al., 2007) and an annual assessment of obesity risk and diabetes risk.

J. **Rescreen annually.**

Team Notes:

Key Recommendation 3. Promote healthy eating and physical activity behaviors.

Why?

Elevated BMI early in life is associated with adult obesity. The prevalence of obesity among preschoolers in the United States is evidence that problem eating behaviors begin early in life. These dietary patterns are associated with increased risk of chronic disease, including type 2 diabetes, cardiovascular disease, hypertension, and some cancers (Fox MK et al., 2010).

Children's eating patterns and food preferences are well established in early life and are greatly affected by parenting styles (May and Dietz, 2010).

The epidemic of type 2 diabetes, which includes American Indian and Alaska Native (AI/AN) communities, is associated with decreasing levels of physical activity and an increasing prevalence of obesity. Promoting physical activity is a crucial component of the prevention and management of type 2 diabetes and many other chronic diseases (IHS, 2007, 2009; Physical Activity Guidelines for Americans, 2008).

Interventions conducted in the classroom may help to increase physical activity and improve healthful eating, both in school and at home (DETS: http://www3.niddk.nih.gov/fund/other/dets/).

Interventions to improve diet and increase physical activity among youth are effective, especially among girls and older students (Stewart-Brown, 2006).

How to Implement the Key Recommendation

A. **Use marketing techniques to promote healthful choices.**
   - Display artwork relating to healthy behaviors
   - Hold competitions related to healthy behaviors
   - Post healthy messages on bulletin boards

B. **Adopt an education curriculum that is age-appropriate and culturally specific** and consistent with the essential knowledge and skills that students need to learn to eat healthfully, stay physically active, maintain a healthy weight, and prevent or manage diabetes.

   Action! Curricula can be evaluated with CDC's **Health Education Curriculum Analysis Tool** (HECAT). Available at: http://www.cdc.gov/healthyyouth/HECAT/

   Action! See Curricula in **Part 3 – Tools and Resources.**

Two excellent diabetes-related youth curricula are:

***Diabetes Education in Tribal Schools (DETS)* curriculum.** The DETS curriculum is for grades kindergarten through twelve and contains lessons designed to enhance understanding of diabetes in AI/AN communities, to empower students to make healthy lifestyle choices, and to stimulate general student interest in diabetes-related science careers. The curriculum is based on national education standards for each subject area along with Native American cultural content. To learn more about the DETS curriculum go to: http://www3.niddk.nih.gov/fund/other/dets/. The DETS materials (printed copies or CDs) are free of charge and can be ordered from the IHS website: http://www.ihs.gov/MedicalPrograms/Diabetes/.

IHS *Youth Staying Healthy* Curricula.

Youth Staying Healthy: A Diabetes Prevention Curriculum for Youth Ages 8–12 is for health professionals working in AI/AN communities and provides a framework for diabetes prevention education for children ages 8 to 12 who are at risk for diabetes. It also includes ideas for engaging parents and caregivers. The curriculum provides lesson plans, visuals, and activities for promoting healthy behaviors. A free copy can be ordered from http://www.ihs.gov/medicalprograms/diabetes/index.cfm?module=toolsCurricula.

Youth Staying Healthy: A Type 2 Diabetes Curriculum for Teens provides health professionals working with American Indian and Alaska Natives with a framework for diabetes education for adolescents ages 13–18. The lesson plans, visuals, and activities focus on life skills and diabetes self-care behaviors. A section on School Health is included. It also includes ideas for engaging parents and caregivers. A free copy can be ordered from:
http://www.ihs.gov/medicalprograms/diabetes/index.cfm?module=toolsCurricula,

Two excellent education materials are:

Eagle Books are inspired by the wisdom of traditional ways of health in Tribal communities. The stories of wise eagle, grateful rabbit, clever coyote, and four young friends are introduced in the four-book series written by Georgia Perez, a community health representative for nineteen years in Nambe Pueblo, New Mexico, and illustrated by Patrick Rolo (Bad River Band of Ojibwe, Wisconsin) and Lisa A. Fifield (Oneida Tribe of Wisconsin, Black Bear Clan). The books embrace the joy of being physically active, eating healthy foods, learning from elders about health, and preventing type 2 diabetes in Indian Country.

An accompanying guide called *Eagle Book Series: A Guide for Educators and Communities* provides age-specific activities. The animated version of Eagle Books as a full-feature DVD includes English, Chickasaw, Paiute, Shoshone, and Spanish languages, as well as closed captioning (English language only). Author Georgia Perez narrates the stories and children and adults from Standing Rock Sioux Tribe provide the voices for the characters. The DVD also includes activities on eating healthy and being active (http://www.cdc.gov/diabetes/projects/programs_ndwp.htm).

National Diabetes Education Program (NDEP) Tip Sheets.
This series of tip sheets provides information about diabetes for children at risk and encourage teens who have type 2 diabetes to take action to manage their disease by staying active, eating healthy, maintaining a healthy weight, and coping with emotional issues related to having diabetes. These materials can be downloaded free or ordered from: http://www.ndep.nih.gov/publications/index.aspx.

Action! See additional education materials in **Part 3 – Tools and Resources.**

C. **Provide training to school staff on healthy eating and physical activity guidelines for youth.**

D. **Implement a staff wellness program.**

Action! See *School Employee Wellness: A Guide for Protecting the Assets of Our Nation's Schools* at http://www.schoolempwell.org/.

E. **Develop coalitions** of parents, health care organizations, schools, and community organizations and leaders to promote guidelines.

Action! See IHS Community Advocacy Best Practice.

F. **Target the home environment.** Parents shape their children's eating environment beginning at birth. Improvements in the intake of healthy choices will require changes in parental choices. Obesity intervention programs targeting parents' behaviors may be more beneficial in achieving desirable outcomes related to child weight than those that exclusively focus on children (May and Dietz, 2010).

G. **Provide healthy eating messages** including:
(Dietary Guidelines for Americans, 2010; USDA Food Guide System)

- Make water the first choice for drinks.
- Choose sugar-free drinks.
- Be present at family meals.
- Pay attention to body messages for hunger and fullness.
- Eat:
  - three meals a day, including breakfast,
  - healthy meals and snacks,
  - a variety of foods from all the food groups,
  - healthy amounts of food,
  - less high-fat foods,
  - less food with added sugars,
  - more whole grains,
  - five or more fruits and vegetables every day, and
  - less fast food.

H. **Provide healthy physical activity messages,** including:
(Physical Activity Guidelines for Americans, 2008)

- Be physically active one hour or more every day Include moderate to vigorous physical activity.
- Engage in two hours or less of screen (sitting) time each day.
- Develop enjoyable lifetime fitness activities.

I. **Use education tools that support a clear message,** such as:

- *5-2-1-0 Campaign*
- *Family Calendar*
- *Go, Slow, and Whoa Foods*
- *Helping Hands*
- *Hunger-Fullness Scales*
- *Kid's Activity Pyramid*
- *Just Move It*
- *Let's Move*
- *MyPlate for Kids*

Action! See Part 3 – Appendix F. Sample Educational Tools for Healthy Eating and Physical Activity for sources for these educational tools and **See Part 3 – Appendix G. Improvement Strategies** for additional strategies for improving nutrition and physical activity behaviors.

Team Notes:

Key Recommendation 4. Make the school environment supportive of healthy eating and physical activity behaviors.

Why?

Interventions that promote healthy changes in eating behaviors need to target three interacting spheres of influence: (a) the environment, which influences the likelihood that healthy eating behaviors will be adopted through social norms, influential role models, cues to action, reinforcements, and opportunities for action; (b) personal characteristics (e.g., knowledge, attitudes, beliefs, values, confidence in one's ability to change eating behaviors, and expectations about the consequences of making those changes); and (c) behavioral skills and experience, which are related to selecting or preparing specific foods, dietary self-assessment, and decision-making.

The strategies listed here require the involvement of teachers, administrators, food service personnel, other school staff, and parents. Classroom teachers play the lead role in most of these activities, but many activities would be most effective if they were reinforced by other persons; all adults in the school community can help by serving as role models. Each school or district should determine the policies it needs to guide its nutrition and physical activity-related activities and who is responsible for the tasks.

(*Guidelines for School Health Programs to Promote Lifelong Healthy Eating* are available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/00042539.htm.)

How to Implement the Key Recommendation

A. **Engage parents, students, and staff in assessment of the school environment and planning improvements.**

   The School Health Index (SHI) (http://www.cdc.gov/HealthyYouth/SHI) may be used as a self-assessment and planning tool to analyze the strengths and weaknesses of school health policies, curricula, and services and plan for improvements. The self-assessment process involves members of your school community coming together to discuss what your school is already doing to promote good health and to identify your strengths and weaknesses. The SHI allows you to assess the extent to which your school implements the types of policies and practices recommended by CDC in its research-based guidelines for school health and safety policies and programs. After you complete the self-assessment process, you will be asked to identify recommended actions your school can take to improve its performance in areas that received low scores. You will then be guided through a simple process for prioritizing the various recommendations. The SHI provides a way for parents and others, or a team, to check out a few things they can change at a time. Small successes are empowering.

B. **Establish nutrition policies and standards.**

- Ensure:
  - a quality school meals program that provides healthy food choices, and
  - that students have appealing, healthy choices in foods and beverages offered outside of the school meals program.
- Establish nutrition standards for competitive foods.
- Provide healthy vending machine choices.
  - Evaluate vending contracts.
- Limit student access to competitive foods.
- Increase availability of healthful foods and beverages.

C. **Work toward Healthy People 2020 Nutrition Objectives.**
(http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=29)

- Do not sell or offer calorically sweetened beverages to students.
- Make fruits and vegetables available whenever other food is offered or sold.

D. **Establish physical activity policies and standards.**

- Increase opportunities for students to engage in daily physical activity.
- Build physical activity time into everyday activities, such as including movement in classroom activities.
- Ensure that safe and developmentally appropriate playground and athletic areas are available to students.

E. **Work toward Healthy People 2020 Physical Activity Objectives.**
(http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=33)

- Increase the following:
  - regularly scheduled elementary school recess,
  - proportion of adolescents who participate in daily school PE,
  - daily physical activity requirement,
  - access to school play areas, and
  - opportunities for aerobic and muscle-strengthening activity.

F. **Develop, implement, and enforce school policies to create schools that are as free as possible from advertisements that do not support healthy behaviors.**

Action! See Part 3 – Appendix G. Improvement Strategies for additional strategies for improving nutrition and physical activity behaviors.

Team Notes:

Key Recommendation 5. Provide diabetes disease management in the school setting through a multidisciplinary school health team.

Why?

Well-managed blood glucose levels not only help young people stave off the long-term complications of diabetes but also help them feel better, happier, and more productive at school. In a supportive school environment, where school personnel understand the needs of students with diabetes and can respond appropriately in emergency situations, young people can manage their diabetes effectively throughout the school day and at school-sponsored activities. Coordination and collaboration among members of the school health team and the student's personal diabetes health care team are essential for helping students manage their diabetes in the school setting. Students with diabetes are more likely to succeed in school when the student's school health team and the student's personal diabetes health care team work together. (NDEP, *Helping the Student with Diabetes Succeed*, 2010)

Effective diabetes management is in the school setting is important:

- For the immediate safety of students with diabetes
- for the long-term health of students with diabetes
- to ensure that students with diabetes are ready to learn and participate fully in school activities, and
- to minimize the possibility that diabetes-related emergencies will disrupt classroom activities.

How to Implement the Key Recommendation

Action! See the primary reference for this Key Recommendation—*Helping the Student with Diabetes Succeed: A Guide for School Personnel 2010*—for more information on any of the following implementation recommendations. This document can be downloaded at http://ndep.nih.gov/media/youth_ndepschoolguide.pdf.

A. **Review the goals of effective diabetes management at school**, including:
- maintaining optimal blood glucose control
- assisting the student with performing diabetes care tasks
- designating trained diabetes personnel

B. **Review the elements of effective diabetes management at school,** including:
- checking glucose levels
- planning for disposal of sharps and materials that come in contact with blood
- recognizing and treating hypoglycemia
- recognizing and treating hyperglycemia
- administering insulin
- planning for disasters and emergencies
- following an individualized meal plan
- getting regular physical activity
- maintaining a healthy weight
- planning for special events, field trips, and extracurricular activities
- dealing with emotional and social issues

C. **Consider each student on an individual basis.**

- What is appropriate for one student may not be appropriate for another student. Many students will be able to handle all or almost all of their non-emergency diabetes care tasks by themselves. Others, because of age, developmental level, or inexperience, will need help from school personnel.

D. **Plan and implement effective diabetes management.**

- Assemble a school health team.
  - Include people knowledgeable about diabetes, the school environment, and the Federal and State education and nursing laws.
  - Include the student with diabetes, the parents/guardian, the school nurse, and other health care personnel, staff members designated as trained diabetes personnel, administrators, the principal, the 504/IEP coordinator, office staff, the student's teacher(s), the guidance counselor, the coach, lunchroom, and other school staff members.
  - The team implements the medical orders in the Diabetes Medical Management Plan using the strategies outlined in the Individualized Health Care Plan.

- Review Federal laws.
  - The requirements of Federal laws must be met.
  - Three Federal laws address the school's responsibilities to help students with diabetes:
    - Section 504 of the Rehabilitation Act of 1973 (Section 504)
    - Americans with Disabilities Act of 1990 (ADA)
    - Individuals with Disabilities Education Act (IDEA)
  - School administrators and nursing personnel need to also determine applicable State and local laws that need to be considered in helping the student with diabetes.

- Assemble health care plans.
  - Written health care plans outline how each student's diabetes will be managed. They help students, their families, school personnel, and the student's personal diabetes health care team to know what is expected of each of them.
  - The **Diabetes Medical Management Plan (DMMP):**
    - This is developed by the student's personal diabetes health care team and contains medical orders that address all aspects of routine and emergency diabetes care.
    - The plan needs to be completed, approved, and signed by the student's health care provider before the youth returns to school, after diagnosis, or when a student transfers to a new school.
    - Review and update the plan annually or whenever there is a change in the student's prescribed care plan, level of self-management, school circumstances, or at parent request.
    - See *Helping the Student with Diabetes Succeed* for information that may be included in the DMMP, such as emergency contact info, specific medical orders, and meal and physical activity plans.

- **The Individualized Health Care Plan (IHP):**
  - This is developed by the school nurse in collaboration with the student's personal diabetes health care team and the family to implement the student's DMMP in the school setting.
  - This plan outlines the diabetes management strategies and personnel needed to meet the student's health goals, as outlined in the DMMP.
  - The school nurse needs to review the IHP with the student and parents/ guardian before it is implemented and establish a timeline to revisit the plan periodically to evaluate progress toward health goals throughout the school year.
  - See Helping the Student with Diabetes Succeed for information that may be included in the IHP, such as supplies needed and where they will be kept, need for free access to water and restrooms, and a list of trained diabetes personnel and the diabetes care tasks they will perform.
- **The Emergency Care Plans for Hypoglycemia and Hyperglycemia:**
  - These are developed by the school nurse, based on the medical orders, and are tools for school staff to recognize and treat hypoglycemia or hyperglycemia and act in an emergency.
  - These plans should be distributed to all school personnel who have responsibility for students with diabetes during the school day and during school-sponsored activities.

- Prepare an education plan (if needed).
  - Includes 504 Plan, Individualized Education Program (IEP), or other education plan and addresses each student's needs for services to manage his/her diabetes safely and effectively at school, where required under Section 504 or the Individuals with Disabilities Education Act.
  - The information in the DMMP and IHP should be used by the 504 team and IEP team to develop the 504 Plan or IEP.
  - The school health team should be part of the group that determines the student's eligibility under Section 504 or IDEA as well as the student's need for services to manage diabetes safely and effectively at school.
  - Written plans need to be updated, approved, and signed by a school representative and the parents/guardian before each school year begins (or at diagnosis of diabetes).
  - See *Helping the Student with Diabetes Succeed* for information on the content of the 504 Plan and IHP.

- Train school personnel.
  - The school nurse is the most appropriate person in the school setting to provide care for a student with diabetes. The school nurse needs to acquire and maintain competency related to diabetes management.
  - It is important to train other school personnel because not all schools have a full-time school nurse, and even if it does, this person cannot always be available during the school day, extracurricular activities, or field trips.

- School personnel need to be prepared to provide care at school and at all school-sponsored activities in which a student with diabetes participates to ensure that students with diabetes are safe, ready to learn, and able to participate in all school-sponsored events.
- Training should be facilitated by a diabetes-trained health care professional such as the school nurse or a certified diabetes educator. The school nurse or a certified diabetes educator develops and implements the training program, evaluates the ability of the trained diabetes personnel to perform the task, and establishes a plan for ongoing supervision throughout the school year.
- Conduct trainings at the beginning of each school year; repeat training when a student is diagnosed or when a student with diabetes enrolls. Provide periodic refresher training.
- Non-medical school personnel can be trained and supervised to perform diabetes care tasks safely in the school setting. In addition to learning how to perform general diabetes care tasks, such as blood glucose monitoring and insulin and glucagon administration, they should receive student-specific training and be supervised by the school nurse or another qualified health care professional.
- Assignment of school tasks must take into account State laws that may be relevant in determining which tasks are performed by trained diabetes personnel. Once determined that a task may be delegated, the school nurse should be involved in identifying which school personnel are most appropriate to be trained.
- The three levels of needed training are:
  - Level 1: All personnel should receive training that provides a basic understanding of diabetes, how to recognize and respond to signs, and symptoms of low blood glucose and high blood glucose, and who to contact immediately in case of an emergency
  - Level 2: Classroom teachers and all school personnel who have responsibility for students with diabetes throughout the school day should also receive additional training to carry out their individual roles and responsibilities and to know what to do in case of a diabetes emergency.
  - Level 3: One or more school staff members should receive in-depth training about diabetes and routine and emergency care for each student with diabetes from a diabetes-trained health care professional such as the school nurse or certified diabetes educator.
- Resources for training include:
  - National Association of School Nurses, Continuing Education: H.A.N.D.S. (Helping Administer to the Needs of the Student with Diabetes in School), http://www.nasn.org/Default.aspx?tabid=411
  - American Diabetes Association, Training Modules and Curriculum: Diabetes Care Tasks at School: What Key Personnel Need to Know, http://www.diabetes.org/schooltraining
  - State Diabetes Prevention and Control Programs, some states have developed training programs. Check with state program.

- Ensure referrals and communications occur between families, providers, and school.

- Ensure that the elements of effective diabetes management in school are addressed, including:
  - Maintaining the student's blood glucose within the target ranges specified in the DMMP. This includes plans for blood glucose monitoring, administering insulin, treating hypoglycemia, and hyperglycemia, and adhering to the meal and physical activity plans.
  - Maintaining needed supplies and determining where they will be kept.
  - Providing an appropriate location for medication storage.
  - Ensuring accessibility to scheduled medications at times set out in the student's DMMP.
  - Providing a location in the school that ensures privacy during blood glucose monitoring and insulin administration.
  - Allowing the student to eat a snack anywhere, including the classroom or the school bus, if necessary, to prevent or treat hypoglycemia.
  - Ensuring access to the restroom and water.
  - Allowing the student to see the school nurse and other trained school personnel upon request.
  - Communicating with the family and the student's personal health care team.
  - Maintaining list of trained diabetes personnel, plan for training and supervision, and the diabetes tasks they will perform.
  - Planning and developing timeline for training of other school personnel (teachers, coaches, food service, and transportation).
  - Overseeing timeline for ongoing review of student outcomes.
  - Developing strategies for health care appointments and accommodations during the day without penalty to student.
  - Maintaining confidentiality and the student's right to privacy.

Team Notes:

Key Recommendation 6. Identify and use resources and partners for behavioral and mental health risk intervention.

Why?

School-based mental health programs can improve access to, diagnosis of, and treatment of mental health problems in youth (Pediatrics, 2004; Stewart-Brown, 2006). The WHO Health Evidence Network found that school-based programs to promote mental health are effective when a "whole school" approach is used in program development and education. Elements of the "whole school" approach include making changes to the school environment, personal skills development, parent and community involvement, and sustained program implementation.

Youth who feel connected to their school—who believe that the school cares about them—are less likely to engage in high-risk behaviors including smoking, alcohol use, violence, and early sexual initiation and are more likely to have better academic performance (CDC, 2009; Center for Mental Health in Schools at UCLA, 2007).

Students with diabetes are not only dealing with the usual developmental issues of growing up, but also they are learning to manage a complex chronic disease. Diabetes can affect every facet of life, complicating the task of mastering normal developmental challenges. Depression is becoming increasingly common among children and teens, and more so in those with diabetes (NDEP, *Helping the Student with Diabetes Succeed*, 2010).

How to Implement the Key Recommendation

A. **Treat the student with diabetes the same as other students, except to respond to his/her medical needs.**

B. **Provide school-based risk interventions when possible,** depending on resources.
- Risk interventions may include prevention of bullying, substance abuse, suicide, and increasing self-esteem, depending on local needs.
- Provide regularly scheduled in-services and mental health training to school personnel on identification of symptoms, how to refer for services, and how to increase their skills in dealing with mental health and behavioral issues.
- Provide multiple opportunities for development of "life skills", such as healthy communication, problem solving, and goal setting, and integrate learning into the school day lessons and activities.
- School health interventions that involve risk intervention programs for behavioral and mental health issues (e.g., depression, low self-esteem, alcohol abuse, substance abuse, bullying, etc.) may require acute mental health support and behavioral health backup.

C. **Identify community partners and refer as appropriate.**

- Use the multidisciplinary school health team to build coalitions to address behavioral health/mental health risk reduction and problems.
- Identify community partners for risk interventions and establish cooperative agreements for on-site and off-site referral policies.
    - After-school programs
    - Church programs
    - Law enforcement programs, such as DARE
    - Summer programs
- Work closely with community elders and cultural groups.
- Provide school-based behavioral health/mental health counseling if possible, depending on resources; if not possible, establish referral policies.

D. **Use the "school to home connection" to support healthy behaviors.**

- Include activities in school lessons that are specific to a school-to-home connection where the student does something interactive with the family at home and brings this back to the school. The Diabetes Education in Tribal Schools (DETS) curriculum implementation testing demonstrated that this activity is important for community-wide change. Concepts learned in school are made part of real life at home and vice versa. For example, smoking cessation information learned in school can be shared with the family and consequently spread to the whole community. When a naming ceremony at home is discussed in school, many children learn the importance of the ceremony, and it becomes a self-esteem building activity.

E. **Expand and provide IHS mental health and counseling programs to include youth at risk for, or with, behavioral problems.**

Action! See Part 3 – Appendix G. Improvement Strategies for more ideas for mental health strategies.

Team Notes:

Additional Recommendations

Working Together with Your Community and Organization

In addition to implementing the **Key Recommendations,** programs need to work on broader community and organizational support of the goals they are trying to achieve.

Community Recommendation

Create a dialogue among local Tribal programs, communities, clinics, schools, parents, families, and youth to stress the importance of establishing healthy behaviors early in life.

Why?

Include families, schools, communities, and health care organizations to create environments in which children can form healthy behaviors early in life to prevent overweight, obesity, and chronic diseases such as diabetes (IOM, 2009).

How to Implement the Recommendation

A. **Establish a school health advisory council.**
Recruit council members, including school principal, school nurse or diabetes coordinator, teachers, physical education instructor, guidance counselor, food service representative, and student representatives. Schedule regular council meetings (for example, every four to six weeks). The following are potential activities for the school health advisory council:

- Assess baseline school food environment through student interviews, direct observation of the food and beverages available in vending machines and cafeteria, and review of school food consumption records. The School Health Index (SHI) (http://www.cdc.gov/HealthyYouth/SHI) may be used as a self-assessment and planning tool to analyze the strengths and weaknesses of school health policies, curricula and services and plan for improvements.
- Recommend policies to promote healthful eating and physical activity, and to provide diabetes education and mental health services in schools, including eating breakfast daily, limiting consumption of sugar-sweetened beverages, encouraging eating at least five fruits and vegetables daily, eating foods rich in calcium, fiber and balanced nutrients, encouraging family meals, limiting eating out (particularly fast foods), eating healthy portions, participating in at least 60 minutes of moderate to vigorous activity daily that is enjoyable, limiting TV and other screen time to less than two hours a day with no TV or computers in the bedroom.
- Raise awareness of the problem of diabetes in youth. For example, conduct awareness programs such as health education events and disseminate credible information. Identify a community role model or champion to speak at the school.
- Collaborate with Tribal diabetes and health education programs.
- Conduct a community needs assessment each year to determine what resources are available for youth.

B. **Establish community partnerships.**

- Select partners.
  - Make list of possible partners at all community levels and learn more about them.
  - Learn about existing community events.
- Contact partners.
  - Schedule meetings and maintain regular communication.
  - Create a shared vision.

Action! See two NDEP Resources for Community Partnerships that provide practical ideas for establishing community partnerships:

- Community Partnership Guide
  http://www.ndep.nih.gov/publications/PublicationDetail.aspx?PubId=121
- American Indian Alaska Native Community Partnership Guide
  http://www.ndep.nih.gov/media/AIsupplement.pdf

Action! See Part 3 – Tools and Resources for more ideas for potential activities and resources.

Team Notes:

Organization Recommendation

Establish infrastructure and employ strategies that support the coordination of school health personnel, activities, priorities, and the implementation of Best Practices.

Why?

Elements of a high-quality school health program include (ASHA, http://www.ashaweb.org/i4a/pages/index.cfm?pageid=3278):

- Active leadership from school administrators and a school/community team who set priorities based on community needs and values and link with community resources
- A commitment of time, personnel, and resources to create programs that promote the health of school students, faculty, and staff, provide services that promote healthy social and emotional development, and remove barriers to students' learning
- Working with other public, voluntary, and private-sector organizations, schools can play a critical role in reshaping social and physical environments, and providing information, tools, and practical strategies to adopt healthy lifestyles (http://www.cdc.gov/healthyYouth/KeyStrategies).

How to Implement the Recommendation

A. **Implement the CDC *Ten Strategies to Promote Physical Activity and Healthy Eating*.** http://www.cdc.gov/healthyYouth/KeyStrategies

1. Address physical activity and nutrition through a Coordinated School Health Program (CSHP). See *Healthy Youth* at http://www.cdc.gov/HealthyYouth/CSHP and *Health Is Academic: A Guide to Coordinated School Health Programs* at http://www.schoolhealth.com/product/educational+aids/books/nursing-school+health/health+is+academic-+a+guide+to+coordinated+school+health+programs.do for information on Coordinated School Health. http://store.tcpress.com/0807737135.shtml

2. Maintain an active school health council and designate a school health coordinator. See *Promoting Healthy Youth, Schools and Communities: A Guide to Community-School Health Councils* at http://www.cancer.org/schoolhealthcouncil.

3. Assess the school's health policies and programs and develop a plan for improvement. See CDC's *School Health Index (SHI): A Self-Assessment Planning Guide* at http://www.cdc.gov/HealthyYouth/SHI.

4. Strengthen the school's nutrition and physical activity policies. See *Fit, Healthy, and Ready to Learn: A School Health Policy Guide (FHRTL)* at http://nasbe.org/index.php?option=com_content&view=article&id=396:fit-healthy-and-ready-to-learn-a-school-health-policy-guide&catid=53:shs-resources&Itemid=372 Sample policies are also found at http://www.actionforhealthykids.org/resources_wp.php.

5. Implement a high-quality health promotion program for school staff. *See School Employee Wellness: A Guide for Protecting the Assets of Our Nation's Schools* at http://www.schoolempwell.org/.

6. Implement a high-quality course of study in health education for students. See *Health Education Curriculum Analysis Tool* (HECAT) at http://www.cdc.gov/HealthyYouth/hecat/index.htm

7. Implement a high-quality course of study in physical education. See *Physical Education Curriculum Analysis Tool (PECAT)* at http://www.cdc.gov/HealthyYouth/PECAT.

8. Increase opportunities for students to engage in physical activity.

9. Implement a quality school meals program. See *Changing the Scene: Improving the School Nutrition Environment* at http://www.fns.usda.gov/tn/resources/changing.html.

10. Ensure that students have appealing healthy choices in foods and beverages offered outside the school meals program. See *Making it Happen: School Nutrition Success Stories* at http://www.cdc.gov/HealthyYouth/nutrition/Making-It-Happen/download.htm and Nutrition Standards for Food in Schools: Leading the Way Toward Healthier Youth at http://iom.edu/Reports/2007/Nutrition-Standards-for-Foods-in-Schools-Leading-the-Way-toward-Healthier-Youth.aspx

B. **Create an infrastructure to support school connectedness.** Provide:

- support (staffing, space, time, and money) for effective school health interventions (e.g., commit funds for permanent staff positions)
- funding for training and continuing education to school teachers and staff, health care providers, and field health personnel related to diabetes
- funding for equipment, incentives, and other resources to engage youth in healthy and safe behaviors and enjoyable activities

C. **Develop partnerships involving all levels of the community.**

- Develop partnerships among the school (including students, teachers, staff, and parents), the health care system, community programs, and organizations. Invite the school representative to be part of the wellness or diabetes team focusing on youth in school. For example, establish regular meetings among school and health care organizations to ensure appropriate care and follow-up.
- Establish local coordinating councils for children and youth, including representatives from schools, health providers, parents, and Tribal government.
- Collaborate with parent organizations, schools, and community providers to provide parent education and support services through schools.
- Advocate for the IHS to sponsor and support "plant a seed" programs at schools that will help communities "start" their school health programs.

D. **Develop policies to promote wellness.**

- Develop and advocate for Tribal policies or resolutions to address wellness. For example, develop policies or resolutions that address vendors, stores, health promotion activities, wellness centers, and built environments, such as safe walking paths.
- Support policy and environmental changes in schools, teen centers, health, and Tribal centers. For example, provide healthy food choices that are lower in fat and calories, such as fresh fruit and healthy beverage choices—100% juices or water. Create policies for mandatory physical education for all students.
- Identify school health as a key priority in the school system's annual goals.

E. **Build success.**

- Recognize schools for success with awards and incentives.
- Share and promote lessons learned from school health success stories throughout the community.
- Encourage creative ways for individual students, staff and schools to tell their stories as role models and inspiration for others.

F. **Provide technical assistance to schools to develop and implement school nutrition policies and federally mandated school wellness policies. Sample policies are** available at: http://www.fns.usda.gov/tn/healthy/wellnesspolicy_examples.html

Team Notes:

Part 3 Appendices, Tools, and Resources

Appendix A. Supplemental Information

1. Importance of a School Health Program

After the family, the school is the primary institution responsible for the development of young people in the United States. The health of young people is linked to their academic success, and the academic success of youth is strongly linked to their health. Helping students stay healthy is a fundamental part of the mission of schools. School health programs and policies may be one of the most efficient means to prevent or reduce risky behaviors and prevent serious health problems among students.
(CDC, *Healthy Youth,* http://www.cdc.gov/HealthyYouth/CSHP)

2. Goals and Components of a Coordinated School Health Program

A coordinated school health program (CSHP) uses a systematic team approach in collaboration with school, family, and community to support the adoption of health-enhancing behaviors by students and improve their health and learning.

Goals of a CSHP include improving:

- health knowledge, attitudes, and skills
- health behaviors and health outcomes
- educational outcomes
- social outcomes

The components of a CSHP are:

- health education
- physical education
- health services
- mental health and social services
- nutrition services
- healthy and safe environment
- family and community involvement
- staff wellness

A coordinated school health program works to improve the quality of these components and expand collaboration among the people responsible for them in the school and in the community. A well-coordinated school health program results in an organized set of courses, services, policies, and interventions that meet the health and safety needs of all students from kindergarten through grade 12.

3. Benefits and Risks of Implementing This Best Practice

The potential benefits to school-age youth of participating in coordinated school health include:

- increased academic success
- improvement in health-enhancing behaviors, including eating healthfully, and being physically active
- prevention of overweight and obesity
- prevention of type 2 diabetes
- effective management of diabetes in the school setting
- improved behavioral and mental health
- more access to interventions and resources
- an improved school environment that supports health

Collaboration among school, family, clinical, and community resources is especially important and necessary in rural areas where resources and trained health professionals are in short supply (Cornwall et al., 2007).

Through collaboration among school, family, and community, and because students can be change agents for health in the home, these benefits can extend to families and the wider community.

There are no known risks to implementing this Best Practice.

4. Health Questions Addressed by Best Practice

What are the best:

- ways to involve family and community in the development and implementation of a school health program for school-age youth at risk for, or with, diabetes?
- methods to identify school-age youth who are overweight?
- ways to increase healthy behaviors related to eating and physical activity in school-age youth?
- ways to improve the school health environment so it supports health eating and physical activity behaviors?
- ways to develop a multidisciplinary school health team? How can this team best provide effective diabetes disease management in the school setting for students with diabetes?
- methods to identify and use resources and partners for behavioral and mental health risk intervention?

5. Sustaining a Coordinated School Health Program

Organizational challenges of implementing this Best Practice may include funding, staffing, and competing priorities, and should be addressed in the organization's strategic plan. Implementing a Best Practice also has cost implications that may require the organization to prioritize funding.

In addition, there are critical issues that must be addressed to enhance program success and sustainability. These include:

- strong leadership and organizational support that includes funding for staff, training, and resources,
- policies that support an effective school health program,
- an organizational strategic plan that addresses school health care,
- mentoring of primary care staff by school health champions,
- active participation by school staff members on the diabetes care team (e.g., initiate a school health care workgroup within the diabetes team), and
- data systems that provide timely access to relevant information.

Appendix B. Key Measures Example

Diabetes increasing among youth. Our health care center and community are concerned about the increasing number of youth who are overweight and have type 2 diabetes.

Diabetes team takes action. Our diabetes team talked about the current role of our schools in addressing this problem and whether they could be more involved. We read the School Health Best Practice and talked about the Key Recommendations.

Identified sources of data. Local data included:

- School data for:
    - School health advisory committee membership and attendance
    - Completion of a school health environment assessment (SHI)
    - Number/age of students
    - Students with diabetes
    - Students who had BMI calculated in the most recent past school year
    - Students who had a BMI calculated whose BMI was above the 85th percentile.

      Data indicated:

        - There are two parents and two community representatives on the school health advisory committee
        - An SHI assessment completed at the end of last year had a score of 30%.
        - 40% of students grade K-8 had BMI calculated last school year; none completed to date this year
        - Of those who had BMI calculated, 20% had a BMI over the 85th percentile. It was not clear how many of these students were referred to their health care provider

Selected suitable Best Practice. After thinking carefully about our goals and resources, and reviewing data, we decided the School Health Best Practice was a good fit for us. We chose to work on two of the Key Recommendations: screening youth for overweight and improving the school environment to support healthy eating and physical activity behaviors.

Identified target population. We decided to start implementing this Best Practice with school-age children ages 5 through 15 (K–8).

Identified SMART objectives based on our resources and data:

- To increase the elementary school's score on an SHI assessment from 30% to 50% during the current school year.
- To increase the percentage of students (K–8) with a BMI calculated from 0% to 75% by the end of the school year.
- To increase the percentage of students with a BMI > the 85th percentile who are referred to their health care team from 0% to 90% by the end of the school year.

Selected Key Measures. We chose the corresponding Key Measures for these Objectives and Key Recommendations. Data will be collected and reviewed at baseline and mid-year.

Selected Key Measures for School Health Best Practice

A. Measure	B. Baseline or beginning value (collected prior to starting activities)	C. Most recent value (if applicable)	D. Data source (where did these numbers come from)
1. * School Health Index (SHI) score	30%	35% score of SHI completed in November	SHI Assessment documented in school health advisory minutes
2. * Percent of students with a BMI calculated	0% as of 10/24/2010	50% as of 12/01/2010	Special Diabetes Program Database, School Records
3. * Percent of youth with a BMI > 85% who are referred to their health care team	0% as of 10/24/2010	75% as of 12/01/2010	Special Diabetes Program Database, School Records

* Required Key Measure

Appendix C. Improving School Health Programs Example

1. **Who is your target population?**
   - School-age youth in our K–-6 community schools.
2. **What are you trying to do?**
   - Increase both healthy eating and physical activity behaviors.
3. **How will you know if what you do makes things better?**
   - Collect and use data, including eating and physical behavior survey of students in community schools—completed before educational interventions and at 4 and 8 months after the interventions—on an ongoing basis. Analyze the data and use it to plan next steps.

   Improved data results suggest that things are getting better. For example:

   - During the current school year, there was a 20% increase in self-reported healthy eating behaviors and a 35% increase in self-reported healthy physical activity behaviors by students in K–6.
   - During the current school year, the elementary school's score on the School Health Index (SHI) increased from 30% to 60%.
4. **What can we do to make things better?**
   - Receive leadership support to improve school health.
   - Include family and community representatives on the school health advisory committee.
   - Continue to assess the school environment.
   - Diabetes team members work with the school health advisory committee to identify gaps in school health and identify realistic solutions.
   - Diabetes team works with the school to train staff in promoting healthy eating and physical activity behaviors in staff and students.
   - Diabetes team works together with the school to establish and streamline referral processes between school and health care providers.
   - Diabetes team works with the school health advisory committee to develop an evaluation plan to monitor progress made in school health services and outcomes.
   - Learn from evaluation results; use results to plan the next steps that can be taken to improve school health services and outcomes.

Appendix D. Considerations for Educators When Providing Information About Healthy Weight

Source: IHS *Youth Staying Healthy: A Diabetes Prevention Curriculum for Youth Ages 8-12*

Over the past three decades, the childhood obesity rate has more than tripled for children between the ages of six and eleven years, and more than doubled for adolescents between the ages of twelve and nineteen years. It is postulated that reduction of weight and insulin resistance will reduce the risk for type 2 diabetes in children and adolescents. Studies that will determine what strategies work best for children and adolescents are under way.

Staying at a healthy weight needs to be part of education offered to help youth and their families reduce their risk for diabetes. There are several considerations the educator needs to take into account in order to make this education appropriate and effective:

- The height, shape, and size of the body vary among people.
- Genetics and environmental factors both play a role in determining body stature.
- Healthy weights are described in ranges. Each person has a weight range that is healthy for him/her.
- Children are growing physically and emotionally.
- All children experience growth spurts during adolescence. Before ages 11 or 12 years, girls may get taller and heavier, and have more fat around their hips, waist and breasts. Boys experience their growth spurt from age 10 to 16 years. They will get taller, gain weight, have broader shoulders, and develop muscles.
- Pre-teens (ages 10–12) need to be reassured that some of their weight gain is a normal part of puberty.
- Pre-teens may become sensitive about their appearance, particularly as they begin comparing themselves to peers and images in the media.
- Children and their families should be encouraged to accept themselves and their body shape.
- It is important that children know others love and accept them no matter how much they weigh.
- Communication about a child's weight status to parents needs to be conveyed carefully and with sensitivity.
- When counseling parents and children, use the term 'overweight' and avoid the term 'obese.'
- Labeling children as 'obese' or 'overweight' may lower the child's self-esteem. Parents worried about their child becoming 'obese' may think that restricting food will keep them from getting 'fat.'
- Diets, particularly low-calorie diets, may not give children the calories and nutrition they need to grow and may be harmful.
- Restricting food intake can make a child feel insecure about food and cause him/her to eat more, gain unhealthy amounts of weight, and/or develop unhealthy eating habits that can lead to eating disorders.

- A pediatrician or primary care provider is the best person to determine if a child is overweight. Most doctors use special growth charts to follow a child's growth pattern and determine if a child is underweight, overweight, or within a healthy weight range.
- Body mass index (BMI) is a standard developed to determine if a person is at risk for chronic diseases. It is calculated by dividing weight in kilograms by height in meters squared.
- BMI is age and gender specific for children. One measurement plotted on a growth chart can be used to screen children for nutritional risk, but it does not provide adequate information to determine the child's growth pattern. When plotted correctly, a series of accurate weights and measurements of stature offer important information about a child's growth pattern over the years. Children tend to grow predictably and follow a specific percentile on the growth chart. If a recent measurement shows a rapid shift up or down in any growth pattern, then this is an indicator that further assessment may be needed
- Generally, the goal for children who are overweight, or have accelerated weight gain, is to slow down the rate of weight gain while allowing for normal growth and development, giving the body a chance to catch up with weight as they grow in height.
- Unhealthy weight gain can be prevented with small changes in healthy eating behaviors and by increasing physical activity.
- Make diabetes prevention education part of a comprehensive program, which includes structured nutrition education, physical activity, medical screening, and intervention, and psychological support targeted at youth at risk for diabetes.
- Overweight youth need to be referred to appropriate health care providers for diagnostic testing for diabetes, as indicated, a medical evaluation for other complications associated with childhood overweight, necessary treatment for high blood pressure and dyslipidemia, and counseling on nutrition, physical activity, and staying at a healthy weight.

Sources:

- BodyWorks, http://www.womenshealth.gov/bodyworks/
- CDC: Use and Interpretation of the CDC Growth Charts, http://www.cdc.gov/nccdphp/dnpa/growthcharts/guide_intro.htm
- Indian Health Services Best Practices: Youth and Type 2 Diabetes (2009), http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Tools/BestPractices/2009_BP_Youth_Type2_Diabetes.pdf
- Ellyn Satter, *Your Child's Weight: Helping Without Harming*, http://www.ellynsatter.com/physical-products-books-your-childs-weight-helping-without-harming-p-790.html

Appendix E. Steps for Calculating and Interpreting BMI Using the BMI Percentile Calculator

1. Obtain accurate height and weight measurements.
2. Calculate the BMI and percentile using the Child and Teen BMI Calculator at http://apps.nccd.cdc.gov/dnpabmi. The BMI number is calculated using standard formulas.
3. Review the calculated BMI-for-age percentile and results.
   - The BMI-for-age percentile is used to interpret the BMI number because BMI is both age- and sex-specific for children and teens. These criteria are different from those used to interpret BMI for adults, which do not account for age or sex. Age and sex are considered for children and teens for two reasons:
     - The amount of body fat changes with age (BMI for children and teens is often referred to as *BMI-for-age.)*
     - The amount of body fat differs between girls and boys.
   - The CDC BMI-for-age growth charts for girls and boys take into account these differences and allow translation of a BMI number into a percentile for a child's or teen's sex and age.
   - After BMI is calculated for children and teens, the BMI number is plotted on the CDC BMI-for-age growth charts (for either girls or boys) to obtain a percentile ranking. Percentiles are the most commonly used indicator to assess the size and growth patterns of individual children in the United States. The percentile indicates the relative position of the child's BMI number among children of the same sex and age. The growth charts show the weight status categories used with children and teens (underweight, healthy weight, overweight, and obese).
4. Find the weight status category for the calculated BMI-for-age percentile as shown in the following. These categories are based on expert committee recommendations.

Weight Status Category

Weight Status Category	Percentile Range
Underweight	Less than the 5th percentile
Healthy weight	5th percentile to less than the 85th percentile
Overweight	85th to less than the 95th percentile
Obese	Equal to or greater than the 95th percentile

Appendix F. Sample Educational Tools for Healthy Eating and Physical Activity

5-2-1-0 Campaign

Many national and state initiatives use the 5-2-1-0 slogan for healthy behaviors:

- five fruits and/or vegetables every day
- two hours or less screen-time each day
- one hour or more physical activity every day
- zero sugary drinks

Sources include:

- Keep ME Healthy 5-2-1-0 Power Up Project
- 5-2-1-0 Healthy NH
- Additional sources can be found by searching the Internet.

Family Calendar

- This visual assists youth and their families with creating family meal times and family physical activity times.
- Source: *Youth Staying Healthy: A Diabetes Prevention Curriculum for Youth Ages 8-12*, http://www.ihs.gov/MedicalPrograms/Diabetes/RESOURCES/Catalog/rde/index.cfm?module=catalog&opt=3

Go, Slow, and Whoa Foods

Provides an easy way to learn about which foods are lower in fat and calories by thinking in terms of **GO, SLOW**, and **WHOA**.

Source: http://www.nhlbi.nih.gov/health/public/heart/obesity/wecan/eat-right/choosing-foods.htm

Helping Hands

Helping Hands and Everyday Objects visuals can be used as serving size guides.

Source: *Youth Staying Healthy: A Diabetes Prevention Curriculum for Youth Ages 8-12*, http://www.ihs.gov/MedicalPrograms/Diabetes/RESOURCES/Catalog/rde/index.cfm?module=catalog&opt=3

Hunger-Fullness Scales

A Hunger-Fullness Scale is a tool to help a person pay attention to his/her body messages for hunger and fullness. This helps him/her eat because of body hunger and stop eating when he/she is comfortably full.

Source: *Youth Staying Healthy: A Diabetes Prevention Curriculum for Youth Ages 8-12*, http://www.ihs.gov/

Kid's Activity Pyramid

This visual teaches kids about the importance of physical activity through colorful, ethnically-diverse graphics and simple language.

Sources:

- Park Nicollet Health Source: http://www.parknicollet.com/
- Additional sources can be found by searching the Internet.

Just Move It!
Just Move It is a national campaign to promote physical activity for American Indians and Alaska Natives.

Source: http://www.justmoveit.org/

Let's Move!
Let's Move! is a comprehensive initiative dedicated to solving the challenge of childhood obesity within a generation. Combining comprehensive strategies with common sense, Let's Move! is about putting children on the path to a healthy future during their earliest months and years, giving parents helpful information and fostering environments that support healthy choices, providing healthier foods in our schools, ensuring that every family has access to healthy, affordable food, and helping kids become more physically active.

Source: http://www.letsmove.gov/

My Pyramid for Kids*
MyPyramid for Kids is a child-friendly version of the MyPyramid Food Guidance System. It was developed to help motivate children 6 to 11 years old to make healthy food choices and be physically active every day. The MyPyramid for Kids messages are the same as MyPyramid but are written in simpler language for children. MyPyramid for Kids includes illustrations of children involved in a variety of physical activities and shows healthy foods from each food group that will appeal to children. The graphic, slogan, and messages of MyPyramid for Kids were developed for and tested with elementary school-aged children.

Source: http://www.choosemyplate.gov/

Appendix G. Improvement Strategies

Improving Mental Health

- Enhance health curricula to include a behavior skills focus and to devote adequate attention to mental health, nutrition, physical activity, reducing sedentary behaviors, and energy balance.
- Involve school health services in mental health and obesity prevention efforts.
- Provide preventive programs to decrease risk factors.
- Provide a positive, friendly, and open social environment at school.
- Change the school psychosocial environment. For example, provide a positive and supportive school environment that allows youth to have an opportunity to talk about issues that concern them.
- Ensure that each student has access to community and family supports that are associated with healthy emotional development.
- Establish a sense of student "connectedness" to schools by offering multiple and varied curricular and extracurricular activities, to increase their feelings of success in some aspect of school life.
- Provide opportunities for positive individual interactions with adults at school, so that each student has positive adult role models and opportunities to develop a healthy adult relationship outside of his or her family.
- Provide families with support services and implement prevention-oriented curricula (e.g., curricula that decrease risk-taking behaviors).
- Publicize and enforce behavioral expectations, rules, and discipline plans.
- Involve students, teachers, staff, parents, and community members who are working together to care for themselves and others.
- Provide education on life skills and healthy risk-taking to support healthy behaviors and emotional wellness.
- Learn how and where to access information that supports healthy choices. Give youth the information in different formats and in different settings throughout the school year, to support youth involvement in their own health care and lifestyle choices.
- Develop personal skills in class through peer education strategies and experiential learning activities. Personal skills include communication, decision-making, conflict resolution, and negotiation, reducing violence and aggression, setting goals, self-advocacy and assertiveness, time management, problem solving, budgeting, leadership, personal health and safety, and anger management. Also, help youth identify depression and learn about ways to seek help for concerns about emotional well-being.
- Incorporate a mental and emotional health promotion program into the ongoing school health curricula and activities.
- Focus on promoting mental health rather than preventing mental illness.
- Establish partnerships with existing mental health resources to obtain full-time services in the school.

- Utilize adults, elders, and traditional practitioners to promote mental well-being. Promoting hope is also important for youth who are concerned about their health or know others struggling with diabetes, or with other health concerns.
- Establish peer youth mentorship programs in schools.
- Promote mental health through counseling programs.

Improving Nutrition

- Provide access to a variety of nutritious and appealing meals that accommodate the health and nutrition needs of all students.
- Integrate traditional and cultural food choices and eating behaviors into activities.
- Provide information displays on serving size and caloric, carbohydrate, and fat content of foods served in the school to cafeteria workers, students, and school staff.
- Adopt a coordinated school nutrition policy that promotes healthy eating through a supportive school environment. For example, eliminate the sale of all sugary drinks, candy bars, and other foods high in calories, fat, or sugar from school buildings and if possible, from within one-half mile of school grounds.
- Involve parents in nutrition education through homework.
- Provide role models (e.g., teachers, parents, other adults, older students, and celebrities or fictional characters) for healthy eating.
- Develop policies regarding food choices for school parties, fundraisers, and other activities.
- Conduct student taste-testing events to find acceptable low-fat products.
- Provide many healthy foods, including familiar, unfamiliar, traditional, and culturally diverse foods, for students to taste in an enjoyable social context.
- Let students prepare meals and snacks.
- Develop "Healthy Food" coupons for teachers to award to students, and redeemable in the lunchroom or at local food stores.
- Conduct nutrition education for each grade and assess student fruit and vegetable intake at the beginning and end of the school year.
- Display posters promoting healthful food choices in prominent locations. Have a poster competition among all students in the school and display their work for all to enjoy.
- Set aside time every day for health/nutrition education class.
- Provide peer-led health interventions. For example, healthy eating interventions can be very effective for young women. Give examples of the benefits associated with healthy eating such as healthy weight, increased bone density, and decreased depression.
- Have students role-play choosing foods from menus.
- Have students examine media and social influences on eating and role play ways to handle these pressures.

Improving Physical Activity

- Provide daily, structured, developmentally oriented and culturally appropriate physical education classes for all grade levels.
- Provide extracurricular physical activity programs that meet the needs and interests of all students.
- Hire full-time physical education teachers in the schools.
- Focus instruction for all elementary and pre-school students on fundamental locomotor fitness skills appropriate for this age range—in other words, do not permit fitness instruction to focus on student athletes more than for non-athletes.
- Focus instruction for middle and high school students on lifetime fitness skills and recreational activity.
- Conduct pre- and post-assessments and include mid-year reviews such as Fitness Gram, Presidential Fitness Challenge, or process measures such as step counts with pedometers and exercise logs.
- Use national standards such as the National Association for Sport and Physical Education NASPE National Standards for physical education. See Tools and Resources section, above.
- Provide training for teachers to maximize the effectiveness of physical activity approaches.
- Integrate traditional and cultural activities into the physical activity plan. Examples may include pow-wow dances and modified American Indian games.
- Provide opportunities for all youth to participate in at least 30 minutes of moderate to vigorous physical activity during the school day.
- Expand opportunities for physical activity through physical education classes; intramural and interscholastic sports programs; physical activity clubs, programs, and lessons; after-school use of facilities; use of schools as community centers; and encouragement of walking and biking to school programs.
- School health advisory council should adopt a coordinated physical activity policy that promotes health through a supportive school environment.
- Allocate adequate resources including budget and facilities for physical activity programs.
- Provide time within the school day for unstructured physical activity such as stand and stretch frequently in class, movement around classroom instead of sitting the entire class.
- Discourage the use of or withholding of physical activities as a method of punishment.
- Have students examine media and social influences on physical activity and role play ways to handle these pressures.

Tools and Resources

A. Managing Diabetes in Youth

American Diabetes Association

- Diabetes Care Tasks at School: What Key Personnel Need to Know. The following resources can be used to train teachers and other school personnel and provide them with a basic understanding of the key components of diabetes care. http://www.diabetes.org/schooltraining
- Diabetes Medical Management Plan (DMMP). The DMMP can be used to train teachers to be aware of the student with diabetes' needs and how to respond in case of emergency. A sample plan may be customized: http://www.diabetes.org/living-with-diabetes/parents-and-kids/diabetes-care-at-school/written-care-plans/diabetes-medical-management.html
- Safe at School. This campaign can be implemented to create a medically safe environment for youth with diabetes. http://www.diabetes.org/living-with-diabetes/parents-and-kids/diabetes-care-at-school/safe-at-school/

IHS

- Diabetes Best Practice for Youth Type 2 Diabetes Prevention and Treatment National Diabetes Education Program (NDEP).
- Helping the Student with Diabetes Succeed: A Guide for School Personnel. This manual provides a framework and essential tools for effective diabetes management in the school setting. http://ndep.nih.gov/media/Youth_NDEPSchoolGuide.pdf
- Tips for Teens with Type 2 Diabetes. The National Diabetes Education Program (NDEP) has a series of tip sheets that provide information about diabetes for children at risk and encourage teens who have type 2 diabetes to take action to manage their disease by staying active, eating healthy, maintaining a healthy weight, and coping with emotional issues related to having diabetes. These materials can be downloaded free or ordered at: http://www.ndep.nih.gov/publications/index.aspx
- Support for Behavior Change Resource (SBCR). The National Diabetes Education Program (NDEP) has launched a new set of tools and resources to support behavior change for people with or at risk for diabetes and the health care professionals who counsel and care for them. Visit the NDEP website at http://www.YourDiabetesInfo.org and click on Support for Behavior Change under What's New and explore the multiple tools and resources that have been assembled by a team of experts in behavior change. Search for research articles, tools and resources by target area, behavior strategy and audience. From January 2010 through March 2010, you can also provide feedback and offer additional resources—just click on How to Submit Materials on the SBCR page at: http://www.ndep.nih.gov/sbcr/index.aspx.
- Slide presentation about diabetes for school district and other staff. http://ndep.nih.gov/hcp-businesses-and-schools/Schools.aspx

B. Health Curricula, Books and Other Education Materials

Conversation Maps: Healthy Kids

- Tool to engage youth in an interactive learning experience. http://www.healthyi.com/

Diabetes Education in Tribal Schools (DETS)

- DETS curriculum materials can be used in the schools for education about diabetes, nutrition, and physical activity. These materials were specifically written for the American Indian and Alaska Native population.
  http://www3.niddk.nih.gov/fund/other/dets/currsupplements.htm
  http://www.kbocc.org/dets.htm

The Eagle Books

- The Eagle Books are inspired by the wisdom of traditional ways of health in Tribal communities. The stories of wise eagle, grateful rabbit, clever coyote and four young friends are introduced in the four-book series written by Georgia Perez, a community health representative for 19 years in Nambe Pueblo, New Mexico, and illustrated by Patrick Rolo (Bad River Band of Ojibwe, Wisconsin) and Lisa A. Fifield (Oneida Tribe of Wisconsin, Black Bear Clan). The books embrace the joy of being physically active, eating healthy foods, learning from elders about health, and preventing type 2 diabetes in Indian Country. An accompanying guide called *Eagle Book Series: A Guide for Educators and Communities* provides age-specific activities. The animated version of Eagle Books as a full-feature DVD includes English, Chickasaw, Paiute, Shoshone, and Spanish languages, as well as closed captioning (English language only). Author Georgia Perez narrates the stories and children and adults from Standing Rock Sioux Tribe provide the voices for the characters. The DVD also includes activities on eating healthy and being active. http://www.cdc.gov/diabetes/pubs/eagle.htm

Growing Healthy: A Comprehensive Health Education Curriculum (Grades K-6)

- Developed by the National Center for Health Education to provide teachers with the tools needed to effectively teach health education—includes a compendium of lessons on diabetes, nutrition and physical activity.

Kids Walk-to-School: Then and Now—Barriers and Solutions

- This website explores the barriers to walking and bicycling to and from school, and offers potential solutions to increase opportunities for daily physical activity by encouraging children to walk to and from school in groups accompanied by adults.
  http://www.cdc.gov/nccdphp/dnpa/kidswalk/then_and_now.htm

Media Smart Youth—Eat, Think and Be Active

- NICHD Resource Center. Interactive after school program for children ages 11–13 designed to teach about the media world and how it can affect health.
  http://www.nichd.nih.gov/msy

Move It! and Reduce Your Risk of Diabetes School Kit

- The Move It! kit promotes physical activity in the school setting to help reduce risk for diabetes among American Indian and Alaska Native youth. The kit includes fact sheets on diabetes in American Indian and Alaska Native youth, posters, and examples of successful school activities using Move It! materials. http://www.ndep.nih.gov/media/moveit_school_kit.pdf

The Physical Activity Kit (PAK): Staying on the Active Path in Native Communities…a Lifespan Approach!

- This toolkit is based on best and promising practices to increase physical activity and can be used in schools, communities, worksites, Head Start programs, elderly centers, and youth programs. http://www.hncp.org/wst/hpdp/PAK/PAK%20Books/PAK%20Book%208.pdf

Success Stories (2009)

- Local, State and non-governmental organization examples from the Department of Adolescent and School Health, Centers for Disease Control. http://www.cdc.gov/healthyyouth/stories/pdf/ss_booklet_08.pdf

USDHHS Office of Women's Health

- BodyWorks: A Toolkit for Healthy Girls and Strong Women. Program designed to help parents and caregivers of young adolescent girls (9–-13) improve family eating and activity habits. http://www.4woman.gov/bodyworks/toolkit

***Youth Staying Healthy* Curricula**

- **Youth Staying Healthy: A Diabetes Prevention Curriculum for Youth Ages 8-12** This curriculum is for health professionals working in American Indian and Alaska Native Communities and provides a framework for diabetes prevention education for children ages 8 to 12 who are at risk for diabetes. It also includes ideas for engaging parents and caregivers. The curriculum provides lesson plans, visuals, and activities for promoting healthy behaviors. A free copy can be ordered from the online catalog at: http://www.ihs.gov/MedicalPrograms/Diabetes/RESOURCES/Catalog/rde/index.cfm?module=catalog&opt=3

- **Youth Staying Healthy: A Type 2 Diabetes Curriculum for Teens** – This curriculum provides health professionals working with American Indian and Alaska Natives with a framework for diabetes education for adolescents ages 13-18. The lesson plans, visuals and activities focus on life skills and diabetes self-care behaviors. A section on School Health is included. It also includes ideas for engaging parents and caregivers. A free copy can be ordered from the online catalog at http://www.ihs.gov/.

C. Mental and Behavioral Health

School-based Mental Health Tool Kit 2008

- Cuyahoga County, Ohio School District. The purpose of this tool kit is to provide school administrators, support staff, teachers, and parents with information to facilitate the implementation or improvement of school-based mental health services. http://www.units.muohio.edu/csbmhp/network/toolkit.pdf

D. Nutrition and Physical Activity

Bright Futures in Practice: Nutrition **and** ***Bright Futures in Practice: Physical Activity***

- These curricula cover eating well and physical fitness from infancy through adolescence. http://www.brightfutures.org/

Destination: Wellness—You're in the Driver's Seat

- USDA Health Meals Resource System. Nutrition education toolkit for high school students. http://schoolmeals.nal.usda.gov/training/md

IHS National Nutrition and Dietetics Training Program (NNDTP).

- The IHS NNDTP provides a wide range of nutrition training tailored to IHS, Tribal, and urban Indian health program professionals and paraprofessionals. http://www.ihs.gov/medicalprograms/nutrition

Just Move It!

- Just Move It is a national campaign to promote physical activity for American Indians and Alaska Natives. http://www.justmoveit.org/

Let's Move!

- Let's Move! is a comprehensive initiative dedicated to solving the challenge of childhood obesity within a generation. Combining comprehensive strategies with common sense, Let's Move! is about putting children on the path to a healthy future during their earliest months and years, giving parents helpful information and fostering environments that support healthy choices, providing healthier foods in our schools, ensuring that every family has access to healthy, affordable food, and helping kids become more physically active. http://www.letsmove.gov/

Power of Choice: Helping Youth Make Healthy Eating and Physical Activity Decisions.

- USDA Leader guide, sessions, handouts, and activities for 11–13 year olds. http://www.fns.usda.gov/tn/Resources/power_of_choice.html

School Nutrition Policy: Choose Your Own Adventure.

- The school nutrition policy lesson uses obesity research to help students develop a new nutritional policy to improve health, and then the students investigate the outcome of the policy's implementation. http://www.cdc.gov/excite/ScienceAmbassador/ambassador_pgm/lessonplans/Wortmann%20Policy%20Lesson%20Plan.pdf

Smart-Mouth.org.

- This tool provides games to teach middle-school-aged children about how the food environment (e.g., advertising, portion sizes, and school vending choices) influences their food choices. Kids can see how their favorite restaurant foods stack up, play "true or false" with a food industry spokesman, and "bite back" by asking food companies and government officials to support healthy eating. http://www.smart-mouth.org

SPARK—Sports, Play, and Active Recreation for Kids!

- Lifelong wellness program for children and teachers dedicated to improving the quantity and quality of physical activity. http://www.sparkpe.org/

Team Nutrition

- USDA offers training and technical assistance for food service, nutrition education for children and their caregivers, and school and community support for healthy eating and physical activity. http://www.eatright.org/

E. Risk Assessment

American Heart Association Policy Position Statement on the Prevention, Assessment, Diagnosis and Treatment of Child and Adolescent Obesity in the Healthcare Setting

- These guidelines can be used by health care providers to prevent childhood obesity and assess and manage children's weight. http://www.americanheart.org/downloadable/heart/1204665035557Policy%20Position%20Statement%20on%20the%20Treatment%20of%20Childhood%20Obesity%20in%20the%20Health%20Care%20Environment.pdf

BMI—Body Mass Index: Calculator for Child and Teen

- The Centers for Disease Control and Prevention provides a percentile calculator for BMI for children and teens in both English and metric. http://apps.nccd.cdc.gov/dnpabmi/Calculator.aspx

Growth Charts

- Centers for Disease Control and Prevention. These can be downloaded to record and assess growth patterns over time: http://www.cdc.gov/growthcharts/clinical_charts.htm.

Youth Risk Behavior Surveillance System (YRBSS)

- The YRBSS monitors priority health risk behaviors and the prevalence of obesity and asthma among youth and young adults. http://www.cdc.gov/HealthyYouth/yrbs/index.htm

F. Websites

American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD)

- The AAHPERD is the largest organization of professionals supporting and assisting those involved in physical education, leisure, fitness, dance, health promotion, and education and all specialties related to achieving a healthy lifestyle. http://www.aahperd.org

American Association for Health Education

McDermott, R. (Ed.). Diabetes education [Special feature]. American Journal of Health Education. 2009;40(5):257–307. This publication addresses interventions from health educators that will make a significant contribution to the health and well-being of young people with or at risk for diabetes and includes eight feature articles about children with diabetes and children at risk for type 2 diabetes. http://www.aahperd.org/aahe/about/updates/upload/AJOHE_Sept-Oct09-ingenta.pdf

Captive Kids: A Report on Commercial Pressures on Kids at School.

- Food companies and health providers, banks, and credit card companies are among those who look for ways to get their messages to kids while those kids are a "captive audience" in school. http://www.consumersunion.org/other/captivekids/index.htm

Centers for Disease Control and Prevention (CDC).

- Division of Adolescent and School Health (DASH), http://www.cdc.gov/HealthyYouth
- Health Education Curriculum Analysis Tool (HECAT), http://www.cdc.gov/HealthyYouth/hecat/index.htm
- Healthy Youth! Making it Happen! provides school nutrition success stories and six approaches to improving student nutrition. http://www.cdc.gov/healthyyouth/nutrition/Making-It-Happen/approaches.htm

- Healthy Youth! Physical Education Curriculum Analysis Tool (PECAT) helps school districts conduct a clear, complete, and consistent analysis of written physical education curricula, based upon national physical education standards. The PECAT is customizable to include local standards. The results from the analysis can help school districts enhance existing curricula, develop their own curricula, or select a published curriculum, for the delivery of quality physical education in schools. http://www.cdc.gov/HealthyYouth/PECAT/index.htm

- School Health Index (SHI) is a self-assessment and planning guide that schools can use to improve their health and safety policies and programs. https://apps.nccd.cdc.gov/shi/default.aspx

- School Health Index for Physical Activity, Healthy Eating, and a Tobacco-Free Lifestyle: A Self-Assessment and Planning Guide enables schools to identify strengths and weaknesses of health promotion policies and programs; develop an action plan for improving student health; and involve teachers, students, parents, and the community in promoting health-enhancing behaviors and better health: http://www.cdc.gov/HealthyYouth/SHI/introduction.htm

- The VERB Campaign is designed to encourage physical activity for American Indians and Alaska Natives. http://www.cdc.gov/YouthCampaign/

Health, Mental Health and Safety Guidelines for Schools.

- These guidelines were developed by more than 300 health, education, and safety professionals from more than 30 different national organizations as well as by parents and other supporters. http://www.nationalguidelines.org

Indian Health Service (IHS)

- Health Promotion and Disease Prevention (HP/DP) Initiative offers preventive health approaches at the local, regional, and national levels. http://www.ihs.gov/NonMedicalPrograms/HPDP

- Behavioral Health offers support to Tribal and urban Native communities to reduce the risk of behavioral health diseases and conditions. http://www.ihs.gov/MedicalPrograms/Behavioral/index.cfm?module=BH&option=Index

Institute of Medicine: Preventing Childhood Obesity: Health in the Balance

- Preventing Childhood Obesity provides a broad-based examination of the nature, extent, and consequences of obesity in U.S. children and youth, including the social, environmental, medical, and dietary factors responsible for its increased prevalence. http://www.nap.edu/catalog.php?record_id=11015

National Association of School Nurses (NASN)

- Diabetes in Children. NASN strongly supports safe and appropriate care for all students with type 1 and type 2 diabetes, and screening for and prevention of diabetes in at-risk youth. This page provides tools and resources for the school nurse and prevent diabetes at school. http://www.nasn.org/Default.aspx?tabid=324

- Managing and Preventing Diabetes and Weight Gain (MAP) Project engaged school nurses in the care and management of children diagnosed with diabetes, screening students at-risk for diabetes, and educating students about how to reduce that risk and prevent the development of diabetes. Integral to this comprehensive program was the Diabetes Resource Nurse and her role in developing the capacity of the practicing school nurse, informing school policy to support students with or at-risk for diabetes, and developing and/or participation in local and state diabetes coalitions.

- Helping Administer to the Needs of the Student with Diabetes in School (H.A.N.D.S.SM) is a live continuing education full-day program developed by the National Association of School Nurses (NASN) for school nurses to equip the school nurse with current diabetes knowledge, and provide tools and resources to facilitate effective diabetes management for students at school. It is presented by a School Nurse with a specific interest in diabetes and a Certified Diabetes Educator.

- School Nurse Childhood Obesity Prevention Education (S.C.O.P.E.) is a live continuing education full-day program developed by the National Association of School Nurses (NASN) to provide strategies for school nurses to assist students, families and the school community to address the challenges of obesity and overweight. It is presented by a School Nurse with a specific interest in childhood obesity. Diabetes Individualized Healthcare Plan Using Standardized Language and Childhood Obesity Resources: A wide variety of Web links to resources from NASN and other leading authorities on childhood obesity.

- Position Statements:
    - School Nurse Role in Care and Management of the Child with Diabetes in the School Setting (2006)
    - Overweight Children and Adolescents (2002)

National Association of State Boards of Education.

- This website offers ideas on general school health policies. http://nasbe.org/index.php/component/content/article/78-model-policies/118-general-school-health-policies

National Association for Sport and Physical Education (NASPE)

- NASPE publishes National Standards and other guidelines for physical education and coaching sports. http://www.aahperd.org/naspe/standards/

New Mexico School Health Manual.

- This manual was developed for the purpose of providing recommendations and guidelines to school nurses and other school health personnel for coordinated school health practice and programs throughout the state. http://www.nmschoolhealthmanual.org

Nutrition Fun for Kids

- This website provides information, activities, newsletters, stickers, handouts, and links—all geared to teaching nutrition to kids. http://nutritionforkids.com/kidactivities.htm

Office on Women's Health, U.S. Department of Health and Human Services

- BodyWorks is designed to help parents and caregivers of adolescents improve family eating and activity habits. http://www.womenshealth.gov/bodyworks/

- Best Bones Forever.™ The National Bone Health Campaign. This girl-friendly website stresses the importance of weight-bearing physical activity and calcium and that they can be a fun and important part of everyday life. Includes colorful graphics, games, quizzes, a dictionary, and profiles of tweens. http://www.girlshealth.gov/bones/stayingstrong/index.html

PE Central

- PE Central provides health and physical education to teachers, parents, and students. Its goal is to provide the latest information about developmentally appropriate physical education programs for children and youth. To combat the high obesity rate among youth, it offers programs to help students log their physical activity and pedometer steps. http://www.pecentral.org/

PE4Life

- PE4Life inspires active, healthy living by advancing the development of quality, daily physical education programs for all children. http://www.pe4life.org/

United States Department of Agriculture

- *MyPlate – think about building a healthier plate at mealtimes.* Use this interactive site to learn about food groups, create a personalized plan, analyze your diet, get healthy eating tips and more! Materials are consistent with the *Dietary Guidelines for Americans* and appropriate for ages two and up. http://www.choosemyplate.gov/

- *Dietary Guidelines for Americans 2011*. Center for Nutrition Policy and Promotion. The Dietary Guidelines provide authoritative advice for people two years and older about how good dietary habits can promote health and reduce risk for major chronic diseases http://www.cnpp.usda.gov/DGAs2005Guidelines.htm

World Health Organization Resource on Implementation of the WHO Global Strategy on Diet, Physical Activity and Health in Schools

- This document describes WHO recommendations for state and local officials to implement effective school health policies.
  http://www.who.int/dietphysicalactivity/SPF-en-2008.pdf

G. Web Links

The following websites provide diabetes management and prevention resources for school nurses.

American Diabetes Association http://www.diabetes.org

Barbara Davis Center for Childhood Diabetes http://www.barbaradaviscenter.org

Centers for Disease Control and Prevention, Division of Diabetes Translation
http://www.cdc.gov/diabetes

Children with Diabetes http://www.childrenwithdiabetes.com

Juvenile Diabetes Research Foundation International http://www.jdrf.org

National Diabetes Education Program (NDEP): http://www.yourdiabetesinfo.org

- NDEP Resources for Children and Adolescents
  http://www.ndep.nih.gov/diabetes/youth/youth.htm
- NDEP Children and Adolescent Workgroup Articles for the School Nurse
  http://www.nasn.org/Default.aspx?tabid=648
- NDEP Resources for Health, Education and Business Professionals
  http://ndep.nih.gov/resources/resources.htm
- NDEP Publication Catalog
  http://www.ndep.nih.gov/diabetes/pubs/catalog.htm
- NDEP overview and information on the CDC website:
- NDEP Helping the Student with Diabetes Succeed—A Guide for School Personnel (includes a Quick Reference Emergency Plan for a Student with Diabetes)
  http://www.ndep.nih.gov/resources/school.htm
- NDEP News & Notes

SEARCH for Diabetes in Youth: A multi-center study of diabetes in children and youth
SEARCH is a multi-center study funded by the CDC (Center for Disease Control and Prevention) and NIDDK (National Institute of Diabetes and Digestive and Kidney Diseases). The study focuses on children and youth in the United States who have diabetes.
http://www.searchfordiabetes.org/public/provider/index.cfm

Treatment Options for type 2 Diabetes in Adolescents and Youth (TODAY) is a nationwide research study to find the best ways to treat young people with type 2 diabetes. It is looking for volunteers who have type 2 diabetes and are between the ages of 10 to 17 years to be in the study. http://www.todaystudy.org/index.cgi

H. Additional Contacts

Programs may obtain assistance from the IHS epidemiology centers (also referred to as "epi centers") for Tribal or national data to help plan school health programs.

Indian Health Service (IHS), Division of Epidemiology & Disease Prevention (DEDP), National Office; http://www.ihs.gov/medicalprograms/epi/index.cfm
National Epidemiology Program Indian Health Service
5300 Homestead Blvd., NE
Albuquerque, NM 87110
Phone: (505) 248-4132 or 4226
Fax: (505) 248-4393

Albuquerque Area Indian Health Board, Albuquerque Area Southwest Tribal Epidemiology Center; http://www.aastec.net/
Albuquerque Area Southwest Tribal Epidemiology Center
Albuquerque Area Indian Health Board
5015 Prospect NE
Albuquerque, NM 87110
Toll-free: (888) 258-5722
Fax: (505) 764-0446
epidirector@aastec.org

Aberdeen Area Tribal Chairman Health Board, Northern Plains Tribal Epidemiology Center; http://www.aatchb.org/nptec/
Northern Plains Tribal Epidemiology Center
1770 Rand Road
Rapid City, SD 57702
Phone: (605) 721-1922
Toll-free: 1-877-209-1215
Fax: (605) 721-2876

California Rural Indian Health Board, Inc., California Tribal Epidemiology Center
http://www.crihb.org/home/california-epi-center.html
California Tribal Epidemiology Center
4400 Auburn Blvd, 2nd Floor
Sacramento, CA 95842
Phone: (916) 929-9761
Fax: (916) 929-7246

CDC has listings and a map of all U.S. Tribal epidemiology centers
http://www.cdc.gov/omhd/Populations/AIAN/AIANEpiCntrs.htm

Great Lakes Inter-Tribal Council, Great Lakes EpiCenter;
http://www.glitc.org/epicenter/index.html
Great Lakes Inter-Tribal Epidemiology Center
Great Lakes Inter-Tribal Council, Inc.
2932 Highway 47 N.
PO Box 9
Lac du Flambeau, WI 54538
Toll-free: (800) 472-7207

Inter-Tribal Council of Arizona, ITCA EpiCenter; http://www.itcaonline.com/epi/
Inter Tribal Council of Arizona, Inc.
2214 North Central Avenue, Suite 100
Phoenix, AZ 85004
Phone: (602) 258-4822
Fax: (602) 258-4825

Montana/Wyoming Tribal Leaders Council, Rocky Mountain Tribal Epidemiology Center;
http://www.rmtec.org/
Rocky Mountain Tribal Epidemiology Center
222 North 32nd St., Suite 401
Billings, MT 59101
Phone: (406) 252-2550
Fax: (406) 254-6355

Navajo Nation Division of Health, Navajo EpiCenter;
http://www.aatchb.org/epi/epicenters.htm
PO Box 1390
Tribal Administration Bldg #2, Downstairs—FEDEX
Window Rock, AZ 86515
Phone: (928) 871-6254
Fax: (928) 871-6255

Northwest Portland Area Indian Health Board, Northwest Tribal Epidemiology Center;
http://www.npaihb.org/epicenter/about_the_epicenter/
527 SW Hall, Suite 300
Portland, OR 97201
Phone: (503) 228-4185
Fax: (503) 228-8182

Oklahoma City Area Inter-Tribal Health Board, Southern Plains Inter-Tribal Epidemiology Center; http://ocaithb.org/ (Select 'Programs' from the navigation menu)
PO Box 57377
Oklahoma City, OK 73157-7377
3625 NW 56th Street, 73112-4559—FEDEX
Phone: (405) 951-6004 x104
Fax: (405) 951-3902

Urban Indian Health Institute lists several Tribal epidemiology centers; http://www.uihi.org/
Urban Indian Health Institute
PO Box 3364
1225 S Weller St., Suite 510, Seattle WA 98144—FEDEX
Seattle, WA 98114
Phone: (206) 812-3030 Fax: (206) 812-3044

United South and Eastern Tribes, Inc., Tribal Epidemiology Center;
http://www.usetinc.org/Programs/USET-THPS/TribalEpiCenter.aspx
711 Stewarts Ferry Pike, Suite 100
Nashville, TN 37214
Phone: (615) 872-7900 Fax: (615) 872-7417

I. Examples of Current Best Practice Programs

Indian Health Care Resource Center of Tulsa
550 S. Peoria
Tulsa, OK 74120
Contact: Nancy O'Banion, MS, Director, Health Education & Wellness
Phone: (918) 382-2220 Email: http://www.ihcrc.org/

The Indian Health Care Resource Center of Tulsa provides School-Based Programs, including:

- CATCH (Coordinated Approach to Child Health) implemented in 12 Tulsa elementary schools in three-year project
- After School programs at two school sites, including at least 45 minutes of physical activity plus nutrition lessons
- CATCH training programs for schools and Tribes
- HEALTHY training annually for schools and Tribes (Harnessing Experiential & Active Learning for Today's Healthy Youth)
- Summer Camp programs which focus on physical activity, nutrition, and diabetes prevention.

Muscogee (Creek) Nation Diabetes Program
800 Forest Avenue
Eufala, OK 74432
Contact: Kimberlee Little MS, Exercise Programs Coordinator
Phone: (918) 637-9684
Email: kimberlee.little@creekhealth.org

The Muscogee (Creek) Nation Diabetes Program offers a variety of community health and wellness programs focusing on diabetes prevention and management, including:

- School-based Programs:
    - School Wellness Policy
    - After School Program Jump Rope Program
- Diabetes Prevention Youth Camps

Navajo Nation Special Diabetes Project (NNSDP) and
Kayenta Community School (KCS) http://www.nnsdp.org/
Contact: Marlene Valentine, Health Education Technician
Navajo Nation Special Diabetes Project
P.O. Box 2269
Kayenta, AZ 86033

John Axline, Counseling Technician
Kayenta Community School, B.I.E.
P.O. Box 188
Kayenta, AZ 86033

The **SPARKS Program** is an example of a Tribal program working with the local school to benefit children's health and diabetes awareness among school-age children.

Northern Navajo Medical Center
PO Box 160
Shiprock, NM
Contacts: Susan R. Jones MS, RD, LD, CNSD, CPS; Miranda Oshida, RD, Supervisory Dietitian; Kari Wato, RD
Phone: (505) 368-6209 Email: susan.jones@ihs.gov

The Northern Navajo Medical Center provides a Pediatric Obesity Clinic that offers a multidisciplinary team approach to helping children who are over the 95% BMI for growth using evidence-based guidelines.

Tohono O'odham Nation
Sells, AZ
Contact: Marlene Saraficio, Public Health Educator
San Simon Health Center
Phone: (520) 362-7050 Email: marlene.saraficio@ihs.gov

Taking Ownership Wellness Coalition (TOWC):

- Established in 2008 to address childhood obesity among the Tohono O'odham Nation.
- Goals include increasing physical activity and nutrition education, decreasing obesity and diabetes, and developing traditionally appropriate projects.
- Supports Coordinated School Health (CSH): In 2008, the Tohono O'odham Nation Legislative Council passed a Resolution to support the adoption of the Comprehensive School and Wellness Proposal for all schools on the Tohono O'odham Nation grades K-12. CSH includes:
  - Everyone Be Healthy and Well: A high school conference for students and parents addressing fitness, nutrition, stress, suicide, historical trauma and other teen health topics.
  - Just Move It—Putting Youth Best Foot Forward into Wellness: This national physical activity campaign is implemented locally through community partnerships and fun fitness activities. It uses an intergenerational approach connecting individuals, families, elders, employees, and health care providers. Team fitness challenges are ongoing to increase physical activity and decrease weight.

Additional Contacts

Contacting other people involved in diabetes and youth prevention and treatment is important because they can help you get started. Your peers at other health care organizations can share their expertise, materials, and ideas, and can also tell you what has worked for them and what has not. This can help you avoid reinventing the wheel. Persons or programs that sites might contact for further ideas and assistance:

Area Diabetes Consultants. Contact information for Area Diabetes Consultants can be viewed at: http://www.ihs.gov/MedicalPrograms/diabetes/index.cfm?module=peopleADCDirectory

Contact the Indian Health Service (IHS), Division of Diabetes Treatment and Prevention for ideas at: http://www.ihs.gov/medicalprograms/diabetes/index.cfm?module=peopleDDTP

Part 4 References

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