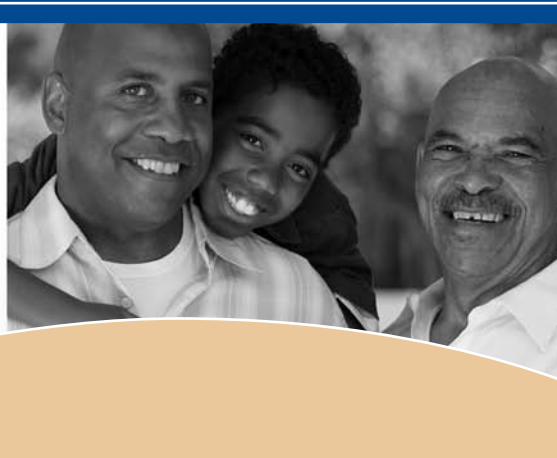
Arizona Diabetes Strategic Plan

2008-2013

Arizona Diabetes Coalition



Arizona Department of Health Services

Arizona Department of Health Services

Office of the Director

150 North 18th Avenue, Suite 500
Phoenix, Arizona 85007-2670

JANET NAPOLITANO, GOVERNOR
JANUARY CONTRERAS, DIRECTOR, ACTING

(602) 542-1025
(602) 542-1062 FAX

August 4, 2008

Dear Arizona Residents,

Diabetes is a serious and costly disease in Arizona. The number of people with diabetes in Arizona grows each year. In fact, since 1990 the prevalence of diabetes in Arizona has doubled from 4 percent to 8.5 percent in 2006.

We know that type 2 diabetes, which is the most common type of diabetes, can be prevented and that people with diabetes can live healthy and long lives with the proper care. Through education, increasing access to care, and other public health strategies, we have a great opportunity to work with our partners in Arizona to reduce the burden of diabetes on individuals, families, and communities.

The Arizona Diabetes Strategic Plan is the first plan in Arizona to address diabetes from a public health perspective for the entire State. It uses public health strategies to address opportunities for improvements in healthcare systems, the diabetes workforce, community partnerships, and local and organizational policies.

We have great hope that by working together with partners throughout Arizona that we will be able to reduce the prevalence rate of diabetes and improve the lives of people living with diabetes in Arizona. We are proud to be a part of the Arizona Diabetes Coalition.

Sincerely,

January Contreras
Acting Director
Arizona Department of Health Services

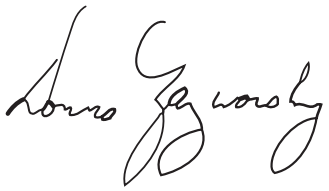
A Message from the Chair of the Arizona Diabetes Coalition

The Arizona Diabetes Coalition members worked over the past year to develop this strategic plan. It was a true collaborative effort with many leaders and experts in diabetes coming together to address how we can combat diabetes in Arizona. We are grateful for the input provided by individuals and families that live day in and day out with this devastating disease. These men, women, and children are the reason why we are all committed to the fight against diabetes. We realize it is going to take many people and many partners to make changes to improve the lives of people at risk for and living with diabetes in Arizona. This strategic plan focuses on four areas for change:

1. Primary prevention of type 2 diabetes;
2. Quality care and treatment with strategies focused on patients;
3. Quality care and treatment with strategies focused on providers; and
4. Public policy.

This strategic plan provides an opportunity to improve the burden of diabetes in Arizona. Many of our strategies deal with partnerships, because we realize that we cannot do this alone. By leveraging our efforts with the efforts of other people and organizations from different areas we can work together to make positive changes. We can make a difference.

Together with partners throughout the State we can make a significantly greater difference in the quality of the lives of people with diabetes and their families than any of us could by working alone. Using a coordinated and collaborative approach and maximizing our resources will create a healthier Arizona.



Donna Zazworsky, MS, RN, CCM FAAN
Chair, Arizona Diabetes Leadership Council and Coalition
Director of Network Diabetes and Outreach
Carondelet Health Network

Table of Contents

ACKNOWLEDGEMENTS

This plan would not have been possible without the support, dedication, and guidance of the Arizona Diabetes Leadership Council. Council members developed the strategies outlined in this plan and provided valuable feedback on the draft report. Donna Zazworsky, Chair of the Arizona Diabetes Leadership Council, was instrumental in leading this effort and working with the larger Arizona Diabetes Coalition to gather input on strategies and implementation of the plan at the 2007-2008 coalition meetings.

Staff from the University of Arizona Mel and Enid Zuckerman College of Public Health facilitated the development of this plan. We are thankful for their guidance for keeping us focused and ensuring that our strategies will meet desired outcomes.

A special thanks to the Arizona Diabetes Coalition members and Committee (Advocacy, Education, and Surveillance) Chairs for their input. We appreciate the valuable work of members who spent time providing feedback and guidance on the strategies. We also thank the Bureau of Chronic Disease Prevention and Control staff, especially the Arizona Diabetes Program, for writing, reviewing, editing, and providing valuable comments on the plan.

Arizona Diabetes Leadership Council Members

Chair
Donna Zazworsky, MS, RN, CCM, FAAN
Carondelet Health Network
2007-2008

Chair-Elect
Scott Endsley, MD, MSc
Health Services Advisory Group
2007-2008

Advocacy Committee Chair
Sue Hendershott, MSN, RN, CDE
Caremark
2007-2008

Surveillance Committee Chair
Zeenat Mahal, MBBS, MS
InterTribal Council of Arizona, Inc.
2007-2008

Education Committee Chair
Linda Parker, RN
Carondelet Health Network
2008

Betty Page Brackenridge, MS, RD, CDE
Diabetes Management & Training Centers, Inc.
2007

Kim Elliot, PhD
Arizona Health Care Cost Containment System
2008

Melissa Spezia Faulkner, DSN, RN, FAAN
The University of Arizona College of Nursing
2008

Pam Ferguson
American Heart Association
2007-2008

Robert Guerrero, MBA
Arizona Department of Health Services
2007-2008

Kimberly D. Harris-Salamone, PhD
Health Services Advisory Group
2008

Trish Herrmann, MS, RD
Arizona Department of Health Services
2007-2008

Darlene Horst, BSN, RN, CDE
Mt. Graham Regional Medical Center
2008

Arizona Diabetes Leadership Council Members

Valerie Jones
Juvenile Diabetes Research Foundation
2007

Beth R. Malasky, MD
Native American Cardiology
University Medical Center
2007-2008

Suzanne Miller
American Diabetes Association
2007-2008

Anita Murcko, MD, FACP
Arizona Health Care Cost Containment System
2007-2008

Bobbi Presser, MPH
Scottsdale Healthcare
2007-2008

Sara Sparman
Juvenile Diabetes Research Foundation
2008

Lisa Staten, PhD
University of Arizona
Mel & Enid Zuckerman
College of Public Health
2007-2008

Christine Winters, MS, RD, CDE
Yuma Regional Medical Center
2007

Education Subcommittee Chairs

Public Health Chair
Leticia Martinez, RD, MPH, MS, BC-ADM
El Rio Health Center
2008

Hospital Chair
Debby Beechey
Sanofi-Aventis
2008

Provider Chair
Scott Endsley, MD, MSc
Health Services Advisory Group
2008

Patient Chair
Linda Parker, RN
Carondelet Health Network
2008

University of Arizona Mel and Enid Zuckerman College of Public Health

Erin Peacock, MPH
Adriana Cimetta, MPH
Kim Fielding
Anneke Jansen, MPH
Ralph Renger, PhD

Arizona Diabetes Program Staff

Trish Herrmann, MS, RD
Carmen Ramirez
Alexandra Ikeda
Kai-Ning Khor

Our Vision

A state without diabetes

Our Mission

To reduce the health, social, and economic burden of diabetes in Arizona

BACKGROUND

Types of Diabetes[1]

Diabetes mellitus is a group of diseases characterized by high levels of blood glucose resulting from defects in insulin secretion, insulin action, or both. Diabetes can be associated with serious complications and premature death, but people with diabetes can take steps to control the disease and lower the risk of complication.

Type 1 Diabetes

Type 1 diabetes was previously called insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes. Type 1 diabetes may account for 5 percent to 10 percent of all diagnosed cases of diabetes, and usually appears in childhood or adolescence, hence the more familiar term "juvenile diabetes". The risk factors are less defined for type 1 diabetes than for type 2 diabetes, but autoimmune, genetic, and environmental factors are involved in the development of this type of diabetes.

Type 2 Diabetes

Type 2 Diabetes was previously called non-insulin dependent diabetes mellitus (NIDDM) or adult-onset diabetes. Type 2 diabetes may account for about 90 percent to 95 percent of all diagnosed cases of diabetes, and usually doesn't develop until after age 40. Risk factors for type 2 diabetes include older age, obesity, family history of diabetes, prior history of gestational diabetes, impaired glucose metabolism, physical inactivity, and race/ethnicity. African Americans, Hispanic/Latino Americans, American Indians, and some Asian Americans and Pacific Islanders are at particularly high risk for type 2 diabetes.

Gestational Diabetes[1-4]

Gestational diabetes mellitus (GDM) develops in approximately 7 percent of all pregnancies. Immediately after pregnancy, 5 to 10 percent of women with gestational diabetes are found to have diabetes, usually type 2. GDM occurs more frequently in African Americans, Hispanic/Latino Americans, American Indians, persons with a family history of diabetes, and among women who are obese. Women who have had GDM are at increased risk for developing type 2 diabetes later in life. Between 40 and 60 percent of women with a history of GDM developed diabetes in the future. The children of women with a history of GDM are at an increased risk for obesity and diabetes compared to other children.

Pre-Diabetes

Pre-diabetes is a term used for people who are at increased risk of developing type 2 diabetes, heart disease, and stroke. People with pre-diabetes have impaired fasting glucose (IFG) or impaired glucose tolerance (IGT). IFG is diagnosed when fasting blood glucose level is elevated (100 to 125 mg/dl) after an overnight fast, but is not high enough to be classified as diabetes. IGT is a condition in which the blood sugar level is elevated (140 to 199 mg/dl) after a 2-hour oral glucose tolerance test, but is not high enough to be classified as diabetes.[5] Most recent estimates from 2003-2006 indicate that 26 percent of all US adults age 20 years and older had IFG.[1] Applying this percentage to the entire US and Arizona population estimates, 57 million Americans and over 1.1 million Arizonans had impaired fasting glucose in 2006.[6]

Other Types

Other types of diabetes result from specific genetic syndromes, surgery, drugs, malnutrition, infections, and other illnesses. These types of diabetes may account for one percent to five percent of all diagnosed cases of diabetes.[1]

Treating Diabetes

To survive, people with type 1 diabetes must have insulin delivered by injections or a pump. Many people with type 2 diabetes can control their blood glucose by following a careful diet and exercise program, losing excess weight, and taking oral medication. Many people with diabetes also need to take medications to control their cholesterol and blood pressure. Diabetes self-management education is an integral component of medical care. Among adults with diagnosed diabetes, 13 percent take both insulin and oral medications, 14 percent take insulin only, 57 percent take oral medications only, and 16 percent do not take either insulin or oral medications.[1]

Prevention of Diabetes Complications

Diabetes can affect many parts of the body and can lead to serious complications such as blindness, kidney damage, and lower-limb amputations. Working together, people with diabetes and their health care providers can reduce the occurrence of these and other diabetes complications by controlling the levels of blood glucose, blood pressure, and blood lipids and by receiving other preventive care practices in a timely manner.

Glucose control

Research studies in the United States and abroad have found that improved glycemic control benefits people with either type 1 or type 2 diabetes. In general, for every 1 percent reduction in results of A1C blood tests (e.g., from 8.0 percent to 7.0 percent), the risk of developing microvascular diabetic complications (eye, kidney, and nerve disease) is reduced by 40 percent.

Blood pressure control

Blood pressure control can reduce cardiovascular disease (heart disease and stroke) by approximately 33 percent to 50 percent and can reduce microvascular disease (eye, kidney, and nerve disease) by approximately 33 percent.

In general, for every 10 millimeters of mercury (mm Hg) reduction in systolic blood pressure, the risk for any complication related to diabetes is reduced by 12 percent.

Control of blood lipids

Improved control of cholesterol or blood lipids (for example, HDL, LDL, and triglycerides) can reduce cardiovascular complications by 20 percent to 50 percent.

Preventive care practices for eyes, kidneys, and feet

Detecting and treating diabetic eye disease with laser therapy can reduce the development of severe vision loss by an estimated 50 percent to 60 percent.

Comprehensive foot care programs can reduce amputation rates by 45 percent to 85 percent.

Detecting and treating early diabetic kidney disease by lowering blood pressure can reduce the decline in kidney function by 30 percent to 70 percent. Treatment with ACE inhibitors and angiotensin receptor blockers (ARBs) are more effective in reducing the decline in kidney function than other blood pressure lowering drugs.

DESCRIPTION OF THE PROBLEM

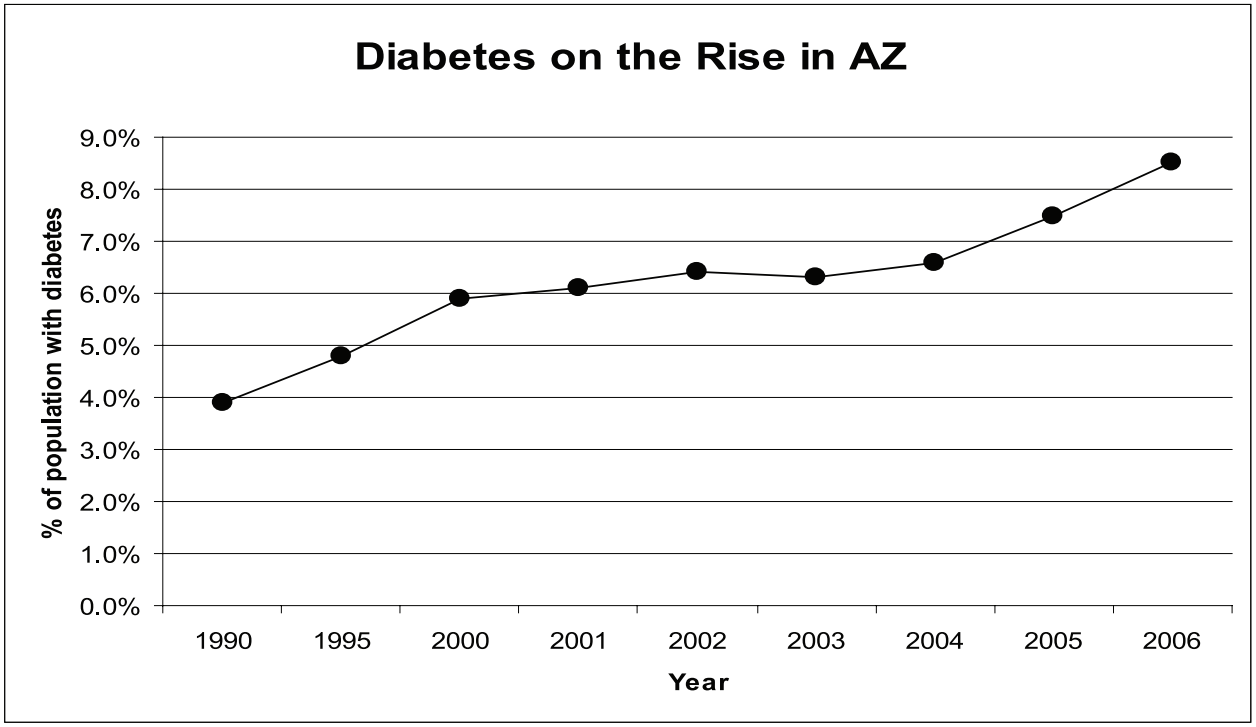
Diabetes Prevalence*

In 2007, 7.8 percent, or 23.6 million, people of all ages in the U.S. have diabetes (diagnosed and undiagnosed).[1] This is a 37 percent increase in diabetes prevalence since 2000. Arizona has seen a 44 percent increase in adults with diabetes from 2000 through 2006, with prevalence rising from 5.9 percent to 8.5.[7] The prevalence of persons with diabetes in Arizona has more than doubled since 1990 (see Figure 1). An estimated 385,741 persons aged 18 years and older in Arizona reported to have diabetes in 2006.[6,7] These numbers do not account for undiagnosed diabetes, which is estimated to be one-third of all people with diabetes, bringing the total number of people with diabetes to about 513,000 (11.3 percent).[8]

Prevalence of Diabetes by Race/Ethnicity[1]

The total prevalence of diabetes among Native Americans, African-Americans, or Asians is not available in Arizona because of small sample sizes of these groups in the Behavioral Risk Factor Surveillance System (BRFSS). Hispanic or Latino Americans make up almost one-third of the Arizona population. In Arizona, 9.2 percent of Hispanics have diabetes whereas 7.8 percent of non-Hispanic Whites have diabetes.[7] Nationally, the prevalence of diabetes is also higher among Hispanics (10.4%) than non-Hispanic Whites (6.6%). More than five percent of the population in Arizona is Native American, a group also more likely to develop diabetes than non-Hispanic Whites. The national estimate for diabetes prevalence among Native Americans and Alaska Natives is 16.5 percent, a prevalence almost three times as high as those of non-Hispanic Whites. African Americans make up 3.9 percent of the Arizona population. Nationally, the prevalence of diabetes among Blacks (11.8%) is almost twice that of non-Hispanic Whites. Asian Americans and Pacific Islanders make up about 2.6 percent of the population in Arizona. Nationally, the prevalence of diabetes among Asians is also higher (7.5%) than that of non-Hispanic Whites.

Figure 1. Prevalence of Diagnosed Diabetes in Persons Aged 18 years and older in Arizona, BRFSS, 1990-2006.



* In some cases, we do not have enough data to report Arizona statistics. Unless otherwise specified, the data in this report uses National data.

Prevalence of Diabetes by Sex[7]

National BRFSS 2006 data indicates that prevalence of diabetes is higher in males (8.0 percent) than females (7.2 percent). Arizona also reflects this national trend with 9.4 percent of males compared to 7.7 percent of females reporting to have diabetes.

Prevalence of Diabetes by Age

The prevalence of diabetes increases with age (Table 1). Twenty-three percent of Americans aged 60 years and older have diabetes, compared to 10 percent of Americans aged 20 years and older.[1] The Arizona BRFSS data indicates aging adults, especially above the age of 55, are at higher risk than adults between the ages of 18 and 54.

Prevalence of Diabetes by Level of Education and Income[7]

According to BRFSS data, the prevalence of diagnosed diabetes is higher in populations with lower levels of education (Table 2). In Arizona, 11.3 percent of adults without a high school diploma have diabetes compared to 6.2 percent of adults with a college diploma. In addition, individuals reporting lower income levels have increased prevalence of diabetes. In Arizona, 15.2 percent of adults with annual incomes less than $15,000 have diabetes whereas 6.1 percent of adults with annual incomes over $50,000 have diabetes.

Table 1: *Prevalence of Diagnosed Diabetes by Age Group in Persons 18 and Older in Arizona, BRFSS, 2000-2006.*

18 - 34 Years	1.4%
35 - 44 Years	3.9%
45 - 54 Years	8.5%
55 - 64 Years	11.4%
65+ Years	14.7%

Table 2: *Prevalence of Diagnosed Diabetes by Education Level in Persons 18 years and older, BRFSS, 2006*

Level of Education	U.S. (including DC and territories)	Arizona
No High School Diploma	12.9%	11.3%
High School Graduate	8.9%	9.5%
Some College	7.7%	8.8%
College Graduate +	5.4%	6.2%

Health Care Access

Health care access is critical for persons with diabetes. Persons with diabetes are disproportionately affected by several complications, including heart disease, stroke, amputations, kidney disease, eye disease, neuropathy, and depression.[1] According to National BRFSS data, 14.5 percent of persons 18 years and older reported not having health care coverage in 2006. In Arizona, Hispanics have a much higher percentage of reporting no health insurance, 19.9 percent, versus 11.5 percent of non-Hispanic, whites. [7] Unlike national statistics, lack of health care coverage in Arizona generally increases as age increases with 20 percent of adults over the age of 55 without health care coverage.[7]

Cost of Diabetes

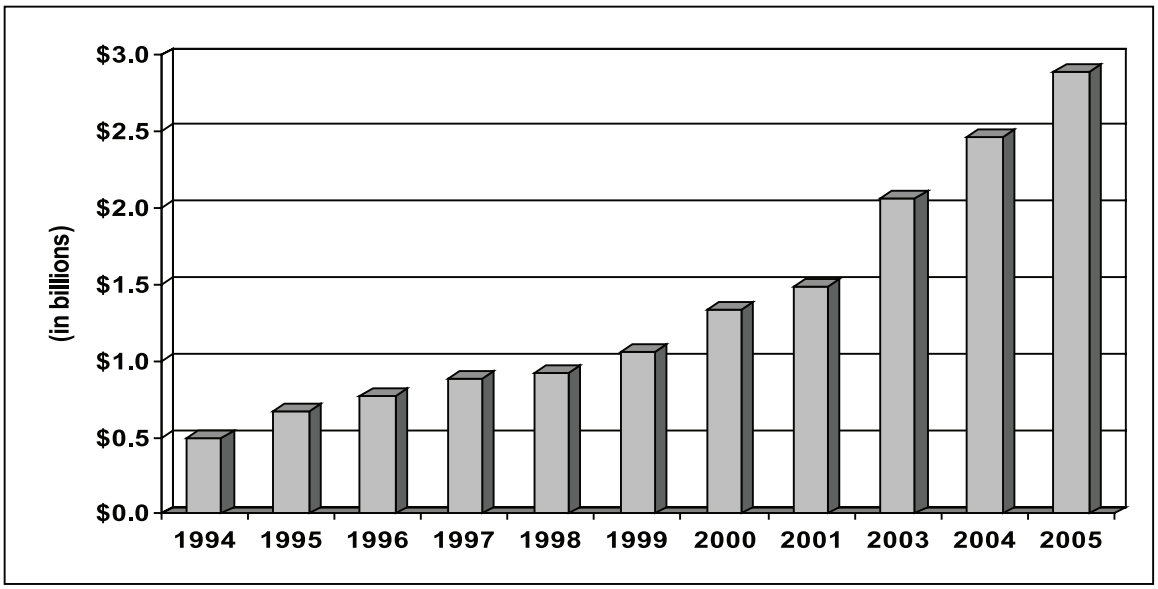
Diabetes alone accounts for 10 percent of the United States health care expenditure. A national study conducted by the American Diabetes Association and endorsed by the National Institutes of Health and the Centers for Disease Control and Prevention (CDC) estimated the direct and indirect costs attributable to diabetes in 2007 were $174 billion (Table 3), which is a 32 percent increase from 2002. Per capita medical expenditures in 2007 were estimated to be $11,744 for people with diabetes. Adjusted for age, sex, and race/ethnicity, medical expenditures for people with diabetes are approximately 2.4 times more than those for people without diabetes.[9]

Table 3: *Cost of Diabetes in the United States*[9]

Type of Cost	Amount in billions
Direct	$116
Indirect	$58
TOTAL	**$174**

Diabetes also poses a large burden on the economy in Arizona. In 2005, there was nearly $3 billion in charges for inpatient hospital stays for diabetes-related conditions, approximately 6 times higher than the amount in 1994. This estimate does not include charges in federal facilities, such as Indian Health Service facilities.

Figure 2. Charges in Arizona for inpatient hospitalizations for diabetes-related diagnoses (non-federal facilities), 1994-2005



Source: Hospital Discharge Database, Bureau of Public Health Statistics, ADHS, 1994-2005

Deaths among persons with Diabetes[10]

According to the CDC, diabetes was the seventh leading cause of death in the nation, contributing three percent of all deaths or 72,507 deaths in 2006.[11] In 2005, diabetes was the eighth leading cause of death among Arizona residents directly attributing to 1,196 deaths. Nationwide, diabetes is believed to be underreported on death certificates because persons with diabetes most often die from cardiovascular disease or renal disease and not from causes unique to diabetes, such as ketoacidosis or hypoglycemia.[1] Studies have found that only about 35 percent to 40 percent of decedents with diabetes had it listed anywhere on the death certificate in only 10 to 15 percent had it listed as the underlying cause of death. Overall, the risk for death among people with diabetes is about twice that of people without diabetes of similar age.[1] In Arizona 1,740 deaths had diabetes assigned as a contributing factor making the diabetes-related mortality rate (49/100,000) or 2.4 times greater than the rate for diabetes as underlying cause (20/100,000).

The 2005 diabetes mortality rate for Arizona was 20 per 100,000. Mortality rates for each race/ethnicity were applied to the 2005 population.

Diabetes mortality rates for racial/ethnic groups compared to White, non-Hispanics:

- American Indians were 4.5 times higher,
- African Americans were 3.6 times higher,
- Hispanics were 3 times higher.

Diabetes in Persons Less than 18 years of age

Type 1 diabetes, an autoimmune disorder that destroys insulin-producing pancreatic cells, is the primary form of diabetes in childhood. It is the second most prevalent chronic disease of childhood after asthma. Nationally, an estimated one in every 400 to 500 children and adolescents has type 1 diabetes.[12] Preliminary reports from the Search for Diabetes in Youth Study suggests that non-Hispanic whites have the highest rate for Type 1 Diabetes.[13] This study reported that type 2 diabetes, although relatively rare, seems to be diagnosed more frequently in adolescent minority populations. More than five percent of Arizona high school students reported being informed by a doctor or a nurse that they had diabetes (5.16 percent).[14]

Complications of Diabetes

Heart disease and stroke.[1] Heart disease is the leading cause of death among persons with diabetes, accounting for about 68 percent of deaths in people with diabetes. Heart disease death rates are two to four times higher among adults with diabetes as compared to those without diabetes. The risk for stroke is two to four times higher among people with diabetes. In Arizona about 25 percent of the adult population that had heart disease, angina and/or stroke also had diabetes (2006).

High blood pressure.[1] About 75 percent of adults with diabetes have blood pressure greater than or equal to 130/80 mm Hg or use prescription medications for hypertension. In Arizona 22.3 percent of the 2005 adult population self-reported they had high blood pressure.

Blindness.[1] Diabetes is the leading cause of new cases of blindness among adults aged 20 to 74 years. Nationally, diabetic retinopathy causes 12,000 to 24,000 new cases of blindness each year. According to the National Eye Institute (2004) approximately 40.3 percent of the people aged 40 years and older with diabetes had diabetic retinopathy. [15]

Kidney disease. Diabetes is the leading cause of kidney failure, accounting for 44 percent of new cases in 2005.[1] In 2006, 2,071 Arizonans were newly diagnosed with chronic end stage renal disease (ESRD). Of those new cases, 51 percent, or 1,055 Arizonans, had a primary diagnosis of diabetes. An additional 3,508 Arizonans with diabetes were receiving dialysis and 709 dialysis deaths occurred as a result of diabetes in 2006.[16]

Nervous system disease. [1] About 60 to 70 percent of people with diabetes have mild to severe forms of nervous system damage. The results of such damage include impaired sensation or pain in the feet or hands, slowed digestion of food in the stomach, carpal tunnel syndrome, and other nerve problems. Almost 30 percent of people with diabetes aged 40 years or older have impaired sensation in the feet (i.e., at least one area that lacks feeling). Severe forms of diabetic nerve disease are a major contributing cause of lower-extremity amputations.

Amputations.[1] More than 60 percent of nontraumatic lower-limb amputations in the United States occur in people with diabetes. The rate of amputation for people with diabetes is 10 times higher than for people without diabetes. According to the Arizona hospital discharge data, 4,015 lower extremity amputations occurred in persons with diabetes from 2004-2006, averaging 1,338 cases per year. This is an increase of 137 cases compared to 2000, where 1,201 lower extremity amputations occurred in persons with diabetes.

Dental Disease.[1] Periodontal (gum) disease is more common in people with diabetes. Among young adults, those with diabetes have about twice the risk of those without diabetes. Almost one-third of people with diabetes have severe periodontal diseases with loss of attachment of the gums to the teeth measuring 5 millimeters or more.

Complications of pregnancy.[1] Poorly controlled diabetes before conception and during the first trimester of pregnancy can cause major birth defects in 5 to 10 percent of pregnancies and spontaneous abortions in 15 to 20 percent of pregnancies. Poorly controlled diabetes during the second and third trimesters of pregnancy can result in excessively large babies, posing a risk to both mother and child.

Other Complications.[1] Uncontrolled diabetes often leads to biochemical imbalances that can cause acute life-threatening events, such as diabetic ketoacidosis and hyperosmolar (nonketotic) coma. People with diabetes are more susceptible to many other illnesses and, once they acquire these illnesses, often have worse prognoses. For example, they are more likely to die with pneumonia or influenza than people who do not have diabetes. According to the Arizona BRFSS data, one-third of Arizonans over the age of 65 years did not receive flu or pneumonia shots in 2006.

DEVELOPMENT OF THE STRATEGIC PLAN

Background

The Bureau of Chronic Disease Prevention and Control (BCDPC) is located within the Arizona Department of Health Services (ADHS) Division of Public Health Services. The Arizona Diabetes Program is one of many programs housed in the BCDPC. Established in 1994 by a cooperative agreement with the Centers for Disease Control and Prevention (CDC), the diabetes program aims to "reduce the incidence and prevalence of diabetes and the disabling conditions associated with diabetes such as: blindness, amputations and kidney disease, as well as the personal, social and economic consequences of diabetes, ultimately improving the quality of life for individuals and families living with diabetes in Arizona." The Arizona Diabetes Program work focuses on health systems infrastructure, community interventions, disease management, wellness, health disparities, and health communications. The Arizona Diabetes Program achieves many of its projects with support from partnerships and through the Arizona Diabetes Coalition (ADC), a 300 member organization with by-laws and managed by the Arizona Diabetes Program.

The purpose of the ADC is to reduce the burden of diabetes on individuals, families, communities, the health care system, and the State. This is done by increasing awareness of diabetes, advocating for and promoting policies and programs that improve access to care, treatment, and outcomes for people with diabetes and those at risk for developing diabetes. The ADC has three committees: advocacy, education, and surveillance. The education committee has four subcommittees: 1) provider, 2) patient, 3) hospital, and 4) public health education.

The Arizona Diabetes Leadership Council provides direction for the activities of the ADC. Both the Arizona Diabetes Leadership Council and ADC meet quarterly each year.

In January 2007, Arizona Diabetes Program staff contracted for strategic planning services with a planning and evaluation team under the direction of Ralph Renger, PhD at the University of Arizona Mel and Enid Zuckerman College of Public Health. The scope of the contract was to engage Arizona Diabetes Program staff, Arizona Diabetes Leadership Council, and ADC members, and other stakeholders in a strategic planning process that would result in the development of a 5-year strategic plan, the Arizona Diabetes Strategic Plan, 2008-2013. This plan is to drive the activities of the ADC and of Arizona Diabetes Program as an important partner in the ADC.

The strategic planning process consisted of three steps which are further outlined in "methods" below. In step 1, two logic maps, each depicting the relationships between a problem of interest and its roots causes, were created. "Persons with diabetes in Arizona do not receive recommended care and treatment" and "There is a high incidence of diabetes/probable high incidence of prediabetes in Arizona" were the problems that were explored. Experts in diabetes were interviewed to identify root causes of these problems. The root causes were prioritized in step 2. In step 3, members of the Arizona Diabetes Leadership Council developed strategies to address the prioritized root causes. Strategy development was divided among three sub-groups that focused on (1) primary prevention, (2) improved care and treatment with strategies focused on the patient, and (3) improved care and treatment with strategies focused on the provider. A fourth priority area, public policy, was added to strengthen activities the ADC began in 2007.

Methods

Below is a description of steps used to develop the strategic plan. The end results of this process are the strategies listed in the next chapter, Arizona Diabetes Strategic Plan.

The Leadership Council actively participated in all steps of the process. The Chair of the Council updated ADC members at the 2007-2008 Coalition meetings. The ADC members were requested to provide input and feedback during all steps of the process.

Table 1: *Steps in the development of the Arizona Diabetes Strategic Plan*

Step	Description of Step	Responsible Party
Step 1	Construct a map of underlying conditions identified in expert interviews	Planning and evaluation team and experts
Step 2	Systematically prioritize underlying conditions based on prioritization criteria	Planning and evaluation team, Arizona Diabetes Leadership Council, and Arizona Diabetes Program staff
Step 3	Identify strategies that address the prioritized conditions	Arizona Diabetes Leadership Council and Coalition and Arizona Diabetes Program staff (with guidance from planning and evaluation team)

Step 1 is critical to gaining a contextual understanding of the problem and its underlying conditions so that ultimately, strategies can be targeted to root causes of the problem. To arrive at this understanding, interviews are conducted with "experts" in the problem area. For our purposes, experts are defined as persons representing the various stakeholder groups in the intended program. During each interview, a facilitator guides the expert through the process of developing a map that depicts the relationships between the problem and its underlying conditions.

Long Term Objectives

The CDC's Division of Diabetes Translation (DDT) administers the state-based Diabetes Prevention and Control Programs (DPCP), of which the Arizona Diabetes Program is one. Therefore, the program is mandated to develop objectives that mirror the DDT National Objectives. The following are the DDT National Objectives:

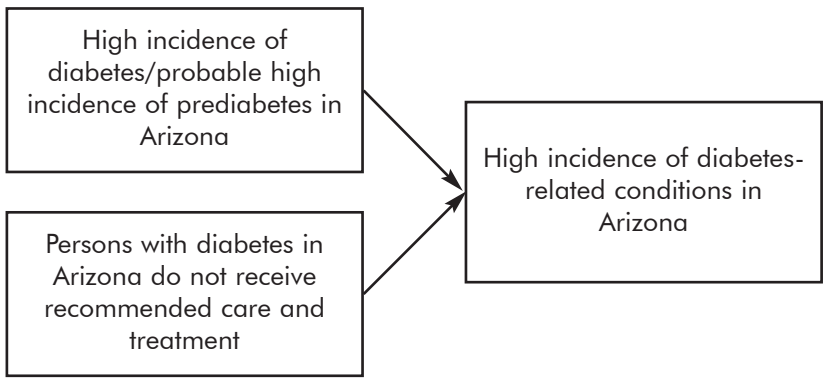
1. Demonstrate success in achieving an increase in the percentage of persons with diabetes who receive the recommended **foot exams.**
2. Demonstrate success in achieving an increase in the percentage of persons with diabetes who receive the recommended **eye exams.**
3. Demonstrate success in achieving an increase in the percentage of persons with diabetes who receive the recommended **influenza and pneumococcal vaccines.**
4. Demonstrate success in achieving an increase in the percentage of persons with diabetes who receive the recommended **A1C tests.**
5. Demonstrate success in reducing **health disparities** for high risk populations with respect to diabetes prevention and control
6. Demonstrate success in **establishing linkages for the promotion of wellness, physical activity, weight and blood pressure control, and smoking cessation** for persons with diabetes.

We have included an additional objective (Objective 7) related to primary prevention.

7. Demonstrate success in reducing the number of people who are diagnosed with pre-diabetes and diabetes.

Experts were nominated by Leadership Council and ADC members. The Program Manager provided guidance on which 16 persons, from a larger pool of nominees, should be interviewed. Two of the recommended experts were unavailable despite several attempts to contact them. An additional expert was added based on a recommendation from the Leadership Chair. In the end, those interviewed (n=15) included health educators (n=5), community advocates (n=4), health care providers (n=3), health system experts (n=2), and a diabetes patient (n=1).

Figure 1. Problem statement for Step 1



Each interview began with a statement of the problem. The facilitator asked the expert why the problem exists and noted the expert's first response on the map in relation to the problem statement. The facilitator then turned to this response and asked why it exists or occurs. Again, the expert's response was noted on the map. The facilitator continued to ask "Why?" for each response until she reached a clear conclusion to the stream of logic (e.g., she reached an issue that is unchangeable given available time and resources). At that point, the facilitator returned to the problem statement and again asked, "Why?" The process continued until the expert felt that she had nothing more to add to the map. The interview concluded with the facilitator asking the expert, "In your opinion, which of the issues you mentioned contributes most significantly to the problem?" and "What strategies might address this issue?"

Step 2 involves the systematic prioritization of the underlying conditions identified in Step 1. A facilitator leads a group of decision-makers (in this case, Leadership Council members and diabetes program staff) to apply prioritization criteria to each underlying condition in a stepwise manner. Conditions that do not meet a given criterion are eliminated and not considered for the next criterion. The resulting list is made up of underlying conditions that meet all of the prioritization criteria. The group can then engage in Step 3 of the process.

The Program Manager was consulted for assistance in developing appropriate prioritization criteria based on program conditions and constraints. The following are the three criteria that were developed:

- Within the mission of the Arizona Diabetes Program
- Changeable within five years
- Changeable with a budget of $1 million per year

Step 3 involves identification and development of strategies that address the conditions prioritized in Step 2. For each proposed strategy, the group of decision-makers (in this case, Leadership Council members and diabetes program staff) must explain how it links to one or more prioritized conditions. In this way, the group stays focused on addressing the conditions that were identified (1) in Step 1 to be root causes of the problem, and (2) in Step 2 to be priorities for the group.

For each strategy proposed, the group was required to provide the following information:

- The prioritized condition(s) that the strategy addresses
- A description of the strategy
- The rationale linking the strategy to the condition
- The key audience
- The potential partners, if any
- An explanation of how the strategy addresses health disparities, if it does
- The data that would be needed to effectively plan the strategy, if any
- An explanation of how the strategy links to the DDT National Objectives, if it does

When they were sufficiently familiar with the strategy development process, the group divided into three sub-groups, focusing on (1) primary prevention, and improving care and treatment through (2) strategies focused on patients and (3) strategies focused on providers. These groups met independently to brainstorm strategies and compile the information listed above for submission to the planning and evaluation team. Upon receipt of the information, the team was able to write appropriate short term, intermediate, and long term outcomes for each of the strategies.

ARIZONA DIABETES STRATEGIC PLAN 2008-2013

The Arizona Diabetes Strategic plan addresses strategies to improve the lives of people at risk for or living with diabetes in Arizona over the next five years. The plan will be reviewed by the Arizona Diabetes Leadership Council and Arizona Diabetes Coalition (ADC) each year and is flexible to change or add strategies as opportunities for new programs or partnerships arise. The Arizona Legislature has appropriated funds to the Arizona Diabetes Program for diabetes and this plan will help guide the use of these funds.

Strategies outlined in this plan focus on three goals:

- Reduce the prevalence of diabetes;
- Reduce the disabling conditions associated with diabetes; and
- Reduce the personal social and economic consequences of diabetes.

Strategies are listed in one of four priority areas:

- Priority area 1-Primary prevention of type 2 diabetes;
- Priority area 2-Quality care and treatment with strategies focused on people with diabetes;
- Priority area 3-Quality care and treatment with strategies focused on health care providers; and
- Priority area 4-Public policy.

Implementation and Evaluation

For each priority area, key strategies with corresponding short term, intermediate, and long term objectives are outlined in tables. To facilitate implementation, each strategy also has the following information provided: target audience, stakeholders critical to the success of the strategy, ADC committee, subcommittee, or ADC partner assigned as the lead group to implement the strategy, and ADHS program partners.

The committees of the ADC are Advocacy, Education, and Surveillance. The Education Committee has four subcommittees: 1) public health; 2) hospital; 3) patient; and 4) provider.

Once a project is adopted by a committee or partner, an implementation plan with timelines, people/organizations responsible, tasks, and deadlines will be developed to monitor progress. Work began on this process at the October 26, 2007 ADC meeting and continued at the January 18, 2008 ADC meeting. In some cases, strategies have action steps outlined in the tables.

This strategic plan is broad in nature and is intended to guide program and partnership activities. In order to evaluate its impact, implementation plans will also address evaluation indicators. Each objective will be reviewed to ensure that it is a SMART (Specific, Measurable, Attainable, Realistic and Time-sensitive) objective and is targeted towards disparate groups most impacted by diabetes.

The Arizona Diabetes Program will continue to lead the effort to produce and disseminate Arizona surveillance reports. Some of the long term objectives can be measured by indicators in these reports. The following reports are prepared by State epidemiologists with input and guidance from the ADC Surveillance Committee and partners of the Arizona Diabetes Coalition:

Indicators Report. The indicators report is prepared annually based on a list of selected measurable indicators of diabetes and its complications to measure progress of diabetes control efforts by various agencies and healthcare systems throughout Arizona. These measurable indicators have been selected by partners that serve on the ADC Surveillance Committee based on quality and availability of the data of those indicators. Indicators focus on precursor conditions, primary, secondary, and tertiary prevention, and mortality.

Diabetes in Arizona Status Report. This comprehensive report is prepared every 3 years and examines the burden of diabetes and its complications in Arizona. Its purpose is to estimate the impact of prevalence, costs, and complications of people with diabetes. The report notes high risk populations and characteristics of people with diabetes.

Health Disparities

A health disparity is defined as

> "A population is a health disparity population if there is a significant disparity in the overall rate of disease incidence, prevalence, morbidity, mortality or survival rates in the population as compared to the health status of the general population."

Minority Health and Health Disparities Research and Education Act United States Public Law 106-525 (2000), p. 2498

Diabetes affects some populations in Arizona more that others. Specifically, type 2 diabetes affects African Americans, Hispanics/Latinos, Native Americans, people over the age of 45, overweight and physically inactive people, women with a history of gestational diabetes, and poor, less educated people. These populations will be a high priority for this strategic plan.

We considered health disparities throughout the planning process and drafting of the strategies. We specifically asked, "Does this strategy address health disparities? And If yes, how?" Implementation plans will further address target audiences for each activity.

Priority Area 1: Primary prevention of type 2 diabetes

Primary prevention is the prevention of type 2 diabetes (type 1 diabetes is not preventable and not addressed in this section). Strategies focus on modifiable risk factors-overweight, obesity, and a sedentary lifestyle-for developing type 2 diabetes. Results from the Diabetes Prevention Program, a large clinical trial funded by the National Institutes of Health, showed the risk of developing type 2 diabetes for people with pre-diabetes or impaired glucose tolerance can be reduced by 57 percent through intensive counseling on diet, exercise, and behavior modification.[17]

Long-term Objectives
Increase healthy eating of Arizonans
Increase physical activity of Arizonans

Strategies
These strategies are further outlined in the tables below.

1. Primary Prevention Partnerships-Partner with other organizations to support current and new programs that educate and raise awareness about healthy lifestyles and diabetes.
2. Healthy School Environments-Advocate for policies and programs that support a healthful school eating and physical activity environment.
3. Worksite Wellness-Promote and support the implementation of worksite wellness programs.

PRIORITY AREA 1: PRIMARY PREVENTION	
Goal 1: Reduce the Prevalence of Diabetes	
Strategy Focus: Primary Prevention Partnerships	
Short-term Objectives (1 Year)	• By June 30, 2009, 5 collaborations between the Arizona Diabetes Coalition and worksite, school or community organizations will be established • By June 30, 2009, identify 2 collaborative projects and begin work to implement in worksites, schools, or communities
Intermediate Objectives (3 Years)	• Implement sustained lifestyle interventions to increase healthy eating and physical activity through the established partnerships
Long-term Objectives (5 Years)	• Increase healthy eating of students, employees, or community members in participating intervention • Increase physical activity of students, employees, or community members in participating intervention
Strategy	Partner with other organizations to support current and new programs that educate and raise awareness about healthy lifestyles and diabetes in school, worksite, and community environments *For example:* - American Diabetes Association has educational materials for schools - American Heart Association advocates for physical education in schools - Nutrition and Physical Activity Self Assessment for Child Care (NAP SACC): NAP SACC is aimed at improving the nutrition and physical activity environment, policies and practices through self-assessment, action planning, training and targeted technical assistance. - Arizona Nutrition Network conducts three campaigns per year for food stamp eligible people

Potential Target audience	Preschool children and childcare providers, school-age children, Food stamp eligible people, Employees High risk populations (African Americans, Native, Americans, Hispanics/Latinos, older people, women with history of gestational diabetes, people with a family history of diabetes, people who do not engage in physical activity, overweight or obese people)
Stakeholders critical to success	American Diabetes Association, American Heart Association, Juvenile Diabetes Research Foundation, Health Services Advisory Group, Arizona Nutrition and Physical Activity Alliance, State universities and community colleges in Arizona, Midwestern University, Arizona Nutrition Network
ADC Committee(s) Responsible	Advocacy and Education
ADHS Program Partners	Arizona Diabetes Program, Nutrition, Physical Activity and Obesity Program, Heart Disease and Stroke Program, and Steps to a Healthier Arizona Initiative

PRIORITY AREA 1: PRIMARY PREVENTION
Goal 1: Reduce the Prevalence of Diabetes
Strategy Focus: Healthy School Environments

Short-term Objectives (1 Year)	• By June 30, 2009, establish a baseline measure for number of schools that have physical education classes • By June 30, 2009, 5 diabetes stakeholders will participate in activities to develop, advocate for, or implement school health policies
Intermediate Objectives (3 Years)	• Increase the number of students who report an increased access to physical activity
Long-term Objectives (5 Years)	• Increase healthy eating of students • Increase physical activity of student

Strategy	Use advocacy committee for awareness and support of policies that support a healthful school eating and physical activity environment Partner with the Arizona Department of Education to support their policies/program relating to healthy schools

Target audience	Legislatures, School districts, State school superintendent, local school boards
Stakeholders critical to success	American Diabetes Association, American Heart Association, Arizona Action for Healthy Kids, Arizona Public Health Association, Arizona Nutrition and Physical Activity Alliance, Arizona Department of Education, physical activity and nutrition advocacy groups, State universities and community colleges in Arizona
ADC Committee(s) Responsible	Advocacy
ADHS Program Partners	Arizona Diabetes Program, and Nutrition, Physical Activity and Obesity Program

PRIORITY AREA 1: PRIMARY PREVENTION
Goal 1: Reduce the Prevalence of Diabetes
Strategy Focus: Worksite Wellness

Short-term Objectives (1 Year)	● By June 30, 2009, recruit 60 additional organizations to utilize the Healthy Arizona Worksites Online Assessment and Resource Guide for developing employee wellness programs and policies ● By June 30, 2009, establish 2 new worksite wellness programs with Arizona employers and 4 worksites that expand or implement new worksite policies
Intermediate Objectives (3 Years)	● Increase number of employers who have physical activity opportunities or access to physical activity for employees ● Increase the number of workplaces that offer healthy foods
Long-term Objectives (5 Years)	● Increase healthy eating of employees ● Increase physical activity of employees

Strategy	Promote and support worksite wellness programs Action Steps: - Assist in development of a promotion plan for the launch of the Healthy Arizona Worksite Online Assessment and Resource Guide to Arizona employers - Provide feedback to refine and update the Healthy Arizona Worksite Website; add a page that states the business case for educating and providing support for employees, including increased retention and productivity - Develop a speakers bureau for people who can present on worksite wellness - Identify best practices of Arizona worksites and promote access to these best practices - Prepare a list of diabetes prevention resources and programs for worksites to integrate into worksite wellness programs Support the implementation of worksite wellness programs Action Steps: - Advocate at the State Health Department Services level to hire a worksite wellness coordinator to provide technical assistance for implementation of worksite wellness programs - Utilize interns who can assist with worksite wellness technical assistance - Provide grants to employers for worksite wellness programs that provide increased physical activity opportunities and changes in worksites to encourage healthy eating - Assist in the adoption and implementation of a diabetes worksite education program at one Arizona worksite

Target audience	Arizona employers with special emphasis on small and midsize businesses
Stakeholders critical to success	Community involvement from: Midwestern University, State universities and community colleges in Arizona, Arizona Human Resources Association, Inter Tribal Council of Arizona, Inc., American Diabetes Association, Wellness Council of Arizona, Health Plans, American Heart Association, Arizona Small Business Association, Arizona Chambers of Commerce, Health Services Advisory Group, Governor's Council on Health, Physical Fitness, and Sports
ADC Committee(s) Responsible	Education, Public Health
ADHS Program Partners	Nutrition, Physical Activity and Obesity Program, Arizona Diabetes Program, Steps to a Healthier Arizona Initiative, and Heart Disease and Stroke Program

Priority Area 2: Quality care and treatment with strategies focused on people with diabetes

People with diabetes live with this disease 24 hours a day, 7 days a week. They can be one of the most important people on their healthcare team by learning about diabetes, monitoring their blood glucose, and learning good self-management skills. The strategies below empower people with diabetes by: 1) learning about self-care standards; 2) having an increased awareness about the seriousness of diabetes and steps to take to manage this disease; and 3) providing a directory with local resources on where they can access diabetes self-management training, regardless of insurance level.

Long-term Objectives
Increase the number of persons with diabetes who receive the recommended care and treatment

Strategies
These strategies are further outlined in the tables below.

1. Standards of Care-Develop, adopt, and promote minimum standards for diabetes care in Arizona.
2. Health Communications Campaign-Implement a health communications campaign about proper care and treatment.
3. Resource Directory-Review, revise, and disseminate the Arizona Diabetes Resource Directory.

PRIORITY AREA 2: QUALITY CARE AND TREATMENT WITH STRATEGIES FOCUSED ON PEOPLE WITH DIABETES	
Goal 2: Reduce the disabling conditions associated with diabetes	
Strategy Focus: Standards of Care	
Short-term Objectives (1 Year)	• By June 30, 2009, the ADC will develop and adopt minimum standards for diabetes care in Arizona
Intermediate Objectives (3 Years)	• Deliver DSMT to 400 underserved diabetes patient • Increase the number of patients who demonstrate proper self-management. • Increase the number of patients who seek out proper care and treatment
Long-term Objectives (5 Years)	• Increase the number of persons with diabetes who receive the recommended care and treatment
Strategy	Develop, adopt, and promote self-care standards for DSMT and clinical standards of care
Potential Target audience	People in Arizona with diabetes Arizonan Providers, health educators at health facilities, community health workers/promotores
Stakeholders critical to success	American Diabetes Association, Community health centers, Arizona Association of Community Health Centers, pharmaceutical companies, Cooperative Extension, County Health Departments, Health Services Advisory Group, Arizona Health Care Cost Containment System (AHCCCS)
ADC Committee(s) Responsible	Education, Provider with support from Patient subcommittee
ADHS Program Partners	Arizona Diabetes Program

PRIORITY AREA 2: QUALITY CARE AND TREATMENT WITH STRATEGIES FOCUSED ON PEOPLE WITH DIABETES
Goal 2: Reduce the disabling conditions associated with diabetes
Strategy Focus: Health Communications Campaign

Short-term Objectives (1 Year)	• By June 30, 2009, implement a diabetes health awareness campaign about diabetes and its complications • By June 30, 2009, increase the number of people who demonstrate increased awareness of the complications of diabetes and how to avoid them • By June 30, 2009, increase number of people who demonstrate increased knowledge about diabetes self-management
Intermediate Objectives (3 Years)	• Increase the number patients who seek out proper care and treatment
Long-term Objectives (5 Years)	• Increase the number of persons with diabetes who receive the recommended care and treatment

Strategy	Partner and provide input on the implementation of a health communications awareness campaign about controlling your diabetes

Potential Target audience	People with diabetes in Arizona
Stakeholders critical to success	National Diabetes Education Program, American Diabetes Association, American Heart Association, Community Health Centers, County Health Departments, Pharmaceutical companies, Health Services Advisory Group
ADC Committee(s) Responsible	Education, Public Health
ADHS Program Partners	Arizona Diabetes Program Chronic Disease Social Marketing Team

PRIORITY AREA 2: QUALITY CARE AND TREATMENT WITH STRATEGIES FOCUSED ON PEOPLE WITH DIABETES
Goal 2: Reduce the disabling conditions associated with diabetes
Strategy Focus: Resource Directory

Short-term Objectives (1 Year)	• By June 30, 2009, revise the Arizona Resource Directory • By June 30, 2009, distribute the Arizona Resource Directory to diabetes primary care providers in Arizona
Intermediate Objectives (3 Years)	• Increase the number of people who receive diabetes self-management training • Increase the number of people who report that they are less overwhelmed by the scope of self-management after being exposed to diabetes self-management training • Increase the number of patients who demonstrate proper disease self-management • Increase the number of patients who receive the proper care and treatment
Long-term Objectives (5 Years)	• Increase the number of persons with diabetes who receive the recommended care and treatment

Strategy	Review, revise, and disseminate "Arizona Diabetes Resource Directory" for distribution at screening facilities and send to providers with the following information: - Where to go to get care and treatment (including low-cost options) - Support groups in Arizona - Diabetes education resources (e.g. DSMT programs) Link Arizona Diabetes Resource Directory to appropriate Websites (health disparities, AZ211, etc.)

Potential Target audience	People newly diagnosed with diabetes; low-income; Spanish language speakers, people with diabetes who have not received Diabetes Self-Management Training
Stakeholders critical to success	American Diabetes Association, American Heart Association, Arizona Beneficiary Committee, Arizona Insurance Board, AZ211, community health centers, pharmaceutical companies, County Health Departments
ADC Committee(s) Responsible	Education, Patient with support from the Provider subcommittee
ADHS Program Partners	Arizona Diabetes Program

Priority Area 3: Quality of care and treatment with strategies focused on health care providers

The Arizona Diabetes Leadership Council wants to share its expertise and knowledge about delivering quality diabetes services in Arizona. To do this requires coordination and partnerships with other organizations, mainly health plans and providers in the State and the use of the Chronic Care Model, an evidence-based approach that addresses community resources and policies and the health system. In this model, four areas within the health system need to be addressed: self-management support, delivery system design, decision support, and clinical information systems. Use of the model leads to informed engaged patients working and interacting with a prepared and proactive practice team. For more information about this model go to ***www.improvingchroniccare.org***. This goal also addresses the need for both professional and paraprofessional education.

Long-term Objectives
Increase the number of persons with diabetes who receive the recommended care and treatment

Strategies
These strategies are further outlined in the tables below.

1. Care and Treatment Partnerships-Align the work of the Arizona Diabetes Coalition with what other agencies, organizations, and companies in Arizona are doing to improve care of people with diabetes.
2. Chronic Care Model-Promote the Chronic Care Model.
3. Professional/paraprofessional Education-Advance professional/paraprofessional awareness and education.

PRIORITY AREA 3: QUALITY CARE AND TREATMENT WITH STRATEGIES FOCUSED ON HEALTH CARE PROVIDERS	
Goal 2: Reduce the disabling conditions associated with diabetes	
Strategy Focus: Care and Treatment Partnerships	
Short-term Objectives (1 Year)	• By June 30, 2009, 10 coalition and Leadership Council members will participate in partners' committees and workgroups • By June 30, 2009, Leadership Council members will develop partnerships with primary care providers to implement a referral process into the practice for DSMT services for patients with diabetes
Intermediate Objectives (3 Years)	• Increase the number of persons with diabetes who receive the recommended care and treatment
Long-term Objectives (5 Years)	• Increase the number of persons with diabetes who receive the recommended care and treatment
Strategy	Align the work of the Coalition with what other agencies, organizations, and companies in Arizona are doing to improve care of people with diabetes. Action steps: - Become subject matter experts on key committees that work towards improving care. For example, have a member of the Arizona Diabetes Leadership Council serve on The Phoenix Healthcare Value Measurement Initiative. - Advocate for the reimbursement of DSMT services with the various health plans. For example, obtain the billing codes acceptable for each Arizona health plan, including AHCCCS plans and Medicare, for the providers

Potential Target audience	Health care plans
Stakeholders critical to success	Arizona Health Care Cost Containment System (AHCCCS), Phoenix Healthcare Value Measurement Initiative, American Diabetes Association, American Heart Association, Health Services Advisory Group
ADC Committee(s) Responsible	Arizona Diabetes Leadership Council
ADHS Program Partners	Arizona Diabetes Program

PRIORITY AREA 3: QUALITY CARE AND TREATMENT WITH STRATEGIES FOCUSED ON HEALTH CARE PROVIDERS
Goal 2: Reduce the disabling conditions associated with diabetes
Strategy Focus: Chronic Care Model

Short-term Objectives (1 Year)	● By June 30, 2009, one Chronic Care Model training will be offered by Coalition partner ● By June 30, 2009, 10 providers will demonstrate the use of Chronic Care Model tools by making changes in their practice that support the Chronic Care Model
Intermediate Objectives (3 Years)	● Increase the number of providers engaging in Chronic Care Model Methods ● Increase the number of providers demonstrating collaboration with other providers
Long-term Objectives (5 Years)	● Increase the number of persons with diabetes who receive the recommended care and treatment

Strategy	Promote Chronic Care Model Action Steps: - Partner with other agencies, organizations, and companies who are educating providers on the Chronic Care Model. - For example, work with MICA (medical malpractice insurer) to disseminate their CME approved program educating providers on the Chronic Care Model. - Prepare "best practices" report that highlights health care practices that are implementing a part of the Chronic Care Model and show improved patient health outcomes and wellbeing (e.g., decrease in A1c and costs, patient satisfaction, etc.) - Develop methods for health providers/administrators to employ patient registries - Train providers on the Chronic Care Model

Potential Target audience	Primary Care Physicians (PCPs), internists, Community Health Center providers, and residency programs
Stakeholders critical to success	MICA, American Diabetes Association, American Heart Association, Arizona Health Query, Health Services Advisory Group, Juvenile Diabetes Research Foundation, National Kidney Foundation, Arizona Kidney Foundation, Maricopa Medical Society, Pima Medical Society, other county medical societies, State universities and community colleges in Arizona, University of Arizona School of Medicine (Phoenix and Tucson) Residency Programs, Midwestern University, Central Arizona Association of Diabetes Educators, Southern Arizona Chapter of Diabetes Educators, Osteopathic Medical Association, Arizona Medical Association, Arizona Association of Family Practice, Arizona chapters of American College of Physicians and American Academy of Pediatrics.
ADC Committee(s) Responsible	Leadership Council Support: Education, Provider
ADHS Program Partners	Arizona Diabetes Program

PRIORITY AREA 3: QUALITY CARE AND TREATMENT WITH STRATEGIES FOCUSED ON HEALTH CARE PROVIDERS
Goal 2: Reduce the disabling conditions associated with diabetes
Strategy Focus: Professional/Paraprofessional Awareness and Education

Short-term Objectives (1 Year)	• By June 30, 2009, train 60 professionals and 100 paraprofessionals on proper care and treatment of people with diabetes and pre-diabetes
Intermediate Objectives (3 Years)	• Increase the number of providers/paraprofessionals engaged in professional education for diabetes
Long-term Objectives (5 Years)	• Increase the number of persons with diabetes who receive the recommended care and treatment

Strategy	Advance professional awareness and education Advance paraprofessional (promotores, community health representatives, community health outreach workers) awareness and education Develop recruitment plan for training paraprofessionals to be lay leaders for diabetes self-management programs

Potential Target audience	Certified diabetes educators, registered dietitians, Registered Nurses, pharmacists, primary Care physicians, internists, nurse practioners, physician Assistants, community health center providers, residency programs, Promotores, community health representatives, community health outreach workers
Stakeholders critical to success	Arizona Health Education Center, University of Arizona/Arizona State University Medical School, State universities and community colleges in Arizona, Midwestern University, Central Arizona Association of Diabetes Educators, Southern Arizona Association of Diabetes Educators, Health Services Advisory Group
ADC Committee(s) Responsible	Leadership Council Support: Education, Provider
ADHS Program Partners	Arizona Diabetes Program

Priority Area 4: Public policy

Changes in legislation may be necessary in certain cases to effectively reduce the burden of diabetes on the State, improve insurance coverage for people with diabetes, and reduce the costs of complications associated with diabetes. Working with and keeping legislators and policy makers informed about the burden of diabetes in Arizona and changes that can make a difference in the lives of people with diabetes and ultimately reduce costs for the State will be key.

Long-term Objectives
Increase the number of persons with diabetes who receive the recommended care and treatment

Strategies
These strategies are further outlined in the tables below.

1. Diabetes Day-Enhance legislative and regulatory advocacy at state and at local levels.
2. DSMT-Promote the impact of diabetes services, including self-management training, to legislators and policy makers.

PRIORITY AREA 4: PUBLIC POLICY	
Goal 3: Reduce the personal social and economic consequences of diabetes	
Strategy Focus: Diabetes Day	
Short-term Objectives (1 Year)	• By June 30, 2009, one diabetes day with legislators will be held • By June 30, 2009, membership of Diabetes Caucus at Arizona Legislature will be updated.
Intermediate Objectives (3 Years)	• Appropriate legislation introduced as bills • Coalition members engaged in support of legislation
Long-term Objectives (5 Years)	• Increase the number of persons with diabetes who receive the recommended care and treatment
Strategy	Enhance legislative and regulatory advocacy at state and at local levels. Action Steps: - Develop and distribute State of the State Diabetes Fact Sheet for legislators - Elicit testimonials, patient stories, and case studies from organizations, and share with policy-making bodies/committees - Support advocacy training
Potential Target audience	Legislators, policy makers
Stakeholders critical to success	American Diabetes Association, American Heart Association, Central Arizona Association of Diabetes Educators, Southern Arizona Chapter of Diabetes Educators, Health facilities in Arizona
ADC Committee(s) Responsible	Advocacy
ADHS Program Partners	Arizona Diabetes Program

PRIORITY AREA 4: PUBLIC POLICY
Goal 3: Reduce the personal social and economic consequences of diabetes
Strategy Focus: DSMT

Short-term Objectives (1 Year)	• By June 30, 2009, develop fact sheet outlining evidence of effective diabetes self-management training and distribute to Coalition members and State legislators
Intermediate Objectives (3 Years)	• Increase reimbursement for diabetes self-management training
Long-term Objectives (5 Years)	• Increase the number of persons with diabetes who receive the recommended care and treatment

Strategy	Promote the impact of diabetes services, including self-management training, to legislators and policy makers Action Steps: - Identify existing evidence for effective diabetes self-management training - Conduct and publish missing gaps in outcomes research to prove effectiveness of DSMT - Request town hall meetings with elected officials to develop strategies for improving federal and state reimbursement for diabetes self-management training and prevention

Potential Target audience	Legislators, other policy makers
Stakeholders critical to success	American Diabetes Association, American Heart Association, Central Arizona Assn of Diabetes Educators, Southern Arizona Chapter of Diabetes Educators, Health facilities in Arizona
ADC Committee(s) Responsible	Advocacy
ADHS Program Partners	Arizona Diabetes Program

REFERENCES

1. Centers for Disease Control and Prevention. National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2007. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2008.

2. Dabelea D, Pettitt DJ: Intrauterine diabetic environment confers risks for type 2 diabetes mellitus and obesity in the offspring, in addition to genetic susceptibility. J Pediatr Endocrinol Metab 2001; 14(8): 1085-91.

3. American Diabetes Association: Gestational diabetes mellitus (Position statement). Diabetes Care 2004;27(Suppl. 1): S88-S90.

4. Pettitt DJ, Knowler WC Pettitt DJ, Knowler WC: Long-term effects of the intrauterine environment, birth weight, and breast-feeding in Pima Indians. Diabetes Care 1998; 21 Suppl 2: B138-41.

5. National Institute of Diabetes and Digestive and Kidney Diseases. National Diabetes Statistics fact sheet: general information and national estimates on diabetes in the United States, 2005. Bethesda, MD: U.S. Department of Health and Human Services, National Institute of Health, 2005.

6. Population data from US Census estimates by age and sex. Accessed at http://www.census.gov/popest/estimates.php. April 15, 2008.

7. Centers of Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance Survey Data. Atlanta, Georgia: US Department of Health and Human Services, Centers for Disease Control and Prevention, 2000-2006. National estimates include all states, DC and territories.

8. Harris MI, Flegal KM, Cowie CC, Eberhartd MS, Goldstein DR, Little RR, Wiedmeyer H, Byrd-Holt DD. Prevalence of diabetes, impaired fasting glucose, and impaired glucose tolerance in US adults. Diabetes Care. 1998;21(4):518-524.

9. American Diabetes Association. Economic Costs of Diabetes in the U.S. in 2007. Diabetes Care, Volume 31, Number 3, March 2008.

10. Arizona Health and Vital Statistics, 2005. Arizona Department of Health Services, Section 2B.

11. Centers for Disease Control and Prevention. National Center for Health Statistics. Death-Leading Causes, 2004. Available at http://www.cdc.gov/nchs/fastats/lcod.htm. April 15, 2008.

12. Centers for Disease and Control and Prevention (CDC). National diabetes fact sheet: general information and national estimates on diabetes in the Unites States, 2002. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention, 2003.

13. Dabelea D, Bell R, D'Agostino RB, Imperatore G, Johansen JM, Linder B et al. Incidence of Diabetes in Youth in the United States. JAMA. 2007; 297:2716-2724.

14. Arizona Department of Health Services. Yuma County Report for the 2007 Youth Risk Behavior Survey. Steps to a Healthier Arizona Initiative, Arizona Department of Health Services, Public Health Services Prevention, December 2007.

15. National Eye Institute, Statistics and Data, Citations and Abstracts from April 2004 Archives of Ophthalmology, The Prevalence of Diabetic Retinopathy Among Adults in the United States. Accessed at http://www.nei.nih.gov/eyedata/pbd3.as. April 15, 2008.

16. The End Stage Renal Disease Network #15. 2006 Annual Report. Contract Numbers: 500-03-NW15 and HHSM-500-2006-NW015C with Centers for Medicaid & Medicare Services, Baltimore, MD. Accessed at http://www.esrdnet15.org and http://www.esrdnetworks.org. April 15, 2008.

17. Diabetes Prevention Program Research Group. N Engl J Med. Reduction in the Incidence of Type 2 Diabetes with Lifestyle Intervention or Metformin. 346:393, February 7, 2002.

ABBREVIATIONS

A1C	Hemoglobin A1C
ACE inhibitors	Angiotensin converting enzyme inhibitors
ADC	Arizona Diabetes Coalition
ADHS	Arizona Department of Health Services
AHCCCS	Arizona Health Care Cost Containment System
ARB	Angiotensin receptor blockers
BCDPC	Bureau Chronic Disease Prevention and Control
BRFSS	Behavioral Risk Factor Surveillance Survey
CDC	Centers for Disease Control and Prevention
CME	Continuing Medical Education
DDT	Division of Diabetes Translation
DPCP	Diabetes Prevention and Control Programs
DPP	Diabetes Prevention Program
DSMT	Diabetes Self-Management Training (synonymous with Diabetes Self-Management Education or DSME)
ESRD	End stage renal disease
GDM	Gestational diabetes mellitus
HDL	High-density lipoproteins
IFG	Impaired fasting glucose
IGT	Impaired glucose tolerance
IDDM	Insulin-dependent diabetes mellitus
LDL	Low-density lipoprotein
NAP SACC	Nutrition and Physical Activity Self Assessment for Child Care
NIDDM	Non-insulin dependent diabetes mellitus
PCP	Primary Care Physicians
SMART	Specific, Measurable, Attainable, Realistic and Time-sensitive
STOP-NIDDM	Study to Prevent Non-Insulin-Dependent Diabetes Mellitus


Arizona
Department of
Health Services