

# INDIAN HEALTH DIABETES BEST PRACTICE

## Community Diabetes Screening

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](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 ..... 3

Summary of Key Recommendations and Key Measures..... 4

**PART 1 Essential Elements of Implementing this Best Practice ..... 5**

    Purpose and Target Population ..... 6

    Intended Users of this Best Practice..... 6

    Definition of Community Diabetes Screening ..... 6

    Goals of This Best Practice ..... 7

    Key Recommendations..... 8

    Planning for Your Program and Evaluation..... 9

*Key Action Steps*..... 9

*Key Measures* ..... 10

**PART 2 Key Recommendations ..... 11**

    Note! Part 2 provides important detail on the “why?” and “how?” of implementation of each Key Recommendation..... 11

**PART 3 Appendices, Tools, and Resources ..... 20**

**PART 4 References ..... 41**

# 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 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 conduct a community needs assessment of interest in diabetes education and/or providing community education to increase awareness of risks for diabetes.
- 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 Community Diabetes Screening 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. Prepare for community diabetes screening.**

- Assess capacity for community diabetes screening.
- Develop a community diabetes screening plan.
- Establish a clinical referral system.
- Choose a screening method.

## **2. Educate the community about diabetes.**

- Teach recognition of diabetes risk factors and diabetes prevention strategies.
- Advocate and assist lifestyle change for at risk individuals to prevent diabetes and associated heart disease complications.

## **3. Identify people at risk of developing diabetes.**

- Formulate a secure and appropriate data collection process for community screening.
- Have a referral protocol for medical follow-up of abnormal findings.
- *Standards of Care* references should be available to all screening personnel.
- Patient informed consent and privacy procedures should be in place.
- Clinical oversight of all invasive screening activities should be coordinated.

## **4. Identify people with abnormal finger stick levels and refer for appropriate blood glucose testing and follow-up.**

**Key Measures for Community Diabetes Screening 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 screened for diabetes in the past twelve months.

2. \*Percent of individuals screened for diabetes who received diabetes prevention education at the time of screening in the past twelve months.

3. Percent of individuals with abnormal screening results in the past twelve months who received follow-up with a health care provider within two weeks of referral.

# PART 1 Essential Elements of Implementing this Best Practice

## Purpose and Target Population

This Best Practice describes recommendations for a community diabetes screening program designed to identify adults at risk of, or with, undiagnosed diabetes.

**Action! See [Part 3](#) – [Appendix A](#). Importance of Community Diabetes Screening**

## Intended Users of this Best Practice

- Community diabetes program staff
- Community workers who provide diabetes education or assessment
- Clinical staff who coordinate care with community diabetes programs
- Tribal leaders
- Health care organization administrators

**Action! See [Part 3](#) – [Appendix A](#). Supplemental Information for discussion of the benefits and risks of implementing this Best Practice.**

## Definition of Community Diabetes Screening

Community diabetes screening uses various methods of testing to identify asymptomatic people who are at risk for developing diabetes or with undiagnosed diabetes. Other related health conditions can also be tested for at the same time as diabetes screening. Individuals identified with health risks by screening can then be referred to health care programs for confirmation and treatment.

Trends of increasing prevalence of diabetes and pre-diabetes in Native Americans make early identification and intervention essential to the success of diabetes prevention and treatment programs. It can be more cost effective to screen and intervene to prevent diabetes than to focus solely on treatment of diabetes after it occurs.

Diabetes screening can be incorporated into various community events such as health fairs, pow-wows, and church or school functions. Ongoing wellness programs such as walking clubs, exercise classes, talking circles, and cooking classes also provide opportunities to screen for diabetes.

Community diabetes screening is different from diagnostic testing for diabetes; screening is used to identify people without symptoms, whereas diagnostic testing is performed when a person exhibits signs and symptoms of diabetes.

**Action! See <http://www.diabetes.org/diabetes-basics/symptoms/> for signs and symptoms of diabetes.**

## Goals of This Best Practice

This document provides guidance for programs that seek to improve early identification of people who are at risk for developing diabetes or with undiagnosed diabetes.

- To increase identification of those at risk for developing diabetes.
- To increase the percent of individuals at risk of developing diabetes who receive further diagnostic testing.
- To increase the number of community members who receive education about diabetes risk factors.
- To improve resources available for the community diabetes screening program by forming new partnerships.
- To increase the percent of staff who receive training or education in effective screening techniques.

# Key Recommendations

These are evidence-based actions that can lead to improved outcomes for adults at risk of, or with, undiagnosed diabetes.

**Key Recommendations for Community Diabetes Screening Best Practice. These are evidence-based actions that will lead to improved outcomes in the community.**

**1. Prepare for community diabetes screening.**

- Assess capacity for community diabetes screening.
- Develop a community diabetes screening plan.
- Establish a clinical referral system.
- Choose a screening method.

**2. Educate the community about diabetes.**

- Teach recognition of diabetes risk factors and diabetes prevention strategies.
- Advocate and assist lifestyle change for at risk individuals to prevent diabetes and associated heart disease complications.

**3. Identify people at risk of developing diabetes.**

- Formulate a secure and appropriate data collection process for community screening.
- Have a referral protocol for medical follow-up of abnormal findings.
- *Standards of Care* references should be available to all screening personnel.
- Patient informed consent and privacy procedures should be in place.
- Clinical oversight of all invasive screening activities should be coordinated.

**4. Identify people with abnormal finger stick levels and refer for appropriate blood glucose testing and follow-up.**

**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. Choose program goals that fit with the Key Recommendations and your resources. Examples of Program Goals include:
  - Increase the number of adults screened for diabetes.
  - Increase the number of adults screened for diabetes who receive diabetes education at the time of screening.
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:

- To increase the number of adults without diabetes who are screened for diabetes from 35% to 45% by the end of the current fiscal year.
  - To increase the number of adults screened for diabetes who received diabetes education at the time of screening from 75% to 85% by the end of the current 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 Community Diabetes Screening.** 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 are **required** to 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 screened for diabetes in the past twelve months.
2. \*Percent of individuals screened for diabetes who received diabetes prevention education at the time of screening in the past twelve months.
3. Percent of individuals with abnormal screening results in the past twelve months who received follow-up with a health care provider within two weeks of referral.

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!** Link to 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 Community Screening Programs Example** to assist you with applying Key Recommendations and Key Measures to a program plan.

**Action!** You can also link to an online training and a workbook to get more ideas about setting goals and objectives, and developing a program plan. Available from: (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. Prepare for community diabetes screening.

### *Why?*

Preparation for community diabetes screening is very important. Your program's capacity to screen, track screened individuals, refer for health services, and monitor follow-up must be determined prior to implementing your screening program.

Coordinating community diabetes screening activities with community leaders and local health care services are critical components of a community diabetes screening program, and as important as the actual content of the screening program.

### **How to Implement the Key Recommendation**

#### **A. Consider the following assessment and planning questions:**

- Do you have a community screening plan developed?
- Do Tribal leaders, clinic staff, and other community stakeholders support community diabetes screening activities?
- Are qualified staff and personnel a part of your team and available to perform testing?
- Are local resources available to screen for diabetes?
- Are local resources available to treat diabetes that is detected through the screening program?

**Action! See Part 3 – [Appendix D](#). Considerations for Community Screening** for factors to consider when designing a community diabetes screening program.

**Action! See Part 3 – [Appendix E](#). Community Diabetes Screening Assessment Pyramid**

**Action! See Part 3 – [Appendix F](#). Staff Roles and Responsibilities Checklist**

**B. Establish a clinical referral system** to evaluate individuals at high risk or with abnormal screening results and ensure that appropriate follow-up is received. Diagnosis and treatment should be conducted at a clinic/facility by a licensed medical provider, based on the results of confirmatory testing conducted at an accredited laboratory.

#### **C. Choose a screening method:**

1. A diabetes paper and pencil risk assessment, adapted from the ADA test, can help identify people who are at high risk for diabetes. **Action!** You may download the test at:  
<http://steps.cherokee.org/Portals/53/CN-ADA%20Paper%20Risk%20Test.pdf>
2. Newer paper and pencil risk assessments have been developed, and are designed to improve the screening process. (Bang, 2009) **Action!** For examples see:  
[http://www.physiciansweekly.com/images/pw10\\_24/Bang-table-1.jpg](http://www.physiciansweekly.com/images/pw10_24/Bang-table-1.jpg)  
[http://www.physiciansweekly.com/pw24\\_10.1.html](http://www.physiciansweekly.com/pw24_10.1.html)
3. Blood sampling:

- capillary blood glucose (fingerstick)
- plasma blood glucose (venipuncture)

**Action! See Part 3 – Appendix G. Examples of Screening** for more information on Surveys and Blood Glucose Testing.

**Note! Point of care blood sampling test results are point of care and not considered diagnostic for diabetes. All point of care testing must be confirmed with accredited laboratory testing confirmation.**

4. The American Diabetes Association (ADA), the International Diabetes Federation (IDF), and the European Association for the Study of Diabetes (EASD) now recommend the use of A1C for the diagnosis of diabetes and the identification of people at risk for diabetes. The Indian Health Service recommends that A1C become the preferred test for diagnosing diabetes and pre-diabetes in non-pregnant patients in our populations.

**Action! See**

[http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Tools/ClinicalGuidelines/2010\\_IHS\\_A1C\\_statement.pdf](http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Tools/ClinicalGuidelines/2010_IHS_A1C_statement.pdf)

**Action! See Part 3 – Appendix H. for Additional Screening Tests**

**Team Notes:**

## **Key Recommendation 2. Educate the community about diabetes as part of diabetes screening.**

### ***Why?***

Education about diabetes:

- Enhances the public's understanding of the seriousness of diabetes and its complications.
- Assists advocacy efforts to prevent diabetes and help improve care for those who already have the diagnosis.
- Provides hope in preventing diabetes for those at risk.

### **How to Implement the Key Recommendation**

**A. Provide education about diabetes and diabetes risk as part of the community diabetes screening program. Include diabetes education at the time of screening.**

**B. The content of a community diabetes education program should include:**

1. Definition of diabetes and pre-diabetes (increased risk for diabetes)

**Action! See** criteria for diagnosis of diabetes at:

<http://www.uptodate.com/contents/image?imageKey=ENDO%2F5002>

**Action! See** categories of increased risk for diabetes at:

<http://www.uptodate.com/contents/image?imageKey=ENDO%2F5001>

2. Definition of people who are at risk of developing diabetes, including:

- American Indians and Alaska Natives.
- People with blood pressure at or above 130/80.
- People who have one or more family members with diabetes.
- Women who had diabetes during pregnancy.
- Women who had a baby weighing more than nine pounds at birth.
- Children born of pregnancies during which the mother had diabetes.

3. Signs and symptoms of diabetes, including:

- Intense thirst
- Frequent urination
- Weight loss without trying
- Or no symptoms

**Action! See** <http://www.diabetes.org/diabetes-basics/symptoms/> for signs and symptoms of diabetes.

4. Options of what people can do to prevent diabetes, including:

- Keeping weight at normal limits. Define normal limits by using height, weight, and body mass index (BMI) charts.

**Action! See** <http://www.cdc.gov/healthyweight/assessing/bmi/>

- Eating meals that are lower in fat and calories.

**Action! See** [http://www.cdc.gov/healthyweight/healthy\\_eating/index.html](http://www.cdc.gov/healthyweight/healthy_eating/index.html)

- Staying active most days of the week.

**Action! See** <http://www.cdc.gov/physicalactivity/>

- Action plans for health care access if a person thinks he or she has diabetes. Explain the risks and consequences of delaying evaluation and treatment (complications of undiagnosed diabetes).
- Educational materials including, the Diabetes Prevention Program (DPP) lifestyle curriculum, DPP video titled “Am I at Risk?”, and other patient education materials.

**Action! See** [http://www.bsc.gwu.edu/dpp/lifestyle/dpp\\_dcor.html](http://www.bsc.gwu.edu/dpp/lifestyle/dpp_dcor.html)

- Resources on where patients can go for more information, such as their health care providers, written materials, and websites.

**Action! See**

<http://www.diabetes.org/>

<http://ndep.nih.gov/>

<http://www.cdc.gov/diabetes/>

<http://diabetes.niddk.nih.gov/>

**Team Notes:**

## **Key Recommendation 3. Identify people at risk of developing diabetes.**

### ***Why?***

Early identification and intervention of pre-diabetes and diabetes can prevent or delay the onset of diabetes, and reduce the incidence of diabetes-related complications.

### **How to Implement the Recommendation**

**A. Formulate a secure and appropriate data collection process** for community screening.

**B. Patient informed consent and privacy procedures** should be in place.

**Action! See Part 3 – [Appendix I](#).** Informed Consent Form Template

**Action! See Part 3 – [Appendix J](#).** Assent Script and Form Template

**C. Clinical oversight of all invasive screening activities** should be coordinated.

**D. Use a referral protocol for medical follow-up** of abnormal findings.

**E. *Standards of Care* references** should be available to all screening personnel.

**F. Use a diabetes paper and pencil risk assessment**, adapted from the ADA test, to identify people who are at high risk for diabetes.

**Action!** You can download tests at:

<http://steps.cherokee.org/Portals/53/CN-ADA%20Paper%20Risk%20Test.pdf> or  
[http://www.physiciansweekly.com/images/pw10\\_24/Bang-table-1.jpg](http://www.physiciansweekly.com/images/pw10_24/Bang-table-1.jpg)

**G. Consider risk factors**, including:

- being more than 20% above ideal body weight
- having a mother, father, brother, or sister with diabetes
- giving birth to a baby weighing more than nine pounds
- having diabetes during pregnancy
- having high blood pressure
- having abnormal blood lipid levels
- having abnormal glucose tolerance in a prior diabetes test

**H. Any high-risk individual with a fasting blood glucose over 100 mg/dl or random blood glucose over 120 mg/dl should be referred** to a health care provider and be seen within two weeks after the screening.

**Team Notes:**



## **Key Recommendation 4. Identify people with abnormal finger stick levels and refer for appropriate blood glucose testing and follow-up.**

### ***Why?***

Some American Indian and Alaska Native communities feel that screening is an important or useful strategy in their community based diabetes programs. However, the American Diabetes Association (ADA) does not recommend random blood glucose screening even in high-risk populations. The ADA is concerned that people with a positive diabetes screening test may not seek and obtain the appropriate follow-up testing and care, or that people who have a negative diabetes screening test may not obtain appropriate repeat testing. **It is the responsibility of the community and clinical health care programs to work together and ensure that referrals for follow-up take place in a timely manner.**

**Action!** See <http://www.cdc.gov/diabetes/news/docs/screening.htm> for diabetes screening position statements.

### **How to Implement the Recommendation**

- A. Remember that community screening results are not diagnostic for diabetes.**
- B. All abnormal results (fasting > 100, random > 120) should be referred to clinical care services within two weeks** for reassessment and further evaluation. Refer any individual with a blood glucose level over 200 mg/dl to a health care provider immediately.
- C. Maintain a screening registry and reminder system** to track all referred patients.
- D. Offer lifestyle education programs to patients with pre-diabetes** or patients who had a negative diabetes screen but are still at high risk.

**Team Notes:**

## Additional Recommendations

### Working Together with your Community and Organization

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

### Community Recommendation

#### Conduct community activities to raise awareness of diabetes.

##### *Why?*

Diabetes awareness programs may provide an opportunity to increase public awareness of the seriousness of diabetes and its complications.

##### **How to Implement the Recommendation**

**Establish community outreach through media promotion** such as print, television/radio, and internet.

**Action!** Materials for community campaigns, including public service announcements, are available at:

<http://ndep.nih.gov/publications/index.aspx?Ethnicity=American+Indians+and+Alaska+Natives>  
[http://www.aaip.org/?page=NDEP\\_MATERIALS](http://www.aaip.org/?page=NDEP_MATERIALS)

- Conduct mailings, flyers, and newsletters.
- Develop PSAs for audiovisual media.
- Consider web-based information, such as blogs, podcasts, social networking.
- Offer diabetes support groups and talking circles.
- Conduct diabetes education sessions at schools, churches, and community centers.
- Host health fairs that focus on diabetes prevention.
- Develop community infrastructure that promotes wellness activities, such as walking and fitness trails.

##### **Team Notes:**

## Organization Recommendation

### Prioritize community screening.

#### *Why?*

Community screening may provide a way to increase awareness of diabetes and its complications.

#### **How to Implement the Key Recommendation**

**A. Provide formal commitment to community diabetes screening programs, such as signed agreements and contracts, and memoranda of agreement (MOA's)**

**Action! See [Part 3](#) – [Appendix K](#). Writing a Resolution for Your Tribal Council**

**B. Establish structured plans, policies, and procedures for community screening.**

**Team Notes:**

# PART 3 Appendices, Tools, and Resources

## Appendix A. Supplemental information

### 1. Importance of Community Diabetes Screening.

Many American Indian and Alaska Native (AI/AN) communities support community diabetes screening as an important strategy in their community-based programs. In addition to identifying at risk and undiagnosed individuals with diabetes, screening also helps general health risk assessment and early implementation of lifestyle intervention measures that can prevent diabetes and cardiovascular disease. Screening can help educate and cultivate positive attitudes about health care in the community.

Currently, the American Diabetes Association (ADA) does not recommend random or universal diabetes screening, even in high-risk populations (ADA, 2004). Concerns exist that people with a positive screening test may not seek and obtain the appropriate follow-up testing and care, or that people who have a negative screening test may not obtain appropriate repeat testing. **It is the responsibility of community and clinical health care programs to work together and ensure that referrals for follow-up occur in a timely manner.**

**Note!** Community screening for diabetes (point-of-care testing) is not diagnostic. All abnormal findings or inconclusive test results should be confirmed with medical follow-up at an established health care facility utilizing an accredited laboratory for confirmation testing.

### 2. Benefits of Community Diabetes Screening:

Community screening should be based on the most current medical evidence to optimize outcomes. Organizations and communities that implement these recommended practices should expect the following benefits:

- With early identification by screening, patient education for healthy lifestyle changes can be implemented sooner.
- People at risk for or previously undiagnosed with diabetes can be referred earlier into the health care system for treatment.
- The burden of disease and health care cost for diabetes, undiagnosed diabetes, and associated cardiovascular complications can be reduced.

The potential harm of implementing this Best Practice occurs when individuals with abnormal test results are not referred to clinical care services for reassessment and further evaluation.

### 3. Health questions addressed by the Best Practice:

- How can our program assess capacity for community screening?
- Why is a Community Screening Plan important?
- What screening techniques effectively identify people at risk for diabetes?
- What are the target population definitions we will use to screen?
- How can education and advocacy be combined with screening activities?
- What is the role of data collection in community screening for diabetes?
- What processes are needed to effectively refer people into the health care system for follow-up?

#### **4. Sustaining a Community Diabetes Screening Program**

It is common for new initiatives to require a certain level of maturity before care goals can be achieved. This maturational process may require more than a few years to produce the desired outcomes in a stable and self-sustaining fashion. Sustainability is a critical issue for programmatic success, and can be an elusive target. The following recommendations may be useful in fostering sustainability in newly implemented community screening program. Often, for care goals to be reached, programs must be in place for more than a few years. Here are some helpful tips for sustaining your community diabetes screening program:

- Ongoing collaboration with a local diabetes/SDPI prevention program.
- Ensure the organization has written policies and procedures for community diabetes screening.
- Provide regular reports to stakeholders based on your program evaluation to demonstrate the effectiveness of the program.
- Ensure that Tribal and health organization leadership and the community understand and acknowledge the magnitude and effect of the obesity epidemic.
- Maintain awareness about the importance of diabetes treatment and prevention among stakeholders.
- Secure non-grant funding to support your community screening program.

## Appendix B. Key Measures Example

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

**Diabetes is increasing in our community.** Our health care center and community are concerned about the increasing number of people with diabetes.

**Diabetes team takes action.** Our diabetes team talked about addressing this problem. We read the Community Diabetes Screening Best Practice and talked about the key recommendations.

**Identified sources of data.** Local data included:

- Community Screening Registry
- RPMS
- Medical Records
- Referral Logs
  - o Data indicated:
    - 50% of adults in the community who do not have diabetes have been screened for diabetes in the past year
    - 75% of adults screened for diabetes received diabetes education at the time of screening
    - 35% of adults with abnormal screens received follow up lab tests

**Selected suitable Best Practice.** After thinking carefully about our goals and resources, and reviewing data, we decided the Community Diabetes Screening Best Practice was a good fit for us. We chose to work on two of the Key Recommendations: identifying people at risk of developing diabetes and educating the community about diabetes and diabetes screening.

**Identified Target Population.** We decided to start implementing this Best Practice with adults in the community.

**Identified Program goals:**

- To increase the number of people screened for diabetes.
- To increase the number of people screened for diabetes who receive diabetes education.

**Identified SMART objectives based on our resources and data:**

- The percent of adults in the community who do not have diabetes who are screened for diabetes within the past year will increase from 50% to 60% over the next year.
- The percent of adults in the community who are screened for diabetes who received diabetes education at the time of screening will increase from 75% to 85% over the next year.
- The percent of adults in the community who are screened for diabetes with an abnormal screen that receive follow up lab tests will increase from 35% to 50% over the next year.

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

**Table 1. Selected Key Measures.**

A. Measure	B. <b>Baseline</b> or beginning value and date (collected prior to starting activities)	C. Most recent value and date (if applicable)	D. Data source
1. * Percent of adults in the community who do not have diabetes who were screened for diabetes	50% as of 1/06/2011	53% as of 5/23/2011	Community Screening Registry
2. * Percent of adults in the community who are screened for diabetes who received diabetes education at the time of the screening	75% as of 1/06/2011	76% as of 5/23/2011	Community Screening Registry
3. Percent of adults in the community with abnormal screening result who received follow up lab tests according to the protocol within two weeks of referral	35% as of 1/06/2011	40% as of 5/23/2011	Community Screening Registry

\* Required Key Measure



## Appendix C. Improving Community Diabetes Screening Programs Example

**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 address as you plan and implement your Best Practice. These questions (and sample answers) are:

### 1. What is your target population?

- Adults in the community who do not have diabetes

### 2. What are you trying to accomplish by implementing this Best Practice?

- Our program's aim is to raise awareness about diabetes risk factors.
- Our program intends to identify community members with prediabetes or diabetes to prevent the onset of diabetes and diabetes-related complications.

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

- We will know if our program makes things better by tracking the number of individuals who are referred for further testing actually receive that testing.

### 4. What additional steps can you take to improve outcomes?

- Our program can set up a referral system that allows us to track the follow-up status of individuals identified through community screening and referred for further diagnostic testing.

## Appendix D. Considerations for Community Screening

American Indian and Alaska Native health programs interested in community diabetes screening may want to consider the following factors when designing their screening program:

1. Developing a written **Community Diabetes Screening Plan** that may include:
  - Mission or vision statement
  - Specified roles and responsibilities
  - Defined goals and objectives
  - Specific activities and measures
  - Timeline for program functions
2. When **defining your target population for screening**, consider:
  - Age groups, gender, other health risks
  - Size and geographic location of target population
  - Guidelines for screening (history, physical, laboratory testing)
  - Community needs
  - Screening program capacity (see below)
3. **Assess capacity** of your screening program team
  - Administrative and clinical support
  - Personnel – staffing and FTE's, credentials and training
  - Funding and material resources
  - Transportation
  - Data collection and system access
  - Referral support from clinical services
  - Scope of objectives, activities, and key measures of work plan
  - Surveillance and monitoring protocol
  - Assess program performance with community feedback and team review
4. Your **screening program's role to advocate and educate the community** by:
  - Raising awareness about diabetes and diabetes complications
  - The public health importance of screening
  - Educating about diabetes risk factors
  - Providing information about lifestyle changes to prevent diabetes
  - Accessing other resources (local, regional, and national)
  - Partnering with Tribal leaders, clinical, and other community programs

## Appendix E. Community Diabetes Screening Assessment Pyramid

# Stepped Approach for Indian Health Best Practice for Community Diabetes Screening

*Set your goals for your clinic*

### Comprehensive Program

Includes all of the previous elements plus ...

- Glucose, A1C, lipids, other blood tests
- Screening team has advanced degree medical/clinical members
- Intensive lifestyle prevention program implementation

### Intermediate Program

Includes all of the previous elements plus...

- In-depth survey
- Glucose screening
- Referral system for advanced education
- Screening team has certified staff members

### Basic Program

- Basic survey
- Non-invasive biometrics
- Basic education
- Ability to record and track results of screening
- Podiatry, footwear and field health referrals
- Referral system for medical follow-up
- Staff is qualified for screening

### Is Your Program Ready?

Do we have the following items in place?

- Able to treat existing patients, provide ongoing screening, provide follow-up
- Able to add DM caseload
- Well-defined target population
- Tribal Council support
- IRB approval
- Able to maintain, track, report data
- Able to maintain confidentiality
- Able to interpret results
- Written screening plan

## Appendix F. Staff Roles and Responsibilities Checklist

<h3 style="text-align: center;">Staff Roles and Responsibilities Checklist</h3> <h4 style="text-align: center;">Diabetes Screening Toolkit</h4>					
PROJECT COMPLETED?	PROJECT TASK	STAFF RESPONSIBLE	START DATE	TARGET FINISH DATE	ACTUAL FINISH DATE
Screening Program Preparation					
	Assess readiness for the screening program				
	Assign Staff Roles and Responsibilities				
	Develop a timeline				
	Identify Target Group				
	Choose a Screening Site				
	Identify information you need to measure the success of the screening program				
	Choose a data collection system				
	Obtain approval from Tribal council				
	Obtain approval from community				
	Obtain approval from the screening site administration				
	Obtain approval from the Institutional Review Board				
	Recruit participants and notify screening site staff				

PROJECT COMPLETED?	PROJECT TASK	STAFF RESPONSIBLE	START DATE	TARGET FINISH DATE	ACTUAL FINISH DATE
Screening Program Implementation					
	Coordinate the activities for the day of the screening (see the checklist for Basic, Intermediate and Comprehensive screening in <a href="#">Appendix E.</a> ).				
	Screening program set-up				
	Screening program clean-up				
Screening Program Follow-up					
	Perform data entry				
	Follow-up with referrals for high-risk participants				
	Send follow-up letter to all participants				
	Track participants who tested negative				
	Perform data analysis and develop reports				
	Evaluate your screening program				
	Present the results of screening program to Tribal Council				
	Present the results of the screening program to the community				
	Present the results of the screening program to the clinic administration				
	Make necessary changes to program and plan next screening				

## Appendix G. Examples of Community Screening

### 1. Survey Questionnaires:

Screening for diabetes using a paper and pencil test such as the following example from the Cherokee Nation (adapted from the ADA):

**Action!** <http://steps.cherokee.org/Portals/53/CN-ADA%20Paper%20Risk%20Test.pdf>

Modified versions of the paper and pencil test offer improvements of screening yield by incorporating additional assessments of diabetes-related health risks, such as overweight/obesity and physical activity. Here is an example:

**Action!** <http://www.annals.org/content/151/11/l-27.figures-only>

Self-Assessment Diabetes Screening Score.

### 2. Blood Glucose testing:

Programs may consider blood glucose testing to screen for diabetes:

- Screening staff should be familiar with blood and body fluid precautions.
- Screening staff should be familiar with all equipment and procedures used for screening activities.
- All screening activities should have a protocol for handling and disposing of hazardous biomaterials.
- Any individual with a blood glucose level over 200 mg/dl should be referred to a health care provider immediately.
- Any high-risk individual with a fasting blood glucose over 100 mg/dl or random blood glucose over 120 mg/dl should be referred to a health care provider and be seen within two weeks for follow-up.
- Any individual having symptoms or complaints suspected to be related to high blood sugar (hyperglycemia) should also be referred for follow-up, regardless of test results.

## Appendix H. Additional Screening Tests

### Survey questionnaires:

- Personal and family history assessment
- Lifestyle assessment (activity, nutrition)
- Knowledge/Attitude/Behavior (K/A/B) about diabetes

### Biometrics:

- Weight/Height (Body Mass Index)
- Waist circumference
- Blood pressure
- Skin examination
- Blood glucose
- Hemoglobin A1C
- Blood lipids (cholesterol)
- Other

Each of these components of screening for diabetes should have a patient education module (what it is, why it is important, lifestyle change information) and a data collection and referral protocol used by the screening program.

## Appendix I. Informed Consent Form Template

Words marked with “<< >>” indicate areas where you will need to fill in information on your program.

<<Diabetes Program>>

<<Address>>

<<Phone>>

<<Fax>>

<<Date>>

### **Informed Consent for Diabetes Screening**

The <<name of diabetes program>> is providing a health screening for <<who will be screened>>. <<Describe the purpose of your screening program.>>

#### **You are not required to participate.**

You will not lose any services from Indian Health Service (IHS), the Tribe, or others, and you will not be penalized in any way. If you attend the screening, you may withdraw at any time during the testing. You may choose to visit your own doctor for these tests, which may involve some cost. You may also choose to do nothing.

#### **We will ask to draw some blood from a vein.**

This is the same thing that happens when you have a physical exam by a doctor or nurse. This can cause some pain, stress, and perhaps a small bruise. Drawing blood will let us do the best tests for diabetes. <<Who will draw the blood? How will participants receive the results?>>

#### **We will ask to take a drop of blood from a finger-stick.**

We will test your blood sugar right away and tell you the results. We will also tell you what the results mean. The finger-stick will sting for a few seconds. We may ask to take a second drop of blood to test your cholesterol. We will tell you the results in about three minutes.

#### **We will ask to check your height, weight, and body fat.**

To check your body fat, we will ask you to remove your shoes and one sock. We will tape two small discs on one hand and on one foot to measure your body fat. You will be asked to stand for about two minutes. We will tell you the results right away.

#### **We will ask to look at your neck.**

Clinic staff will check for darkening of the skin on the neck. This can be a sign that a person is at risk for diabetes.

#### **We will ask you a few questions.**

We will ask about diabetes in your family, about your activity level, and whether or not you ate before the screening.

#### **We will keep this information confidential.**

We will not give your name or date of birth to any outside agencies. <<Where will results go? Who will receive results of screening? How will the results of the screening be distributed?>>

#### **If you have questions.**

Please contact <<contact person name and phone number>>.



**If you have a complaint or a concern.**

Contact <<contact person name and phone number>>.

**Both you and the entire reservation community will benefit.**

You will benefit by finding out if you have diabetes or if you are at high risk for diabetes. If you have diabetes or are at high-risk for diabetes, the IHS clinic or your regular doctor can help you stay healthy. The community will benefit since the screening will help us better plan our health care services. The research may even benefit other Tribes in our area.

**Taking part is voluntary.**

You may refuse to take part without any penalty or loss of care or services by IHS or others. You may stop taking part at any time, without penalty or loss of care or services to which you are otherwise entitled.

Yes, I want to participate in the community screening for diabetes. I agree to take part in the medical tests and allow information about me to be collected for research purposes. I am free to withdraw at any point during the testing.

---

***Signature of Volunteer***

---

***Date***

---

***Signature of Legal Guardian (if necessary)***

---

***Date***

---

***Signature of Diabetes Team Member***

---

***Date***

## Appendix J. Assent Script and Form Template

Words marked with “<< >>” indicate areas where you will need to fill in information on your program.

<<Diabetes Program>>  
<<Address>>  
<<Phone>>  
<<Fax>>  
<<Date>>

### **Assent Script for Diabetes Screening**

People who have diabetes have too much sugar in their blood. The <<name of diabetes program>> would like to examine—or screen—you to see if you might have too much sugar in your blood.

#### **You do not have to be screened for diabetes.**

If you do not want us to see if you have too much sugar in your blood, you do not have to participate. You will not lose care or services by your school, clinic, or anyone else.

#### **Both you and your reservation community will benefit.**

You will find out if you have too much sugar in your blood. If you have diabetes or if it looks like you might develop diabetes, the IHS clinic or your regular doctor can help you stay healthy. Your community will benefit since the screening will help us plan our health care services. The research may even benefit other Tribes in our area.

#### **We will ask to draw some blood from a vein.**

We will ask to draw some of your blood to see how much sugar is in it. This is the same thing that happens when you have an exam by a doctor or nurse. This may hurt a bit, and you might not like it. <<Who will draw the blood? How will participants receive the results?>>

#### **We will ask to take a drop of blood from a finger-stick.**

We will test your blood sugar right away and tell you the results. We will also tell you what the results mean. The finger-stick will sting for a few seconds.

#### **We will check how tall you are, how much you weigh, and how much body fat you have.**

To check your body fat, we will ask you to remove your shoes and one sock. We will tape two small discs on one hand and on one foot to measure your body fat. We will ask you to stand for about two minutes. We will tell you the results right away.

#### **We will ask to look at your neck.**

We will check for darkening of the skin on the neck. This can be a sign that you might have too much sugar in your blood.

#### **We will ask you a few questions.**

We will ask about diabetes in your family, about your activity level, and whether or not you ate before we screened you.

#### **We will not tell anyone about you.**

We will not give your name or date of birth to anybody. <<Where will results go? Who will receive results of screening? How will the results of the screening be distributed?>>

**If you have questions.**

You can ask us or you can call <<contact person name and phone number>>.

**If you have a complaint or a concern.**

You can tell us or call <<contact person name and phone number>>.

**Taking part is voluntary.**

You may refuse to take part or stop taking part at any time. You will not lose any care or services by IHS or others.

## Assent Form for Diabetes Screening

Question	Yes	No
Do you understand that you do not have to take part in the screening?		
Do you understand that you do not have to complete all the tests?		
Do you understand that you can stop at any time?		
Do you understand that you will not lose any service if you decide not to take part in the screening?		
May we take some blood from one of you veins?		
May we take two drops of your blood from a finger-stick?		
May we weigh you, measure your height, take your blood pressure, and measure your body fat?		
May we ask you a few questions?		

\_\_\_\_\_

**Signature of Volunteer**

\_\_\_\_\_

**Date**

\_\_\_\_\_

**Signature of Witness**

\_\_\_\_\_

**Date**

## Appendix K. Writing a Resolution for Your Tribal Council

### Key Components of a Resolution

#### ✂ Resolution number

This will be assigned by the Council Operations staff, and will usually include the year that the resolution was considered.

#### ✂ Title

This should accurately and succinctly describe nature of the resolution.

#### ✂ Opening block

- This is usually a standard set of paragraphs, unique to each Tribe that cites the constitutional authority of the Tribal Council to act as the Tribe's governing body. Contact the Council Operations staff for clarification on the content and format of this information.

#### ✂ Supporting paragraphs

- These are intended to provide background information on your resolution. Cite statistics and reports that both inform the Tribal Council and support your resolution. Include information that is necessary for the Tribal Council to make an informed decision, such as funding, staffing, chain-of-command, reporting, cultural concerns, and letters of support.

#### ✂ Resolution paragraph

- This should clearly and succinctly state the specific action that you desire the Tribal Council to approve. It will be preceded by the phrase "Now, therefore be it resolved." If you are asking the Council to consider more than one specific action, each subsequent action should be in a new paragraph preceded by the phrase "Be it further resolved." It is usually easiest to write this paragraph first, and then go back to the supporting paragraphs.

#### ✂ Closing block

- This is usually a standard set of paragraphs, unique to each Tribe that cites the Chairman's authority to execute the resolution, provides signature lines, and contains a certification of the voting process. Contact the Council Operations staff for clarification on the content and format of this information.

## Resolution Template

Resolution #2002-\_\_\_\_\_ of the \_\_\_\_\_ Tribal Council

Title: Screening for Diabetes and Pre-diabetes on the \_\_\_\_\_ Reservation

**[Insert opening block]**

**WHEREAS**, type 2 diabetes is epidemic in Indian Country, including among the \_\_\_\_\_ Tribe; and

**WHEREAS**, type 2 diabetes and its complications create a heavy economic and social burden for the \_\_\_\_\_ Tribe; and

**WHEREAS**, a recent major research trial has shown the type 2 diabetes can be prevented in people with pre-diabetes; and

**WHEREAS**, screening is necessary to identify people with pre-diabetes; and

**WHEREAS**, screening for diabetes and pre-diabetes is good public health practice; and

**WHEREAS**, screening for diabetes and pre-diabetes can raise awareness in the community and positively influence health behaviors; and

**WHEREAS**, the \_\_\_\_\_ Clinic has grant funding to cover the costs of a screening program and staffing adequate to administer the program; and

**WHEREAS**, a screening program for diabetes and pre-diabetes has support from the community, clinic administration, and the \_\_\_\_\_ Tribal Health Commission; and

**WHEREAS**, necessary precautions have been taken to assure the confidentiality of information and the safety of participants; and

**WHEREAS**, the screening program has undergone review by the Cultural Affairs Officer, whose report is included in the supporting documentation; and

**WHEREAS**, no aggregate data will be produced without prior consent from the \_\_\_\_\_ Tribal Council; and

**WHEREAS**, the primary contact person for this project is \_\_\_\_\_; and

**WHEREAS**, the primary contact person will provide semi-annual reports to the \_\_\_\_\_ Tribal Council; and

**NOW, THEREFORE BE IT RESOLVED** that the \_\_\_\_\_ Tribal Council approves the screening project proposed by the \_\_\_\_\_ Clinic, and

**BE IT FURTHER RESOLVED** that the continued approval of this program is based upon ongoing semi-annual reporting to the \_\_\_\_\_ Tribal Council; and...

**[Insert closing block]**

## Tools and Resources

### Web-based Resources

**Division of Diabetes Treatment and Prevention** [Internet]. **An on-line training course** on effective program planning and evaluation. [Developed 2009 July] Creating Strong Diabetes Programs: Plan a Trip to Success.

<http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=trainingBasicsCreating>

**Division of Diabetes Treatment and Prevention** [Internet]. **A workbook (with on-line training course)** on effective program planning and evaluation. [Developed 2009, July] Creating Strong Diabetes Programs: Plan a Trip to Success.

<http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Training/WebBased/Basics/Creating/Workbook.pdf>

**Diabetes Prevention Program (DPP)** This website contains study documents regarding the research aspects of the DPP. <http://www.bsc.gwu.edu/dpp/>

#### **Dietary Guidelines for Americans 2009**

Here you will find resources on My Pyramid and other nutrition tools.

<http://www.cnpp.usda.gov/dietaryguidelines.htm>

#### **Guide to Community Preventive Services**

The Guide to Community Preventive Services is a free resource to help choose effective and proven programs and policies to improve health and prevent disease in your community. Here you will find more than 200 interventions that have been reviewed and the recommendations (<http://www.thecommunityguide.org/about/findings.html>)

for their use. <http://www.thecommunityguide.org/obesity/index.html>

This website from the **IHS Division of Diabetes Treatment and Prevention** provides useful tools for health care providers and community program staff.

<http://www.ihs.gov/medicalprograms/diabetes>

#### **National Diabetes Education Program**

<http://www.ndep.nih.gov>

<http://www.cdc.gov/diabetes/ndep>

<http://www.diabetesatwork.org>

<http://www.betterdiabetescare.nih.gov>

<http://www.YourDiabetesInfo.org>

The National Diabetes Education Program brings together public and private partners to improve treatment and outcomes for people with diabetes, promote early diagnosis, and prevent the onset of type 2 diabetes. It promotes awareness and education activities and quality care. The website provides tools for educating health care providers and patients.

**National Diabetes Information Clearinghouse** <http://diabetes.niddk.nih.gov>

800-860-8747

## Examples of Current Best Practice Programs

### **Coquille Indian Tribe Community Health Center**

Southern Oregon Consortium

Contact: Kelle Little, RD, CDE, Health and Human Services Administrator

Phone: (541) 888-9494 ext. 20217

Email: [kelle@uci.net](mailto:kelle@uci.net)

The Southern Oregon Consortium is a SDPI Diabetes Prevention Demonstration Project.

## Additional Contacts

Contacting other people involved in community screening 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. You might contact the following for further ideas and assistance:

**Area Diabetes Consultants.** Contact information for Area Diabetes Consultants can be viewed at:

<http://www.ihs.gov/MedicalPrograms/diabetes/index.cfm?module=peopleADCDirectory>



# PART 4 References

## References

American Diabetes Association. International expert committee report on the role of the A1C assay in the diagnosis of diabetes. *Diabetes Care*. 2009;32(7):1-8.

American Diabetes Association. Screening for type 2 diabetes. *Diabetes Care*. 2004;27(Suppl 1):S11–14.

Bang H, Edwards AM, Bombback AS, et al. A self-assessment diabetes score: development, validation, and comparison with other diabetes risk-assessment scores. *Ann Intern Med*. 2009;151;775-783.

Diabetes Prevention Program (DPP) Research Group. The Diabetes Prevention Program (DPP): Description of lifestyle intervention. *Diabetes Care*. 2002;25:2165–71.

Indian Health Service Division of Diabetes Treatment and Prevention [Internet]. 2009 Apr. [cited 2009 July 1] Creating Strong Diabetes Programs: Plan a Trip to Success. Available from: <http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Training/WebBased/Basics/Creating/Workbook.pdf>

Indian Health Service Division of Diabetes Treatment and Prevention [Internet]. 2008 Sept. [cited 2009 July 1] Guidelines for Care of Adults with Prediabetes and/or Metabolic Syndrome in Clinical Settings. Available from: [http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Tools/ClinicalGuidelines/PreDiabetes\\_Guidelines\\_0209.pdf](http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Tools/ClinicalGuidelines/PreDiabetes_Guidelines_0209.pdf)

United Kingdom Prospective Diabetes Study (UKPDS) Group. Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet*. 1998;352(9131):837–53.