UNLV Center for Democratic Culture
Edited by Dmitri N. Shalin

The Social Health of Nevada

Leading Indicators and Quality of Life in the Silver State

Disease Prevalence and Behavioral Risk in Nevada

Shannon M. Monnat, *Department of Sociology, University of Nevada, Las Vegas*

Throughout the last several years, people living in the United States have engaged in intense debates about health care reform, costs, and mandates. What is often missing from these debates is arguably the key issue in American health: *What is making us sick in the first place?*

Research suggests that deficiencies within the healthcare system and individuals' genetic predispositions to disease account for only about 40% of premature death. The remaining 60% is explained by preventable conditions and behaviors, including environmental, social, economic, and behavioral health risk[1]. Some of the most common among these are smoking, poor diet, and physical inactivity. In addition, *social determinants of health* – the circumstances in which people are born, grow up, live, work, and age, as well as the systems put in place to deal with illness – are major drivers of disparities in disease and risk in the U.S. and Nevada[2].

Highlights

- **The Silver State is ranked 47th in overall health among all states in the U.S.**
- **Nevada ranks 37th out of all states in cardiovascular deaths, 42nd in heart attack prevalence, and 25th in cardiovascular disease.**
- **Nevada has the third highest firearm related death rate in the country.**
- **Nevada ranks in the top half of states in stroke, high blood pressure, and diabetes prevalence.**

How to Cite this Report

Monnat, Shannon M. 2012. "Disease Prevalence and Behavioral Risk in Nevada." In *The Social Health of Nevada: Leading Indicators and Quality of Life in the Silver State*, edited by Dmitri N. Shalin. Las Vegas, NV: UNLV Center for Democratic Culture, http://cdclv.unlv.edu

[1] McGinnis, J. Michael, et al. 2002. "The Case for More Active Policy Attention to Health Promotion." *Health Affairs* 21(2):78-93.
[2] Lewis, Kristen and Sarah Burb-Sharps. 2010. *The Measure of America, 2010-2011: Mapping Risks and Resilience*. New York, NY: New York University Press.

Led by the Robert Wood Johnson Foundation (RWJF), several organizations have ramped up the collection of health data and dissemination of health rankings for all states in the U.S. These initiatives reflect the belief that health programs and policies implemented at the state and local levels have major implications for health behaviors and outcomes.

Two of the most in-depth and interactive resources for ranking health outcomes and behaviors between and within U.S. states are the County Health Rankings, a collaborative project between the RWJF and the University of Wisconsin Population Health Institute; and America's Health Rankings, a project of the United Health Foundation and American Public Health Association. In this chapter, I use data from these sources and the 2011 Healthy People Nevada Report[3] to examine health outcomes and behavioral risks in Nevada, with an eye on comparing Nevada to other states as well as comparing counties within Nevada. I also present information on racial/ethnic and gender differences in these outcomes and make suggestions on how we might improve opportunities for good health in Nevada.

Health Outcomes

Nevada is currently ranked 47th in overall health among all states in the U.S, the worst rank since the ranking system began in 1990.[4] The overall health of states is determined by calculating how far each state is from the national average on a number of different measures of mortality, disease prevalence, behavioral risks, public health policies, clinical care, and economic and environmental conditions. *Nevada has always been among the bottom ten states, and usually among the bottom five.* The reasons for this will be explored in detail throughout this report, but Nevada's status at the bottom can be largely explained by the state's low high school graduation rate, low level of public health funding, high violent crime and unemployment rates, and low rates of childhood immunization and health insurance coverage. The table below displays the overall health rankings for the top five and bottom five performing states in 2010.

Table 1. Top Five and Bottom Five Ranked States in Overall Health, 2010

Top Five Performing States	Bottom Five Performing States
1. Vermont	50. Mississippi
2. Massachusetts	49. Louisiana
3. New Hampshire	48. Arkansas
4. Connecticut	**47. Nevada**
5. Hawaii	46. Oklahoma

Source: United Health Foundation. 2010. America's Health Rankings. Available at: http://statehealthstats.americashealthrankings.org/#/country/US/2010/Overall-State-Ranking.

[3] Ritch, Luana J. and Alicia Chancellor Hansen. 2011. *Healthy People Nevada – Moving from 2010 to 2020*. Nevada State Health Division, Office of Health Statistics and Surveillance, Bureau of Health Statistics, Planning. Epidemiology and Response.

These state rankings have remained fairly consistent over time, with states in New England regularly outperforming Southern states and Nevada. What the top-ranked states have in common is a commitment to their educational, social, and healthcare institutions. These states have the highest high school graduation rates, highest levels of public health funding and health insurance coverage, most primary care physicians per capita, lowest teen birth rates, best prenatal care, highest fruit and vegetable consumption, and lowest smoking rates. States ranked in the bottom five fall far short on most of these indicators.

Nevada's ranking on key indicators of interest for 2010 are displayed in Table 2. Low numbers indicate good rankings while large numbers indicate poor rankings. The last column indicates whether Nevada has improved or declined in its rankings since last year. Results indicate that Nevada has moved down in the rankings on 15 of the 25 indicators, improved in the rankings on eight indicators, and remained the same on two (smoking prevalence and high school graduation rates).

Table 2. Nevada's National Ranking on Key Indicators of Adult Health and Well-Being

Indicator	*Description*	*2010 Rank*	*Change from 2009*
OVERALL HEALTH	Weighted sum of the number of standard deviations all health measures are from the national avg.	47	↓ **(45)**
Health outcomes			
Infectious disease	Number of AIDS, tuberculosis, and hepatitis (A and B) cases reported to CDC per 100,000 residents	35	↑ **(39)**
% fair/poor health	% of adults self-reporting fair or poor health	34	↑ **(42)**
% high cholesterol	% of adults who have had their cholesterol checked and have been told it is high	30	↓ **(19)**
Poor physical health days	# of days in previous 30 days when activities were limited due to physical health difficulties (avg.)	30	↓ **(28)**
Cardiac heart disease	% of adults who have been told by a health professional that they have angina or CHD	25	↓ **(22)**
Stroke	% of adults who have been told by a health professional that they have had a stroke	23	↓ **(7)**
High blood pressure	% of adults who have been told by a health professional that they have high blood pressure	17	↑ **(24)**
Diabetes	% of adults who have been told by a health professional that they have diabetes	16	↑ **(30)**
Preventable hospitalization	Discharge rate among the Medicare population for diagnoses that are amenable to non-hospital care	12	↓ **(11)**
Health Risks and Behaviors			
Binge drinking	% of population over age 18 that drank excessively in the last 30 days (5+ drinks for males and 4+ drinks for females in one sitting)	42	↓ **(41)**
Smoking prevalence	% of population over age 18 that smokes on a regular basis	41	-- (41)
Physical activity	% of adults who participated in any physical activity over the past month	30	↑ **(38)**
% getting cholesterol check	% of adults who have had their blood cholesterol checked within the last 5 years	27	↑ **(46)**
Daily fruits/vegetables	% of adults who consumer 5 or more servings of vegetables and fruits a day	23	↑ **(32)**

Prevalence of obesity	% of pop. with a body mass index of 30 or higher	22	↓ **(19)**
Social Determinants: Community Conditions			
High school graduation	% of incoming 9th graders who graduate in 4 years with a regular degree	50	-- (50)
Public health funding	State funding dedicated to public health as directed to states by the CDC and HRSA (per capita)	50	↓ **(48)**
Violent crime	Number of murders, rapes, robberies and aggravated assaults per 100,000 residents	50	↓ **(49)**
Unemployment rate	Total unemployed as a % of civilian labor force	49	↓ **(44)**
Immunization coverage	Avg. % of children aged 19-35 months who received vaccinations for DTP, polio, measles, and hepatitis B	49	↓ **(47)**
Health insurance coverage	% of population that does not have health insurance through their employer or government	47	↓ **(42)**
Teen birth rate	Number of births per 1,000 mothers aged 15-19	42	↑ **(44)**
Median household income	Median total household income in the state	19	↓ **(14)**
Air pollution	Avg. exposure of the general public to particulate matter of 2.5 microns or less in size	17	↓ **(15)**

Source: United Health Foundation. 2010. America's Health Rankings. Available at: http://statehealthstats.americashealthrankings.org/#/country/US/2010/Overall-State-Ranking.

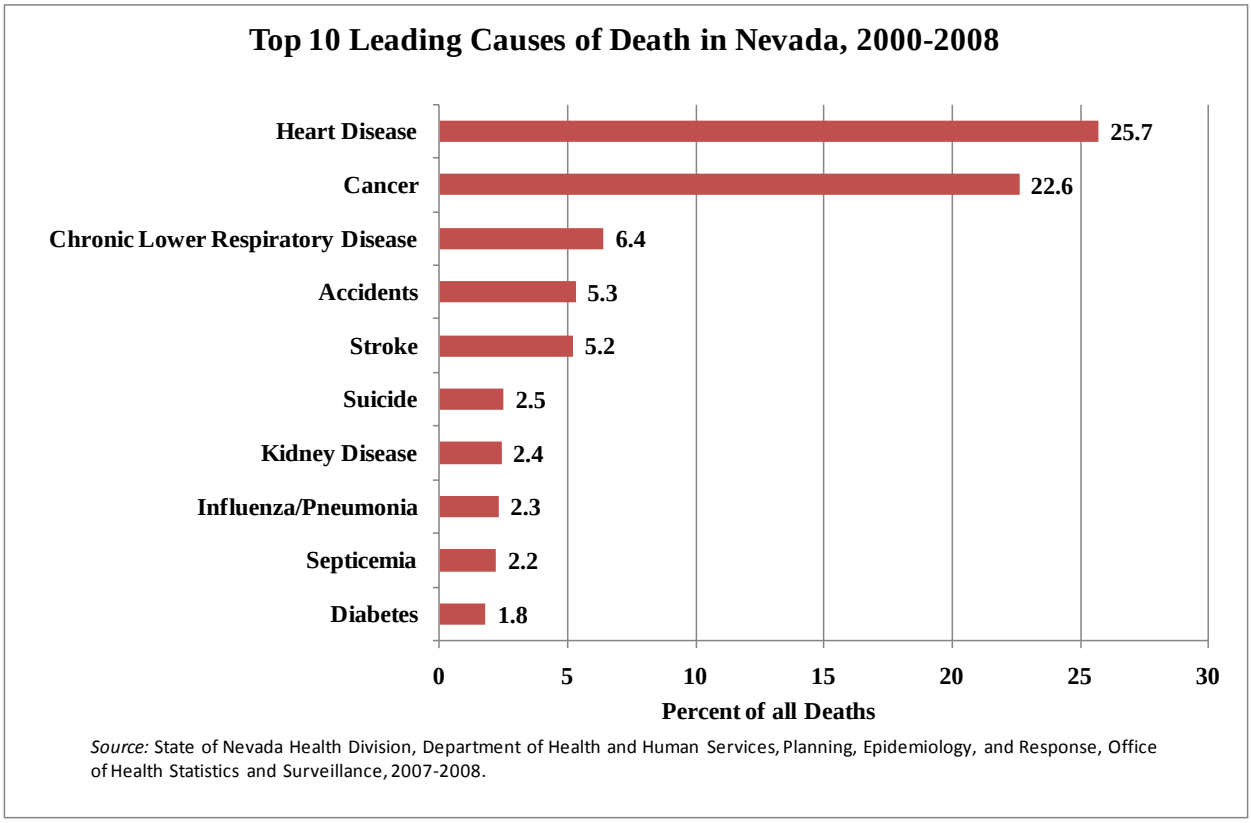
In terms of health outcomes, the Silver State currently ranks among the bottom half of all US states for infectious disease, percentage of adults reporting fair or poor health, percentage of adults reporting high cholesterol, and average number of poor physical health days. Nevada ranks in the top half of states in stroke, high blood pressure, and diabetes prevalence and in preventable hospitalizations.

Regarding lifestyle behaviors and health risks, Nevada ranks in the bottom half in binge drinking, smoking prevalence, physical activity, and percentage of adults getting a cholesterol screenings but ranks in the top half in daily fruit and vegetable intake and obesity prevalence.

Where Nevadans really suffer is with *social determinants of health* – environmental, economic, social, and political conditions existing where people live, work, play, and go to school. These are conditions over which Nevadans have little control but that nevertheless affect health and well-being. The idea that health should be an individual responsibility is a popular one because it conforms to American notions of personal choice, meritocracy, and accountability. Smoking, poor diet, and lack of exercise – three fatal behavioral health risks – all reflect poor personal choices. However, the reality is that the conditions where we live, work, learn, and play matter for individual and population health. Nevada ranks at the bottom of all states in high school graduation, public health funding, violent crime, immunization coverage, health insurance coverage, and the teen birth rate. Only median household income and air pollution are within the top half of states. However, Nevada's ranking for those indicators has declined since 2009.

Mortality and Disease Prevalence

The graphic below presents the Top 10 leading causes of death in Nevada between 2000 and 2008, ranked by the percentage of all deaths due to that cause. Heart disease is the leading cause of death in both the United States and Nevada, accounting for over a quarter of all deaths in the Silver State. Cancer also contributes to a large percentage of deaths in the U.S. and Nevada (22.6%). Estimates are that cancer has led to over 4 million years of lost life in the U.S.[3] Diabetes, although a relatively less prevalent cause of death in Nevada (1.8%), is an indicator of and contributor to both heart disease and cancer deaths.



Source: State of Nevada Health Division, Department of Health and Human Services, Planning, Epidemiology, and Response, Office of Health Statistics and Surveillance, 2007-2008.

Disease Prevalence

The extent to which disease prevalence in Nevada has increased or decreased over time depends upon the particular measure of interest. While rates of infectious disease and preventable hospitalizations have decreased substantially since 2000, the percentage of residents reporting high cholesterol, high blood pressure, and diabetes are steadily increasing, both nationally and in Nevada. In addition, while Nevada did not meet the 2010 target for reducing the overall cancer mortality rates, deaths from most types of cancers have been in decline since 2000. Below are some highlights about the most common diseases.

Heart Disease[3]

Heart disease is the leading cause of death in both the United States and Nevada. Several other medical conditions and lifestyle behavioral choices increase the risk of heart disease, including high cholesterol, high blood pressure, diabetes, cigarette smoking, obesity, and physical inactivity.

- Nevada is currently ranked 37th out of all states in *cardiovascular deaths*, 42nd in *heart attack prevalence*, and 25th in *cardiovascular disease*. In 2010, 4.9% of Nevadans reported that they had been told by a doctor or other health care professional that they have had a heart attack, while 3.8% were told that they have angina or coronary heart disease. These percentages have remained fairly consistent over the past decade.

- The rate of coronary heart disease decreased in Nevada from 2000 to 2010, and over that decade, Nevada maintained significantly lower hospitalization rates for congestive heart failure than the national average

- In Nevada, men have over twice the coronary heart disease mortality rate of women, and both the prevalence and mortality rate are higher for blacks than for whites. Hispanics have the lowest heart disease prevalence and death rates of any racial/ethnic group in Nevada.

High Blood Pressure[3]

High blood pressure (hypertension) is significantly associated with heart disease and accounts for about 6% of all deaths related to cardiovascular disease. Nevada is currently ranked 17th out of all states in high blood pressure prevalence.

- In 2009, 27.5% of Nevadans had high blood pressure. Although a lower percentage than the national average (29.2%), the high blood pressure rate in Nevada is increasing. Indeed, Nevada did not even come close to meeting the Healthy People 2010 target of 14.0%.

- High blood pressure is more common among males than females; while the rate for females has remained fairly stable over the past 10 years (at around 25.0%), the increasing rate for males is what has been driving the overall increase in prevalence in Nevada. While about 25% of males in Nevada had high blood pressure in 2000, the percentage had increased to 30% by 2009.

- High blood pressure is most common among individuals aged 65 and older; nearly 60% of this population had high blood pressure in 2009.

- Finally, while rates have been climbing for whites and blacks, the percentage of Hispanics with high blood pressure has declined since 2001.

High Cholesterol[3]
High blood cholesterol is also associated with heart disease. It is estimated that a decrease of just 10% in serum cholesterol could decrease heart attack incidence by 30%.

- About 38.2% of Nevadans have high cholesterol, a rate that is higher than the national average (37.5%) and that has been increasing over the past 10 years. The current rate of high cholesterol in Nevada is almost three times the Healthy People 2020 target rate of 13.5%

- Males in Nevada are more likely to have high cholesterol than females, and the risk of high cholesterol increases with age. About 55% of Nevadans aged 55 and older have high cholesterol.

- Blacks and whites have higher rates than other racial/ethnic groups; Hispanics have the lowest rate.

Diabetes[4,5]
Diabetes is the 10th leading cause of death in Nevada (vs. 7th in the United States). However, individuals with diabetes are at greater risk of heart disease, stroke, high blood pressure, kidney disease, amputations, dental disease, and other life threatening conditions. Diabetes prevalence in the United States is likely to increase throughout the next several years for several reasons, including an aging population and an increase in the Hispanic population – a group that is at higher risk of developing diabetes.

- Nevada is currently ranked 16th out of all states in diabetes prevalence. In 2010, 7.9% of Nevada's population reported having been diagnosed with diabetes (over 160,000 people). Although Nevada has been improving its relative position in the state-by-state rankings, diabetes prevalence in Nevada has been increasing over the past 20 years.

- Estimates are that the total cost of diabetes in Nevada exceeds $1.5 billion per year, including lost work productivity and direct medical bills. In 2009, 253 non-traumatic lower limb amputations were performed in Nevada due to the effects of diabetes.

- About equal percentages of men and women in Nevada have clinically diagnosed diabetes, but men have a higher mortality rate from diabetes than do women. Rates are highest among older Nevadans (aged 55 and older). In terms of race/ethnicity, blacks have the highest diabetes rate and diabetes mortality rate in Nevada while whites have the lowest diagnosis rate and whites and Hispanics have the lowest diabetes mortality rates.

[4] Juvenile Diabetes Research Foundation. 2010. "Combined State sheets." Available at: http://advocacy.jdrf.org/files/General_Files/Advocacy/2010/CombinedStateSheets4.05.10.pdf

Cancer[3,5]

Cancer is the second leading cause of death in both the United States and Nevada. The current overall lifetime probability of developing cancer is 1 in 2 for men and 1 in 3 for women. About two-thirds of all cancers are caused by lifestyle behaviors, including smoking, obesity, and poor nutrition. Table 3 displays cancer mortality trends by type of cancer for 2000-2008.

Nevada is currently ranked 25th out of all states in cancer deaths, and this rank has steadily improved since its peak of 44th in 2003. The rate of cancer deaths in 2010 was 194 per 100,000 residents, down from a high of 220 per 100,000 in 2001 and 2002. There is substantial variability in cancer trends when examining death rates by type, however. While cancer death rates from *lung cancer*, *breast cancer*, and *colorectal cancer* have all decreased in Nevada since 2000, Nevada's mortality rates are still above the national average for all types of cancer except breast cancer.

Table 3. Nevada Cancer Mortality Trends, 2000-2008

Type of Cancer	Above or Below National Avg.	Rate Increasing or Decreasing	Gender with highest rate	Racial/ethnic group with highest rate
Overall	=	**Decreasing**	Male	Black
Lung	**Above**	**Decreasing**	Male	White
Breast	**Below**	**Decreasing**	N/A	Black
Uterine/Cervix	**Above**	Fluctuating	N/A	Black/Asian
Colorectal	**Above**	**Decreasing**	Male	Black
Prostate	**Above**	Fluctuating	N/A	Black
Melanoma	**Above**	Fluctuating	Male	White

Source: Ritch, Luana J. and Alicia Chancellor Hansen. 2011. *Healthy People Nevada – Moving from 2010 to 2020*. Nevada State Health Division, Office of Health Statistics and Surveillance, Bureau of Health Statistics, Planning. Epidemiology and Response.

Lung cancer: Lung cancer is by far the most common cause of cancer death in Nevada, killing almost 50 out of every 100,000 people in Nevada in 2008. About 31% of cancer deaths among men and 26% among women are from lung cancer. Lung cancer deaths have historically been higher among whites, while rates have been lowest among Hispanics and Asians.

Breast cancer: Breast cancer mortality rates have decreased in Nevada since 2000, and the rate has historically been below the national average. The current rate is about 21 per 100,000 female residents (23.5 nationally). There are a number of risk factors linked to breast cancer, including smoking, alcohol consumption, obesity, and poor diet. While black women are less likely to acquire breast cancer than white women, breast cancer mortality rates for black women in Nevada significantly exceed those for white women (about 36 per 100,000 for black women and 21 per 100,000 for white women).

[5] United Health Foundation. 2010. America's Health Rankings. Available at: http://statehealthstats.americashealthrankings.org/#/country/US/2010/Overall-State-Ranking.

Mortality rates for Hispanic and Asian women are about 15 per 100,000 female residents. Mammograms are recommended every two years for women age 40 and older. The proportion of Nevadan women who received a mammogram in the past 2 years has decreased since 2000. Women in the lowest age bracket (40-44) are the least likely to have had a mammogram in the preceding 2 years.

Uterine Cervical Cancer: The uterine cervical cancer rate in Nevada has fluctuated between about 2.5 and 3.5 deaths per 100,000 women. The rate is above that of the national average. The median age at death for cancer of the cervix and uterus is 72 years old. From 2003, black and Asian women had significantly higher mortality rates from uterine cervical cancer than white or Hispanic women. However, in the latest data (2004-2007), white and Hispanic women have the highest mortality rates from this type of cancer. A pap smear is a microscopic examination of the cervix that can detect cancerous and precancerous cells in the cervix. Women should have a pap test at least once every 3 years after they begin sexual intercourse. A pap test is recommended every year for women under the age of 30 and women who have a history of cancer in the family. The proportion of women aged 18 and older who received a pap test within the past 3 years in Nevada has decreased since 2000. There is very little racial/ethnic variation in the percentage of women receiving pap tests in Nevada.

Colorectal Cancer: Colorectal cancer mortality rates in Nevada have been on the decline since 2000. In 2008, the colorectal cancer mortality rate in Nevada was 16.1 per 100,000 residents. However, the state rate is still above that of the U.S. average. Men have higher rates of colorectal cancer mortality than women, and blacks have had the highest rate of any racial/ethnic group in Nevada for most of the past decade. A fecal occult blood test is recommended for adults aged 50 and older at least every two years. This test allows doctors to see microscopic traces of blood in the feces – a positive test is an indication that the individual needs a colonoscopy. The proportion of Nevadans who have had a fecal occult blood test within the past two years has been in decline since 2002. Whites are less likely to have this test than other racial/ethnic groups in Nevada. However, whites are more likely than other racial/ethnic groups to have had a sigmoidoscopy or colonoscopy. A sigmoidoscopy is a medical examination of the large intestine from the rectum through the last part of the colon. A colonoscopy is an endoscopic examination of the color and the distal part of the small bowel. The proportion of Nevadans who have had this procedure has increased over time, and surpassed the Healthy People 2010 target.

Prostate Cancer: The prostate cancer mortality rate is Nevada has declined slightly since 2000. In 2008, the mortality rate was 24.3 per 100,000 male residents. Many men who die of prostate cancer do not experience symptoms, so neither they, nor their doctors know they had the disease. In Nevada, black males have the highest prostate cancer mortality rate. From 2000 to 2003, the mortality rate among black males was nearly 60 per 100,000 black male residents – a rate over twice that of white and Hispanic males and almost six times that of Asian males. Between 2004 and 2008, the prostate cancer mortality rate among black males dropped to about 40 per 100,000, still far greater than the rates for white, Hispanic, and Asian men.

Melanoma Cancer: Relative to the U.S. as a whole, Nevada is perhaps worst off when it comes to melanoma cancer death rates. While relatively small at 2.6 per 100,000 population, the rate of death from melanoma cancer in Nevada significantly exceeds that of the national average and shows no signs of declining over time. Exposure to ultraviolent rays from the sun is a known melanoma cancer risk factor. More than half of a person's lifetime skin damage is caused by the age of 18. While skin cancer is the most common form of cancer, death rates are relatively low. Males have higher melanoma cancer mortality rates than females, and whites have the highest melanoma cancer mortality rate of any racial/ethnic group.

Human Immunodeficiency Virus (HIV)[3]

In 2008, about 10.4 out of every 100,000 Nevadans were living with diagnosed HIV. However, since about 21% of individuals who are infected with HIV are unaware of their infection, the true rate of HIV in Nevada is much higher than 10.4 per 100,000.

- The HIV rate in Nevada is significantly lower than the national average (14.4), and rates, both in the U.S. and Nevada, have been in decline over the past 10 years. Reported new cases among Nevada residents are also in decline.

- The mortality rate from HIV was 2.6 per 100,000 in 2008, a value that has been improving over the past 10 years. This is also much lower than the national mortality rate of 4.0 per 100,000.

- Males have significantly higher HIV incidence rates (about 16 out of every 100,000 males vs. 4 out of every 100,000 females in 2009). They also have higher HIV mortality rates (about 4.5 per 100,000 for males vs. 0.5 per 100,000 for females).

- The incidence rate is also substantially higher among blacks than any other ethnic group. In 2008, about 40 out of every 100,000 blacks had been diagnosed with HIV, while the rates for whites and Hispanics were about 8 (out of 100,000) and 11 (out of 100,000) respectively.

Infectious Diseases

Rates of vaccine preventable disease are at historic lows. Most infants and toddlers receive all necessary vaccinations by the age of 2. However, Nevada currently ranks 49th out of all states in the percentage of children who have received their necessary vaccinations by the 3rd birthday. Many adolescents and adults are under-immunized as well, leaving the possibility for an infectious disease outbreak in Nevada.

Table 4 displays some of the most common infectious disease, the disease rate in Nevada per 100,000 residents, an indication of whether the rate is above or below that of the national average, whether the rate has been increasing or decreasing since 2000, and the county with the highest disease prevalence (when available). Rates of hepatitis

A, meningococcal disease, and tuberculosis are all relatively low and have been decreasing over time.

Table 4. Rate of Reported New Cases of Vaccine Preventable Diseases, Nevada Residents, 2008

Disease	# of Cases (per 100,000)	Above or Below National Average	Rate Increasing or Decreasing	County with Highest Prevalence
Hepatitis A	0.5	**Below**	**Decreasing**	Washoe
Meningococcal Disease	0.3	**Below**	**Decreasing**	Washoe
Tuberculosis	3.7	**Below**	**Decreasing**	Not Reported

In Nevada, approximately 80% of all tuberculosis cases occur among racial/ethnic minorities, with the highest rates occurring among Asians.

HEALTH LIFESTYLE AND RISKY BEHAVIORS

Injury and Violence[3]

Unintentional injuries are the leading cause of death for individuals between the ages of 1 and 44 in the U.S. and in Nevada. They also account for a great proportion of disabilities than any other cause, resulting in more than 5 million people nationally who report chronic, injury-related limitations with physical or mental functioning.

Males have significantly higher rates of all types of injuries, injury related deaths, and violence. They are significantly more likely to be hospitalized for a non-fatal head injuries and non-fatal spinal cord injuries than females and have higher rates of firearm related, poisoning, unintentional injury, motor vehicle, pedestrian, falling, drowning, and homicide deaths than females. For example, while the rate of firearm related death among males is about 21 per 100,000, the rate among females is less than 5 per 100,000. Similarly, while the rate of deaths from unintentional injuries is about 45 per 100,000 among males, the rate is about 25 per 100,000 for females.

Table 5. Rates of Injuries and Deaths from Injuries, Nevada, 2008

Injury	# of Cases (per 100,000)	Above or Below National Average	Rate Increasing or Decreasing	County with Highest Prevalence
Non-fatal head injuries	61.9	Fluctuating	Fluctuating	Clark/Washoe
Non-fatal spinal cord injuries	2.7	**Below**	Fluctuating	Washoe
Fire-arm related deaths	12.6	**Above**	**Decreasing**	N/A
Poisoning deaths	17.3	**Above**	**Increasing**	N/A
Unintentional injury deaths	36.4	**Below**	Fluctuating	N/A
Motor vehicle deaths	9.2	**Below**	**Decreasing**	N/A
Pedestrian deaths	1.5	**Above**	**Decreasing**	N/A
Deaths from falls	6.5	**Below**	**Increasing**	Esmeralda Storey Lincoln Carson City
Drowning deaths	1.1	**Below**	**Fluctuating**	N/A
Homicide deaths	4.8	**Below**	**Decreasing**	N/A

- Nevada has the third highest **firearm related death rate** in the country. The five states with the highest firearm related death rates are Louisiana, Alaska, Nevada, Mississippi and Alabama. Note that three of these states also rank in the bottom five for overall health in the country. Black Nevadans have the highest rate of firearm related deaths of all racial/ethnic groups by far. Hispanics have the lowest rate.

- The rate of **poisoning deaths** in Nevada has been increasing since 2000, and is substantially higher than the national rate (12.4 per 100,000). Poisoning deaths are more common among males and whites. Poisoning death rates are lowest among Asians and Hispanics.

- **Unintentional accidental deaths** have been fluctuating at around 35 per 100,000 in Nevada over the past decade. Females have consistently had a lower rate of accidental death than males. While Hispanics and Asians have the lowest rates, whites, blacks, and Native Americans have similarly high rates of accidental death.

- The **motor vehicle crash death rate** has substantially decreased in Nevada from a high of nearly 16 per 100,000 individuals in 2004 to 9.2 per 100,000 in 2008. Males have a higher death rate from motor vehicle crashes than females, and Native Americans have the highest rate of any racial/ethnic group in Nevada. Almost 86% of Nevadans report that they always wear a seat belt. This rate has improved over time and is higher than the national average. Females are more likely to report always wearing a seat belt than males.

- The **pedestrian death rate** on public roads in Nevada has been on the decline since 2004 but has consistently been higher than the national average. While the rate of pedestrian deaths has decreased among whites, blacks, and Asians since 2003, the rate has increased for Hispanics, who now have the highest rate of death from pedestrian accidents.

- **Deaths from falls and drowning** are both lower in Nevada than at the national level, but while deaths from drowning have remained about the same since 2000, deaths from falls are increasing. Blacks have the highest mortality rate from drowning compared to all other racial/ethnic groups in Nevada.

- **Homicide deaths** in Nevada are below the national average and are on the decline (from a high of about 8 per 100,000 in 2006 to a low of 4.8 per 100,000 in 2008). Males have a substantially higher homicide rate than females, but the rate among males has declined significantly since 2006, while the rate among females has remained about the same. In Nevada, blacks have a homicide rate that is four times higher than other racial/ethnic groups.

Obesity[2,3]

Obesity negatively affects physical and mental health and well-being in a number of different ways. In addition to shortening the life span by putting obese individuals at greater risk for heart disease, diabetes, stroke, certain cancers, blindness, high blood pressure, high cholesterol, and amputation, obese individuals are also significantly more likely to suffer from depression, anxiety, stress, poor self-esteem, and poor body image. Obese children are more likely to be bullied. Obese adults students are less likely to be admitted to college, and obese adults are less likely to be hired and earn less money. Risk of obesity is greatest among the poor and among racial/ethnic minorities in both the U.S. and Nevada.

- Nevada is currently ranked 22nd in adult obesity among all states in the U.S. Approximately two-thirds of Nevadans are overweight or obese. The prevalence of overweight/obese in Nevada has consistently increased since 2000. Nevada's obesity trends parallel those at the national level.

- Costs associated with obesity in Nevada are around $350 million.

- Nevadan males have consistently higher rates of obesity than females.

- Until 2008, blacks had the highest rate of obesity in Nevada, but as of 2009, whites have the highest obesity rate.

- Obesity is most common among the 45-65 age group and least common among those aged 18-24.

There are a number of environmental factors associated with increasing rates of obesity, including reduced walkability of cities, prevalence of fast food, fewer home cooked meals, more corner stores and liquor stores coupled with fewer grocery stores, unsafe neighborhoods that prohibit exercise and play, lack of parks and other green space, increased portion sizes at restaurants, and lack of information about nutrition.

Tobacco Use[3]

Cigarette smoking is the most preventable cause of disease and premature death in the United States, accounting for about 20% of deaths annually. Individuals who smoke are at increased risk for heart disease, stroke, lung cancer, and chronic lung disease. Second-hand smoke puts non-smokers at risk of developing cancer, asthma, and other respiratory illnesses.

- Nevada is currently ranked 41st in the percentage of adults who smoke on a regular basis. About 22% of adults smoked in 2009. This rate is higher than the national average (17.9%), but has been improving over the past decade. Over 50% of Nevada adult smokers reported some attempt at smoking cessation in 2009.

- Tobacco use is more common among males than among females in Nevada, but the difference is quite small.

- Whites, blacks, and Hispanics have fairly similar smoking rates, but blacks have experienced that greatest decrease in smoking since 2005.

- Older Nevadans (those aged 65 and older) are the age group that is least likely to be current smokers. Cessation efforts are the strongest in the 25-34 age group.

Substance Abuse[3]

Alcohol and drug use contribute to some of Nevada's most serious social and public health problems, including child abuse, domestic violence, sexually transmitted diseases, teen pregnancy, school drop-out, low worker productivity, homelessness, motor vehicle accidents, homicides, suicides, accidental death, heart disease, cancer, and increased health-care costs.

- Nevada has a rate of drug-induced deaths (16.5 per 100,000) that surpasses that of the national average (12.7 per 100,000). The rate has also increased over the past decade.

- Rates of drug induced death are higher among males and whites. Hispanics have the lowest rate of drug induced death.

- In 2009, 17.5% of Nevadans were identified as binge drinkers (men who consumed 5 or more drinks and women who consumed 4 or more drinks on one occasion). This rate is higher than the national average of 15.8% and has remained fairly stable over the past decade. Males are more likely to be classified as binge drinkers than females. Binge drinking is more common among whites and Hispanics and less common about blacks. The age group most at risk for binge drinking in Nevada is the 18-34 group.

Sexually Transmitted Diseases[3]

Sexually transmitted diseases are common in Nevada. Rates of gonorrhea in Nevada (79.2 per 100,000) and syphilis in Nevada (2.8 per 100,000) are lower than the national averages. While rates of gonorrhea have fluctuated over the past decade, declining from 2004 onward, syphilis rates in Nevada are on the rise. In Nevada, the highest reported rates of gonorrhea infection are among sexually active teenagers and young adults and blacks. Blacks living in Nevada have a gonorrhea rate of 438 per 100,000 – 17 times that of whites and 12 times that of Hispanics. The story is similar for syphilis. The rate is highest among blacks (almost 16 per 100,000) and is more common among women and among men who have sex with other men.

HEALTH ACROSS NEVADA'S COUNTIES

The economic, social, and political conditions where people live and the systems put in place to deal with illness are main drivers of health and health disparities. Just as there is a great deal of variation in health outcomes, lifestyle behaviors and risks, and contextual conditions across states, there is wide variability across counties within the state of Nevada. The communities in which we live are created by the distribution of money, power, policies on education, health, and public safety, social safety nets, and political processes. While we must encourage people to take personal responsibility for their health, we must also ensure that their communities provide opportunities for healthy behaviors and quality health care. In this section, I will compare Nevada's counties on indicators of health outcomes, behaviors, and community conditions.

Table 6 presents the overall rankings for 2011 as calculated by the Robert Wood Johnson Foundation for their County Health Rankings Project.

- **Health behaviors** include unsafe sex, tobacco use, diet and exercise, and alcohol use. Douglas, Lincoln, and Washoe counties have the highest ranked health behaviors in Nevada, while Humboldt, Pershing, and Mineral counties are at the bottom.

- **Clinical care** includes access to and quality of health care. Douglas, Washoe, and Mineral counties top the chart for clinical care ranking, while Elko, Lincoln, and Pershing counties rank at the bottom.

- **Social and economic factors** include employment, community safety, income, educational attainment, and family and social supports. Along these criteria, Storey, Elko, and Douglas counties rank in the top three, and Pershing, Nye, and Mineral counties rank in the bottom three.

- Finally, the **physical environment** incorporates environmental quality and the built environment (human-made resources, such as recreational facilities and access to healthy food). Carson City, Churchill county, and Lyon county rank in the top three, while Washoe and Clark counties are at the bottom.

Table 6. Health Factors Ranking by County, 2011[6]

Rank	Health Behaviors	Rank	Clinical Care	Rank	Social & Economic Factors	Rank	Physical Environment
1	Douglas	1	Douglas	1	Storey	1*	Carson City
2	Lincoln	2	Washoe	2	Elko	1*	Churchill

[6] Robert Wood Johnson Foundation. 2011. County Health Rankings. Available at: http://www.countyhealthrankings.org/about-project

3	Washoe	3	Mineral	3	Douglas	3	Lyon
4	Storey	4	Lander	4	Churchill	4	Pershing
5	Carson City	5	Storey	5	Humboldt	5	Douglas
6	Lander	6	Carson City	6	Lincoln	6	Lincoln
7	Churchill	7	Churchill	7	Lander	7*	Humboldt
8	Clark	8	Clark	8	White Pine	7*	Nye
9	White Pine	9	Humboldt	9	Washoe	9	White Pine
10	Elko	10	Lyon	10	Carson City	10	Elko
11	Nye	11	Nye	11	Lyon	11	Storey
12	Lyon	12	White Pine	12	Clark	12*	Lander
13	Humboldt	13	Elko	13	Pershing	12*	Mineral
14	Pershing	14	Lincoln	14	Nye	14	Washoe
15	Mineral	15	Pershing	15	Mineral	15	Clark

Note: Data for Esmeralda and Eureka counties are not available
*indicates a tie

Health Outcomes

The overall rankings tell only part of the story, however. The rankings can be broken down to reveal the areas where some counties are excelling while other counties are falling far short.

- In terms of **overall health outcomes** (Table 7a) Douglas County tops the charts, with Pershing, and Elko counties also ranking very high. Lander, Mineral, and Nye counties rank in the bottom three. The high rankings for Douglas, Pershing, and Washoe counties have much to do with their low rates of mortality and morbidity.

- Pershing County has the overall lowest **mortality rate**, while Mineral County has the highest with a massive 14,537 years of potential life lost over a one year period.

- Further, Mineral County has the highest **percentage of residents reporting that they have fair or poor health** (22.4%). A high percentage of Carson City residents also report fair or poor health (21.4%). These rates are significantly higher than the rates of poor/fair health in Douglas and Lincoln counties at 13.7% and 14% respectively.

- Residents of Douglas County reported the lowest average **number of physically unhealthy days** (3.2) – the number of days during the previous 30 when their physical health was not good. The average for White Pine County was twice as high at 6.6 days.

- Finally, despite Pershing County's overall high health outcome ranking and its low mortality rate, it has a significantly higher **rate of preventable hospitalizations** than the state average. White Pine also had a high rate of preventable hospitalizations. Lander county had the lowest rate.

Table 7a. Health Outcomes by County, 2011

HEALTH OUTCOMES					
	Outcomes Rank	Years of Potential Life Lost	% Reporting Fair or Poor Health	Avg. # Physically Unhealthy Days	Rate of Preventable Hospitalizations
Carson City	11	8681	21.4	4.1	63
Churchill	5	9529	15.8	3.9	74
Clark	9	8315	18.3	3.6	62
Douglas	1	5846	13.7	3.2	49
Elko	3	7783	17.8	4.0	65
Humboldt	7	8845	16.2	4.6	38
Lander	13	13623	16.0	4.7	49
Lincoln	10	12723	14.0	3.5	65
Lyon	6	7907	15.0	3.9	69
Mineral	15	14537	22.4	4.5	86
Nye	14	12777	19.6	4.6	62
Pershing	2	5433	16.2	3.9	130
Storey	8	5117	16.0	3.8	46
Washoe	4	7500	15.0	3.4	46
White Pine	12	10388	19.5	6.6	99
NEVADA	**47th in US**	**8232**	**17.6**	**3.6**	**59**

Note: Data for Esmeralda and Eureka counties are not available
NA = data not available for specific measure
Source: Robert Wood Johnson Foundation. 2011. County Health Rankings. Available at: http://www.countyhealthrankings.org/about-project
Indicates that county is at least one standard deviation better than the state average.
Indicates that county is at least one standard deviation worse than the state average.

Health Behaviors

There is also a great deal of variation in health behaviors across Nevada counties. Table 7b presents information on select health behaviors across counties.

- The **STD rate** is the highest in Clark and Mineral counties and the lowest in Lincoln and Storey counties.

- Lander and Lincoln counties have the lowest **percentage of adults who regularly smoke** cigarettes, while Lyon, Mineral, and Pershing counties have the highest rates of cigarette smoking.

- **Obesity** is the least prevalent in Carson City and Douglas and Washoe counties and the most prevalent in Pershing and White Pine counties.

- **Binge drinking** is most common in Humboldt and Lander counties and least common in White Pines and Lincoln counties.

- Finally, the percentage of women aged 40 and older who have had a mammogram within the past two years is highest in Douglas county at nearly 72% and lowest in Nye and White Pine counties (both under 50%).

Table 7b. Health Behaviors by County, 2011

HEALTH BEHAVIORS	STD rate per 100,000	% Regular Smokers	% Obese	% Binge Drinkers	Mammography Screening Rate
Carson City	257	23.1	23.7	19.3	60.4
Churchill	273	23.3	25.8	19.6	61.8
Clark	416	23.1	26.0	18.7	56.0
Douglas	135	19.3	21.1	19.8	70.6
Elko	91	23.7	29.8	23.4	50.0
Humboldt	265	24.9	29.9	28.3	54.5
Lander	295	16.6	29.2	25.1	NA
Lincoln	41	16.1	26.2	15.4	NA
Lyon	191	28.4	28.6	21.3	63.4
Mineral	320	30.9	29.4	20.1	53.6
Nye	129	26.5	30.2	16.7	46.5
Pershing	95	27.2	33.2	NA	NA
Storey	69	20.5	25.8	19.1	NA
Washoe	328	20.3	21.6	21.3	61.2
White Pine	109	19.7	34.5	13.1	48.7
NEVADA	**377**	**22.7**	**25.4**	**19.4**	**57.3**

Note: Data for Esmeralda and Eureka counties are not available
NA = data not available for specific measure
Source: Robert Wood Johnson Foundation. 2011. County Health Rankings. Available at: http://www.countyhealthrankings.org/about-project
Indicates that county is at least one standard deviation better than the state average.
Indicates that county is at least one standard deviation worse than the state average.

Social Determinants

Finally, divergent conditions at the community level contribute to the differences we see in mortality and morbidity across counties. Such conditions include policy and investment at the county level, the prevalence of risk behaviors within the county, residential segregation, cultural norms that foster healthy or unhealthy behaviors, neighborhood walkability and access to healthy foods, stress related to crime, unemployment, and poverty, and the availability of quality healthcare.

Table 7c presents data on select social determinants of health across Nevada counties. Overall, Carson City has the best conditions, with a low ratio of residents to primary care providers and good access to healthy food and recreational facilities. While rating poorly on some indicators, certain counties rate well on others. For example, Lander County has a relatively high violent crime rate and no access to recreational facilities, but it has a low unemployment rate and a good supply of primary care providers. Mineral County has a very low high school graduation rate, a high percentage of single parent households, and no access to recreational facilities, but it boasts the lowest percentage of uninsured residents of any county in the state (15%) and also has a relatively high supply of primary care providers and low unemployment rate.

Table 7c. Social Determinants of Health by County, 2011

SOCIAL DETERMINANTS OF HEALTH									
	% Uninsured Adults	Ratio of Residents to Primary Care Providers	High school grad. rate	% unemployed	% not getting emotional support	% Single-Parent Households	Violent Crime Rate	Healthy Food Scale	Access to Recreational Facilities
Carson City	27	837:1	60	11.5	24	38	382	100	16.0
Churchill	23	992:1	65	9.1	23	22	251	100	16.0
Clark	23	1244:1	50	12.0	24	33	865	67	6.0
Douglas	21	933:1	65	12.1	18	25	160	60	11.0
Elko	24	2051:1	65	6.6	25	21	252	40	6.0
Humboldt	24	1629:1	65	7.7	26	28	457	33	11.0
Lander	20	855:1	65	6.3	NA	29	873	50	0.0
Lincoln	32	1161:1	70	9.6	NA	25	86	75	0.0
Lyon	22	3772:1	60	16.0	22	26	162	50	17.0
Mineral	15	930:1	35	9.1	30	45	261	50	0.0
Nye	20	2599:1	55	14.4	26	33	280	33	11.0
Pershing	27	2097:1	75	10.4	22	32	963	50	16.0
Storey	22	NA	85	12.3	16	37	299	NA	0.0
Washoe	23	791:1	50	11.6	22	32	523	63	10.0
White Pine	21	1015:1	75	7.4	NA	44	263	33	11.0
NEVADA	**23**	**1153:1**	**52**	**11.8**	**24**	**33**	**738**	**60**	**8.0**

Note: Data for Esmeralda and Eureka counties are not available
NA = data not available for specific measure
Source: Robert Wood Johnson Foundation. 2011. County Health Rankings. Available at: http://www.countyhealthrankings.org/about-project
Indicates that county is at least one standard deviation better than the state average.
Indicates that county is at least one standard deviation worse than the state average.

IMPROVING NEVADA'S HEALTH

The vastly different outcomes between U.S. states and between Nevada counties are explained not only by inequalities within the healthcare system itself, but also from disparities in social, economic, and political systems. Social determinants of disease, risk, and lifestyles affect overall health outcomes. These conditions shape the environments where we grow up, live, work, and go to school. There are a number of different practical strategies Nevada can use to improve health and enhance opportunities to make healthy choices across our state. Many of these suggestions come from a national report on mapping U.S. risk and resilience.[2]

1. ***Improve food quality in schools***. What we feed our children goes a long way in forming their eating habits as they age into adulthood. In both the home and the school, children should have the opportunity to eat healthy and fresh foods, with an emphasis on fruits and vegetables and a limit on fats, sugars, and processed foods.

2. ***Use economic strategies as disincentives for risky behaviors***. While increasing the price of cigarettes through excise taxes has been shown to be effective in decreasing cigarette consumption, these "sin" taxes disproportionately affect the poor, both because the product and the tax represents a higher proportion of their income and because the poor are more likely to smoke, purchase high-calorie junk food, and consume alcohol. Sin taxes at the establishment level would encourage bars to prohibit smoking if the increased tax outweighed any potential business loss from banning smoking.

3. ***Expand smoking bans in public places***. Along the same lines as creating establishment level economic disincentives for risky behaviors, Nevada must implement a state-wide clean indoor air law. These sorts of bans prevent people from smoking indoors, on school campuses, and other areas where non-smokers are exposed to second-hand smoke. States with these regulations have lower percentages of smokers and lower rates of smoking related illness.

4. ***Regulations to limit fats, salts, and sugars in commercially processed food***. A number of major U.S. cities have recently banned transfats. Although there was a great deal of resistance to these efforts initially, residents have found little discernible change in taste, and restaurants have found innovative ways to serve healthier food. These sorts of restrictions lower the rates of high blood pressure, high cholesterol, and heart disease.

5. ***Improve neighborhood walkability***. There are a number of streets in Nevada without walkable sidewalks. This detracts from physical activity and community engagement. Sidewalks enable residents to travel without automobiles and encourage exercise and neighborhood investment.

6. ***Create environments where healthy choices are the default***. Every school and neighborhood should have a playground, and every community should have a park. These are not luxuries. These are essential apparatuses for encouraging exercise and other outdoor activities without fear of crime. All Nevadan residents should also have easy access to healthy food. The corner convenience store should not be the default for grocery shopping, as it currently is in some communities. Community gardens, farmers markets, and grocery stores with fresh food should be available in every neighborhood.

7. ***Expand employee incentives***. Employers can encourage their employees to exercise and eat healthy through "get-fit" campaigns that reward improvements on various health outcomes. When the space allows, employers should provide on-site exercise facilities or subsidize gym memberships. Filling vending machines with nuts, fruits, and other low-fat choices instead of chips and candy bars is also a way to provide opportunities for employees to make healthy choices.

Conclusion

To conclude this report, I would like to quote directly from *The Measure of America, 2010-2011: Mapping Risks and Resilience.2*:

> Social norms change. People who spent their childhoods in the 1970s sliding around unrestrained in the shotgun seat next to their cigarette-wielding mothers and fathers now conscientiously buckle their own children into car safety seats and avoid secondhand smoke even out-of-doors. The doomsday scenarios of those who warn that public health policies will rob individuals of personal liberty simply don't materialize. Fluoridated water was not, it turns out, a prelude to subjugation by communists. A seat belt is not a prison cell. Cigarette taxes are not tyranny. Population-based public health strategies save lives. And they do so in ways that are both cheaper and more humane than trying to put Humpty Dumpty together again.

Appendix

For more information about disease, behavioral risk and social determinants of health, visit the following websites:

National Institutes of Health: http://www.nih.gov/

U.S. Department of Health and Human Services: http://www.hhs.gov/

Centers for Disease Control and Prevention: http://www.cdc.gov/

Robert Wood Johnson Foundation: http://www.rwjf.org/

American Public Health Association: http://www.apha.org/

County Health Rankings: http://www.countyhealthrankings.org/

University of Wisconsin Population Health Institute: http://uwphi.pophealth.wisc.edu/

Healthy People 2020: http://www.healthypeople.gov/2020/default.aspx

American Lung Association: http://www.lungusa.org/

American Diabetes Association: http://www.diabetes.org/

American Cancer Society: http://www.cancer.org/

Southern Nevada Health District: http://www.cchd.org/

National Women's Health Resource Center: http://www.healthywomen.org/

Men's Health Information: http://health.nih.gov/category/MensHealth

Smoking Cessation: http://www.smokefree.gov/

Heart Disease Health Center: http://www.webmd.com/heart-disease/default.htm

CiudadoDeSalud.gov: http://www.cuidadodesalud.gov/enes/

Nevada Department of Health and Human Services: http://dhhs.nv.gov/

Nevada Cancer Institute:
http://www.nevadacancerinstitute.org/education.aspx?id=358

For more information, contact Shannon.Monnat@unlv.edu