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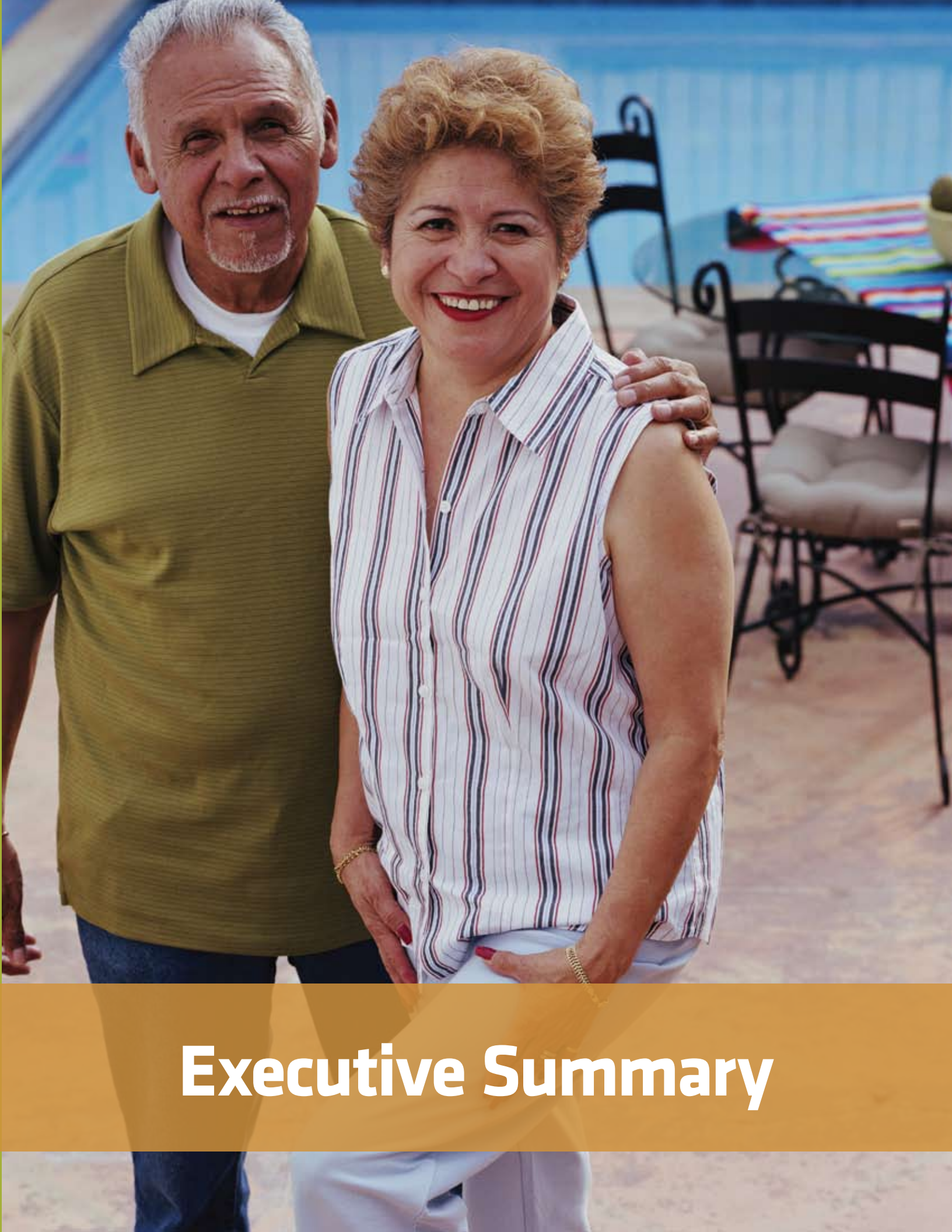
Diabetes

AMONG HISPANICS



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Executive Summary

CDC estimates that 11.1% of Hispanics in the United States had diabetes in 2007, compared to 6.4% of non-Hispanic whites.

Diabetes is a major health issue in the United States, and the burden of this disease disproportionately affects racial and ethnic populations, including Hispanics. The Centers for Disease Control and Prevention (CDC) estimates that in 2007 nearly 24 million people in the United States, or 8% of the population, had diabetes. Another 57 million people were estimated to have pre-diabetes, a condition that increases the risk for developing type 2 diabetes. Type 2 diabetes, formerly known as adult-onset diabetes, accounts for 90% to 95% of all diagnosed diabetes cases and is the primary focus of this report.

Diabetes is a major cause of morbidity and mortality in all communities in the United States. However, Hispanics are nearly two times as likely to have diabetes as non-Hispanic whites. CDC estimates that 11.1% of Hispanics in the United States had diabetes in 2007, compared to 6.4% of non-Hispanic whites. Hispanics also experience a much higher diabetes mortality rate, and in 2005 were 1.6 times more likely to die from diabetes than non-Hispanic whites. In addition, many of the risk factors for type 2 diabetes are more common among Hispanics and contribute to these disparities. Hispanics experience disproportionate rates of obesity, lower levels of physical activity, higher cholesterol levels, poorer eating habits, gestational diabetes (diabetes during pregnancy), and a family history of diabetes.

The projected growth of Hispanics in the U.S., combined with the uneven rate with which they suffer from diabetes, is set to dramatically increase the number of Hispanics with the disease. As diabetes disproportionately affects the elderly, future generations of older Hispanics will be especially at risk. The Hispanic population 65 years and older is projected to nearly triple in size from 6% to 18% by 2050, faster than any other racial/ethnic older adult age group. As a result, we can expect the number of Hispanics with diabetes in this elderly age cohort to rise in accordance with its population growth.

Although the current and projected prevalence of diabetes and pre-diabetes among Hispanics and the nation as a whole is striking, these figures need to be understood within the context of a variety of factors. Growth and aging of the general population, overall increase in prevalence of obesity, improvements in diabetes detection, overall decrease in mortality rates, and growth in certain racial/ethnic populations predisposed to have more diabetes have all contributed to the dramatic rise of diabetes in the United States today. In addition, the increase in diagnosed diabetes and pre-diabetes can be partly attributed to changes in the diagnostic criteria for these two conditions. In 1997 the criteria for diagnosing diabetes was lowered from 140 mg/dL to 126 mg/dL, and in 2003 the criteria for diagnosing pre-diabetes was lowered from 110 mg/dL to 100 mg/dL. The combination of these two diagnostic

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changes instantly increased the number of people considered to have diabetes and pre-diabetes.

While many national trends contribute to the large number of people who have diabetes and pre-diabetes, distinct health care barriers also contribute to higher rates of diabetes among certain racial/ethnic groups and warrant special attention. Access to health care, language, and financial barriers all directly impact rates of diabetes morbidity and mortality, diabetes complications, and the access to and provision of diabetes care for Hispanics and other racial/ethnic groups. The Agency for Healthcare Research and Quality (AHRQ) found that Hispanic and non-Hispanic black patients with diabetes are more likely than non-Hispanic whites to be readmitted to the hospital within six months of a hospital stay for diabetes-related complications. Another AHRQ study measuring the provision of three annual screenings recommended for persons with diabetes (foot examinations, eye examinations, and checking blood sugar levels) found that 33.8% of Hispanics over the age of 40 diagnosed with diabetes received the three recommended annual screenings, compared with 42.4% of non-Hispanic whites. These findings are consistent with another AHRQ study indicating that while health disparities for racial and ethnic groups in the United States are narrowing in some cases, they appear to be widening for Hispanics in areas of AHRQ quality health care and health care access measures.

Credible and reliable diabetes health information and services must be increased to address diabetes-related needs among Hispanics in the U.S., reduce disparities, and decrease diabetes prevalence. Data from a study conducted by the National Alliance for Hispanic Health (the Alliance) show that Hispanics need more help to easily identify their diabetes risk status, as well as access screening and early healthy lifestyle intervention services if at risk for diabetes. In the Alliance study, 35% of individuals reported not knowing who is at risk for diabetes. A very large proportion of the sample stated that they do not seek medical help until they have symptoms or are in crisis. Due to the estimated number of Hispanics with diabetes and pre-diabetes, these responses magnify the need for more accessible and culturally proficient information on diabetes risk factors and symptoms, as well as early access to screening and diabetes prevention and management services.

While very serious, diabetes can be prevented by identifying and addressing risk factors associated with the disease, as well as successfully managed if diagnosed early. However, successful diabetes prevention depends on an understanding of diabetes risk factors and the support of a health care system to facilitate behavior change that leads to healthier lifestyles. Likewise, successful diabetes management depends on regular access to a coordinated team of health care specialists who can instruct and monitor the behaviors

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that prevent the development of diabetes complications. Immediate implementation of concerted long-term efforts to support prevention, early diagnosis, and adequate care for those with diabetes and pre-diabetes are critical to the nation's health. This effort must begin with the recognition that Hispanics and other racial/ethnic groups suffer from a

disproportionate burden of diabetes. Equally important is a renewed commitment to dramatically increase the levels of education and access to affordable quality health care to address this burden. Unique examples of successful diabetes interventions at the federal, national, regional and local levels can provide guidance on how to begin this process.



Diabetes in the United States

While usually experienced in adulthood, type 2 diabetes is more frequently being diagnosed among children and adolescents.

Diabetes and its complications represent a significant U.S. public health challenge. The Centers for Disease Control and Prevention (CDC) estimated that in 2007 nearly 24 million people, or fully 8% of the population in the United States, had diabetes. This figure represents an increase of more than 3 million people in approximately two years. In addition, another 57 million were estimated to have pre-diabetes, a condition that puts people at increased risk for type 2 diabetes.¹ This report focuses primarily on type 2 diabetes which accounts for 90% to 95% of all diagnosed cases of diabetes. Type 2 diabetes, previously called non-insulin-dependent diabetes mellitus (NIDDM) or adult-onset diabetes, is usually characterized by a disorder known as insulin resistance where cells either ignore the insulin produced by the body or do not make proper use of insulin. Insulin is necessary to convert sugar, starches, and other nutrients into energy used by the body each day. While usually experienced in adulthood, type 2 diabetes is more frequently being diagnosed among children and adolescents. Type 1 diabetes, formally known as insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes, accounts for 5% to 10% of all diagnosed diabetes cases and is almost always found in children and young adults.²

The current rates of type 2 diabetes and pre-diabetes in the United States can be attributed in many ways to a variety of factors affecting

some or all Americans, including growth and aging of the general population, overall increase in prevalence of obesity, improvements in diabetes detection, overall decrease in mortality rates, and growth in certain racial/ethnic populations predisposed to have more diabetes. In addition, two major changes to the diagnostic criteria of diabetes and pre-diabetes were implemented in the last two decades that increased the number of people diagnosed with these conditions.

In 1997, an International Expert Committee of the American Diabetes Association (ADA) issued recommendations to lower the diagnostic criteria for diabetes from 140 mg/dL to 126 mg/dL when measured by a Fasting Plasma Glucose (FPG) test.³ The lowered threshold of 126 mg/dL allowed for the diagnosis of diabetes earlier in the progression of the disease for those who took the FPG test, and as a result, millions of individuals who previously were classified as having normal or impaired glucose levels were newly considered to have diabetes. In addition, the Expert Committee recommended the criteria for glucose at high levels, but not high enough to classify as diabetes, be designated by the range of 110–125 mg/dL (Impaired Fasting Glucose) when measured by an FPG test, and the range of 140–199 mg/dL (Impaired Glucose Tolerance) when measured by an Oral Glucose Tolerance Test (OGTT).⁴ This recognition established a range of impaired glucose levels in extreme danger of progressing into diabetes.

As recently as 2006, diabetes remained the fifth major cause of death for Hispanics and African Americans, compared to the seventh major cause of death for non-Hispanic whites.

In 2002 the U.S. Department of Health and Human Services (DHHS) and the ADA announced the adoption of the term “pre-diabetes” to describe these ranges of impaired glucose levels and more clearly explain the seriousness of this condition.⁵

In 2003 another International Expert Committee of the ADA lowered the diagnostic criteria of pre-diabetes (Impaired Fasting Glucose) from 110 mg/dL to 100 mg/dL when using an FPG test. As a result, pre-diabetes would be diagnosed between 100–125 mg/dL.⁶ Lowering the threshold for pre-diabetes provided an opportunity to identify millions of additional people at increased risk for developing the disease. Using this new criteria, in 2004 the estimated number of adults with pre-diabetes doubled from 20 to 41 million when calculated using data from the 1988–2004 National Health and Nutrition Examination Survey (NHANES) and projected to the 2000 U.S. population.⁷

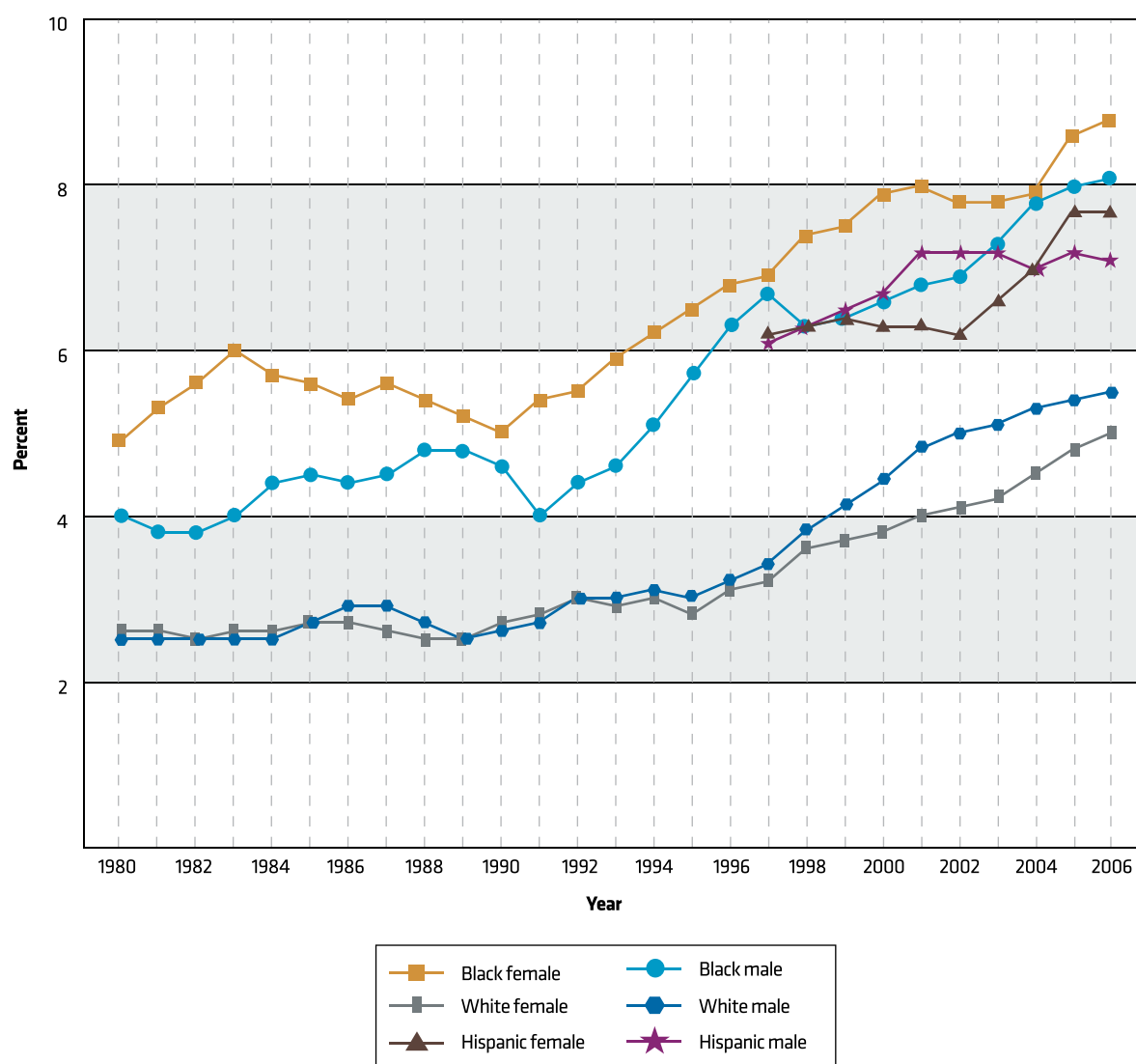
Diabetes has consistently affected Hispanics and African Americans at higher levels than non-Hispanic whites over the last two and a half decades (Figure 1). In every year between 1980 and 2006 Hispanic and African American men and women consistently had higher diagnosed diabetes prevalence rates than white men and women. However, diagnosed diabetes increased significantly among all racial/ethnic groups during this time period. Among non-Hispanic whites, the age-adjusted

prevalence increased 120% among men and 92% among women from 1980–2006. Among African Americans, the age-adjusted prevalence increased 103% among men and 80% among women during the same time period. Among Hispanics, the age-adjusted prevalence increased 16% among men and 24% among women from 1997–2006. Because no Hispanic data are available prior to 1997, the year when a Hispanic identifier was included for the first time in death certificates, rates for Hispanics measure a substantially smaller number of years than other race/ethnicities and are proportionately lower.⁸

While the number of people with diabetes and pre-diabetes continues to increase, recent efforts to expand awareness of undiagnosed diabetes appear to be working to some degree. According to the CDC, the number of people with undiagnosed diabetes decreased from 30% to 25% over a two-year period.⁹ A similar study by the RAND Corporation showed that not only have cases of undiagnosed diabetes dropped, but racial and ethnic group differences in rates of undiagnosed diabetes essentially disappeared. These findings revealed that Hispanics and African-Americans were no longer more likely than whites to unknowingly have the disease.¹⁰ Despite these improvements, as recently as 2006, diabetes remained the fifth major cause of death for Hispanics and African Americans, and the seventh major cause of death for non-Hispanic whites.¹¹

Diabetes has consistently affected Hispanics and African Americans at higher levels than non-Hispanic whites over the last two and a half decades.

FIGURE 1: Prevalence Of Diagnosed Diabetes by Race/Ethnicity and Sex, United States, 1980–2006



Source: Centers for Disease Control and Prevention (CDC). National Center for Health Statistics, Division of Health Interview Statistics, data from the National Health Interview Survey. "Prevalence of Diagnosed Diabetes by Race/Ethnicity, Sex and Age."

While the number of people with diabetes and pre-diabetes continues to increase, recent efforts to expand awareness of undiagnosed diabetes appear to be working to some degree.

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Diabetes Among Hispanics



Roughly half of all Hispanic children born in 2000 will develop diabetes in their lifetime.

Over the last decade, diabetes prevalence has increased among Hispanics and continues to be a major cause of morbidity and mortality in Hispanic communities in the United States.¹² In 2000, CDC estimated that of the 30 million Hispanics in the U.S., around 2 million had diagnosed diabetes, and roughly half of all Hispanic children born in that year will develop diabetes in their lifetime.¹³ Hispanics are also nearly two times as likely to have diabetes as non-Hispanic whites. According to the CDC 11.1% of Hispanics aged 18 or older in the United States had diabetes compared to 6.4% of non-Hispanic whites and 12.5% of non-Hispanic blacks in 2007.¹⁴ This represents an increase from diabetes prevalence estimate data reported for 2004–2006 showing that 10.4% of Hispanics had diabetes, with some variation by Hispanic subgroup (12.6% of Puerto Ricans, 11.9% of Mexican Americans, and 8.2% of Cuban Americans).¹⁵

Los Angeles County has the largest urban Hispanic population in the United States. According to the L.A. County Health Survey (LACHS) conducted in 2002–2003, diabetes prevalence was approximately two times higher among Hispanics than among non-Hispanic whites (11.9% versus 5.6%).¹⁶ Two additional findings merit close attention from this survey. First, the prevalence of diabetes was higher among those born in Mexico compared to those born in Central America (13.3% compared to 8.3%). This is further indication of the need to obtain data by Hispanic subgroup

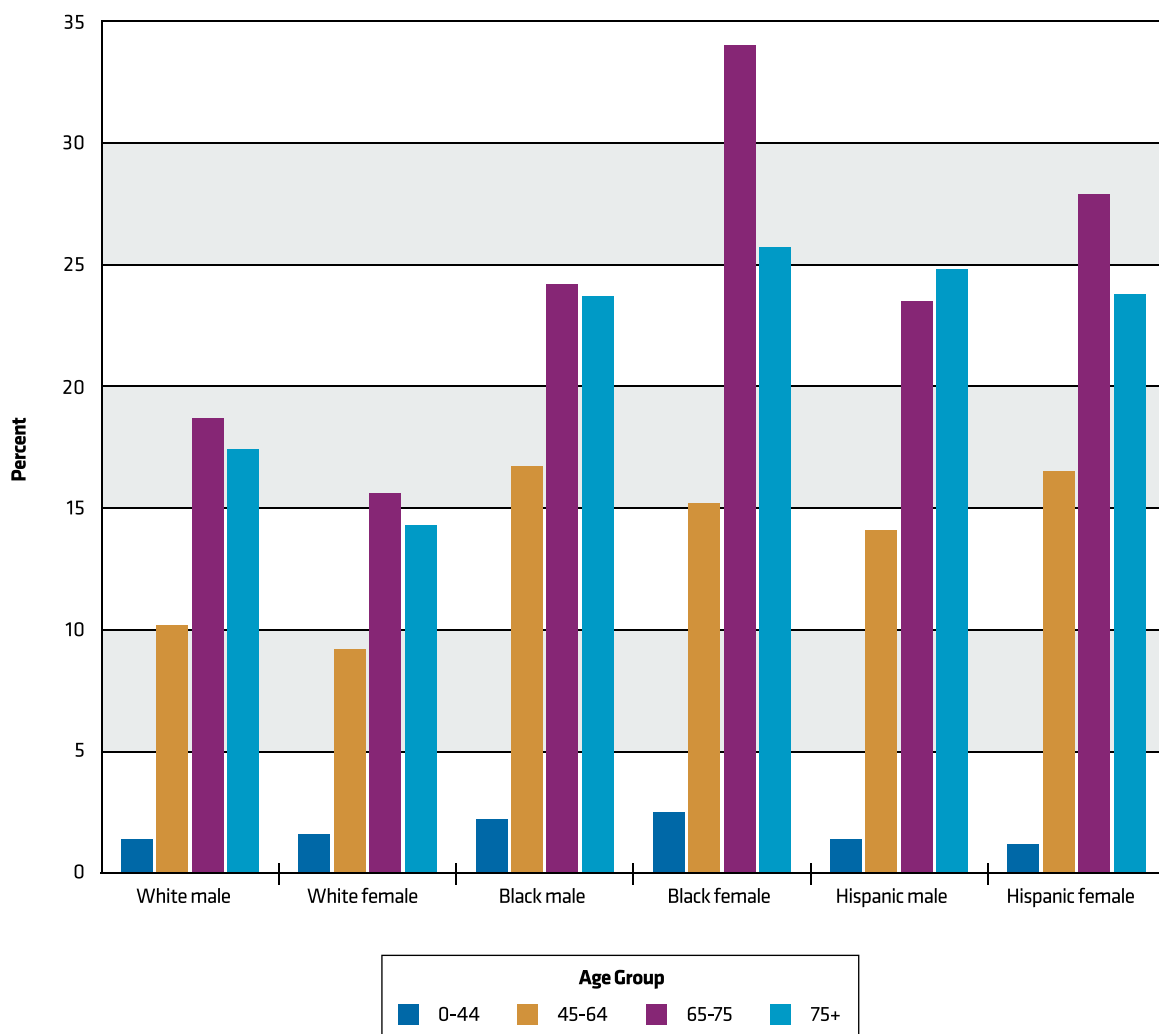
to better understand why certain groups of people are more susceptible to developing diabetes. Second, diabetes prevalence was highest among Hispanics who had lived in the United States for more than twenty years, indicating a connection between the process of acculturation and the development of diabetes.¹⁷

As with all racial/ethnic groups, diabetes among Hispanics increases with age. In 2006 the prevalence of diagnosed diabetes was highest among Hispanic men and women aged 65 years and older and lowest among those less than 45 years of age. Prevalence was higher for Hispanics than for non-Hispanic whites across all age groups 45 years and older (Figure 2).¹⁸ This is particularly significant as the Hispanic elderly population (65 and over) is expected to triple between 2006 and 2050 from 6% to 18%, faster than any other racial/ethnic elderly group.¹⁹

Because of the limited availability of national level data about the prevalence of diabetes in the Hispanic population as a whole, a useful substitute is to focus on data from the ten states with the largest Hispanic populations: Arizona, California, Colorado, Florida, Georgia, Illinois, New Jersey, New Mexico, New York, and Texas. Data from a 2008 Behavioral Risk Factor Surveillance Survey (BRFSS) show that in seven of these ten states (AZ, CA, CO, GA, NJ, NM, and TX) the prevalence rate of diagnosed diabetes was higher among Hispanics than non-Hispanic whites (Figure 3).²⁰

The rate of potentially preventable hospital stays among Hispanic adults for diabetes is more than double that for non-Hispanic white adults.

FIGURE 2: Prevalence of Diagnosed Diabetes by Race/Ethnicity, Sex and Age, United States, 2006



Source: Centers for Disease Control and Prevention (CDC). National Center for Health Statistics, Division of Health Interview Statistics, data from the National Health Interview Survey. "Prevalence of Diagnosed Diabetes by Race/Ethnicity, Sex and Age."

Hispanics with diabetes have a higher incidence of certain diabetes complications, such as eye disease and blindness.

A similar CDC study in 2004 examining the prevalence of diabetes in six U.S. geographical areas from 1998 to 2002 found that among U.S. regions with the greatest proportion of Hispanic residents (including the Commonwealth of Puerto Rico and the states of California, Florida, Illinois, New Jersey, New York, Texas), the overall age-adjusted prevalence of diagnosed diabetes among Hispanic adults eighteen and older was 9.8% compared to 5.0% for non-Hispanic whites.²¹

In addition, among both Hispanics and non-Hispanic whites, the prevalence of diagnosed diabetes increased with age, but was significantly higher for many groups of older Hispanics compared to older non-Hispanic whites in the study including:

- 15.9% compared to 4.6% for those aged 45–54 years in Illinois;
- 24.6% compared to 9.2% for those aged 55–64 years in California; and
- 25.4% compared to 11.8% for those aged 65 and older in Texas.²²

While it is important to emphasize that the Hispanic population in the United States is younger overall than the non-Hispanic population, the 2004 CDC study also shows that diabetes tends to strike Hispanics at younger ages more frequently than the non-Hispanic white population. In California, younger Hispanics had a higher rate of diabetes (3.2%) among adults aged 18 to 44 years, compared with non-Hispanic whites (1.3%).

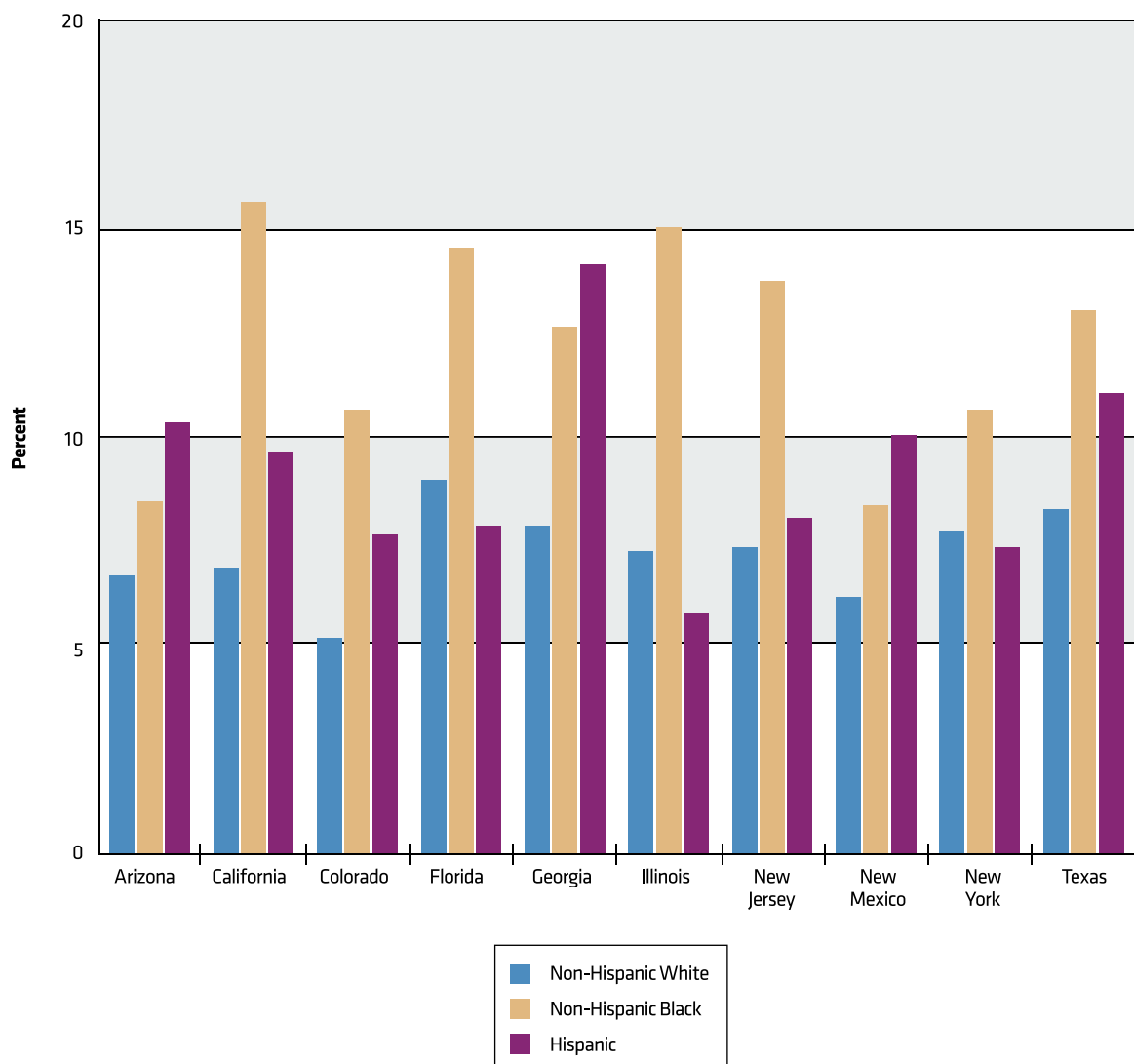
In Texas, 2.8% of Hispanics in the same age group had diabetes compared to 1.4% of non-Hispanic whites.²³

A study published in the *Journal of the American Medical Association* (JAMA) estimates the lifetime risk for developing diabetes is higher for Hispanic women than for non-Hispanic white women. Hispanic women born in 2000 have a 52.5% risk of developing diabetes in their lifetime compared with a 31.2% risk among non-Hispanic white women. Hispanic men also have a higher risk (45.4%) for developing diabetes in their lifetime compared with non-Hispanic white men (26.7%).²⁴

Not only are Hispanic women at greater risk for type 2 diabetes, they are also at greater risk for gestational diabetes.²⁵ Although the causes for gestational diabetes are not completely known, it is believed that hormones existing in the body during pregnancy affect the ability of the mother to use insulin properly. While gestational diabetes usually goes away after the baby is born, women who have had gestational diabetes have a 20% to 50% chance of developing diabetes at some point in the future. In addition, their children are at increased risk for diabetes compared with those born to mothers without the disease.²⁶ While CDC estimates that about 7% of all pregnant women develop gestational diabetes, an NIDDK study published in 2006 comparing women with and without a history of gestational diabetes revealed that women with gestational diabetes were more often Hispanic

Hispanics are 1.6 times as likely to die from diabetes as non-Hispanic whites.

FIGURE 3: Prevalence of Diagnosed Diabetes in Ten States with Largest Hispanic Populations by Race/Ethnicity, 2008



Source: Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data*. U.S. Department of Health and Human Services, CDC, Atlanta, GA, 2008.

Only 33.8% of adult Hispanics aged 40 and over with diabetes received three recommended annual screenings – foot exams, eye exams, and A1C tests – compared with 42.4% of non-Hispanic whites.

or African American.^{27, 28} Nearly 25% of the women with gestational diabetes were Hispanic compared to just 15% of the women without it.²⁹ Other studies show similar trends. In 2003, the prevalence rate in Washington, D.C. for gestational diabetes was 12% for Hispanic women.³⁰ In Colorado, the gestational diabetes prevalence rate increased 95% from 1994 to 2002, with the highest rate of increase among Hispanics (from 2.8% to 5.1%).³¹

The U.S. Hispanic population has a high diabetes mortality rate. As noted earlier, diabetes was the fifth major cause of death for Hispanics in 2006, compared to the seventh leading cause for non-Hispanic whites.³² In addition, Hispanics are 1.6 times as likely to die from diabetes as non-Hispanic whites.³³ The difference between the death rate attributed to diabetes among Hispanics compared to non-Hispanic whites and non-Hispanic blacks in the ten states with the largest Hispanic populations, is illustrated in Figure 4. In nine out of ten states, the age-adjusted death rate attributed to diabetes was higher for Hispanics than for non-Hispanic whites.³⁴

Additional national data highlight diabetes-related health issues for Hispanics including risk factors, development of complications, and unequal access to health care services:

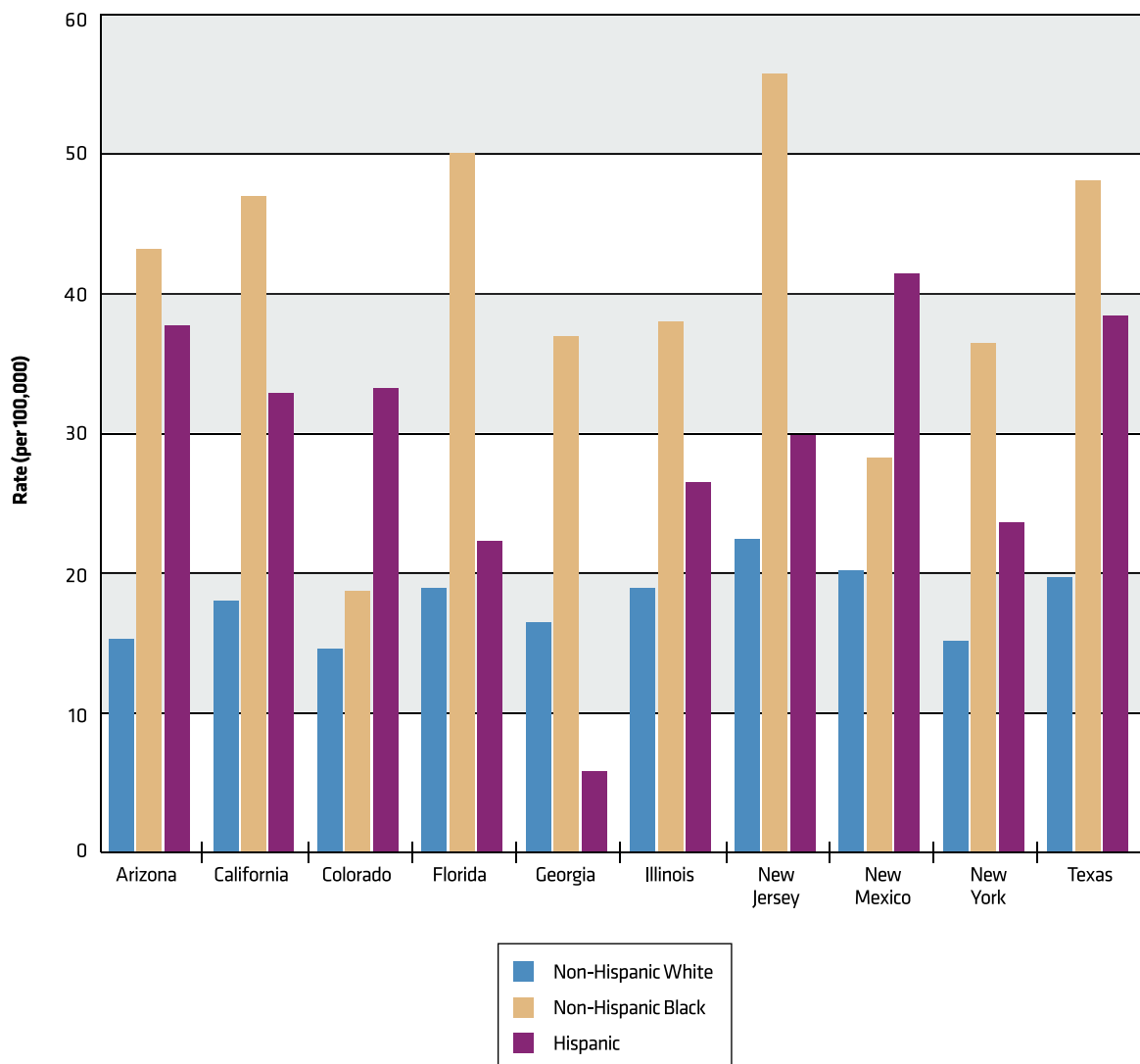
- The hospitalization rate for diabetes-related amputations among Hispanics increased from 63 admissions per 100,000 people in 2001 to nearly 80 admissions per 100,000

people in 2004, while rates for non-Hispanic whites remained steady, and rates for non-Hispanic blacks slightly declined.³⁵

- In 2005, only 33.8% of adult Hispanics aged 40 and over with diabetes received three recommended annual screenings — foot exams, eye exams, and A1C tests (a blood test that measures average blood glucose over the past two to three months) — compared with 42.4% of non-Hispanic whites.³⁶
- A 2008 study published in the Archives of Ophthalmology found that almost 50% of Hispanic participants diagnosed with type 2 diabetes more than a year prior, and 79% of those newly diagnosed, had never had a dilated eye exam, which can detect eye-related diabetes complications before they become serious.³⁷
- Almost 50% of Hispanics with diabetes in the 2004 Los Angeles Latino Eye Study (LALES) were found to have diabetic retinopathy, an eye disease that damages retinal blood vessels.³⁸ In addition, Hispanics' overall prevalence of open-angle glaucoma, a condition where the eyes' drainage canals become blocked, was almost 5%, and ranged from nearly 8% for those in their 60s to 15% for those in their 70s. These rates are significantly higher than those reported for non-Hispanic whites and comparable to those for blacks in other studies (1.4% overall prevalence for non-Hispanic whites and 4.9% overall prevalence for blacks).³⁹

Not only are Hispanic women at greater risk for type 2 diabetes, they are also at greater risk for gestational diabetes.

FIGURE 4: Diabetes Death Rate in Ten States with Largest Hispanic Populations by Race/Ethnicity, 2006



Source: U.S. Department of Health and Human Services. Office on Women's Health. Quick Health Data Online. "Diabetes Death Rates, by Sex and Race, Age Adjusted" by State (2006).

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- A 2007 study conducted by the Joslin Diabetes Center found that obese Hispanic children and adolescents with normal blood sugar levels had elevated markers for blood vessel inflammation that may put them at risk for type 2 diabetes.⁴⁰
- A study based on Agency for Healthcare Research and Quality (AHRQ) data indicated that Hispanic and non-Hispanic black patients with diabetes are more likely than non-Hispanic whites to be readmitted to the hospital within six months after their initial hospitalization for complications associated with diabetes.⁴¹ Another AHRQ study found that the rate of potentially preventable hospital stays among Hispanic adults for diabetes is more than double that for non-Hispanic white adults (37 versus 17 hospitalizations per 10,000 population).⁴²

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The hospitalization rate for diabetes-related amputations among Hispanics increased from 63 admissions per 100,000 people in 2001 to nearly 80 admissions per 100,000 people in 2004.

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Diabetes Risk Factors



Eliminating the known risk factors of a poor diet and low levels of exercise sharply reduced the chances that a person would develop diabetes.

Perhaps the single most important fact that has been learned in the last few decades about type 2 diabetes is that it can be prevented. The results from the Diabetes Prevention Program (DPP) sponsored by the National Institutes of Health (NIH) support this conclusion. The DPP randomized a large cohort of participants with a wide distribution of age, obesity, and ethnic/racial backgrounds (45% of participants were from diverse ethnic/racial groups) that were at high risk for developing type 2 diabetes. Risk factors associated with type 2 diabetes include poor diet, low levels of physical activity, being obese, high cholesterol levels, high blood pressure, age greater than 45 years, diabetes during pregnancy (gestational diabetes), impaired glucose tolerance, a family history of diabetes, and belonging to certain racial and ethnic groups.⁴³ DPP participants were followed for three years (1996–1999) to determine whether diet and exercise, or the oral diabetes drug metformin, could prevent or delay the onset of type 2 diabetes in persons with impaired glucose tolerance (IGT) or what is now known as pre-diabetes. The results of the study showed that eliminating the known risk factors of a poor diet and low levels of exercise sharply reduced the chances that a person with IGT would develop diabetes. Metformin also reduced risk, but far less dramatically. The conclusions were so overwhelming that an external monitoring board recommended the program end a year early.⁴⁴

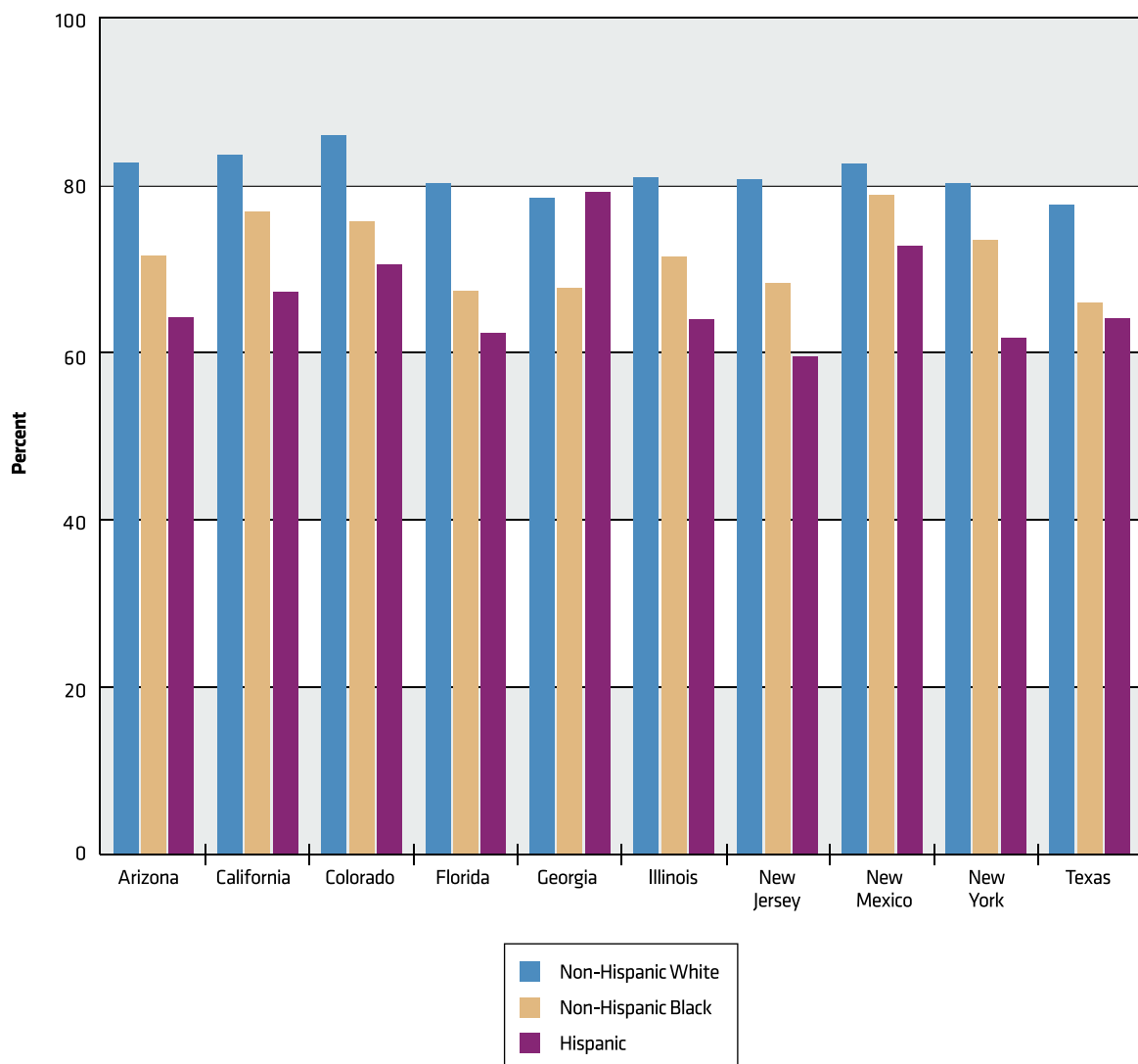
As the DPP study showed, engaging in regular physical activity is a key factor in the prevention of diabetes and its complications. In the period from January to March 2009, the age-sex-adjusted percentage of adults who engaged in regular leisure-time physical activity was significantly lower for Hispanic adults (27.7%) compared to non-Hispanic white adults (37.2%).⁴⁵ Similarly, Hispanic youth in grades 9–12 were less likely (30.2%) to report participation in currently recommended levels of physical activity than non-Hispanic white youth (37.0%) and non-Hispanic black youth (31.1%).⁴⁶ As seen in Figure 5, Hispanics reported having the least amount of any exercise in the last thirty days than both non-Hispanic whites and non-Hispanic blacks in nine of the ten states with the largest Hispanic populations.⁴⁷

The other major risk factor targeted by the DPP study was a poor diet. Healthy eating was proven to be a significant part of preventing type 2 diabetes. As seen in Figure 6, Hispanics were less likely to report eating five or more servings of fruits and vegetables per day than non-Hispanic whites in eight of the ten states with the largest Hispanic populations, and less likely than non-Hispanic whites and blacks in six of these states.⁴⁸

Another significant risk factor associated with type 2 diabetes and its complications, and one directly related to physical activity and healthy eating, is obesity. Obesity, defined as

The rate of obesity for all Hispanics aged 18 and over increased from 16.8% in 1995 to 26.5% in 2005.

FIGURE 5: Any Exercise in Last 30 Days in Ten States with Largest Hispanic Populations by Race/Ethnicity, 2007



Source: U.S. Department of Health and Human Services. Office on Women's Health. *Quick Health Data Online*. "Percent Total Exercise, Age Adjusted" by State (2007).

Hispanics reported having the least amount of any exercise in the last 30 days than both non-Hispanic whites and non-Hispanic blacks.

a Body Mass Index or BMI of 30 or more, is known to significantly increase the probability of acquiring diabetes and/or worsen its associated complications. The rate of obesity for all Hispanics aged 18 and over increased from 16.8% in 1995 to 26.5% in 2005.⁴⁹ In 2006–2008, the obesity rate for Hispanics in this age range increased to 28.7%.⁵⁰ As seen in Figure 7, the number of Hispanics diagnosed with obesity was higher than the number of non-Hispanic whites in nine of ten states with the largest Hispanic populations.⁵¹

NHANES data show that rates of obesity for Mexican American adult women aged 20–74 years increased from 36.1% in 1988–1994 to 42.6% in 2003–2006. Rates of obesity among Mexican American adult men of the same age increased from 24.4% to 30.4% during the same time period.⁵² Among youth, the prevalence of overweight Mexican American boys aged 12–19 increased from 14.1% in 1988–1994 to 22.1% in 2003–2006. During the same time frame, rates among Mexican American girls from the same age group increased from 9.2% to 19.9%.⁵³ In addition, the prevalence of obesity among Mexican American adults with diagnosed diabetes (59.5%) was higher than for non-Hispanic whites (57.9%).⁵⁴

High cholesterol is a frequent result of obesity, and a major risk factor for diabetes and heart disease. NHANES data indicate that only about one half (47.6%) of Mexican American adults were screened for high blood cholesterol between 1999 and 2002 compared to 65.2%

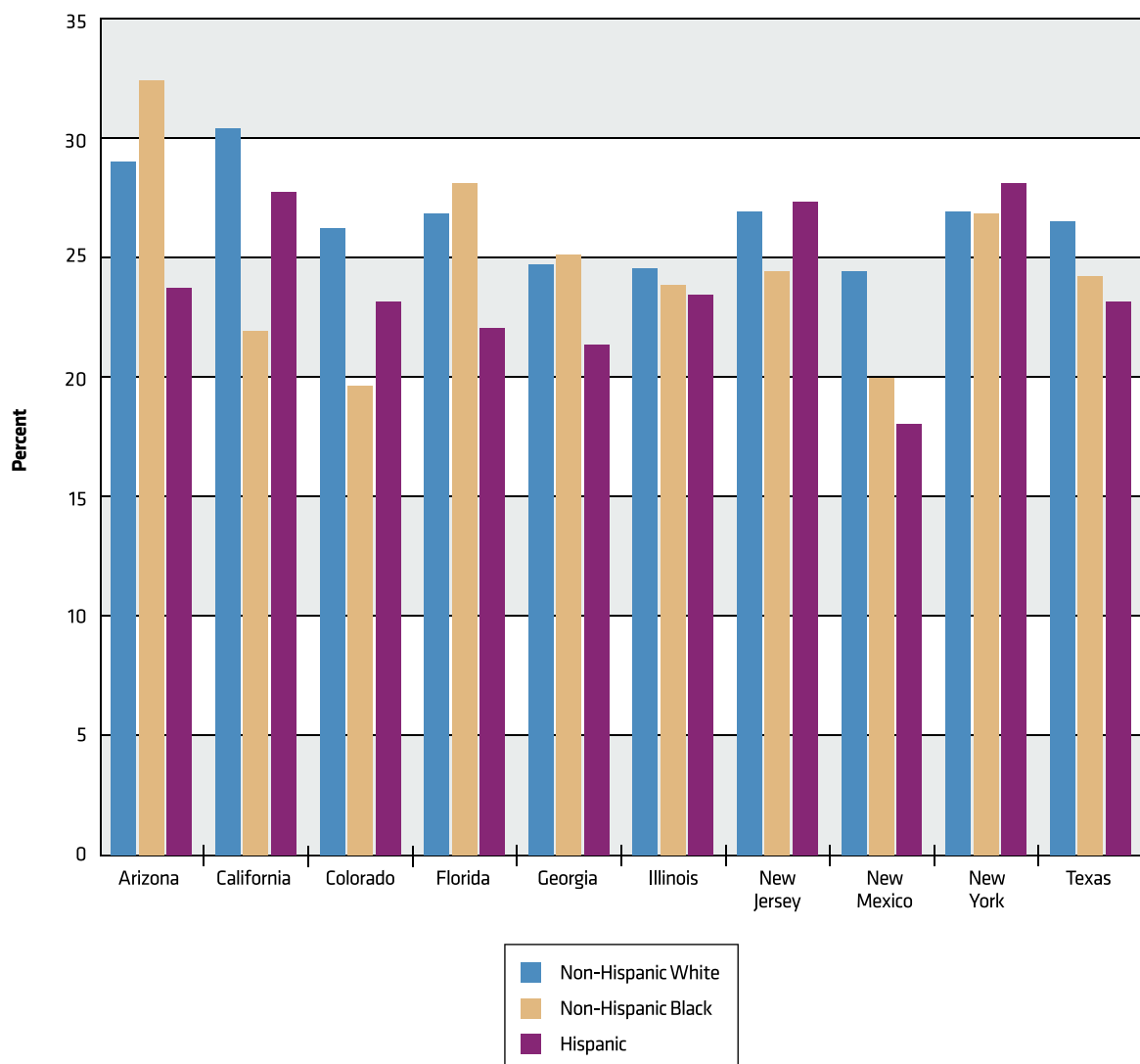
of non-Hispanic whites and 57.7% of non-Hispanic blacks. Of those found to have high blood cholesterol, less than half of Mexican Americans (41.8%) were aware of it compared to 65.5% of non-Hispanic whites and 54.0% of non-Hispanic blacks.⁵⁵ Additionally, in nine out of the ten states with the largest Hispanic populations, Hispanics were less likely than non-Hispanic whites and non-Hispanic blacks to have had a cholesterol screening test in the past five years (see Figure 8).⁵⁶

In 2007, the Alliance conducted the Summer Heart Health cholesterol screening campaign in Chicago, Houston, Miami, and the New York/New Jersey metro area. According to the campaign results, of the 2,964 Hispanics screened, 39% were found to have “borderline” or “high” cholesterol. In all cities 56% of persons screened were found to have “borderline high” or “high” triglyceride levels, and 40% were found to have low levels of “good” HDL cholesterol. Finally, in all cities a majority (65%) of persons surveyed reported one or more risk factors for heart disease beyond cholesterol level.⁵⁷ While the survey design was not intended to be a representative sample of specific Hispanic population groups, the results merit further attention in order to better understand the cholesterol and heart health profiles of underserved Hispanic populations.

Interestingly, according to NHANES data, rates of high cholesterol for Mexican American men (17.7%) are similar to those for non-Hispanic

Mexican American women, especially when overweight, have higher rates of gestational diabetes than non-Hispanic white women.

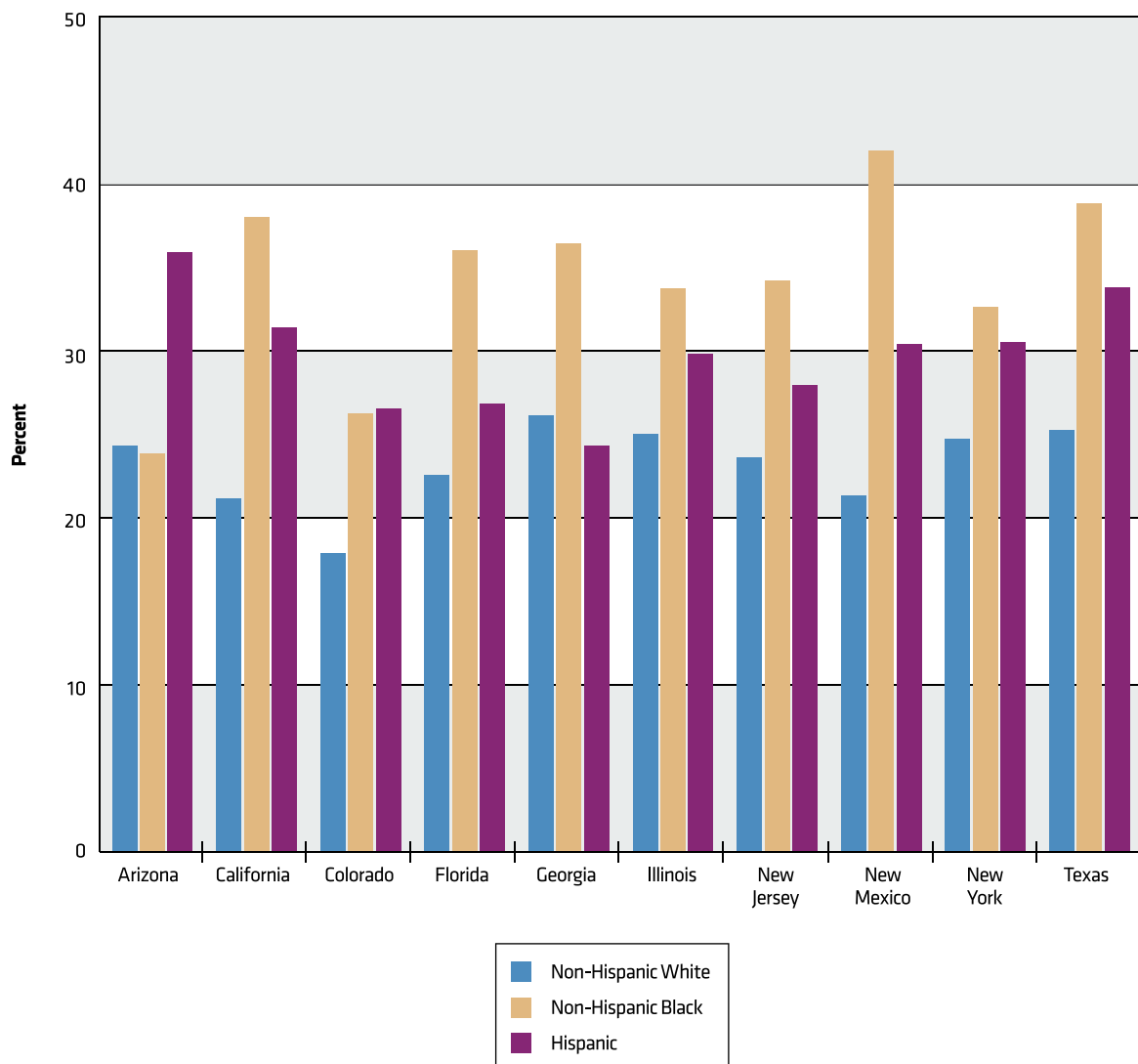
FIGURE 6: Consumption of Five or More Fruits and Vegetables a Day in Ten States with Largest Hispanic Populations by Race/Ethnicity, 2007



Source: U.S. Department of Health and Human Services. Office on Women's Health. *Quick Health Data Online*. "Percent Total Ate ≥ 5 Servings of Fruit/Vegetables" by State (2007).

Interestingly, rates of high cholesterol for Mexican American men are similar to those for non-Hispanic white men, and lower for Mexican American women than for non-Hispanic white women.

FIGURE 7: Obesity Rates in Ten States with Largest Hispanic Populations by Race/Ethnicity, 2007



Source: U.S. Department of Health and Human Services. Office on Women's Health. *Quick Health Data Online*. "Percent Total Obese, 20+, Age Adjusted" by State (2007).

Hispanics were less likely than non-Hispanic whites and non-Hispanic blacks to have had a cholesterol screening test in the past five years.

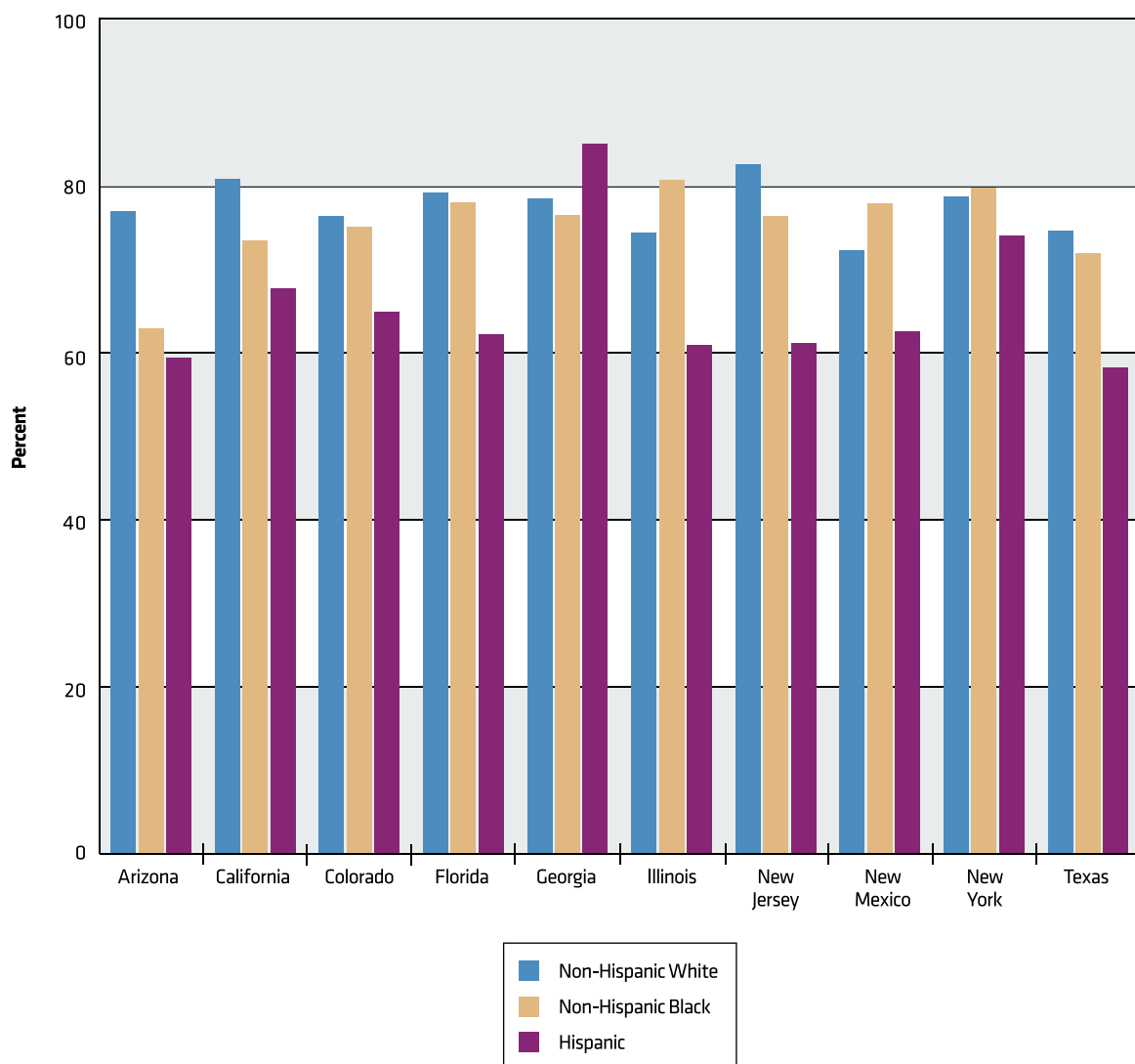
white men (16.0%), and lower for Mexican American women (13.8%) than for non-Hispanic white women (17.9%).⁵⁸ Additionally, while heart disease was the leading cause of death among Hispanics in 2006, the death rate for diseases of the heart was significantly lower for Hispanic males (192.4 deaths per 100,000) than for non-Hispanic white males (262.2 deaths per 100,000) or for non-Hispanic black males (329.8 deaths per 100,000). Hispanic females also experience a lower death rate from heart disease (129.1 deaths per 100,000) than non-Hispanic white females (170.3 deaths per 100,000) and non-Hispanic black females (228.3 deaths per 100,000).⁵⁹

The lower cholesterol and heart disease death levels among Hispanics are not currently understood but may be the result of cultural, diet, genetic, or other protective factors affecting some or all Hispanic subgroups, and merit further study. Such a study has been undertaken by the National Institutes of Health's (NIH) National Heart, Lung, and Blood Institute (NHLBI). The NHLBI-led Hispanic Community Health Study: Study of Latinos (SOL) is the largest long-term epidemiological study of Hispanic health. The \$61 million, 6½ year study is enrolling 16,000 Hispanic participants. According to the NHLBI director at the time of the study announcement, the questions SOL seeks to answer include, "Why are Hispanics experiencing increased rates of obesity and diabetes and have fewer deaths from heart disease than non-Hispanics?"⁶⁰

Being 45 years and older is a significant risk factor for developing type 2 diabetes. According to the CDC, almost 25% of all persons 60 years and older had diabetes in 2007.⁶¹ This risk factor is expected to greatly affect Hispanics as they age and the size of the population grows over the next half-century. In 2008, there were 46.9 million Hispanics in the United States, representing over 15% of the total population, in addition to approximately 4 million Hispanics living in the Commonwealth of Puerto Rico.^{62, 63} By 2050 it is estimated that nearly one-third (30%) of the nation's population will be Hispanic, totaling 132.8 million, continuing the trend of Hispanics as the fastest-growing racial/ethnic group in the U.S.⁶⁴ The older Hispanic population is expected to grow at a similar rate. The Hispanic elderly made up 6% of the total population aged 65 and over in 2006. However, while the non-Hispanic white population 65 years and older is projected to decrease from 81% to 61% between 2006 and 2050, the Hispanic population 65 years and older is projected to grow from 6% to 18% during this time period, nearly tripling in size.⁶⁵ Longer life expectancy averages among Hispanics contribute to the growing elderly population at risk for diabetes. The average life expectancy for Hispanics born in 1999 was higher in both men (77.2 years) and women (83.7 years) than for non-Hispanic whites (74.7 years for men, 80.1 years for women), and non-Hispanic blacks (68.4 years for men, 75.1 years for women).⁶⁶ Assuming the

Hispanics were less likely to report eating five or more servings of fruits and vegetables per day than non-Hispanic whites.

FIGURE 8: Cholesterol Screening Rates over Five Years in Ten States with Largest Hispanic Populations by Race/Ethnicity, 2007



Source: U.S. Department of Health and Human Services. Office on Women's Health. *Quick Health Data Online*.
"Percent Total Cholesterol Checked within 5 Years, Age Adjusted" by State (2007).

Between 2006 and 2050, the Hispanic population 65 years and older is projected to grow from 6% to 18%...nearly tripling in size.

number of elderly Hispanics grows according to projections over the next several decades, we can expect to see a corresponding increase in the number of diabetes cases among older Hispanics due to the increased risk of the disease for adults aged 45 and older.

As mentioned earlier in this report, gestational diabetes is another risk factor associated with type 2 diabetes. This is significant for Hispanics as they appear to be at higher risk for gestational diabetes than other racial/ethnic groups. Mexican American women, especially when overweight, have higher rates of gestational diabetes than non-Hispanic white women, as well as an increased risk for developing type 2 diabetes after having had gestational diabetes (as high as 12% per year).⁶⁷

Finally, having a family history of diabetes is another risk factor that can affect Hispanics disproportionately. Due to a variety of genetic, environmental, and lifestyle factors, Hispanics tend to have more family members with diabetes. The San Antonio Heart Study found that the prevalence of diabetes among Mexican Americans who have first-degree relatives (parents or siblings) with diabetes was double that for those individuals with no family history of the disease.⁶⁸

Notes:

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Perhaps the single most important fact that has been learned in the last few decades about type 2 diabetes is that it can be prevented.

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Health Care Barriers

Hispanics are the racial/ethnic group most likely to be uninsured.

When examining any aspect of disease prevention and health promotion among Hispanics, the larger context of barriers to health care must be considered. Access to health care, language, and financial barriers all directly impact the access to and provision of diabetes health care, diabetes morbidity and mortality rates, and diabetes complications. In some cases these barriers can increase diabetes risk factors among Hispanics discussed earlier in this report.

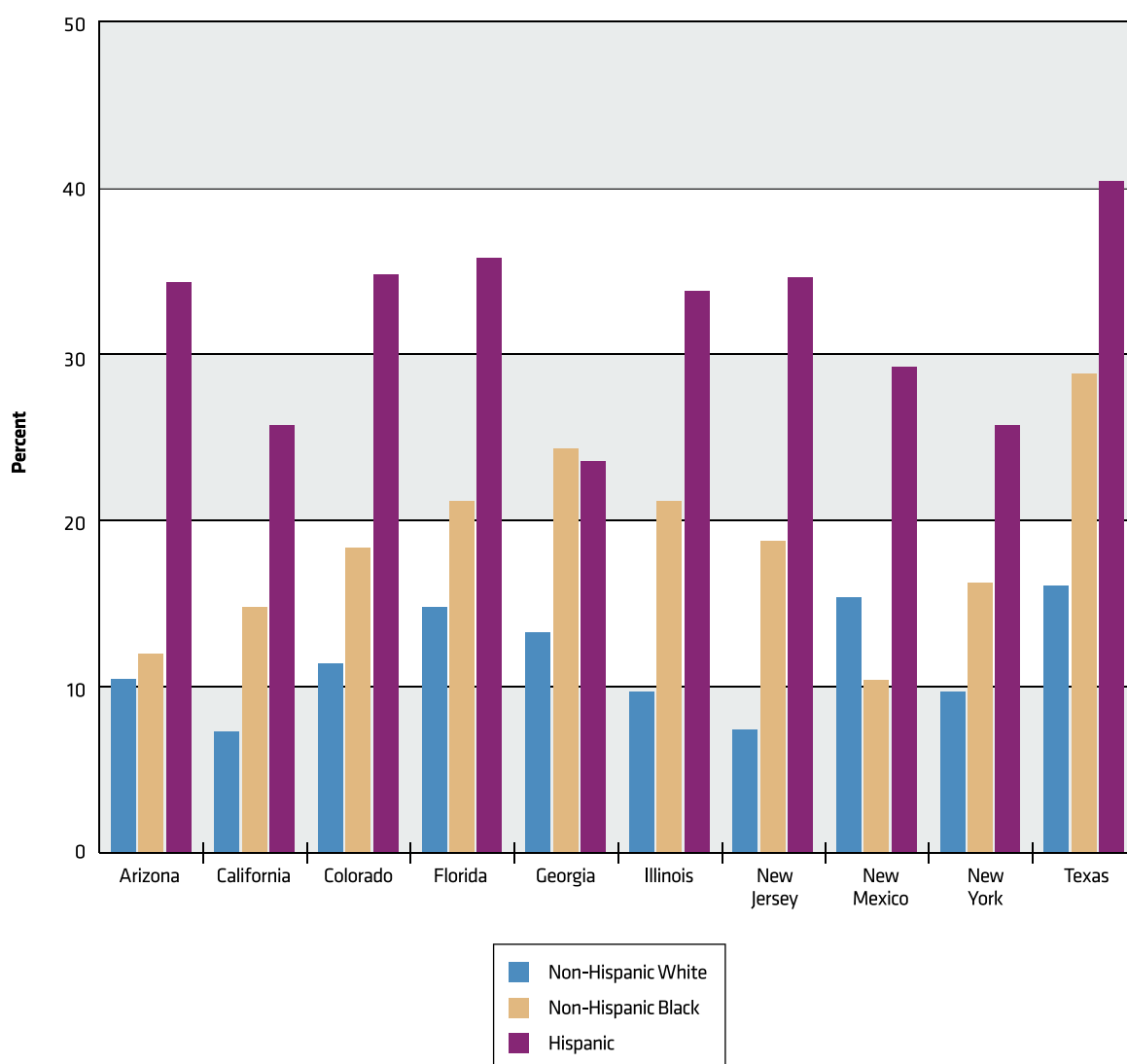
Health insurance and regular and affordable access to a variety of quality health care providers is essential for preventing, diagnosing, and managing diabetes, as well as avoiding its complications. According to data from the U.S. Census Bureau, Hispanics are the racial/ethnic group most likely to be uninsured and are three times as likely as non-Hispanic whites to lack either public or private health insurance coverage. Overall, almost one third (30.7%) of Hispanics are uninsured, compared to 10.8% of non-Hispanic whites and 19.1% of blacks.⁶⁹ Similarly, Hispanic children are the racial/ethnic group most likely to be uninsured. In 2008 more Hispanic children under 18 years of age were uninsured (17.2%) than non-Hispanic white (6.7%) and non-Hispanic black (10.7%) children.⁷⁰ Figure 9 displays the rates of uninsured by race/ethnicity in the ten states with the largest Hispanic populations. In nine of the ten states, Hispanics were the least likely to have health insurance.⁷¹ Within this context it is not surprising that Hispanic adults

are the racial/ethnic group least likely to see a physician. In the period from 2005–2006, Hispanics were more likely to have no usual source of medical care (35.1%) than non-Hispanic whites (18.1%) or non-Hispanic blacks (19.8%).⁷²

According to the 2008 AHRQ *National Healthcare Disparities Report* to Congress, while some disparities in health care quality are getting smaller for Hispanics and other select racial/ethnic groups, 71% of the disparities in this area remain the same or are worsening for Hispanics.⁷³ In addition, 80% of the disparities in the area of health care access have either remained unchanged or gotten worse for Hispanics.⁷⁴ Additional data from this report reflect this reality in the area of diabetes-related health. From 2002 to 2005 the proportion of adults 40 years and older with diagnosed diabetes that received the three recommended diabetes services (A1C test, eye exam, and foot exam) was lower among Hispanics than non-Hispanic whites (33.8% compared with 42.4%).⁷⁵ In the area of kidney health, diabetes is the most common cause of End Stage Renal Disease (ESRD), the final stage of kidney disease when the kidneys no longer function. According to analysis conducted from 1998–2004, the proportion of Hispanic dialysis patients under age 70 on a waiting list for kidney transplants was lower than that for non-Hispanic whites. This gap in registration decreased over the years of the study, but by 2004 Hispanics still lagged

Eighty percent of the disparities in the area of health care access have either remained unchanged or gotten worse for Hispanics.

FIGURE 9: Uninsured Rates in Ten States with Targets Hispanic Populations by Race/Ethnicity, 2007



Source: U.S. Department of Health and Human Services. Office on Women's Health. *Quick Health Data Online*. "Percent Total No Health Insurance, by Race, Age Adjusted" by State (2007).

A lack of culturally proficient care can create harmful situations where communication with the provider is difficult or nearly impossible.

behind non-Hispanic whites (13.9% versus 17.6% registered).⁷⁶

The ability to communicate effectively with health care providers is essential to good health care. However, limited English proficient (LEP) persons often find the health system lacks the ability to deliver culturally proficient care, including language access. A lack of culturally proficient care can create harmful situations where communication with the provider is difficult or nearly impossible, and often leads to misunderstandings related to describing symptoms or understanding providers' medical instructions.

According to a 2003 Commonwealth Fund study, nearly half (45%) of uninsured Spanish speaking Hispanic patients reported problems communicating with their doctor, compared to less than a third of uninsured whites (28%) and African Americans (30%).⁷⁷ A 2007 report by the Pew Hispanic Center concluded that language fluency varies among Hispanic subgroups residing in the United States and helps explain this barrier to care, especially among those more recently arrived in the U.S. Seventy-seven percent of adult first-generation Hispanics say they cannot speak English very well. However, this changes with generations as only 12% of second generation and 6% of third and higher generation adults say they are unable to speak English very well.⁷⁸ Hispanics cite lack of English language skills as the biggest cause of discrimination (46%) over immigration

status, income/education, or skin color, which can contribute to further alienation and communication problems in clinical settings.⁷⁹

Economic data on the total cost to the United States to treat and manage diabetes shed light on how much is collectively spent on the disease, and is an indication of the financial burden the disease represents for Hispanic communities. The American Diabetes Association (ADA) estimated the United States spent \$174 billion in 2007 on direct diabetes medical costs; indirect costs related to disability, work loss, and premature death; and costs associated with caring for a diagnosed diabetic, representing a 32% increase from 2002. Additional costs associated with the estimated 6 million undiagnosed people with diabetes are not included in this figure, and therefore increase the actual total cost to a substantially higher figure.⁸⁰

The American Diabetes Association (ADA) estimated the United States spent \$174 billion in 2007 on direct diabetes medical costs; indirect costs related to disability, work loss, and premature death; and costs associated with caring for a diagnosed diabetic.

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Diabetes Knowledge, Attitudes, and Behaviors Among Hispanics



The results of both Alliance studies indicate a great need for the development and implementation of culturally proficient diabetes awareness, prevention, and control efforts.

In 2002, the National Alliance for Hispanic Health (the Alliance) sponsored a study about Hispanic knowledge, attitudes, and behaviors with regard to diabetes. The study was carried out in four cities around the country (New York, Washington, D.C., San Diego, and Miami), and involved in-depth interviews with individuals from different Hispanic subpopulations. A total of 160 individuals (49 Hispanic health care providers, and 111 Hispanic adolescent and adult consumers) were interviewed in both English and Spanish. Approximately 97% of adult consumers preferred to use Spanish compared to about half of the adolescent consumers. Health care providers responded to the survey in English.⁸¹

Overall, data showed that more information is needed to help Hispanic consumers understand diabetes, better identify their risk status, and seek screening and healthy lifestyle intervention services if at risk for diabetes. Younger consumers were especially less informed about diabetes than older consumers, particularly limited English proficient (LEP) youth. Overall, 35% of individuals reported not knowing who is at risk for diabetes. While the study participants showed a relatively high level of knowledge regarding healthy diet and its relationship to diabetes, there were very few responses that demonstrated an understanding of physical activity affecting diabetes risk. In addition, a very large number of consumers stated they would not seek help until they had symptoms

or were in crisis (41% and 52% respectively).⁸² Other findings included:

- While a majority of consumers agreed that diabetes meant “having too much sugar in the blood,” many, especially adolescents, did not seem to know what it was or its causes.
- While a majority of consumers indicated knowing someone with diabetes, they had a much greater familiarity with type 1 diabetes than type 2.
- When asked how one gets diabetes, 38% of adult respondents stated by “eating too much sugar, sweets,” 30% did not know how people get diabetes, 21% thought it was “in your genes,” and another 21% thought it was “passed down from your parents.” Only 1% related diabetes to a sedentary lifestyle, such as a lack of exercise or physical activity.
- When consumers were asked who is at greatest risk for developing diabetes, 29% responded that they did not know. About 18% thought that “those that were over 40 years old” were more likely to get it, and another 12% thought that only those with family members with diabetes were at risk.
- When asked about seeking medical treatment for diabetes, 41% indicated that they would seek treatment if they experienced a crisis, and 52% would do so if they started having symptoms. That is, almost 93% responded in such a way as to suggest that only the onset of symptoms, and possibly severe symptoms, would lead them to seek treatment for diabetes.⁸³

Almost 93% responded...that only the onset of symptoms, and possibly severe symptoms, would lead them to seek treatment for diabetes.

In 2007, the Alliance conducted another study with Hispanic consumers around the United States to evaluate selected Spanish-language diabetes public service announcements (PSAs) through discussions on their content, messages, style, and approach. Results from these discussions indicated a great need for the development and use of culturally proficient English- and Spanish-language television PSAs, as well as radio and print PSAs to a lesser degree, on the topics of diabetes awareness, prevention, and control.⁸⁴ Other important conclusions regarding the development of future diabetes PSAs can be drawn from the results of the discussion groups, as well as insight into the general knowledge and attitudes among Hispanics about diabetes, including:

- The level of diabetes knowledge among participants was generally very low, even among those with diabetes, and all expressed a need for more information on the subject.
- Due to their expressed preference for learning through television, and the stated large number of hours spent watching TV, an especially promising opportunity exists to reach large numbers of Hispanics about diabetes through this medium.
- PSAs that do not have crystal clear messages can leave participants confused as to whether a PSA is about diabetes control, diabetes prevention, or whether the main idea is about diabetes at all.

- To ensure that Hispanics screen for, prevent, or control diabetes, participants indicated the most important messages in future PSAs should include statistics on the risk of diabetes for Hispanics; information on diabetes complications; and messages about the seriousness of the disease.
- Participants indicated the most important messages to avoid in future PSAs to ensure that Hispanics screen for, prevent, or control diabetes include the threat that you are going to die; attacks or criticisms of lifestyle choices; demands to give up your favorite foods; and anything that shows needles.⁸⁵

The results of both Alliance studies indicate a great need for the development and implementation of culturally proficient diabetes awareness, prevention, and control efforts.

Only 1% of respondents recognized a sedentary lifestyle as a risk for diabetes.

Notes

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Successful Diabetes Outreach and Education Programs

Vive tu Vida! Get Up! Get Moving!™ (GUGM) events focus on providing individual, family, and community activities to address the challenges surrounding physical activity in Hispanic communities.

There are excellent examples of programs that make a difference on diabetes awareness, prevention, and control at the national, regional, local, and federal levels through outreach and education programs for the general public, as well as specific racial/ethnic communities. These programs are successful because they involve key stakeholder and community partners who drive the development of educational campaigns and materials, and then connect them with local consumers and providers in meaningful ways. The inclusion of these partners from program inception to implementation results in community investment, the development of culturally and linguistically proficient diabetes materials and community tools, and successful diabetes outreach and education initiatives that reduce diabetes risks and ensure the best outcomes for all.

The National Diabetes Education Program (NDEP)

The National Diabetes Education Program (NDEP) was initiated in 1997 as a joint program sponsored by the Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH). A collaborative effort from its inception, NDEP involves a broad cross-section of organizations to shape its mission, messages, and materials, and partners with them to implement outreach and education campaigns, including the “Control Your Diabetes. For Life.” and the “Small Steps. Big Rewards. Prevent Type 2

Diabetes.” campaigns. NDEP formally partners with a group of diverse national organizations directly serving specific communities, including the National Alliance for Hispanic Health (the Alliance), the Association of American Indian Physicians, and the Black Women’s Health Imperative. Population-specific work groups contribute to the core of NDEP services. Each work group is made up of ten to fifteen volunteer representatives of each target population who meet regularly to assist NDEP staff plan outreach strategies, develop materials, and address challenges. Work group members make their biggest contribution through adaptation, translation, review, testing, and promotion of materials for their specific target audiences. Current NDEP work groups focus on the African American/ African Ancestry, American Indian & Alaska Native, Asian & Pacific Islander, Business, Children and Adolescent, Health Care Professional, Hispanic/Latino, Older Adult, and Pharmacy, Podiatry, Optometry and Dentistry communities.

NDEP’s Hispanic/Latino work group helps to adapt campaigns and materials to ensure they are culturally proficient, linguistically appropriate, and effective for all Hispanic audiences. This work group has developed a wide variety of Spanish-language educational tools for community health workers (*promotores*) and others who work directly in Hispanic communities. NDEP materials for Hispanics include diabetes awareness, prevention and control fact sheets, brochures,

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fliers, posters, and recipe books; radio and print public service announcements (PSAs); community education tool kits; and music videos and CDs. For more information and a complete list of materials, visit NDEP's Web site at <http://www.ndep.nih.gov>.

Vive tu Vida! Get Up! Get Moving!™ (GUGM)

GUGM was initiated in 2007 by the National Alliance for Hispanic Health (the Alliance) and has become the nation's premier physical activity and Hispanic family healthy lifestyle event series. GUGM events are held in cities across the country serving major metropolitan regions and take place in venues including community centers, shopping malls, sports stadiums, and parks. The three major components of GUGM are: Physical activity and sport, including a wide variety of cultural and family options for physical activity and fun; Community pavilion, including community resources from sponsors for healthy lifestyles; and Health screenings and services, including diabetes and other free preventive health screenings, education classes, and registration opportunities for follow-up health services such as WIC, SCHIP, and Medicaid. GUGM events also focus on providing individual, family, and community activities to address the challenges surrounding physical activity in Hispanic communities. Activity stations for soccer, tennis, baseball, basketball, dance, aerobics, and yoga are offered, as well as healthy snacks and prize drawings. All of these activities and

services provide accessible ways for Hispanics to reduce their risk for diabetes.

One of the leading GUGM sponsors is Univision Communications, ensuring promotion across platforms of television, radio, and the Internet. Over 500 community organizations have participated as exhibitors in GUGM events to-date by providing screenings, health information, classes and other services. From 2007 through 2009, thirty-eight GUGM events were held by the Alliance and its partners, attracting close to 50,000 participants. For more information about Vive tu Vida! Get Up! Get Moving!™ (GUGM) visit <http://www.hispanichealth.org/vida/>.

La Clínica del Pueblo (LCDP), Washington, D.C.

La Clínica del Pueblo (LCDP), located in Washington, D.C., has many years of experience serving the Hispanic community. It is an example of the hundreds of Hispanic-serving community-based organizations and health centers providing culturally proficient diabetes prevention, screening, treatment, and management services. Established in 1983, LCDP offers primary care, mental health and substance abuse services, HIV/AIDS services, social services, as well as health education and outreach on a wide variety of issues, including diabetes. Since being designated as a Federally Qualified Health Center (FQHC) in 2007, LCDP has greatly expanded the quality and quantity of its services to the community.

The inclusion of...partners from program inception to implementation results in community investment, the development of culturally and linguistically proficient diabetes materials and community tools, and successful diabetes outreach and education initiatives.

LCDP has offered services for people with or at risk for diabetes for many years. LCDP conducts a diabetes education and management training program for consumers that consists of nine sessions, including counseling twice a month by a certified nutritionist, participation in physical activity classes, and hands-on cooking demonstrations. In addition, all appropriate exams (A1Cs, eye exams, foot exams, blood pressure screenings, etc.) are provided to enrolled participants. A case manager also ensures that all diabetes program clients participate in LCDP's wellness and physical activity program, which includes weight management, blood pressure control, and smoking cessation.

On a broader scale, LCDP conducts regular diabetes outreach and education activities through monthly health fairs that are held in churches and other community venues (Domingos Saludables/Healthy Sundays), and empowers clients to become advocates for their own health through a series of community forums focusing on diabetes. Members of the D.C. Hispanic community are given the opportunity to interact with others and voice their thoughts and concerns about diabetes and other health care issues in the District of Columbia through these venues. For more information on LCDP, visit their Web site at <http://www.lcdp.org>.

Medicare

While coverage for diabetes care and prescription drugs has been in place for some

time, in January 2005 Medicare beneficiaries became eligible for expanded preventive services related to diabetes screening. These services include up to two diabetes screenings per year at no extra cost for people at risk for diabetes, or diagnosed with pre-diabetes. For those recipients who have already been diagnosed with diabetes, Medicare covers 80% (with the recipient paying 20%) of the cost of diabetes glucose monitors, test strips, and lancets, after the yearly Part B deductible. Medicare also covers 80% (with the recipient paying 20%) of the cost of diabetes self-management training after the yearly Part B deductible for those at risk for complications from diabetes. Additionally, in many cases Medicare helps to pay for A1C tests, nutrition therapy services, dilated eye exams to check for diabetic eye diseases, glaucoma screenings, foot exams and treatment including therapeutic shoes or inserts, insulin pumps and the insulin for the pumps, and flu and pneumococcal shots.

The combination of the preventive benefits introduced in 2005 and the existing diabetes coverage strengthens diabetes-related care for Medicare recipients with diabetes, pre-diabetes, and others at risk for the disease. With access to diabetes screenings, affordable diabetes monitoring equipment, and self-management training, more cases of diabetes will be prevented and/or controlled more effectively for persons aged 65 or older. For more information about Medicare diabetes screening and management benefits, visit its Web site at <http://www.medicare.gov/health/diabetes.asp>.



Recommendations

In order to have a meaningful impact on the growing number of Hispanics at risk for or living with diabetes in the United States today, the following steps are recommended in the areas of research and data collection, risk factors, health care barriers, and diabetes outreach and education:

Research and Data Collection

- Expand research efforts examining the effects of acculturation on disease development and progression to identify both protective and risk factors among Hispanics for incorporation into future diabetes prevention programs.
- Expand research efforts that examine why Hispanics are more susceptible to certain diabetes complications such as eye and kidney disease.
- Design national data systems to capture diabetes incidence, prevalence, morbidity, and mortality for Hispanics and Hispanic subgroups.

Risk Factors

- Increase awareness about the lack of physical activity as a risk factor for diabetes, and provide encouragement, instruction, and opportunities for regular exercise through dance, walking in accessible and safe areas, group exercise classes, as well as sports activities.

- Raise awareness about the importance of a healthy diet, and invest and promote methods to increase availability of affordable fruits and vegetables in communities.
- Develop new community options to address the unique needs of the growing Hispanic elderly population, including community-based aging services, assisted living, and skilled nursing facilities.
- Increase awareness among Hispanic women of gestational diabetes, as well as the associated increased risk for developing diabetes later in life.

Health Care Barriers

- Support the process to achieve access to health coverage for all through meaningful health care reform.
- Invest in increasing access to regular, affordable, quality health care for appropriate diabetes screening and prevention services with priority for those with multiple diabetes risk factors.
- Maintain the expanded Medicare coverage for diabetes screening, supplies, and self-management training, and continue to inform eligible recipients of these services.
- Ensure access for all limited English proficient (LEP) persons to health care services in accordance with Title VI of the Civil Rights Act of 1964, through culturally proficient and bilingual staff and trained medical interpreters.

To have a meaningful impact on the growing number of Hispanics at risk for or living with diabetes...steps are recommended in the areas of research and data collection, risk factors, health care barriers, and diabetes outreach and education.

Diabetes Outreach and Education

- Invest in the strengthening and development of community programs that connect consumers to culturally proficient and linguistically appropriate, comprehensive diabetes outreach and education services focused on prevention and management.
- Tailor the delivery of diabetes outreach and education to each Hispanic community or Hispanic subgroup, utilizing a variety of methods including *promotores* (community health workers), health fairs, *charlas* (group discussions), awareness and self-management trainings, faith-based networks, and community media.
- Invest in the production of television, radio, and print PSAs for Hispanics incorporating the lessons learned from studies on diabetes and effective diabetes-related messaging.

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Our Mission

To improve the health of Hispanic communities and work with others to secure health for all.

The National Alliance for Hispanic Health is the nation's foremost source of information on Hispanic health and a science-based and community driven advocate for health. To learn more about us visit www.hispanichealth.org.



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