Nevada Chronic Disease Prevention and Health Promotion State Plan 2012–2017

Aligning the Agenda to Reduce Chronic Disease in Nevada

Nevada Division of Public and Behavioral Health
Chronic Disease Prevention and Health Promotion Section

6/24/2014

TABLE OF CONTENTS

TABLE OF FIGURES

LETTER FROM NEVADA CHIEF MEDICAL OFFICER

Dear colleagues and fellow Nevadans,

Chronic disease affects everyone. We can all easily recall a family member, neighbor, or colleague who is afflicted with a chronic disease. Chronic disease is more prevalent now than ever in our state's history. Recent estimates show 6 out of 10 Nevadans live with some form of chronic disease. More Nevadans die each year from chronic disease than from all other causes of death *combined.* In 2011, the estimated financial burden from chronic disease on the citizens of Nevada was in excess of $20.3 billion. By 2023, this number is projected to increase to *$45.5 billion*.

The financial impact of chronic disease is alarming; however, financial impact is only part of the issue. The negative physical, psychological, and emotional impacts on Nevada's citizens heightens the problem to a near state of emergency. Perhaps the most upsetting issue relating to chronic disease is that most cases of illness and death are preventable! Everyone can do something to improve the health of Nevadans.

Seventy-five professionals, working in the field of chronic disease across the state, have volunteered their expertise, experience, and leadership to provide recommendations to decrease the burden of chronic disease in Nevada. The Fitness and Wellness Advisory Council, the Chronic Disease Leadership Team, and the Nevada Division of Public and Behavioral Health, Chronic Disease Prevention and Health Promotion Section are dedicated to addressing the burden of chronic disease through the implementation of this plan.

This plan includes recommendations for actions that everyone, from policy makers (members of congress, state and local board members) and educators to medical and dental personnel, can do to help reduce or eliminate chronic disease in Nevada. I believe that with concentrated and cooperative efforts, and by following the recommendations in this plan, the burden of chronic disease in Nevada can be greatly reduced.

This plan, ***Aligning the Agenda to Reduce Chronic Disease in Nevada,*** represents the dedication of Nevada Division of Public and Behavioral Health to reducing the burden of chronic disease on Nevada's citizens. With this letter, I pledge my service and support for this plan.

Sincerely,

Tracey D. Green, MD
Chief Medical Officer,
Nevada Division of Public and Behavioral Health

TECHNICAL NOTES

Behavioral Risk Factor Surveillance System (BRFSS) is a state-based system of health surveys that targets non-institutionalized adults, ages 18 years and older. The BRFSS was established in 1984 by the Centers for Disease Control and Prevention (CDC). Currently, all 50 states, including the District of Columbia, Puerto Rico, and the U.S. Virgin Islands, participate in BRFSS, the largest, ongoing telephone health survey in the world. BRFSS collects information on chronic conditions, health risk behaviors, preventive health practices, and health care access related to chronic disease and injury. The BRFSS has required core modules, optional modules that states and territories can elect to include, and "State-added questions" to address local health issues. Data in this report used Nevada BRFSS data from 2001 to 2013. In 2011, BRFSS weighting methodology changed, and cell phones were added to the sampling framing. Because of these changes, data from 2011–2013 are not directly comparable to those from previous years of BRFSS.

Prevalence estimates are from BRFSS data. All nationwide data used for comparison are the median percent of all 50 states (where applicable) and the District of Columbia. Nationwide 2013 BRFSS data were not available to compare with Nevada prevalence estimates.

Mortality data are from the Office of Vital Statistics, and the age-adjusted rates (per 100,000) are for underlying cause of death. The 2000 U.S. standard population was used for age adjustment. Mortality data for 2013 are preliminary and subject to change.

Nevada population data are from the Nevada State Demographer's office, which was used for computation of age-adjusted death rates.

THE STATE PLAN PROCESS

Significant changes were made over the past three years in the Chronic Disease Prevention and Health Promotion Section (CDPHP) of the Nevada Division of Public and Behavioral Health (NDPBH). The merging of three cancer control programs and the loss of approximately $2 million in funding radically transformed the deliverables of our projects. Additionally, as funding for chronic disease continues to shrink at the local level, and public health priorities shift at the national level, it is critical for Nevada to rethink the way the state conducts business and develop a plan that embodies the changing financial situation and health priorities affecting chronic disease.

The CDPHP Section and the Advisory Council on the State Program for Wellness and the Prevention of Chronic Disease (CWCD) has spent the last 18 months building an integrated strategic chronic disease state plan in an effort to enhance efficiency and expand coordination and collaboration across the state. Between December 2011 and February 2013, several planning meetings and focus groups were held with the CDPHP leadership team, community partners, staff, and administration. In these meetings, the following five focus areas were identified as core functions requiring attention in the state:

1. ***Evaluation and Surveillance –***
   Gather, analyze, and disseminate data and information. Conduct evaluations to inform, prioritize, deliver, and monitor programs and population health.

2. ***Health Education and Promotion –***
   Use all available resources to educate and inform the citizens of Nevada about the best strategies for preventing the development of chronic disease and the best practices for chronic disease management.

3. ***Clinical, Community, and Health Systems –***
   Ensure that communities support and clinics refer patients to programs that improve management of chronic conditions. Implement interventions that ensure those with or at high risk for chronic diseases have access to quality and low-cost community resources to best manage disease conditions and risk.

4. ***Policy, System and Environmental Changes –***

   Promote policy and system change within the physical and institutional environments that advance health and reinforce healthy behaviors (in schools, worksites, and communities).

5. ***Enhanced State Capacity –***

   Enhance statewide chronic disease infrastructure and staff capacity to improve the effective delivery of clinical and preventive services for the early detection of disease and to reduce or eliminate risk factors that propagate disease.

Moving forward, the state will use this plan to expand efforts in these five domains. The CDPHP Section staff and CWCD will no longer focus efforts around a specific disease or program, but rather coordinate efforts that embrace integrated evidence-based strategies that address multiple risk factors and manifestations of chronic disease.

Challenges and Obstacles

Working collaboratively toward coordination has its challenges, and with limited resources and funding, Nevada must embrace coordination. The "one agency-one program" model is no longer effective. Further, by definition, systems change strategies require a more comprehensive and integrated approach. The following are some of the challenges and obstacles associated with the coordination path, and a brief description of the plan for overcoming obstacles:

Lack of Funding

Lack of funding is the largest obstacle faced. For Nevada, state public health funding ranks 51st in the nation (Robert Wood Johnson Foundation, 2011). To subsidize the lack of state funding, the NDPBH has been successful in obtaining a number of federal grants. Nonetheless, $6 million in federal funding is not enough to target population-based outcomes. As a result, current funding sources by categorical diseases will be leveraged for crosscutting efforts. In addition, we will work to leverage resources, expertise, and funding through our collaboration efforts with key community partners.

Lack of Coordination

Traditionally, state and community entities have operated in silos with a singular focus such as diabetes prevention and management or cancer prevention and management. To address this, the CDPHP leadership team, FWAC, and the CDPHP Section staff will create internal workgroups focused on the five domains of the chronic disease state plan. In addition, funding and technical assistance will be provided to community

stakeholders to work on integration efforts related to the goals and objectives of the chronic disease state plan. Furthermore, community champions will be identified to steer strategies linked to the chronic disease state goals addressed in this plan.

Coordination of Communication

Another major challenge is the lack of communication among state and community partners. The coordination and collaboration model brings a significant number of organizations and stakeholders to the table. The Nevada CDPHP Section developed a communication plan to enhance the procedure by which entities, particularly the NDPBH, communicate data, resources, and funding announcements. Key communication strategies included in the plan are the development of a chronic disease electronic LISTSERV, wellness websites, annual policy briefs, surveillance reports, and fiscal reports. Through these communication venues, the State's sister agencies and community partners will also have the ability to highlight and publish their own efforts as needed.

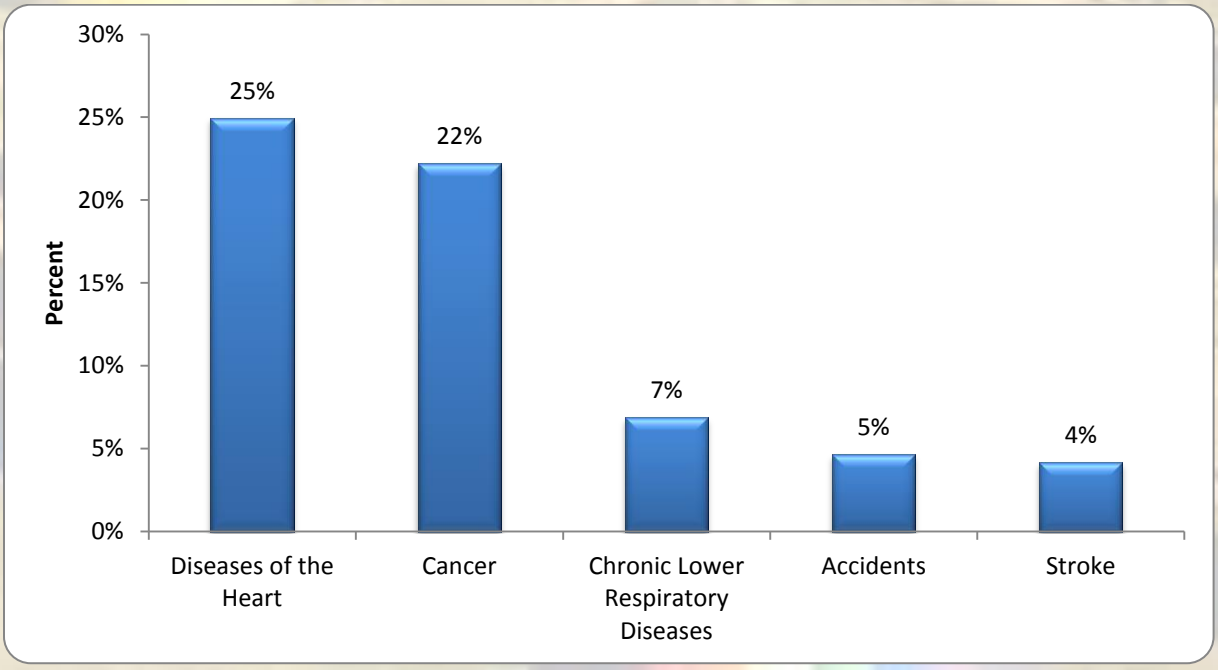
CHRONIC DISEASE IN NEVADA

Chronic disease has a palpable impact on the state of Nevada, its people, and its resources. Chronic disease develops gradually, but once it becomes a noticeable condition, it can be difficult to manage and can pose serious limitations to individuals' lifestyles.

Chronic disease shortens life expectancy and decreases quality of life. People with chronic disease live shorter lives and spend time unable to do the things they want to do.

In 2013, the leading causes of death in Nevada were diseases of the heart, cancer, chronic lower respiratory diseases, accidents, and cerebrovascular diseases (stroke). Diseases of the heart and stroke combined accounted for nearly 1 out of 3 deaths in Nevada in 2013.TThe age-adjusted death rates for diseases of the heart and stroke were 204.3 and 39.9 per 100,000 population respectively.

Figure 1: Leading Causes of Death, Nevada 2013



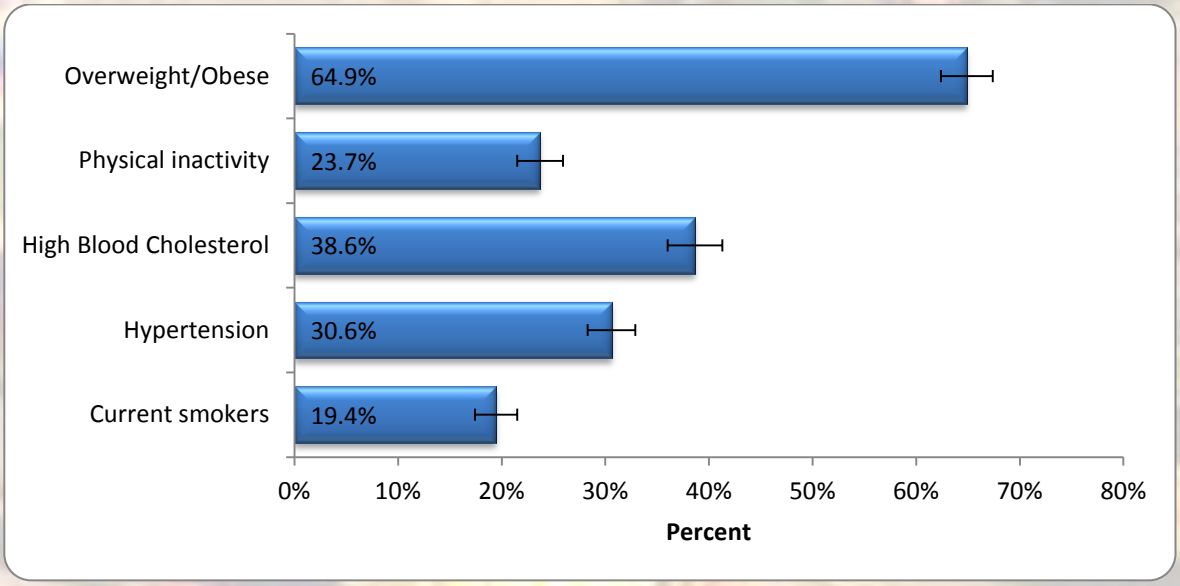
Source: Office of Public Health Informatics and Epidemiology, Nevada State Health Division, 2014.
Note: Mortality data for 2013 are preliminary and subject to change.

Modifiable Risk Factors

Prevention is the most effective solution to the problem of chronic disease. These six modifiable risk factors or behaviors have been directly linked to chronic disease:

1) Physical inactivity
2) Overweight and obesity
3) Tobacco and nicotine use
4) Poor nutrition
5) Hypertension (high blood pressure)
6) Dyslipidemia (high cholesterol)

Figure 2: Prevalence of Risk Factors Associated With Chronic Diseases in Nevada, 2013 BRFSS Data



The coordination model is ideally suited to reducing chronic disease by modifying risk factors, as these risk factors are associated with multiple diseases. For example, smoking and tobacco use puts a person at a much greater risk for heart disease and cancer than non-smokers. Likewise, inadequate physical activity increases a person's risk for heart disease, diabetes, pulmonary disease, and some cancers. Inadequate nutrition puts a person at higher risk for developing arthritis, heart disease, cancer, and diabetes. These modifiable risk factors are components of multiple manifestations of chronic disease. By modifying risk factors, chronic disease will be reduced.

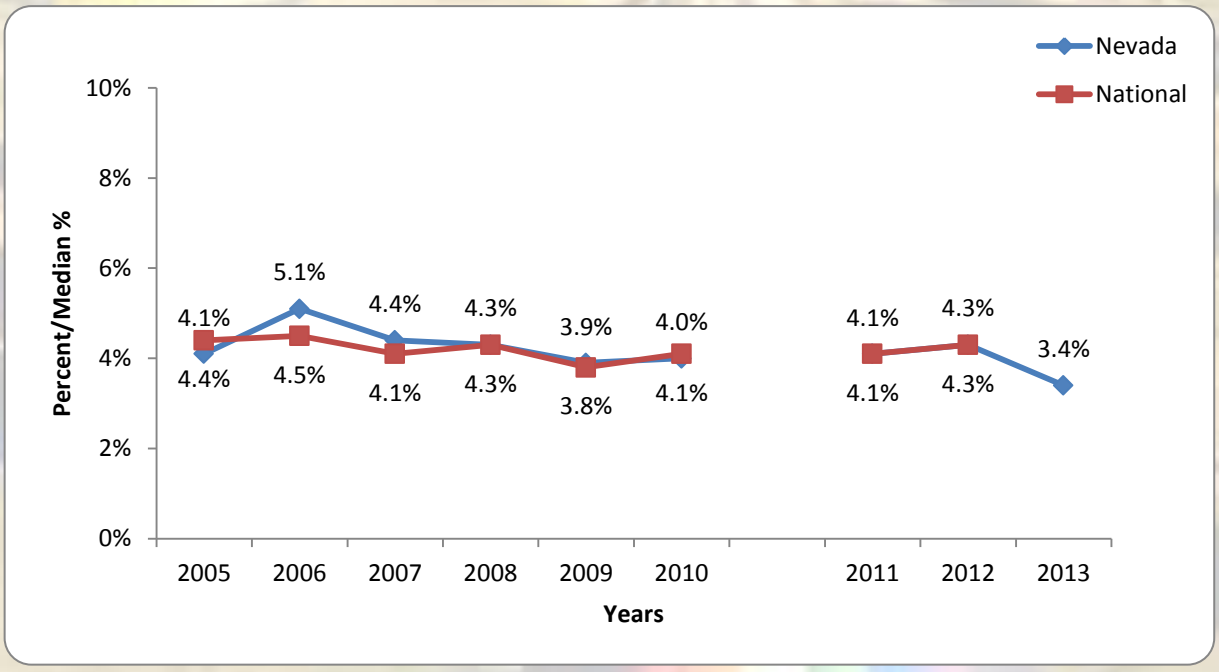
THE BURDEN OF CHRONIC DISEASE IN NEVADA

Coronary Heart Disease

Coronary heart disease (CHD) is the leading cause of morbidity and mortality among adults in the United States (U.S.). Risk factors for CHD include high blood pressure, high blood cholesterol, Type 2 Diabetes, cigarette smoking, physical inactivity, unhealthy diet, being overweight or obese, heavy drinking, and genetics.[2] Adopting a healthy lifestyle can prevent most chronic diseases, including CHD.

In 2012, 4.3 percent of Nevadans reported having ever been told by a doctor, nurse, or other health professional that they had coronary heart disease, compared to the nationwide median percent of 4.3. In 2013, 3.4 percent of Nevadans reported having ever been told by a doctor, nurse, or other health professional they had coronary heart disease.

Figure 3: Coronary Heart Disease, Nevada vs. Nationwide, 2005–2013 BRFSS Data

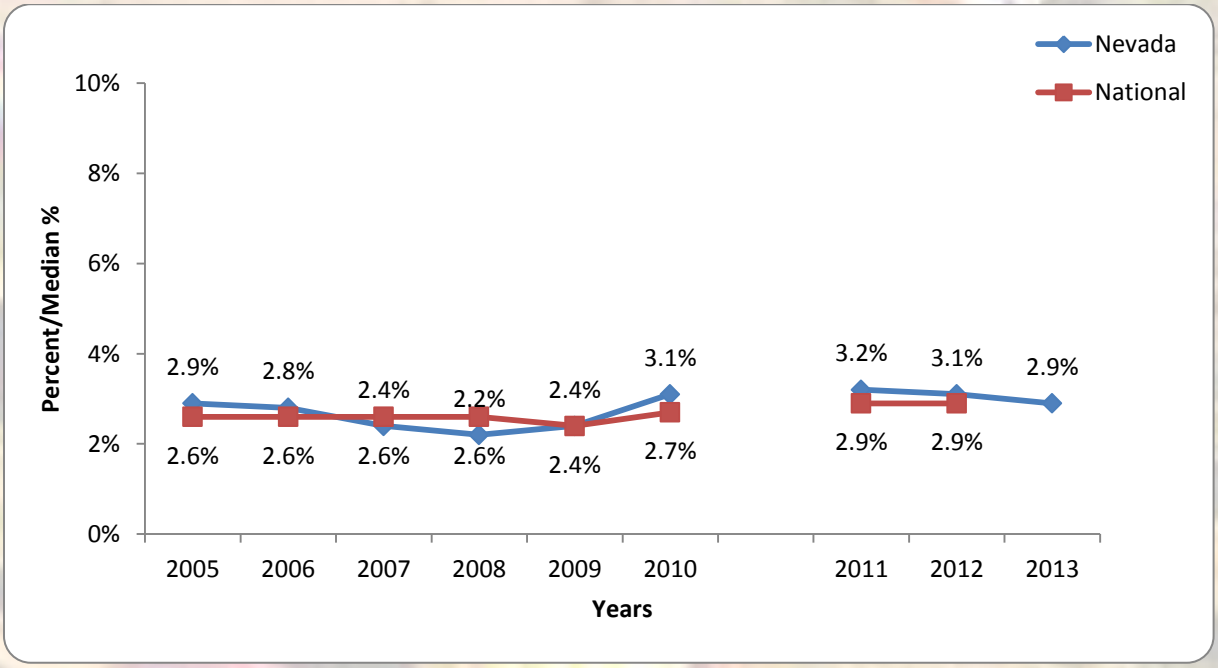


Note: BRFSS methodology changed in 2011; therefore, it may be misleading to compare statistics before and after the methodology change.

Stroke

Stroke is the third leading cause of death in the U.S.[3] and the fifth leading cause of death in Nevada (figure 1). In 2012, 3.1 percent of Nevadans reported having ever been told by a doctor, nurse, or other health professional that they had stroke, compared to the nationwide median percent of 2.9. In 2013, 2.9 percent of Nevadans reported having ever been told by a doctor, nurse, or other health professional they had stroke.

Figure 4: Stroke, Nevada vs. Nationwide, 2005-2013 BRFSS Data



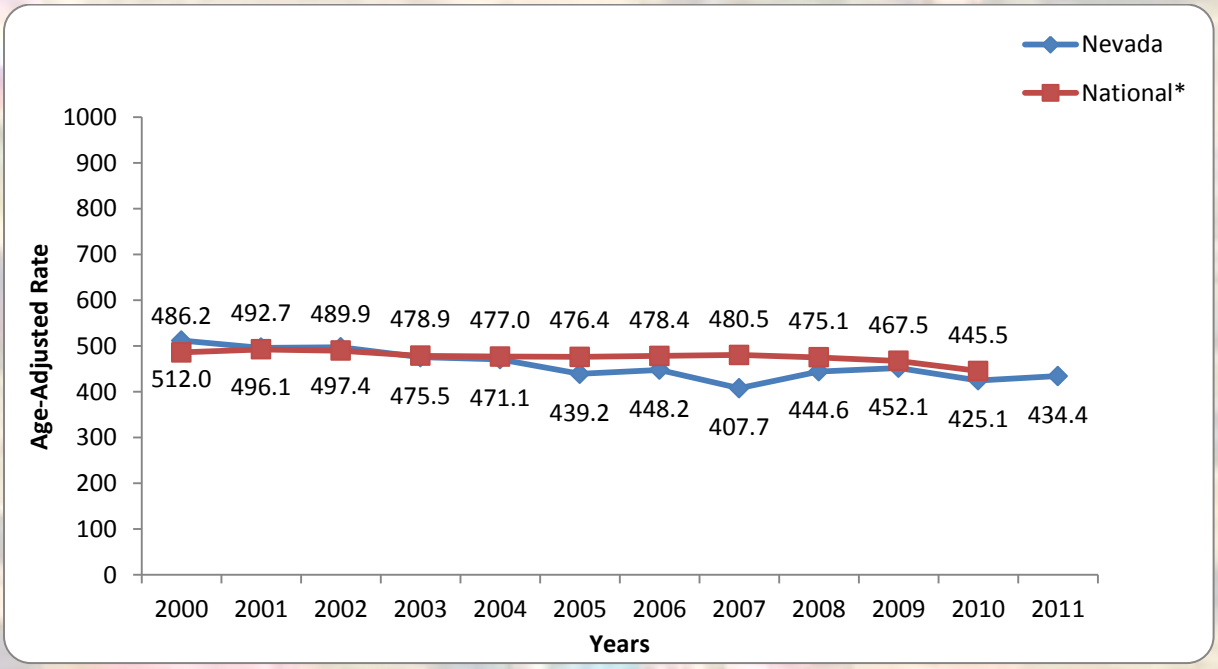
Note: BRFSS methodology changed in 2011; therefore, it may be misleading to compare statistics before and after the methodology change.

Cancer

In 2013, cancer was the leading cause of death in Nevada (figure 1). Some modifiable risk factors for cancer include being overweight or obese, physical inactivity, and consumption of red meat.[4]

The age-adjusted incidence rate for all cancer sites for Nevadans was 425.1 compared to 445.5 per 100,000 population nationwide. Nevada'a and national overall cancer incidence rates have been steady for the last decade.

Figure 5: Cancer Incidence for All Sites, Nevada vs. Nationwide, 2000–2011



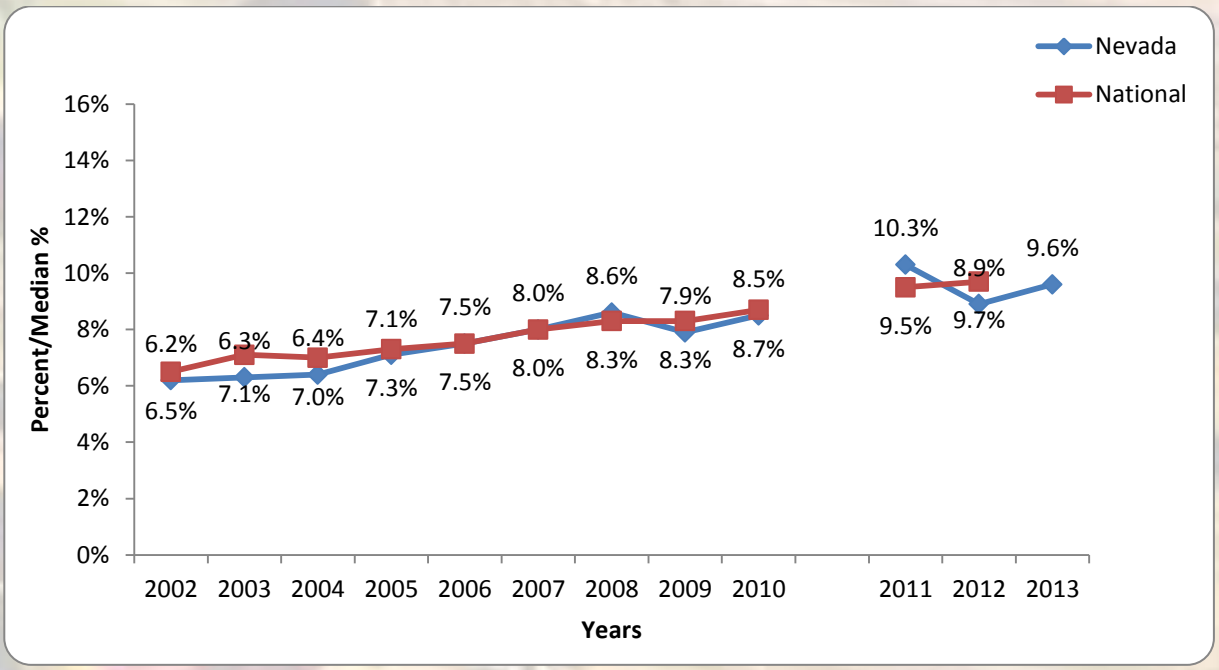
***Source**: U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2010 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute; 2013. Available at www.cdc.gov/uscs.
Note: Rates are per 100,000 and are age adjusted to the 2000 U.S. standard population.

Diabetes

Diabetes is a chronic disease that affects about 25.8 million people (8.3 percent) in the U.S. Diabetes us a major cause of heart disease and stroke. In 2012, diabetes was the seventh and eighth leading cause of death in the U.S. and Nevada respectively.[3] In addition, diabetes is the leading cause of kidney failure, non-traumatic lower-limb amputations, and new cases of blindness among adults in the U.S.[5]

In 2012, 8.9 percent of Nevadans reported having ever been told by a doctor, nurse, or other health professional they had diabetes, compared to the nationwide median percent of 9.7. In 2013, 9.6 percent of Nevadans reported having ever been told by a doctor, nurse, or other health professional they had diabetes.

Figure 6: Diabetes, Nevada vs. Nationwide, 2002–2013 BRFSS Data



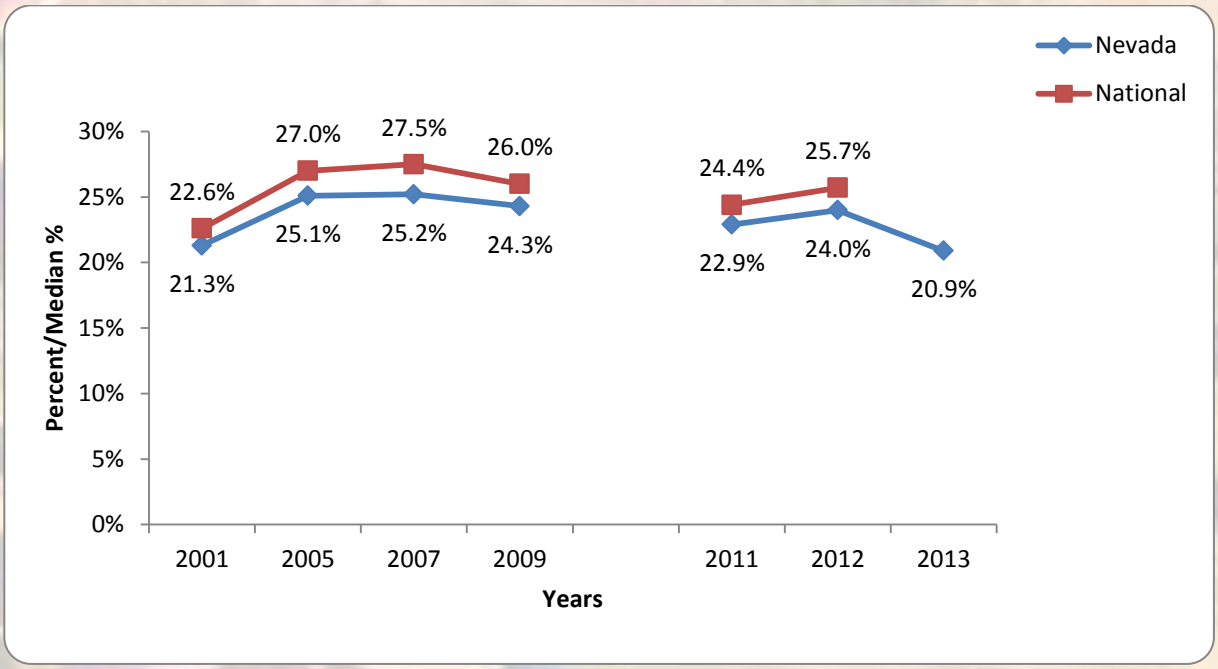
Note: BRFSS methodology changed in 2011; therefore, it may be misleading to compare statistics before and after the methodology change.

Arthritis

Arthritis is a form of joint inflammation that varies in severity and causes stiffness and pain. Physical activity and a healthy body weight are important in managing arthritis pain and stiffness.[6]

In 2012, 24 percent of Nevadans reported having ever been told by a doctor, nurse, or health professional they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia, compared to the nationwide median percent of 25.7. In 2013, 20.9 percent of Nevadans reported having ever been told by a doctor, nurse, or health professional they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.

Figure 7: Arthritis, Nevada vs. Nationwide, 2001–2013 BRFSS Data



Note: BRFSS methodology changed in 2011; therefore, it may be misleading to compare statistics before and after the methodology change.

Chronic Disease Risk Factors

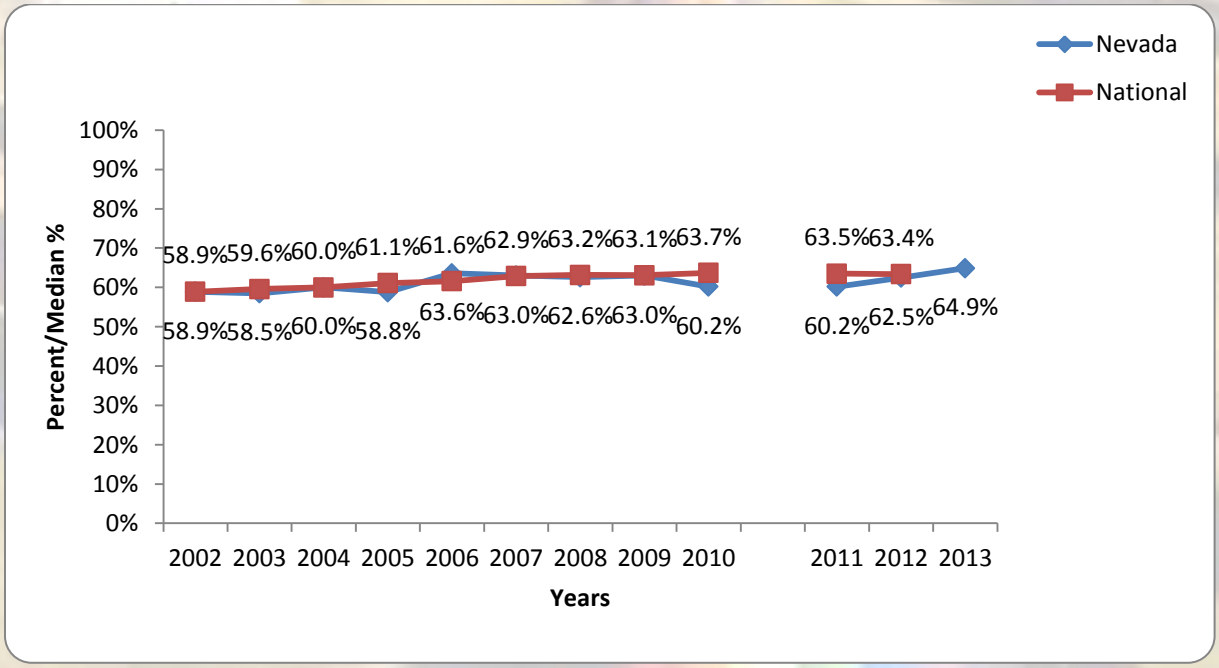
Modifiable risk factors are responsible for much of the illness, suffering, and early death related to chronic disease. The World Health Organization has estimated that if the major risk factors for chronic disease (listed below) were eliminated, at least 80 percent of all heart disease, stroke and Type 2 Diabetes would be prevented, and more than 40 percent of cancer cases would be prevented.[7]

Obesity

Being overweight or obese is a risk factor for heart disease, Type 2 Diabetes, and other chronic conditions. Body mass index (BMI) is calculated from a person's height and weight. BMI is categorized into the following four groups: underweight (BMI less than 18.5), healthy weight (BMI between 18.5 and 24.9), overweight (BMI between 25 and 29.9), and obese (BMI equal to or greater than 30).[8]

In 2012, 62.5 percent of Nevadans were overweight or obese, compared to the nationwide median percent of 63.4. In 2013, 64.9 percent of Nevadans were overweight or obese.

Figure 8: Overweight or Obese, Nevada vs. Nationwide 2002–2013 BRFSS Data



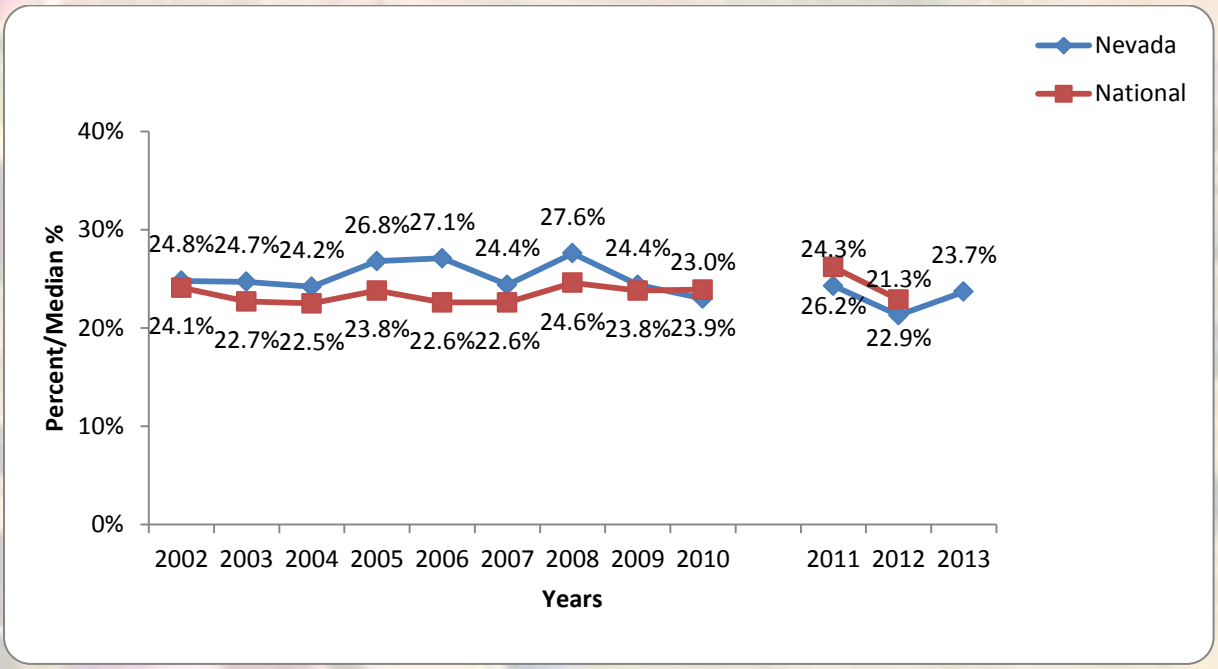
Note: BRFSS methodology changed in 2011; therefore, it may be misleading to compare statistics before and after the methodology change.

Physical Inactivity

Sedentary behavior is a risk factor for early death, heart disease, stroke, Type 2 Diabetes, depression, and some cancers. Regular physical activity reduces the risk of these chronic conditions. It is recommended that adults do at least 2.5 hours (150 minutes) of moderate physical activity such as brisk walking per week.[9]

In 2012, 21.3 percent of Nevadans reported they did not engage in any physical activity or exercise in the past month, compared to the nationwide median percent of 22.9. In 2013, 23.7 percent of Nevadans reported they did not engage in any physical activity or exercise in the past month.

Figure 9: Physical Inactivity in the Past Month, Nevada vs. Nationwide, 2002–2013 BRFSS Data

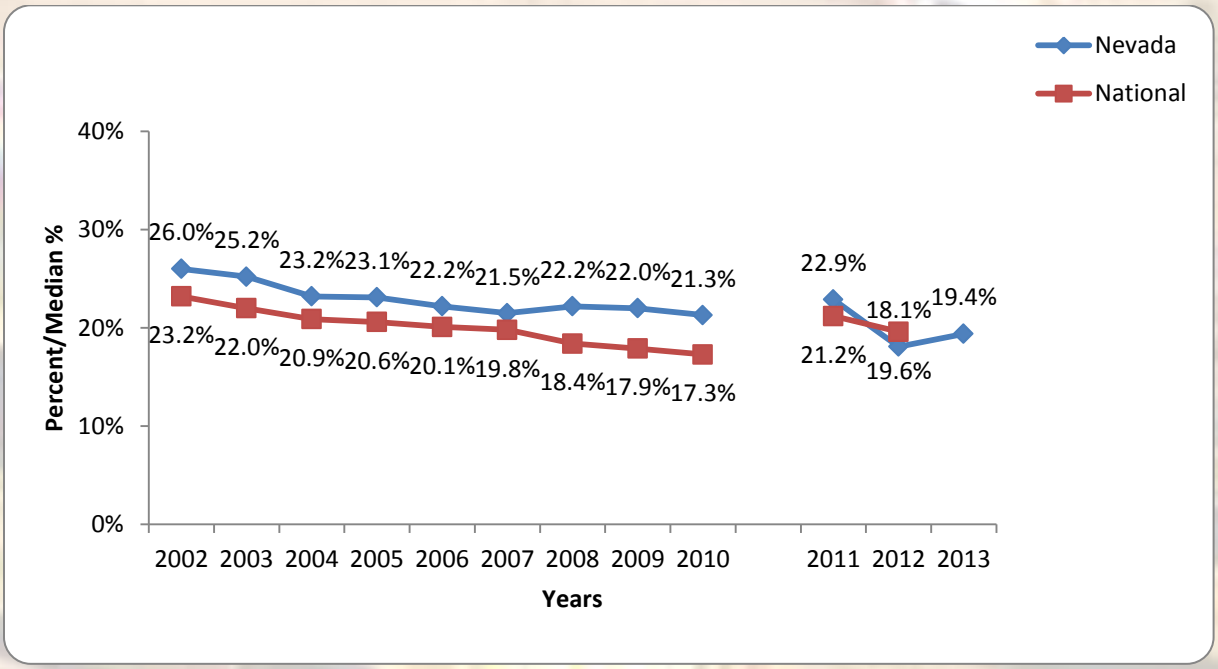


Note: BRFSS methodology changed in 2011; therefore, it may be misleading to compare statistics before and after the methodology change.

Tobacco

Cigarette smoking is the leading cause of preventable death in the U.S., with over 443,000 deaths each year attributable to cigarette smoke.[10] In 2012, 18.1 percent of Nevadans were current smokers, compared to the nationwide median percent of 19.6. In 2013, 19.4 percent of Nevadans were current smokers.

Figure 10: Current Smokers, Nevada vs. Nationwide 2002–2013 BRFSS Data



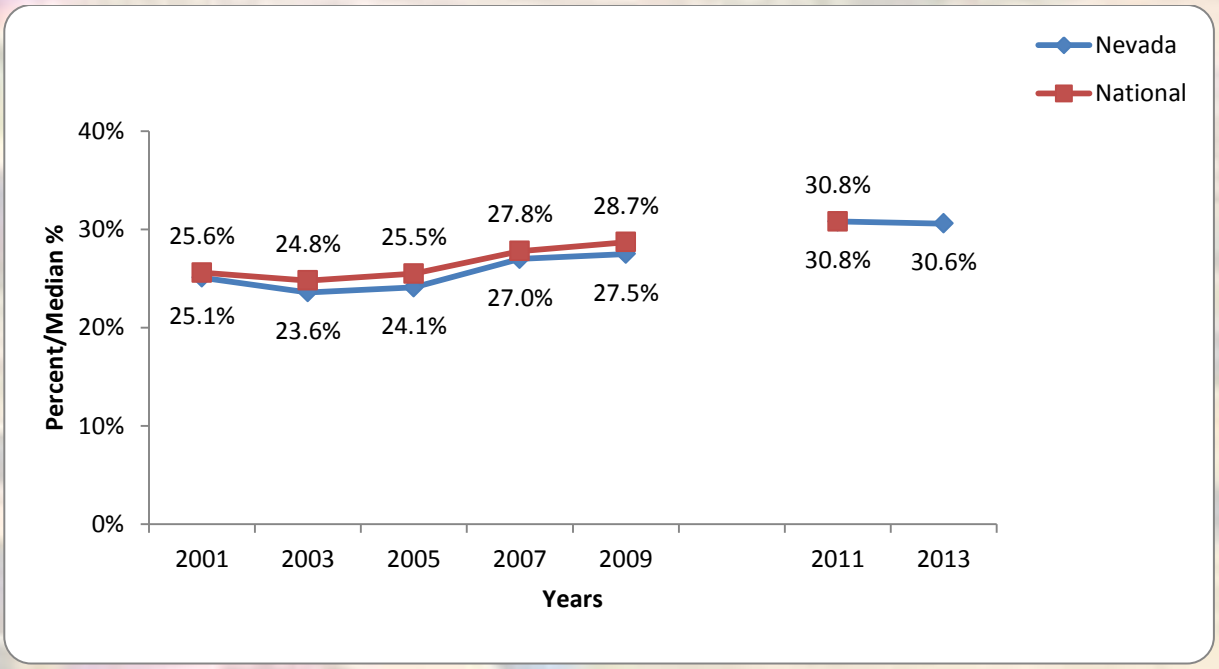
Note: BRFSS methodology changed in 2011; therefore, it may be misleading to compare statistics before and after the methodology change.

Hypertension

High blood pressure (hypertension) is a risk factor for heart attack, stroke, and kidney disease. If untreated, high blood pressure can lead to death. The new 2014 recommended blood pressure goal for adults aged 18 years is less than 140/90 mm Hg.[11]

In 2011, 30.8 percent of Nevadans reported having ever been told by a doctor, nurse, or other medical professional their blood pressure was high, compared to the nationwide median percent of 30.8. In 2013, 30.6 percent of Nevadans reported having ever been told by a doctor, nurse, or other medical professional their blood pressure was high.

Figure 11: Hypertension, Nevada vs. Nationwide, 2001–2013 BRFSS Data



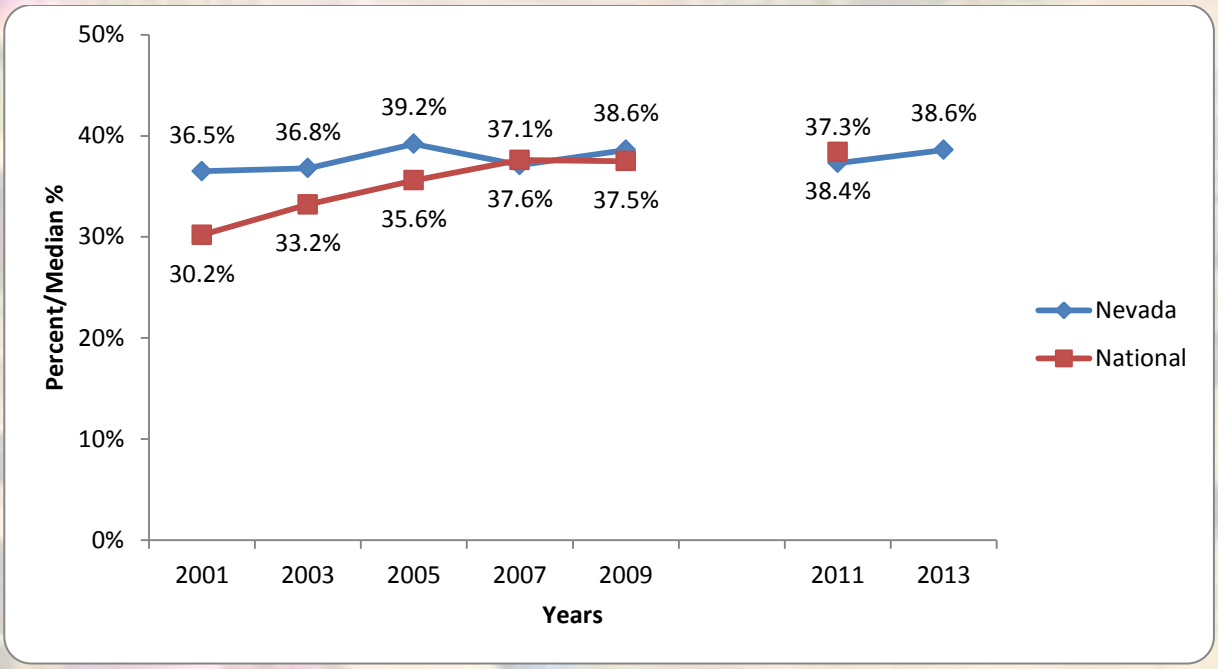
Note: BRFSS methodology changed in 2011; therefore, it may be misleading to compare statistics before and after the methodology change.

High Blood Cholesterol

High blood cholesterol is a major risk factor for heart disease. Age, sex, genetics, and diet also determine a person's blood cholesterol levels.[2]

In 2011, 37.3 percent of Nevadans reported having their blood cholesterol checked and having ever been told by a doctor, nurse, or other medical professional it was high, compared to the nationwide median percent of 38.4. In 2013, 38.6 percent of Nevadans reported having their blood cholesterol checked and having ever been told by a doctor, nurse, or other medical professional it was high.

Figure 12: High Blood Cholesterol, Nevada vs. Nationwide, 2001–2013 BRFSS Data



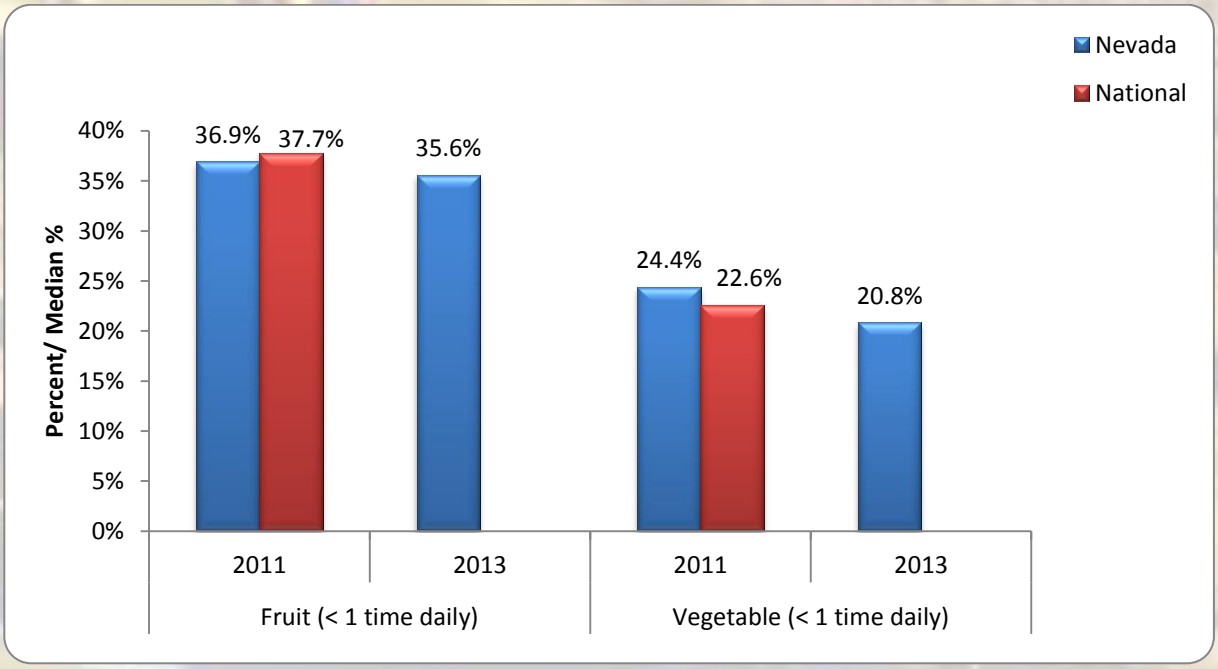
Note: BRFSS methodology changed in 2011; therefore, it may be misleading to compare statistics before and after the methodology change.

Nutrition

Fruits and vegetables are a very important component of our diet because they lower the risk of many chronic conditions such as heart disease, Type 2 Diabetes, and some cancers. The 2010 dietary guidelines urge Americans to increase vegetable and fruit intake. In addition, consumption of a variety of vegetables—especially dark-green, red, and orange—is recommended because these vegetables are loaded with antioxidants that promote good health.[12]

In 2011, 36.9 percent of Nevadans reported consuming fruit fewer than one time daily, and 24.4 percent reported consuming vegetables fewer than one time daily. This is compared to the nationwide median percentages of 37.7 for consumption of fruit and 22.6 for consumption of vegetables.

Figure 13: Fruit and Vegetable Consumption, Nevada vs. Nationwide, 2011 and 2013 BRFSS Data

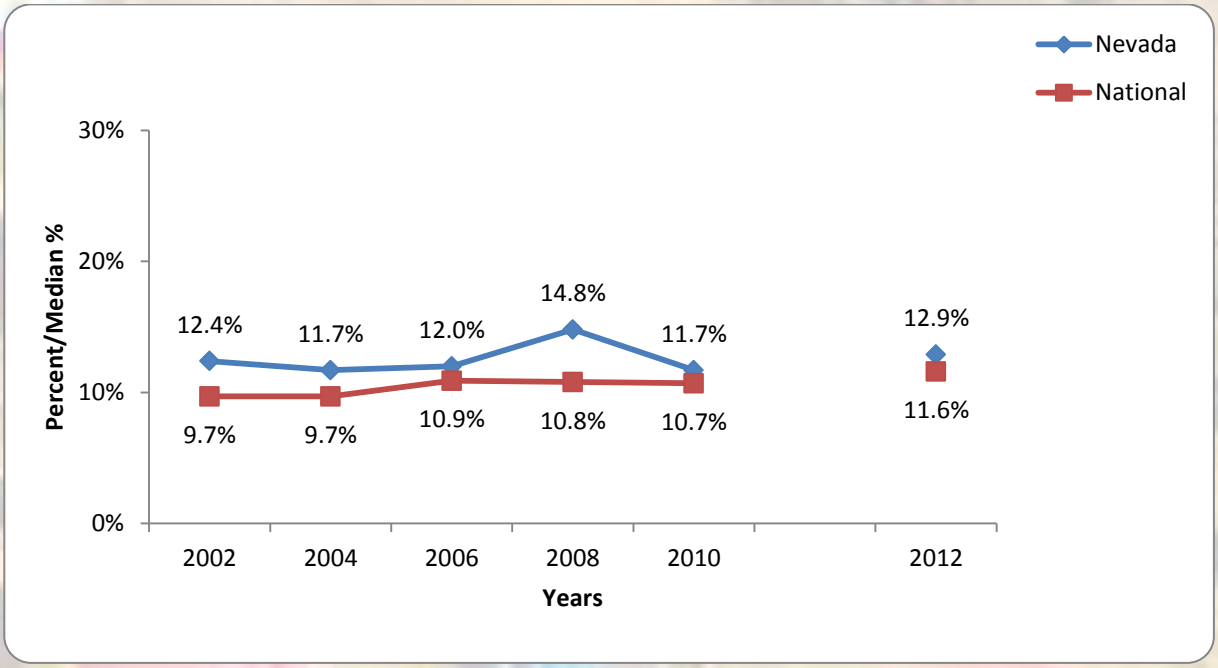


Oral Health

Oral health is integral to an individual's overall health. Common dental diseases such as dental caries and periodontal disease affect important bodily functions, including eating and swallowing, processes that are vital to the body's ability to take in nutrients.[13]

In 2012, 12.9 percent of Nevadans reported they last visited a dentist or dental clinic (including specialists such as orthodontists) for any reason five or more years ago, compared to the nationwide median percent of 11.6.

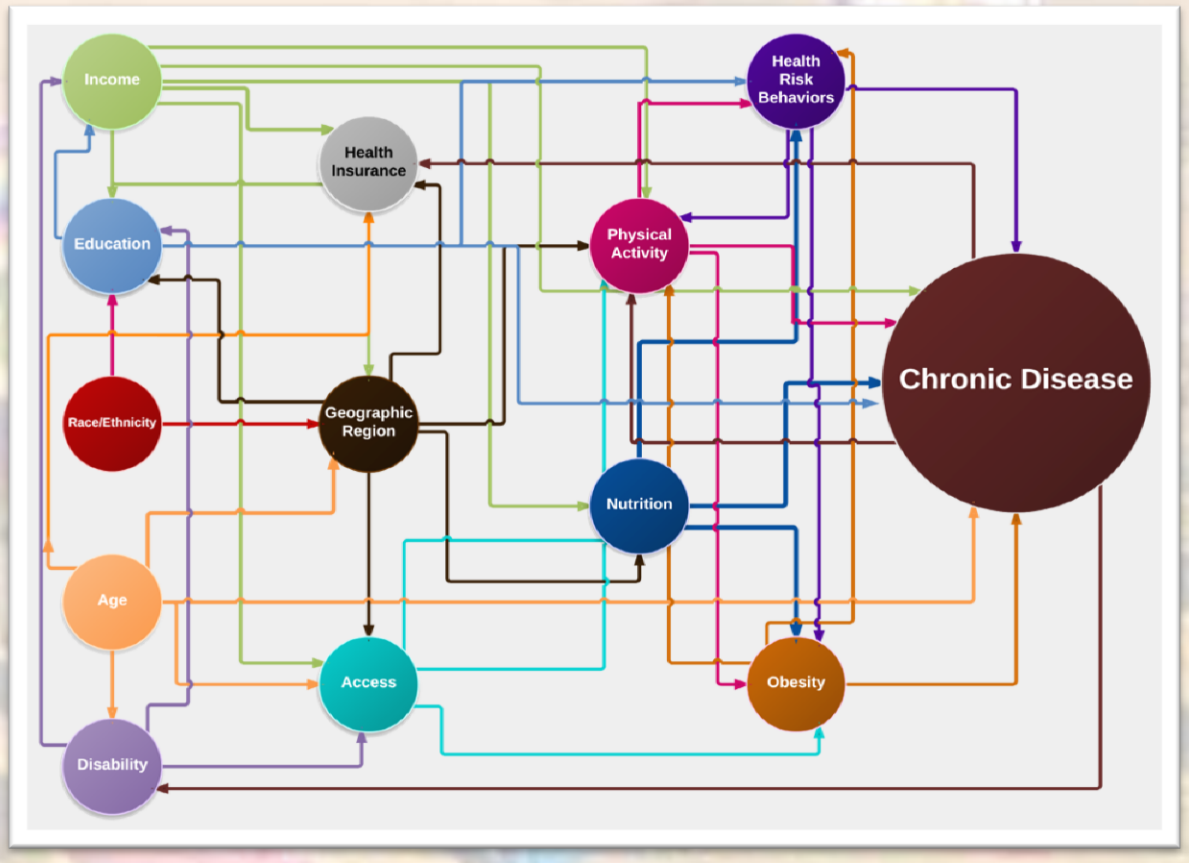
Figure 14: Last Visited a Dentist or Dental Clinic Five or More Years Ago, Nevada vs. Nationwide, 2002–2013 BRFSS Data



Note: BRFSS methodology changed in 2011; therefore, it may be misleading to compare statistics before and after the methodology change.

Chronic Disease Risk Disparities

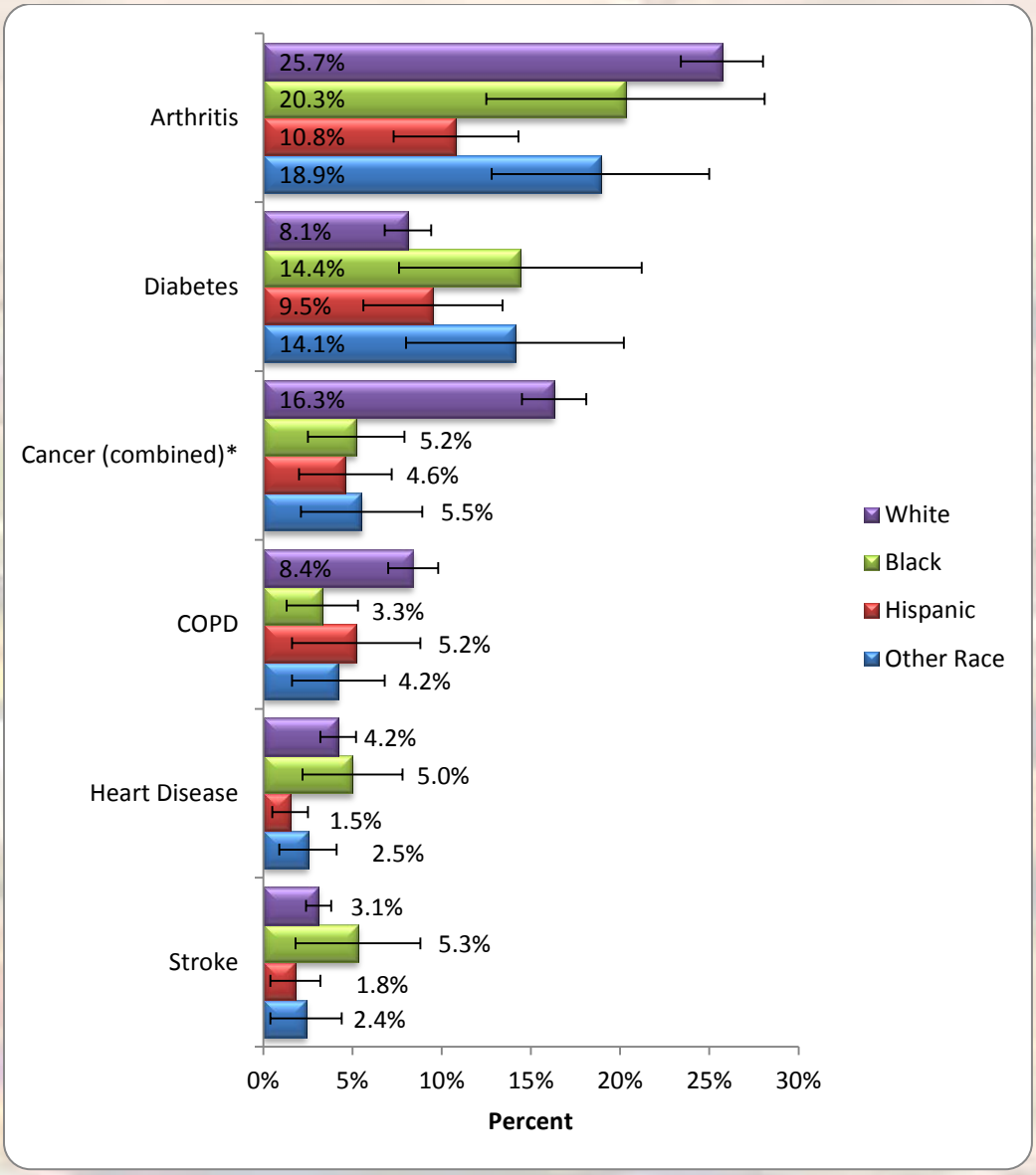
Health disparities are differences in the burden of disease (incidence, prevalence, mortality, etc.) and other adverse health conditions or outcomes between specific population groups. The social factors affecting health are well known, and the relationships can be complex, as shown in the following figure:



Source: Whitehill, J.; Flores, M.; and Mburia-Mwalili, A. (2013). *The Burden of Chronic Disease in Nevada – 2013.* Chronic Disease Prevention and Health Promotion. Carson City: Nevada State Health Division.

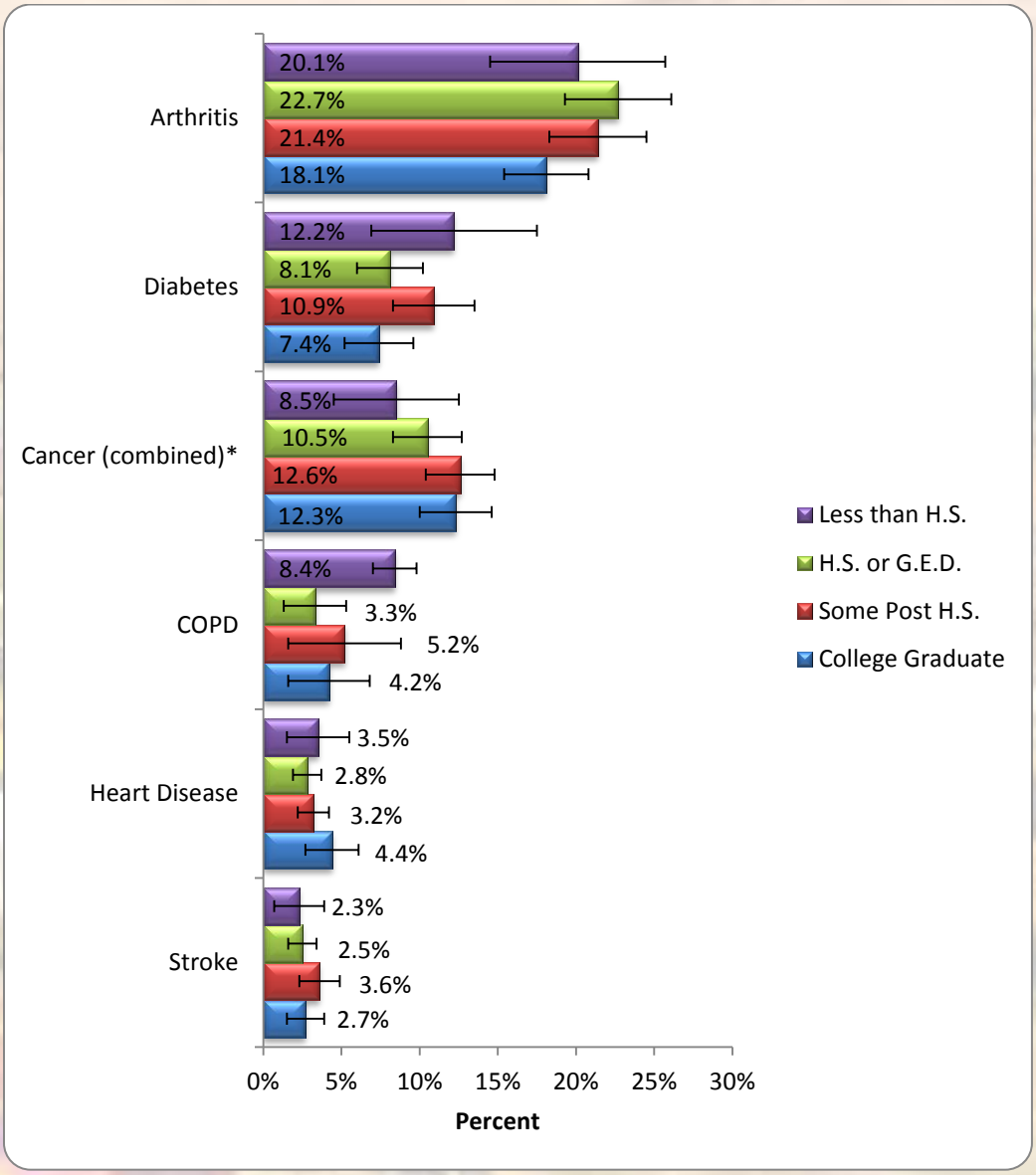
Despite improvement in overall U.S. health, disparities still exist among culturally diverse populations. Members of these groups tend to have poorer health or die prematurely and are more prone to certain chronic diseases, compared to Whites. Furthermore, there is a strong relationship between chronic disease prevalence and level of education. The more education an individual attains, the less likely he or she is to have a chronic disease. Conversely, the less education an individual attains, the more likely he or she is to have a chronic disease. Oddly, there is a higher prevalence of chronic disease among populations with some post-high school education than in those with just a high school diploma or equivalent. The following diagrams illustrate some key findings regarding health disparities and inequalities in Nevada:

Figure 15: Chronic Disease Prevalence by Race, Nevada, 2013 BRFSS Data



***Note**: "Cancer (combined)*" refers to skin and other types of cancer.

Figure 16: Chronic Diseases by Education Level, Nevada, 2013 BRFSS Data



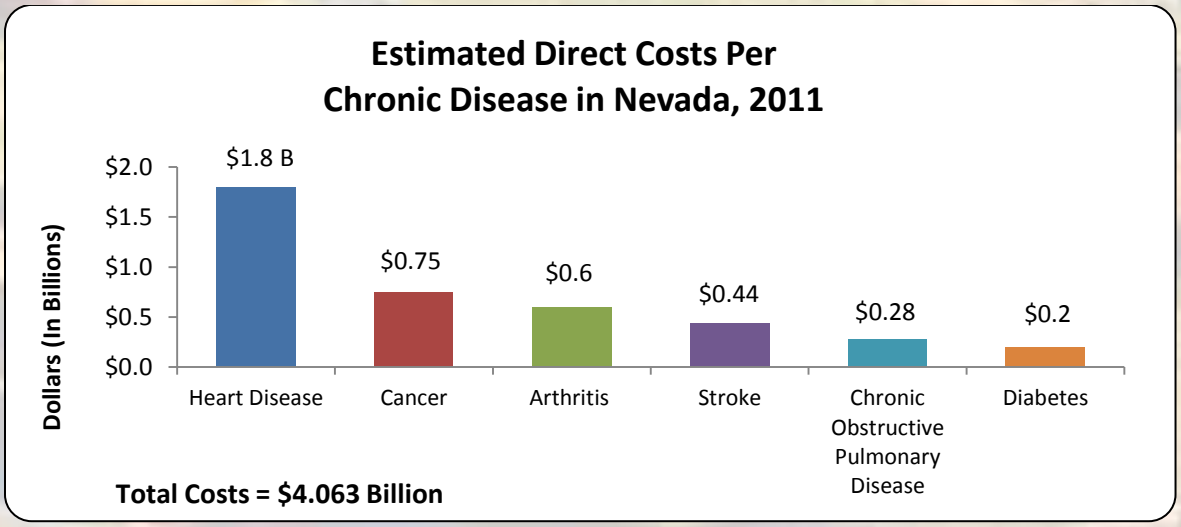
***Note**: "Cancer (combined)*" refers to skin and other types of cancer.

THE ECONOMIC BURDEN OF CHRONIC DISEASE

The rising rate of chronic disease is a crucial but frequently ignored contributor to increasing medical expenditures. Nevada faces staggering financial costs associated with chronic disease despite the relatively low population density. This section estimates the current and future treatment costs and loss of productivity for the following six major chronic conditions: arthritis, combined cancers, chronic obstructive pulmonary disease, diabetes, heart disease, and stroke.[14] The estimates are conservative because 1) the focus is only on the costs attributed directly to the treatment of each disease and ignores the costs of co-morbidities and secondary effects, and 2) the costs of related health conditions are excluded, as well as costs for individuals in nursing homes, prisons, and other institutions (Wu & Green, 2000).

Direct Costs:

The following diagram illustrates the total direct costs associated with chronic disease, based on total charges incurred by a patient for the duration of a hospital stay:

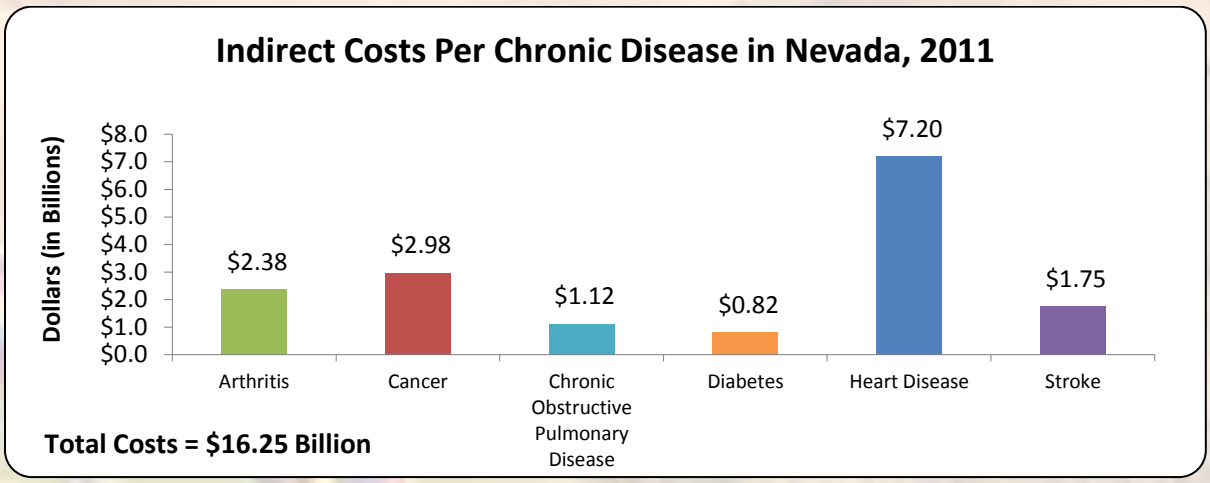


Source: Whitehill, J.; Flores, M.; and Mburia-Mwalili, A. (2013). *The Burden of Chronic Disease in Nevada – 2013.* Chronic Disease Prevention and Health Promotion. Carson City: Nevada State Health Division.

Indirect Costs

Direct costs are not the only representation of economic burden chronic diseases place on Nevada; indirect costs represent the productivity losses due to illness and premature death (Nicholson, 2006). The DeVol, Ross and Bedroussian study[14], which is endorsed by the CDC and used by the Milken Institute, calculated that productivity losses are approximately four times

greater than the direct medical cost of chronic disease. Years of potential life lost (YPLL) for the population in Nevada was calculated for persons under the age of 75 for 2011. Diseases of the heart, and malignant neoplasms account for over 64,000 total years lost in Nevada annually.



Source: Whitehill, J.; Flores, M.; and Mburia-Mwalili, A. (2013). *The Burden of Chronic Disease in Nevada – 2013.* Chronic Disease Prevention and Health Promotion. Carson City: Nevada State Health Division.

Presenteeism

Good health is a vital component of individual well-being, and it also plays a large role in employee productivity. Presenteeism occurs when ill or injured employees go to work to avoid taking sick leave and do not perform well. Nicholson et. al., reported that output loss due to presenteeism is immense, and with some diseases it can be as high as fifteen times greater than absenteeism, which is defined as work missed due to sick days (Nicholson, 2006). The chart below depicts the estimated total economic burden as follows: direct costs (calculated in previous burden document), indirect costs (using CDC-approved DeVol equation of four times direct costs), and total costs (the sum of direct and indirect costs). Also shown is the projected total estimated economic burden for Nevada for 2023 if nothing is changed or implemented to prevent or focus on reducing the incidence of chronic diseases.

Total Economic Burden in Nevada			
	Direct Costs	Indirect Costs	Total Estimated Economic Burden
2003	$1,900,000,000	$7,500,000,000	$9,400,000,000
2011*	$4,062,820,904	$16,251,283,616	$20,314,104,520
2023	$9,100,000,000	$36,400,000,000	$45,500,000,000

Source: Milken Institute, The Economic Burden of Chronic Disease on Nevada, 2007.
Analysis used the Medical Expenditure Panel Survey (MEPS) data from 2003, the most recent year available at time of analysis.
*Numbers calculated from Economic Burden of NV section

CHRONIC DISEASE STATE PLAN

The CWCD and the CDPHP Section have identified goals to improve, manage, and prevent chronic disease in Nevada over the next five years. These goals are based on Healthy People 2020 objectives and are centered on these five core functions identified through our gap analysis:

1. Evaluation and Surveillance
2. Health Education and Promotion
3. Clinical, Community, and Health Services
4. Policy, Systems, and Environmental Changes
5. Leadership and Management Capacity

The CDPHP Section and its partners will incorporate clinical and preventive initiatives, environmental and system changes, health promotion, and surveillance efforts to eradicate the epidemic of chronic disease in Nevada. Since many reports tout the important roles staff and leadership play in ensuring the delivery of quality and culturally competent medical care and health promotion services, Nevada also seeks to foster training and capacity-building activities to support the infrastructure, development, and sustainability of a strong and effective chronic disease workforce in Nevada.

Nevada will take a multipronged, comprehensive approach toward incorporating these five priorities into the state's healthcare systems. As such, these priorities coincide with national standards and priorities set by Healthy People 2020, the Centers for Disease Control, and the U.S. Preventive Services Task Force. By following evidence-based practices promoted by national champions, the goals and strategies in the state plan will have an impact across multiple chronic diseases and risk factors. For example, by enhancing clinical and health services through Community Health Workers, we hope to increase access to chronic disease care and prevention activities for underserved populations in Nevada.

The success of the state plan will be evaluated using evaluation measures and surveillance activities that utilize local and national data sets such as Behavioral Risk Factor Surveillance System, Youth Risk Behavioral Surveillance System, and community assessments. The findings will be published and disseminated to community members through circulation strategies such as LISTSERVs, newsletters, and educational briefs. Moreover, CDPHP staff will report quarterly to the CWCD for guidance. As our advisors and community champions, CWCD will ensure the state is moving forward in making progress toward these goals over the next five years.

Evaluation, Epidemiology, and Surveillance

Goal	Objectives	Strategy	Activity	Community Stakeholders
Evaluation and surveillance data and information are widely used by policy makers, decision makers and practitioners to address the burden of chronic disease in Nevada.	*Increase the delivery of accurate, accessible, and actionable chronic disease information from 5 to 20 by 2017.*	1. Establish, maintain, and/or enhance statewide chronic disease surveillance systems, including credible primary and secondary data sources such as BRFSS, YRBSS, and state cancer and stroke registry. 2. Establish and increase the use of health communication strategies and health information technology (HIT) to improve population health outcomes and health care quality.	• Strengthen internal and external protocols on the collection, analysis, and dissemination of chronic disease data • Actively work with the local health authorities, hospitals, clinics, and other providers on HIT and HER. • Identify funding for surveillance and evaluation activities. • Create a heart disease and stroke registry. • Create a sealant data registry.	• Nevada State Office of Public Health Informatics and Epidemiology • Division of Care Financing and Policy- Medicaid • Washoe County Health District • Southern Nevada Health District • Carson City Health and Human Services • Tobacco Quitline • Federally Qualified Health Centers • University of Reno, Nevada • University of Nevada, Las Vegas • Cancer Registry
		3. Support the use of and access to electronic health records (EHR) to achieve improved outcomes in patient engagement, care coordination, and population health.	• Engage local health authorities to establish protocols on data sharing, collection, and dissemination. • Link with hospitals and clinics to establish a plan for the use and dissemination of health report cards on chronic disease through the use of HIT and EHR.	
		4. Create chronic disease information for use by key stakeholders to make the case for chronic disease.	• Create data-driven chronic disease and risk-factor-burden reports. • Create reports for taking action on social determinants of health to address health equity. • Create a statewide chronic disease surveillance plan. • Publish chronic disease evaluation reports.	

Health Education and Promotion

Goal	Health Objectives	Strategy	Activity	Community Stakeholders
Nevada will benefit from improvements in chronic disease risk factors (high blood pressure, obesity, smoking, caries, A1C, etc.) by applying health education and promotion activities.	• *Reduce adult obesity in Nevada from 23% to 22% by 2017.* • *Reduce the rate of adult smoking prevalence from 21% to 20% by 2017.*	1. Integrate surveillance and evaluation information into programmatic and policy decision making to improve performance.	• Use surveillance, evaluation, and research information for press releases, advocacy briefs, and publications that highlight chronic disease and key risk factors.	• Washoe County Health District • Southern Nevada Health District • Carson City Health and Human Services • Office of Public Health Informatics and Epidemiology
		2. Prioritize, integrate, and align health promotion tools into ongoing state activities to raise community awareness and build community demand for chronic disease action.	• Create a statewide chronic disease LISTSERV. • Engage in social media strategies such as Facebook, Twitter, etc. • Design a wellness website to promote worksite wellness among businesses and health establishments. • Create and disseminate reports addressing risk factor burden for chronic disease (oral health, cancer, diabetes, etc.). • Create and disseminate reports for taking action on social determinants of health to address healthy equity.	
		3. Invest in statewide television, radio, and social media to address and highlight the burden of key chronic disease risk factors such as tobacco, nutrition, and physical activity.	• Leverage resources and funding for health promotion activities. • Conduct media campaigns to promote the use of age-appropriate screening and early detection of tooth decay, pre-diabetes, and breast, cervical, and colorectal cancer. • Conduct radio and television media campaigns that promote physical activity, nutrition, and tobacco cessation.	

Clinical and Community Health Services

Goal	Health Objective	Strategy	Activity	Community Stakeholders
The provision of clinical and health preventive services in Nevada will be institutionalized with better health outcomes, better care, and lower cost.	• *Decrease the percentage of smokers from 22 to 20 by 2017.* • *Increase the percentage adults with diabetes who receive self-management training from 52.7 to 55 by 2017.* • *Maintain the number of children aged 6 to 9 years with dental caries to 49.0% by 2017.* • *Increase the number of children who have received a dental sealant to 3860 by 2017.* • *Increase the proportion of women age 40 and older reporting having had a mammogram from 69.9% to 81% by 2017.* • *Increase the proportion of Nevada women who receive a cervical cancer screening from 78% to 93% by 2017.* • *Increase the proportion of people aged 50 or over who report receiving either a fecal occult blood test or a flexible sigmoidoscopy or colonoscopy from 60% to 65% by 2017.*	1. Establish communication, coordination, and funding to facilitate the provision of clinical services affecting chronic disease. 2. Train community organizations and health entities to effectively recruit key population groups to receive clinical preventive services.	• Promote and provide, through the Helpline, resources on the provisions of coaching, self-help materials, and nicotine replacement to smokers trying to quit. • Promote and fund age-appropriate oral health screenings, and breast, cervical, and colorectal cancer screening services. • Conduct training on gold standards, evidence-based practices, and promising practices.	• Nevada Primary Care Association • Nevada Quitline • Federally Qualified Health Centers • Access to Health Care • Cancer Coalition • Nevada Advisory Council for Oral Health
		3. Convene experts, state agencies, insurers, community organizations, advocates, and stakeholders to identify a process to expand self-management classes and the use of community health workers.	• Promote utilization of chronic disease self-management classes. • Develop a quality and technical assistance center. • Establish school-based health centers. • Establish a statewide community health worker association, and standardize training curriculum and certification program.	• Nevada State Department of Education • Nevada System of Higher Education • Nevada Primary Care Association
		4. Promote policy, system, and environmental change within the health care system that endorse the chronic care model and patient-centered care.	• Pursue policies that support clinician reimbursement for provisions of clinical and preventive services, including patient education and counseling. • Engage in the adoption and use of electronic health records to achieve improved outcomes in patient engagement, care coordination, and population health.	• Division of Care Financing and Policy – Medicaid • Federally Qualified Health Centers • HealtHIE Nevada

Policy, Systems, and Environmental Changes

Goal	Health Objective	Strategy	Activity	Community Stakeholders

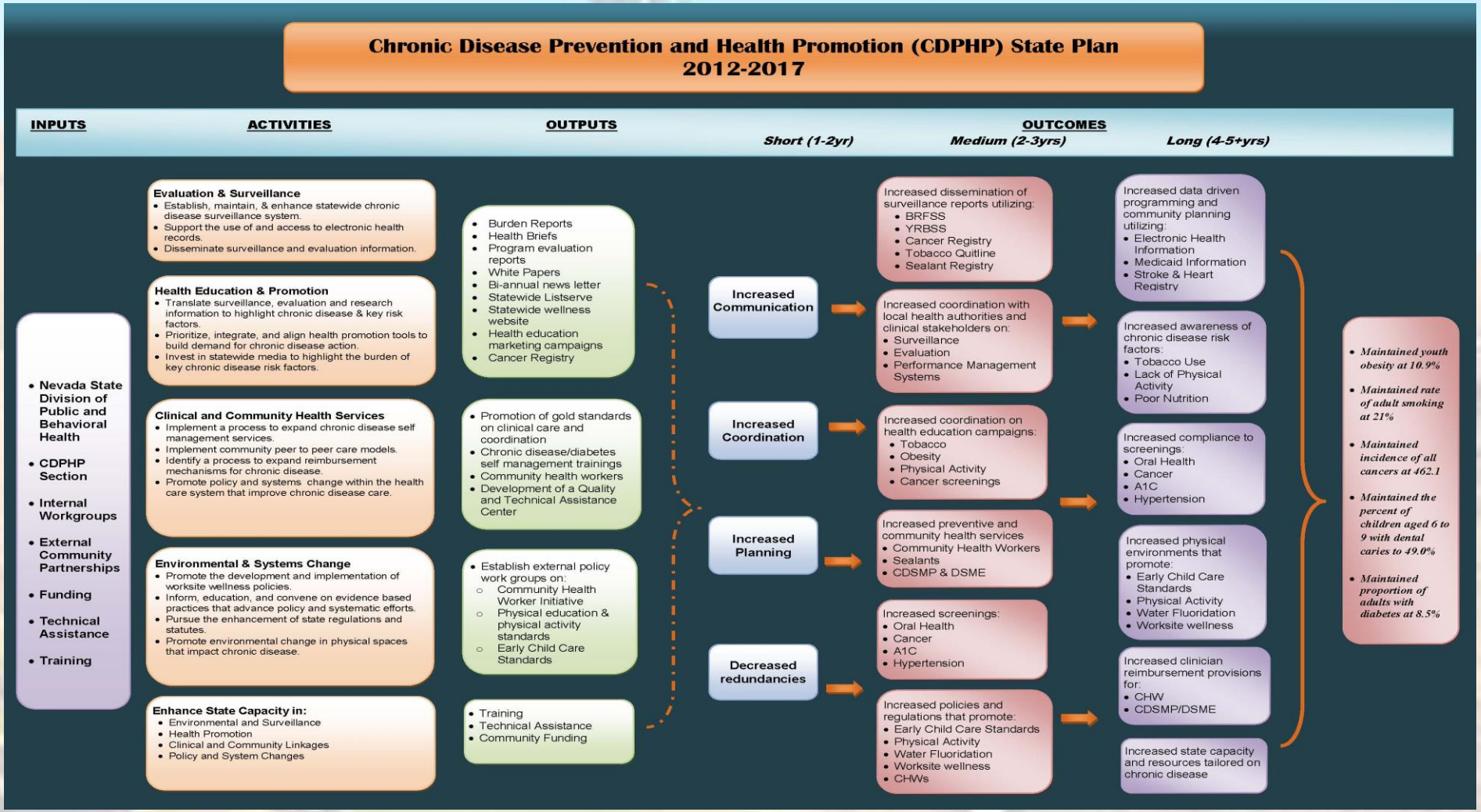
Nevada will have physical and social environments that promote healthy eating and physical activity and that denounce tobacco products.	• *Increase policies that encourage physical activity, physical education, and recess activities in schools from 0 to 3 by 2017.*
	• *Increase the number of national health and safety performance standards in childcare settings from 3 to 47.*
	• *Decrease the proportion of nonsmokers reporting overall exposure to secondhand smoke from 75% to 74%.*
	• *Decrease youths' exposure to tobacco product advertisement from 72% to 70% by 2017.*
		Promote the development and implementation of comprehensive worksite wellness policies that include tobacco-free and breastfeeding-friendly environments, healthy food and beverage choices, and physical activity opportunities.	• Implement with businesses worksite wellness efforts relating to:
			  ○ Physical activity
			  ○ Breastfeeding
			  ○ Healthy vending
			  ○ Tobacco-free policies
				• Washoe County Health District
				• Southern Nevada Health District
				• Carson City Health and Human Services
				• Nevada Department of Environmental Protection
				• Public Employees' Benefits Program

		1. Engage, convene, and provide resources and support to community members and policy and decision-makers as a means to increase the number of regulations and policies that promote healthy and safe environments.	• Provide training and resources that move forward evidence-based and best practices on built environments.
			  ○ Utilization of electronic benefit transfers at farmers' markets
			  ○ Availability and marketing of healthy and affordable foods
			• Provide training to early childcare centers to improve regulations that increase physical activity and nutrition efforts.
			• Provide training to K–12 schools to improve regulations that increase physical activity and nutrition efforts.
			• Expand healthy vending protocols.
			• Enhance efforts that push for tobacco-free businesses, academic campuses, parks, and multi-unit housing.
			• Enhance projects that promote standards relating to:
			  ○ Physical activity
			  ○ Breastfeeding
			  ○ Nutrition
				• Nevada Department of Education
				• Washoe County Health District
				• Southern Nevada Health District
				• Carson City Health and Human Services
				• Nevada Child Care Advisory Committee
				• Division of Environmental Protection

Leadership and Management Capacity

Goal	Objective	Strategy	Activity	Stakeholder
Nevada will have the human resources, leadership, and infrastructure to implement the chronic disease plan.	• *Increase statewide chronic disease funding levels from $5 million to $8 million by 2017 to ensure federal, state, tribal, and local health agencies have the necessary infrastructure and capacity in place.* • *Increase staff development training sessions from 5 to 10 by 2017, to ensure federal, state, tribal, and local health agencies have the necessary infrastructure and capacity in place.*	EXTERNAL: 1. Build community capacity by providing funding, resources, training, technical assistance, and support to local health departments and high-level community organizations.	• Establish bi-annual training (in-person or via webinar). • Pursue funding opportunities on behalf of community partners. • Align community stakeholders with the integrated chronic disease state plan.	• Washoe County Health District • Southern Nevada Health District • Carson City Health and Human Services • NACDD • NACCHO • ASTDD
		INTERNAL: 2. Build internal capacity by providing staff training, resources, and enhancement of operations in the CDPHP Section and community services bureau.	• Align NDPBH staff with the integrated work plan • Establish large group quarterly training (in-person or via webinar) • Provide personalized training when possible	

Logic Model


Chronic Disease Prevention and Health Promotion (CDPHP) State Plan 2012-2017
INPUTS
ACTIVITIES
OUTPUTS
OUTCOMES
Short (1-2yr)
Medium (2-3yrs)
Long (4-5+yrs)
Nevada State Division of Public and Behavioral Health
CDPHP Section
Internal Workgroups
External Community Partnerships
Funding
Technical Assistance
Training
Evaluation & Surveillance
Establish, maintain, & enhance statewide chronic disease surveillance system.
Support the use of and access to electronic health records.
Disseminate surveillance and evaluation information.
Health Education & Promotion
Translate surveillance, evaluation and research information to highlight chronic disease & key risk factors.
Prioritize, integrate, and align health promotion tools to build demand for chronic disease action.
Invest in statewide media to highlight the burden of key chronic disease risk factors.
Clinical and Community Health Services
Implement a process to expand chronic disease self management services.
Implement community peer to peer care models.
Identify a process to expand reimbursement mechanisms for chronic disease.
Promote policy and systems change within the health care system that improve chronic disease care.
Environmental & Systems Change
Promote the development and implementation of worksite wellness policies.
Inform, education, and convene on evidence based practices that advance policy and systematic efforts.
Pursue the enhancement of state regulations and statutes.
Promote environmental change in physical spaces that impact chronic disease.
Enhance State Capacity in:
Environmental and Surveillance
Health Promotion
Clinical and Community Linkages
Policy and System Changes
Burden Reports
Health Briefs
Program evaluation reports
White Papers
Bi-annual news letter
Statewide Listserve
Statewide wellness website
Health education marketing campaigns
Cancer Registry
Promotion of gold standards on clinical care and coordination
Chronic disease/diabetes self management trainings
Community health workers
Development of a Quality and Technical Assistance Center
Establish external policy work groups on:
Community Health Worker Initiative
Physical education & physical activity standards
Early Child Care Standards
Training
Technical Assistance
Community Funding
Increased Communication
Increased Coordination
Increased Planning
Decreased redundancies
Increased dissemination of surveillance reports utilizing:
BRFSS
YRBSS
Cancer Registry
Tobacco Quitline
Sealant Registry
Increased coordination with local health authorities and clinical stakeholders on:
Surveillance
Evaluation
Performance Management Systems
Increased coordination on health education campaigns:
Tobacco
Obesity
Physical Activity
Cancer screenings
Increased preventive and community health services
Community Health Workers
Sealants
CDSMP & DSME
Increased screenings:
Oral Health
Cancer
A1C
Hypertension
Increased policies and regulations that promote:
Early Child Care Standards
Physical Activity
Water Fluoridation
Worksite wellness
CHWs
Increased data driven programming and community planning utilizing:
Electronic Health Information
Medicaid Information
Stroke & Heart Registry
Increased awareness of chronic disease risk factors:
Tobacco Use
Lack of Physical Activity
Poor Nutrition
Increased compliance to screenings:
Oral Health
Cancer
A1C
Hypertension
Increased physical environments that promote:
Early Child Care Standards
Physical Activity
Water Fluoridation
Worksite wellness
Increased clinician reimbursement provisions for:
CHW
CDSMP/DSME
Increased state capacity and resources tailored on chronic disease
Maintained youth obesity at 10.9%
Maintained rate of adult smoking at 21%
Maintained incidence of all cancers at 462.1
Maintained the percent of children aged 6 to 9 with dental caries to 49.0%
Maintained proportion of adults with diabetes at 8.5%

CONCLUSIONS AND RECOMMENDATIONS

Chronic disease affects all Nevadans, either directly or indirectly. These conditions are largely preventable and can be significantly reduced if not eliminated completely. The physical, mental, and financial burden from these diseases is enormous. *Everyone* can help reduce the burden of chronic disease. Below is a list of the things different people and organizations can do to eliminate the burden of chronic disease in our state:

Individual	What You Can Do
Policymaker (elected or appointed official)	Adopt policies that target the following: • Increased infrastructure for physical activity (parks, recreation centers, sidewalks, bike lanes, etc.) • Increased venues that prohibit smoking • Decreased accessibility to tobacco • Easier access to healthy foods (e.g., subsidies to local farms)
Medical Professional (Physician, Dentist, etc.)	• Spend more time on health education and prevention-based medicine. • Refer patients to programs with an emphasis on prevention (i.e., smoking cessation classes and nutrition programs). • Perform more health screenings (e.g., for cancer). • Be sure your cancer cases are reported in a timely manner. • Refer and provide access to clinical trials. • Make earlier referrals to hospice for end-of-life care.
Nevada Citizen	• Avoid tobacco and secondhand smoke. • Encourage your children and youth to be active, and be active with them. • Eat a nutritious and balanced diet, and maintain a healthy weight. • Increase your daily physical activity at home and at work.
Organizations/Groups	
Educational Institution	• Improve access to healthy foods. • Expand the amount of time dedicated to physical activity/education. • Include cancer prevention messages in health classes. • Provide healthy foods in vending machines and cafeterias. • Make entire campus a tobacco-free environment.

Insurance Company	• work with businesses that have wellness/health promotion programs • Give financial incentives to individuals who ➢ exercise regularly ➢ don't smoke/use tobacco ➢ maintain a healthy weight
Hospital/Medical/Dental Organization	• Do case reporting on chronic diseases in a timely manner (e.g., cancer, oral health). • Embed Community Health Workers. • Link clinical practices to community. • Collaborate to sponsor community screening and education programs. • Reward providers who provide preventive services to patients. • Work with insurance companies/Medicare, and Medicaid to improve access to care.
Employer	• Give incentives to employees who ➢ exercise regularly ➢ don't smoke ➢ maintain a healthy weight • Start a worksite wellness/health promotion program. • Allow employees extra time for exercise/physical activity. • Establish a tobacco-free workplace policy. • Provide healthy foods in vending machines and cafeterias. • Collaborate with hospitals to host health screening events. • Provide health insurance coverage.
Government Agency/Local Public Health Department	• Develop incentive programs for training/retaining qualified healthcare professionals, especially in rural Nevada. • Fund programs that support health promotion/disease prevention, increase/improve infrastructure. • Provide chronic disease awareness information and data to citizens and groups. • Collaborate in community-based coalitions. • Work with physicians to promote preventive programs and case reporting. • Implement policy and environmental changes to reduce chronic disease. • Assure access to care for uninsured and underinsured.
Community-based Organization	• Provide cancer awareness information to constituents. • Promote cancer screening among clients. • Encourage participation in clinical trials. • Collaborate to provide community prevention programs.

APPENDIX A – CDPHP SECTION ORGANIZATION CHART

Division of Public & Behavioral Health
Bureau of Child, Family and Community Wellness
Chronic Disease Prevention & Health Promotion (CDPHP) Section
June 19, 2014

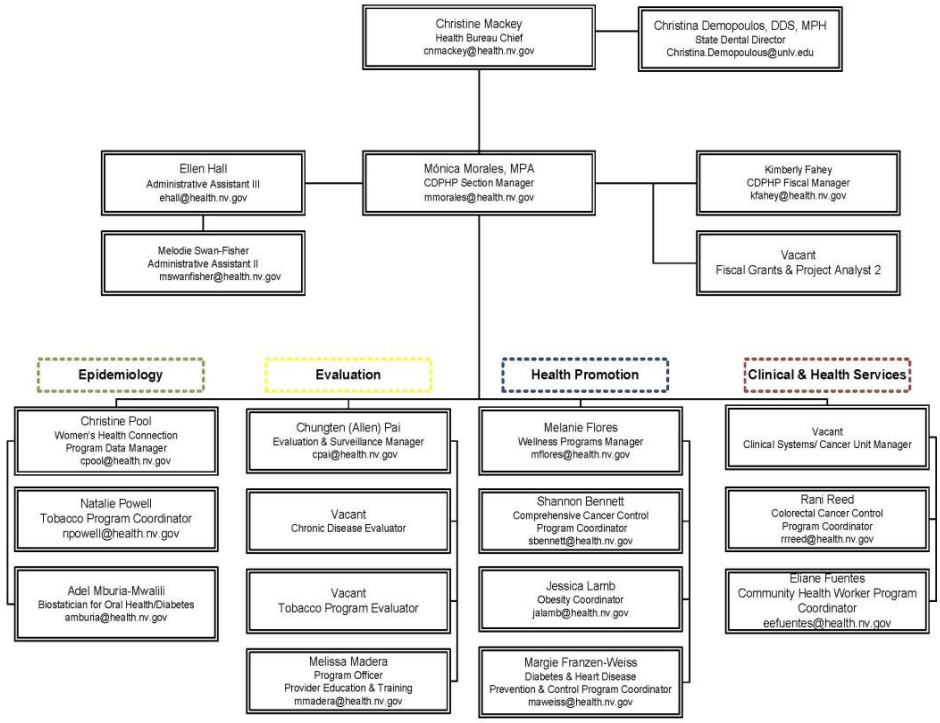
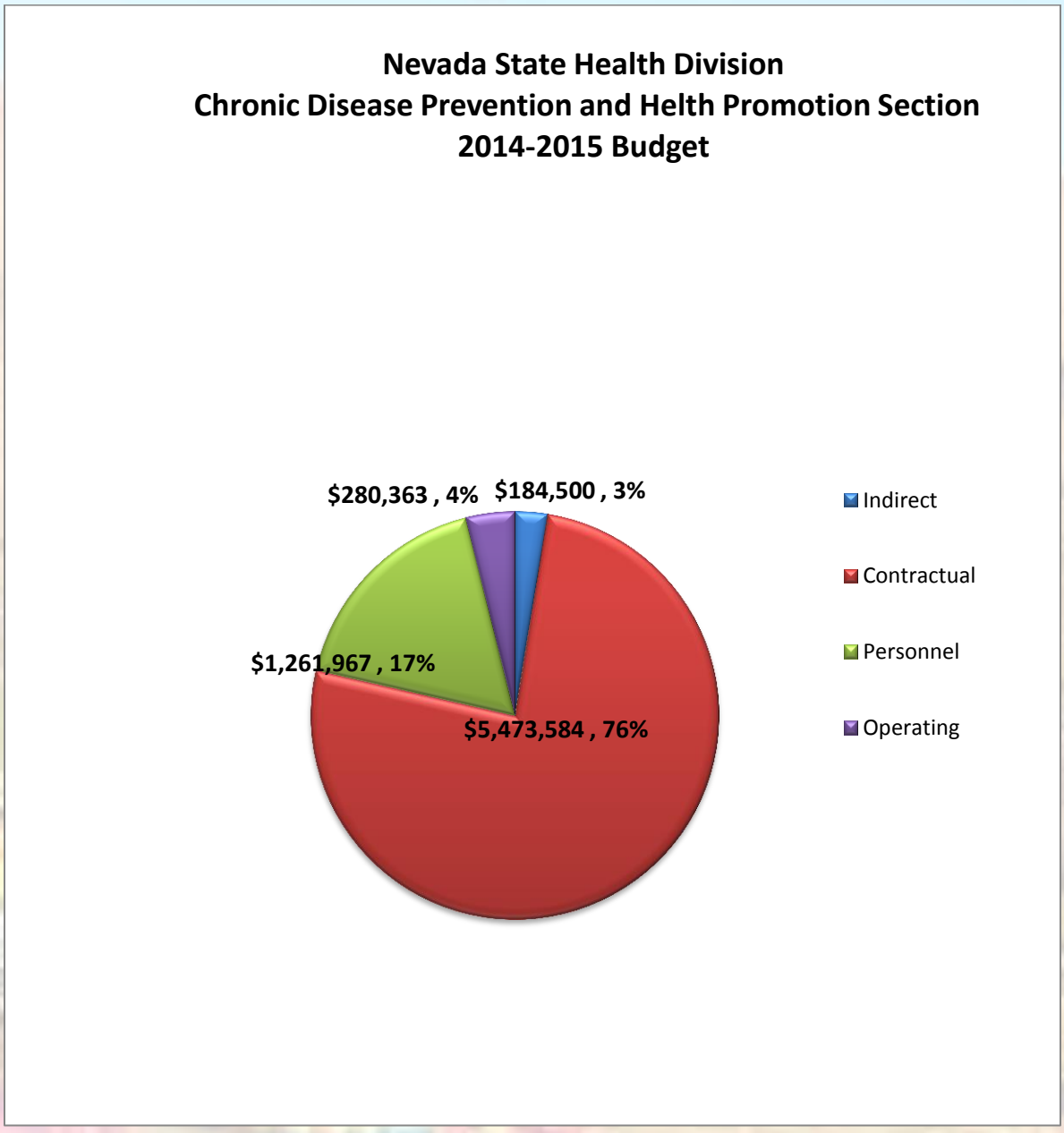


Chart 1

APPENDIX B – CDPHP 2013–2014 Funding

The pie chart below depicts the Chronic Disease Prevention and Health Promotion Section budget as of **October 2014**. The total budget is **$7,200,414.00.**



The table below provides the funding breakdown of the Chronic Disease Prevention and Health Promotion Section programs and how they support these efforts.

Grant	Operating (travel, supplies, trainings)	Personnel (staff salaries)	Contractual (Community) (subgrants, contracts)	Indirect (internal charges)	Total
Community Health Worker	$12,987.00	$47,966.00	$294,385.00	$3,695.00	**$359,033.00**
Tobacco Control and Prevention	$26,644.00	$203,636.00	$741,378.00	$24,469.00	**$1,996,127.00**
Healthy Funds for Nevada	$3,875.00	$11,163.00	$977,342.00	$7,620.00	
Comprehensive Cancer Control	$16,076.00	$103,787.00	$125,629.00	$6,952.00	**$252,444.00**
Colorectal Cancer Control	$46,696.00	$177,173.00	$265,183.00	$11,733.00	**$500,785.00**
Heart and Stroke Prevention	$19,215.00	$82,376.00	$334,367.00	$23,777.00	**$459,735.00**
Diabetes Prevention	$17,862.00	$88,005.00	$275,110.00	$20,485.00	**$401,462.00**
Nutrition, P/A and Obesity	$9,874.00	$91,633.00	$64,693.00	$8,561.00	**$174,761.00**
School Health	$20,700.00	$0.00	$55,337.00	$11,315.00	**$87,352.00**
Management, Leadership & Capacity	$6,038.00	$38,176.00	$0.00	$2,564.00	**$2,261,798.00**
Breast and Cervical Cancer Control (Women's Health Connection)	$39,703.00	$253,123.00	$1,890,639.00	$31,555.00	
National Association of Chronic Disease	$30,903.00	$18,615.00	$45,000.00	$5,482.00	**$100,000.00**
Preventive Health and Health Services	$29,790.00	$146,314.00	$404,521.00	$26,292.00	**$606,917.00**
Total	**$280,363.00**	**$1,261,967.00**	**$5,473,584.00**	**$184,500.00**	**$7,200,414.00**

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