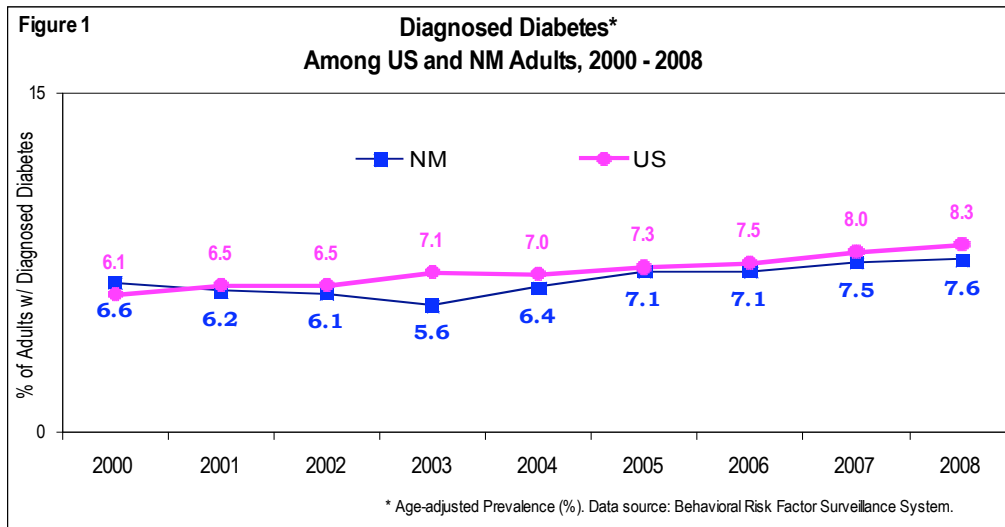


Diabetes is a group of diseases marked by high levels of blood glucose (sugar) resulting from defects in insulin production, insulin action, or both. Diabetes can lead to serious complications and premature death. However, people with diabetes can control the disease and lower the risk of complications.<sup>1</sup>

## Trends in Diagnosed Diabetes in New Mexico



All States and some US Territories use the Behavioral Risk Factor Surveillance System (BRFSS), a land-line phone survey, to annually monitor the extent of health-related behaviors or disease conditions in their areas.<sup>2,3</sup> The prevalence of diagnosed diabetes among adults 18 years and older in New Mexico and the United States was similar from 2000 to 2008 (Figure 1). However, the prevalence of diagnosed diabetes underestimates the total number of diabetes cases. Based on national estimates, about 30% of persons with diabetes are undiagnosed.<sup>4</sup> In some groups, such as those who are poor or above age 65, the percentage of undiagnosed persons may be higher. Table 1 shows estimates of diagnosed, undiagnosed and total prevalence of diabetes in NM adults. In 2007, an estimated 157,930 NM adults over age 18 and older had diabetes; 116,125 were diagnosed and 41,805 were undiagnosed.

## Prevalence by Geographic Area

Table 1 also shows diagnosed and total prevalence for New Mexico Department of Health public health regions. The southeast and northwest regional rates were the highest and were statistically higher than the lowest regional rate (northeast). The estimated numbers of NM adults 18 years and older with diagnosed and undiagnosed diabetes are in the last column.

Regions	Prevalence (%) of Diagnosed Diabetes	Total Prevalence (%) of Diabetes (diagnosed + undiagnosed) <sup>c</sup>	Numbers with Diabetes (diagnosed + undiagnosed) <sup>d</sup>
<b>New Mexico</b>	<b>7.5</b>	<b>10.2</b>	<b>157,930</b>
Southeast-Region 4	9.2	11.9	22,526
Northwest-Region 1	8.8	11.5	36,158
Southwest-Region 5	7.7	10.4	32,075
Bernalillo Co., Region 3	6.7	9.4	47,109
Northeast-Region 2	5.3	8.0	18,804

a. Data source for diagnosed diabetes prevalence is NM Behavioral Risk Factor Surveillance System (BRFSS).

b. Estimates are age-adjusted to 2000 US standard population.

c. The percent undiagnosed is estimated to be 2.7%, which is the national average prevalence of undiagnosed diabetes and is derived from National Health and Nutrition Examination Survey (NHANES).<sup>4</sup>

d. The number of persons with diabetes (diagnosed and undiagnosed) are estimated by multiplying the total prevalence rates by the population of NM adults, using population estimates from the University of NM's Bureau of Business & Economic Research.<sup>5</sup>

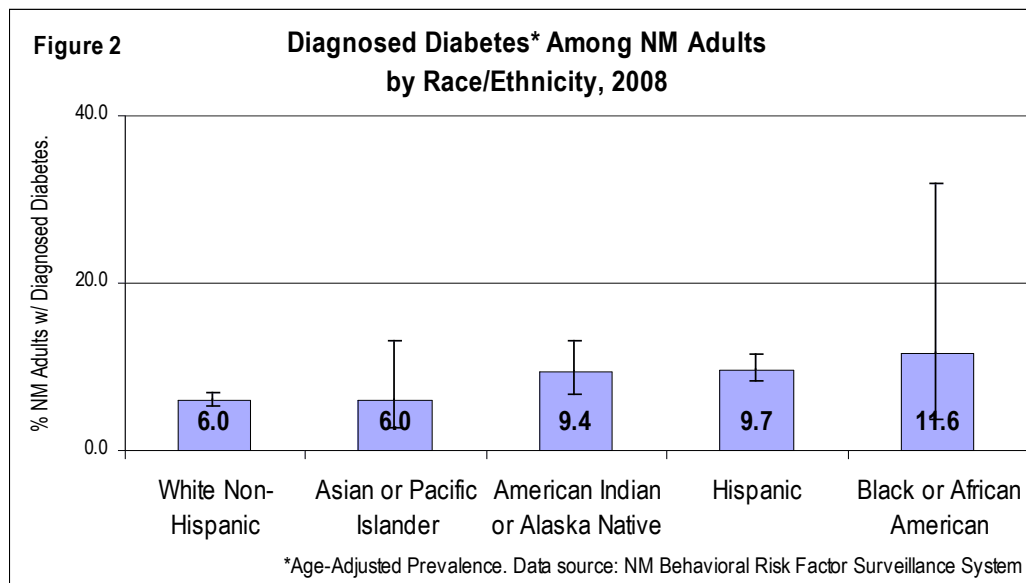
## Prevalence by Age

Table 2. Diagnosed Diabetes Among NM Adults By Age Group, 2008		
Age-Adjusted Prevalence (%)		
18 to 39 Years	40 to 59 Years	60 Years & Older
2.0	8.8	16.2
Data Source: NM Behavioral Risk Factor Surveillance System		

Diabetes prevalence increases with age. Table 2 shows that the oldest age group has the highest prevalence at 16%, or eight times the prevalence of the youngest age group. As our population ages and as our state population increases, the number of adults with diabetes will rise. New Mexico's population grew 35% from 1990 to 2007. In this same period, the population of adults 60 years and older grew by 59%. These two factors, a growing state population and increases in the older adult population, are important determinants behind the increasing numbers of New Mexicans with diabetes. Other important factors, such as the high prevalence of childhood and adult obesity and poverty contribute to the prevalence of chronic diseases such as diabetes.

NM does not have state prevalence data for diabetes in youth. Diabetes prevalence among US youth is about 1.8 per 1,000 (about 0.2%), according to 2001 data from the national multi-year *SEARCH for Diabetes in Youth* study<sup>6</sup>.

## Prevalence by Race and Ethnicity



The 2008 prevalence rates of diagnosed diabetes for adults in NM's main racial/ethnic groups are shown in Figure 2. The black vertical bars show the range for each estimated rate. The shorter the bar, the more precise the estimate. Figure 2 illustrates the following:

- Estimates for Hispanic and White Non-Hispanic adults are statistically different from each other. Hispanic adults are 1.6 times more likely than White Non-Hispanic adults to have diagnosed diabetes.
- American Indians/Alaska Natives are 1.6 times more likely than White Non-Hispanics to have diagnosed diabetes.
- Yearly diabetes estimates for Black/African American and Asian/Pacific Islander have far wider ranges. The Asian/Pacific Islander estimate varies from 2.6 to 13.1, with an average of 6.0%. The Black/African American estimate varies from 3.6 to 31.8, with an average of 11.6%.

NM BRFSS estimates for smaller groups are less precise than for larger groups; thus they do not provide an accurate state-specific estimate of the risk of diabetes in smaller groups for resource planning, comparison year-to-year or comparison to other groups.

## Gestational Diabetes

**Table 3. Diabetes During Pregnancy Among NM Women Who Gave Birth During 2006-2007\***

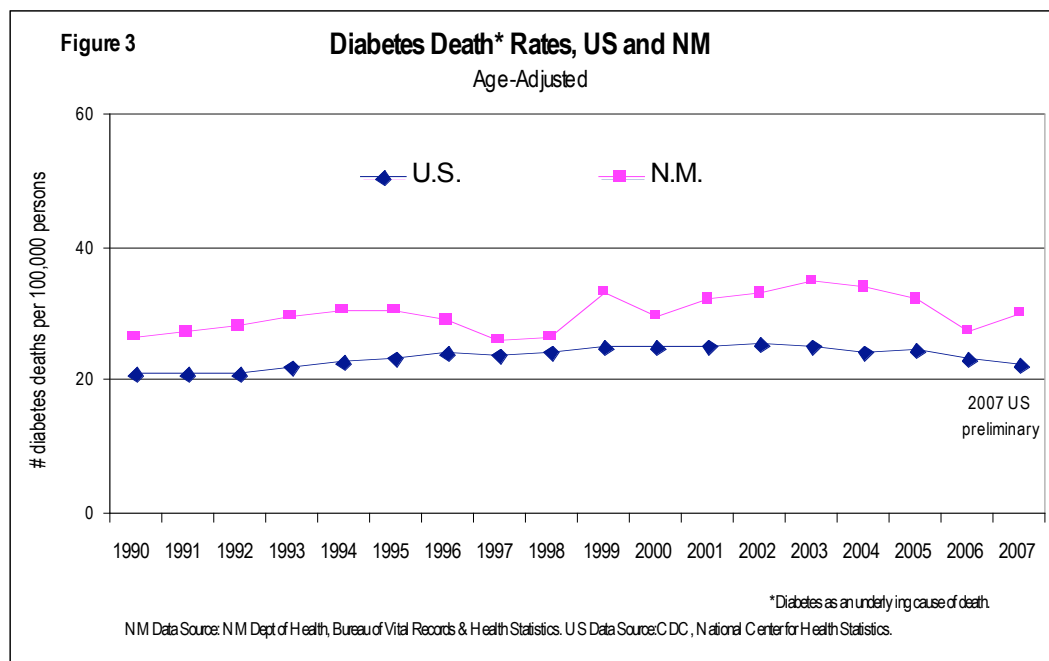
Age-adjusted Prevalence (%)

	Estimate in Percentages	Estimate in Numbers
Diabetes Before Pregnancy	2.2	1263
Diabetes Started During Pregnancy (Gestational Diabetes)	8.4	4690
<b>Total</b>	<b>10.6</b>	<b>5953</b>

\*In 2006 and 2007, PRAMS had < 70% response rate and as a result, may not be representative of all NM women with a live birth in this period. Data source: NM Pregnancy Risk Assessment Monitoring System (PRAMS)<sup>7</sup>

Women who were overweight or obese before pregnancy were at least two times more likely to develop gestational diabetes during pregnancy than mothers who were not overweight or obese before pregnancy. Women who develop gestational diabetes are at higher risk for developing type 2 diabetes later in life. Diabetes during pregnancy also places the infant at higher risk of developing diabetes and obesity as an adult. About one in nine NM women (10.6%) who gave birth in 2006-2007 had diabetes during pregnancy.<sup>7</sup>

## Diabetes Deaths

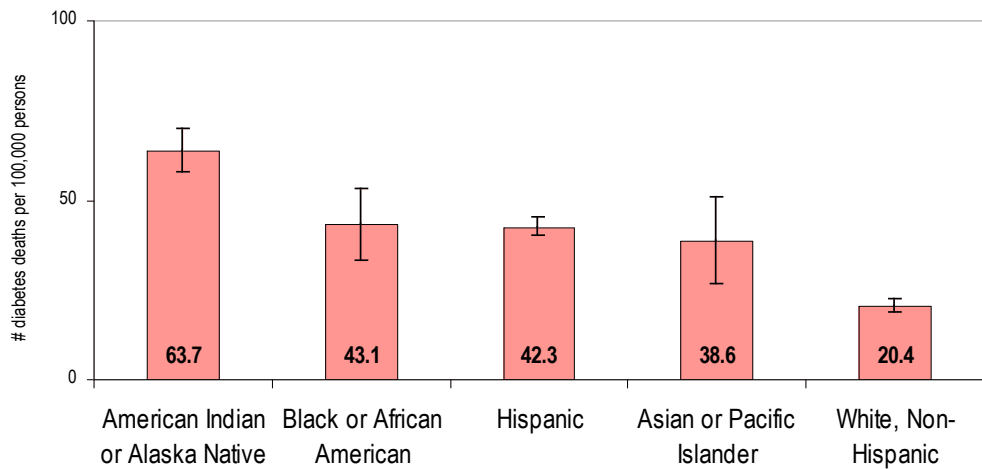


While US and NM prevalence rates and trends have been similar over the last decade, New Mexico's diabetes mortality rates have generally been higher than the US (Figure 3). Nationally and in NM diabetes was the seventh leading cause of death in 2007.<sup>8,9</sup> This was a change from the previous eight years, during which diabetes was the fifth or sixth leading cause of death in the US and NM. From 2000 to 2007, the NM diabetes death rate fluctuated between 27 and 35 deaths per 100,000 persons. During this period there were 4,710 NM deaths from diabetes as an underlying cause<sup>10</sup>, with an average of 581 diabetes deaths annually. The 2007 NM death rate was 28.6 diabetes deaths per 100,000 persons, based on 614 deaths.

As with prevalence, death rates vary by race/ethnicity. American Indian/Alaska Native, Hispanic and White Non-Hispanic death rates differed statistically, with the American Indian/Alaska Native rate as the highest. American Indian/Alaska Native adults die of diabetes at three times the rate of White Non-Hispanic adults (Figure 4). The Black/African American and Asian/Pacific Islander death rates were similar statistically and were less precise; these differ statistically from the American Indian/Alaska Native and White Non-Hispanic rates.

**Figure 4** Diabetes Death Rates in NM by Race / Ethnicity, 2005-2007

Age-Adjusted



Data source: NM Dept. of Health Bureau of Vital Records & Health Statistics; downloaded via the online NMDOH Indicator-Based Information System Dec. 2009.

#### In summary:

- Diagnosed diabetes in New Mexico continued to increase from 2000 to 2008.
- Diabetes prevalence differed by region, age and race/ethnicity.
- Diabetes during pregnancy affected about one in nine women who gave birth in 2006-2007.
- Since 1990, diabetes mortality rates in NM have been slightly higher than the US rates. As with prevalence, diabetes death rates differed by race/ethnicity.

#### References

1. Division of Diabetes Translation. 2008. National diabetes fact sheet: general information and national estimates on diabetes in the United States, 2007. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention. [www.cdc.gov/diabetes/pubs/pdf/ndfs\\_2007.pdf](http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2007.pdf)
2. New Mexico Behavioral Risk Factor Surveillance System (BRFSS). 2009. Survey data for 2007. Santa Fe, NM: New Mexico Department of Health, Epidemiology and Response Division, Injury & Behavioral Epidemiology Bureau.
3. Behavioral Risk Factor Surveillance System. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Adult and Community Health. <http://apps.nccd.cdc.gov/brfss/>
4. Cowie CC, Rust KF, et. al. June 2006. Prevalence of Diabetes and Impaired Fasting Glucose in Adults in the U.S. Population. *Diabetes Care* 29(6).
5. New Mexico Bureau of Business & Economic Research. 2009. Modified NM population estimates 2007. Albuquerque, NM: University of New Mexico, Bureau of Business & Economic Research.
6. SEARCH FOR Diabetes in Youth Study Group. 2006. The Burden of Diabetes Mellitus Among US Youth: Prevalence Estimates From the SEARCH for Diabetes in Youth Study. *Pediatrics* 118: 1510-1518.
7. New Mexico Pregnancy Risk Assessment and Monitoring System. 2009. Survey data for 2006-2007, personal communication. Santa Fe, NM: New Mexico Department of Health, Public Health Division, Family Health Bureau.
8. Xu J, Kochanek KD, Tejada-Vera B. 2009. Deaths: Preliminary data for 2007. *National Vital Statistics Reports* 58(1). Hyattsville, MD: National Center for Health Statistics.
9. New Mexico Department of Health Indicator-Based Information System (NM-IBIS), Leading Causes of Death, Ranked by Age-Adjusted Rate (Deaths per 100,000) Measure. <http://ibis.health.state.nm.us/query/result/mort07/MortCntyICD10/Top10AgeRate.html> (17 Dec 2009).
10. New Mexico Bureau of Vital Records and Health Statistics. 2008. NM Selected Vital Health Statistics Annual Report for 2006. Santa Fe, NM: New Mexico Department of Health. [http://nmhealth.org/ERD/HealthData/pdf/2006\\_AR\\_final093008.pdf](http://nmhealth.org/ERD/HealthData/pdf/2006_AR_final093008.pdf) (06 Oct 2008).

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