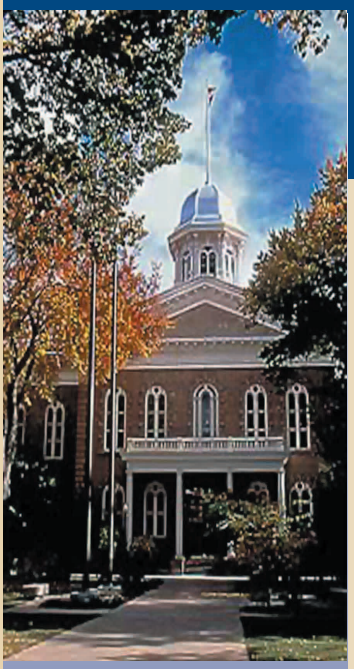

# DIABETES IN NEVADA

*A Report and Performance Improvement Plan from the Nevada State Health Division, Bureau of Community Health*

*April 2005*


Kenny C. Guinn, Governor
Michael J. Willden, Director
Department of Human Resources

Alex Haartz, MPH, Administrator
Bradford Lee, MD, State Health Officer
Nevada State Health Division

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*A Report and Performance Improvement Plan*
*from the Nevada State Health Division,*
*Bureau of Community Health*

***April 2005***

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Bureau of Community Health
Diabetes Prevention and Control Program
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http://health2k.state.nv.us/diabetes/

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Division of Diabetes Translation

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Dear Colleague:

The Nevada State Health Division, Bureau of Community Health is pleased to share with you a copy of the State of Diabetes in Nevada Report and Performance Improvement Plan. The Nevada Diabetes Prevention and Control Program, the Nevada Diabetes Council, and the Nevada Diabetes Assessment and Performance Improvement Plan team developed the report.

Research indicates that diabetes is one of the most controllable and often preventable chronic diseases. Despite this promising research, diabetes prevalence rates are rising at alarming rates, increasing in Nevada from 4.2% in 1996 to 6.3% in 2003. In comparison, national diabetes prevalence rates increased from 4.5% in 1996 to 7.1% in 2003. While an estimated 13 million have been diagnosed with diabetes in the US, unfortunately, an additional 5.2 million people (or over one-third) are unaware that they have the disease. As with other chronic illnesses, this increase is due to the aging of the U.S. population, the rising rate of obesity and physical inactivity. In addition:

- Diabetes is the leading cause of adult blindness, kidney failure, and nontraumatic lower-limb amputations.
- Persons with diabetes are 2 to 4 times more likely to have heart disease and stroke than persons without the disease.
- Diabetes related drug therapy costs the Nevada Medicaid program over $3 million annually. In 2002, over $80 million was spent for Nevada hospitalizations with diabetes as a primary diagnosis.

Current scientific evidence demonstrates that much of the morbidity and mortality of diabetes can be prevented or delayed by aggressive treatment with diet, physical activity, and new pharmacology approaches to normalize blood sugar levels, blood pressure, and lipids. The good news is that research also shows that type 2 diabetes can be prevented or delayed in the 41 million people with pre-diabetes--about 40 percent of U.S. adults, ages 40-74 who are at high risk for the disease by losing a modest amount of weight by getting 30 minutes of physical activity 5 days a week, and making healthy food choices.

Unfortunately, a wide gap still exists between current and desired diabetes care and practices. Public awareness about the seriousness of diabetes and its treatment is low, despite the fact that the disease is one of the leading causes of death and disability in the United States. Using the National Public Health Performance Standards as a model, Nevada's Diabetes Report represents a call to action to improve the quality of life for people with diabetes in Nevada. It encourages changes in public awareness, health policies and systems.

The Nevada Department of Human Resources and Nevada State Health Division's Bureau of Community Health extends its appreciation to the many individuals who helped prepare this report. The information presented serves as a starting point in the effort to define and reduce the burden of diabetes in Nevada.

Sincerely,

Bradford Lee, M.D.
State Health Officer
Nevada State Health Division

Building and Strengthening Public Health through Communication and Partnerships

## Table of Contents

# Executive Summary

In 1996, the Centers for Disease Control and Prevention funded Nevada's Diabetes Prevention and Control Program (DPCP) to develop and maintain statewide diabetes public health surveillance and control activities. Diabetes is one of the most common, complex and costly chronic health conditions in the United States and Nevada. Diabetes research indicates that it is one of the most controllable and often preventable chronic diseases.

Despite this promising research, diabetes prevalence rates are rising at alarming rates, increasing in Nevada from 4.2% in 1996 to 6.3% in 2003. In comparison, national diabetes prevalence rates increased from 4.5% in 1996 to 7.1% in 2003. Diabetes prevalence for all Nevada groups exceeds the Healthy People 2010 objective of 2.5%.

Diabetes prevalence in Nevada is varies by region, gender, age group, racial/ethnic group, or household income. Prevalence data shows the following:

- Clark County had the highest prevalence at 6.6%, compared to 5.1% for Washoe County and 4.4% for Carson City and the rural counties and 6.3% statewide (2003 data);
- Males (7.4%) had higher diabetes prevalence than females (5.1%) in 2003. Female diabetes prevalence is increasing at a faster rate than the prevalence rate for males;
- Persons age 65 and older had the highest prevalence of all adult age groups (15.4%), while 18-24 year olds had the lowest prevalence (0.9%) in 2003.
- American Indians (15.0%) had the highest diabetes prevalence of any racial/ethnic group during the 1996-2001 period, while Asian/Pacific Islanders had the lowest prevalence at 3.5%;
- Adults with household incomes of less than $15,000 had the highest diabetes prevalence at 10.4%, compared to those with household incomes of $75,000 or more at 4.2%.

The costs of diabetes are staggering. In 2002, $82,030,607 was spent for hospitalizations for Nevada residents with diabetes as the primary diagnosis. Of this amount, Nevada Medicaid reimbursed $15,074,818. Also, Nevada Medicaid paid $3,121,158 for diabetic therapy prescriptions in 2002.

The Nevada Diabetes Prevention and Control Program (DPCP) works in partnership with diabetes leaders from around the state to respond to this pressing public health challenge. *Diabetes in Nevada* outlines the need for (1) increased diabetes surveillance to strengthen baseline data sets and monitor trends and progress in meeting statewide goals and objectives, (2) developing strategies and interventions to reduce health disparities for high-risk populations such as American Indians, African-Americans, and Hispanics, and (3) strengthening the partnerships necessary to improve the health status of those with diabetes and those at risk of developing the disease.

*Diabetes in Nevada* describes the burden of this disease and proposes public health strategies for diabetes prevention and control in Nevada. This document is developed in the spirit of partnership and does not mandate specific courses of action. The primary focus is to build and sustain an effective diabetes public health system to reduce the burden of diabetes.

> ***"Diabetes is one of the most common, complex and costly chronic health conditions in the United States and Nevada."***

# Nevada Demographic Profile

Nevada is the nation's seventh largest state geographically with an area of 110,540 square miles. This area is equivalent to the combined area of Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, and the District of Columbia. Of Nevada's sixteen counties and one independent city, only Clark, Washoe and Carson City are urban, while Douglas, Lyon and Storey counties are rural. The other eleven counties are all regarded as frontier (seven or fewer persons per square mile).

Nevada is a semi-arid, high desert, largely mountainous state. The Sierra Nevada Mountains form a natural barrier between Nevada and California. Las Vegas, Nevada's most populated city is located in the southern end, and Reno, Nevada's third most populated city, is located in the northern part of the state separated by about 430 miles from Las Vegas.

These demographic changes, listed in the adjacent box, especially in the older age groups and racial/ethnic groups, have major implications for the health care delivery system. From social, behavioral, environmental and economic aspects, chronic disease impacts not only individuals and their families, but also society as a whole. Also, cultural differences can affect health risks and behaviors, and can pose barriers to accessing available health care services.

According to the U.S. Census, Nevada has been the fastest-growing state in the nation for more than a half-century. The state's rapid population growth since 1990 has put almost impossible pressure on health and human services to keep pace with spiraling demand for services. To put the growth in perspective:

- From 1990-2003, Nevada's population grew by 86%. Over 1,000,000 more people lived in Nevada in 2003 as compared to 1990. Nevada's 2003 population was estimated to be 2,296,566 residents.

- 71% of Nevadans now live in Clark County (Las Vegas area). From 1990-2003, the population of Clark County has more than doubled, adding almost 850,000 people. Washoe County (Reno area) grew by 45%, adding almost 116,000 people. The rest of the state grew by a similar 45% rate, adding 94,000 more people.

- The number of children and youth under age 18, and seniors age 65 and over, grew at the fastest rate. In 2003, there were roughly twice as many people in each of these age groups as there were in 1990.

- The number of persons of Hispanic origin more than tripled from 1990 to 2003: comprising 10.8% of the population in 1990 to being 21.5% of the population in 2003. There is an even higher concentration of Hispanic persons among children and youth; 30% of persons under age 18 were Hispanic in 2003. In the same time period, the number of Asian and Pacific Islander persons almost tripled as well.

*"These demographic changes, especially in the older age groups and racial/ethnic groups, have major implications for the health care delivery system."*

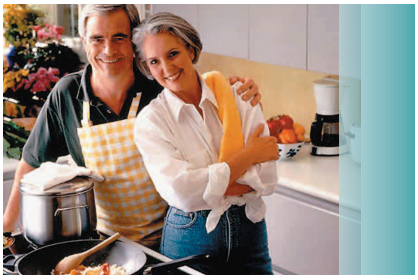
# What is Diabetes

According to the American Diabetes Association (ADA), diabetes is a disease in which the body does not produce enough insulin or properly use the insulin it does produce. Insulin is a hormone that unlocks the body cells to allow blood sugar to enter and fuel them. The cause of diabetes remains unknown, although both genetics and environmental factors such as obesity and a lack of physical activity appear to play a role in determining whether a person develops diabetes.

The ADA estimates that 18.2 million adults in the United States (U.S.) have diabetes. This estimate includes 13 million adults diagnosed with the disease, and 5.2 million adults who are unaware they have the disease. In Nevada, it is estimated about 108,000 adults had diagnosed diabetes in 2003.

The rates of diabetes have been increasing across the U.S. Between 1980 and 1994, the number of persons diagnosed with diabetes rose by 2.2 million, an increase of 39%. As with other chronic illnesses, this increase is due to the aging of the U.S. population, the rising rate of obesity, and physical inactivity, especially among women and minority populations.

The goal of any type of diabetes care is to keep blood sugar levels within a normal range and prevent complications. People with diabetes



are more likely to experience serious complications if blood sugar is not controlled. These complications include high blood pressure, stroke, eye disease/blindness, kidney disease, heart disease, foot problems and amputations, complications of pregnancy, and dental disease. Diabetes is recognized as the leading cause of blindness in adults, non-traumatic lower extremity amputations, and kidney failure.

People with diabetes can also experience immediate or acute complications under certain circumstances. Acute or immediate health problems associated with diabetes can include low blood sugar (hypoglycemia) and high blood sugar (hyperglycemia).

# What Are The Different Types Of Diabetes?

**Pre-diabetes** is a condition that occurs when a person's blood sugar levels are higher than normal but not high enough for a diagnosis of type 2 diabetes. A normal fasting blood sugar level is below 100 mg/dl. A person with pre-diabetes has a fasting blood sugar level between 100 and 125 mg/dl. If the blood glucose level rises to 126 mg/dl or above, a person has diabetes. Recent research has shown that some long term damage to the body, especially the heart and blood vessels, may already be occurring during pre-diabetes.

The ***good news*** is that many people with pre-diabetes can prevent or delay the onset of diabetes. The Diabetes Prevention Program, a landmark study sponsored by the National Institutes of Health, found that people with pre-diabetes can prevent or delay the onset of diabetes by losing 5 to 7 percent of their body weight (10-15 pounds for a 200 pound person). Losing a small amount of weight by getting 30 minutes of physical activity 5 days a week, and making healthy food choices will help prevent type 2 diabetes.

**Type 2 diabetes is the most common form of diabetes.** Type 2 diabetes occurs when the body fails to make enough insulin or the body cells and muscles do not use insulin properly. The ADA estimates that approximately 90-95% (17.4 million) of Americans are diagnosed with type 2 diabetes. The average age at onset is 51 years, but an increasing number of younger people are being diagnosed with type 2 diabetes. People with type 2 diabetes control their disease by monitoring their blood sugars, eating healthy foods, and engaging in physical activity programs. In addition, medications may be needed to help keep blood sugar levels in control.

**Type 1 diabetes** results from the body's failure to make insulin, the hormone that unlocks the

body cells to allow blood sugar to enter and fuel them. People with type 1 diabetes must take insulin to stay alive. The ADA estimates that 5-10% of Americans who are diagnosed with diabetes have type 1 diabetes. Type 1 diabetes usually occurs among children and young adults, and was formerly called juvenile-onset diabetes.

People with type 1 diabetes control their disease by taking insulin, monitoring their blood sugars, meal planning and engaging in a physical activity program.

**Gestational diabetes** affects about 4% of all pregnant women. The ADA estimates this to be about 135,000 cases in the U.S. each year. Gestational diabetes starts when the pregnant body is not able to make and use all the insulin it needs. In general, gestational diabetes requires treatment only during pregnancy. However, women with gestational diabetes are at higher risk for developing type 2 diabetes later in life.

## Burden of Diabetes in Nevada

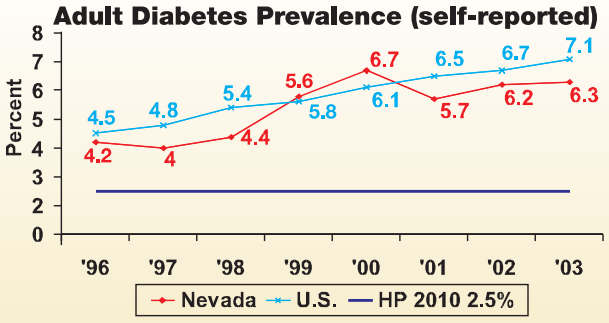
The primary data source used to describe the burden of diabetes in Nevada is the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is based upon a randomly selected telephone interview sample of Nevadans over age 18 years. There are limitations to the BRFSS data in terms of the representations of all regions in the state and all population groups. The frequency of responses by a particular population group (e.g. racial and ethnic minorities) may be rather small, so in several instances multiple years of data were aggregated, or counties of the state were combined (rural counties and Carson City) to achieve reliable frequencies.

Nevada has been collecting BRFSS data since 1992. The Nevada DPCP has analyzed diabetes prevalence trend data from the core question "Have you ever been told by a doctor that you have diabetes". Diabetes prevalence in Nevada exceeds the Healthy People 2010 objective of 2.5%. ***Figure 1*** shows the diabetes prevalence in Nevada adults from 1996 through 2003 and U.S. adults from 1996 through 2003. The Nevada diabetes prevalence trend is similar to that of the U.S.

Community health assessments support the BRFSS findings. Professional Research Consultants, Inc. conducted surveys in Carson City in 1999, Douglas County in 2001, and Clark County in 2002. In the Carson City assessment, diabetes prevalence was 7.5%, the Douglas County prevalence was 6.0%, and the Clark County prevalence was 8.0%. Also, the Gallup Organization, funded by the Nevada Tobacco Prevention and Education Program, included the core diabetes question in an Elko County survey conducted in 2001. The diabetes prevalence was 5.4%.

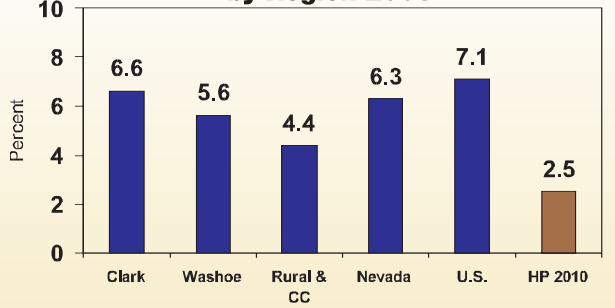
Diabetes prevalence is not evenly distributed by geographic region in Nevada. According to the 2003 BRFSS, Clark County had a diabetes prevalence of 6.6%, Washoe County 5.6%, and Carson City and the rural counties had a prevalence of 4.4%. The regional prevalence data is shown in ***Figure 2***. Again, prevalence in all regions exceeds the Healthy People 2010 objective of 2.5%.

Figure 1




Sources: BRFSS 1992-2002 & Healthy People 2010 Objectives

Figure 2

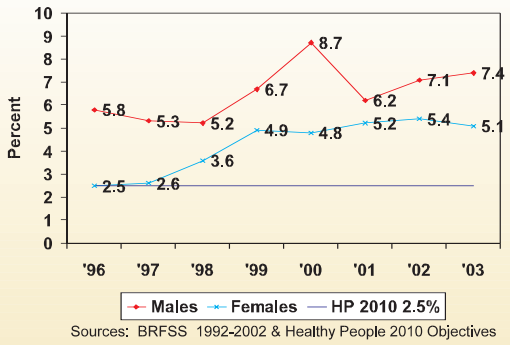



Sources: BRFSS & Healthy People 2010 Objectives

In Nevada, BRFSS data shows higher prevalence trends for males as compared to females (*Figure 3*). For males, diabetes prevalence ranges from 5.8% in 1996 to 7.4% in 2003. Diabetes prevalence for females in Nevada shows an upward trend from 2.5% in 1996 to 5.1% in 2003. This is double the Healthy People 2010 objective of 2.5%.

Figure 3

**Diabetes Prevalance by Gender - Nevada 1996-2003**

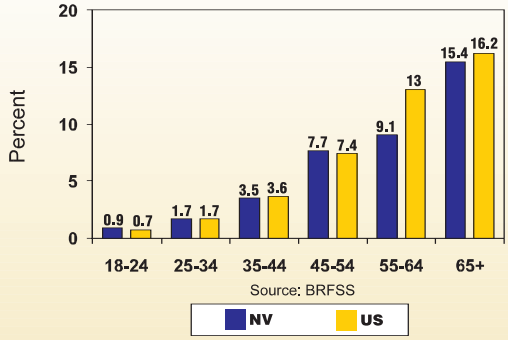



Sources: BRFSS 1992-2002 & Healthy People 2010 Objectives

Diabetes prevalence differs among age groups(*Figure 4*). Less than 1% of adults age 18-24 in both Nevada and the United States have been diagnosed with diabetes, while 15.4% of Nevada adults and 16.2% of U.S. adults age 65 and older have been told they have diabetes. According to the BRFSS data, Nevada adults 45-54 have slightly higher diabetes prevalence than those age 45-54 nationwide.

Figure 4

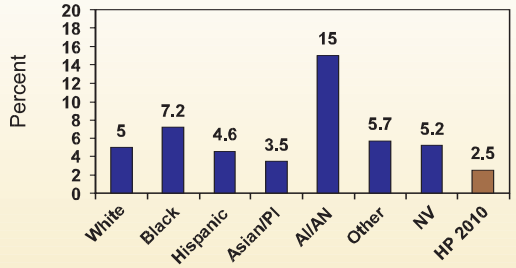
**Percentage of Nevada Adults with Diabetes by Age Group 2003**




Diabetes prevalence varies among racial and ethnic groups in Nevada. *Figure 5* shows aggregated 1996-2001 BRFSS data by racial/ethnic group. American Indians/Alaska Natives had the highest diabetes prevalence of any racial/ethnic group in Nevada at 15.0%. African-Americans had the second highest (7.2%), followed by White-non-Hispanics (5.0%), Hispanics (4.6%) and Asian/Pacific Islanders at 3.5%.

Figure 5

**Diabetes Prevalence by Race/Ethnic Group, Nevada Adults, 1996-2001**

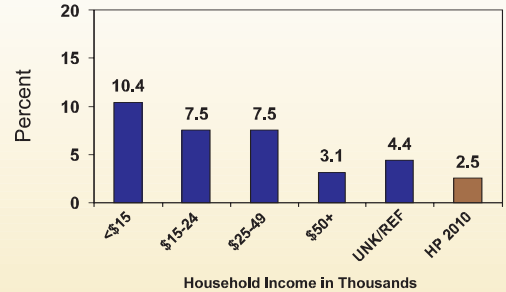



Sources: BRFSS, 1996-2001 & Healthy People 2010 Objectives

Diabetes prevalence also varies among income levels. *Figure 6* shows diabetes prevalence rates by income level. Rates are highest among those earning less than $15,000.

Figure 6

**Diabetes Prevalence by Household Income, Nevada Adults - 2003**




Sources: BRFSS 1996-2001& Healthy People 2010 Objectives

# Diabetes Care and Management

The Nevada DPCP tracks self-reported information about diabetes care and management to determine the progress in reducing the burden and complications of diabetes. The measures are based on the seven national objectives developed by CDC's Division of Diabetes Translation and include foot exams, eye exams, influenza and pneumococcal vaccinations, A1c tests for blood sugar control and increasing access to diabetes care and self-management education for disparate populations. These national objectives, together with the diabetes surveillance data, guide the DPCP in developing a plan and performance improvement measures.

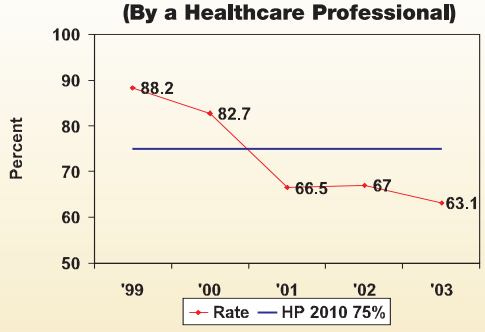
## Foot Exams

According to the ADA, more than 60% of non-traumatic lower extremity amputations in the U.S. occur among people with diabetes. Annual foot exams by a health care professional can reduce the rate of lower extremity amputations. *Figure 7* shows the rate of persons with diabetes reporting at least one foot exam by their health care provider in the previous year.

The rate has ranged from 63.1% in 2003 to 88.2% in 1999. The Healthy People 2010 objective is 75%, and the objective was met in 1999 and 2000. *Figure 7* shows significant variance in the rate of foot exams for people with diabetes living in Nevada.

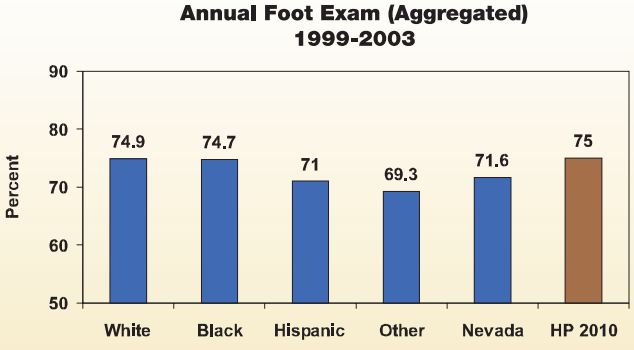
*Figure 8* shows aggregated rates (1999-2003) for annual foot exams by racial/ethnic group. The Other category includes Asian/Pacific Islanders and American Indians/Alaska Natives.

Figure 7




Sources: BRFSS & Healthy People 2010 Objectives

Figure 8




Sources: BRFSS & Healthy People 2010 Objectives

The Nevada DPCP tracks diabetes care and management data to determine the progress in reducing the complications of diabetes. The following shows the current diabetes care and management recommendations:

People with diabetes should visit their health care team at least twice a year to find and treat health problems early. Follow this plan:

***At each visit get a:***

- Blood pressure check - if over 130/80, ask what steps to take to lower.
- Weight check.
- Foot check.

***Two times each year get:***

- A1C check - check more often if over 7 and ask what steps to take to lower.
- Dental exams to prevent gum disease and loss of teeth. Tell your dentist you have diabetes.

***Once each year get a:***

- Cholesterol check - if LDL over 100, ask what steps to lower.
- Dilated eye exam to check for eye problems.
- Complete foot exam to check on foot health.
- Urine and blood tests to check for kidney problems.
- Flu shot.

*In addition to the above at least once get a pneumonia shot and attend a diabetes self management program.*

## Eye Exams

Diabetes is the leading cause of new cases of blindness among adults 20-74 years old. An annual dilated eye exam plays an important role in preventing blindness. ***Figure 9*** shows the rate of persons with diabetes reporting an annual dilated eye exam from 1999 to 2003. The rate has ranged from 54.8% in 2003 to 79.1% in 2000.

The Healthy People 2010 objective is 75.0%. Nevada exceeded this objective in 1999 and 2000. However, the BRFSS data shows a significant decline in the number of people with diabetes receiving dilated eye exams from 79.1% in 2000 to 54.8% in 2003.

***Figure 10*** shows aggregated rates (1998-2002) for an annual dilated eye exam by racial/ethnic group. The Other category includes Asian/Pacific Islanders and American Indians/ Alaska Natives. Hispanics had the lowest annual dilated eye exam rate (53.1%)

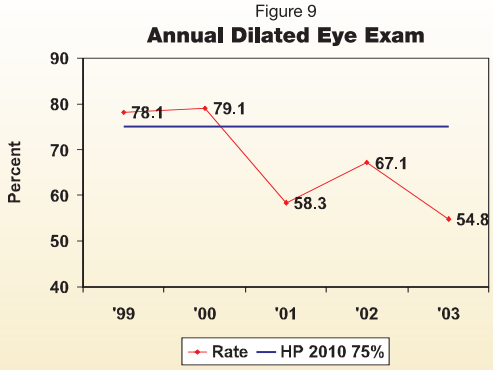
## Immunizations

People with diabetes are at high risk for influenza. ***Figure 11*** shows the rate at which persons with diabetes report receiving an annual influenza vaccination.

Influenza vaccination for people with diabetes has ranged from 49.5% in 1997 to 57.1% in 1999. The Healthy People 2010 objective calls for influenza vaccination rates to be at or exceed 90% for high-risk adults 65 and older and at 60% for high-risk adults less than 65 years of age. Vaccination is an effective strategy to reduce illness and deaths due to influenza.

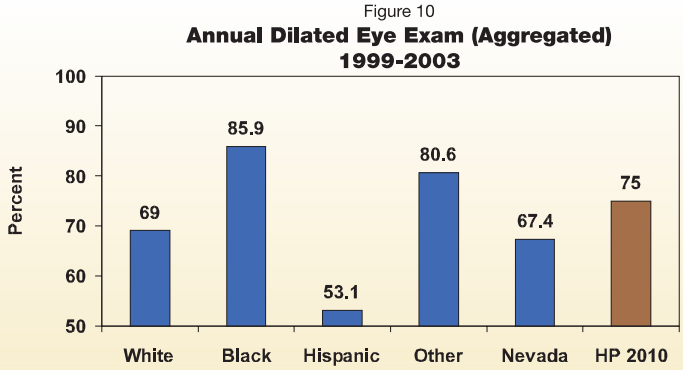
***Figure 12*** shows aggregated rates (1997, 1999, 2001) for annual influenza vaccinations by racial/ethnic group. The Other category includes Asian/Pacific Islanders and American Indians/ Alaska Natives. Hispanics had the lowest annual influenza vaccination rate (40.3%).

Figure 9



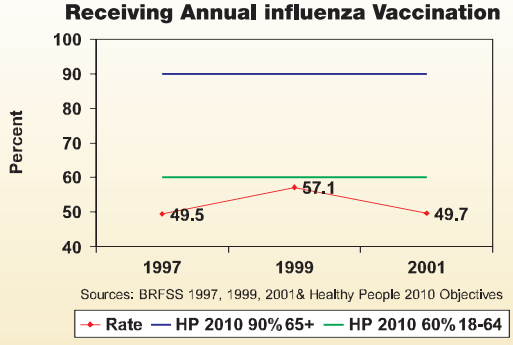

Sources: BRFSS & Healthy People 2010 Objectives

Figure 10



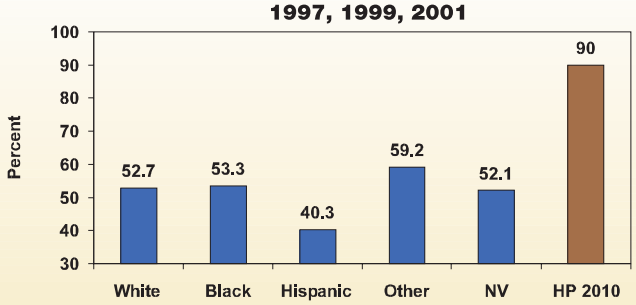

Source: BRFSS & Healthy People 2010 Objectives

Figure 11



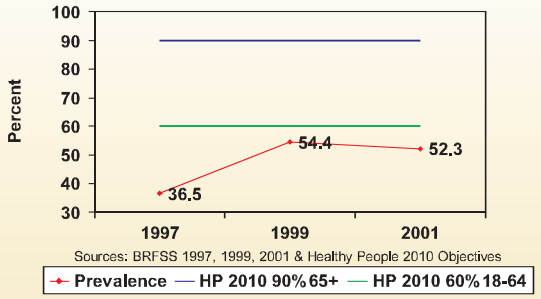

Sources: BRFSS 1997, 1999, 2001& Healthy People 2010 Objectives

Figure 12



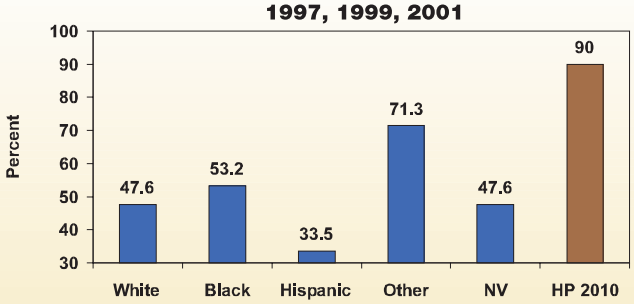

Source: BRFSS 1997, 1999, 2001

Figure 13
**Percentage of Nevada Adults with Diabetes Ever Received a Pneumococcal Vaccination**



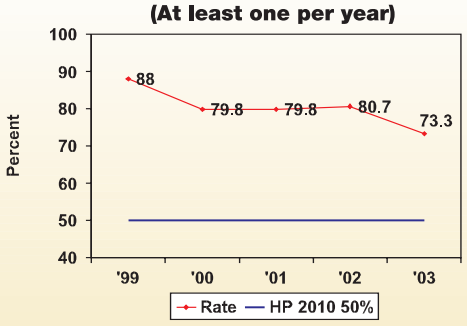

Sources: BRFSS 1997, 1999, 2001 & Healthy People 2010 Objectives

Figure 14
**Pneumococcal Vaccinations (Aggregated) 1997, 1999, 2001**



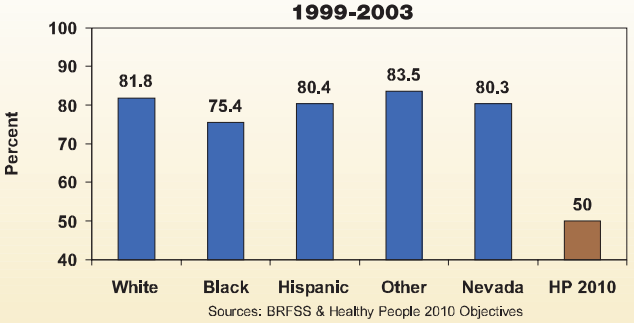

Sources: BRFSS & Healthy People 2010 Objectives

Figure 15
**A1c Tests (At least one per year)**




Sources: BRFSS & Healthy People 2010 Objectives

Figure 16
**A1c Tests (Aggregated) 1999-2003**




Sources: BRFSS & Healthy People 2010 Objectives

It is recommended that persons with diabetes receive one pneumococcal vaccination in their lifetime to reduce illness and deaths due to pneumococcal disease. ***Figure 13*** shows the rate of persons with diabetes who report having received a pneumococcal vaccination. The rate has ranged from 36.5% in 1997 to 54.4% in 1999.

Healthy People (HP) 2010 objective calls for pneumococcal vaccination rates to be at or exceed 90% for high-risk adults 65 and older and at 60% for high-risk adults less than 65 years of age. People with diabetes are included in the high-risk category.

***Figure 14*** shows aggregated rates (1997, 1999, 2001) for pneumococcal vaccinations by racial/ethnic group. The Other category includes Asian/Pacific Islanders and American Indians/ Alaska Natives. Hispanics had the lowest pneumococcal vaccination rate (33.5%)

Note: Nevada BRFSS data is not broken out by age group, and it is not known if persons with diabetes are meeting the HP 2010 (HP) objective for influenza and pnuemococcal vaccinations.

## A1c Tests

Blood sugar control is an important part of diabetes management. The A1c test shows an average blood sugar control over a two to three month period. Current clinical practice recommendations indicate that persons with diabetes have a quarterly A1c test if treatment changes or treatment goals are not being met, or twice a year if blood sugar levels are stable. ***Figure 15*** shows the rates persons with diabetes report an A1c test at least once a year.

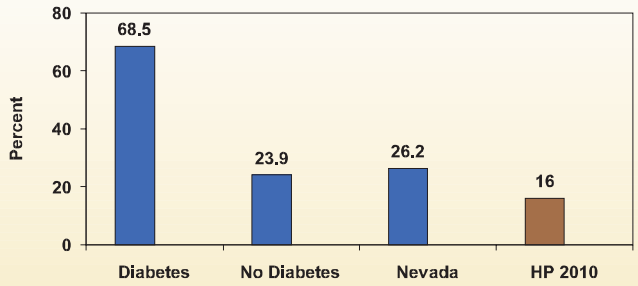
The rate has ranged from 88.0% in 1999 to 73.3% in 2003. The HP 2010 objective is 50.0%. Nevada has exceeded this HP objective since 1996.

***Figure 16*** shows aggregated rates (1999-2003) for A1c tests by racial/ethnic group. The Other category includes Asian/Pacific Islanders and American Indians/ Alaska Natives. All racial/ethnic groups exceed the HP 2010 objective of 50%.

## Hypertension

Hypertension, or high blood pressure, can be a serious problem for those who have diabetes, or pre-diabetes. As shown in *Figure 17*, the hypertension rate for adults with diabetes in Nevada (68.5%) is almost triple the rate of those who do not have diabetes (23.9%). Both rates exceed the HP 2010 objective of 16.0%.

Figure 17
**Hypertension (Aggregated)**



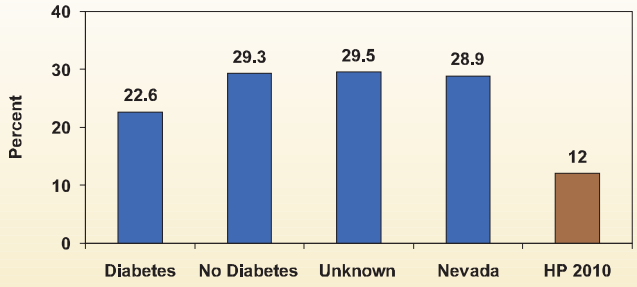

Sources: BRFSS 1997, 1999, 2001 & Healthy People 2010 Objectives

## Tobacco Use

Cigarette smoking causes significant health problems. People with diabetes who also smoke face higher risk of heart, nerve and blood vessel problems. Quitting smoking, no matter how long individuals have smoked, will improve their health.

In Nevada, 22.6% persons who have diabetes are current smokers. All rates exceed the HP 2010 objective of 12.0%.

Figure 18
**Current Smoking Rates (Aggregated)**



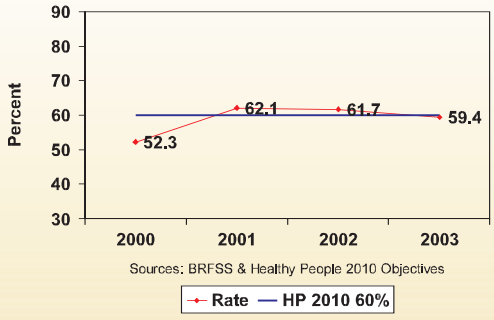

Sources: BRFSS 1997-2001 & Healthy People 2010 Objectives

## Diabetes Self Management

Diabetes self management is a key component in the prevention of diabetes complications. Accordingly, persons with diabetes are encouraged to learn how to work with their health care providers to manage diabetes themselves. *Figure 19* shows the rate persons with diabetes report taking a self-management course. This rate has ranged from 52.3% in 2000, to 59.4% in 2003. The HP 2010 objective is 60.0%. Nevada has exceeded the objective in 2001 and 2002.

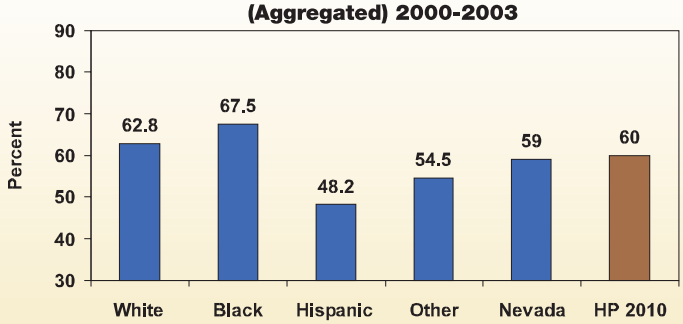
*Figure 20* shows aggregated rates (2000-2003) for diabetes self-management training by racial/ethnic group. The Other category includes Asian/Pacific Islanders and American Indians/ Alaska Natives. Hispanic people with diabetes report the lowest rate of diabetes self-management training (48.2%).

Figure 19
**Percentage of Nevada Adults with Diabetes Self-Management Training**




Sources: BRFSS & Healthy People 2010 Objectives

Figure 20
**Diabetes Self-Management Training (Aggregated) 2000-2003**




Source: BRFSS & Healthy People 2010 Objectives

# Risk Factors

Most people can benefit from the key diabetes prevention and management strategies: making healthy food choices and being more active. The DPP study results show that losing 5 to 7 percent of body weight (i.e. 10-15 pounds for a 200 pound person) will help prevent or delay type 2 diabetes. Losing a modest amount of weight by getting 30 minutes of physical activity 5 days a week and making healthy food choices will also help prevent other chronic diseases such as heart disease, stroke, obesity and high blood pressure.

## Physical Activity

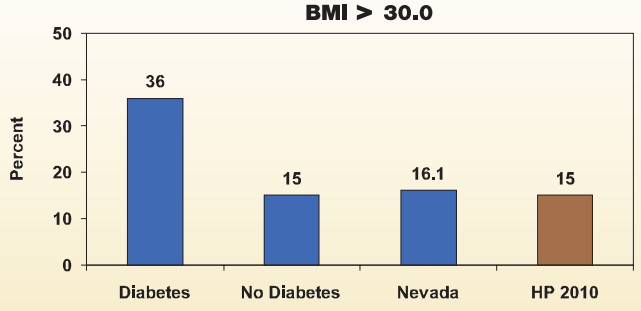
Moderate physical activity, like walking, for 30 minutes five times a week can help individuals reduce stress, maintain a healthy weight and reduce the risk of developing type 2 diabetes and other chronic diseases such as heart disease, stroke, obesity and high blood pressure. As shown in ***Figure 22***, 64% of persons with diabetes report doing some form of physical activity three to five times per week, compared to 76.8% of those who do not have diabetes. Both rates are below the Healthy People 2010 objective of 80.0%.

## Obesity

The BRFSS obtains participant height and weight to calculate their body mass index (BMI). As shown in ***Figure 21***, the percentage of those with diabetes who are obese is more than double than those who do not have diabetes. With the exception of those who do not have diabetes, obesity rates exceed the Healthy People 2010 objective of 15.0%.

Figure 21

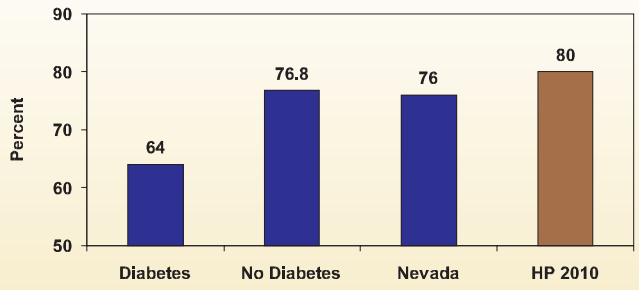
**Obesity Rates (Aggregated)**
**BMI > 30.0**




Sources: BRFSS 1996-2002& Healthy People 2010 Objectives

Figure 22

**Physical Activity (Aggregated)**




Source: BRFSS 1996, 1998, 2000 & Healthy People 2010 Objectives

# Diabetes Complications

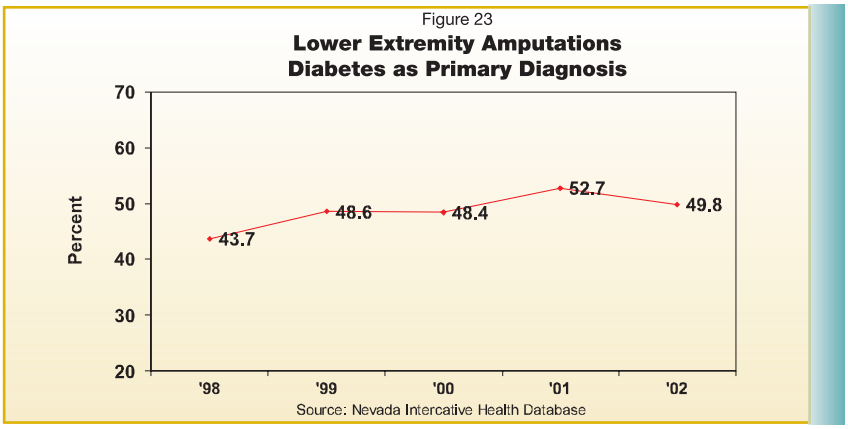
Lower extremity amputations and end-stage renal disease are serious complications that can result from diabetes. Each complication is discussed below.

## Lower Extremity Amputations

*Figure 23* shows the percentage of lower extremity amputations performed in Nevada from 1998 to 2002 where diabetes was the primary diagnosis.

The percentage of lower extremity amputations where a primary diagnosis of diabetes is indicated increased from 43.7% in 1998 to 49.8% in 2002. The average cost per discharge (post amputation) increased from $37,150 in 1998 to $61,221 in 2002.

Figure 23

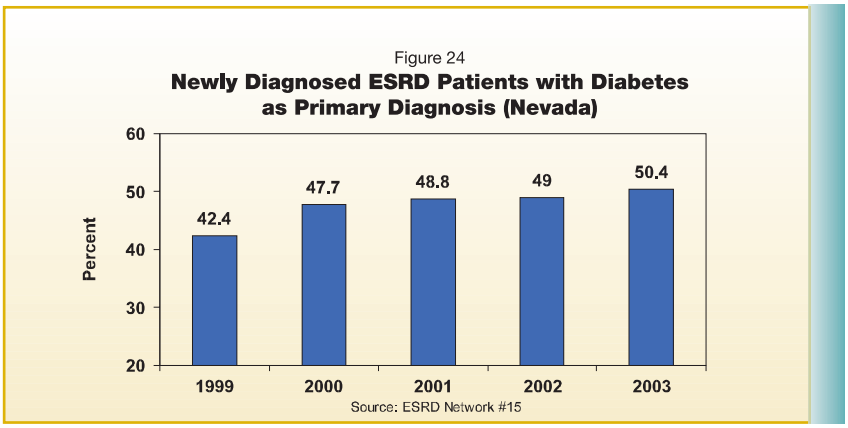



## End-Stage Renal Disease

Diabetes is a leading cause of new cases of end-stage renal disease (ESRD). ESRD occurs when the kidneys are no longer able to help the body remove excess fluids and waste products. Dialysis or a kidney transplant is needed to keep the body functioning.

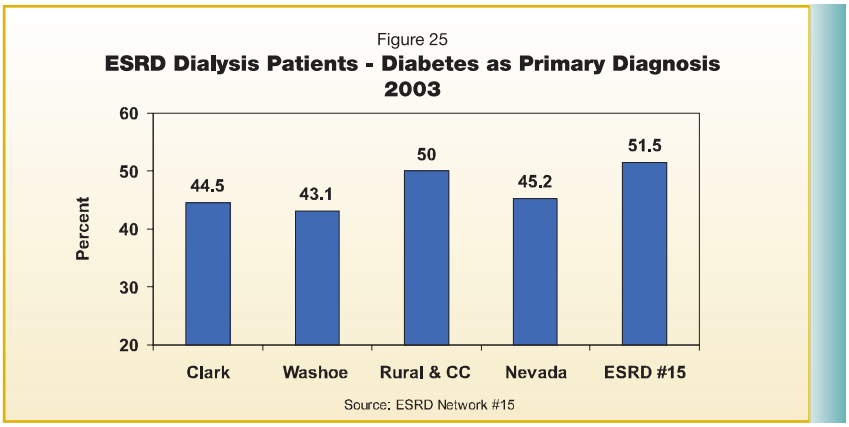
*Figure 24* shows the percentage of new ESRD cases with diabetes as the primary diagnosis. In Nevada, the number of new cases of ESRD increased from 42.4% new cases in 1999 to 50.4% in 2003.

Figure 24




In 2003, Clark County had the highest prevalence of ESRD rates in Nevada (*Figure 25*). The state compares favorably with the states in ESRD Network #15 (Arizona, Colorado, Nevada, New Mexico, Utah, Wyoming) which had diabetes as the primary diagnosis in 51.6% of new ESRD cases.

Figure 25



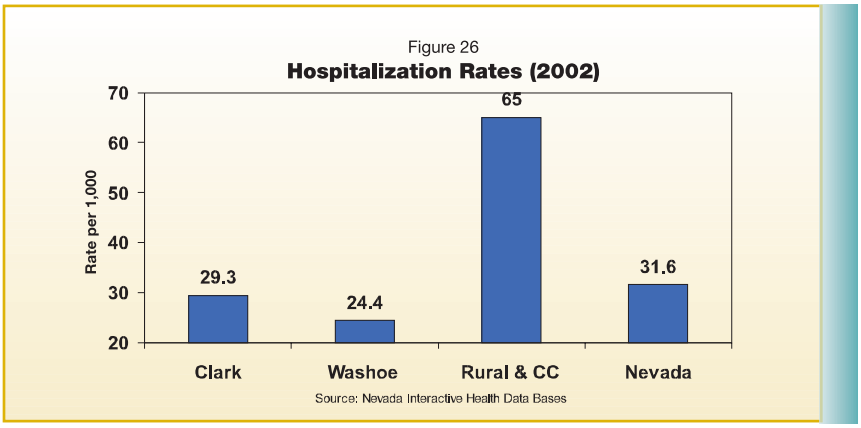
# Cost of Care

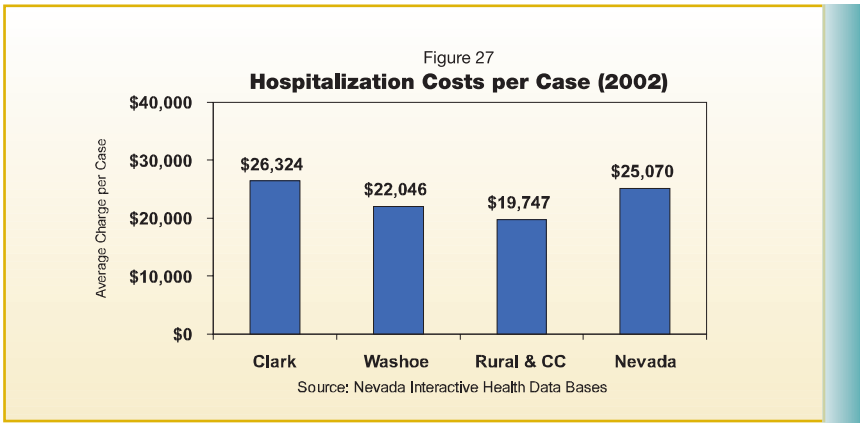
Diabetes is a costly disease. The following figures show the cost of hospitalization and the amounts spent on pharmaceuticals to treat the disease.

*Figure 26* shows 2002 hospitalization rates per 1,000 persons with diabetes by region. The data presented is for cases where diabetes was the primary diagnosis.

Hospitalization rates in rural counties and Carson City are more than double the statewide rate.

The average charge per diabetes case also varies among Nevada's regions. *Figure 27* shows the average charge per case for a diabetes hospitalization. The average hospitalization cost statewide was $25,070. Hospitalization costs in rural counties averaged $19,747; Washoe County costs average $22,046 and Clark County averaged $26,324.




## Nevada Medicaid Diabetes Costs

The total 2002 hospitalization costs with diabetes, as the primary diagnosis in Nevada was $82,030,607. Of this amount, Nevada Medicaid reimbursed $15,074,818. The following gives the 2002 Medicaid reimbursement rates by county:

- For Clark County, $58,149,015 was spent on diabetes hospitalizations, with $12,372,250 reimbursed by Nevada Medicaid.
- In Washoe County, $9,215,405 was spent on diabetes hospitalizations, with $774,364 reimbursed by Nevada Medicaid.
- In Carson City and the rural counties, $7,958,057 was spent on diabetes hospitalizations, with $999,625 reimbursed by Nevada Medicaid.

The amount spent on diabetes-related prescriptions in Nevada has almost tripled from 1998 to 2002.

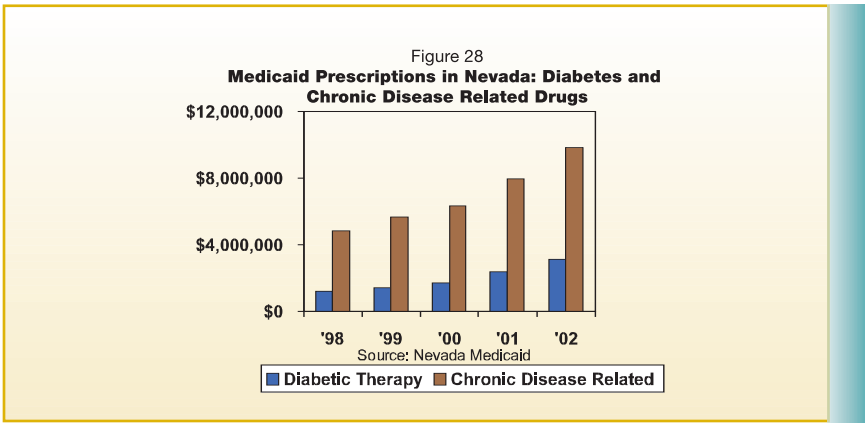



*Figure 28* shows the cost of prescriptions paid by Medicaid for diabetic therapy and chronic disease related therapy.

Diabetic therapy prescription costs increased from $1,165,996 in 1998 to $3,121,158 in 2002, while chronic disease related prescriptions increased from $4,823,883 in 1998 to $9,825,692 in 2002. Chronic disease related prescriptions included lipotropics, cholesterol reducers, anti-hypertensives and other cardiovascular drugs.

# Nevada Diabetes Public Health System Objectives

The Nevada DPCP objectives address the seven national objectives developed by the Division of Diabetes Translation, Centers for Disease Control and Prevention. These objectives, together with the Nevada diabetes surveillance data, Healthy People 2010 objectives and results from a statewide assessment process provide the framework for the Nevada Diabetes Public Health Improvement Plan. This plan will enable the Nevada DPCP to:

- Continue enhancement of the Nevada diabetes surveillance system.
- Develop strategies for sustaining and integrating chronic disease prevention and management programs, especially for disparate populations with diabetes or at risk for diabetes.
- Expand partnerships and linkages within the Nevada diabetes public health system.

## Objective 1:

By March 29, 2008, the Nevada DPCP will expand the current diabetes surveillance and quality improvement data systems to improve the quality and assessability of diabetes prevalence, health services and behavioral data statewide by:

**1.** Further developing and implementing an expanded Nevada-specific BRFSS (in addition to the current CDC diabetes module) with oversampling of disparate at-risk populations, particularly the American Indian population.

**2.** Continuing to develop and implement a Nevada diabetes data and reporting system that includes Medicare, Medicaid, tribal health programs, school health programs and other health care plans.

**3.** Expanding dissemination of and access to diabetes surveillance and tracking reports to consumers, health policy and delivery systems and other partners in Nevada's public health system.

## Objective 2:

By March 29, 2008, increase the percent of people in Nevada with diabetes who receive appropriate foot exams from baseline (Nevada BRFSS 2003, 63%) to 70% (HP 2010 Objective is 75%).

## Objective 3:

By March 29, 2008, increase the percent of people in Nevada with diabetes who receive appropriate annual dilated eye exams from baseline (Nevada BRFSS 2003, 55%) to 60% (HP 2010 Objective is 75%).

## Objective 4:

By March 29, 2008, increase the percent of people in Nevada with diabetes: To 60% who receive appropriate immunizations among adults 18 to 64 years old; to 85% who receive an annual influenza vaccination and receive a pneumococcal vaccination among those 65 and older (HP 2010 Objective is 60% for influenza and pneumococcal vaccinations among adults 18 to 64, and 90% for influenza and pneumococcal vaccinations among those 65 and older).

## Objective 5:

By March 29, 2008, increase the percent of people in Nevada with diabetes who receive the appropriate A1c test from baseline (Nevada BRFSS 2003, 73%) to 83% (HP 2010 Objective is 50%).

## Objective 6:

By March 29, 2008, Nevada will demonstrate progress in reducing diabetes health disparities related to access to care and clinical care improvement measures in uninsured, and other high-risk populations including but not limited to the Hispanic, African-American and American Indian populations by:

**1.** Expanded collection and dissemination of diabetes data about at risk populations to health program policy and other partners in Nevada's public health system (see Objective 1).

**2.** Insuring that Nevada DPCP funded community program action plans include targeted community efforts and objectives aimed at reducing diabetes-related health disparities. Partnerships will include, but not be limited, to state and federal collaboratives, county health districts, tribal health networks, federally qualified health centers and other organizations working toward reducing and/or eliminating health disparities in Nevada.

## Objective 7:

By March 29, 2008, Nevada will demonstrate success in establishing linkages to other programs for the promotion of wellness, physical activity, weight control, blood pressure control, and smoking cessation for persons with diabetes by:

**1.** Increasing the number of collaborative funding, policy, and contractual agreements between the Nevada DPCP and state public health system.

**2.** Integrating diabetes surveillance and quality improvement data sources with other chronic disease tracking systems. This includes cross-tabulated BRFSS data about cardiovascular disease, hypertension, tobacco use, obesity, physical activity and nutrition (see Objective 1).

**3.** Disseminating diabetes surveillance and quality improvement reports that highlight opportunities for integrated approaches to improve diabetes prevention and control across Nevada's diabetes public health system.

**4.** Insuring that Nevada DPCP funded community program action plans include targeted community efforts and objectives aimed at promoting wellness, physical activity, weight and blood pressure control and smoking cessation programs for persons with diabetes. Partnerships will include, but not be limited to state and federal collaboratives, county health districts, tribal health networks, federally qualified health centers and other organizations promoting wellness, physical activity, weight control, blood pressure control and smoking cessation programs for persons with diabetes in Nevada.

# Defining the Public Health System

In *The Future of Public Health* (1988), the Institute of Medicine (IOM) critically assessed the status of public health in the United States and identified three core functions of public health: assessment of health status and health needs, policy development, and assurance. In 1994, the Public Health Functions Steering Committee, working with representatives of U.S. Public Health Service agencies and other major national public health organizations developed a list of ten essential public health services that would further define the core functions and activities (*Figure 29*). These essential services provide a foundation for the nation's public health strategy including the Healthy People 2010 objectives and the development of National Public Health Performance Standards for state and local public health systems.

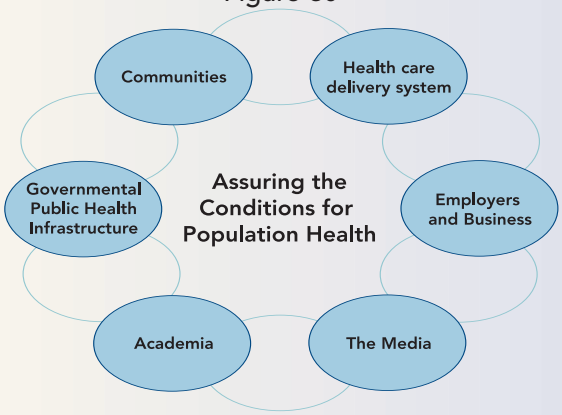
Figure 29

## 10 Essential Public Health Services

1. Monitor health status to identify community health problems.
2. Diagnose and investigate health problems and health hazards in the community.
3. Inform, educate and empower people about health issues.
4. Mobilize community partnerships to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure a competent public health and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.

The 2003 IOM Committee report: ***The Future of the Public's Health in the 21st Century*** describes the need for a strong public health system that engages partnerships beyond the national, state and local government public health agencies to reach the goals of HP2010. There is strong and growing evidence that health is shaped not only by inherent factors (i.e. genes, age, gender) but also by social, economic, natural, built, and political environments. These multiple determinates of health represent a reality that tells us it is impossible for one entity or one sector alone to bring about population health improvements. An effective public health system is a strong, complex, intersectoral network that includes the governmental public health infrastructure (national, state, local), the community, the health care delivery system, employers and business, the media and academia (*Figure 30*). Consequently, it is not only health departments that play a role in carrying out the 10 essential services. All partners can use the 10 essential services as a framework, both individually and collectively, to assess their roles and responsibilities, consider changes and develop strategies for increased partnerships and collaborations. Thus, the 10 essential services can help transform ways of doing business to assure the health of the population.

Figure 30




*The intersectoral public health system. The 2003 IOM Committee on Assuring the Health of the Public identified six sectors who, together with the government public health agencies are in a position to act powerfully for health. Some sectors or partners are included in the category of community (i.e. schools, church, law enforcement). The shaded ovals represent sectors who can work individually or together as part of a public health system to create conditions necessary to assure the best possible health for the nation. The unshaded ovals represent other sectors of the society that also may impact the public health system.*

**Source: Committee on Assuring the Health of the Public in the 21st Century, The Future of The Public's Health in the 21st Century, Institute of Medicine, National Academies Press, 2003 pg 30.**

## State Diabetes Prevention & Control Program Assessment and Performance Improvement Plan

In 2003, the Centers for Disease Control and Prevention (CDC), Division of Diabetes Translation (DDT) asked the State Diabetes Prevention and Control programs (DPCP) to begin using the Essential Public Health Services as a framework for continual self-assessment and evaluation. This framework would help outline and measure services, activities, competencies and capacities that define the current statewide public health system as it impacts diabetes prevention and control. In addition, the assessment would improve dialogue between partners, creating a stronger awareness of strengths and challenges of current performance in the state compared with the optimal performance outlined in the essential services. The results of the assessment would guide the DPCP and partners in developing a statewide performance improvement plan (PIP).

## Nevada's Assessment Process

In July 2003, a team of diabetes stakeholders from the American Diabetes Association, Nevada Diabetes Association for Children and Adults, Health Access Washoe County (primary care clinic), St. Rose Dominican Hospital Diabetes Program, HealthInsight, Washoe County District Health Department, Clark County Health District, Washoe Tribal Health Services and the University of Nevada Cooperative Extension were involved in the initial assessment.

The team used a modified assessment tool to rate the effectiveness of Nevada's diabetes public health system. The tool grouped the essential services under three categories: ***Understanding Diabetes-Related Health Issues; Diabetes Prevention and Promoting Healthy Living; Helping People Get the Services They Need.*** Each category referenced the essential service, specific diabetes indicators and rating criteria.

Team consensus placed three essential services as high priority areas for statewide performance improvement:

1. Access to high quality diabetes prevention, self-management programs, and clinical care for individuals, families and communities.
2. Information systems that describe and evaluate existing resources for diabetes prevention, self-management and clinical care programs.
3. Policy development to support diabetes prevention priorities based on existing science and research.

The assessment process also identified gaps in the Nevada Diabetes Council (NDC) membership. As a result, the NDC expanded its partnerships to include the Great Basin Primary Care Association, the Inter-Tribal Council of Nevada, the Nevada Public Health Foundation and a small, independently owned, nutrition-counseling practice. The Nevada DPCP and the NDC plans to continue identifying and engaging partners within each sector of the public health system. In addition, the NDC plans to continue clarification of partnership roles and responsibilities within the framework of the 10 essential public health services.

*"The Nevada DPCP plans to continue engaging partners to improve diabetes public health services within Nevada."*

### Nevada DPCP's Assessment and Performance Improvement Plan (PIP) Overview

- October 2002 CDC DDT guidence document provided.
- November 2002 - July 2003 Nevada DPCP participates in trainings regarding process and shares with Nevada Diabetes Council (NDC). Plans made for Nevada's assessment activities.
- July 2003 NDC completes intial assessment activity.
- August - November 2003 Nevada DPCP submits assessment report and begins discussions with NDC regarding PIP.
- June - August 2004 the *Nevada Diabetes Report* and *PIP* working draft submitted to NDC for review and comment.
- November 2004 *Nevada Diabetes Report* and *PIP* completed.

Following the assessment process, the Nevada DPCP and NDC worked to develop the statewide performance improvement plan (PIP). The seven national objectives developed by the Division of Diabetes Translation, Centers for Disease Control and Prevention together with the Nevada diabetes surveillance data, Healthy People 2010 objectives and results from the assessment process provide the framework for the Nevada Diabetes Public Health Improvement Plan. ***Figure 31*** shows the interrelationships between the Nevada objectives, the National objectives and essential public health services.

The overall goals of the PIP are to enable the Nevada DPCP to:

- Continue enhancement of the Nevada diabetes surveillance system.
- Develop strategies for sustaining and integrating chronic disease prevention and management programs, especially for disparate populations with diabetes or at risk for diabetes.
- Expand partnerships and linkages within the Nevada public health system.

The DPCP is partnering with several state agencies and organizations to improve and maintain quality diabetes prevention, self-management and clinical care for individuals, families and communities. Each statewide program and initiative is also focused on improving the diabetes surveillance and resource information systems. In addition the DPCP, NDC and other state partners are working to develop policy and programs to support integration of chronic disease prevention activities.

Figure 31

| Objective Number | Nevada Diabetes Objectives | National Objective | Essential Public Health Service # |
|---|---|---|---|
| 1 | Expand current surveillance. | All | 1, 2, 4, 9, & 10 |
| 2 | Increase foot exam rates. | 1, 2, & 6 | 1, 2, 3, 4, 7, 9, & 10 |
| 3 | Increase dilated eye exam rates. | 1, 3, & 6 | 1, 2, 3, 4, 7, 9, & 10 |
| 4 | Increase diabetes immunization rates (influenza and pneumonia). | 1, 4, & 6 | 1, 2, 3, 4, 7, 9, & 10 |
| 5 | Increase A1c test rates. | 1, 5, & 6 | 1, 2, 3, 4, 7, 9, & 10 |
| 6 | Reduce diabetes related health disparities among minority populations. | 1, & 6 | 1, 2, 3, 4, 7, 9, & 10 |
| 7 | Establish linkages to other programs for the promotion of wellness, weight control, blood pressure control and smoking cessation. | 1, & 7 | 1, 2, 3, 4, 7, 9, & 10 |

**The following is a listing of Nevada's DPCP improvement objectives (direct responsibility) for the project period ending March 29, 2008.**

## Improvement Objectives: DPCP Direct Responsibility

- Design and implement a BRFSS over sample of American Indian households in Nevada. (Objectives 1, 6 and 7; ES 1, 9 and 10*).
- Implement a Nevada specific diabetes related Medicaid claims data analysis and reporting system (Objectives 1 and 6; ES 1, 4, 7 and 9).
- Implement a Nevada specific diabetes related Medicare Part A (hospitalization) and Part B (influenza vaccines, A1c tests, lipid panels and dilated eye exams) claims data analysis and reporting system (Objectives 1, 3, 4, 5 and 6; ES 1, 4, 7 and 9).
- Facilitate a chronic disease data and surveillance workgroup (Objectives 1-7; ES 1).
- Expand collaborative partnerships with the Clark County Health District and the Washoe County District Health Department for the purpose of developing chronic disease prevention plans (with indicators for diabetes prevention and control) (Objectives 1 -7; ES 1 and 5).
- Develop partnerships and linkages in rural counties and other underserved areas to strengthen diabetes prevention and outreach programs (Objective 6; ES 2, 3, 4, and 7).
- Develop pilot program with the Great Basin Primary Care Association to measure the effectiveness of placing VISTA Health Care Advocates in underserved communities to facilitate and strengthen community based diabetes prevention programs. (Objectives 6 and 7; ES 3, 4 and 7)
- Assist the Nevada Diabetes Collaborative in developing compendium report (Objectives 1-6; ES 1 and 9).
- Establish system for annual review and enhancement of the NSHD Diabetes Prevention and Control Program website (Objectives 1-7; ES 3 and 7).
- Conduct a comprehensive obesity prevention planning effort with the Nevada Public Health Foundation and other partners (Objective 7; ES 1, 2 and 5).
- Assist the NDC leadership with orientation and self-assessment of current membership roles and responsibilities (Objective 7; ES 4 and 8).
- Identify partners working with multiple chronic disease risk factors to continue coordinating linkages, data networks, community outreach and other programs. (Objectives 1, 6, 7; ES 4, 9,10)

** ES = Essential Public Health Service*

The following is a listing of Nevada's DPCP improvement objectives (indirect responsibility) for the project period ending March 29, 2008.

## Improvement Objectives: DPCP Indirect Responsibility

- Clark County Chronic Disease Program staff will work in partnership with NV DPCP and other partners to create effective linkages and networks within underserved, disparate population groups to strengthen diabetes prevention and outreach programs (Objective 6; ES 2, 3, 4, and 7).
- Washoe County Chronic Disease Program staff will work in partnership with NV DPCP and other partners to create effective linkages and networks within underserved, disparate population groups to strengthen diabetes prevention and outreach programs (Objective 6; ES 2, 3, 4, and 7).
- Nevada Diabetes Association for Children and Adults will conduct annual health care professional continuing education conference (Objectives 2, 3, 4, 5, and 6; ES 8).
- Health Access Washoe County will work with other State Diabetes Collaborative partners in developing a compendium report (Objectives 2, 3, 4, 5, 6 and 7; ES 1 and 9).
- A partnership of the Nevada Health Centers, Great Basin Primary Care Association and the Clark County Health Access Consortium will plan the framework for developing a Specialty Care Access Network (SCAN) project to benefit underserved populations in Clark County (Objectives 1 and 6; ES 3, 4, 5, 7 and 10).
- The Inter-Tribal Council of Nevada will complete a Nevada Tribal Health Master Plan and establish a health board that will partner in the state's chronic disease prevention effort (Objectives 1-7; ES 1, 5, 7, 9 and 10).

## Summary

The Nevada Diabetes Council and DPCP have been working since 1996 to build an effective diabetes public health system. This report shares the results of our initial assessment of the Nevada statewide diabetes system. We need to continue system improvements that will positively impact the health of people at risk for diabetes and those people living with the disease.

The Nevada DPCP supports an integrated public health system approach to address gaps in services, enhance coordination between programs addressing chronic disease risk factors (nutrition, physical activity, tobacco, etc) and improve quality of services. We plan to (1) enhance the Nevada diabetes surveillance system, especially within those public health systems that serve disparate populations at high risk for diabetes, (2) develop strategies and interventions to reduce health disparities for high-risk populations such as African-Americans, American Indians and Hispanics, and (3) engage committed partners in strengthening the Nevada public health system.

# References


1. Centers for Disease Control and Prevention (US), Division of Diabetes Translation. Division of Diabetes Translation website (2003). Available from: www.cdc.gov/diabetes

2. American Diabetes Association website (2003) Available from: www.diabetes.org

3. Nelson J, Essien J, Loudermilk R, Cohen D. The Public Health Competency Handbook: Optimizing Individual and Organizational Performance for the Public's Health. Atlanta: Center for Public Health Practice of the Rollins School of Public Health; 2002.

4. Committee on Assuring the Health of the Public in the 21st Century, The Future of The Public's Health in the 21st Century, Institute of Medicine, National Academies Press, 2003 Available from: www.nap.edu

5. Department of Health and Human Services (US). Healthy people 2010. Washington DC: Government Printing Office; 2000. Available from: www.healthypeople.gov

6. National Diabetes Education Program, CDC, Division of Diabetes Translation and National Institutes of Health; 2003 Available from: www.ndep.nih.gov

7. Centers for Disease Control and Prevention (US). National Public Health Performance Standards Program (NPHPS). Available from: www.phf.org/performance.htm

8. National Association of City and County Health Officials. Turning point. National Association of City and County Health Officials (online); 2003. Available from: www.naccho.org


# Diabetes Data Sources

***Data from the following sources were used to develop this report:***

Bureau of Health Planning and Statistics, Nevada State Health Division, the Centers for Disease Control and Prevention. Nevada Behavioral Risk Factor Surveillance System, 1996-2003. Data from the diabetes core question, diabetes module, hypertension module, immunization module, tobacco use module and the physical activity module is included. On-line: www.health2k.state.nv.us/nidhs and www.cdc.gov/brfss

U.S. Department of Health and Human Services, Healthy People 2010: Understanding and Improving Health, 2nd edition. Washington, DC, U.S. Government Printing Office. This document contains the Healthy People 2010 objectives used in the report. On-line: www.healthypeople.gov

Bureau of Health Planning and Statistics, Nevada State Health Division. Nevada Interactive Health Data Bases, 1991-2002. Hospital discharge data, hospitalization costs, and lower extremity amputation data was collected from this source. On-line: www.health2k.state.nv.us/nidhs

Intermountain ESRD (End-Stage Renal Disease Network #15, Diabetes-Related End-Stage Renal Disease in Network #15. Incidence and prevalence data was collected for the years 1999-2003. On-line: www.esrdnet15.org

Nevada Department of Human Resources, Division of Health Financing and Policy (Nevada Medicaid). Chronic disease prescription cost data was provided. On-line: www.dhcfp.state.nv.us

# Diabetes Resources

***The following agencies and organizations offer additional information about diabetes and related risk factors:***

**Nevada Diabetes Prevention and Control Program**
505 E. King Street, Room 103
Carson City, Nevada 89701
(775) 684-4081
www.health2k.state.nv.us/diabetes

**Nevada Diabetes Association for Children and Adults**
1005 Terminal Way, Suite 104
Reno, Nevada 89502
(775) 856-3839
www.diabetesnv.org

**American Association of Diabetes Educators**
100 West Monroe, 4th Floor
Chicago, Illinois 60603-1901
800-832-6874
800-338-3633 (for names of diabetes educators)
www.diabeteseducator.org

**American Diabetes Association**
1660 Duke Street
Alexandria, Virginia 22314
800-DIABETES (342-2383)
800-ADA-ORDER (236-6733—to order publications)
800-232-3472
www.diabetes.org

**American Dietetic Association**
216 West Jackson Boulevard, Suite 800
Chicago, Illinois 60606-6995
800-745-0775
800-366-1655 (Consumer Nutrition Hotline, Spanish speaker available)
www.eatright.org

**American Heart Association National Center**
7272 Greenville Avenue
Dallas, Texas 75231
800-AHA-USA1 (242-8721)
www.americanheart.org

**Centers for Disease Control and Prevention (CDC)**
**Division of Diabetes Translation**
**Public Inquiries and Publications**
P.O. Box 8728
Silver Spring, Maryland 20910
877-CDC-DIAB (232-3422)
E-mail: diabetes@cdc.gov
www.cdc.gov/diabetes

**Department of Veterans Affairs Diabetes Program**
www.va.gov/diabetes

- ***Veterans Health Administration***
  810 Vermont Avenue, N.W.
  Washington, D.C. 20420
- ***Veterans Administration Health Benefits***
  1-877-222-8387
  https://iris.va.gov/phonenbrs.asp

**Indian Health Service Diabetes Program**
5300 Homestead Road, N.E.
Albuquerque, New Mexico 87110
505-248-4182
www.ihs.gov/medicalprograms/diabetes

**Juvenile Diabetes Research Foundation International**
120 Wall Street, 19th Floor
New York, New York 10005-4001
800-JDF-CURE (533-2873)
800-223-1138
E-mail: info@jdrf.org
www.jdf.org

**The Foundation of the American Academy of Ophthalmology**
P.O. Box 429098
San Francisco, California 94142-9098
415-447-0386
www.aaofoundation.org

**National Diabetes Education Program**
**CDC Division of Diabetes Translation**

- ***Program and partnership information:***
  www.cdc.gov/team-ndep; or
  www.cdc.gov/diabetes
  1-877-CDC-DIAB; E-mail:diabetes@cdc.gov"
  Mail requests to NDEP, CDC Diabetes Program Public Inquiries
  P.O. Box 8728, Silver Spring, Maryland 20910
- ***Campaign materials and publications:***
  www.ndep.nih.gov
  1-800-438-5383;
  E-mail: berryt@extra.niddk.nih.gov
  Mail requests to NDEP, National Diabetes Education Clearinghouse
  1 Information Way
  Bethesda, Maryland 20892-3560

**National Eye Institute - Diabetic Eye Disease Public Education Program**
2020 Vision Place
Bethesda, Maryland 20892-3655
www.nei.nih.gov/nehep/ded.asp

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# Nevada's Diabetes Council Affiliates

Abbott Diagnostics/Medisense
Adult Diabetes Education Management System
American Diabetes Association
Becton Dickinson Consumer Health Care
Carson Tahoe Hospital
Churchill Community Hospital
Clark County Health District
Dairy Council of Nevada
Diabetes Treatment Centers of America
Diabetes Wellness
Duck Valley Shoshone-Paiute Diabetes Program
Great Basin Primary Care Association
Health Access Washoe County
HealthInsight
Inter-Tribal Council of Nevada
Juvenile Diabetes Research Foundation
Lions Club
Latinos United Celebrating Health
Mead Johnson
Nevada Broadcaster's Association
Nevada Diabetes Association for Children & Adults
Nevada Department of Human Resources - Division for Aging Services
Nevada Public Health Foundation
Nevada Health Centers
Nevada State Medical Association
Nevada Urban Indians
Novo Nordisk
PacifiCare
Pyramid Lake Paiute Tribal Diabetes Program
Reno Sparks Health & Human Services
SavOn Pharmacy
Sierra Dietetics
Sierra Health Services
Smith Kline Beecham
South Lyon Medical Center
Southwest Medical Associates
St. Mary's Regional Medical Center
St. Rose Dominican Hospital
Sunrise Hospital & Medical Center
University of Nevada
VA Sierra Nevada Health Care System
Von's Pharmacy
Washoe County District Health Department
Washoe Medical Diabetes Health Center
Washoe Tribal Diabetes Program


# DIABETES IN NEVADA

*A Report and Performance Improvement Plan from the Nevada State Health Division, Bureau of Community Health*