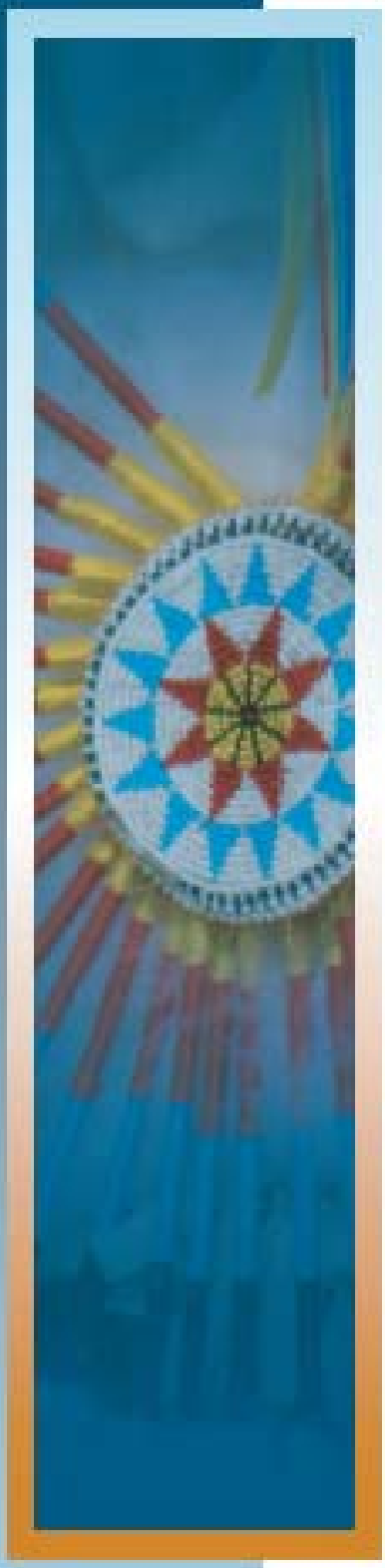

INDIAN HEALTH DIABETES
BEST PRACTICE

Nutrition for Diabetes Prevention and Care

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

Indian Health Service
Division of Diabetes Treatment and Prevention
5300 Homestead Road NE
Albuquerque, New Mexico 87110
http://www.ihs.gov/MedicalPrograms/Diabetes/

Table of Contents

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 and Outcomes 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

Key Recommendations for Nutrition for Diabetes Prevention and Care Best Practice. These are evidence-based actions that will lead to improved outcomes in the community.

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

1. Provide nutrition programs and activities across the lifespan that:
    - promote evidence-based guidelines for healthy food choices at meals and snacks throughout the lifecycle: infancy, childhood, adolescence, early adulthood, mid-life, and the elders,
    - integrate culture and health information so that interventions are well accepted, better understood, and more effective, and
    - provide opportunities for individuals to practice skills for lifestyle changes, healthy eating practices, and physical activity.
2. Provide comprehensive nutrition care that offers both:
    - basic nutrition education to promote health and achieve and maintain treatment goals, and
    - individualized medical nutrition therapy (MNT) with a registered dietitian (RD).
3. Provide and update ongoing nutrition education and programs in the clinical and community settings to promote, support, and sustain healthy lifestyle changes.

Key Measures for Nutrition for Diabetes Prevention and Care Best Practice. 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.

1. *Percent of individuals in the target population with documented MNT or nutrition education in the past twelve months.
2. *Percent of individuals in the target population with documented MNT or individualized nutrition education follow-up appointments in the past twelve months.
3. * Percent of individuals in the target population with documented MNT or individualized nutrition education who met one or more of their nutrition-related behavioral goals in the past twelve months.
4. * Percent of individuals in the target population with documented MNT or individualized nutrition education who met one or more of their nutrition-related clinical goals in the past twelve months.
5. Number of documented partnerships that enhance the provision of nutrition education to individuals, families, and communities in the past twelve months.

PART 1 Essential Elements of Implementing This Best Practice

Purpose

This document provides guidance for programs that seek to improve nutrition for diabetes care and prevention through education, provision of food, food gathering or preservation instruction, and evaluation of program successes and outcomes.

Target Population

This best practice describes nutrition recommendations for any individual with diabetes or at risk for diabetes.

Action! See Part 3 – Appendix A. Supplemental Information for discussion of the Importance of Nutrition for Diabetes Prevention and Care

Intended Users of This Best Practice

- Multidisciplinary care teams,
- Providers of contractual services,
- Complementary/alternative medicine providers,
- Community workers/agencies who provide education or other services,
- School health personnel, and
- Leaders of health care organizations.

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

Definition of Nutrition for Diabetes Prevention and Care

Optimal nutrition is provided by breastfeeding early in life and by the consumption of a diet rich in fruits and vegetables, whole grains, legumes, low-fat dairy products, lean meats, fish and/or poultry, and healthy fats from early childhood through adulthood (DGAC, 2005, 2011). Consistent but limited evidence suggests that lower energy-dense diets may be associated with lower risk of type 2 diabetes among adults (DGAC, 2011).

Today, there is no one set of nutrition recommendations or interventions that apply to all individuals with or without diabetes. This is similar to medical therapy for diabetes, in which there is no single therapeutic agent or diabetes medication that applies to everyone. Research demonstrates that nutrition education, and specifically medical nutrition therapy (MNT) administered by a registered dietitian (RD) or nutrition professional, is a key component in the prevention and management of diabetes, and a complement to the treatment of diabetes by physicians and other health care providers (Morris, 2010).

To be effective in the work of helping individuals prevent and manage diabetes, nutrition educators base nutrition management suggestions on an assessment of the individual's

lifestyle. They then assist the individual in achieving and maintaining therapeutic goals by employing changes the person is able and willing to make (Franz, 2008). Meal planning for individuals at risk of diabetes, or with diabetes, usually involves making dietary adjustments in carbohydrate management and encouraging healthy eating choices that promote variety, balance, and moderation (ADA, 2008). The good news is that the food choices and healthy eating recommendations for people to prevent and/or manage diabetes are consistent with recommendations for the population at large (DGAC, 2005, 2011).

Goals of This Best Practice

- To implement new nutrition practice and/or activity for diabetes prevention or management that is supported by the scientific literature.
- To increase the number of individuals on the diabetes registry who receive medical nutrition therapy (MNT) by a registered dietitian (RD).
- To provide nutrition-related support activities for individuals with prediabetes or diabetes.
- To establish new partnerships to increase access to nutrition education for those at risk for developing diabetes or those living with diabetes.

Key Recommendations

These are evidence-based actions that can lead to improved outcomes for any individual with diabetes or at risk for diabetes.

Key Recommendations for Nutrition for Diabetes Prevention and Care Best Practice. These are evidence-based actions that will lead to improved outcomes in the community.
1. Provide nutrition programs and activities across the lifespan that: • promote evidence-based guidelines for healthy food choices at meals and snacks throughout the lifecycle: infancy, childhood, adolescence, early adulthood, mid-life, and the elders, • integrate culture and health information so that interventions are well accepted, better understood, and more effective, and • provide opportunities for individuals to practice skills for lifestyle changes, healthy eating practices, and physical activity. 2. Provide comprehensive nutrition care that offers both: • basic nutrition education to promote health and achieve, and maintain treatment goals, and • individualized medical nutrition therapy (MNT) with a registered dietitian (RD). 3. Provide and update ongoing nutrition education and programs in the clinical and community settings to promote, support, and sustain healthy lifestyle changes.

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

Planning for Your Program and Evaluation

Key Action Steps

1. **Identify your program's goal(s).** There are many program goals consistent with the Key Recommendations of this practice. Examples of Program Goals include:
   - Increase the percent of people with diabetes who receive nutrition education.
   - Increase the percent of people at risk for diabetes who receive nutrition education.

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 percent of people with diabetes with documented nutrition education in the past twelve months from 54% to 70% by the end of the fiscal year.

   - Increase the percent of people with prediabetes with documented nutrition education from 40% to 55% by the end of the fiscal year.

3. **Use Key Measures**. The following Key Measures can be used to monitor progress and the effectiveness of implementing this 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

Key Measures for Nutrition for Diabetes Prevention and Care Best Practice. 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.

1. *Percent of individuals in the target population with documented MNT or nutrition education in the past twelve months.
2. *Percent of individuals in the target population with documented MNT or individualized nutrition education follow-up appointments in the past twelve months.
3. * Percent of individuals in the target population with documented MNT or individualized nutrition education who met one or more of their nutrition-related behavioral goals in the past twelve months.
4. * Percent of individuals in the target population with documented MNT or individualized nutrition education who met one or more of their nutrition-related clinical goals in the past twelve months.
5. Number of documented partnerships that enhance the provision of nutrition education to individuals, families, and communities in the past twelve months.

Action! See Part 3 – Appendix E. for ideas for additional measures for monitoring progress and outcomes.

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 and measure outcomes, 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 Nutrition and Diabetes Prevention and Care Programs Example* to assist you with applying Key Recommendations and Key Measures to a program plan.

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

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. Provide nutrition programs and activities across the lifespan that:

- **promote evidence-based guidelines for healthy food choices at meals and snacks throughout the lifecycle: infancy, childhood, adolescence, early adulthood, mid-life, and the elders,**
- **integrate culture and health information so that interventions are well accepted, better understood, and more effective, and**
- **provide opportunities for individuals to practice skills for lifestyle changes, healthy eating practices, and physical activity.**

Why?

- Dietary patterns that contain higher amounts of vegetables, fruit, and total fiber, coupled with lower amounts of total fat, saturated fat, and added sugars, may be related to a lower risk of developing type 2 diabetes in adults. Similar dietary patterns are associated with a reduced risk of developing cardiovascular disease (CVD) and hypertension. The common thread of these dietary patterns is the consumption of more plant-based foods, which translates to a meal plan containing more dietary fiber and less saturated fat. When these preferred dietary patterns contain more total fat than is typically recommended (e.g., > 30% of calories), the fats are heart-healthy mono- and polyunsaturated fatty acids. Likewise, the carbohydrate content of these dietary patterns tends to be relatively high (e.g., 50-60% of calories), but include primarily complex carbohydrates, such as whole grains and legumes (DGAC, 2011).
- Saturated fat intake has been implicated for both the increased risk of CVD, due to elevated total and LDL-cholesterol, and type 2 diabetes due to increased insulin resistance. It is now known that the substitution of 5% of calories coming from saturated fat with heart-healthy fats (mono- and polyunsaturated fatty acids) decreases the risk of CVD and type 2 diabetes. This same dietary manipulation has been shown to increase insulin responsiveness in those who are insulin resistant and/or have type 2 diabetes (DGAC, 2011).
- The PREDIMED study was a large nutrition intervention trial for primary cardiovascular prevention in individuals at high cardiovascular risk. It demonstrated that the addition of nuts or olive oil to the diet, as compared to a low-fat diet, resulted in diabetes risk reduction in the absence of significant changes in body weight or physical activity. The conclusion was that Mediterranean diet type interventions – without calorie restriction – seem to be effective in the prevention of diabetes in subjects at high cardiovascular risk (Salas-Salvado, 2011).
- For people at risk for developing diabetes, nutrition, and physical activity interventions are the key to *preventing* diabetes. The Diabetes Prevention Program (DPP) demonstrated that losing approximately 5% of total body weight (goal was 5-7%) as a result of making lifestyle changes, including improved nutrition and physical activity, can help reduce the incidence of diabetes (Knowler et al., 2002).

- Nutrition therapy goals have been established for the prevention and management of diabetes and slowing the onset of diabetes-related complications. Specific guidelines for individuals at risk of diabetes, with prediabetes, those with diabetes and for individuals with specific conditions are available (ADA, 2008).

  Action! The *Nutrition Recommendations and Interventions for Diabetes* can be reviewed at: http://care.diabetesjournals.org/content/31/Supplement_1/S61.full.pdf+html

- Helping people improve their eating habits is a vital aspect in the prevention and management of diabetes by improving blood glucose, blood pressure, and lipid levels. In addition, tailoring the nutrition therapy and education to fit an individual's cultural practices will be more effective and better received (Brown, 2005). Encouraging traditional Native American eating patterns and foods is associated with improved diabetes management (Brown, 2003; Schultz, 2006). For example, daily consumption of salmon and seal oil is associated with lower prevalence of glucose intolerance in Alaska Natives when compared to less frequent consumption of these foods (Johnson, 2009).

- Throughout the nation, many Tribal communities have implemented programs to return to a more traditional diet and improve food consumption patterns (McLaughlin, 2010).

- In addition to cultural factors, there are many environmental factors that affect an individual's food intake: the proximity of grocery stores or fast food restaurants, food prices, and taxes, availability of food and nutrition assistance programs, and other characteristics of the community. Communities that have access to larger-size grocery stores, community gardens, farmers' markets, or other community-based programs often have a wider selection of nutrient-rich foods and the opportunity for improved intake (McLaughlin, 2010). The U.S. Department of Agriculture (USDA) has developed an online tool for assessing variation and food choices by county across the nation.

  Action! Visit http://www.ers.usda.gov/foodatlas to explore *Your Food Environment Atlas.*

- Another factor affecting nutritional intake and the management of diabetes is food insecurity. Food insecurity for an individual is defined as "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways." Food insecurity is associated with diabetes incidence independent of Body Mass Index (BMI). The management of diabetes and other chronic diseases can be influenced by food insecurity. Food-insecure adults tend to consume fewer, but larger, meals, and more snacks. Research supports that food insecurity – especially among women from households experiencing marginal to low food security – is associated with overweight and obesity. Possible causes of this phenomenon include a binge-like eating pattern or overeating when food is available and consumption of low-quality diets of empty-energy, high-fat, and sugary foods (ADA, 2010).

- Physical activity and healthy food choices go hand in hand in the prevention and treatment of diabetes. The *Indian Health Diabetes Best Practice: Physical Activity for Diabetes Prevention and Care* includes recommendations for physical activity for individuals and community programs.

Action! The *Indian Health Diabetes Best Practice: Physical Activity for Diabetes Prevention and Care* is available at: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBPList

How to Implement the Key Recommendation

A. AI/AN communities have a history of eating nutrient-rich foods and many communities are interested in consuming traditional foods (McLauglin, 2010). **Encouraging traditional Native American eating patterns and foods is associated with improved diabetes management** (Brown, 2003; Schultz, 2006).

B. **A current practice advocates for nutrition education professionals to focus on foods to include, not exclude, as a means of helping individuals succeed with making healthful food choices.** The process of substituting nutrient-dense foods one at a time for less-healthful foods will help individuals to naturally eliminate or reduce the intake of these low-nutrient foods (Webb, 2011). When individuals increase their intake of fruits, vegetables, whole grains, lean meats, low-fat dairy, and heart-healthy fats, their intake of saturated fat, salt, and sugar will naturally decrease. In an American Dietetic Association (ADA) position paper, nutrition professionals were encouraged to avoid having their recommendations focus on the foods to eliminate or limit in the diet, as this could quickly lead to classifying foods as "good" or "bad" (ADA, 2007).

C. **Sound nutrition and accurate and reliable information about healthy food choices is important throughout the life cycle.** An abundance of resources for providing evidence-based nutrition advice and incorporating nutrient-rich foods for the prevention and management of diabetes are available:

Infancy

- **Human milk is for human babies and there is scientific evidence that demonstrates its role in the prevention of diabetes.**

  Action! Information on how to promote and support breastfeeding with families and in the community is covered in *the Indian Health Diabetes Best Practice: Breastfeeding Support* at the IHS Division of Diabetes website: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBPList

- **The newly revised *Your Guide to Breastfeeding* (January 2011) is an easy-to-read publication which provides women the how-to information and support needed to breastfeed successfully.**

  Action! This resource is available for ordering or to download at: http://www.womenshealth.gov/pub/bf.cfm

- **Staff working with infants and their caregivers will find the USDA *Infant Nutrition and Feeding: A Guide for Use in the WIC and CSF Programs* handbook a useful reference.** It provides accurate information on the feeding of infants, signs of developmental readiness for the introduction of solids, transitioning to table foods, nutrient-dense food choices, guidelines for physical activity, and special feeding concerns.

Action! This reference is available online at: http://wicworks.nal.usda.gov/nal_display/index.php?info_center=12&tax_level=2&tax_subject=624&level3_id=0&level4_id=0&level5_id=0&topic_id=2625&&placement_default=0

Children through Adults

- ***USDA MyPlate* materials provide guidelines for making healthy food choices and meeting nutrient needs of preschoolers, children, and adults**.

  Action! Resources are available at: http://www.choosemyplate.gov/

- **The Nutrient Rich Foods Coalition website offers easily accessible and reliable information to help people eat the nutrient-rich way.** The approach to eating is a positive, total diet approach based on the five food groups and nutrient density concepts highlighted in the *Dietary Guidelines for Americans* and USDA Food Guidance System initiatives such as MyPlate. This is not a specific eating plan, but helps people choose nutrient-dense foods that best fit personal tastes and lifestyles, giving them a long-term, well-balanced, and healthier way to eat.

  Action! Visit the coalition at: http://www.nutrientrichfoods.org/index.html

  ***First 5* is a resource for ages 0-5 nutrition and physical activity programs from a California state initiative.**

  Action! They provide links to several organizations serving this age group on the website: http://www.f5ac.org/files/Nutrition%20and%20Physical%20Activity%20Report.pdf

  Action! Resources on Nutrition and Exercise for children 0-5 are also available at http://www.ccfc.ca.gov/Help/nutrition.asp

- **IHS Division of Diabetes Treatment and Prevention Curricula that include teaching outlines, lessons, visual aids, resource directories and are easily adaptable to suit individual and community needs are available for:**
  - **Youth:** *Youth Staying Healthy: A Diabetes Prevention Curriculum for Youth Ages 8-12; Youth Staying Healthy: A Type 2 Diabetes Curriculum for Teens*
  - **Adults:** *Balancing Your Life and Diabetes*; *Balancing Your Food Choices: Nutrition and Diabetes*
  - **Pregnant Women:** *Beautiful Beginnings: Pregnancy and Diabetes*
  - **Individuals and Families:** *Honor the Gift of Food*

  Action! Link to: Each of these is available at: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula

- **Many eating plans advocate for the inclusion of more foods from plant sources.**

Action! The CDC website *Fruits and Veggies: More Matters* offers guidelines on eating more fruits and vegetables at: http://www.fruitsandveggiesmatter.gov/

- **There is not one food intake pattern or single diet plan that is suitable for all people with diabetes. Individuals have differing health needs, cultural influences, food preferences, and tastes.** A referral for MNT is recommended for individuals at risk of diabetes, with prediabetes or diabetes as needed to achieve treatment goals.

  Action! The American Diabetes Association's (ADA) nutrition recommendations and interventions for individuals at risk of, or with diabetes are available at: http://care.diabetesjournals.org/content/31/Supplement_1/S61.full.pdf+html

- **The ADA nutrition recommendations for the prevention of diabetes recommend that low-glycemic foods rich in fiber and other important nutrients are to be encouraged.** In the management of diabetes, the use of glycemic index (GI) and glycemic load (GL) may be a somewhat more beneficial, or specific, than using total carbohydrate in meal planning (ADA, 2011).

  Action! *The Official Website of the Glycemic Index and GI Database* http://www.glycemicindex.com/ provides a continuously updated database for GI and GL of foods. A table of 750 foods can be accessed at: http://www.ajcn.org/content/76/1/5.full.pdf+html or one for 100 foods at http://www.health.harvard.edu/newsweek/Glycemic_index_and_glycemic_load_for_100_foods.htm . **Note!** See additional information in this document for a discussion of lowering the glycemic index of a meal without relying on GI values for specific foods.

- **Research on The Mediterranean Diet has linked the diet to many improvements in health and the prevention of disease.** Mediterranean diet interventions without calorie restriction seem to be effective in the prevention of diabetes in subjects at high cardiovascular risk (Salas-Salvado, 2011).

- **This pattern of eating more whole foods is consistent with the Dietary Approaches to Stop Hypertension (DASH) diet, the National Cholesterol Education Program Adult Treatment Panel III guidelines (http://www.nhlbi.nih.gov/guidelines/cholesterol/atp3xsum.pdf) and the ADA nutrition guidelines (Pereira, et al, 2010)**. The main characteristics of a Mediterranean-style pattern of eating include: an abundance of seasonally fresh and locally grown fruits and vegetables; the inclusion of legumes, whole grain breads and cereals, and other grains that are rich in fiber; fruits for dessert rather than high-sugar desserts; a low to moderate intake of dairy products with more of a focus on cheese and yogurt rather than milk; smaller portions of meat, especially red meat; eating fatty fish on a regular basis; consuming a higher percentage of calories from monounsaturated fats, particularly olive oil and nuts; the intake of fewer than four eggs per week and eating family meals (Pereira, et al, 2010).

  Action! Additional information on the Mediterranean Diet can be found at: http://www.oldwayspt.org/mediterraneandiet or

http://www.americanheart.org/presenter.jhtml?identifier=4644 or
http://www.mayoclinic.com/health/mediterranean-diet/CL00011 .

Action! Information for planning and enjoying family meals can be found at: http://www.ellynsatter.com/. Information for feeding all members of the family and support for the importance of offering regular meals and sit-down snacks is available on this website. Parenting at mealtime is addressed by Ellyn Satter's Division of Responsibility in feeding: "Parents are responsible for what and when food is served. The child is responsible for deciding whether they eat, and how much they eat, of the food that is offered." Newsletters are available which may be used with individuals and families.

Team Notes:

Key Recommendation 2. Provide comprehensive nutrition care that offers both:

- **basic nutrition education to promote health and achieve and maintain treatment goals, and**
- **individualized medical nutrition therapy (MNT) with a registered dietitian (RD).**

Why?

For people at risk of diabetes or with diabetes, nutrition and physical activity interventions can help improve blood glucose management, blood pressure, and lipid levels (Kaplan et al., 1987; Knowler et al., 2002; ADA, 2011; Franz et al., 2010). In a cross-sectional study, AI/AN people with diagnosed diabetes showed healthier eating patterns than undiagnosed individuals. This research suggests that people with diabetes may have healthier eating patterns because they receive nutrition education (Archer, et al., 2004).

MNT is one strategy that has been shown to be an integral component of high-quality, chronic disease care. The scientific literature provides strong and convincing evidence that people with diabetes and metabolic conditions benefit from MNT when delivered by a RD as part of a comprehensive plan of care by a multidisciplinary team (McLaughlin, 2010; Sandoval, et al, 2007). In the Indian health system, research suggests that MNT provided by a RD results in better diabetes management (Wilson et al., 2003). An extensive review of the literature evidence and specific recommendations for the provision of medical nutrition therapy (MNT) in the care and treatment of diabetes is available. (Franz et al., 2010)

The 2008 American Diabetes Association's *Nutrition Recommendations and Interventions for Diabetes* recommends that "a registered dietitian (RD)…be the team member who plays the leading role in providing nutrition care." It is emphasized and recommended that all team members have knowledge of the MNT goals and nutrition recommendations in order to support the nutritional management of people with diabetes and at risk for diabetes (ADA, 2008). Managing diabetes and achieving nutrition goals is a team effort, and the scientific literature provides strong and convincing evidence that people with diabetes and metabolic conditions benefit from MNT when delivered by a RD as part of a comprehensive plan of care by a multidisciplinary team (Franz, 1995; Sheils, 1999; Pastors, 2002; Morris, 2010; Franz 2010).

Given the established benefits of MNT, every attempt should be made to utilize the skills of a RD in the provision of MNT for all people with prediabetes and diabetes. The IHS recognizes, however, that some communities have limited access to the services of a RD. Therefore, it is important that other health care professionals understand the goals of MNT and partner with individuals to achieve them (ADA, 2007).

How to Implement the Key Recommendation

A. The effectiveness of nutritional management is dependent on access to effective nutrition education and interventions, as well as the quality of education received. The Institute of Medicine (IOM) describes two levels of nutrition education:

1. **The first level is basic nutrition education or advice.** This is generally brief and informal and is usually focused on general concepts of good nutrition for the primary prevention of chronic disease.

2. **The second level is nutrition therapy that is more intensive, individualized, and is focused on the treatment and/or prevention of specific chronic diseases or conditions and follows a four-step process of assessment, diagnosis, intervention, and goal setting with evaluation** (IOM, 2000).

B. The American Dietetic Association developed the four-step Nutrition Care Process (NCP) to guide the specific steps that a nutrition professional needs to take to provide either level of nutrition education (Lacey, 2003).

- MNT is defined as "a specific application of the Nutrition Care Process (NCP) in clinical settings that is focused on the management of diseases." MNT involves in-depth individualized nutrition assessment and a duration and frequency of care using the NCP to manage disease. MNT services are defined as "nutritional diagnostic, therapy, and counseling services for the purpose of disease management which are furnished by a registered dietitian or nutrition professional …pursuant to a referral by a physician" (ADA, 2009).

- The nutrition counseling component of MNT is a supportive process to set priorities, establish goals, and create an individualized plan which acknowledges and fosters responsibility for self-care. MNT involves the use of specific nutrition services to treat and manage an illness, such as diabetes, or to prevent the long-term complications associated with diabetes.

- When providing MNT, a RD follows the four-step NCP which is "a systematic problem-solving method to make decisions to address nutrition-related problems and provide safe and effective quality nutrition care" (ADA, 2009). **The four steps of the NCP are**:
    1. The RD conducts a comprehensive nutrition assessment of the individual
    2. The RD makes initial nutrition diagnosis
    3. During nutrition intervention the RD provides counseling and, with the individual, determines interventions using lifestyle counseling methods
    4. In the nutrition monitoring and evaluation step the RD monitors biochemical
        a. markers; progress on the individual's goals, changes in physical activity, and
        b. other behavior changes; based on outcomes the RD implements changes to MNT in subsequent visits (McLaughlin, 2010).

- MNT is an integral component of diabetes management and diabetes self-management education (DSME). Documentation of all aspects of the NCP are recorded in the individual's medical record or chart. **Note!** The IHS has recently updated the Medical Nutrition Therapy (MNT) Nutrition Care Process (NCP) Electronic Health Record (EHR) which can be loaded into the facility's EHR system. Training sessions are available; questions or comments can be directed to the IHS Division of Diabetes Medical Nutrition Therapy Action Team (MAT) at IHSMNTActionTeam@ihs.gov

  Note! A review of how MNT works in the IHS system to improve health parameters, save money and generate income is available in the March and October 2007 editions of the *IHS Primary Care Provider:* http://www.ihs.gov/Provider/index.cfm?module=archived_2000_2009

C. Guidelines for the Provision of Nutrition Education

1. **Use positive, consistent, culturally relevant messages when nutrition education is provided.** Incorporate the use of traditional foods, social and religious traditions, family customs, and community beliefs. **Nutrition education strategies include:**
   - Focusing on what individuals and families can add to their intake rather than what they need to eliminate
   - helping individuals learn and practice skills for improving lifelong health habits
   - using motivational interviewing and behavior modification techniques like cognitive restructuring and stimulus control to enhance adoption of new health behaviors
   - using storytelling, talking circles, support groups, and other traditional approaches to improve nutrition knowledge and skills
   - providing ongoing support for making and sustaining healthy lifestyle changes, and
   - connecting people with severe depression or disordered eating to behavioral health services when basic nutrition and behavioral counseling techniques do not work.

2. **Individualize nutrition care:**
   - Assess readiness to learn and willingness to change.

     Action! Information on the Stages of Change can be accessed at: http://www.aafp.org/afp/20000301/1409.html
   - Address individual nutrition needs, accounting for personal and cultural preferences.
   - Use motivational tools and confidence scales to assist individuals in setting realistic and measurable goals.

3. **Improve nutritional intake for the prevention of diabetes or for those with prediabetes and diabetes; food recommendations are similar for both the prevention and care of diabetes.** It is important that nutrition educators learn about the culture, food, eating traditions, and customs specific to the Tribal community they are working in. Incorporate traditional foods into recommendations whenever possible (McLaughlin, 2010).

   Work with individuals to select one goal to work on at a time. Listed below are some suggestions that might be used to help an individual choose the goal, or change, that they would like to make to improve their nutritional intake and reduce their risk of type 2 diabetes and complications from diabetes:

   Use a meal planning approach like *MyPlate* : http://www.choosemyplate.gov/ to assist people with prediabetes, diabetes or those at risk for diabetes in all age groups to meet the recommended guidelines for number of servings from each food group. Help them to balance the kinds and amounts of foods eaten during planned meals and snacks as recommended in the Dietary Guidelines for Americans (DGAC, 2011).

   Use the *Idaho Plate Method* at http://www.platemethod.com/ to help individuals with basic meal planning. This plate method uses good groups and assists with estimating portion sizes.

   Action! The *Helping Hands* educational tool, available in the IHS curricula at: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula, is also useful for teaching how to estimate portion sizes. **Note!** These are exceptionally good tools for visual learners, for individuals with lower literacy skills, or those who do not speak English.

   Encourage individuals to drink more water and consume less of sweetened beverages: soda pop, punch, Kool-Aid®, sports drinks, juice and juice drinks. Include ideas for flavoring water with fresh lemon, lime or tea to make it more appealing.

   Encourage the consumption of a variety of fiber-containing foods such as legumes, whole grains, fiber-rich cereals, as well as fruits and vegetables.

- Add legumes – dried peas and beans – to meals. Legumes can be added to casseroles, sprinkled on salads, and made into tasty dips for vegetables or whole grain crackers.
- Eat more whole grain foods. Try whole grain breads and cereals, experiment with brown rice, barley, and whole grain pasta in recipes.
- Plan meals and snacks to include vegetables. Raw vegetables can be eaten with a sandwich at lunch or made into a tasty soup. Vegetables can be added to casseroles for color, crunch, and taste, and to decrease the energy-density of the dish. Add non-starchy vegetables to meals as salads or side dishes.
- Use fruit for desserts and snacks. Give individuals ideas of how to incorporate more fruits into meal planning; for example – an apple combined with a piece of string

cheese or peanut butter makes a satisfying snack. A juicy, delicious slice of watermelon provides a delightful dessert.

- Teach how to save money on fruits and vegetables. Encourage individuals to: buy what is in season or on sale; use fresh, frozen or canned varieties; read the labels to make healthier choices; buy only what they can use before it goes bad; and plan how they will use fruits and vegetables at meals and snacks.
- Give Individuals the opportunity to try new foods or recipes.

Action! Utilize ideas from the Nutrient Rich Foods Coalition: http://www.nutrientrichfoods.org/index.html

Encourage the consumption of foods rich in soluble fiber like eggplant, okra, oats, barley, psyllium, oranges, pears, Brussels sprouts, carrots, legumes, and plant proteins, like soymilk or soy foods, and nuts for the protection of heart health (Jenkins, 2003; DHHS, 2001; Franz et al, 2010).

Encourage individuals to include fish by eating a variety of local species, or other fresh or canned fish in at least two meals each week. Most fish include at least some beneficial omega-3 fatty acids and are low in saturated fat.

Action! Visit the American Heart Association website for more information: http://www.heart.org/HEARTORG/GettingHealthy/NutritionCenter/HealthyDietGoals/Fish-and-Omega-3-Fatty-Acids_UCM_303248_Article.jsp

Encourage individuals to include a handful of nuts on most days of the week as part of their meal or in a planned snack. Almonds, pecans, walnuts, and pistachios are especially recommended (Webb, 2011). The DASH diet supports this healthful addition to the diet: http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/new_dash.pdf

In addition to emphasizing fruits, vegetables, whole grains, nuts, and legumes, **the DASH diet also emphasizes the inclusion of three servings of low-fat or fat-free dairy products daily** as sources of calcium to reduce blood pressure. If individuals do not consume cows' milk, fortified soy products are available, or calcium supplements may be an option.

Action! Visit: http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/new_dash.pdf

Use extra-virgin olive oil, canola and peanut oils, and avocados in place of other fats to increase intake of heart-protecting monounsaturated fats. Hazelnuts, pecans, and pistachios are also rich in monounsaturated fats (Webb, 2011).

Encourage the intake of healthier fats (mono- and polyunsaturated fats) and less saturated or *trans* fats. Saturated and *trans* fats are the principle dietary fats known to increase blood lipids, the major risk factor for cardiovascular disease. Have individuals:

- Replace lard and shortening with liquid cooking oils.
- Replace stick margarine and butter with soft-tub margarines labeled "zero trans fats" or "trans fat free" or "no hydrogenated fats".
- Choose snacks and other food items with 0 (zero) trans fats, and without "partially hydrogenated vegetable oils" or "partially hydrogenated vegetable shortening" listed on the package's Ingredients list.
- Educate individuals how to use the Nutrition Facts label to compare products and make healthier food choices.
- Encourage individuals to eat more wild game such as deer meat, bison, elk, rabbit, moose, and caribou along with more poultry to reduce consumption of fatty red meats and processed meats.
- Teach individuals how to choose leaner cuts of meat.
- Have individuals trim excess fat from meats before cooking and eating.
- Teach individuals how to oven fry, bake, grill or broil favorite foods.
- Replace high-fat dairy foods with low-fat or fat-free choices. Offer individuals the opportunity to try lower-fat options.
- Watch portion size – plan the meal to include lots of vegetables, whole grains, and fruits to help individuals decrease portion sizes of meats, cheese, and other higher fat foods.

- **The primary goal for individuals with diabetes is to achieve blood glucose, blood pressure, and blood lipid target goals. Nutrition education to help individuals improve their A1C, blood pressure, and lipid profile include the following strategies:**

  For individuals with diabetes, the amount and type of carbohydrate in foods is important for managing blood glucose levels after a meal. **Resources for use in meal planning include**:

  - **Exchange Lists** translate the nutrition recommendations into food choices for individuals by grouping foods into lists with similar nutritional value. Nutrition education providers work with an individual to develop a meal plan with a recommended number of servings from each list. **Note!** In 2008, the exchange lists were given a new title, *Choose Your Foods: Exchange Lists for Diabetes* (Geil, 2008).
  - **Basic Carbohydrate Counting** encourages consistency of carbohydrate intake and portion control using a food list, and can be used in conjunction with insulin dosing.

Action! Tools are available in the *Balancing Your Life with Diabetes* curriculum at: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula and at the American Diabetes Association website: http://shopdiabetes.org/Categories/3-Health-Care-Professional-Nutrition.aspx/1/80000000%5E24 .

- **The Idaho Plate Method at http://www.platemethod.com/ and *Helping Hands*** available in the IHS curricula at: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula are useful tools for teaching portion control consistency and basic food categories.

- **An online service for individuals with diabetes** is *My Food Advisor* available from the American Diabetes Association at http://tracker.diabetes.org/about/

- **Note!** Refer to the IHS Division of Diabetes curricula for more information and education materials particular to youth, pregnant women, and adults at: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula

For individuals with elevated LDL-C, encourage the use of sterol-fortified foods. Aim for 2 g/day of plant sterols from fortified margarines, orange juice, breads, cereals, and low fat yogurt (U.S.DHHS, 2001; Webb, 2011).

Substitute garlic or onion powder and other herbs and spices for seasonings that contain salt. Decrease use of table salt, processed and convenience foods (lunchmeats, canned/boxed rice, potato and pasta dishes, frozen meals), and meals at restaurants or fast food establishments for better blood pressure management.

Action! For more information about the DASH diet and reducing sodium to lower blood pressure visit: http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/introduction.html

Suggest that individuals consume little or no alcohol (no more than one drink per day for a woman and two drinks per day for a man). Alcohol, if used, should be consumed with a meal. The American Heart Association does not recommend that people start drinking alcohol if they do not already consume alcohol: http://www.americanheart.org/presenter.jhtml?identifier=4422

Offer some general recommendations to eat lower glycemic index (GI) foods and meals:

- At meals, use the dinner plate as a guide. Fill half of the plate with non-starchy or low carbohydrate vegetables, e.g., green beans, carrots, broccoli, cauliflower, and more, and/or add a leafy green salad.

- Add healthy fats and lean protein to each meal to help lower the GI of the meal.

- Choose breads, cereals, and other whole grains that are coarsely ground and grainy in texture. In general, the less processed a grain is, the lower the GI will be.

  Action! Review a GI chart http://www.glycemicindex.com/ to get a general idea of how to choose carbohydrate foods. **Note!** Be careful that the list does not become a "good" or "bad" food list.

- The energy- and nutrient-density of foods is important when choosing foods for a meal. The combination of foods at a meal will influence the GI of the meal and the effects of GI will vary depending on the individual.

- Encourage individuals to monitor their blood glucose before they eat and one and one-half to two hours after consuming the meal or food if they want to know its effect on their blood glucose (Palmer, 2011).

The use of non-nutritive (artificial) sweeteners in foods and beverages does not contribute to high blood glucose. Approved sweeteners by the Food and Drug Administration (FDA) include acesulfame potassium, aspartame, neotame, saccharin, stevia/Rebaudioside A, and sucralose (Franz et al., 2010). Before being allowed on the market, these sweeteners were shown in laboratory study to be safe when consumed by the public, including people with diabetes and women during pregnancy. There is no evidence at this time that consumption of foods containing nonnutritive sweeteners will contribute to weight loss or weight gain (ADA, 2008):

- Encourage use in moderation.

4. **Provide education to build skills for eating away from home in restaurants, at fast food establishments, and at community gatherings**. Include information on meal planning, shopping on a budget, and timing of meals and snacks.

5. **Maintain the pleasure of eating by limiting food choices only when indicated** by the individual's clinical and behavioral goals.

6. **Provide ongoing nutrition self-management education and care as part of a comprehensive plan of care for diabetes self-management.**

   Action! Refer to the *Indian Health Best Practice Diabetes Self-Management Education and Support* for more information: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBestPractices

7. **In overweight and obese insulin-resistant individuals, modest (5-7% of total weight) weight loss is recommended for diabetes prevention and management**. For more information on weight management refer to the *Indian Health Best Practice Adult Weight Management and Diabetes: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBestPractices*

   Action! Refer to *ADA Nutrition Recommendations and Interventions for Diabetes at* http://care.diabetesjournals.org/content/31/Supplement_1/S61.full and http://www.cnpp.usda.gov/DGAs2010-DGACReport.htm for the *2010 Dietary Guidelines for Americans*, and the *Tools and Resources* section of this document for additional curricula and other teaching tools.

Team Notes:

Key Recommendation 3. Provide and update ongoing nutrition education and programs in the clinical and community settings to promote, support, and sustain healthy lifestyle changes.

Why?

The scientific literature provides compelling evidence that behaviors must be addressed to reduce the considerable personal, social, and fiscal burden associated with diabetes (Marrero, et al., 2001). For people at risk for developing diabetes, the Diabetes Prevention Program (DPP) showed that the lifestyle interventions, which resulted in modest weight loss, had a greater impact in reducing the risk of diabetes than the use of glucose-lowering medication (Knowler et al., 2002).

For people with diabetes, improved healthful eating practices and physical activity programs have been associated with decreases in body fat, increases in insulin sensitivity, improvements in long-term blood glucose control, improvements in blood pressure levels, and increases in cardiovascular fitness (Hamdy et al., 2001; Franz et al. 2010).

How to Implement the Key Recommendation

Following are helpful tips for supporting lifestyle changes.

A. Learning Styles

- Educate yourself about appropriate learning styles and effective teaching strategies.
- Use visual teaching aids like food models, measuring tools, and pictures as well as hands-on teaching methods like cooking demonstrations and grocery store tours.
- Work with the individual and family members on a shopping list. Explore ideas for meal planning and preparation by incorporating favorite foods, adding nutrient-rich foods, and using acceptable substitutions and cooking techniques.

B. Cultural Considerations

- Learn about the Tribal community's cultural traditions, spiritual and religious practices, customs, health beliefs, and food practices.
- Conduct an individual assessment to find out the extent to which the individual follows cultural traditions, beliefs, and practices.
- Use peer or lay health educators, preferably from the Tribal community.
- Support the use of traditional foods and methods for harvesting and gathering these foods.

C. Counseling Strategies

- Use effective counseling strategies such as Stages of Change, motivational interviewing, cognitive restructuring, and patient empowerment to facilitate behavior change.

  Action! Utilize the American Diabetes Association's free continuing education opportunity for empowering individuals with diabetes to make behavior changes at: http://www.facilitatingbehaviorchange.org/

- Focus on small, incremental changes in eating and lifestyle changes. Assess current habits and take a step by step approach to make one to three changes in eating and physical activity habits that can be continued for a lifetime. Even small changes are improvements and must be applauded.

- Focus on positive messages such as, "add more of this" instead of "do not eat this"; "Eat meals at regular times."; "Plan for snacks, and carry something with you."; "Visit the farmers' market and try a new vegetable."

- Integrate culture and health information so that interventions are more acceptable, better understood, and more effective.

D. Nutrition Messages

- Utilize tools and resources provided in this document to provide evidence-based nutrition education messages and programs.

- Emphasize the importance of eating together as a family.

- Teach the concept of honoring body cues for hunger and fullness, and the practice of "mindful eating".

  Action! Visit WIN Wyoming for a *Feel Your Fullness* lesson plan: http://www.uwyo.edu/winwyoming/Small_Victories/FeelFullness/feel_fullness_lesson.html

- Promote the nutritional benefits of traditional foods.

- Promote the health benefits of breastfeeding and support breastfeeding in the community. Refer to the *Indian Health Diabetes Best Practice Breastfeeding Support:* http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBestPractices

E. Make Connections with Community Resources

- Connect people with needed community programs and resources like WIC, the Tribal Food Distribution Program on Indian Reservations (FDPIR), soup kitchens, food banks, community gardens, farmers' markets, local farmers, and community supported agriculture programs to increase access to nutritious foods.

- Utilize the services of the local cooperative extension service and visit the National Center for Home Food Preservation at http://www.uga.edu/nchfp/ to help community members preserve traditional foods and foods from their gardens in a safe way.

- Collaborate with local health advocates to promote healthful eating and physical activity in the community (e.g., traditional healers, community health representatives, health promotion/disease prevention area coordinators, health educators, public health nurses, fitness centers, cultural and faith-based programs, Boys and Girls clubs, HeadStart and Early HeadStart programs, schools and after school programs, or other youth activity programs).

  Action! Refer to the *Indian Health Diabetes Best Practice Physical Activity for Diabetes Prevention and Care:* http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBestPractices

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.

Note! Healthy eating and physical activity go hand in hand in the prevention and treatment of diabetes. The community recommendations address both healthful eating and active living.

The following documents provide guidance on the importance of eating a healthy diet and being physically active to promote good health and reduce the risk of diabetes and other chronic diseases.

Action! Visit: http://www.cnpp.usda.gov/DGAs2010-PolicyDocument.htm for the *2010 Dietary Guidelines for Americans* (for individuals two years of age and older),

and http://www.health.gov/dietaryguidelines/dga2005/document/default.htm for the 2005 Dietary Guidelines for Americans (ages two and older) which provide the basis for the 2010 recommendations.

Action! Visit: http://www.health.gov/paguidelines/guidelines/default.aspx for the *2008 Physical Activity Guidelines for Americans*. Additional resource for physical activity are the *Indian Health Diabetes Best Practice Physical Activity for Diabetes Prevention and Care:* http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBestPractices

and the *IHS Quick Guides Section on Physical Activity:* http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsQuickGuides

Community Recommendations

Community Recommendation 1. Provide programs that integrate principles of both healthful eating and physical activity.

Why?

Research indicates that programs are most effective in achieving good diabetes self-management when they focus on both nutrition and physical activity (Pate et al., 1995). Similarly, weight loss, due to changes in food intake and increased physical activity, has proven effective in preventing onset of diabetes (Hamman, et al., 2006).

How to Implement the Recommendation

A. Provide nutrition education programs that are creative and culturally appropriate:

- Incorporate traditional and contemporary Native wellness activities into programming like prayer, celebrations, games, gardening, affirmations, dances, stories, or talking circles.

- Use storytelling, talking circles, and support groups to increase awareness, offer opportunities to share experiences, and communicate successes related to nutrition.

- Promote the use of traditional foods in the context of a healthy eating plan.

B. Teach how to honor and listen to the body's need for food such as "mindful" or intuitive eating practices.

Action! See these websites for more information:
http://www.mindlesseating.org/
http://ces.uwyo.edu/pubs/MP112-5.pdf – for "*The Last Orange on Earth – An Activity to Teach Mindful Eating"*

C. Offer cooking classes to provide hands-on opportunities to learn:

- simple recipe changes to increase fiber and nutrient-density, and to decrease fat, sugar and/or salt
- healthy food combinations in meals and snacks that provide complex carbohydrates for energy and lean protein for staying power
- tasty and nutritious uses of commodity foods
- foods to add to meals or recipes to decrease energy-density, and
- quick and healthy recipes.

D. Organize grocery store tours to teach participants how to plan meals and use food labels to choose high fiber, nutrient-rich foods that are lower in added fat, salt, and sugar plus how to shop for nutritious foods on a budget.

Action! Visit these websites for information on how to provide grocery store tours in the community: http://www.spreadsnutrition.org/tools/SupermarketSmarts or visit: http://join.strength.org/site/PageNavigator/SOS/SOS_ofl_shoppingmatters_home

E. Teach parents how to support and model healthful eating and engage in regular physical activity with their children:

- Help patients overcome myths and misconceptions about nutrition.

Action! Utilize the IHS Division of Diabetes Youth Curricula sections on evaluating the media for health-related materials:
http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula

- Provide reliable resources on nutrition. There are many sources of incorrect information in circulation.

Action! Visit the American Dietetic Association http://www.eatright.org/Public/ for consumer information. Utilize reputable websites and evidence-based sources for nutrition information.

Action! Visit: http://www.choosemyplate.gov/ from USDA or one of the many other sites listed in *Tools and Resources*.

- Discuss the importance of eating together as family.

Action! For a toolkit on promoting families to eat together visit: http://nutrition.wsu.edu/ebet/

- Encourage parents to offer a variety of foods and be a role model for healthy eating and physical activity.

Action! Utilize the *Indian Health Diabetes Best Practice Physical Activity for Diabetes Prevention and Care::* http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBestPractices and the *IHS Quick Guides Section on Physical Activity:* http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsQuickGuides and the IHS Division of Diabetes Youth Curricula: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula

F. Demonstrate the advantages of planned, regularly spaced meals and sit-down snacks as opposed to constant grazing all day long or eating only one or two large meals a day:

- Remind participants that feeding themselves regularly with meals containing adequate amounts of carbohydrate and protein throughout the day may result in less late afternoon and after supper snacking.

G. Focus on increasing healthy lifestyle behaviors to promote good health. Do not limit the focus to weight loss. Identify other measures of success with participants including: self-reports of increase in energy level; improved AIC, blood pressure or other laboratory measures; positive changes in dietary intake, meal patterns, or physical activity levels, etc.

Action! http://www.uwyo.edu/WINTHEROCKIES_EDUR/ANewYou.asp
http://www.ellynsatter.com

Action!

- Utilize the *Indian Health Diabetes Best Practice Adult Weight and Cardiometabolic Risk Management and Diabetes g*uidelines: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBestPractices

- Utilize *the IHS Quick Guide Cards on Physical Activity*, *Anthropometrics, Obesity* and more: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsQuickGuides

- Encourage other healthy lifestyle practices including getting adequate sleep, managing stress, discontinuing the misuse of tobacco, and consuming adequate water on a daily basis.

H. Work with ongoing programs and other groups in the community:

- Conduct a community needs assessment to assess learning needs and preferences of the community:

    - Partner with local schools to improve school food and physical activity programs.

    Action! Refer to the *Indian Health Diabetes Best Practice School Health: Promoting Healthy Habits and Preventing Disease*:
    http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBestPractices

    - Partner with cultural programs and faith-based organizations to provide information on the prevention and management of diabetes.

    - Work with programs, groups, and faith-based organizations to offer healthier choices at community gatherings and events.

    - Encourage clinical and community staff to participate in events and programs such as health fairs, youth wellness camps, diabetes camps, Native food gathering outings, food preservation sessions, Tribal garden projects, and other programs that encourage and support active participation in nutrition-related activities.

    - Increase access to healthful foods at home by monitoring foods available at local grocery and convenience stores. Make recommendations to business owners to improve selection of fruits, vegetables, whole grains, low fat and fat-free dairy foods, and lean meats for consumers.

    - Partner with local restaurants to provide healthier food options and to label healthier foods on menus (for example, indentify entrees on menus with less than 500 calories, or those that contain whole grains).

    - Increase access to healthier options in the workplace by making fruits and vegetables available for snacks, offering nutrient-rich foods at meetings, and in vending machines, and making changes in cafeteria menus.

I. Use evidence-based materials, tools, and comprehensive curricula:

- Utilize the IHS Diabetes and Youth Curricula for youth at risk of diabetes or who have diabetes:
  http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula

- Use a curriculum like the National Institutes of Health (NIH) Diabetes Prevention Program *Lifestyle Balance* curriculum for people at risk for diabetes,. This curriculum can be accessed at: http://www.bsc.gwu.edu/dpp/manuals.htmlvdoc

- Utilize modules and materials that have been developed for use in AI/AN communities like *Honoring the Gift of Heart Health* available at:
  http://www.nhlbi.nih.gov/health/public/heart/other/amer-indian_risk/index.htm

- Use a curriculum such as IHS's *Balancing Your Life and Diabetes* curriculum for people with diabetes. Pregnancy and nutrition supplements for this curriculum are available. Access this curriculum and the supplements through the IHS Division of Diabetes Treatment and Prevention website: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula

- US Diabetes *Conversation Map*® Program. http://www.journeyforcontrol.com/journey_for_control/journeyforcontrol/for_educators/conversation_maps/conversation_map_overview.jsp

Team Notes:

Community Recommendation 2. Promote and provide support for healthy lifestyle changes in the community.

Why?

Community nutrition programs and services help empower individuals and communities to make changes that lead to healthier eating behaviors (IHS SDPI, 2007).

How to Implement the Recommendation

A. **Provide community-wide multimedia campaigns** to encourage and reinforce healthy eating.

B. **Offer healthy food options and education at social gatherings and community events** such as potlucks, powwows, Tribal meetings, celebrations, or feasts.

C. **Offer services of nutrition staff to help groups plan meals and snacks** that are nutrient-rich, culturally appropriate, and incorporate traditional foods.

D. **Increase access** to community gardens, farmers' markets, cooking classes, grocery store tours, and healthy use of commodity foods.

E. **Offer training programs** for clinical and community outreach workers and staff of Tribal food programs to increase accuracy and consistency of nutrition information in the community.

F. **Use support groups** and traditional approaches to improving nutrition such as talking circles and storytelling.

G. **Target entire families and communities** for lifestyle change, not just individuals.

H. **Hold monthly community walks** and offer healthy snacks and/or nutrition education information.

I. **Establish a monthly newsletter** with nutrition information, healthy recipes, and upcoming events and make it available for distribution as a printed document or by email.

J. **Offer stress management programs** for individuals and in the community.

K. **Link patients and families to resources within and outside the community** such as weight management, stress management, wellness center programs, recreation and fitness programs for youth, adults, elders, and employees.

L. **Use American Indian curricula** such as *Diabetes Education in Tribal Schools (DETS)* for schools and families available at:

http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula

and the elementary school curriculum *Pathways* at
http://www.ajcn.org/content/78/5/1030.full.pdf+html

(Caballero et al. 2003; Davis et al., 2003)

and refer to the *Indian Health Diabetes Best Practice School Health Promoting Healthy Habits and Preventing Disease:*
http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBPList

Team Notes:

Organization Recommendations

Organization Recommendation 1. Support broad system and programmatic changes.

Why?

Nutrition programs and policies in American Indian and Alaska Native communities are an important component of diabetes treatment and prevention (IHS Division of Diabetes Report to Congress, 2007). An organization whose leadership recognizes that nutrition is integral to the treatment and prevention of diabetes is able to support successful clinical and community approaches.

Action! See Part 3 – Appendix B. *Descriptions and Examples of Nutrition for Diabetes Prevention and Care Best Practice Program Components.*

How to Implement the Recommendation

A. **Provide administrative and Tribal support for quality improvement activities**.

B. **Dedicate professional time to plan, organize, and network**.

C. **Provide adequate resources**, personnel, space, materials, and time for nutrition education.

D. **Promote employee health and wellness programs** with an emphasis on healthful eating and physical activity habits and attitudes.

E. **Promote traditional healing and food practices.**

F. **Include specific outcome measures related to nutrition in the facility's annual performance-based objectives**.

G. **Include nutrition-related objectives in the annual performance plan of the CEO, service unit director, or medical director**.

H. **Develop and maintain partnerships** with businesses, communities, and Tribal leadership that build nutrition program capacity.

I. **Build planned environments to support healthy nutrition** practices and availability of healthy foods (e.g., community gardens and farmers' markets).

J. **Increase the number and types of trained personnel** who plan, facilitate, deliver, and evaluate services to support healthy eating behaviors and diabetes self-care.

K. **Seek administrative and Tribal support** for the recruitment and retention of registered dietitian(s) (RDs) to deliver medical nutrition therapy (MNT).

L. **Strengthen workforce skills and role modeling behaviors** related to nutrition by implementing staff wellness policies and programs.

Team Notes:

Organization Recommendation 2. Support diabetes team members' efforts to implement system and programmatic changes.

Why?

Changes in health care systems and programs have been associated with increased delivery of appropriate diabetes care.

How to Implement the Recommendation

The evidence suggests that the following activities may help improve diabetes care:

A. **Use clinical practice guidelines** to facilitate evidenced-based clinical decision-making and improve diabetes outcomes.

B. **Use flow sheets and standing orders** to improve documentation of appropriate care.

C. **Provide training and continuing education to health care providers** to help improve nutrition and diabetes care and education.

Team Notes:

PART 3 Appendices, Tools, and Resources

Appendix A. Supplemental Information

1. Importance of a Nutrition for Diabetes Prevention and Care Program

The epidemic of diabetes around the world, and including Tribal communities, is associated with the consumption of excessive amounts of solid fats and added sugars, and a more sedentary lifestyle. In prediabetes, insulin resistance leads to hypertension, decreased HDL cholesterol, increased triglycerides, elevated blood glucose and ultimately type 2 diabetes. Nutrient-dense food choices can help, in part, to prevent and treat these health risks, diabetes and other associated health complications (Weisenberger, 2010).

Historically, American Indian and Alaska Native (AI/AN) people consumed a diet of nutrient-dense traditional foods that required hours of physical activity to hunt, gather, and prepare. Over the last century, AI/AN people have experienced drastic lifestyle and cultural changes. Many have adopted a "Westernized" lifestyle of convenience, relying on more highly processed or fast foods that are not physically demanding to acquire or prepare. Foods are now higher in fat – particularly saturated fat – and higher in sodium and added sugars. The fiber, vitamin, and mineral content of an AI/AN individual's intake has decreased dramatically over the last 100 years. The combination of these food changes and a decrease in levels of physical activity, along with genetic factors, has resulted in high rates of overweight, obesity, and obesity-related disorders like diabetes and cardiovascular disease among AI/AN people (McLaughlin, 2010).

2. Benefits and Risks of implementing This Best Practice

Good nutrition throughout the lifecycle is vital to maintaining health and is a cornerstone in the prevention and treatment of diabetes, cardiovascular disease, and other chronic conditions.

There are no potential risks if this nutrition for diabetes prevention and care best practice is implemented.

Note! See the "Why?" in the Key Recommendations for more information on benefits of this Best Practice.

3. Health Questions Addressed by Best Practice

The best practice addresses the following questions:

1. What are the nutrition goals for the prevention and treatment of diabetes at each stage of the life cycle?

2. What are effective approaches for promoting and supporting lifestyle changes in the clinical and community settings?

3. How can you advocate for improving and supporting nutrition education services in your community?

4. Sustaining a Nutrition Program for Diabetes Prevention and Care

For nutrition program goals to be reached, programs often must be in place for more than a few years. Here are some helpful tips for sustaining your program:

- Ensure ownership of programs by the community rather than just the clinic.
- Identify short- and long-term program goals. Remember that everything does not have to be completed in the first year.
- Be realistic about what can be accomplished in one year, and build on it in consecutive years.
- Collect data and program outcomes to utilize for future funding from available sources.
- Establish community coalitions for nutrition and diabetes prevention and treatment.
- Document improved outcomes, long term cost-savings, and effectiveness to justify the continuation of your program.
- Commit Special Diabetes Programs for Indians (SDPI) funds to Medical Nutrition Therapy (MNT), nutrition education, and diabetes risk reduction.
- Ensure administrative support for committing personnel, resources, time, and space to activities that support nutrition services.
- Bill for MNT and Diabetes Self-Management Education (DSME) services. Medicare beneficiaries with diabetes can be covered for MNT and DSME (IHS Division of Diabetes, 2006).
- Help Tribal leadership and community members understand nutrition and diabetes issues, and obtain their commitment to improvement of services.
- Report outcomes to stakeholders on a routine and regular basis.

Appendix B. Key Measures Example

Remember—this is an example! Apply this process to your community using your data.

Chronic disease is increasing. Our health care center and community are concerned about the increasing number of people with diabetes in the community and whether their nutrition needs were being met. We were especially concerned about our elders.

Diabetes team takes action. Our diabetes team talked about addressing this problem and how the diabetes team could be more involved. We read the Nutrition for Diabetes Prevention and Care Best Practice and talked about the Key Recommendations.

Identified sources of data. Local data included:

- *Diabetes Care and Outcomes Audit* data
- RPMS data
- Medical record data
- Activity attendance logs
    - Data indicated:
        - 50% of patients with diabetes had MNT or nutrition education in the past year.
        - 20% of patients with diabetes over the age of 55 had MNT or nutrition education in the past year.
        - 10% of patients with diabetes over the age of 55 had MNT or nutrition education follow-up appointments in the past year.
        - no data on attendance by elders at community nutrition programs and activities.

Selected suitable Best Practice. After thinking carefully about our goals and resources, and reviewing data, we decided the Nutrition for Diabetes Prevention and Care Best Practice was a good fit for us. We chose to work on two of the Key Recommendations: 1) Provide nutrition programs and activities and 2) Provide comprehensive nutrition care that offers both basic nutrition education to promote health, and achieve and maintain treatment goals and individualized medical nutrition therapy (MNT) with a registered dietitian (RD).

Identified Target Population. We decided to start implementing this Best Practice with elders with diabetes (using the diabetes registry) and with elders without diabetes (using community membership).

Identified Program goals:

- To increase nutrition programs and activities for all elders in the community.
- To increase the number of elders with diabetes receiving nutrition education by an RD

Identified SMART objectives based on our resources and data:

- The percent of elders (age 55 and older) in the community who participate in community nutrition programs and activities will increase from 0% to 25% in the next twelve months.
- The percent of elders (age 55 and older) with diabetes with documented MNT or nutrition education in the past twelve months will increase from 20% to 40% in the next twelve months.

- The percent of elders (age 55 and older) with diabetes with documented MNT or individualized nutrition education follow-up appointments in the past twelve months will increase from 0% to 20% in the next twelve months.
- To increase the percent of elders (age 55 and older) with diabetes who received documented MNT who meet one or more of their nutrition-related behavioral goals from baseline (0%) to 20% in the next twelve months.
- To increase the percent of elders (age 55 and older) with diabetes who received documented MNT who meet one or more of their nutrition-related clinical goals from baseline (0%) to 10% in the next twelve months.

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.

Table 1. Selected Key Measures

A. Measure	B. Baseline or beginning value and date (collected prior to starting activities)	C. Most recent value and date (if applicable)	D. Data source
1. Percent of elders (age 55 and older) in the community who participate in community nutrition programs and activities.	No data as of 1/1/2011	10% as of 4/05/2011	Activity Logs
2.* Percent of elders (age 55 and older) with diabetes who receive documented MNT or nutrition education.	20% as of 1/1/2011	25% as of 4/05/2011	Diabetes Audit, RPMS
3.* Percent of elders (age 55 or older) with diabetes with documented MNT or nutrition education follow-up appointments	10% as of 1/1/2011	25% as of 4/05/2011	Diabetes Audit, RPMS
4.* Percent of elders (age 55 and older) with diabetes who receive documented MNT or nutrition education who met one or more of their nutrition-related behavioral goals.	0% as of 1/1/2011	12% as of 4/05/2011	RD nutrition notes, Diabetes Audit
5.* Percent of elders (age 55 and older) with diabetes who receive documented MNT or nutrition education who met one or more of their clinical goals.	0% as of 1/1/2011	5% as of 4/05/2011	RD nutrition notes, Diabetes Audit

* Required Key Measures

Appendix C. Improving a Nutrition for Diabetes Prevention and Care Program

Remember—this is an example! Ask these questions in your community, thinking about your local needs, resources, and tracking systems.

There are four fundamental questions to ask as you plan and implement your best practice. These questions (and sample answers) are:

1. **Who is the target population?**

   Community members at risk for developing diabetes or currently living with diabetes.

2. **What are you trying to accomplish by implementing this best practice?**

   This best practice aims to increase the number of people who receive nutrition education for diabetes prevention and care.

3. **How will you know if what you do makes things better?**

   You will know that you have made changes to make things better if community members at risk of diabetes make and maintain healthy lifestyle changes, and those living with diabetes improve their glycemic control. You can assess this by using data from the *Diabetes Care and Outcomes Audit*, reviewing medical records, and by observing and recording other changes that your participants make.

4. **What can you do to make things better?**

   You can provide more individual and/or group education opportunities in the community for members to access nutrition activities and services to support their healthy lifestyle goals.

Appendix D. Descriptions and Examples of Nutrition for Diabetes Prevention and Care Best Practice Program Components

Is Your Program Ready? – "Do we have the following items in place?"

- Providers, administrators, Tribal leaders, and community members recognize the role of nutrition education in the treatment and prevention of diabetes, and perceive the need for care. They provide input and support for expanded services.
- Administrative support for nutrition program is evident – including adequate budget for staffing, educational resources, and continuing education requirements of staff. There is recognition of the need for Continuous Quality Improvement (CQI).
- Information Technology (IT) support is adequate for program development.
- Designated space for nutrition education – requires private location for education of individuals and adequate space for group education sessions (designated space can be shared with other staff as long as privacy can be maintained during delivery of education or diabetes care).
- Diabetes team members are identified and meeting times are established.
- Health providers recognize the need for current and updated information on the nutrition component of diabetes self-care management and realize that Medical Nutrition Therapy (MNT) provided by a registered dietitian (RD) results in better diabetes management.

Basic Nutrition for Diabetes Prevention and Care Program

Community Resources and Policies

- Identify and network with available community programs for services (e.g., Tribal health programs and fitness center, local health department, local hospital, WIC program, cooperative extension services, and others).
- Utilize community programs and resources for basic nutrition education or advice in community education based programs.
- Utilize RDs, Certified Diabetes Educators (CDEs) or health care providers with recent training in diabetes treatment and prevention for clinically based programs.

Organization Leadership

- Provide administrative support for quality improvement in nutrition care services.

Delivery System Design: Services, Programs, Systems, and Procedures

- Ensure access to a RD (available at least by consultation).
- Establish a diabetes team that meets on a regular basis with a clearly defined role for the RD as a member of the diabetes team. The staff RD serves as the resource and expert on major nutrition recommendations and interventions for diabetes and other nutrition concerns.
- Work as a team to develop specific action plans for program development, CQI, and evaluation.

- Adopt evidence-based clinical and educational practice guidelines and protocols that have been customized for the local Tribal community by facility providers through a consensus process.
- Utilize motivational interviewing and assess readiness to change in MNT sessions.
- Use an appointment system for acute, follow-up, and preventive care visits.

Decision Support: Information and Training for Providers

- With the diabetes team, identify, and adopt a diabetes self-management education curriculum (IHS-certified or equivalent) and utilize the RD to educate staff on the nutrition recommendations to support nutritional management of people with and at risk for diabetes.
- Conduct needs assessments to identify staff training needs and train providers on nutrition for diabetes.
- Facilitate training for providers and members of the diabetes team – it is important that all providers provide consistent and credible information about food and nutrition when educating patients.
- Train providers on how to make appropriate referrals for RD and other program provider services.

Clinical Information Systems: Collecting and Tracking Information

- Identify target population for services. Prioritize the patient population according to program goals to maximize use of limited resources (start small, with a group size that is manageable).
- Establish and maintain a separate diabetes registry for selected target population.
- Develop a system for record keeping and data retrieval for evaluation purposes.
- Develop and establish a tracking system for referrals and outcomes data.
- Obtain pre-program data and establish system for collecting data for ongoing and post-program evaluation.
- Document in the medical record to facilitate continuity of care, staff communication, and provide information for the *Diabetes Care and Outcomes Audit*.
- Conduct or assist with annual *Diabetes Care and Outcomes Audit*, this may be completed manually or electronically.

Patient Self-Management Support

- Patients are referred to a RD for MNT at diagnosis and as needed thereafter to achieve treatment goals. In the absence of a RD, other health professionals will be trained to understand the goals of MNT and partner with patients to achieve them, however, these services will not be billable.
- Provide culturally appropriate patient education on nutrition that includes respect for the individual's or Tribal community's traditional foods, social and religious traditions, family customs, practices, and health beliefs.

- Provide education to prevent or delay the complications of diabetes by making changes in nutrient intake and lifestyle.
- Address individual nutritional needs, accounting for personal and cultural preferences, and willingness to change.
- Education addresses different learning styles, promotes effective behavior change interventions and peer support.
- Provide education on dietary changes that promote balance, moderation, carbohydrate management, and healthy eating choices for diabetes prevention and treatment for individuals and community groups.
- Inventory and update educational resources (materials should be scientifically sound, evidence-based and current – a general guideline is that materials are updated at least every five years).

Intermediate Nutrition for Diabetes Prevention and Care Program: Basic program *plus the following:*

Community Resources and Policies

- Develop partnerships with community programs and implement a community services referral system.

Organization Leadership

- Include specific outcome measures related to nutrition in the facility's annual performance-based objectives.
- Develop a program plan for services with measurable objectives, time lines, and responsible personnel.
- Support provision of ongoing MNT in clinical settings and the delivery of nutrition education in clinical and community settings to support lifestyle changes.

Delivery System Design: Services, Programs, Systems, and Procedures –

- Hire a RD on staff who conducts nutrition assessment, provides MNT, and makes referrals.
- Expand and implement educational programs for differing target populations across the lifespan.
- Design programs to support lifestyle changes, promote health, and achieve and maintain treatment goals.

Decision Support: Information and Training for Providers –

- Provide staff updates, attend clinical and community services meetings for visibility and informational updates, and begin coalition building. Recognize that nutrition in diabetes care is continuously changing and staff should receive updates and/or training at least annually.

Clinical Information Systems: Collecting and Tracking Information –

- Further develop registries for various groups. Maintain tracking system capable of tracking measures for risk assessments, education, referrals, and progress on individually identified goals.
- Perform or assist with *Diabetes Care and Outcomes Audit*.

Patient Self-Management Support –

- Identify support services for lifestyle changes, either clinically, in the community, or both, and make appropriate referrals.
- Provide ongoing nutrition education in clinical and community settings to strengthen learning skills for lifestyle changes, healthy eating practices, and physical activity.

Comprehensive Nutrition for Diabetes Prevention and Care Program: Basic and Intermediate program *plus the following:*

Community Resources and Policies

- Enlist community-wide support for program participants and diabetes programming.
- Attend community planning groups, conduct community-wide needs assessments, build coalitions, and establish working agreements.
- Collaborate with local health advocates to promote healthful eating and physical activity throughout the community and across the lifespan. (Support farmers' markets, community gardens, community walking or running programs/groups, transportation programs, etc.).
- Increase access to healthy food choices. (Support community gardens; encourage traditional foods; advocate for healthier choices at school meals, elderly meal programs, concession stands, powwows, and foods offered during meetings and gatherings, etc.).
- Implement approved curricula in schools for the prevention of diabetes.

Organization Leadership

- Bill for MNT and Diabetes Self-Management Education (DSME) services.
- Continue to provide administrative support for expansion of nutrition and diabetes program, and make appropriate program policy changes.
- Emphasize employee health and wellness. Healthy employees serve as role models for patients; improving the health of the employee impacts the health of their family and the community at large.

Delivery System Design: Services, Programs, Systems, and Procedures

- Expand target population groups. Plan interventions and activities for all age groups.
- Plan interventions for all levels of diabetes care: primary, secondary, and tertiary.
- Establish appropriate clinical privileges for diabetes team members.
- Use case-management approach for the management of diabetes.
- Seek diabetes education program recognition.

Decision Support: Information and Training for Providers

- All diabetes team members are encouraged to become CDEs.
- The RD trains and updates other staff and community leaders as identified (CHRs, community health nurses, health educators, clinic staff, fitness instructors, lifestyle coaches, etc) about basic nutrition and other nutrition services available in the community.

Clinical Information Systems: Collecting and Tracking Information

- Collaborate with other health professionals and establish a diabetes registry coalition for comprehensive diabetes information collection, analysis, and interpretation of shared tracking outcomes.
- Use feedback systems that include quality improvement reports.

Patient Self-Management Support

- Work with traditional healers and local community people with a strong interest in diabetes, to provide a consistent message about the role of good nutrition in diabetes self-care and the prevention of diabetes.
- Eliminate barriers to diabetes self-care (e.g., provide patients with cooking classes, information on incorporating traditional foods, grocery store tours, selecting commodity foods, etc.).

Appendix E. Monitoring Progress and Outcomes

Percentages can be used for measurement as long as a baseline number has been established. An example of how to collect this baseline data would be to use registries for people with diabetes or prediabetes.

The following measures can be used to monitor the effects of implementing the *Indian Health Diabetes Best Practice Nutrition for Diabetes Prevention and Care:*

- Percent of individuals with prediabetes or diabetes who received MNT by a RD in the last twelve months documented in the individual's medical record, and evaluated via the IHS Resource Patient Management System (RPMS) and/or the IHS Diabetes Care and Outcomes Audit: http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=resourcesAudit

- Percent of individuals with prediabetes or diabetes who received nutrition education from other multidisciplinary care team members documented using the IHS Patient Education Protocols and Codes, Computerized Public Health Activities Data System (CPHAD – learn more under listing in *Tools and Resources* section) or other method of documentation in the individual's medical record in the last twelve months.

- Percent of individuals with diabetes or prediabetes who achieved their self-identified nutrition-related clinical and/or behavioral goal(s) in the last twelve months:

    - an example of this would be the number of reported *Fast Food Encounters/week,* or the number of servings of fruits and vegetables/week or a *Mediterranean Diet Score (0-10)* as described in the January 2011 issue of the *IHS Primary Care Provider:* http://www.ihs.gov/Provider/index.cfm?module=archived_2010_2019

- The presence and effectiveness of a functioning referral system between primary care providers and the nutrition/diabetes team:

    - may be tracked using a review of chart and/or referrals.

- The number of documented partnerships with providers that enhance the provision of nutrition education to individuals, families, and communities established in the last twelve months:

    - number of multidisciplinary team members providing nutrition education who receive training in appropriate interventions, and

    - documentation of attendance at training and level of competency achieved.

- Written documentation demonstrating evidence of the number of partnerships with facilities and/or services that enhance the nutrition education opportunities being offered to individuals, families, and communities. This may include both informal and formal memorandums of agreement evidenced by:

    - attendance records, meeting minutes, media releases, documentation of work or programs in the community promoting nutrition, etc.

    - the number of memoranda of agreement signed by partnering organizations for providing nutrition education focused on diabetes prevention and care in the community.

- Evidence of commitment and support of leadership for increasing nutrition care services in the community:

    - written documentation of meeting minutes, policy and procedure changes, budget allocations, grant applications or other records that demonstrate accessing of additional funds, policy changes, accrual of staff, etc.

- Participant and staff experiences with nutrition services provided:

    - may be tracked using participant surveys (satisfaction surveys), questionnaires, and/or targeted interviews.

- Costs of providing nutrition services as compared to health care costs/savings:

    - may be tracked using budget data for salary, educational materials, and supplies, health care costs for the community.

Tools and Resources

Web-based Resources

2008 Nutrition Recommendations and Interventions for Diabetes – position statement of the American Diabetes Association
http://care.diabetesjournals.org/content/31/Supplement_1/S61/T3.expansion.html

2008 Physical Activity Guidelines for Americans (for health professionals and policymakers). The U.S. Department of Health and Human Services (DHHS) issued its first-ever comprehensive physical activity guidelines for Americans across the lifespan in 2008. The guidelines describe the types and amounts of physical activity that offer substantial health benefits to Americans from age six and older: http://www.health.gov/paguidelines/guidelines/default.aspx and *Toolkit for Organizations and Communities.* The toolkit resources include a user's guide and printed and CD-rom versions of fact sheets, posters, and FAQ sheets for organizations and communities. U.S. DHHS: http://www.health.gov/paguidelines/toolkit.aspx

2011 Standards of Medical Care in Diabetes – American Diabetes Association
http://care.diabetesjournals.org/content/34/Supplement_1/S11.full

5-2-1-0 Model and Pediatric Obesity Clinical Decision Support Chart. The Model encourages the following *every day*:

5: Eat five servings of fruits and vegetables each day.
2: Limit TV and other screen time to no more than two hours a day.
1: Engage in one hour of physical activity.
0: Limit sugar-sweetened beverages—none is best.

Flipchart and resources from the American Academy of Pediatrics provide health care team members practical support and guidance to help improve care and outcomes for overweight children.
https://www.nfaap.org/netforum/eweb/dynamicpage.aspx?webcode=aapbks_productdetail&key=3ffed110-2471-40f3-9547-61666fa5b6ed

Alliance for a Healthier Generation. The American Heart Association and the William J. Clinton Foundation have joined together to form the Alliance for a Healthier Generation to combat the spread of childhood obesity and the serious diseases associated with it, such as heart disease and diabetes. The Alliance is taking a comprehensive approach to stop the increase of childhood obesity by 2010. http://www.healthiergeneration.org/. The Alliance recently launched a joint effort with the American Academy of Pediatrics and Eric Carle Studios on a new parent/child education campaign and co-branded version of the children's classic, The Very Hungry Caterpillar. Educational materials include growth charts and handouts geared towards helping parents have meaningful conversations about healthy eating habits. Download free copies of these educational materials at the following website: http://www.healthiergeneration.org/veryhungrycaterpillar.

American Diabetes Association. This website provides nutrition education information and numerous resources for people with diabetes, and those at risk for developing the disease as well as for diabetes care team members. http://www.diabetes.org/. Utilize the American Diabetes Association's free continuing education opportunity for empowering individuals with diabetes to make behavior changes at: http://www.facilitatingbehaviorchange.org/ .

American Diabetes Association. *Nutrition recommendations and interventions for diabetes. A position statement of the American Diabetes Association.* http://care.diabetesjournals.org/content/31/Supplement_1/S61/T3.expansion.html

American Diabetes Association. *Standards of medical care in diabetes – 2011.* http://care.diabetesjournals.org/content/34/Supplement_1/S11.full

American Dietetic Association. This website provides nutrition information for consumers and numerous resources for dietitians to improve their practice and provide Medical Nutrition Therapy (MNT). http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/index.html

American Heart Association. Visit the Nutrition Center for heart healthy eating tips. http://www.heart.org/HEARTORG/GettingHealthy/NutritionCenter/Nutrition-Center_UCM_001188_SubHomePage.jsp

Bam! Body and Mind. From the CDC and designed for kids 9-13 years old, this website gives them the information they need to make healthy lifestyle choices. http://www.bam.gov

BodyWorks – A Toolkit for Healthy Teens & Strong Families. BodyWorks is a program designed to help parents and caregivers of adolescents improve family eating and activity habits. The program focuses on parents as role models and provides them with hands-on tools to make small, specific behavior changes to prevent obesity, and help maintain a healthy weight. The BodyWorks program uses a train-the-trainer model to distribute the Toolkit through community-based organizations, state health agencies, non-profit organizations, health clinics, hospitals and health care systems. The program includes one six-hour training module for trainers and ten 90-minute weekly sessions for parents and caregivers: http://www.womenshealth.gov/bodyworks/ .

The ***Community Guide*** from the Task Force on Community Preventive Services provides information on evidence-based recommendations for programs and policies to promote community health. It includes systematic reviews of interventions in the following areas: campaigns and informational approaches, behavioral and social approaches, and environmental and policy approaches. This link is specific to promoting good nutrition: http://www.thecommunityguide.org/nutrition/index.html

The *Community Tool Box* – 2009. This online tool kit is the "gold standard" for community-based skill-building information. Created and maintained by the Kansas Work Group on Health Promotion and Community Development, the core of the site is the "how-to tools," including practical information for community building – for example, community assessment, action and intervention, leadership skills, and program evaluation. Available online at: http://ctb.ku.edu/en/tablecontents/

Computerized Public Health Activities Data System (CPHAD) – program for documenting public health activities by clinicians and other staff involved with public health activities; uses standard RPMS package and GUI interface; can be tied in with GRPA. Reports can be generated regarding productivity, communities served, number of people served, what was taught, chronic disease education given, etc. Mary Brickell is the contact person – work phone# 503-326-7434 or mary.brickell@ihs.gov

Creating Strong Diabetes Programs: Plan a Trip to Success. IHS Division of Diabetes Treatment and Prevention [Internet]. An online training course on effective program planning and evaluation. [Developed 2009, July]
http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=trainingBasicsCreating and

IHS Division of Diabetes Treatment and Prevention [Internet]. Creating Strong Diabetes Programs: Plan a Trip to Success. A workbook (to accompany online training course above) on effective program planning and evaluation. [Developed 2006, July]
http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Training/WebBased/Basics/Creating/Workbook.pdf

DASH Eating Plan What you choose to eat affects your chances of developing high blood pressure, or hypertension Recent studies show that blood pressure can be lowered by following the Dietary Approaches to Stop Hypertension (DASH) eating plan—and by eating less salt, also called sodium. While each step alone lowers blood pressure, the combination of the eating plan and a reduced sodium intake gives the biggest benefit and may help prevent the development of high blood pressure. http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/new_dash.pdf

Diabetes Education in Tribal Schools (DETS) Program – a curriculum for use by teachers and other educators working with children and youth in grades K-12. This curriculum is part of a national effort to decrease the incidence and improve the care of type 2 diabetes among American Indians and Alaska Natives. The curriculum was developed through collaboration with the National Institutes of Health (NIH), the Centers for Disease Control (CDC), American Indian Tribal Colleges and the IHS Division of Diabetes (Division of Diabetes), 2008. http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurriculaDETS .

The **Diabetes Prevention Program (DPP)** website contains study documents on the research aspects of the DPP at: http://www.bsc.gwu.edu/dpp/. In addition, the site provides access to the comprehensive *Lifestyle Balance* curriculum that was used for people with prediabetes enrolled in the DPP: http://www.bsc.gwu.edu/dpp/manuals.htmlvdoc.

Dietary Guidelines for Americans, 2005. This document supplies the background and basis for the 2010 recommendations. Chapter 4 – *Physical Activity* provides an overview of physical activity in the US and the groundwork for the 2008 Physical Activity Guidelines for Americans. http://www.health.gov/dietaryguidelines/dga2005/document/

Dietary Guidelines for Americans, 2010. This website provides the complete report of the Report of the Dietary Guidelines Advisory Committee. *PART D Science Base Section 1: Energy Balance and Weight Management* provides an extensive review of dietary intake and physical activity in the United States. http://www.cnpp.usda.gov/DGAs2010-DGACReport.htm

Ellyn Satter Associates. On this website you will find information for feeding and eating throughout the lifecycle, the *Division of Responsibility in Feeding* for infants and children, and newsletters that can be used with individuals and families. Information and support for planning and enjoying family meals can be found at: http://www.ellynsatter.com/ .

First 5. *Nutrition & Physical Activity Resources for Ages 0-5 and Their Families*. This resource for ages 0-5 physical activity programs is from a California state initiative. Strengths, limitations, and implementation strategies are given for several different curriculums and resources. They also provide links to several organizations serving this age group. http://www.f5ac.org/files/Nutrition%20and%20Physical%20Activity%20Report.pdf

Resources on Nutrition and Exercise for children 0-5 are also available at http://www.ccfc.ca.gov/Help/nutrition.asp

Foodplay! This site provides activities for children, teens, parents, teachers, and school foodservice personnel to help young people make healthy food choices. http://www.foodplay.com/free_materials/home.html

Food Preservation. Utilize the National Center for Home Food Preservation at http://www.uga.edu/nchfp/ and the 2006 edition of **So Easy to Preserve, 5th Edition** from the Cooperative Extension at The University of Georgia and local cooperative extension services to help community members preserve traditional foods and foods from their gardens in a safe way.

Fruits and Veggies: More Matters. Many eating plans advocate for the inclusion of more foods from plant sources. The CDC website offers guidelines on eating more fruits and vegetables at: http://www.fruitsandveggiesmatter.gov/

Glycemic Index/Glycemic Load. *The Official Website of the Glycemic Index and GI Database* http://www.glycemicindex.com/ provides a continuously updated database for GI and GL of foods. A table of 750 foods can be accessed at: http://www.ajcn.org/content/76/1/5.full.pdf+html or one for 100 foods at http://www.health.harvard.edu/newsweek/Glycemic_index_and_glycemic_load_for_100_foods.htm.

Healthfinder for Kids (U.S. Department of Health and Human Services: Office of Disease Prevention and Health Promotion) website provides information and resources to help improve the health and lifestyle choices of children and youth. http://www.healthfinder.gov/scripts/SearchContext.asp?topic=14314 or http://www.healthfinder.gov/prevention/category.aspx?catId=1 for topics specific to *Nutrition and Fitness*.

Healthier Worksite Initiative. This CDC initiative provides health promotion program planners with information on a variety of health promotion programs at worksites. The website also links to resources from other nonprofit and educational organizations through the Quick Resources section. http://www.cdc.gov/nccdphp/dnpao/hwi/index.htm

HealthyPeople.gov. *Healthy People* is a set of goals and objectives with ten-year targets designed to guide national health promotion and disease prevention efforts to improve the health of all people in the United States. The goal of the Nutrition and Weight Status site is to promote health and reduce chronic disease risk through the consumption of healthful diets and achievement and maintenance of healthy body weights. This site is a useful tool for finding evidence-based information and recommendations for Nutrition: http://healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=29

Healthy Start Company. The Healthy Start Company was founded in 2001 to provide early educational solutions that promote positive healthy behaviors to help prevent childhood obesity and other risk factors for long-term illnesses later in life. These timely and exemplary programs are extensively researched, evaluated, and published in over 20 professional journals. The programs are designed to be engaging and fun for young children with stories, games, songs, and rhymes. They are adaptable to a variety of preschool environments and easy to integrate into any early childhood education curriculum. This curriculum is currently being used in over 21 states throughout the nation. http://www.healthy-start.com

Healthy Weight for Life: A Vision for Healthy Weight Across the Lifespan of American Indians and Alaska Natives – Actions for Health Care Teams and Leaders, IHS, 2011. This resource provides guidance for taking action and refers to the companion booklet, "Healthy Weight for Life: A Vision for Healthy Weight Across the Lifespan of American Indians and Alaska Natives, Actions for Communities, Individuals, and Families," for additional information. http://www.ihs.gov/healthyweight/documents/HW4L_TeamsLeaders.pdf

Honoring the Gift of Heart Health for American Indians. Heart disease is a serious health problem for all Americans, including American Indians and Alaska Natives (AI/AN). An easy to read booklet *Your Choice for Change* is available at: http://www.nhlbi.nih.gov/health/public/heart/other/amer-indian_risk/index.htm and the curriculum modules for group presentations for American Indians are available at: http://www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/amer_indian.htm and Alaska Natives at: http://www.nhlbi.nih.gov/health/prof/heart/other/aian_manual/alaska_native.htm

Idaho Plate Method useful to help individuals with basic meal planning using food groups and assisting with teaching how to estimate portion sizes at http://www.platemethod.com/

IHS Division of Diabetes Treatment and Prevention Best Practices
This site provides resources and tools to help treat and prevent diabetes in American Indians and Alaska Natives. You can also access all 19 Diabetes Best Practices at this site.
http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsBestPractices

IHS Division of Diabetes Treatment and Prevention Curricula were written and reviewed by health care professionals from IHS, Tribal, and Urban Indian health care settings with expertise in diabetes treatment, prevention and education. They include teaching outlines and lessons, visual aids, and resource directories, and are easily adaptable to suit individual patient and local community needs.
http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsCurricula

> ***Youth Staying Healthy: A Diabetes Prevention Curriculum for Youth Ages 8-12*** – A curriculum for health professionals working in American Indian and Alaska Native Communities that provides a framework for diabetes prevention education for children ages eight to twelve who are at risk for diabetes. It also includes ideas for engaging parents and caregivers. The curriculum provides basic information about health and wellness, not about diabetes.

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; can be used one-on-one or in group settings. It provides basic information about type 2 diabetes and general wellness for adolescents.

Balancing Your Life and Diabetes (BYLD) Curriculum – This core diabetes curriculum, developed by the IHS Division of Diabetes, provides information and lessons plans about type 2 diabetes, diabetes self-management, and general healthy lifestyle practices. This comprehensive curriculum addresses the National Standards for Diabetes Self-Management Education.

Balancing Your Food Choices: Nutrition and Diabetes – A supplement to the *Balancing Your Life and Diabetes (BYLD)* Curriculum that addresses nutrition and diabetes. This supplement is intended for use with the *BYLD* Curriculum.

Beautiful Beginnings: Pregnancy and Diabetes – A supplement to the *Balancing Your Life and Diabetes (BYLD)* Curriculum that addresses pregnancy and diabetes, including pre-gestational and gestational diabetes. This supplement is intended for use with the *BYLD* Curriculum.

Curricula Developed in Collaboration

Honor the Gift of Food – This workbook can help individuals and their families choose food for good health, save money when buying foods and try recipes that are low in fat and sugar. Note: originally developed by the Portland Area Diabetes Program in cooperation with the Northwest Indian College Nutrition Assistant Program and recently updated by the Division of Diabetes. The material was originally adapted from *Eating Right is Basic* Program materials, Washington State Cooperative Extension Services, USDA.

IHS Division of Diabetes Medical Nutrition Therapy Action Team (MAT). The IHS has recently updated the Medical Nutrition Therapy (MNT) Nutrition Care Process (NCP) Electronic Health Record (EHR) which can be loaded into the facility's EHR system. Training sessions are available; questions or comments can be directed to the IHS Division of Diabetes at IHSMNTActionTeam@ihs.gov

IHS Division of Diabetes Website – *Quick Guide Card Sections* on *Physical Activity* and *Anthropometry*. The set includes an overview, resources, and several 'How To' short video tutorials at http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=toolsQuickGuides

IHS Standards of Care for Adults with Type 2 Diabetes. Updated clinical guidelines for providers. Revised March 2009. http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Tools/ClinicalGuidelines/Diabetes_Standards_Care_508Rev2.pdf

International Food Information Council. This website is a healthy eating and active living website designed for children ages nine to twelve years old and their families. http://www.kidnetic.com/Whatis.aspx

Just Move It! This is a national campaign to promote physical activity for American Indians and Alaska Natives. Use this website to learn how to start an activity in your own community, share information about ongoing programs, contribute stories, and enter information in Just Move It's calendar. http://justmoveit.org/jmi/home.htm

La Leche League International. The mission is to help mothers worldwide to breastfeed through mother-to-mother support, encouragement, information, and education, and to promote a better understanding of breastfeeding as an important element in the healthy development of the baby and mother. http://www.llli.org/

Let's Move! A comprehensive initiative, launched by the First Lady, dedicated to solving the problem of obesity within a generation so that kids born today will grow up healthier and able to pursue their dreams. This website contains tools, resources, and action steps to increase activity levels, improve nutrition and more at http://www.letsmove.gov/

Mediterranean Diet. Research on The Mediterranean Diet has linked the diet to many improvements in health and the prevention of disease. Additional information on the Mediterranean Diet can be found at: http://www.oldwayspt.org/mediterraneandiet or http://www.americanheart.org/presenter.jhtml?identifier=4644 or http://www.mayoclinic.com/health/mediterranean-diet/CL00011

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/

The **National Diabetes Education Program (NDEP)** is a partnership of the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), and more than 200 public and private organizations. NDEP provides many resources and tools tailored for American Indian and Alaska Native communities. Healthy eating materials are available at: http://www.ndep.nih.gov/publications/index.aspx?Keyword=Healthy+Eating&Go.x=13&Go.y=11&Go=Go

National Diabetes Information Clearinghouse, NIDDK. The Clearinghouse offers an easy-to-read publication, "What I need to know about Physical Activity and Diabetes." March 2008 http://diabetes.niddk.nih.gov/dm/pubs/physical_ez/

National Eating Disorders Association (NEDA). For information on improving relationships with food, binge eating, and other eating disorders visit: http://www.nationaleatingdisorders.org/ or call 1.800.931.2237.

NIH Senior Health. The National Institutes of Health provides aging-related health information for seniors on a variety of topics, including eating well as you get older: http://nihseniorhealth.gov/eatingwellasyougetolder/toc.html . This website also contains a training tool for teaching elders how to find reliable, up-to-date online health information on their own. http://nihseniorhealth.gov/

The **Nutrient Rich Foods Coalition** website offers easily accessible and reliable information on eating the nutrient-rich way; the approach to eating is a positive, total diet approach based on the five food groups and nutrient density concepts highlighted in the *Dietary Guidelines for Americans* and *MyPlate*. It is not a specific eating plan, but it helps people choose nutrient-rich foods that best fit personal tastes and lifestyles, giving them a long-term, well-balanced, and healthier way to eat. Visit the coalition at: http://www.nutrientrichfoods.org/index.html

Nutrition and Active Living is a leader for health promotion and disease prevention, and is recognized as a centre of excellence. This is a resource for feeding and food choices throughout the lifecycle, information about food security, and the Canada Food Guide. http://www.calgaryhealthregion.ca/programs/nutrition/index.htm

Promoting a Healthy Weight in Children and Youth Clinical Strategies. A publication of the IHS Division of Diabetes Treatment and Prevention Office of Information Technology, December 2008 available at: http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Tools/ClinicalGuidelines/Promoting_Healthy_Weight_1208.pdf

***Quick Guide to Healthy Living*.** This U.S. DHHS website includes healthy eating information and tools including a shopping list and food diary templates for consumers. http://www.healthfinder.gov/prevention/ViewTopic.aspx?topicID=21&cnt=1&areaID=0

Robert Wood Johnson Foundation. *Leadership for Healthy Communities Action: Advancing Policies to Support Healthy Eating and Active Living Strategies* Toolkit, May 2009. The toolkit includes strategies for local and state leaders to work together to create healthy communities and prevent childhood obesity. http://www.leadershipforhealthycommunities.org/images/stories/toolkit/lhc_action_strategies_toolkit_0900504final.pdf

Small Step. This U.S. Department of Health and Human Services website provides information about the small steps that adults and children can take to discover a healthier self. Specifically addresses healthy eating and portion sizes. http://www.smallstep.gov or http://smallstep.gov/kids/flash/index.html

***The Surgeon General's Call to Action to Support Breastfeeding* – 2011.** Visit this website for the report and information for mothers, employers, and other online resources: http://surgeongeneral.gov/topics/breastfeeding/index.html

U.S. Breastfeeding Committee. The United States Breastfeeding Committee (USBC) is an independent nonprofit coalition of more than 40 nationally influential professional, educational, and governmental organizations, that share a common mission to improve the Nation's health by working collaboratively to protect, promote, and support breastfeeding. http://www.usbreastfeeding.org/

US Diabetes *Conversation Map*® Program. Each map is a series of images and metaphors—a tool that educators can use to engage groups in conversations about diabetes. This innovative teaching method provides participants with an action plan to make changes in their choices and behaviors. In some cases, the action plan is robust, while in other cases it provides a starting point for change. http://www.journeyforcontrol.com/journey_for_control/journeyforcontrol/for_educators/conversation_maps/conversation_map_overview.jsp

U.S. Department of Agriculture: Center for Nutrition Policy and Promotion
This website provides information, links to nutrition information, and materials from MyPyramid, MyPlate, and the Dietary Guidelines for Americans.
http://www.cnpp.usda.gov/

U.S. Department of Agriculture: Food and Nutrition Information Center
This website provides credible, accurate, and practical resources for nutrition and health professionals, educators, government personnel, and consumers. Browse by subject, including *Dietary Guidance, Weight and Obesity, Diet and Disease, Lifecycle Nutrition* and more, at:
http://fnic.nal.usda.gov/nal_display/index.php?tax_level=1&info_center=4

U.S. Department of Agriculture: Your Food Environment Atlas
Provides a spatial overview of a community's ability to access healthy food and its success in doing so. Assemble statistics on food choices, health, and well-being, and community characteristics. http://www.ers.usda.gov/foodatlas/

USDA *Infant Nutrition and Feeding: A Guide for Use in the WIC and CSF Programs*.
Reference handbook for staff of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and Commodity Supplemental Food Program (CSFP), or those that provide nutrition education to the caregivers of infants.
The handbook provides an overview of topics related to infant nutrition and feeding, and answers some common questions on feeding infants. The handbook can be used as a resource in disseminating appropriate and accurate information to participants as well as for planning individual counseling sessions, group classes, and staff in-service training sessions. The *Guide* can be viewed online or ordered in hard copy.
http://wicworks.nal.usda.gov/nal_display/index.php?info_center=12&tax_level=2&tax_subject=624&level3_id=0&level4_id=0&level5_id=0&topic_id=2625&&placement_default=0

U.S. Department of Agriculture: National Agricultural Library
This website provides easy, online access to government information on food and human nutrition for consumers.
http://www.nutrition.gov/nal_display/index.php?info_center=11&tax_level=1

This **U.S. Department of Agriculture (USDA) SNAP-Ed Connection** is a dynamic online resource center for State and local SNAP-Ed providers. SNAP-Ed Connection is funded by USDA's Food and Nutrition Service (FNS) and maintained at the National Agricultural Library's Food and Nutrition Information Center.
http://snap.nal.usda.gov/nal_display/index.php?tax_level=1&info_center=15 - This website provides nutrition education information and resources for Native Americans.
http://snap.nal.usda.gov/nal_display/index.php?info_center=15&tax_level=3&tax_subject=275&topic_id=1336&level3_id=5217

USDA TEAM Nutrition. *Team Nutrition* is an initiative of the USDA Food and Nutrition Service to support the Child Nutrition Programs through training and technical assistance for foodservice, nutrition education for children and their caregivers, and school and community support for healthy eating and physical activity. http://www.fns.usda.gov/tn

***We Can!* (W**ays to **E**nhance **C**hildren's **A**ctivity **and N**utrition**)** is a national movement designed to give parents, caregivers, and entire communities a way to help children eight to thirteen years old achieve and stay at a healthy weight. The National Heart, Lung, and Blood Institute (NHLBI) provides this website. http://www.nhlbi.nih.gov/health/public/heart/obesity/wecan/

***Your Guide to Breastfeeding* –** January 2011**.** This easy-to-read publication provides women the how-to information and support needed to breastfeed successfully. It explains why breastfeeding is best for baby, mom, and society and how loved ones can support a mother's decision to breastfeed. Expert tips and illustrations help new moms learn how to breastfeed comfortably and how to overcome common challenges. The wisdom of real moms is shared in personal stories that reassure and encourage. Available in English, Spanish, and Chinese with an update in progress for American Indian and Alaska Native women. http://www.womenshealth.gov/pub/bf.cfm Copies may be ordered free of charge or PDF may be downloaded.

Zero to Three. Keeping your child healthy and ensuring that s/he gets good nutrition are two of the most important jobs of parenting. Learn more by downloading resources, tips, and tools on nutrition at http://www.zerotothree.org/child-development/health-nutrition/

Examples of Current Best Practice Programs

Contacting other people involved in diabetes and nutrition 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:

Chinle Service Unit Nutrition and Diabetes Services
LCDR Gwenivere Rose, MS, RD, USPHS gwenivere.rose@ihs.gov
LCDR Michelle Johnson, MS, RS, USPHS michelle.johnson@ihs.gov
LCDR Faye Scott, RD, USPHS revondolyn.scott@ihs.gov
Pam Etsitty, BS pamela.etsitty@ihs.gov Phone: 928-674-7602

CSU is located in the center of the Navajo Nation. We have been successful in partnering with clinical, Tribal, and community agencies to implement many innovative initiatives. We have nine dietitian positions and over eleven health tech positions. Some of our initiatives include building capacity of community and clinical health techs to deliver basic nutrition and diabetes education, Training paraprofessionals as certified breastfeeding counselors, implementing the baby friendly hospital and breastfeeding in the workplace policies, increasing access to fruits and vegetables through community gardening, Environmental changes such as implementing native lifestyle balance and wellness policies at worksites, training clinical and community staff on integration of self management support into all patient encounters, pre-visit screening for active diabetic patients, utilizing media messages to promote healthy eating in schools and incorporating traditional teachings into all that we do.

Navajo Nation Special Diabetes Project
Betti Delrow, LCSW
Phone: 928-871-6543 Email: b.delrow@nndoh.org

This program conducts food and grocery store demonstrations; offers vegetarian cooking classes; offers the Lifestyle Balance classes; and produces media releases.

Northern Navajo Medical Center
PO Box 160
Shiprock, NM 87420
Contacts: Susan R. Jones MS, RD, LD, CNSD, CPS; Miranda Oshida, RD, Supervisory Dietitian; Kari Wato, RD, CDR, USPHS, Lead Clinical Dietitian
Phone: 505-368-6209 Email: susan.jones@ihs.gov

This program has developed Innovative outpatient specialty clinics in addition to many other activities. Specialty clinics include:

- Pediatric Obesity Clinic: A multidisciplinary team approach to helping children who are over the 95% BMI for growth using evidence-based guidelines.
- Infant Nutrition Clinic – A team of dietitian and dentist officers offering a wellness/educational group session for all four month old infants and family members to teach on healthy introduction of solids, healthy dental care, and the parents as role models. Program based on the (7-5-2-1-0) principles.
- Started the CHF clinic and affiliated with the CKD clinic.

Oneida Indian Nation Health Department
Michael Washo, MS, RD, CDE, Diabetes Coordinator
Phone: (315) 829-8713
Email: mwasho@oneida-nation.org

The Oneida Nation Health Center's Community Nutrition Program works with a variety of community and governmental partners to provide nutrition services. These include:

- working with employee wellness programs
- providing medical nutrition therapy (MNT)
- presenting a variety of group nutrition education options (cooking class, supermarket tours, etc.)
- presenting exercise (yoga, Pilates, personal training) programs at the Oneida Nation Health Center and at other community locations
- providing a diabetes self-management education (DSME) program that incorporates both didactic and practical, hands-on self-care management
- working with the Early Learning Day Care Center and after school recreation programs to promote nutritional health
- providing nutrition oversight to the off-site elder meal program, and
- utilizing community health staff to promote and expand nutrition education efforts.

Tuba City Regional Health Care Corporation
Healthy Living Center
Tuba City, AZ 86045
Contact: Abdul-Aziz Baco, RD, PhD, CDE
Phone: 928-283-2895
Email: abdulaziz.baco@tchealth.org

This recognized diabetes program has a very successful diabetes prevention program, and provides coordinated clinical and community nutrition services.

Wewoka Indian Health Clinic
P.O. Box 1475
Wewoka, OK 74884
Contact: Stefanie McLain, MS, RD, LD
Public Health Nutritionist
Phone: 405-257-7501
Email: Stefanie.Mclain@ihs.gov

The name of our diabetes education program is BEAT (Being Empowered About Treating diabetes) and MNT education is provided to increase Health Promotion Disease Prevention efforts within the community service area. Our Community Health Department as a whole provides various classes such as: 8-week intensive weight loss classes, an extensive walking program, cooking demos in the community, heart health events, Empowerment Day, Camp LEAD is our adult diabetes camp, and GO PRO is our kid's camp.

Additional Contacts

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 additional ideas and suggestions.
http://www.ihs.gov/medicalprograms/diabetes/index.cfm?module=peopleDDTP

PART 4 References

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