

# Indian Health Diabetes Best Practice Community Screening

Revised July 2009

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## Best Practice Guidelines

### What is community screening?

Community screening is a systematic way to identify people who are at high risk for developing diabetes or who already have diabetes but do not know it. These individuals can then be linked to effective prevention and treatment programs. Settings for community screening may include health fairs, pow-wows, or other community events. Community diabetes screening is different from diagnostic testing for diabetes; diagnostic tests are performed when a person exhibits signs and symptoms of diabetes (ADA, 2004).

### Why is community screening important?

Some American Indian and Alaska Native (AI/AN) communities feel that random screening is an important or useful strategy in their community-based diabetes programs. Large numbers of undiagnosed individuals are estimated to reside in these communities. Screening provides an opportunity to raise awareness and also educate the community about diabetes prevention.

The American Diabetes Association (ADA), however, does not recommend random blood glucose screening even in high-risk populations (ADA, 2004). 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.

If your program has decided to perform community screening, remember that screening results are not diagnostic for diabetes. All abnormal results should be referred to clinical care services for reassessment and further evaluation.

- 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 after the screening.

American Indian and Alaska Native health programs interested in community diabetes screening programs may want to consider focusing efforts on the following beneficial activities:

1. Conducting diabetes risk assessments using a paper and pencil test that has been adapted from the American Diabetes Association test, such as the following example from the Cherokee Nation: <http://steps.cherokee.org/Portals/53/CN-ADA%20Paper%20Risk%20Test.pdf>
2. Programs may also want to consider random blood glucose screening with appropriate referral to medical care for repeat testing and follow-up.
3. Enhancing community awareness of the seriousness of diabetes and its complications.
4. Educating community members on diabetes risk factors, when to seek medical assistance, and the diabetes resources available to them in the clinic and community.
5. Following people who received assistance from the program to ensure that they have received appropriate medical care and follow-up.

Organizations and communities that implement these recommended practices should expect the following benefits:

1. Community screening efforts are based on current medical evidence.
2. People at risk for diabetes are identified earlier and referred to and enter into the health care system to receive effective and appropriate health care.
3. The burden of undiagnosed diabetes is 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.

## Key Recommendations

Key Recommendations
Prepare for community diabetes screening.
Educate community members about diabetes.
Raise awareness of the risk factors for diabetes.
Identify people at risk of developing diabetes.
Identify people with abnormal finger stick levels and refer them for appropriate blood glucose testing and follow-up.

## Scope and Purpose

This best practice describes recommendations for community screening, and is for all adults at risk of developing diabetes.

The best practice addresses the following questions:

- What screening techniques effectively identify people with diabetes or at risk of diabetes?
- How can diabetes education be prioritized based on available resources?
- How can the effectiveness of community awareness campaigns be enhanced?
- How can the effectiveness of identifying people at risk of diabetes be enhanced?
- What referral processes are needed to effectively get people into the health care system?

## Community Screening Best Practice Objectives

### Community Screening Best Practice Objectives\*

To increase the percentage of individuals at risk of developing diabetes who receive further diagnostic testing by 25% from baseline by the end of the fiscal year.

To increase the number of community members who receive education about diabetes risk factors by 30% from baseline by the end of the fiscal year.

To provide greater access to the resources needed to implement a community screening program by forming at least one partnership with another organization by the end of the fiscal year.

To increase the percentage of staff who receive training in effective screening techniques by 75% from baseline by the end of the fiscal year.

\*Measures of progress towards these objectives need to occur before the intervention and at designated times thereafter.

The intended users of this best practice are:

- diabetes care teams
- community workers who provide diabetes education, and
- leaders of health care organizations.

This document provides guidance to diabetes teams that wish to improve the effectiveness and efficiency of community-based diabetes screening. There are three fundamental questions to address as you plan and implement this best practice. These questions are:

- 1. What are you trying to do by implementing this best practice?**
- 2. How will you know if what you do makes things better?**
- 3. What can you do to make things better?**

Please refer to Appendix A for example answers to the above questions.

## Monitoring Progress and Outcomes

The following measures can be used to monitor the effects of implementing the community diabetes screening best practice:

- the number of individuals screened in the community setting who received education about diabetes risk factors, and
- the number of individuals identified with abnormal results who were seen for further diagnostic testing.

### Key Measures

Key Measures for Measuring Progress and Outcomes
1. Written policies and procedures are in place that detail referral processes for individuals with abnormal blood glucose results who are identified through community screening.
2. A memorandum of agreement (MOA) exists between the programs that provide community screening, clinical services, and (if applicable) the Special Diabetes Program for Indians (SDPI) Demonstration Project. The MOA lists the key responsibilities of each entity.

## Clinical Recommendations

### 1. Prepare for community diabetes screening.

#### *Why?*

Coordinating community diabetes screening activities with community leaders and health care services, as well as careful planning, are critical components of a community diabetes screening program (IHS DDTP, 2009).

#### *How?*

A. Consider the following questions:

1. Are local resources available to screen for diabetes?

2. Are local resources available to treat diabetes that is detected through the screening program?
  3. Are qualified staff and personnel available to perform testing?
  4. Do Tribal leaders, clinic staff, and other community stakeholders support community diabetes screening activities?
- 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.
- 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. You may download the test at:  
<http://steps.cherokee.org/Portals/53/CN-ADA%20Paper%20Risk%20Test.pdf>
  2. capillary blood glucose (finger stick)
  3. plasma blood glucose (fasting or random)
  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 has not yet adopted the use of the A1c assay for this purpose. There are technical advantages to A1c testing compared to glucose testing, but it is currently *undetermined how A1c testing applies to community based screening* (ADA, 2009).

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

### ***Why?***

Education about diabetes provides a way to enhance the public's understanding of the seriousness of diabetes and its complications (ADA, 2004).

### ***How?***

- A. The content of a community diabetes education program should include:
1. Definition of diabetes.

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.
- People exposed to mothers who had diabetes during pregnancy.

3. Signs and symptoms of diabetes, including:

- Intense thirst.
- Frequent urination.
- Weight loss without trying.

4. Explanation that some people will have no signs or symptoms, but will still have diabetes.

5. 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.
- Eating meals that are low in fat and calories.
- Staying active most days of the week (e.g., at least 30 minutes, five days a week). (Please refer to the *Indian Health Diabetes Best Practice for Adult Weight Management* and those for nutrition and physical activity.)
- Description of what to do if a person thinks he or she has diabetes, such as making an appointment to see a health care provider right away. Explain that the person should not wait to see a health provider because the eyes, nerves, and kidneys could be harmed.
- Educational materials including, the Diabetes Prevention Program (DPP) lifestyle curriculum, DPP video titled “Am I at Risk?”, and other patient education materials.
- Resources on where patients can go for more information, such as their health care providers, written materials, and websites.

# Community Recommendations

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

### *Why?*

Diabetes awareness programs may provide an opportunity to increase public awareness of diabetes and the seriousness of diabetes and its complications (ADA, 2004).

### *How?*

Examples include working with the media (e.g., TV, newspapers, radio, movie theatres, billboards) to provide community outreach.

- A. Conduct mass mailings.
- B. Offer diabetes support groups.
- C. Conduct diabetes education.
- D. Conduct community health fairs that focus on diabetes.
- E. Offer counseling on ways to be more physically active, and
- F. Create walking trails for safe exercise.

## 2. 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 (UKPDS, 1998; DPP, 2002).

### *How?*

- A. Use a diabetes paper and pencil risk assessment, adapted from the ADA test, to identify people who are at high risk for diabetes. You can download the test at: <http://steps.cherokee.org/Portals/53/CN-ADA%20Paper%20Risk%20Test.pdf>
- B. Consider risk factors including:
  - 1. being more than 20% above ideal body weight
  - 2. having a mother, father, brother, or sister with diabetes
  - 3. giving birth to a baby weighing more than nine pounds
  - 4. having diabetes during pregnancy
  - 5. having high blood pressure
  - 6. having abnormal blood lipid levels, and
  - 7. having abnormal glucose tolerance in a prior diabetes test.

- C. Some programs will choose to incorporate random capillary glucose (fingerstick) testing to screen for pre-diabetes. A value of > 100 mg/dl (fasting or random) and < 200 mg/dl (random) indicates the need to refer the individual for further diagnostic testing (IHS, 2008).

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

#### ***Why?***

As noted above, some American Indian and Alaska Native communities feel that random screening is an important or useful strategy in their community based diabetes programs. However, the ADA does not recommend random blood glucose screening even in high-risk populations (ADA, 2004). 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. Therefore, it is important to refer and follow people who have abnormal finger stick levels for appropriate testing and follow-up care.

#### ***How?***

- A. Remember that community screening results are not diagnostic for diabetes. All abnormal results should be referred to clinical care services for reassessment and further evaluation. Refer any individual with a blood glucose level over 200 mg/dl to a health care provider immediately.
- B. Refer any high-risk individual with a fasting blood glucose over 100 mg/dl or random blood glucose over 120 mg/dl to a health care provider and follow them to ensure they are seen within two weeks after the screening.
- C. Maintain a registry and tickler system to track 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.
- E. Ensure that people with a positive diabetes screen receive appropriate diabetes care and education.

## Organization Recommendations

### Identify community screening as important work.

#### *Why?*

Community screening may provide a way to increase awareness of diabetes and its complications (ADA, 2004).

#### *How?*

- A. Provide formal commitment to community diabetes screening programs.
- B. Establish structured policies and procedures for community screening.

## Evaluating a Community Screening Program

Evaluation is a vital component of effective health care management. Develop an evaluation plan that:

- identifies the aim for community screening
- defines program goals and objectives
- establishes measures that can be used to monitor progress
- assigns responsibility for data collection
- determines how often data are collected
- identifies how data are displayed for analysis
- defines how often data are shared with the team and organization leaders, and
- defines how evaluation data are used to improve and sustain community screening practices.

You can link to online training and a workbook to get more ideas about setting goals and objectives and developing a program plan at:

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

## Sustaining a 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:

- 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.

## 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 2006, 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 site 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 site 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, promotes early diagnosis, and prevents 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**

### **Klamath Tribal Health and Wellness Center**

Southern Oregon Consortium

Jeremy Klegseth, Diabetes Coordinator [jdklegseth@klm.portland.ihs.gov](mailto:jdklegseth@klm.portland.ihs.gov)

(541) 783-2438 ext. 310

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

Southern Oregon Consortium

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

(541) 888-9494 ext. 20217 [kelle@uci.net](mailto:kelle@uci.net)

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

## Additional Contacts

Persons or programs that sites might contact for further ideas and assistance.

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

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

## 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.

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/CreatingWorkbook.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.

# Appendix A

## Community Screening in the Indian Health System

There are three fundamental questions to ask as you plan and implement your best practice. These questions are:

### 1. What are you trying to do?

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

### 2. How will you know if what we 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.

### 3. What can we do to make things better?

- 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.