Health and Wellness in Nevada

An Assessment of Selected Aspects of Health Status and Health Service Capacity

Fund for a Healthy Nevada

June 2003

EXHIBIT C Healthy NV Document consists of 103 pages.

☒ Entire document provided.

☐ Due to size limitations, pages _____ provided. A copy of the complete document is available through the Research Library (775/684-6827 or e-mail library@lcb.state.nv.us).

Meeting Date: August 14, 2003

Fund for a Healthy Nevada

Task Force Members

Senator Raymond D. Rawson, Chair

Assemblywoman Vivian L. Freeman, Vice Chair

Assemblywoman Kathy McClain

Ms. Maureen Brower

Dr. John Ellerton

Dr. Elizabeth Fildes

Mr. Ron Mestre

Ms. Carla Sloan

Mr. Bill Welch

UPDATE LIST WITH NEW MEMBERS

Grant Staff

Bob Atkinson
Legislative Counsel Bureau

Laura Hale
Department of Human Resources

Tana McGuire
Department of Human Resources

Kim Morgan
Legislative Counsel Bureau

Carol Stonefield
Legislative Counsel Bureau

Information

www.healthynevada.state.nv.us

Task Force members may be contacted through Carol Stonefield with the Legislative Counsel Bureau at (775) 684-6825. Program information is available through Laura Hale with the Department of Human Resources at (775) 684-4011.

Consulting Team

This report was prepared as a joint project of the Center for Health Improvement and Social Entrepreneurs, Inc. under contract with the Fund for a Healthy Nevada.

Center for Health Improvement
1330 21st Street, Suite 100
Sacramento, California 95814
Phone: (916) 930-9200
www.centerforhealthimprovement.org

Center for Health Improvement

Social Entrepreneurs, Inc.
6121 Lakeside Drive, Suite 160
Reno, Nevada 89511
Phone: (775) 324-4567
www.socialent.com

social entrepreneurs inc.

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Executive Summary

The Task Force for the Fund for a Healthy Nevada, as one of its duties, is responsible for using a portion of Nevada's Tobacco Settlement dollars to issue grants that control tobacco use, provide treatment for tobacco-related illness, improve healthcare for children, or improve services to persons with disabilities. In order to assist the Task Force with making strategic decisions about how to produce the greatest health benefits from the resources in the Fund, a statewide assessment of health needs and existing resources was commissioned.

The purpose of the assessment is to identify the magnitude of selected health-related issues in Nevada, the extent to which programs and services are available to effectively address those issues, and the presence of significant gaps in existing services that could be targeted by the Fund. It is also hoped that the assessment results are useful to anyone else who is working to build a stronger and healthier Nevada.

Scope and Methodology

The assessment focuses on aspects of health and wellness that relate to the legislative mandates of the Fund. The twelve topic areas covered in the assessment are:

- Tobacco use
- Disabilities and special needs
- Respite and independent living
- Oral health
- Chronic diseases
- Access to health care
- Family planning
- Immunizations
- Injury and violence prevention
- Maternal and infant health
- Fitness and nutrition
- Substance abuse

The assessment process was launched in March 2003 and needed to be completed by the end of June 2003 so that the results could be used to guide priorities for the Fund's next grant cycle.

The short timeframe, together with a desire to avoid duplicating previous health assessment efforts around the state, led to a process that emphasized locating, obtaining, analyzing and compiling existing data rather than conducting new studies. The assessment was therefore organized in two phases.

In the first phase, all levels of data and reports currently available from state departments and agencies related to the twelve topic areas were gathered and analyzed. Phase two expanded the process to seek existing information from a broad range of sources other than the state governmental agencies already approached. These sources included city and county health and human service departments/agencies, state and county level education systems, regional and state associations, nonprofit organizations, charitable foundations that have sponsored health and human service studies in Nevada, local and regional coalitions and collaborations formed around health issues, and federal studies containing data on Nevada health issues. Altogether, efforts were made to contact 90 organizations to contribute information to this report, of which 62 organizations responded.

For each topic area, information was sought about the magnitude and characteristics of public health needs, and the extent to which existing programs and services have the funding and service capacity to address the needs. Information is broken down into three regions wherever possible: Clark County, Washoe County, and the rest of the state.

Recognizing that comprehensive data was not available for all aspects of the twelve topic areas, the report concludes with a section that describes the remaining data gaps and provides recommendations for filling those data gaps.

Appendix 1 contains a complete list of all reports, databases and other materials obtained for use in this report. Appendix 2 identifies the people and organizations contacted during the assessment process.

Key Findings

Nevada faces serious challenges with improving the health and well-being of its residents. The state's population has exploded since 1990, changing dramatically in the process. The rapid population growth has put almost impossible pressure on health and human services to keep pace with spiraling demand for services.

To put the growth in perspective:

- Over 1,000,000 more people lived in Nevada in 2002 than were here in 1990 – an 84% growth rate in this time period that brought the total population to 2,210,650 in 2002.

- The population of Clark County has more than doubled in this same period, adding almost 820,000 people in twelve years. 70% of Nevadans now live in Clark County. Washoe County grew by 40%, adding over 100,000 people. The rest of the state grew by a similar 42% rate, accumulating 86,000 more people.

- The number of children and youth under age 18, and seniors age 65 and over, grew at a faster rate than the rest of the population. In 2002, there were roughly twice as many people in each of these age groups as there were in 1990.

- The ethnic makeup of Nevada has also changed significantly since 1990. The number of persons of Hispanic origin more than tripled from 1991 to 2002. This group went from comprising 11.9% of the population in 1991 to being 21.3% of the population in 2002. There is an even higher concentration of Hispanic persons among children and youth; 30% of persons under age 18 were Hispanic in 2002. In the same time period, the number of Asian and Pacific Islander persons almost tripled as well. These shifts have major health implications since cultural differences can affect health risk behaviors, while cultural and language differences can pose barriers to accessing available services.

The end result is a situation where Nevada ranks last or close to last in the country on numerous health indicators. Just a few significant examples are that Nevada has:

- ✓ The second highest percentage of adults who smoke, and the highest percentage of women who smoke;
- ✓ The highest rate of increase of people with one or more disabilities;
- ✓ The fewest dentists per capita;
- ✓ The highest teen pregnancy rate;
- ✓ The highest percentage of mothers with late or no prenatal care during pregnancy; and
- ✓ The highest rate of dependence on illicit drugs.

However, not all of the news is bad. Progress has been made on numerous fronts including reductions in youth smoking, the percentage of people without health insurance, teen birth rates, and child abuse reports.

The Fund for a Healthy Nevada is in a position to make a measurable difference in the health and well-being of Nevadans. Doing so requires the ability to focus enough resources on high-priority issues to make a meaningful impact on those issues. To help with prioritization, the following pages compare the key findings from across the twelve topic areas covered by this assessment. Information presented is:

Current Status – Primary indicators of the current conditions and level of need, color-coded as green ☺ where the level of need is relatively low, yellow 😐 for a moderate level of need, and red ☹ for high need.

Number of People Affected – The estimated number of people directly impacted by the issue, not counting effects on family, employers, and other relationships.

Degree of Impact – The extent to which quality of life is changed for those people who are affected.

Primary Gaps in Services – Areas identified where current services fall short of the level of demand or needs.

	Current Status	# of People Affected	Degree of Impact	Primary Service Gaps
Tobacco Use	☹ 29.1% of adults smoked, 2nd highest rate in the country ☹ 29.5% of women smoke, 1st highest rate in the country 😐 25.2% of high school students smoked in the last 30 days; better than the national median but well over the 2010 target of 16% ☹ 11% of pregnant women smoked during pregnancy ☹ Daily secondhand smoke exposure reported in 15.3% of households and at work by 17% of workers	▪ Estimated 471,000 current smokers in Nevada ▪ Roughly 3,300 babies a year born to mothers who smoked during pregnancy ▪ Up to 170,000 non-smoking adults exposed daily to secondhand smoke at home ▪ Over 84,000 children exposed to secondhand smoke at home	▪ Tobacco use is responsible for one in every five deaths; smokers have twice the risk for fatal heart disease, ten times the risk of lung cancer, and greater risk of numerous other diseases ▪ Smoking during pregnancy increases risks of low birth weight babies, infant death and other disorders ▪ Secondhand smoke exposure causes asthma, respiratory infections, and lung cancer ▪ Total economic cost of smoking to Nevada estimated at $1.2 billion a year	▪ Adoption of state policies proven to reduce smoking, especially high excise taxes on tobacco products ▪ Access to smoking cessation services – just over 2% of smokers were reached by current programs in fiscal year 2001-02 ▪ More effective strategies to reduce smoking during pregnancy are needed ▪ Tobacco control programs in rural areas; about 24,000 smokers not reached ▪ Education and outreach to reduce secondhand smoke exposure
Disabilities	☹ Number of people with one or more disabilities rose 157% from 1990 to 2000, highest rate in the country ☹ Almost 20% of all Nevadans have a disability ☹ Nevada has the highest prevalence of mental illness in the Western U.S.; about 5.4% of the population is living with a serious mental illness	▪ 375,910 people with one or more disabilities in Nevada in 2000; at least 50,000 were children or young adults ▪ Over 125,000 seniors with disabilities; 48% of people over age 75 or 45,900 people are severely disabled ▪ Estimated 108,000 people with serious mental illness ▪ Over 250,000 people with a physical disability and 80,000 with a sensory disability	▪ Potentially profound effect on quality of life depending on the nature and severity of disability ▪ Physical disabilities can be life-threatening or life-shortening ▪ Large loss of human potential if people with disability do not get the support to allow them to work and be involved in the community	▪ Access to community or home-based services (versus institutional settings) ▪ Ability for people to get information on existing services ▪ Ability and willingness of many health and human service agencies to work with people with disabilities ▪ Shortage of mental health workers, especially in rural areas

	Current Status	# of People Affected	Degree of Impact	Primary Service Gaps
Respite/Indep. Living	No specific indicators were identified for this area, nor was comparative data available for other states or regions.	▪ 29,500 people need assistance with basic activities of daily living (ADLs) like bathing, dressing, and eating ▪ About 68,000 people need help with one or more instrumental activities of daily living (IADLs) like shopping, house cleaning, and laundry ▪ Over 110,000 family/friend caregivers for disabled seniors need periodic respite	▪ Without support, people needing help with ADLs and many others needing help with IADLs would be forced from their home into an institutional setting like assisted living or other type of long-term care facility ▪ Of an average 5,091 certified beds in intermediate care and skilled nursing facilities only 1% (50 beds) were vacant ▪ Care-giving often leads to stress and depression if respite is not available	▪ Level of demand for personal care assistance and independent living support is much greater than current capacity, especially in Clark County – 9 month wait for some current services ▪ Demand for respite services also appears higher than supply but unable to quantify the degree of the shortfall

	Current Status	# of People Affected	Degree of Impact	Primary Service Gaps
Oral Health	☹ 25-44% of elementary school age children have visible untreated tooth decay and 7% have active pain and swelling requiring immediate care ☹ 14% of seniors have broken, loose or decayed teeth; 29% of seniors need at least a partial denture and do not have one ☹ 35 dentists per 100,000 residents in 2001, worst ratio in the country (fewest per capita), but improving a bit with change in licensing law ☹ 27% of third grade children and over 38% of seniors are not covered by dental insurance	▪ 45,000 to 80,000 elementary school age children with visible untreated tooth decay needing prompt care ▪ Over 12,500 elementary school children with pain and swelling from untreated dental problems ▪ Including middle and high school students, possibly up to 175,000 children and youth with untreated oral health problems ▪ At least 35,000 seniors who need immediate dental care and 75,000 who need partial or full dentures	▪ Dental problems are often very painful, leading to problems with eating, nutrition and sleeping ▪ Oral health problems invite infections and diseases that spread to the rest of the body; periodontal (oral) diseases are a risk factor for increased respiratory diseases and even diabetes ▪ Chronic dental problems in children lead to absences from school and poorer school performance; nationally, an estimated 50 million hours of school time are lost by children because of oral health problems	▪ Relatively little emphasis is placed on oral health education ▪ Less than 1/3 of children have dental sealants applied despite proof that sealants greatly reduce the number and severity of dental caries ▪ More dentists are needed throughout the state, especially ones who will accept Medicaid and Nevada Check Up (only 12% of current dentists are active Medicaid providers) ▪ Targeted oral health services for seniors are not available

	Current Status	# of People Affected	Degree of Impact	Primary Service Gaps
Chronic Diseases	😐 Age-adjusted death rate for coronary heart disease is 167.8 per 100,000 – well below the national rate of 196.0, but heart disease is still the most common cause of death in Nevada ☹ Cancer death rate of 204.5 per 100,000 people, 16th highest in the country and second-leading cause of death in Nevada 😐 25,000 children with asthma but hospitalization rate for pediatric asthma is 1/3 below the national rate and below year 2010 target levels ☺ Age-adjusted diabetes death rate of 17.0 per 100,000 population is second-lowest in the country and 65% of people with diabetes received formal diabetes education; both of these rates are better than 2010 targets ☹ Nevada had the 2nd highest liver disease death rate in the country	▪ 4,001 deaths in 2000 due to heart disease (26.9% of all deaths) ▪ 3,658 deaths due to cancer (24.6% of all deaths); lung cancer is particularly rampant in Nevada, killing more people each year than the next four most prevalent cancers combined ▪ Average of 7,650 Nevadans diagnosed with cancer each year from 1996-2000 ▪ Chronic obstructive pulmonary disease, which includes chronic bronchitis and emphysema, killed 970 people (6.5% of all deaths) ▪ In total, estimated 131,000 people with asthma of which 25,000 are children; another 56,000 with chronic bronchitis and almost 18,000 with emphysema ▪ 846 deaths due to stroke (5.7% of all deaths) ▪ Estimated over 92,000 adults with diabetes; 266 deaths from diabetes in 2000 (11th leading cause of death)	▪ Major loss of life – seven out of every ten deaths in Nevada are due to a chronic disease, most of which are preventable because they are caused by poor health choices such as smoking, obesity and lack of physical activity ▪ Chronic diseases cause major limitations in activities for 10.8% of Nevada's population or more than 210,000 people ▪ Over $1.5 billion annual cost of chronic diseases in Nevada just from hospital stays; the total economic cost is far greater when non-hospital medical costs, lost work time and other economic factors are considered	▪ Gaps in services noted for other topic areas directly impact the rate of chronic diseases, particularly the gaps listed under Tobacco Use, Access to Health Care, Fitness and Nutrition, and Substance Abuse. Reducing the rate of smoking is likely to have the greatest effect on reducing the incidence, mortality and costs of chronic diseases. ▪ Lack of coordination of health education efforts, hampering the consistency and effectiveness of investments in public health education ▪ Possible gap in service to assist people with arthritis; no programs found that focus on this issue yet more hospital discharges are due to arthritis than to diseases such as diabetes and asthma

	Current Status	# of People Affected	Degree of Impact	Primary Service Gaps
Access to Health Care	😐 15.8% of people in Nevada are without any kind of health insurance in 2002, a 2% improvement from 2001; 14.2% of children under age 18 were uninsured 😐 An additional 18.5% of Nevada residents are under-insured, having to spend more than 10% of income for out-of-pocket medical costs ☹ Nevada ranks 37th in ratio of primary care physicians to total population and Las Vegas has nation's lowest ratio of physicians of any city; every county in Nevada has some degree of physician shortage	▪ Almost 350,000 people in Nevada are uninsured, including 112,000 children ▪ Approximately 400,000 additional people are under-insured ▪ 525,000 people reside in federally-designated primary care Health Professional Shortage Areas ▪ 64,000 people in rural Nevada live more than a two-hour round-trip drive to access primary care services, and almost 200,000 rural Nevadans live more than a two-hour round-trip drive from a hospital	▪ Lack of health care access reduces preventive care and delays diagnosis of health problems, leading to unnecessary hospitalizations and possible irreversible health problems ▪ Lack of health care access for children can delay assessment of physical and/or cognitive needs, hurting quality of life and readiness for school ▪ Lack of access to specialists like obstetricians and pediatricians hurts prenatal care and child wellness	▪ Medical workforce size and distribution – more primary care physicians and specialists (especially obstetricians and pediatricians) are needed ▪ More primary care access points are needed for uninsured and under-insured people in both urban and rural areas ▪ More affordable health insurance options are needed for middle-income families that do not qualify for Medicaid or Nevada Check Up
Family Planning	😐 Teen birth rate is 29.3 births per 1,000 females ages 15 to 17 – declining steadily since 1997 but still above national rates and 2010 objective of 25.0 per 1,000 females ☹ Nevada has the highest teen pregnancy rate in the country for females age 15 to 19 ☹ 35% of high school students report being sexually active; sexual risk behaviors have improved little since 1997	▪ 1,214 births to mothers age 15 to 17 in 2001 ▪ 6,840 pregnancies to females age 15 to 19 in 1998	▪ Teen mothers are more likely to live in poverty as adults and have unstable relationships; less than 1/3 of teen mothers nationally get their high school diplomas ▪ Children of teen mothers are more likely to have academic and social problems, to live in poverty, and to become teenage parents themselves	▪ Estimated service gap of 12,360 teenagers needing but not receiving contraceptive services ▪ Possible need for better targeting of sexual responsibility education and family planning efforts, particularly to reduce births among Hispanic teens in Clark and Washoe Counties and Black teens in Clark County

	Current Status	# of People Affected	Degree of Impact	Primary Service Gaps
Immunizations	☹ 75.5% of children aged 19 to 35 months are fully immunized, ranking Nevada 43rd in the country; only 66% of Medicaid children are up-to-date on their immunizations 😐 63% of seniors have been vaccinated in the last year against influenza and 66% have been inoculated against pneumococcal disease, both above national averages but well below 2010 target of 90%	▪ About 7,500 children aged 19 to 35 months are not fully immunized; an uncertain number of children older than 35 months are also not fully immunized ▪ Over 80,000 seniors are in need of immunizations against influenza and/or pneumococcal disease	▪ Children who are not fully immunized are at greater risk of contracting diseases that can be crippling or even life-threatening ▪ Seniors who are not properly immunized also have a greater risk of disease and death; pneumococcal disease kills more people in the U.S. each year than all other vaccine-preventable diseases combined	Information available for this assessment is insufficient to understand why immunization rates are consistently so low in Nevada, so recommendations could not be developed for potential courses of action.
Injury & Violence Prevention	😐 Child abuse reports are down 10% and substantiated reports are down 45% over 1997 levels despite rapid population growth ☹ 22,971 domestic violence reports to law enforcement, with children present 54% of the time during the violence ☹ Nevada has the highest suicide rate in the country; 11% of high school youth report that they have attempted suicide 😐 588 juvenile arrests for violent crimes in 2001	▪ 2,854 substantiated reports of child abuse and/or neglect involving 5,324 separate incidents of abuse/neglect, and 13,277 total reports of child abuse and/or neglect ▪ 12,487 documented cases of domestic violence with a child present and 22,971 total cases of domestic violence ▪ 52 accidental deaths of children age 1-14 and 83 accidental deaths of persons age 15-24; 87 of these 135 total accidental deaths were motor vehicle accidents ▪ 388 suicides, of which 43 were committed by persons age 5 to 24	▪ Physical injury and pain, emotional trauma, and potential death results from the issues covered in this category ▪ Children who grow up in violent homes are much more likely to become abusive partners or victims of abuse as adults; over 80% of abusive partners had been abused as a child or witnessed their mother being abused ▪ Children growing up in violent homes are 74% more likely to commit crimes and also show lower levels of school performance	▪ More appropriate and non-threatening options to address the needs of children exposed to domestic violence ▪ Improved training of health and human service providers on identifying potential domestic violence and responding appropriately ▪ Possible need for further expansion of services that prevent child abuse through parent education and family support that reduce family stress factors

	Current Status	# of People Affected	Degree of Impact	Primary Service Gaps
Maternal & Infant Health	☹ Over 24% of Nevada mothers in 2001 had late or no prenatal care, worst of any state in the U.S.; prenatal care rates have gotten steadily worse since 1996 😐 7.6% of babies born at a low birth weight (< 2,500 grams), right at the national average but well above 2010 target of 5.0% 😐 1.5% of babies born with at least one birth defect ☺ Infant mortality rate in 2001 of 5.24 per 1,000 live births is one of the lowest in the U.S.	▪ 6,044 mothers with late prenatal care (care delayed until second or third trimester of pregnancy) and 1,294 mothers with no prenatal care ▪ 2,245 babies born in 2000 with a low birth weight ▪ 455 babies born in 2000 with at least one birth defect ▪ 201 infant deaths in 2000	▪ Late or no prenatal care increases the risk of babies born at a low birth weight, who are stillborn, or who die in their first year of life ▪ Babies born at a low birth weight have increased risk of birth defects, infant death, developmental delays as children, and long-term disabilities ▪ Birth defects are one of the primary causes of infant mortality; those that survive often have life-long physical, mental and/or developmental disabilities	▪ Access to and utilization of prenatal care – the central issue for maternal and infant health is improving the rates of prenatal care, which should positively impact the other indicators (low birth weight, birth defects and infant mortality)
Fitness & Nutrition	😐 8.4% of Nevada residents are food insecure (lacking assured access at all times to enough food for a healthy life); almost 4% are food insecure with hunger (unable to meet daily nutrition requirements) 😐 Only 43.5% of Nevada adults at a healthy weight, slightly better than national average but far short of 60% target ☺ Rates of exercise and physical fitness are better than national averages and close to 2010 targets	▪ 185,000 residents are food insecure, of which about 88,000 are food insecure with hunger; more than 44,000 children in Nevada may experience hunger on a regular basis ▪ Over 315,000 adults are obese (body mass index or BMI >= 30.0) and another 600,000 are overweight (BMI 25.0-29.9) ▪ Over 360,000 adults not engaging in any leisure-time physical activity	▪ Food insecurity, and especially hunger, hurt children through weakened immune systems and poorer overall health, reduced ability to learn, more school absences, and greater need for mental health services ▪ Being overweight is a risk factor for high blood pressure, heart disease, diabetes, and some types of cancer; excess body weight estimated to cause $230 million a year in extra health care costs in Nevada	▪ More food access is needed by children in the summer months who are eligible to participate in the free/ reduced-cost lunch program during the school year but may not have enough food in the months when school is out ▪ An expanded and integrated public education effort is needed to increase the percentage of adults and adolescents at a healthy body weight

	Current Status	# of People Affected	Degree of Impact	Primary Service Gaps
Substance Abuse	☹ 13% of Nevada's population needs substance abuse services ☹ Nevada has the nation's highest rate of past-month use of illicit drugs other than marijuana ☹ Nevada is tied with Alaska for the highest percentage of the population reporting dependence on illicit drugs ☹ Nevada has the 8th highest rate of past month binge alcohol use in the country ☹ Age-adjusted rate of drug-induced deaths of 12.7 per 100,000 population is almost double the national rate; rate of cirrhosis deaths is almost 50% higher than the national rate	▪ Over 211,000 people in need of some form of substance abuse services ▪ Over 500 drug and alcohol-related deaths ▪ Over 125,000 adults with consistent heavy alcohol consumption ▪ Over 25,000 high school youth engaged in binge alcohol drinking in the past month ▪ Potentially over 1,200 babies born in one year to mothers who were binge drinkers during pregnancy, and over 3,600 babies born to mothers who used alcohol during pregnancy ▪ 31,010 drug and alcohol related arrests in 2001	▪ Use of alcohol and other drugs is directly linked to numerous health problems including cirrhosis of the liver and heart disease; death can occur quickly through overdose, accidents while driving under the influence, and other accidents ▪ Young people who initiate drug use before age of 15 are twice as likely to have drug problems as those who wait until after the age of 19 ▪ Prenatal alcohol exposure increases risk that children will have physical deformities, learning problems, behavioral and mental health problems, and alcohol and drug problems as adults	▪ Expanded prevention programs are needed; some federal funding sources limit the amount of federal money that can be spent on prevention ▪ Treatment services are needed for 27,900 more people who have an illicit drug problem ▪ Treatment services for youth urgently need expansion; few existing programs accept youth yet almost 7,000 youth age 12-17 require but are not receiving treatment services ▪ More treatment options are also needed for women, and especially women with children and parenting teens

***Note**: Many of the figures in the "**#** of People Affected" column across all twelve of the health topic areas are broad estimates derived by applying incidence rates from the available data to Nevada population levels as of 2002. They should be interpreted as general indicators of potential incidence levels, and not as statistically exact figures.*

Recommended Actions

The primary purpose of conducting this assessment is to give the Task Force the best available information to use in determining how to focus the Fund's resources in order to produce the greatest overall health benefits, synergistic with the resources being invested by other state and local agencies. The main recommendation for using the report is therefore to prioritize the various health issues, select the top priority issues to be targeted with the Fund's resources, and identify the specific populations (and types of services, as appropriate) where the most benefit can be realized from additional funding.

Users of this report should recognize that although the project was structured as a "needs" assessment, an effort has been made to identify existing strengths and assets. Strategic decision-making should look to build upon those assets wherever possible.

This report consolidates information from a very broad range of local, state and national sources. However, there are still some important gaps in the available data which, if addressed, could affect policy and funding decisions. Specific limitations to the available data are listed in the Data Gaps section of the report. The following steps are recommended to further strengthen the information for future decision-making:

1. Work with Center for Health Data and Research representatives to review the data gaps and issues, in order to see which issues might be resolved through existing state level research and to obtain guidance on how to proceed with other issues.

2. Distribute this assessment report as broadly as possible and invite people to submit information to correct, clarify and/or enhance what is presented here.

3. Update this report during the 2003-04 fiscal year, incorporating input received from stakeholders around the state and results from other data collection efforts already underway that could not be completed in time for this report.

4. Meet with leaders around the state who are actively involved in the individual topic areas to discuss topic-specific data gaps (for example, health care access or family planning) and see if/how the Fund for a Healthy Nevada may be able to partner with them to address the data gaps.

5. Develop a more complete inventory of existing local and regional projects related to capture of health and human service information, such as current Washoe County efforts to create an integrated case management system and homeless information system, and link with these projects to understand what is being done and to explore ways that local data collection can assist state-level planning and policy.

6. For data gaps that are not resolved by the preceding steps, prioritize the data gaps according to the relative significance of the health issue involved and invest in new issue-specific research to address gaps remaining in the top priority health issues.

It is sincerely hoped that this report can be a catalyst to raise awareness among policy makers, service providers, and the public about critical health issues facing Nevada, leading to collective action to address those issues. The quality of life of hundreds of thousands of Nevada residents – indeed, lives themselves – depends on our ability to take such action.

Demographics

Nevada's population has changed dramatically in the last ten years, and will continue to change in the foreseeable future. An understanding of the health issues facing the people of Nevada should therefore begin with an understanding of the state's population.

This section describes current demographics and trends for total population and sub-groups by age, gender, ethnicity, household status and income. It is not intended to give a complete demographic breakdown, but rather focuses on the attributes that are most important for the assessment of health needs.

Total Population

The total population of Nevada grew by an astounding 66% during the 1990's, jumping from 1,201,833 people in 1990 to 1,998,257 people in 2000 per the U.S. Census. In just two more years, the population grew another 10.6% and stood at 2,210,650 in 2002.

Based on projections from the Nevada State Demographer's Office, rapid population growth is expected to continue for the rest of the current decade, with an average annual growth rate of 2.5% through 2010. The population will have doubled in only 15 years, from 1990 to 2005. Growth is then projected to slow considerably in the following decade, with annual growth rates averaging 0.7% from 2011 through 2020.

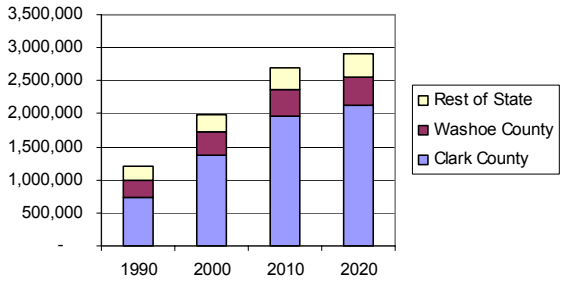
The most growth, both in terms of number of people and growth rate, has occurred in Clark County. Clark County's population jumped almost 86% during the 1990's, then rose another 185,000 (13.4%) in the last two years to reach a total population of 1,560,654 in 2002. 70% of the state's residents live in Clark County. The county is projected to continue growing faster than the rest of the state through 2010, with an average growth rate of 2.95% for the rest of the decade.

Growth rates in the 1990's were 33% for Washoe County and 38% for the rest of the state combined. The total population of Washoe County in 2002 was 357,776, while the population of the rest of the state other than Clark and Washoe Counties was 292,220.

The table and graph below show population growth in ten-year increments from 1990 to the projected levels for 2020.

	1990	2000	2010	2020
Clark County	741,459	1,375,765	1,969,348	2,123,277
Washoe County	254,667	339,486	398,003	439,284
Rest of State	205,707	283,006	322,727	348,398
Total	1,201,833	1,998,257	2,690,078	2,910,959

Total Population, 1990 - 2020



Source: 1990 and 2000 data from U.S. Census, 2010 and 2020 data from Nevada State Demographer's Office

Sustained rapid population growth places tremendous strain on health and human services, often creating a situation where service capacity expansion lags several years behind growth in the demand for services.

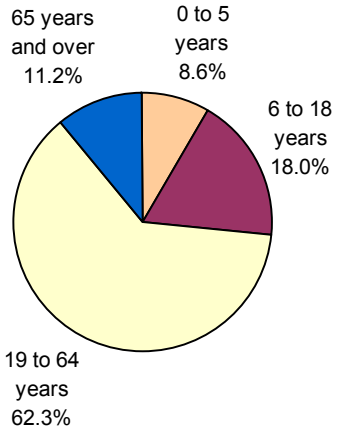
Profile by Age and Gender

The Fund for a Healthy Nevada targets children's health with a portion of its resources, and senior health with other resources. It is thus important to understand the age profile of Nevada's population and related trends.

In 2002, there were 587,029 children and youth under the age of 18, representing 26.6% of the population. By comparison, persons under 18 years comprised 24.7% in 1990; there were roughly half as many children and youth in 1990 as there are today. Projections indicate that children and youth will remain around 26% of the population for the next decade.

	2002	2007	2012
TOTAL PEOPLE			
0 to 5 years	190,119	222,516	240,498
6 to 18 years	396,910	450,065	481,620
19 to 64 years	1,376,986	1,583,084	1,683,742
65 years and over	246,635	297,321	347,395
Total	2,210,650	2,552,986	2,753,255
% OF POPULATION			
0 to 5 years of age	8.6%	8.7%	8.7%
6 to 18 years of age	18.0%	17.6%	17.5%
19 to 64 years of age	62.3%	62.0%	61.2%
65 years and over	11.2%	11.6%	12.6%
Total	100.0%	100.0%	100.0%

2002 Total Population by Age



Source: Nevada State Demographer's Office

Slowly but steadily, seniors are becoming an increasingly large percentage of the population. Persons 65 and over represented 10.6% of the population in 1990, 11.0% in 2000, and 11.2% by 2002. This trend is expected to continue, with seniors making up 12.6% of the population in 2012 and 15.3% of the population by 2022.

The age profile varies somewhat by geographic area. In 2002, persons under 18 years of age comprised 27.0% of the population in Clark County, 24.9% in Washoe County, and 26.4% in the rest of the state. Persons age 65 and over represented 10.7% of Clark County's population, 10.9% in Washoe County, and 13.8% in the rest of the state. The table below shows the breakdown of total population for 2002 by age group and geographic area.

	Clark County	Washoe County	Rest of State
0 to 5 years	138,510	29,145	22,464
6 to 18 years	282,471	59,813	54,626
19 to 64 years	972,148	229,950	174,888
65 years and over	167,525	38,868	40,242
Total	1,560,653	357,776	292,220

Source: Nevada State Demographer's Office

The population overall is 50.8% male and 49.2% female. For persons under 18 years of age, 51.4% are male and 48.6% are female according to 2000 U.S. Census data. Conversely, only 46.6% of persons over 65 years of age are male and 53.4% are female.

Ethnicity

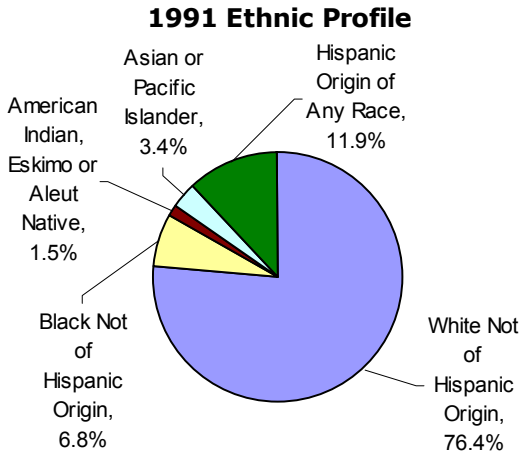
The ethnic makeup of Nevadans has changed significantly since 1990. Information in this section is based entirely on Nevada State Demographer's Office projections to improve the comparability of figures across years.

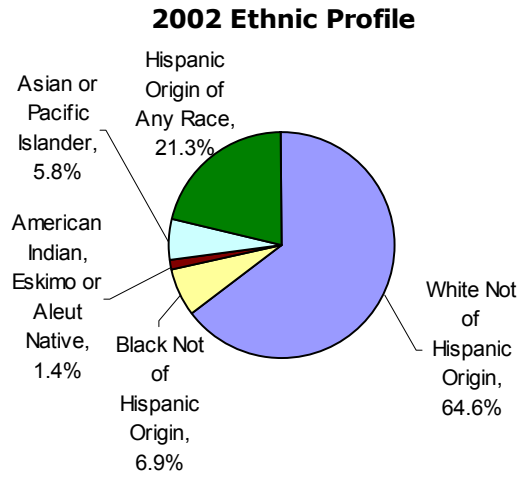
Two ethnic groups have expanded at a much faster rate than the overall population. The number of persons of Hispanic origin has tripled in just 11 years, jumping from 156,963 people in 1991 (11.9% of the population) to 471,232 in 2002 (21.3% of the population). There is a higher concentration of Hispanic persons among children and youth; 30% of persons under 18

years of age were of Hispanic origin in 2002. In the same 1991 – 2002 period, the number of Asian and Pacific Islander persons almost tripled as well, rising from 45,213 people in 1991 (3.4% of the population) to 129,107 people in 2002 (5.8% of the population).

The percentage of American Indian and Black Not of Hispanic Origin persons has stayed constant over the past decade. Conversely, the percentage of persons who are White Not of Hispanic Origin has dropped steadily.

The two graphs below contrast the ethnic composition of the population in 1991 and 2002.





These trends are expected to continue for the next decade. By 2012, persons of Hispanic origin are expected to comprise 26.0% of the population, with Asian/Pacific Islanders growing to 6.5% of the population. The percentage of persons who are Black Not of Hispanic Origin and American Indian are projected to remain relatively steady, reaching 2012 levels of 7.1% and 1.3% respectively.

Ethnic composition varies greatly by geographic area. Below are the number of persons and percentage of population for 2002 broken down by ethnic group and geographic area.

	Clark County	Washoe County	Rest of State
TOTAL PEOPLE			
White Not of Hispanic Origin	931,239	259,414	236,838
Hispanic Origin of Any Race	368,571	64,521	38,140
Black Not of Hispanic Origin	142,287	7,870	2,604
Asian or Pacific Islander	105,365	19,242	4,500
American Indian, Eskimo or Aleut	13,191	6,729	10,138
Total	1,560,653	357,776	292,220
% OF POPULATION			
White Not of Hispanic Origin	59.7%	72.5%	81.0%
Hispanic Origin of Any Race	23.6%	18.0%	13.1%
Black Not of Hispanic Origin	9.1%	2.2%	0.9%
Asian or Pacific Islander	6.8%	5.4%	1.5%
American Indian, Eskimo or Aleut	0.8%	1.9%	3.5%
Total	100.0%	100.0%	100.0%

The ethnic profile has numerous implications for the assessment of health status and related services. Some health issues affect certain ethnic groups disproportionately. Cultural differences can have a profound effect on choices in health behaviors and therefore health risk factors. Cultural and language differences can also present substantial barriers to accessing health care services.

Households and Income

Living arrangements play a role in health and safety matters, particularly in single-parent households with children where stress and lower income levels can present challenges for the parent and children alike.

Following is a summary of Nevada households by type in 2000, as reported by the U.S. Census:

Households with own children under 18 years:	
Married-couple family	166,072
Female householder, no husband present	50,675
Other (primarily male householder with no wife present)	22,099
Family households without own children under 18 years	259,487
Householder living alone	186,745
Other non-family households	66,087
Total households	751,165

Approximately 30% of families with children were headed by a single parent; 21% with a single female householder and 9% with a single male householder. The percentage of single-parent households with children is slightly higher than the state average in Clark County (30.8%) and slightly lower in Washoe County (28.1%). The highest rates are in Mineral County (39.0%), White Pine County (34.4%), and Carson City (33.9%).

Income status is closely correlated with many health issues, including tobacco use, nutrition, and substance abuse. Of particular significance is the incidence of poverty. The best available data on poverty is from the 2000 U.S. Census, which is based on 1999 income levels. Following is a profile of the extent to which Nevadans had household income below the federal poverty level in 1999:

	Number	Percent
Families below poverty level:		
All families	37,877	7.5%
With related children under 18 years	30,226	11.4%
With related children under 5 years	16,964	14.8%
Female householder, no husband present:		
With related children under 18 years	15,085	26.3%
With related children under 5 years	7,842	36.5%
Individuals	205,685	10.5%

Overall, 14% of Nevada's children were in poverty in 2001. In 1999, the percent of children under age 18 in poverty was 14.1% in Clark County, 12.2% in Washoe County, and ranged from a low of 4.2% in Storey County to a high of 19.6% in Lincoln County. Poverty rates also vary greatly by ethnicity; 28.6% of Black children and 20.0% of Hispanic or Latino children were in poverty in 1999.

The breakdown of Nevada's households based on total household income in 1999 is:

	Number	Percent
Less than $10,000	53,981	7.2%
$10,000 to $14,999	39,245	5.2%
$15,000 to $24,999	92,710	12.3%
$25,000 to $34,999	98,362	13.1%
$35,000 to $49,999	136,104	18.1%
$50,000 to $74,999	163,415	21.7%
$75,000 to $99,999	83,304	11.1%
$100,000 to $149,999	55,431	7.4%
$150,000 to $199,999	13,545	1.8%
$200,000 or more	15,880	2.1%

The median household income was $44,581, which means that half of all households earned less than this amount and half earned more. The median family income, which can be more relevant in considering income status for households with children, was $50,849. The median family income was slightly lower in Clark County ($50,485) and moderately higher in Washoe County ($54, 283).

Tobacco Use

Conditions and Needs

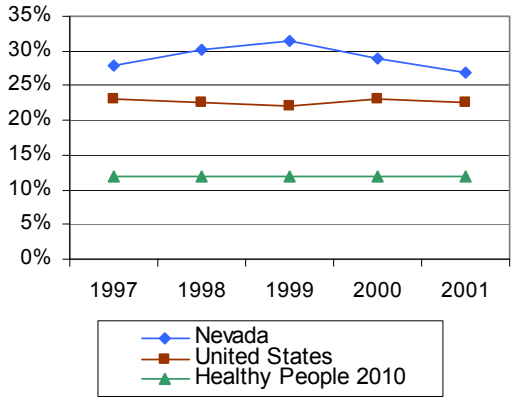
According to the 2002 Nevada Tobacco Profile, which provided the data for this section of the assessment, tobacco use alone is responsible for much of the excess of preventable morbidity, mortality, and medical costs to Nevadans. In the year 2000, Nevada ranked second highest in the nation for the percentage of adults who smoked (29.1% compared to a national median of 23.3%) and ranked first highest in the nation for the percentage of women who smoked (29.5% versus a national median of 21.2%). In the same year, rates for Nevada's neighboring states were substantially lower: California (17.2%), Utah (12.9%), Oregon (20.8%), Idaho (22.4%), and Arizona (18.6%).

There are four main components to understanding tobacco use: adult use, youth use, smoking by pregnant women, and environmental tobacco smoke exposure.

Adult Use of Tobacco

Smoking by adults has remained essentially unchanged in the last decade, occurring at a six-year average rate of 29.8% that is above the national median and far above the Healthy People 2010 objective of 12%.

Adult Smokers, Nevada and National Median, 1997-2001



Key aspects of adult use of tobacco:

- The percentage of adults who are current smokers, as determined by the annual Nevada Behavioral Risk Factor Surveillance System (BRFSS) survey, dropped each of the last two years, down to 27.3% in 2001. However, these declines essentially just reversed substantive increases in smoking rates from the previous two years.

- Men and women smoke at an almost identical rate. The six-year weighted average of BRFSS results shows 29.8% of adult men and 29.7% of adult women are current smokers.

- Smoking is most prevalent among American Indian/Alaskan Native (32.5%), White Non-Hispanic (29.5%), and Black Non-Hispanic (28.8%) adults. Smoking rates are lower for Asian/ Pacific Islander (25.0%) and Hispanic (23.5%) adults, although these rates are still above the national median.

- A higher percentage of young adults age 18-24 – over 33% – smoke than any other age group. Conversely, about 19% of seniors age 65 and over smoke, which is the lowest rate of any age group.

- Smoking is also much more common among persons at lower income levels. Over 42% of adults with incomes under $15,000 smoke, compared to less than 23% of adults with an income over $50,000.

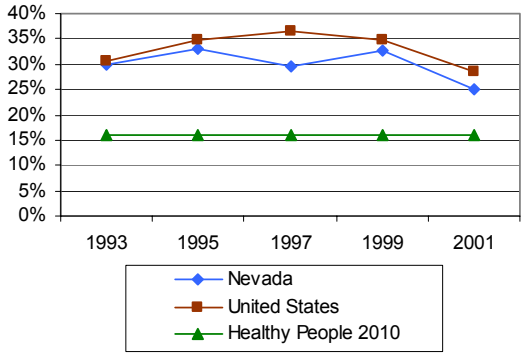
- Smoking rates are highest in Clark County (29.8%) as compared to Washoe County (27.3%) and all other counties (26.7%).

Youth Use of Tobacco

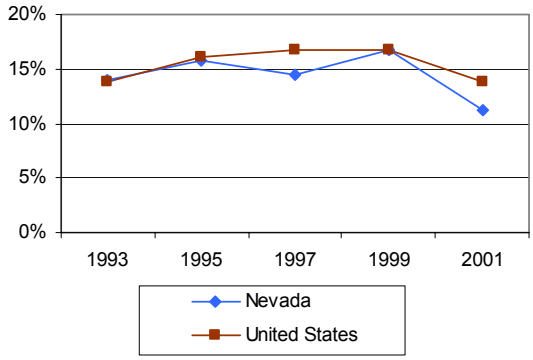
According to a study by the U.S. Department of Health and Human Services, nearly 90 percent of all current adult smokers began smoking as children or adolescents. The extent to which youth under 18 years old are smoking is therefore an important indicator of future smoking rates and related health problems.

The Centers for Disease Control and Prevention administer a Youth Risk Behavior Survey to high school students every other year. In the 2001 survey, 25.2% of Nevada's high school students responded that they are a "current smoker", defined as smoking on one or more days in the 30 days prior to the survey. This is an improvement over previous years and better than the national median, but still well above the Healthy People 2010 objective of holding the youth smoking rate to 16% or less.

High School Youth "Current Smokers", 1993-2001 Trend



High School Youth "Frequent Smokers", 1993-2001 Trend



11.3% of Nevada youth reported to be "frequent smokers", defined as having smoked on at least 20 of the 30 days prior to the survey. This rate was also below the national median, but certainly high enough to still be of concern since these youth are extremely likely to remain smokers as adults.

Key aspects of youth tobacco use:

- Female youth have consistently reported a higher percentage of smoking than males. In 2001, 25.8% of female youth smoked compared to 24.6% of males.

- Youth are starting smoking at an early age. In 2001, 22% of 9th grade students were classified as "current smokers". The rate of smoking jumped further in 11th grade (26%) and 12th grade (36%).

- Tobacco use among youth is not limited to cigarettes. 6.9% of Nevada's high school youth reported to have used smokeless tobacco. Smokeless tobacco use is much higher among males (11.1%) than females (2.6%), and is highest among white males.

Smoking by Pregnant Women

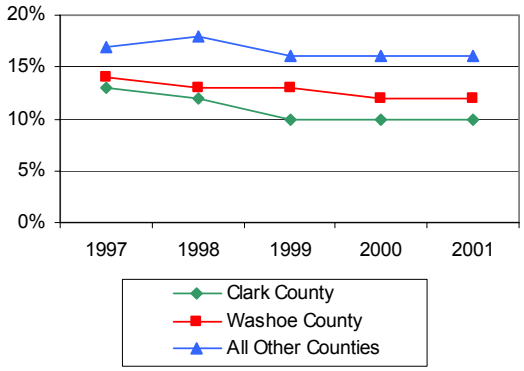
Smoking by pregnant women in Nevada is well above the Healthy People 2010 objective for the nation of no more than 1%. Smoking by pregnant women contributes to low birth weight and many other adverse health outcomes for Nevada infants including increased risk for Sudden Infant Death Syndrome (SIDS).

Smoking prevalence in pregnant women in Nevada has declined over the past decade. However, the rate of decline appears to have leveled off at around 11% in each year from 1999-2001 and remains at unacceptable levels. It also should be noted that reporting of negative behaviors such as smoking is often under-reported. The actual percentage of women who smoked during pregnancy was probably higher than that reported here due to under-reporting.

Key aspects of smoking by women during pregnancy:

- As the graph below shows, pregnant women in rural counties have the highest rates of smoking, while Clark County and Washoe County have consistently lower rates.

Percent of Mothers Reported Smoking During Pregnancy, 1997-2001



- Women with lower education attainment reported the highest prevalence of smoking during pregnancy. The rate of smoking during pregnancy was 13% overall for women with less than a high-school education, compared to only 2% for women with a college degree. Women with less than high-school education in rural and frontier counties reported the highest level of smoking by education at 24%.

- There is also a correlation between ethnicity and smoking during pregnancy. Smoking during pregnancy was reported by 17% of Native American women, 16% of Black women, and 14% of White Non-Hispanic women. In contrast, 7% of Asian/ Pacific Islander and 3% of Hispanic women reported smoking during pregnancy.

- Women in the 18-24 and 40+ age groups were 30% more likely to smoke during pregnancy than women age 25-39. This finding reflects an overall increase in smoking by young women in the mid-to-late 1990's in Nevada.

Environmental Tobacco Smoke Exposure

People who do not smoke can still experience significant health problems due to sustained exposure to second-hand tobacco smoke from others. There are two primary places of second-hand smoke exposure: in the home and at the work place.

Second-hand smoke in the home affects hundreds of thousands of children and adults in Nevada. A 2001 survey of Nevada households conducted by The Gallup Organization found:

- Adults reported exposure to second-hand smoke in their home at least one day a week in 32.7% of households, and daily exposure in 15.3% of households.

- 32% of smokers reported not allowing smoking in their homes in 2001, a large improvement over 1992-93 levels where only 9.9% of smokers did not allow smoking in their homes. This is a sign that awareness of the dangers of second-hand smoke has increased and yet much more awareness is needed.

The latest study that specifically addressed the exposure of children to second-hand smoke, conducted in 1996, found that 21% of Nevada's children or an estimated 84,551 children were exposed to tobacco smoke at home.

Many adults are also exposed to tobacco smoke at work. The 2001 Gallup survey noted that 44.5% of adults reported being exposed to tobacco smoke at work one or more days each week, and 17% reported daily exposure. The situation is especially severe for casino workers, of which 46% reported daily exposure to tobacco smoke at work.

Community Impact

An estimated 48 million adults in the United States smoke cigarettes, even though this single behavior will result in disability and/or death for half of all regular users. Tobacco use is responsible for more than 440,000 deaths each year, or one in every five deaths in the U.S.

Paralleling this enormous health toll is the economic burden of tobacco use. The American Lung Association estimates the total economic cost of smoking in Nevada to be $1.2 billion. Smoking-related medical expenditures alone are $440 million in Nevada. Every pack of cigarettes costs society over $7.50 in higher costs of insurance, products and services, lost work time, and excess taxes.

Cigarette smoking remains the most important cause of preventable morbidity and early demise in the United States. Smokers have twice the risk of fatal heart disease, ten times the risk of lung cancer, and several times the risk of cancers of the mouth, throat, esophagus, pancreas, kidney, bladder, and uterine cervix. Smokers have four times higher risk for fractures of the hip, wrist, and vertebrae and two-fold increased risk for developing cataracts.

The harmful effects of smoking do not end with an increased burden of chronic disease among smokers alone. Women who use tobacco during pregnancy are more likely to have adverse birth outcomes, including low birth weight babies, which is linked to an increased risk of infant death and a variety of disorders and developmental delays in the infant. Nevada women who smoke during pregnancy are twice as likely as women who do not smoke to have a low birth weight baby.

In addition to low birth weight, children of people who smoke have higher incidence of asthma, more frequent respiratory infections, less efficient pulmonary functions, and higher incidence of chronic ear infections than children of nonsmokers and are more likely to become smokers themselves.

The health of nonsmokers is adversely affected by environmental tobacco smoke (ETS). Exposure to ETS causes an estimated 3,000 nonsmoking Americans to die of lung cancer and causes up to 300,000 children to suffer from lower respiratory tract infections each year. Environmental tobacco smoke also increases the risk of coronary heart disease for nonsmokers.

Current Services and Funding

Programs to control tobacco use fall into two broad categories: prevention and cessation. Prevention programs use paid media (radio, television, billboards and so on), school-based campaigns, and other education methods to motivate people to avoid smoking entirely. Cessation programs offer treatment and support to current smokers to help them quit. Virtually all tobacco control programs, aside from private smoking cessation services operated on a fee-for-service basis, are funded either by Center for Disease Control (CDC) grants channeled through the state Tobacco Prevention & Education Program or by Fund for a Healthy Nevada grants.

Combining Healthy Nevada grants for fiscal year (FY) 2001-02 and CDC grants for FY 2002-03, a total of $5,367,408 in funding was available for tobacco control programs. $3,822,932 was for prevention programs and $1,544,476 went to cessation efforts. The table below shows the breakdown of current program funding and service levels by geographic area.

	Clark County	Washoe County	Rest of State
PREVENTION			
Program funding	$2,547,466	$1,085,134	$190,332
Population, 2002	1,560,653	357,776	292,220
Funding per person	$1.63	$3.03	$0.65
# people served (*)	1,666,581	653,751	100,838
CESSATION			
Program funding	$991,456	$464,121	$88,899
Number of smokers	336,300	69,500	65,300
Funding per smoker	$2.95	$6.68	$1.36
# people served	5,135	3,542	2,255
% of smokers served	1.5%	5.1%	3.5%

(*) Number served may exceed the total population due to use of paid media that reaches people outside of the target geographic area.

Overall, prevention programs reached almost all of Nevada's residents in some manner with anti-smoking messages. Cessation programs served a total of 10,932 people in 2001-02 or 2.3% of the estimated 471,000 current smokers in Nevada.

Gaps in Services

To begin, it must be emphasized that the most effective ways to reduce overall tobacco use is through policy changes rather than through programs and services. The most effective policy is to increase the price of tobacco products. As reported by the Center for Health Improvement, national data show that every 10% increase in cigarette excise tax reduces cigarette consumption among the general population by 4%. Evidence suggests that youth are up to three times more sensitive to price than adults and that because 90% of smokers start as teens, higher taxes can sharply reduce smoking in the long run. Policy changes can also have a measurable impact on youth smoking through stronger enforcement of underage purchase laws, and on environmental tobacco smoke exposure through policies that reduce second-hand smoke exposure in public places and particularly in work settings.

The overall funding level of over $5.3 million appears significant on the surface, yet on a national basis, tobacco companies spend $10 in advertising for their products for every $1 spent by states to control tobacco use. Per the American Lung Association, the current funding level is only 1/3 of the Center for Disease Control's minimum recommendation.

Some encouraging news came from 2001 surveys that showed substantive reductions in both adult and youth smoking rates in Nevada. These reductions occurred *before* new programs funded with Fund for a Healthy Nevada grants could take effect. It would therefore be prudent to obtain 2002, and probably even 2003, data on smoking patterns to assess the impact of currently funded programs before considering a major shift in the existing balance between prevention and cessation activities.

In considering additional funding for tobacco control efforts, several gaps in existing services were identified during the assessment.

1. ***Balanced funding for cessation services***. In the 2001 BRFSS survey, 39% of smokers reported that they have attempted to quit, yet current cessation programs reached just over 2% of smokers in the last fiscal year. A particularly small percentage of smokers were served in Clark County, which has the highest smoking rates compared to Washoe County and the rest of the state. However, insufficient information exists to suggest precise changes to the current geographic distribution of cessation programs. Specifically, objective evaluations of current programs are needed in order to measure the success rates – the number and percent of smokers who are able to quit smoking permanently – and to compare the cost per positive outcome for different program models.

2. ***Smoking during pregnancy***. Few programs specifically address smoking cessation during pregnancy. In the current fiscal year (2002-03), one program in Clark County and one in Carson City / Douglas County targets this issue, and two programs in Washoe County (Step 2 and St. Mary's Health Network) address this issue as part of a broader set of services. No focused efforts were noted in rural areas, despite the fact that smoking during pregnancy is highest in rural counties. It should be noted that service providers have found pregnant smokers to be a very difficult group to impact, so new programmatic strategies may be needed to reduce smoking during pregnancy.

3. ***Tobacco control in rural areas***. Both prevention and cessation programs outside of Clark and Washoe Counties appear to operate entirely within Carson City and Douglas, Lyon and Elko Counties with little or no outreach to the state's 11 other counties. Although these 11 counties have smaller populations, collectively they represent approximately 108,000 people and 24,000 smokers. This is roughly 5% of the state's smokers.

4. ***Environmental tobacco smoke exposure***. Few programs or activities have been identified that would have a measurable impact on the exposure of children and adults to second-hand smoke, aside from some inroads by the Clark County Health

District with increasing the number of smoke-free restaurants.

Again, these gaps are not presented as recommendations for funding but rather to create awareness of issues to consider together with continuation or expansion of existing prevention and cessation efforts, once better information is available on the impact of current programs.

Data Issues

No substantive data gaps related to assessing tobacco use have been identified. Thorough data collection on smoking patterns is gathered on annual or bi-annual cycles, depending on the type of data, using methodologically sound surveys and other techniques. Data is consistently gathered and analyzed by age, gender, ethnicity, geographic area, income status, and educational attainment to enable solutions to be targeted to the demographic groups where the greatest change is needed.

The one area where additional data is needed for Fund for a Healthy Nevada resource allocation decisions relates to evaluating the effectiveness of different program models being used in Nevada in order to see the impact of sustained investments in specific programmatic strategies. This was discussed earlier under the heading of "Gaps in Services".

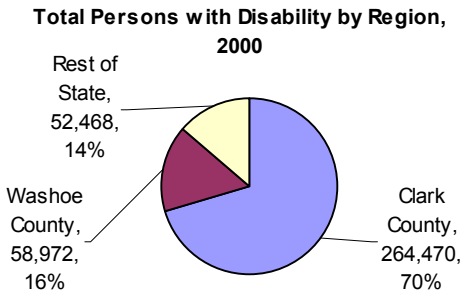
Data sources used to prepare this report are listed in Appendix 1.

Disabilities and Special Needs

Conditions and Needs

The term "disabilities" covers a broad range of health and wellness issues. There are three primary categories of disabilities: mental, physical/neurological, and sensory. Mental disabilities include mental illness, mental retardation, developmental delays, pervasive developmental disorders, and dual diagnosis (individuals who have a diagnosed emotional/ psychiatric disturbance as well as a diagnosed developmental disability). Physical/neurological disabilities are any physical conditions causing substantial functional limitation and may result from amputation, burn injury, cancer, cerebral palsy, cystic fibrosis, head injury, multiple sclerosis, diabetes, stroke, epilepsy, sickle cell anemia and a host of other conditions. Sensory disabilities include blindness/visual impairment, deafness/hearing impairment, and speech impairment.

The Department of Human Resources Strategic Plan for People with Disabilities noted in October 2002 that Nevada ranks number one in the nation in the increase of people with disability over the past decade. In 2000, there were 375,910 people with disabilities living in Nevada, representing almost 20% of the total population. At least 50,000 were children or young adults. The disability population of the state increased by 157% from 1990 to 2000 while that of the nation, as a whole, decreased by 2% during the same time period.



In order to frame the current conditions related to people with disability, an analysis is provided for each of three different age groups (children and youth, adults under age 65, and seniors). Separate breakdowns are then presented for selected types of disability. Recognizing the special challenges faced by people who are homeless, a final section highlights the presence of homelessness in Nevada and the needs of homeless persons.

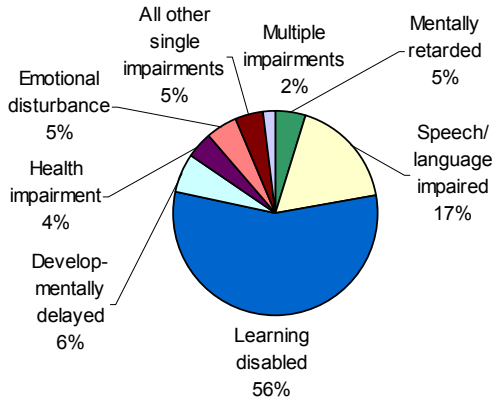
Children and Youth Disability

The Nevada Department of Education identified 40,227 students enrolled in Nevada schools in December 2001 ages 3 to 21 who had disabilities. These students represented about 11% of the total Nevada student enrollment. Over 17,500 of these children and youth had at least one disability likely to need some health and personal care services. Over 22,600 others had learning disabilities that may or may not require a comprehensive service array in the future.

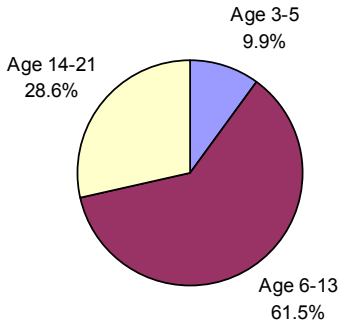
The table and graphs below show the breakdown of Special Education students by type of disability and age group in December 2001.

	Age Groups			
Impairment	3-5	6-13	14-21	Total
Mentally retarded	58	1,004	813	1,875
Hearing impaired	56	291	158	505
Speech/language impaired	1,084	5,842	109	7,035
Visually impaired	9	98	45	152
Emotional disturbance	3	1,156	779	1,938
Orthopedically impaired	65	232	80	377
Hearing impaired	55	1,179	465	1,699
Learning disabled	19	13,975	8,645	22,639
Deaf-Blind	2	5	1	8
Multiple impairments	48	438	270	756
Autism	153	438	80	671
Traumatic brain injured	5	98	50	153
Developmentally delayed	2,419	NA	NA	2,419
Total	3,976	24,756	11,495	40,227

Special Education Students by Impairment, December 2001



Special Education Students by Age Group, December 2001



Source: Nevada Department of Human Resources, *Strategic Plan for People with Disabilities*, October 2002

The Special Education student population grew at a 13% rate over the period from 1999-2001, compared to an overall growth rate of only 8% in the number of children and youth.

The above statistics only reflect children age 3 and older with an identified disability. The federal government estimates that approximately 3% of children from birth through two years old have disabilities. Using U.S. Census 2000 population data, this would indicate an additional 2,600 children age 2 and younger in Nevada have one or more disabilities.

Adults Under Age 65 Disability

Existing data is unclear about the precise magnitude and nature of disabilities impacting adults age 18 to 64. The best available data is from the U.S. Census 2000, which estimated the following numbers of people 16 to 64 years old in Nevada by primary type of disability:

Mental disability	40,044
Physical disability	80,214
Sensory disability	30,876
Self-care disability	20,829
Total	171,963

Source: U.S. Census 2000, Summary File 3

These figures do not correspond exactly to the overall figure of 375,910 Nevadans with disabilities due to differences in the census sampling techniques to develop population-level estimates by type of disability. The number of adults with mental disabilities appears to be particularly low. However, the breakdown above is useful as an estimated minimum incidence of disability among persons age 16 to 64.

Senior Disability

Existing data is similarly unclear about the level of disabilities among seniors age 65 and over. Shown below are the U.S. Census 2000 estimates of the number of Nevada seniors with disability, which should also be interpreted as likely minimum levels of disability among seniors.

Mental disability	18,510
Physical disability	61,255
Sensory disability	29,516
Self-care disability	16,630
Total	125,911

Source: U.S. Census 2000, Summary File 3

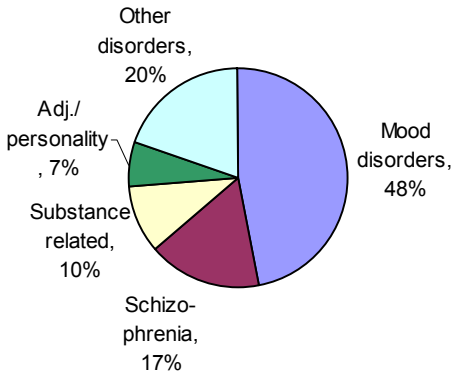
The Nevada Senior Services Task Force estimated in 2002 that 48% of seniors over age 75, or 45,900 people, are severely disabled. The challenges faced by many of these seniors are compounded by the fact that over 16% of persons age 65 and over with disabilities are living in poverty, making it difficult to obtain necessary support services.

Mental Health

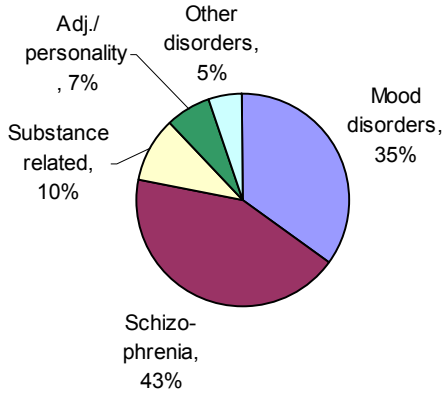
A 1998 study ranked Nevada as the number one state in the Western United States for prevalence of mental illness, estimating that as much as 23.7% of the population in Nevada will have some form of diagnosable mental disorder during their life. The Nevada Division of Mental Health and Developmental Services estimated that approximately 5.4% of the total Nevada population, or almost 108,000 people, were living with a serious mental illness in 2000.

The graphs below show a 2001 breakdown of state inpatient and outpatient mental health services according to the patient's diagnosis.

Outpatient Mental Health - Patient Diagnosis Profile, FY00



Inpatient Mental Health - Patient Diagnosis Profile, FY00



Source: Nevada Senior Services Task Force, *Act Now or Pay Later: Ten-Year Targets to Preserve the Health and Independence of Nevada Seniors*, August 2002

As shown in the graphs, the majority of diagnosed mental health patients are suffering from a mood disorder or schizophrenia.

Physical and Sensory Disabilities

Data was not available from sources solicited for this report to determine the precise nature of physical and sensory disabilities affecting Nevadans. However, an important finding was that people with physical or sensory disabilities often have multiple forms of disability, creating particularly significant quality of life challenges. The August 2002 strategic health plan from the Nevada Senior Services Task Force contained the following profile of the disability domains of Nevadans 15 years of age and older:

	Number of People	% of Disabled
Disability in one domain:	209,565	60.9%
Physical	157,956	45.9%
Mental	29,714	8.6%
Sensory	21,895	6.4%
Disability in two domains:	101,655	29.5%
Physical and sensory	56,301	16.3%
Physical and mental	40,662	11.8%
Sensory and mental	4,692	1.4%
Disability in three domains	32,842	9.6%
Total disabled, age 15+	344,062	100.0%

Source: Derived from data in Nevada Senior Services Task Force, *Act Now or Pay Later: Ten-Year Targets to Preserve the Health and Independence of Nevada Seniors*, August 2002

Homeless Persons

The definition of a homeless person from the Reno Area Alliance for the Homeless is a person sleeping in a place not meant for human habitation (such as the street or a makeshift camp), in an emergency shelter, or in transitional or supportive housing who originally came from the street or an emergency shelter.

Counts taken in 2001 identified at least 12,126 people within the State of Nevada who met the above definition of being "homeless". The total

magnitude of homelessness is certain to be much higher than this figure. First, it is extremely difficult to accurately locate and count all homeless persons. Second, the definition of "homeless" does not include people living in motels as their primary housing or other unstable forms of housing not intended for long-term habitation. In Washoe County alone, an additional 3,197 people were found living in motels on an emergency or transitional basis during a November 2001 homeless count.

The table below shows the breakdown of persons identified in 2001 that meet the definition of homeless. The Washoe County and Rural Nevada figures represent people located through point-in-time counts rather than being based on estimates.

Living Situation	Clark County	Washoe County	Rest of State
Street or camps	6,350	176	207
Emergency shelter	1,825	344	272
Transitional housing	2,650	302	0
Total	10,825	822	479

Sources: Clark County figures from BBC Research & Consulting study as reported in Nevada Strategic Plan for People with Disabilities, 2002. Washoe County figures from Reno Area Alliance for the Homeless Continuum of Care Strategy, June 2002. Rest of state figures from Rural Nevada Homeless Continuum of Care Strategy, June 2002.

The 2002 Nevada Strategic Plan for People with Disabilities notes that at least 41% of the homeless population is known to have some form of disability, with 35% having a serious mental illness.

Community Impact

For the one in five Nevadans who have some form of disability, the condition can have a profound effect on their quality of life. The degree of impact depends on the nature and severity of the disability. For some, the disability is detrimental to their self-esteem and relationships, leading to isolation and depression. For others, physical disabilities can be life-threatening or life-shortening conditions that compound the effect of other health issues they may experience.

Family and friends that serve as caregivers to persons with severe disabilities are also greatly affected. Caregiving can lead to exhaustion, burn out, stress and depression, as discussed further in the section of this report on Respite and Independent Living.

It must be emphasized that most people with disabilities are capable of healthy, productive lives. Some do not require any support, and others need selective support that is empowering. An important aspect of the impact of disabilities is the cost of not providing this support in terms of lost opportunities for disabled persons to contribute more to the workforce and their community.

Mental illness has a measurable impact on society in many ways. The ability to work is limited for about half of those with a serious mental illness. Delay in diagnosis leads to increased health care utilization and costs estimated to be $17 billion nationally each year. Further, a study conducted in 2001 of Southern Nevada Adult Mental Health Services (SNAMHS) patients revealed a strong link between mental illness and increased mortality. The overall mortality rate per 100,000 patients from 1990 to 1999 for SNAMHS patients within one year of admittance was almost double the general rate over the same time frame, and the suicide rate was more than fifteen times the general rate. Treatment clearly impacted mortality; the mortality rate of SNAMHS patients in their third year of admittance was half the rate of patients in their first year of admittance.

Current Services and Funding

An extremely complex and fragmented system of services is available to persons with disabilities. As described by the Nevada Department of Human Resources in the Strategic Plan for People with Disabilities, October 2002, the following entities comprise the disability service delivery system:

State Government
- Nevada Medicaid
- Office of Community Based Services
- Mental Health/Developmental Services

- Children's Services
  - Community Connections
  - Division of Child & Family Services
  - Health Division
  - Department of Education
  - Nevada Check Up
- Housing Division
- Department of Transportation
- Vocational Rehabilitation Division
- Aging Services
- Nevada Counties
- Federal Qualified Health Centers and Rural Health Center Programs
- Indian Tribal Health Centers
- Nonprofit Organizations
- Hospitals
- University and Community College System

The following table shows local and state government programs and services that specifically address the needs of persons with mental, physical and/or sensory disabilities. This is the only sector of the service delivery system for which reliable service level and funding data was available for this assessment. Service and funding levels are from fiscal year 2001-02 except where noted with an asterisk (*), figures are from fiscal year 2000-01. "NA" means data was not available.

Program/Service	# Served	Total Funding
INCOME SUPPORT:		
Social Security Disability Income (SSDI)	42,468	$247,248,000
Supplemental Security Income (SSI)	27,293	11,190,000
Subtotal – Income Support		$258,438,000
MEDICAL AND LONG TERM CARE ASSISTANCE:		
County Services to Indigents: Long Term Care (*)	1,666	$ 19,860,551
County Services to Indigents: Medical Assistance (*)	11,845	28,353,991
Nevada Medicaid: Disabled and Blind Services	21,935	279,467,900
Nevada Medicaid: Mental Health/ Mental Retardation Services	NA	97,962,281
Nevada Medicaid: Long Term Care	NA	101,610,534
Subtotal – Medical Assistance		$526,585,257
SUPPORT SERVICES:		
County Services to Indigents: Other Assistance to Disabled Persons (*)	1,541	$ 2,846,647
Nevada Medicaid: Physical Disabilities Waiver (*)	601	745,042
Nevada Medicaid: Home/Community Long Term Support Services	NA	18,437,666
Office of Community Based Services: In Home Personal Assistance	78	1,552,356
Office of Community Based Services: TTY Distribution	240	150,480
Office of Community Based Services: Deaf Resource Centers (*)	528	109,824
Office of Community Based Services: Independent Living	101	376,528
Office of Community Based Services: Assistive Technology Loan Program	51	81,600
Office of Community Based Services: Residential Rehabilitation	23	1,347,570
Office of Community Based Services: Day Treatment Rehab	46	1,335,840
Community Connections: First Step/Happy	512	2,637,435
Community Connections: Special Children's Clinics	1,229	6,446,105
Fund for a Healthy Nevada: ALS Support	136	182,104
Fund for a Healthy Nevada: Endeavor – Respite	280	413,840
Fund for a Healthy Nevada: Nevada Early Childhood Association, - Rural Respite	122	175,680
Fund for a Healthy Nevada: UNR Geriatric Resource Team	50	112,250
Fund for a Healthy Nevada: C*A*R*E* Chest of Sierra Nevada	NA	450,000
Subtotal – Support Services		$37,400,967
MENTAL HEALTH AND DEVELOPMENTAL SERVICES:		
State Mental Health Services	22,341	$73,948,607
State Developmental Services	3,153	60,663,748

Program/Service	# Served	Total Funding
Division of Child & Family Services: Youth Mental Health Inpatient	365	13,017,501
Division of Child & Family Services: Child/Youth Intervention Outpatient	2,201	5,345,958
Subtotal – Mental Health and Developmental Services		$152,975,814
TOTAL		$975,400,038

Note: The above table does not include respite and independent living services that are not specifically focused on persons with disabilities. Additional respite and independent living services are covered in the next section of the assessment.

Precise breakdowns of funding by geographic region are not available for most programs. The Office of Community Based Services estimated a funding breakdown for their programs of 50% for Clark County, 40% for Northern Nevada, and 10% for rural areas. The Division of Mental Health and Developmental Services allocated 56% of funds to Clark County, 28% to Washoe County, and 16% to the rest of the state in fiscal year 2000-01.

It is worth noting that the Fund for a Healthy Nevada has recently increased its support for programs serving people with disability. In FY03-04, the Fund allocated $1,934,000 in grants to such programs. This is a 45% increase in funding from the FY01-02 total of $1,333,874 of Fund for a Healthy Nevada grants reflected in the above table.

Highlights of information obtained about service capacity other than government-operated programs:

- As of October 2002, 42 nonprofit organizations served adults with all types of disabilities and 25 nonprofit organizations served children with all types of disabilities. These agencies are predominantly located in Northern Nevada – 27 of the adult-serving agencies (64%) and 22 of the child-serving agencies (88%) were in the north even though the number of disabled persons in Clark County is 2.5 times the number for the rest of the state combined. No data was obtained on funding for these agencies that comes from non-governmental sources.

- The medical care system including hospitals, community health centers and Indian health centers provides a variety of health care services related to disabilities. The "Access to Health Care" section later in this report describes current conditions, service capacity, and gaps in services related to medical care.

- Services for homeless persons include assessment of needs, multiple levels of housing (emergency shelter, transitional housing, and permanent supportive housing), and a broad variety of support services such as case management, job training and placement, substance abuse treatment, mental health care, food, clothing, financial management, and a host of other supports. Clark County and Washoe County both have well-established service networks to assist homeless persons, while services in the rest of the state are mainly limited to a few population centers such as Carson City, Winnemucca, and Elko. Solid data was not available to show the total funding for these programs that go specifically to assist homeless persons.

Gaps in Services

Services for people with disabilities are being greatly affected by a 1999 Supreme Court decision known as the "Olmstead Decision." The decision requires states to provide care to people with disabilities at home or in community-based programs where possible, instead of in institutions, or be found in violation of Title II of the Americans with Disabilities Act (ADA). As a result, gaps in services must be viewed not just in terms of gaps in the overall service capacity, but also in terms of gaps by mode of service delivery.

If the number of persons with disability were to merely grow at the same rate as the rest of the population, there would be 506,000 persons with disability by 2010. Since the number of seniors is growing at a faster rate than the rest of the

population and seniors have a higher incidence of disability, the number of disabled persons in 2010 is likely to be higher than 506,000.

The Nevada Department of Human Resources' *Strategic Plan for People with Disabilities* published in October 2002 analyzed gaps in services. Other sources used for this assessment support the conclusions reached in the strategic plan. The primary gaps identified are:

1. ***Insufficient capacity to provide home and community-based services***. The Strategic Plan states, "many people who can live in the community are unnecessarily languishing in nursing facilities or other segregated settings and missing out on the many opportunities the community offers them. There are many others that are at imminent risk of unnecessary institutionalization due to the lack of available community services." Waiting lists exist for virtually every type of home or community-based support service for disabled persons. Just a few examples, all using 2002 data:
    - 16% of people with mental illness in Southern Nevada needing case management services are not getting them. The wait time for services is five months.
    - As of April 2002, there were over 300 children under the age of 3 with disabilities waiting for assistance after referral to Early Intervention Services. On average, it takes approximately 150 days from referral until an individualized family service plan is developed for these children.
    - 118 people were on the waiting list for independent living services, with an average wait of six months.
    - 152 people were on the waiting list with Nevada Supportive Housing, with a wait time of 12-18 months.
    - 190 people with developmental disabilities were on the waiting list for residential support services.

    The issue is compounded by the rapid growth in demand for services. For example, Nevada's adult mental health clinics experienced a 9% jump in people served from fiscal year 2001 to 2002.

2. ***Information barriers to service***. As noted earlier, there are a bewildering number of programs and agencies serving disabled persons. A huge barrier facing people with disabilities is being able to learn about available services that are appropriate for them. The Strategic Plan for People with Disabilities recommends implementation of 2-1-1 as a phone number for the public to use in being able to access all types of social services, much like 9-1-1 is used to access emergency services. 2-1-1 has already been implemented in 10 states and was recently approved in California.

3. ***Many existing services don't know how to – or won't – assist persons with disabilities***. Providers of most types of health and human services have not been properly trained to work with people with disabilities, limiting the effectiveness of their services. Some programs are missing basic infrastructure, such as homeless shelters without accommodations for people with physical disabilities despite a Clark County study that found 25% of their homeless population with some form of physical disability. Other providers refuse altogether to work with disabled people; this has been noted as a particular problem with dental care.

4. ***Eligibility requirements inhibit timely service***. Applications for Medicaid and SSI take between 110 and 145 days to process, on the average. For people who are newly disabled, this creates a significant gap from the time they are discharged from the hospital or other treatment center to the time they have income and medical support to help with their daily needs.

5. ***Shortage of rural health and mental health workers***. Major difficulties have been encountered in recruiting mental health workers all over the state, and in recruiting health professionals to work in rural areas of the state. Mobile services that could help reach rural areas are largely unavailable.

6. ***Transition of special education students to adult life***. Many of the 11,000+ high school age youth in special education programs are at risk of not receiving the support they need to transition successfully from school to adult life. Without comprehensive transition services, many of these youth will be at risk of unnecessary institutionalization.

Data Issues

Outside of programs operated by local and state governmental agencies, data collection related to persons with disability is quite limited. Most nonprofit organizations and other non-governmental service providers do not have consistent definitions of "disabilities" or the infrastructure to track needs and service levels specifically related to persons with disability. This issue was highlighted in the Strategic Plan for People with Disabilities, which said:

> A primary problem in Nevada is the lack of an effective overall information system for people with disabilities. Each state agency, sub-agency, county and private service provider has its own separate information system. As a result, service delivery is often provided in an inefficient and scattered manner. Information systems are replete with missing pieces in some places, and duplicated counts of people and service units in others, resulting in a common practice of development of service plans and budget projections based on misinformation. The [Nevada] Task Force [on Disability] has recommended support for a comprehensive review of all data systems for people with disabilities in Nevada and the development of a unified information system.

Because of the challenges with information systems and classification of disabilities, data gaps that impact the conclusions in this report include the following:

- No solid data could be found regarding what portion of the state's 375,000 persons with a disability require assistance.

- The lack of integrated case management systems makes it difficult, if not impossible, to identify unduplicated people served in order to assess what portion of the disabled population that does need assistance is being served and what portion is not.

- Aside from the state-supported programs described in the Current Services and Funding section, data was not available on the level of funding that is specifically targeted to serving people with disabilities.

- No data was found regarding the number and age of people who become disabled each year. This is relevant since newly disabled persons can have special needs that can impact the design of support services.

Data sources used to prepare this report are listed in Appendix 1.

Respite and Independent Living

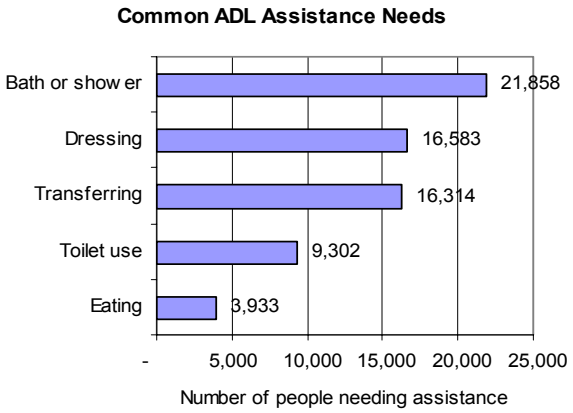
Conditions and Needs

It is quite difficult to separate the issues of respite and independent living from the issues of disability because there is a high degree of overlap. Many persons with disabilities need some level of support in order to live in a home rather than in a long-term care facility or other type of institutional setting, as described in the previous section of this report. An effort is made to separate them here because respite and independent living support may be needed by residents – primarily seniors – who may not have significant disabilities but also need assistance in order to continue to live independently. Further, thousands of people who care for a disabled or elderly person need respite from their care-giving in order to sustain their own quality of life.

Personal Care Assistance

A study conducted in 2001 by the state Office of Community Based Services with the University of California, San Francisco found that over 58,400 people in Nevada – 3.7% of the population – experience various levels of difficulty with basic activities of daily living (ADLs) such as bathing, dressing, eating and using the toilet. Slightly less than half of these people (28,900) have difficulty with one or more ADLs but do not need assistance. The other 29,500 people do need some form of assistance with ADLs. Of these, 11,150 people need help with three or more ADLs.

Seniors require personal care assistance at a much higher rate than the rest of the population. 4.1% of persons age 65 – 74 require assistance with ADLs, rising to 9.6% of persons age 75 – 84 and 22.8% of persons age 85 and over. Since the number of seniors is projected to grow by another 100,000 people in the next ten years, there is certain to be a substantial jump in the demand for personal care assistance.



Source: Nevada Department of Human Resources, *Strategic Plan for People with Disabilities*, October 2002

Independent Living Support

The previous section on Personal Care Assistance identifies people that need ongoing support in order to live in their own home rather than in a long-term care facility or other type of institutional setting. In addition, there is a larger group of people who need assistance with instrumental activities of daily living (IADLs) such as shopping and errands, house cleaning, laundry, and meal preparation in order to sustain their independent living situation.

Taking all people into account, including persons of all ages with disabilities, an analysis prepared for the Nevada Senior Services Task Force found that approximately 68,000 Nevadans need assistance with one or more IADLs.

Seniors are the largest group requiring IADL support. A study by the National Institute on Disability, Department of Education and Rehabilitation found that 16.2% of people age 65 and over need assistance with IADLs. This translates to 39,950 Nevada seniors needing IADL support in 2002.

Respite

Respite services offer caregivers of disabled or elderly persons a temporary break from their care-giving duties. The August 2002 strategic health plan from the Nevada Senior Services Task Force notes that "a high proportion of seniors in Nevada rely exclusively on their families and other unpaid individuals for care. In a recent study conducted for the Nevada Division for Aging Services, survey respondents indicated that family and friends were the exclusive caregivers for approximately 90% of seniors with disabilities. No data was found regarding the percentage of non-seniors with disabilities receive care primarily or exclusively from their families and friends, but it is likely to be a high percentage.

Community Impact

Without support, the 29,500 people who need assistance with ADLs and thousands of additional people who need help with IADLs are faced with having to leave their home and go to an institutional setting to receive the care they require. This is a costly solution. Further, the long-term care system is ill-equipped to handle an influx of new residents. According to an April 2002 memorandum from the Division of Health Care Financing and Policy, in 2001 there were an average of 5,091 certified beds in intermediate care and skilled nursing facilities, of which only 50 beds were vacant.

Respite is important for the health and well-being of the hundreds of thousands of people who provide the primary care for seniors and disabled persons in Nevada. A national study conducted by Family Circle and the Kaiser Family Foundation in September 2000 found that care-giving can be an emotional roller coaster. Caring for a loved one demonstrates love and commitment but it also can lead to exhaustion, burn out, stress, and depression. Over 53% of those surveyed reported they were worried and 28% felt "sad or depressed."

Current Services and Funding

The table below shows programs and services identified that promote independent living and/or provide respite and which do not duplicate programs already listed in the previous section of this report on Disabilities and Special Needs. Service and funding levels are from fiscal year 2001-02 except where noted with an asterisk (*), figures are from fiscal year 2000-01. "NA" means data is not available.

Program/Service	# Served	Total Funding
Nevada Medicaid: CHIP – Frail Elderly at Home (*)	1,240	$6,636,184
Nevada Medicaid: Adult Day Health Care	126	600,014
Nevada Medicaid: Personal Care Aide	816	5,356,836
Nevada Medicaid: Home Health	1,511	7,318,843
Title XX Federal Social Services Block Grant: Respite care	54	37,240
Division for Aging Services: Tobacco Settlement Independent Living Grants (*see note below*)	7,583	4,600,000
TOTAL		$24,549,117

Note on Tobacco Settlement Grants: Information from the Department of Human Resources 2002 Annual Report showed 1,724 clients received respite services, 1,344 clients received transportation services, and 4,515 clients received other services. There may be overlap in the clients served.

The Nevada Senior Services Task Force's 2002 strategic health plan for seniors contained a separate list of home care services showing the following programs and fiscal year 2001-02 services levels in addition to the ones listed above:

- Title XIX – 312 people receiving personal assistance or homemaker services
- Senior Dimensions – 1,167 people receiving personal assistance or homemaker services
- Clark County – 466 people receiving homemaker services
- Washoe County – 103 people receiving homemaker services

County-supported homemaker services are also available in Douglas, Esmeralda, Eureka, Lincoln, Lyon, Mineral, Nye, Pershing and White Pine Counties but no information was available about service levels in these counties.

Care management services help seniors and their family members to learn about formal and informal services and supports, make a plan for staying in their homes with appropriate supports, and identify problems and develop solutions to those problems. In 2002, 5,828 people were receiving care management services through various county, state and federally support programs with an additional 1,240 people on waiting lists to receive these services.

Counties offer few respite and independent living services beyond the homemaker services noted earlier and home-delivered meals, which are available in most counties. According to information compiled in the Nevada Department of Human Resources' *Strategic Plan for People with Disabilities* from October 2002, the following counties offer services:

- Clark County has assisted living, chore, and independent living services. None of these services are available through the county in Washoe County.
- Personal assistance is available from the county only in Eureka and Mineral Counties.
- Douglas County is the only county to provide respite care.

Nonprofit organizations are an important part of the service system for respite and independent living support. The table below shows the number of nonprofit agencies offering respite and independent living services, divided into northern and southern Nevada. Some agencies offer services in multiple locations.

	North	South	Total
Independent living	9	5	14
Personal care assist	6	3	9
Respite care	6	3	9

Source: Nevada Department of Human Resources, *Strategic Plan for People with Disabilities*, October 2002

The nonprofit organizations table includes two providers, Endeavor and the Nevada Early Childhood Association, that have received grants from the Fund for a Healthy Nevada to provide respite services in southern and rural Nevada. United Ways in Nevada reported $15,042 in fiscal year 2001-02 grants for respite and ADL support. No data was available on the number of people served or funding levels for these organizations.

Gaps in Services

It is apparent that the level of demand for personal care assistance, independent living support, and respite services is substantially greater than the current capacity to provide these services. The service gap appears to be particularly acute in Clark County, where a majority of the state's seniors and disabled persons reside. An indicator of this is a report from the Nevada Medicaid CHIP (Frail Elderly at Home) program that in fiscal year 2002, the wait for services in Northern Nevada was about 3 months and the wait in Las Vegas was longer than 9 months. However, the data gathered for this assessment was insufficient to precisely compute or even broadly estimate the magnitude of the service gap.

Data Issues

The ability to assess and target service gaps would be greatly enhanced by gathering information from state, county and nonprofit service providers regarding (a) current service levels, (b) breakdown of people being served by age and level of functioning or disability, and (c) waiting lists or other indicators of unmet demand for additional services. This information could be compared to the geographic and demographic profile of seniors and disabled persons in Nevada in order to more accurately understand the nature and magnitude of service gaps.

Data sources used to prepare this report are listed in Appendix 1.

Oral Health

Conditions and Needs

As Dr. C. Everett Koop stated during his term as U.S. Surgeon General, "you are not healthy without good oral health." Nevada has not historically placed a high priority on oral health services, resulting in significant health issues for hundreds of thousands of residents.

The analysis of current conditions and needs related to oral health is organized into four sections: oral health of children, oral health of seniors, provider capacity, and dental insurance coverage.

Oral Health of Children

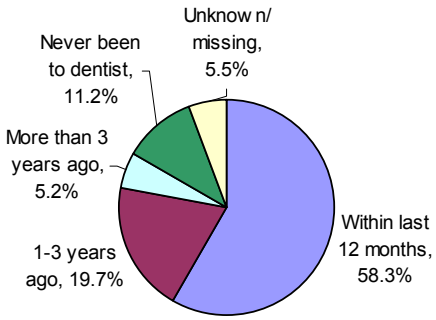
The last statewide oral health needs assessment of Nevada's children was done in 1992 by Cristman Associates under contract with the Nevada State Health Division. The needs assessment found that 67% of children examined had experienced decay in permanent or primary teeth, and half of the children had active tooth decay in primary or permanent teeth requiring prompt dental treatment.

Several recent studies have demonstrated that the oral health of children today is as dire as it was in 1992. Three studies of note:

- A study sponsored by the Nevada State Health Division on the oral health of Nevada's third grade children was just completed in May 2003. The study found 67% of children have a history of dental caries (the same level as 1992). 39% currently have untreated tooth decay, and for 7% of all children screened, treatment was needed urgently.

  This same study asked when the child had their last dental visit. Over 11% of the third-grade children had never been to a dentist, and for another 5% their last visit was more than three years ago.

Last Dental Visit for 3rd Grade Children - 2003 State Health Division Study



- In October 2000, the Southern Nevada Dental Hygienists' Association screened 9,958 children in 23 Southern Nevada Elementary Schools. Over half of all kindergarten through 5th grade students were screened. Of these, 4,390 children (44%) were referred to a dentist due to the presence of visible untreated decay. 695 of them (7%) needed immediate care due to the presence of pain and/or swelling.

- From July 1, 2000 through June 30, 2001, Saint Mary's Take-Care-A-Van screened 1,583 children in 31 Washoe County schools. 400 (25%) were referred to a dentist due to the presence of visible untreated decay. An additional 798 children were screened in 15 rural schools. 215 of these (27%) were referred to a dentist due to the presence of visible untreated decay.

These latest studies consistently show that 25 – 44% of elementary school age children have visible untreated tooth decay requiring prompt care, and 7% have active pain and swelling requiring immediate care. Applied to the number of elementary school age children in Nevada, this suggests that between 45,000 and 80,000 elementary school age children need prompt care, and over 12,500 children are experiencing current pain and swelling from untreated dental problems.

- If one were to assume that middle school and high school age youth have untreated tooth decay at the same rates found for elementary school students, the total number of children and youth with untreated oral health problems would be somewhere between 100,000 and 175,000. This extrapolation should only be used as a very rough estimate since no data was found regarding the rates of tooth decay in middle and high school age youth. "Crack Down on Cancer" has a report on oral health screenings they have conducted in high school age students. The report was not available in time for this assessment report but should be available soon.

Oral Health of Seniors

Seniors have significant dental problems that often go unaddressed. A 1999 oral health needs assessment of Nevada seniors conducted for the State Health Division found the following about seniors residing in the general community:

- 14% have broken, loose or decayed teeth;
- 6% have inflamed and swollen or bleeding gums;
- 3% have infection, ulcers or rashes in the mouth;
- 6% have lost all natural teeth, but have no denture; and
- 23% have lost some natural teeth, but do not have a partial denture.

The same study found similar problems among residents of long-term care/skilled nursing facilities, such as:

- 13% reported chewing problems and 3% reported swallowing problems;
- 2% reported mouth pain;
- 8% have lost all natural teeth, but do not use dentures; and
- 25% have lost some natural teeth, but do not have a partial denture.

Applied to 2002 population data for persons age 65 and over, these studies suggest there may be at least 35,000 seniors who need immediate dental care and 75,000 seniors who need partial or full dentures.

Nevada seniors also use preventive dental services at a comparatively low rate. According to a national survey done through the National Oral Health Surveillance System in 1999, 39.1% of Nevadans over the age of 65 reported that they had not had their teeth cleaned within the past year compared to the national average of 27.5%. Additionally, people with incomes below $15,000 a year were even less likely to have had their teeth cleaned—66.5% had no dental cleaning within the past year. Nationally, 53.3% of those with incomes below poverty had not had their teeth cleaned.

Provider Capacity

Nevada is experiencing a severe shortage of dentists. In 2001, the state had 35 dentists per 100,000 residents, ranking last in the nation in the ratio of dentists per capita. The situation has improved somewhat since the 2001 enactment of SB 133 authorizing dental licensure by credential; as of March 2003, there were 1,055 dentists with active Nevada licenses or almost 48 dentists per 100,000 residents.

Availability of dentists is particularly a problem in rural areas of Nevada. As of March 2003, 13 out of the 14 rural and frontier counties met the federal designation as dental underserved areas; only Douglas County did not qualify as a dental underserved area. There have been concerted efforts in 2002 and 2003 to expand services in rural areas, including hiring of a Dental Hygienist to serve low-income children and disabled adults in Fallon, construction of a new dental facility in Lyon County, and hiring of a pediatric dentist to serve Elko and Winnemucca.

Capacity constraints extend beyond not having enough dentists. As stated in the Oral Health Plan facilitated by the Bureau of Family Health Services in 2002, "There are an insufficient number of specialists, particularly pediatric dentists. Some areas of the state are experiencing a shortage of support staff needed to effectively provide dental services - dental hygienists and dental assistants. In addition, programs for the

underserved frequently lack practice management and case management support."

Dental Insurance Coverage

Even if there were enough dental care providers available, many Nevadans would not be able to afford to access these services due to a lack of insurance coverage (or coverage that is accepted by the dentists in their area).

In 2001, only 12% of the dentists in Nevada were active Medicaid providers. As of 1999 there were five Nevada counties without any dentists who accept Medicaid. This makes it very difficult for low-income individuals and families to obtain affordable oral health care, particularly in rural areas. The impact is acutely felt by children – in 2001, only 18,324 (17%) of the 108,479 children eligible to receive Medicaid Early and Periodic Screening, Diagnosis and Treatment services actually received any dental services.

The 2003 study of third grade children by the Nevada State Health Division found that over 27% of the children were not covered by dental insurance. This clearly impacts access to care – when parents were asked why their child could not get dental care, the two most often-cited reasons were "could not afford it" and "no insurance". The high percentage of children without insurance was corroborated by Michael Johnson, Manager of Outreach Programs for Saint Mary's Mobile Dental Outreach, who reported that 43% of the students seen by their program (elementary school students in Carson City and Washoe, Lyon and Churchill Counties) have no dental coverage.

The 1999 Oral Health Needs Assessment for Seniors found that at least 38.5% of Nevada seniors have no third party payer for oral health prevention and treatment coverage.

Community Impact

Oral health problems can be extremely painful for all age groups, with the pain often leading to problems with eating, nutrition and sleeping.

Research has shown that a lack of proper dental care can also be directly linked to other poor health conditions. Minor infections and diseases of the gums and mouth can lead to serious infections and diseases of the mouth and gums which can spread to other parts of the body. The American Dental Hygienists' Association states that "poor oral health has been identified as a risk factor contributing to respiratory system (lung) diseases – chronic bronchitis, emphysema, and pneumonia." A separate report issued by the Women's and Children's Health Policy Center at Johns Hopkins University in 2002 notes that:

> Emerging research is beginning to establish distinct associations between periodontal diseases and adverse chronic health conditions such as cardiovascular disease, diabetes, and osteoporosis. Although additional studies are needed to determine the mechanisms by which such associations exist, available research clearly demonstrates that oral diseases and conditions are not only markers for underlying health problems, but also important determinants influencing the development and management of adverse chronic health conditions.

Therefore, preventive dental care can lead to better overall health status and well-being.

For children, the pain and infection caused by dental caries can lead to problems in speaking and attention in school. Other studies have shown that chronic dental problems in children can adversely affect self-image, school attendance, and school performance. Nationally, an estimated 50 million hours of school time are lost by children because of oral health problems.

Current Services and Funding

The table on the next page shows programs and services identified in the assessment that provide free or low-cost oral health services in Nevada. Service and funding levels are from fiscal year 2001-02 except where noted with an asterisk (*), figures are projections for fiscal year 2002-03. "NA" means data is not available.

Program/Service	# Served	Total Funding
CLARK COUNTY:		
Medicaid and Nevada Check Up: UNLV School of Dentistry	30,000	NA
Economic Opportunity Board	512	$113.664
Huntridge Teen Clinic	690	NA
Miles for Smiles: Preventive or Restorative Care (*)	5,250	600,000
Saint Rose Dominican: Positive Impact Treatment (*)	700	150,000
CCSN: Children's Oral Health Center (*)	NA	52,880
Subtotal – Clark County		$916,544+
WASHOE COUNTY:		
Saint Mary's: Restorative Care (startup 6/02 through 2/03) (*)	518	NA
Northern Nevada Dental Health Program: Free Services to Low-Income Populations	360	NA
Salvation Army Referral Service: Free Services to Low-Income Populations	60	NA
Health Access Washoe County	9,145	NA
Saint Mary's: Sealants (*see note below*)	2,176	NA
Saint Mary's: Screenings	2,723	NA
Saint Mary's: Restorative Referrals	1,242	NA
Subtotal – Washoe County		NA
REST OF THE STATE:		
Great Basin Primary Care Association: Facility Expansion (*)	17,059	$800,000
Family Resource Center of North-east Nevada: Dental Varnish (*)	267	8,400
Subtotal – Rest of the State		$808,400+
TOTAL		$1,724,944+

Note: The Saint Mary's Mobile Dental Outreach program covers Carson City and Lyon and Churchill Counties in addition to Washoe County.

Additional information obtained about current services and planned capacity expansions:

- Health Access Washoe County has been able to add providers and operatories for their dental program, and is projected to serve 15,000 people in fiscal year 2002-03 compared to 9,145 people in fiscal year 2001-02.

- The oral health facility expansion being promoted by Great Basin Primary Care Association is intended to serve a target population of 67,360 children and disabled persons, of which a projected 17,059 additional people who are either uninsured or have Medicaid or Nevada Check Up coverage will ultimately be served. The breakdown of the projected service levels by community is:

Elko County	2,871
Lyon County	4,395
Churchill County	1,686
Washoe County (HAWC)	2,300
Winnemucca	1,436
Nevada Rural Health Center sites	4,371
Total	17,059

- United Way reported $50,607 in grants to oral health programs in fiscal year 2001-02, $20,000 in Clark County and $30,607 in Washoe County.

Gaps in Services

The most significant gaps identified in the area of oral health services are:

1. ***Oral health education***. Very little effort appears to be placed on educating people at all age levels about the importance of good oral health and proper preventive care. Education is needed for parents of young children about preventing early childhood caries (ECC) but few parents get this information; for example, the Bureau of Family Health Services noted in the 2002 annual report for the Department of Human Resources that a total of 422 participants were reached through ECC education efforts during the year. Similarly, there are few school-based programs to educate and screen children. The general population does not receive effective oral health education either. Several Healthy Nevada grantees provide limited oral health

education: Miles for Smiles; Economic Opportunity Board; St. Rose Positive Impact; Crackdown on Cancer; and St. Mary's.

2. ***Preventive care for children***. The use of dental sealants and varnishes has been shown to dramatically reduce the number and severity of dental caries in children. However, the 2003 study by the Nevada State Health Division found that only 32.5% of third grade children had dental sealants applied. Existing programs are working to provide screening and sealants for children, but they are able to reach only a small fraction of children who can benefit from this service. Further, in the spirit of the previous item on oral health education, there is no systematic attempt to educate parents who have dental insurance or the ability to pay for services about the benefits of sealants and varnishes.

3. ***Professional service capacity***. When people require treatment for dental caries or periodontal disease, shortages in the number and geographic distribution of dentists can mean long wait times or decisions to skip treatment altogether. Shortages are particularly acute in three areas: dentists who will accept Medicaid and Nevada Check Up as payment for services, dentists who will work with children and disabled persons, and all types of dental professionals in rural areas (specifically, all areas other than Clark County, Washoe County, Carson City and Douglas County).

4. ***Targeted oral health services for seniors***. A large number of seniors are experiencing major dental problems warranting immediate attention, yet no programs were identified in this assessment that specifically focus on seniors for oral health services. The Task Force recently approved limited funding for senior dental and vision under the 30% allocation to the Division of Aging for independent living grants. Since roughly half of all seniors have some form of disability and the senior population in Nevada will continue to grow at an accelerated rate, investment in this area would certainly fit under the mandate of the Fund for a Healthy Nevada.

Data Issues

Three main gaps in data were encountered related to assessing oral health conditions and opportunities to enhance existing services:

- Data on current funding levels for oral health services is extremely incomplete. This makes it almost impossible to correlate funding with service levels, and to evaluate what portion of available resources is going to each geographic area and age group.

- Good data exists regarding oral health conditions of elementary school age children, but no data was found on the oral health status of preschool age children, middle school age children, and high school youth. "Crack Down on Cancer" has a report on oral health screenings they have conducted in high school age students. The report was not available in time for this assessment report but should be available soon.

- It is particularly important to understand health status for preschool children and for youth in the 12-18 age range – young children because good oral health starts as an infant, and youth because of the potential need for continued screening and treatment services in the teenage years.

- No data was found on the oral health status of adults between ages 18 and 65. As a result, it was not possible to assess whether oral health issues are affecting people with disabilities to a significant degree. It should also be noted that the best available data on the oral health of seniors is from 1999 and may not be useful for decision-making much longer because of the rapid growth and change in Nevada's population.

Further research to address these data gaps should result in more confident future decision-making related to oral health services.

Data sources used to prepare this report are listed in Appendix 1.

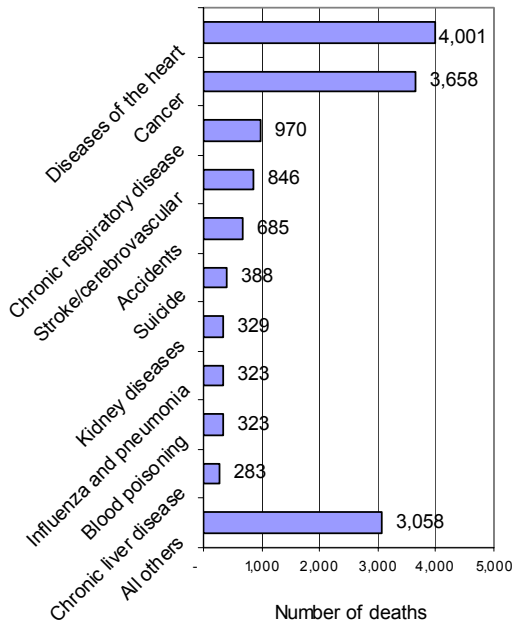
Chronic Diseases

Conditions and Needs

Chronic disease refers to health conditions that are continuous or persistent over an extended period of time. They are long-standing conditions that are not easily or quickly resolved.

Chronic diseases such as heart disease, cancer, chronic obstructive pulmonary disease (such as chronic bronchitis and emphysema), stroke and diabetes are among the most prevalent, costly and preventable of all health problems. Seven of every ten Nevada residents who die each year, die from a chronic disease. Heart disease and cancer alone account for over half of all deaths in this state.

Leading Causes of Death in Nevada, 2000



Source: Center for Health Data and Research, *Nevada Vital Statistics*, 2000

This report focuses on the chronic diseases that represent the greatest public health issues rather than trying to be an exhaustive review of all chronic health conditions. Information is broken down into the following categories: cancer, cardiovascular diseases, respiratory diseases, diabetes, and other chronic conditions.

Cardiovascular Diseases

Heart disease and stroke, the two main categories of cardiovascular disease, are the first and fourth leading causes of death, respectively, in Nevada and nationwide. Together, they accounted for 32.6% of total deaths in Nevada in 2000. Heart disease was the most common cause of death in Nevada in 2000, accounting for 4,001 deaths (26.9% of all deaths) and stroke was the cause of 846 deaths (5.7% of all deaths). Stroke is also the number one cause of disability in the U.S., with more than 3,000,000 Americans currently living with permanent brain damage caused by such an event.

The age-adjusted death rate from coronary heart disease in Nevada was 167.8 per 100,000 population in 2001, which is well below the national rate of 196.0 per 100,000 and almost down to the Healthy People 2010 objective of 166 per 100,000.

The major risk factors contributing to cardiovascular diseases are high blood pressure, high blood cholesterol, smoking, obesity or being overweight and physical inactivity. All of these risk factors are controllable. Further, Nevada does not compare favorably to Healthy Nevada 2010 objectives in these areas, indicating a risk of increased future rates of cardiovascular diseases.

Indicator	Nevada Status	U.S. Status	2010 Target
Proportion of adults with high blood pressure	25.6%	25.6%	16.0%
Proportion of adults with high blood pressure who are taking action to control their blood pressure	68.4%	84.0%	95.0%

Indicator	Nevada Status	U.S. Status	2010 Target
Proportion of adults with high total blood cholesterol levels	36.5%	30.2%	17.0%
Proportion of adults who have had their blood cholesterol checked within the preceding 5 years	73.3%	67.0%	80.0%
Proportion of adults who smoke cigarettes	26.9%	23.0%	12.0%
Proportion of adults who are obese	19.5%	20.1%	15.0%
Proportion of adults who engage in no leisure-time physical activity	22.6%	25.7%	20.0%

Nevada statistics are from 2001, the latest year of data available. U.S. status is also from 2001 except for the proportion of adults taking action to control their blood pressure and proportion of adults who have had their cholesterol checked; these figures are from 1998.

Source: Dr. Wei Yang, Center for Health Data and Research, June 2003.

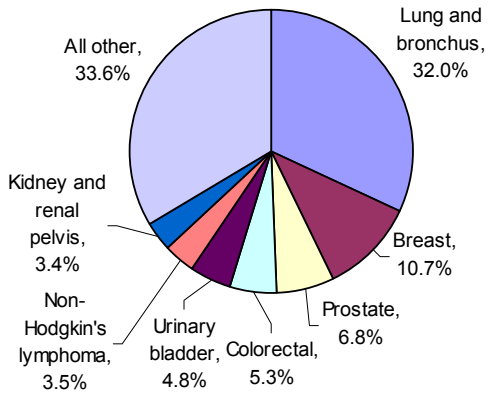
The presence of diabetes, older age, and heredity are also important contributing factors to heart disease.

Cancer

Cancer has been the second leading cause of death in Nevada each year from 1990 through 2000. The 3,658 deaths from cancer in 2000 represented 24.6% of all deaths. Nevada has the 16th highest rate of deaths from cancer in the country, an age-adjusted rate of 204.5 per 100,000 population in 2000. The Healthy People 2010 objective is 159.9 per 100,000 population.

Lung cancer is the leading cancer killer of both women and men. This type of cancer accounted for 18.7% of the total cancer incidence and 32.0% of cancer mortality during the period 1996-2000. Each year lung cancer kills more people than the next four most prevalent cancers (breast, prostate, colorectal, and urinary bladder cancer) combined. Nearly all of those newly diagnosed with lung cancer are former smokers. Per the 2002 Nevada Tobacco Profile report, only 7% of those developing lung cancers in Nevada have not had significant exposure to tobacco smoke.

Total Deaths by Type of Cancer, 1996-2000

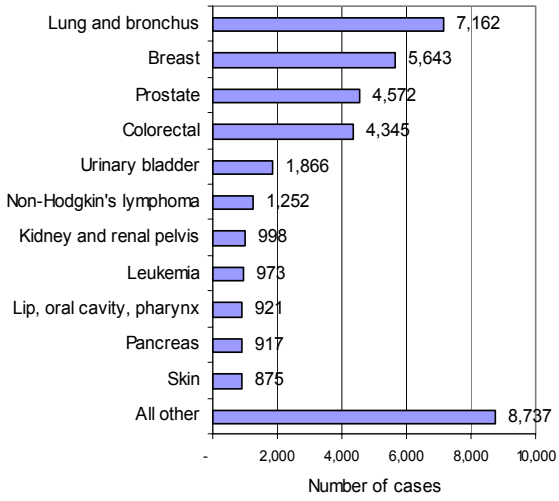


Source: Center for Health Data and Research, *Report on Cancer in Nevada 1996-2000*.

The rate of cancer deaths overall, and lung cancer in particular, is higher in Clark County than the rest of the state. This is not surprising given that Clark County also has the highest rates of smoking in the state.

The incidence or number of people diagnosed with cancer as reported to the Nevada Central Cancer Registry was over twice the death rate during the 1996-2000 period. The graph below shows the breakdown of cancer incidence by type of cancer.

Incidence of Cancer by Type, 1996-2000 Combined



Other key findings about cancer in Nevada reported by the Center for Health Data and Research in the *Report on Cancer in Nevada 1996-2000*:

- When compared to national incidence, Nevada had a much higher percentage of lung and bronchus cancer (18.7% vs. 12.9%) and a considerably lower percentage of breast cancer cases (14.7% vs. 18.2%) during the 1996-2000 period.

- Of the racial/ethnic groups, Whites have the highest incidence of cancer. For every White cancer case during the 1996-2000 period there were 0.87 Black, 0.52 Asian, 0.42 Hispanic, and 0.39 Native American cancer cases. However, Blacks had the highest age-adjusted mortality rate.

- Whites and Blacks accounted for 96.4% of all reported lung and bronchus cases during the 1996 to 2000 period despite only comprising, on average, approximately 75% of the total population during this time period.

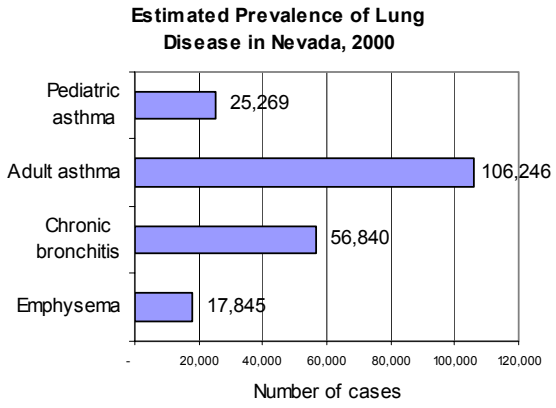
- The median age at diagnosis of cancer was 66 years of age for Nevada residents from 1996 to 2000. The median age at time of death due to cancer was 70 years.

- The incidence of cancer is highest in Carson City and Churchill County, followed by Clark, Washoe, Lyon and Mineral Counties. The lowest rates are found in Storey, White Pine, Pershing, Elko, Eureka and Lincoln Counties.

Respiratory Diseases

Chronic obstructive pulmonary disease (COPD) refers to a group of disorders that block the breathing airways. Chronic bronchitis and emphysema, the two most common forms of COPD, are both long-term illnesses that obstruct airflow in the lungs. COPD and other chronic lower respiratory diseases, such as asthma, are collectively the third leading cause of death in Nevada, accounting for 970 deaths in 2000 or 6.5% of all deaths.

Similar to COPD, asthma is a chronic lung condition with symptoms of difficulty breathing with wheezing caused by irritation, inflammation and narrowing of the air passages. Nevada has the highest rate of asthma in the country. The American Lung Association estimates that there are more than 130,000 persons living with asthma in Nevada. About 25,000 of those affected with this disease are children age 18 and younger, although it should be noted that in 2001, the rate of hospitalization for pediatric asthma was 14.2 per 10,000 people, which was 1/3 less than the national rate and less than the Healthy People 2010 objective of 17.3 per 10,000 people.



Source: American Lung Association, *Estimated Prevalence of Lung Disease Report*, May 2002

Chronic respiratory disease is also a contributing factor to other causes of death. As reported in the Nevada Tobacco Profile 2002, recently released results of a study by the Kaiser Permanente Health Plan showed that asthma sufferers and those with chronic lung inflammation (bronchitis and/or emphysemas) were 32% more likely to be hospitalized or die from heart disease than persons without asthma.

According to the American Lung Association, approximately 80 to 90 percent of COPD cases are caused by smoking; a smoker is 10 times more likely than a nonsmoker to die of COPD. Occupational exposure to certain industrial pollutants also increases the odds for COPD.

Diabetes

Diabetes is a disease in which the body does not produce or properly use insulin. Insulin is a hormone that is needed to convert sugar, starches and other food into energy needed for daily life. According to the American Diabetes Association, "the cause of diabetes continues to be a mystery, although both genetics and environmental factors such as obesity and lack of exercise appear to play roles."

Diabetes was the 11th leading cause of death in Nevada in 2000, accounting for 266 deaths. Diabetes can also significantly increase the risk of heart disease and stroke. The American Heart Association estimates that 65% of patients with diabetes die of some form of cardiovascular disease. Prompt diagnosis and treatment of diabetes is therefore very important in preventing early deaths.

The 2001 Behavioral Risk Factor Surveillance Survey (BRFSS) results showed 5.7% of people in Nevada have been told by their doctor that they have diabetes, compared to 6.2% of people nationally. The incidence of diabetes is highest in Clark County (5.9%) and lowest in Washoe County (4.5%) compared to the rest of the state (5.7%).

There is positive news regarding diabetes in Nevada. The age-adjusted diabetes death rate in Nevada of 17.0 per 100,000 population in 2001 is the second-lowest in the country and far below the Healthy People 2010 objective. Also, over 65% of persons with diabetes have received formal diabetes education according to 2001 BRFSS results, which is above the Healthy People 2010 target of 60%.

Progress can still be made in getting persons with diabetes to have annual eye examinations to help prevent blindness (61% of Nevadans with diabetes are getting an annual exam, compared to the Healthy People 2010 target of 75%) and to have annual foot examinations to avoid nerve damage, foot infections and amputations (71% of Nevadans with diabetes receive an annual foot exam, compared to the Healthy People 2010 objective of 75%).

Other Chronic Conditions

Kidney conditions (nephritis, nephrotic syndrome and nephrosis) were the 7th most common cause of death in 2000, accounting for 329 deaths. However, no other data was found on these conditions or potential actions that can be taken to reduce kidney disease incidence.

The other chronic disease accounting for a significant number of deaths, chronic liver disease and cirrhosis, resulted in 283 deaths in 2000. Nevada had the 2nd highest liver disease death rate in the nation in 1999. Liver disease is directly tied to excessive alcohol use, which is addressed further in the Substance Abuse section of this report.

Arthritis does not result in death, but it is a painful and potentially disabling condition affecting thousands of Nevadans. In 2001, there were 3,289 hospital discharges in Nevada due to arthritis. This represents more hospitalizations than diseases such as diabetes and asthma.

Community Impact

Chronic diseases clearly take a major toll in terms of death, since seven of every ten deaths in Nevada are due to a chronic disease, many of them preventable.

The 2002 Nevada Tobacco Profile report provided a further explanation of the impact of chronic diseases, stating:

> A consideration of deaths alone severely understates the burden of chronic disease. The prolonged course of illness and disability of chronic diseases such as heart disease, stroke, COPD, and cancer results in extended pain and suffering, as well as in decreased quality of life for thousands of Nevadans and their families. According to the Nevada Disability Council, chronic disabling conditions cause major limitations in activities for more than 10.8% of the Nevada population, or more than 210,000 people. Almost every family in Nevada is in some way adversely affected by a chronic disease, either through the death of loved ones or through family members living with long-term illness, disability and diminished quality of life, and in many cases, through the enormous financial burden wrought by these diseases.

The economic cost of chronic diseases is staggering when health care costs are combined with lost workdays, lost productivity and other such costs. As an insight into the cost of chronic diseases, the table below shows the total charges from hospital inpatient stays in 2001 related to several chronic diseases.

	# Discharge	Total Charges
Lung cancer	1,064	$39,263,792
All other cancers (*)	5,442	154,633,658
Heart disease	25,235	938,543,720
Cerebrovascular diseases (stroke)	6,578	163,981,058
Chronic obstructive pulmonary disease	4,025	66,195,150
Asthma	897	13,460,140
Diabetes	3,019	66,366,381
Arthritis	3,289	103,854,060
Cirrhosis and alcoholic hepatitis	736	17,706,688
Totals	50,285	$1,564,004,647

(*) Estimate based on average from 1996-2000 data

Sources: Nevada Interactive Health Database, Nevada Center for Health Data and Research, and Bureau of Health Planning and Statistics and the University of Nevada - Las Vegas, *Personal Health Choices 1997 – 2001*, October 2002

It must be emphasized that $1.56 billion cost shown above only represents a small portion of the total cost of chronic diseases, since it does not cover all diseases and only includes inpatient hospital costs (and not physician services, outpatient services, pharmaceutical, home care and other health care costs) nor does it include lost work time and other economic costs.

Current Services and Funding

Services related to chronic diseases can be viewed in two broad categories, prevention and diagnosis and treatment.

Prevention programs seek to prevent chronic diseases by addressing behaviors such as smoking, alcohol and other drug abuse, lack of exercise and obesity that contribute to disease. Many such programs are described in other sections of this report. In addition, numerous disease-specific association and advocacy groups are actively involved in prevention efforts. For example, the Las Vegas chapter of the American Heart Association reported that they have presented at over 162 health fairs from July 2002 through May 2003, reaching over 53,200 people in Clark County on preventing heart disease. The American Cancer Society, American Lung Association, American Diabetes Association, and a host of other groups also conduct chronic disease-related activities in Nevada. No data was available to indicate the total number of people reached and funding levels for such efforts.

Diagnosis and treatment of chronic diseases is primarily handled by the medical care system in Nevada – the physicians, hospitals, community health centers, county health services, and ancillary health services (medical laboratories, home health services, pharmacies, rehabilitation services, and so on). The current capacity of the health care system is discussed in the Access to Health Care section of this report.

The Fund for a Healthy Nevada has invested in several programs to address chronic disease issues, beyond the prevention efforts described elsewhere in this report. The programs are listed in the table below.

Program/Service	# Served	Total Funding
CLARK COUNTY:		
ALS Association Nevada Chapter: Support for ALS (Amyotropic Lateral Sclerosis or Lou Gehrig's Disease) patients	136	$182,104
WASHOE COUNTY:		
Washoe Medical Center: Diabetes support and treatment	201	320,997
REST OF THE STATE:		
Carson Advocates for Cancer Care: Support for cancer patients	784	255,584
TOTAL		$758,685

Other services provided through the Nevada state government related to chronic diseases include:

- Division of Aging Services – caregiver training and consumer services related to Alzheimer's Disease
- Bureau of Community Health – programs target diabetes, tuberculosis, and vaccine-preventable diseases like Hepatitis A; surveillance systems have also been developed for diabetes and HIV/AIDS

Data was not obtained on the service levels and current funding for these programs.

Gaps in Services

Gaps in services noted in other sections of this report have a direct impact on chronic diseases. Of particular importance are the gaps identified in the sections on Tobacco Use, Access to Health Care, Fitness and Nutrition, and Substance Abuse. Of these, reducing the rate of smoking is likely to have the greatest effect on reducing incidence, mortality and costs of chronic diseases.

An additional gap related to chronic diseases is the lack of coordination of health education efforts. Hospitals, HMOs, health-related state and national associations, public health agencies, and a myriad of other groups conduct activities to educate people about causes, early detection, and treatment of chronic diseases. Unfortunately, there does not appear to be much (or any) linkage between these various education efforts. As a result, public health information is delivered inconsistently – perhaps a flurry of messages in one month and then little or nothing for the next several months – without any effective way to determine whether all at-risk populations have been addressed in a meaningful way by health education activities.

Another possible service gap relates to treatment and support for persons with arthritis. No services were identified during this assessment to provide treatment and support for persons with arthritis, despite the high costs and number of hospitalizations associated with this condition. However, this may be due to a gap in data rather than a true gap in services.

Data Issues

In general, good data is available on the incidence and impact of chronic diseases, and especially those diseases accounting for the vast majority of deaths in Nevada. It was somewhat surprising that a thorough analysis of cardio-vascular disease was not located despite being the leading cause of death and hospitalization in the state. An excellent annual report is prepared on cancer in Nevada; consideration should be given to using the cancer report as a model to prepare a similar analysis of cardiovascular disease in order to better target heart disease and stroke prevention and treatment efforts.

Important gaps in the information available for this assessment related to chronic diseases are:

- Complete and reliable data was not available regarding current programs that address specific chronic diseases. For example, information was not found on existing programs, service levels, and current funding focused on diabetes prevention, diagnosis, treatment and support. The same is true of heart disease, cancer, stroke, chronic obstructive pulmonary diseases, arthritis, and other chronic diseases.

- No data was found on kidney conditions (nephritis, nephrotic syndrome and nephrosis) despite being the 7th most common cause of death in Nevada. It is therefore not clear if there are gaps in prevention and/or treatment of kidney disease that could be targeted through additional services.

Data sources used to prepare this report are listed in Appendix 1.

Access to Health Care

Conditions and Needs

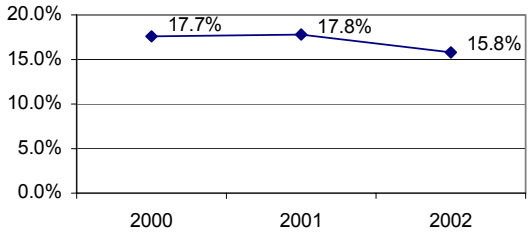
The ability to prevent health problems, and promptly diagnose and treat health conditions that do arise, fundamentally depends on the ability of Nevada's residents to access quality health care services in a timely manner. However, access is a major problem for hundreds of thousands of people in Nevada. In fact, the Great Basin Primary Care Association reported in 2003 that Nevada ranks 49th in the country in access to medical, dental, and mental health care based on federal designations of provider shortages, lack of insurance and other barriers to access.

The analysis of access to health care is divided into four topic areas: the availability of health insurance that allows people to pay for care, the capacity of health professionals (physicians, nurses, and other health professionals) to meet the needs of the state's growing population, the presence of health care facilities and other medical infrastructure to serve residents, and other barriers to accessing health care services that have been identified.

Health Insurance

According to a study by the Great Basin Primary Care Association (GBPCA) released in March 2003, 15.8% of people in Nevada did not have any kind of health insurance in 2002. This means nearly 350,000 people in the state are uninsured.

Percent Uninsured in Nevada, 2000 - 2002



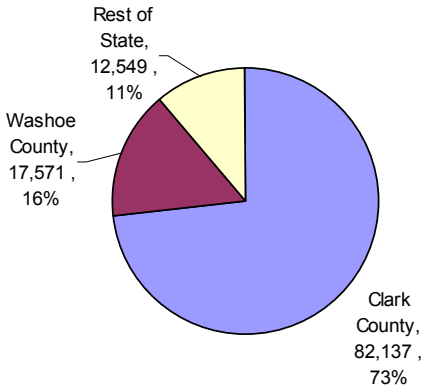
Source: Great Basin Primary Care Association, 2003

The 2002 rate was a 2% improvement over 2001, when 17.8% of Nevadans were uninsured. Over half of this decrease can be attributed to an increase in enrollment in the Nevada Check Up children's health insurance program.

Key findings from the GBPCA study related to persons without health insurance in Nevada are:

- Clark County, at 15.9%, has a slightly higher percentage of uninsured people. The uninsured rate in Washoe County is 15.5%.
- The uninsured rate among Nevada's Hispanic populations is over twice that of the general population (32.3% for Hispanics compared to a 15.8% statewide average). This is especially significant because the number of persons of Hispanic origin has more than tripled since 1990, and this group is projected to continue to grow faster than any other ethnic group in the next ten years.
- Because of the presence of public health plans – Medicaid and Nevada Check Up (described further below) – the percentage of uninsured persons in low-income families is relatively low. 3.2% of persons in families with a total income below the poverty level were uninsured in 2002, and 4.8% of persons in families whose income was between 100-199% of the Federal Poverty Level were uninsured.
- Contrary to commonly held belief, the majority of America's uninsured are working families rather than the unemployed: eight out of ten uninsured people are full-time workers or their dependents, and only 10% of uninsured families have no connection to the workforce.
- 14.2% of all children under age 18 were uninsured in 2002. This translates into over 112,000 uninsured children.

Uninsured Children by Region, 2002



- The age groups most likely to be without health coverage are the age 20-24 (31.9% uninsured) and age 25-34 (22.7% uninsured) groups. In fact, when senior citizens are excluded since almost all seniors are covered by Medicare, over 20% of Nevadans below age 65 are uninsured.

In addition to the number of uninsured persons, an estimated 18.5% of residents are under-insured, having to spend more than 10% of income for out-of-pocket medical expenses.

Health coverage for low-income individuals and families who qualify is available through the Medicaid program. Health benefits for children under Medicaid include immunizations, well-child checkups, school physicals, and hearing, dental and vision-screening services. According to the Nevada KIDS COUNT Data Book 2003, an estimated 67,521 children and youth under age 21 received Medicaid in calendar year 2001, up 24% over 2000 levels.

Nevada Check Up offers coverage to uninsured children from families with incomes that are too high for Medicaid and too low to afford private insurance. As of May 6, 2003, there were 23,691 children enrolled in Nevada Check Up. This is a reduction of 7% from January 2003 levels and only slightly higher than January 2002 levels.

At a Washoe County Community Forum on Access to Health Care held in May 2002, participants identified lack of insurance as the greatest barrier to health care access. The problem manifests in multiple ways, including:

- Many physicians, particularly specialists, are unwilling or unable to take referrals from uninsured or underinsured patients.

- Hospital emergency rooms become a primary and costly point of access to care for the uninsured. As proof of this, a study in Clark County found that almost 34% of all emergency room visits to the four major hospitals in the area during the year 2000 were by individuals without insurance.

- Underinsured persons tend to wait until a medical crisis develops before accessing care, resulting in more severe health problems and higher costs of care.

- The association between inadequate insurance and low income results in the stigmatization of those who seek care at Community Health Centers.

Health Professional Capacity

Three types of federal designations are available to identify shortfalls in health care delivery capacity. A ***Medically Underserved Area*** (MUA) is a geographic area without sufficient primary care service capacity based on a combination of factors that include poverty levels and providers per 1,000 population. A ***Medically Underserved Population*** (MUP) is a group of people, such as Native Americans or those with no health insurance, which needs greater health care service access. A ***Health Professional Shortage Area*** (HPSA) identifies a geographic area with an insufficient number of providers to serve the population. A HPSA can be further broken down into a Primary Care HPSA, Dental HPSA, or Mental Health HPSA depending on the kind of providers needed.

Numerous geographic areas and populations in Nevada meet one or more of the federal designations of health care capacity shortfalls. For example:

- 10 counties (Storey, Lyon, Pershing, Lander, Eureka, Mineral, Esmeralda, Nye, White Pine and Lincoln) qualify under all HPSA

designations across the entire county. Every other county in the state has at least a partial HPSA designation based on either an under-served area or an underserved population.

- Every county in the state is a Mental Health HPSA except Clark (which has a partial shortage designation), Washoe, Storey, Lyon and Douglas Counties.

- MUP designations have been given to portions of Clark, Washoe, Elko, Mineral and Nye Counties. MUA designations have been given to portions of Storey, Lyon, Esmeralda, Lander, Eureka, and Lincoln Counties.

Overall, the Nevada State Health Division estimated that in 2001, approximately 525,000 people in Nevada resided in federally – designated primary care Health Professional Shortage Areas in Nevada (25% of the population), which reflects a lack of access to primary medical care. According to data published by the Sheps Center for Health Services Research at the University of North Carolina, Nevada ranks 37th in the ratio of primary care physicians to total population.

Las Vegas has the nation's lowest ratio of physicians among all metropolitan areas (5.084 physicians per 10,000 residents) with a ratio that is only 60% of the national average. This presents major access challenges for a rapidly growing and aging population.

Provider shortages are not limited to primary care physicians. Access to specialty services is difficult for many Nevadans. This is particularly true for obstetric and pediatric services in rural/frontier counties. A study conducted for the Nevada Department of Human Resources and reported in the *Strategic Plan for Rural Health Care*, October 2002 showed deficits of pediatricians and obstetric/ gynecology specialists in almost every rural area. Anywhere from one to five additional pediatric and OB/GYN physicians are needed in each county.

Conflicting data was found regarding the availability of nurses. The October 2002 *Strategic Plan for Rural Health Care* states:

> According to the federal Health Resources and Services Administration, there are 786 nurses for every 100,000 citizens in the United States. In Nevada, there are 520. This ranking is the lowest in the nation. The average nurse vacancy rate in Nevada hospitals is 14%, although some hospitals have a vacancy rate as high as 30%. A crisis is considered to be 9%.

However, the Nevada State Nursing Board reports that there were 24,831 licensed nurses in Nevada as of June 30, 2002, which would be a ratio of 1,123 nurses per 100,000 population. The total number of nurses breaks down into 17,087 Registered Nurses (RN), 2,697 Licensed Practical Nurses (LPN), and 5,047 Certified Nursing Assistants (CNA). Even if the ratio was computed solely with RNs, the June 2002 ratio would be 773 RNs per 100,000 people or close to the national average. There were 324 new graduates from Nevada nursing programs in school year 2001-02, although there is no assurance these graduates will stay in Nevada.

Nevada also has the lowest proportion of pharmacists to citizens in the nation.

Health Care Facilities and Infrastructure

Data gathered for this report did not indicate any shortages in the number of hospitals and other health care facilities in Clark County and Washoe County. For these counties, the current challenges lie with the service capacity of existing facilities and the ability of area residents to access services at those facilities.

The situation is quite different in rural and frontier counties. Per the 2002 *Strategic Plan for Rural Health Care*, 78% of the rural/frontier population is within a one-hour drive (one way) of primary care services. The other 22% – over 64,000 people – are more than a two-hour round-trip drive away from primary care services. If Tribal Health Centers were to provide access to all rural residents, 89% of the rural/frontier population would be within a one-hour drive of primary care.

Residents in rural areas have even greater difficulty with reaching a hospital for more intensive care. Only 1/3 of the rural/frontier population has access to a tertiary care center (acute care hospital) within one-hour driving time. For the other 2/3, one-way drive times of up to three hours are required to reach a tertiary care center.

Rural/frontier counties also have emergency medical services that are often understaffed, reliant on volunteers, and using outdated clinical and communications equipment that inhibits the quality of services. The *Strategic Plan for Rural Health Care* notes the importance of strengthening rural emergency medical services in light of continued population growth and long travel times to emergency rooms in hospitals.

Other Barriers to Access

Beyond lack of insurance and provider capacity, another barrier to health care access noted at the May 2002 Washoe County Community Forum on Access to Health Care is the fragmented nature of the health care system. No centralized health referral and case management system exists to help coordinate care, particularly for serving uninsured individuals and families. This presents many challenges, including insufficient focus on preventive care, inability to follow up on compliance with prescribed treatment regimens, and missed opportunities to bring new federal monies into the community through leveraging of existing service delivery.

Other factors that contribute to limited access to care are language barriers, physical and cultural isolation of communities in rural areas, and lack of public transportation to get people from outlying areas to clinic sites.

Finally, undocumented immigrants have few options for receiving health care. A May 2003 memo from Cheryl Sonnenberg from the Economic Opportunity Board in Las Vegas notes that "approximately 52% of the clients EOB Health Services assists are Hispanic. … Many of the Hispanics are undocumented immigrants who cannot access other health care." The Office of Policy and Planning for the U.S. Immigration and Naturalization Service (INS) estimates that there were 101,000 unauthorized immigrants in Nevada in 2000. A separate study by Northeastern University suggests that the INS estimates may be 50% too low, which would put the number of undocumented immigrants in Nevada at over 150,000.

Community Impact

Lack of access to or use of health care services can result in reduced use of preventive care such as timely and complete immunizations for children, delayed diagnosis of health problems, the development of preventable health conditions, or the worsening of existing conditions. As reported by the Great Basin Primary Care Association in their 2003 Primary Care Handbook, "not getting needed health care can have dire consequences, including unnecessary hospitalizations and expensive and irreversible health problems. In many cases, these problems—including severe complications due to diabetes, asthma, and cardiovascular disease—can be prevented with early education or medical intervention." GBPCA goes on to say that "crucial and early medical interventions are significantly less likely to occur when people are uninsured."

Difficulties in obtaining health care can be particularly detrimental to the health and well-being of children. The absence of a regular medical home also reduces opportunities to evaluate the developmental status of children, producing delays in addressing physical, cognitive and/or social needs of a child that can impede their quality of life and readiness for school.

Access to specialty care can also negatively impact health status. For example, obstetrical services are only available in Boulder City, Carson City, Elko, Ely, Fallon, Las Vegas, Reno and Winnemucca. Not surprisingly, the percent of pregnant women getting adequate prenatal care is consistently lower in rural areas that are farther from obstetrical services, which presents risks to the health of both the mother and baby.

Current Services and Funding

There are many components to the medical care system in Nevada. The highest level of Healthy Nevada funding goes for Access issues through Clark County Health District's School-Based clinics and the United Way of Southern Nevada's Making Access Possible (MAP) Collaborative. Below is a summary of the primary types of facilities that are delivering medical care services in the state.

Hospitals. Ten acute care hospitals are located in Clark County with total of 2,675 beds. Four hospitals are located in Washoe County with a total of 1,004 beds. A total of 11 hospitals were identified in the rest of the state:

Carson City - 128 beds
Churchill County – Fallon, 40 beds
Elko County – Elko, 50 beds
Humboldt County – Winnemucca, 52 beds
Lander County – Battle Mountain, 25 beds
Lincoln County – Caliente, 20 beds
Lyon County – Yerington, 63 beds
Mineral County – Hawthorne, 35 beds
Nye County – Tonopah, 42 beds
Pershing County – Lovelock, 37 beds
White Pine County – Ely, 13 beds

Four of these hospitals – the ones in Lincoln, Mineral, Nye and Pershing Counties – are considered to be "at risk" of closure due to financial instability, according to the study performed for the Department of Human Resources, *Strategic Plan for Rural Health Care*, October 2002. The strategic plan also notes that there are six hospitals in states neighboring Nevada that are a reasonable travel distance for some rural/frontier Nevadans.

Community Health Centers. Two organizations are Federal Qualified Health Centers to provide primary care and other health services to uninsured and underserved populations. Health Access Washoe County (HAWC) operates clinics at two sites in Reno, handling about 40,000 visits a year involving 12,000-14,000 patients. Nevada Health Centers, Inc. operates 14 clinics around the state. Four of these are in Las Vegas, including a clinic for the homeless. Ten other sites are spread across Nye, Elko, Lander, Washoe and Eureka Counties and Carson City.

Tribal Health Centers. 16 clinics around the state are focused on serving American Indians and Alaska Natives, although the Nevada Strategic Plan for People with Disabilities says that "services provided in most areas are woefully under-funded" as Nevada facilities must compete with Arizona and Utah for limited federal funding. Together, the Community Health Centers and Tribal Health Centers are able to serve 63,565 people.

Community Health Nursing Clinics. Community health nursing clinics are located in 19 rural communities. These clinics are intended to provide preventive and education services such as immunizations, well-child exams, family planning education and treatment, sexually-transmitted disease and HIV/AIDS assistance, and child and dental health referrals. However, the *Strategic Plan for Rural Health Care* notes that "they are often asked to work beyond their funded duties and provide direct health care services to local residents, particularly the elderly. This happens where there are no other providers in the town."

County Health Districts. The largest two counties operate their own health services to provide services such as immunizations, Women Infants and Children program services, home health care, and public health education. The Clark County Health District had a fiscal year 2001-02 budget of about $45 million. In addition, Clark County Social Services provides over $38 million in funding to University Medical Center, the county hospital, for indigent care. Most of this goes to inpatient care. The Washoe District Health Department had fiscal year 1999-2000 expenditures of over $13 million.

State Agencies. Numerous medical care programs are operated under the umbrella of the State of Nevada Department of Human Resources. These agencies include the State Health Division, which includes the Bureaus of Community Health and Family Health Services, the Division of Health Care, Finance & Policy, and the Director's Office of the Department of Human Resources Office.

Other Nonprofit Organizations. In addition to the nonprofit hospitals and health centers listed earlier, a few other nonprofit organizations were identified that offer direct health care services. These are:

- Clark County: Economic Opportunity Board of Clark County, Huntridge Teen Clinic
- Washoe County: Saint Mary's Foundation (affiliated with Saint Mary's Health System), Children's Cabinet at Incline Village
- Rest of the State: Community Chest, Inc. in Storey County, Family Resource Center of Northeast Nevada in Elko

Note: United Way reported $244,858 in grants to these nonprofit health programs in fiscal year 2001-02, $214,000 in southern Nevada and $30,158 in northern Nevada.

Data on funding and service levels was not available for most of these medical care facilities, except as shown above. Also, dental and mental health facilities are not included since they are described elsewhere in this report.

Two state divisions were identified that are working to expand access to health care. One is the Nevada State Health Division; efforts to expand access are led by the Nevada Primary Care Development Center and secondly the Division of Health Care, Finance & Policy, but other units of the Health Division such as the Bureau of Licensure and Certification certainly also have an impact on access to care issues. The other agency is the Great Basin Primary Care Association (GBPCA). Per the 2003 *Nevada Primary Care Handbook*, GBPCA is currently working to develop 14 new access points around the state by 2007 that will be able to serve approximately 72,000 more residents.

Gaps in Services

This section focuses on gaps related to access to medical care. Gaps in dental care and mental health services are covered in the Oral Health and Disabilities and Special Needs sections respectively.

The collection of data from studies and community forums gathered for this assessment consistently pointed to the following four issues as being the most significant gaps in access to medical care:

1. ***Medical workforce size and distribution***. The *Strategic Plan for Rural Health Care* states that "…workforce development is probably the single most pressing long-term need for rural health care delivery in Nevada." The same can be said of the urban areas. There is a clear need for more primary care physicians throughout the state, including in the greater Las Vegas area, and for more specialists, especially pediatricians and obstetricians. More nurses may also be needed, although the data is less conclusive on this matter.

2. ***Primary care access points***. Uninsured and under-insured individuals and families that cannot afford to see a private physician need more accessible clinic sites in order to receive primary care services. The need for primary care access is just as acute in the urban areas as it is in rural communities.

3. ***Insurance access and acceptance***. Programs such as Nevada Check Up have had an impact on reducing the percentage of children without health coverage, and need to be sustained to reach more of the 112,000 children still without health insurance. Creative approaches are also needed to reduce the percentage of adults without health insurance, particularly in the 20-34 age range.

Another potential gap related to medical support services. The *Strategic Plan for Rural Health Care* says that many rural and frontier counties need enhancements to vital medical support services such as emergency medical services (EMS), access to medications by those affected by chronic illnesses (such as hypertension, diabetes and mental illnesses), and access to diagnostic technology like x-rays, CAT scans and MRIs. However, grants with the tobacco settlement funds during the fiscal year 01-02 have purchased $330,329 of EMS equipment, all but $8,080 going to rural areas, and

another $310,208 in telecommunications equipment for rural health facilities. Based on the available information it is not clear what further enhancements are needed.

Data Issues

Important data issues regarding access to health care are outlined below.

- A complete statewide profile of existing physician capacity, demand for physicians, and level of unmet demand would be very useful. The 2002 *Strategic Plan for Rural Health Care* contained this type of analysis, but only for rural counties and then only for primary care physicians, pediatricians, and obstetricians.

- A more complete assessment of the extent of unmet medical care needs by Nevada residents is also desirable. Existing data obtained for this report require a fair number of inferences in order to derive an estimate of unmet need, which may or may not be valid. This makes it difficult to accurately determine where investments in additional service capacity would make the greatest difference in the health and well-being of individuals and families.

- Inconsistent data was found on the extent to which low-income persons are uninsured. The GBPCA study and 2001 Nevada Behavioral Risk Factor Surveillance Survey agreed on the overall percentage of Nevadans without health coverage in 2001; the GBPCA study reported 17.8% of people were uninsured and the BRFSS showed 17.5% of people were uninsured in 2001. However, the BRFSS found that 36.8% of people with income less than $15,000 and 37.4% of people with income between $15,000 and $24,999 were without insurance. The GBPCA study, by contrast, reported that only 3.7% of people at or below 100% of the Federal Poverty Level (FPL) and 4.4% of people from 100-200% of the FPL were uninsured. The BRFSS and GBPCA studies use different measures of income – static income levels for the BRFSS compared to Federal Poverty Level for the GBPCA study – but these differences cannot account for the huge discrepancy in results (36-37% versus 3-4% uninsured for low-income populations). Resource allocation decisions could certainly be impacted by how this discrepancy is resolved.

- There were also inconsistencies in the data regarding whether or not there is a shortage of nurses in Nevada, and if so, the location(s) and magnitude of the shortage. These discrepancies were discussed earlier in the segment on Health Professional Capacity.

Data sources used to prepare this report are listed in Appendix 1.

Family Planning

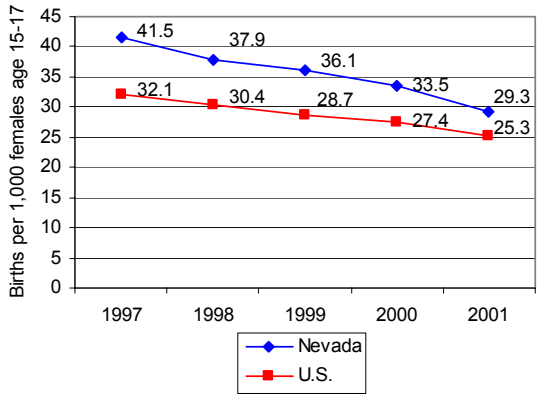
Conditions and Needs

With respect to family planning, this assessment focuses on teen births and the sexual behaviors leading to teen births. The emphasis is placed on teen births because of the children's health mandate of the Fund for a Healthy Nevada, since births to teenagers pose several health risks to both mothers and their children.

Teen Births and Pregnancy

The teen birth rate has been dropping steadily since 1997, reaching a low in 2001 of 29.3 births per 1,000 females ages 15 to 17. Despite the progress made, Nevada's teen birth rate has been consistently above national rates and above the Healthy Nevada 2010 objective of 25.0 per 1,000 females ages 15 to 17.

Teen Birth Rate Trend, 1997 - 2001

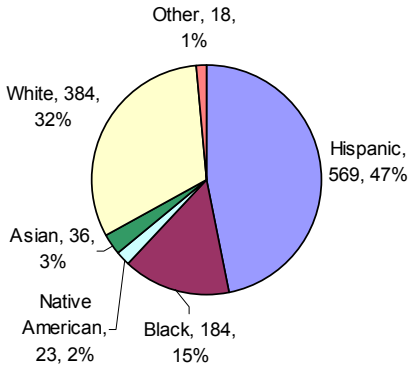


Sources: 1997 – 2000 Nevada data from Nevada Vital Statistics 2000, 2001 Nevada data from Center for Health Data and Research, comparative U.S. data from Nevada KIDS COUNT Data Book 2003

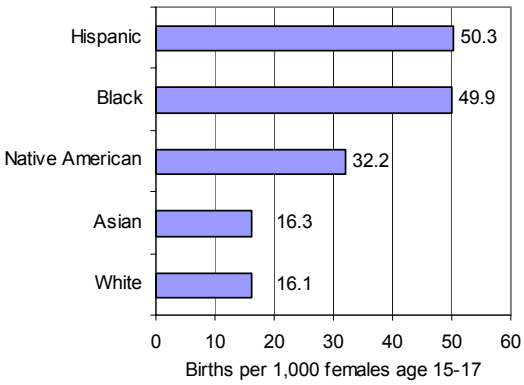
There were a total of 1,214 births to mothers age 15 to 17 in Nevada in 2001. These births occur disproportionately to Hispanic and Black females, both in terms of total number of births and as a percentage of the total population. In fact, in each year from 1999 to 2001, almost half of all teen births were to females of Hispanic origin.

The following two graphs demonstrate this finding. The first graph shows total number of teen births in 2001 and the percent of total births by race/ethnicity. The second graph shows teen births by race/ethnicity on a standardized basis of birth rate per 1,000 females age 15 to 17.

2001 Teen Births by Race/Ethnicity of Mother

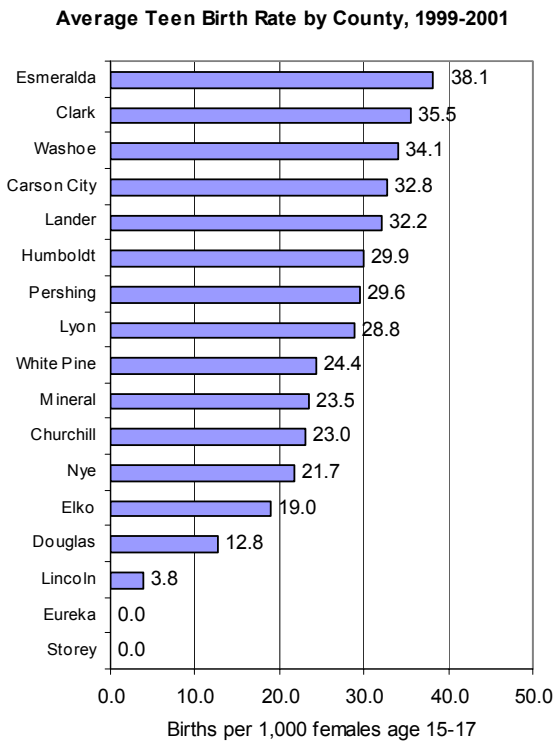


2001 Teen Birth Rate by Race/Ethnicity



Source: Nevada KIDS COUNT Data Book 2003

Another significant issue is that teen births rates are highest in the most populated areas of the state. Aside from Esmeralda County, where small numbers can skew the rates, the highest teen birth rates for the period 1999-2001 were in Clark County, Washoe County, and Carson City.



Source: Nevada KIDS COUNT Data Book 2003

In 2000, there were an additional 64 births to females age 14 and under.

Another item of note is that in 2000, 160 births to females age 15 to 17 involved mothers who had at least one previous birth. In other words, 12.6% of births to this age group represented a second or third child for the mother.

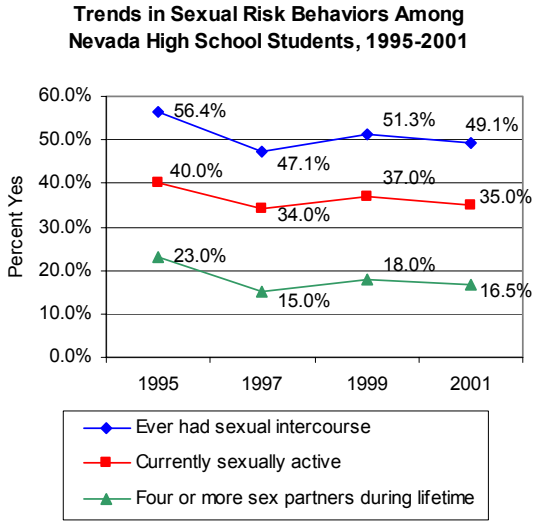
The above analysis has focused on the 15 to 17 age group because the adverse effects of teen births are greatest for this group. If the age group is expanded to include 18 and 19 year olds, the trend again shows a steadily declining birth rate. Despite this progress, Nevada's 2000 birth rate for females age 15 to 19 was still the 8th highest in the United States. Total births and the rate per 1,000 females for the age 15 to 19 group are shown in the table below.

	1998	1999	2000	2001
# of births	3,466	3,710	3,770	3,663
Rate per 1,000	64.2	61.5	60.4	52.4

Finally, it should be recognized that teen birth rates are different than teen pregnancy rates. The Alan Guttmacher Institute reports that 50% of teen pregnancies in Nevada end in birth, 37% in abortion and 14% in miscarriage. Thus, the teen pregnancy rate is actually double the teen birth rate. The Institute also found that Nevada has the highest teen pregnancy rates in the country based on pregnancies involving females age 15 to 19 – a total of 6,840 pregnancies to this age group in 1998.

Teen Sexual Behaviors

The Nevada Youth Risk Behavior Survey (YRBS) is conducted with high school students every two years. According to the YRBS data, there has been relatively little change in the sexual behaviors of Nevada high school students since 1995. Teens are continuing to engage in sexual intercourse and remain sexually active at fairly consistent rates. In 2001, 49.1% of Nevada high school students reported having had sexual intercourse at least once, and 35% were currently sexually active (defined as having had sexual intercourse during the three months preceding the survey).



Source: Nevada Youth Risk Behavior Survey, as reported in Nevada KIDS COUNT Data Book 2003

These results suggest that continued diligence is needed to sustain the recent declines in the teen birth rate. The most likely explanation for a declining teen birth rate at the same time the

level of sexual activity is remaining steady is that teens are more diligent in the use of birth control methods. The YRBS results gave some credence to this theory; 62% of high school students reported using a condom during their last sexual intercourse in 2001, up from 55% in 1999.

Community Impact

Teen parents are generally unprepared for the financial, emotional, and psychological challenges of early childbearing. The effects of these challenges are borne primarily by the children of teen mothers, followed by the mothers themselves, the mothers' families, and, finally, by the government and taxpayers.

Teenage mothers often face major disadvantages both before and after they have their first birth. Research has shown that, compared with older mothers, teen mothers display a higher likelihood of welfare dependence, are more likely to experience relationship instability, have lower educational attainment, have less spacing between children, and are less likely to cultivate stimulating home environments for their children. A report by the Candies Foundation stated that nationally, less than one-third of teen mothers get their high school diplomas.

Research has shown that children of teenage mothers experience many disadvantages compared to other children. They:

- Are more likely to experience academic and social problems than children raised by older mothers;
- Are more likely to grow up in homes that have lower levels of emotional support;
- Are less likely to earn high school diplomas;
- Are more likely to live in poverty; and
- Are more likely to engage in early sexual activity and become teenage parents themselves.

The problems associated with teenage motherhood are particularly acute for, and are less likely to be overcome by, teenagers who are parenting more than one child. Research shows that teenagers who have subsequent births, in particular closely spaced births, are less likely to obtain a high school diploma and are more likely to live in poverty or receive welfare than those who have only one child during adolescence. Women having a second birth in their teens are less likely to hold down jobs, more likely to earn lower wages, and have fewer opportunities for career advancement than women who postpone additional births.

Current Services and Funding

According to the Alan Guttmacher Institute, there are 40 publicly supported family planning clinics in Nevada. 22 are run by health departments, 2 are run by hospitals, 3 are run by Planned Parenthood, 8 are run by community health centers, and 5 are run by other types of agencies.

These clinics serve 33,020 women, including 9,460 teenagers. 45% are served by health departments, 5% are served by hospitals, 24% are served by Planned Parenthood, 8% are served by community health centers, and 18% are served by other types of agencies. The majority of these services are delivered through clinics supported by Title X of the Public Health Service Act, which is the only federal program devoted solely to the provision of family planning services on a nationwide basis.

More detailed data was provided by the Washoe District Health Department. In fiscal year 2001-02, two separate programs operated by the District with a family planning component served a combined total of 4,544 people with total funding of $1,216,445.

Moderate state government investments have been made in sexual abstinence education and teen pregnancy prevention. State-supported programs identified during the assessment:

- Bureau of Community Health - $153,147 in abstinence education and $12,896 in teen pregnancy programs
- Bureau of Family Health Services – The State Partnership to Prevent Teen Pregnancy (SPPTP) was established to promote teen pregnancy prevention

activities, and has partnered with the Welfare Division in distributing $500,000 of Temporary Assistance for Needy Families (TANF) funds to community groups for teen pregnancy prevention program development and social marketing campaigns.
- Fund for a Healthy Nevada - $50,000 per year grant issued to Planned Parenthood of Southern Nevada, providing services only in Clark County

The public school system also operates the Sexuality, Health and Responsibility Education (SHARE) program. No data was available on funding levels, number of students reached and age of those students.

United Way reported $43,364 in grants to family planning programs in fiscal year 2001-02.

Gaps in Services

An analysis conducted by the Alan Guttmacher Institute found that there are 21,820 teenagers in Nevada that are in need of publicly supported contraceptive services. Since there were 9,460 teenagers served by family planning clinics, this would suggest a service gap of up to 12,360 teenagers in receiving contraceptive services.

Another potential gap relates to strategic targeting of sexual responsibility education and family planning services by county and race/ethnicity. The data clearly indicates that the greatest reductions in teen births can occur by impacting the behavior of Hispanic teens in Clark and Washoe Counties, since most teen births are to Hispanic females and these counties have by far the highest concentrations of Hispanic youth. The potential also exists for targeted outreach to black teens in Clark County, since the teen birth rate for black females is three times the rate for white females and 93% of the state's black persons reside in Clark County. The information obtained for this report did not show whether or not special efforts are already being made to reach these groups in a culturally sensitive way that also addresses potential language barriers.

Data Issues

Overall, the available data on teen pregnancy, births, sexual behaviors, and use of existing family planning services is reasonably complete. The only data gaps encountered on family planning were:

- Information was not available on the total level of funding currently being devoted to reducing teen pregnancy, combining education and family planning programs.

- More complete information on the nature of existing programs and the number and demographic profile of youths being reached by those programs would be useful. This kind of data would help answer the question about whether additional efforts to target Hispanic and Black youth would be beneficial.

- Little information was available about the presence of sexual responsibility and abstinence education activities, if any, occurring outside of the family planning clinic system and the SHARE program in public schools. An understanding of such efforts could identify opportunities to expand or supplement existing education activities.

Data sources used to prepare this report are listed in Appendix 1.

Immunizations

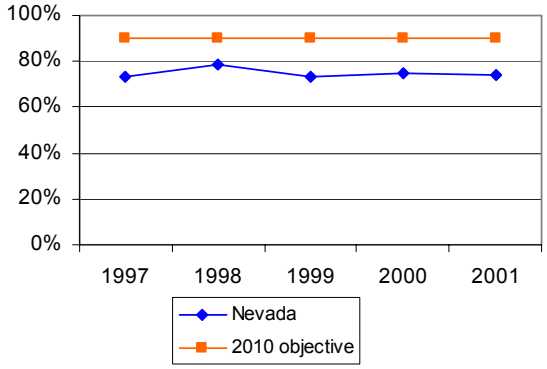
Conditions and Needs

Immunizations are a vital tool for public health, greatly reducing the incidence of preventable diseases.

By age three, all children should receive vaccines for the following diseases: diphtheria, tetanus, acellular pertussis, hepatitis B, polio, measles, mumps, rubella, and Haemophilus influenzai type b (Hib). One dose of the varicella antigen should also be administered.

Immunization rates for children in Nevada have historically been lower than national averages and remain so now. In 2000, Nevada ranked 43rd in the country for the percent of children aged 19 to 35 months that were fully immunized, at 75.5%. The Healthy Nevada 2010 objective is 90%. The chart below shows the recent trend for percent of 19-35 month old children in Nevada who are fully immunized.

Percent of Nevada Children 19-35 Months Old Fully Immunized, 1997-2001

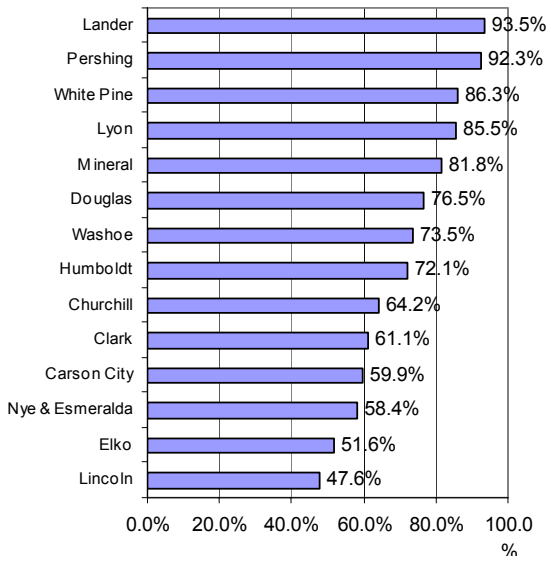


Source: National Immunization Survey, Center for Disease Control

Children from lower-income families are less likely to have been fully vaccinated. A 2001 survey conducted by the state Immunization Program showed that only 66% of Medicaid children are up-to-date with their immunizations, compared to the state average of 75%, for all children 19-35 months old. This corresponds to data from the State Health Division showing that immunization rates for children seen in public health clinics are lower than the overall state averages. Further, the percent of children 24-35 months old seen in public health clinics that are fully immunized has been steadily declining, from 74.6% in 1999 down to 63.4% in 2002.

The graph below shows the percent of children 24-35 months old seen in public health clinics in 2002 that are fully immunized, ranked by county. Although these rates are likely to be lower than the full-population immunization rates since children who receive vaccines from private health care services are not included, they represent the best available data on immunization rates by geographic area and help identify opportunities for improvement. The low rates in some of the more populated areas like Carson City and Clark, Churchill and Elko Counties are of special concern.

Percent of Children 24-35 Months Old In Public Clinics, Fully Immunized, 2002



Source: Bob Salcido, Nevada State Health Division. Eureka County data not available. Storey County children are included in Lyon County, Carson City and Washoe County figures.

No data was found regarding immunization rates of children 36 months old and older, other than a report from the Washoe District Health Department that 98.5% of 1st grade children enrolled in Washoe County schools were up to date with their state-mandated immunizations in 2001. It is therefore unknown whether children who are not fully immunized at an early age ultimately receive the appropriate vaccines.

Immunizations are not limited to children. It is desirable for adults, and particularly older adults age 65 and over, to be vaccinated annually against influenza and to receive at least one vaccine against pneumococcal disease. Pneumococcal disease is a serious disease that can lead to serious infections of the lungs (pneumonia), the blood (bacteremia), and the covering of the brain (meningitis). In fact, pneumococcal disease kills more people in the United States each year than all other vaccine-preventable diseases combined.

2001 data from the Nevada Behavioral Risk Factor Surveillance Survey (BRFSS) shows that 63.3% of adults age 65 and over have been vaccinated in the last year against influenza, compared to a national average of 63% and a Healthy Nevada 2010 objective of 90%. 66.3% of adults age 65 and over have been vaccinated against pneumococcal disease, compared to a national average of 54% and a Healthy Nevada 2010 objective of 90%.

Community Impact

Vaccines prevent thousands of illnesses in Nevada each year, including incidence of diseases like polio that can be crippling or even life-threatening.

Vaccines also save money. Per a report from Truckee Meadows Tomorrow, studies show that for every $1 spent on the measles, mumps and rubella vaccine, the community saves $21 in medical care costs.

Current Services and Funding

In 2001, 673,769 vaccine doses were administered. Of these, 47% were administered by private health care providers, 51% by public providers, and 2% in unknown settings.

The Immunization Program through the state Bureau of Community Health promotes immunizations and provides state-supplied vaccine free of charge to all physicians, hospitals, and clinics agreeing to meet the requirements of the program. The goal of the program is to improve immunization coverage levels in preschool children while maintaining high coverage levels in school-age children. Vaccine is distributed to the Clark and Washoe County Health Districts, rural public health clinics, and 274 private and federally-funded health care providers. The fiscal year 2001-02 cost of this program was $11,669,905, of which $9,388,946 was for the cost of vaccine doses administered during the year and the remainder was other program costs.

The Washoe District Health Department reported $791,751 in immunization expenditures in fiscal year 2001-02 to serve 16,874 people. Funding levels for Clark County immunization programs were not available because the cost of immunization services is bundled together with a host of other health care services.

Programs currently receiving grants from the Fund for a Healthy Nevada that could potentially impact immunization rates are (award amounts are for fiscal year 2002-03):

- Clark County – Health District's School-Based Clinics, $400,000 provides acute health care, education, prevention, maintenance, dental evaluations and mental health services
- Washoe County – Saint Mary's Foundation Kid's Korner, $50,000, provides immunizations and outreach
- Rural – Community Chest Inc., $21,397 to expand the community health nurse program
- Rural – Family Resource Center of NE Nevada, $80,000 that includes health education and assistance for uninsured

persons with Medicaid and Nevada Check Up applications

Gaps in Services

Gaps in services clearly exist based on the consistently low rates of child immunization, particularly among low-income families and in some parts of the state. However, the information that could be gathered for this report is insufficient to understand the reasons why immunization rates are low, and therefore to develop recommendations for potential courses of action. The segment below on Data Issues describes the information gaps that need to be addressed in order to formulate more effective strategies to increase immunization rates.

Data Issues

Some important gaps remain in the data related to immunizations.

- No data was found on immunization rates of children older than 35 months. It is therefore not known if most children who are not fully immunized according to the prescribed schedule do become immunized before entering kindergarten, or if they remain at risk during their school years and adult life.

- No analysis was found as to the reasons why parents are not having their children immunized and/or what barriers to service access may be hurting the immunization rates. Similarly, data was also not found on the ethnic composition of children who are, and aren't, being fully vaccinated so it is not known if there are potential cultural biases against immunization to be overcome.

- No information was obtained that describes current investments in public health education related to immunization. Anecdotal information suggests that public education efforts about immunization occur entirely through public clinics and private health care providers. This makes it possible for uninsured families and families who only interact with the health care system when emergencies occur to "miss the message", not knowing the importance of vaccines or how to protect their children through free or low-cost services.

In short, better information than what could be found for this report is needed before sound decisions can be made about how best to target resources to improve the low rates of immunization found in Nevada.

Data sources used to prepare this report are listed in Appendix 1.

Injury and Violence Prevention

Conditions and Needs

The physical and emotional well-being of children is profoundly affected by the extent to which they are exposed to violence and injury, whether intentional or unintentional.

Consistent with the mandates of the Fund for a Healthy Nevada, this analysis focuses on injury and violence prevention issues that impact children rather than trying to cover all issues for all age groups. The following topics are highlighted: child abuse and neglect, domestic violence, accidents and unintentional injuries, youth suicide (self-inflicted injuries), and juvenile violence.

Child Abuse and Neglect

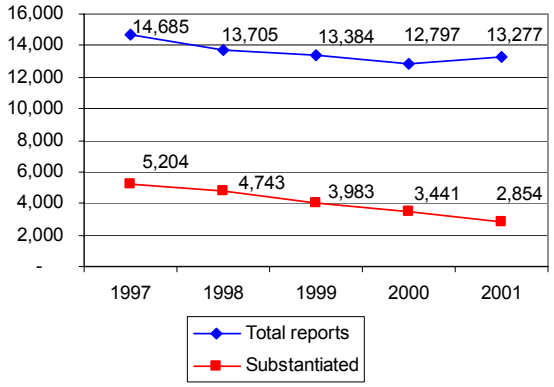
According to NRS 432B, "abuse or neglect" of a child means physical or mental injury of a non-accidental nature; sexual abuse or sexual exploitation; or negligent treatment or maltreatment caused or allowed by a person responsible for his welfare under circumstances which indicate that the child's health or welfare is harmed or threatened with harm.

Reports of suspected child abuse or neglect are directed to Child Protective Services (CPS). An investigation is made and one of three outcomes is determined:

Substantiated	The abusive or neglectful situation was confirmed through investigation or court process.
Unsubstantiated	The abusive or neglectful situation was not confirmed through the investigation.
Unknown	The alleged perpetrator could not be located, the child could not be interviewed, insufficient evidence existed, or the information was too old to pursue.

The graph below shows a five-year trend of the total number of child abuse and neglect reports in Nevada, and the number of those reports that were substantiated. In 2001, the total number of reports rose by 4% over 2000 levels but the number of substantiated reports dropped by almost 17%.

Child Abuse Report Trends, 1997-2001



Source: Nevada Division of Child & Family Services, Child Abuse & Neglect Statistics, 1997 – 2001

The steady decline in the number of substantiated cases appears to be good news, particularly since the population and total number of children continues to rise. However, this raises a question over which there is considerable debate – what is the best measure of the true rate of child abuse and neglect? It is generally agreed that the number of substantiated cases represents the minimum level. Some experts suggest that the total number of reports is the best available indicator of the actual rate of abuse and neglect, since not all reports involve actual abuse (and in fact some are intentionally false and malicious) but at the same time not all actual abuse is reported.

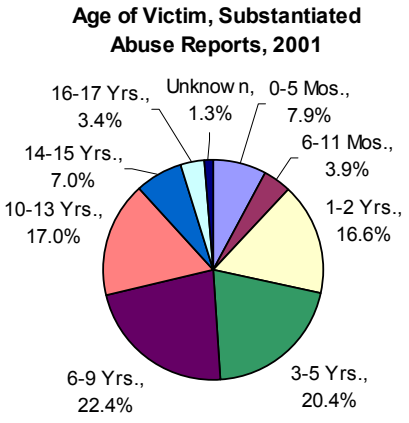
In 2001, Washoe County had a disproportionately high percentage of the state's child abuse and neglect reports compared to the percentage of children who live in Washoe County. Clark County had fewer reports relative to the number of children living in the county.

	% of Children Age 0-18	% of 2001 Abuse Reports	% of Substan-tiated Reports
Clark County	71.7%	62.6%	66.3%
Washoe County	15.2%	20.3%	23.7%
Rest of State	13.1%	17.1%	10.0%
Total	100.0%	100.0%	100.0%

The table below breaks down 2001 child abuse reports by county.

	Substan-tiated	Unsubst-antiated	Un-known	Total
Carson City	82	436	7	525
Churchill	41	254	6	301
Clark	1,891	6,177	248	8,316
Douglas	27	177	3	207
Elko	36	253	9	298
Esmeralda	0	6	0	6
Eureka	2	6	1	9
Humboldt	9	94	3	106
Lander	4	55	5	64
Lincoln	4	22	1	27
Lyon	34	241	16	291
Mineral	9	35	1	45
Nye	17	188	6	211
Pershing	4	33	1	38
Storey	2	17	1	20
Washoe	676	1,900	116	2,692
White Pine	16	99	6	121
Total	2,854	9,993	430	13,277

Over 28% of substantiated abuse cases involve a child 0-2 years old. Almost half of substantiated cases have a victim 5 years of age or younger.



Physical abuse and physical neglect were the two most common forms of maltreatment for incidents that could be substantiated in 2001, collectively accounting for almost 31% of all incidents statewide but over 2/3 of the incidents in Washoe County. Lack of supervision was also a significant issue (13.5% of incidents statewide).

The table below shows the distribution of substantiated incidents of child abuse and neglect in 2001. Note that the number of incidents is greater than the number of substantiated reports, since reports may involve multiple types of maltreatment and multiple incidents. Numbers between regions can also vary because of differences in how CPS cases are classified and documented in each region.

Type of Maltreatment	Nevada Total	Clark County	Washoe County	Rest of State
Physical neglect	15.8%	8.7%	50.2%	41.6%
Physical abuse	15.1%	14.3%	17.3%	20.1%
Lack of supervision	13.5%	12.2%	21.4%	15.6%
Sex abuse/ exploitation	4.2%	4.1%	3.2%	7.1%
Educational neglect	3.0%	3.3%	1.0%	3.4%
Abandon-ment	2.4%	2.0%	4.1%	3.7%
Emotional abuse	2.0%	2.0%	0.3%	4.2%
Medical neglect	1.7%	1.5%	1.7%	3.4%
Fatal	0.1%	0.1%	0.2%	0.3%
Other	42.3%	51.8%	0.6%	0.6%
Percent	100.0%	100.0%	100.0%	100.0%
Number of incidents	5,324	4,340	631	353

Source: Nevada Division of Child & Family Services, Child Abuse & Neglect Statistics, 2001

There is a notable relationship between child abuse and substance abuse. 16% of the Nevada CPS cases in 2001 specifically cited alcohol/ drug dependency as a family stress factor. Nationally, a study by the Packard Foundation's Center for the Future of Children estimated that between 50% and 80% of families involved with CPS are dealing with substance-abuse problems.

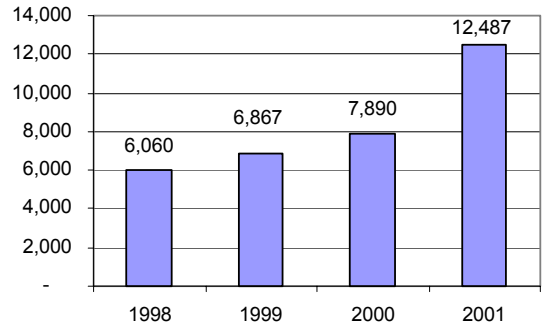
Domestic Violence

Domestic violence is the use of physical force, or threat of force, against a current or former partner in an intimate relationship, resulting in fear and emotional and/or physical suffering.

The Nevada KIDS COUNT Data Book 2003 shows that based on police reports during calendar year 2001, children were present during 12,487 (54%) of the 22,971 reported cases of domestic violence. These data under-represent the number of incidents of domestic violence in which a child was present because (1) police reports may not be fully completed in all cases, and (2) not all cases of domestic violence are reported. These data also under-estimate the total number of children who experienced domestic violence in their homes, since more than one child may have been present at the incident.

As the graph below demonstrates, Nevada children are increasingly exposed to domestic violence. The number of such cases with police reports more than doubled from 1998 to 2001.

Number of Domestic Violence Cases with Children Present in Nevada, 1998-2001



Source: Nevada KIDS COUNT Data Book, 2003

The table below shows the breakdown of domestic violence incidents in 2001 by geographic area, as reported to the local police departments and sheriff's office.

	Total # of Domestic Violence Reports	# of Incidents With a Child Present	% of Incidents With a Child Present
Clark County	17,892	9,024	50.4%
Washoe County	3,040	2,147	70.6%
Rest of State	2,039	1,316	64.6%
Total	22,971	12,487	54.4%

As noted earlier, the above statistics under-represent the true extent of domestic violence. The Committee to Aid Abused Women (CAAW), the largest nonprofit agency addressing domestic violence issues in Washoe County, reported that they served 12,967 clients in fiscal year 2001-2002, of which 8,867 were first time clients. Law enforcement was not contacted in 38% of the cases where it is known whether or not law enforcement was involved.

Accidents and Unintentional Injuries

From 1999 to 2001, accidents were the leading cause of death for children between the ages 1 and 14, accounting for 109 deaths in this time period. 52 of these deaths occurred in 2000 alone. The causes of most accidental deaths in 2000 to children 14 and under were motor vehicle accidents (30 deaths) and drowning (10 deaths). An additional 83 accidental deaths occurred in 2000 to persons age 15-24, of which 57 were due to motor vehicle accidents.

Youth Suicide

In 2000, the age-adjusted suicide death rate for Nevada residents (19.3 per 100,000 people) was almost twice the national average (10.3). Nevada has continually ranked highest in the nation during the past 10 years for suicide deaths.

The Nevada KIDS COUNT Data Book 2003 reported "findings from the 2001 Nevada Youth Risk Behavior Survey (YRBS) revealed that 29.7% of high school students in Nevada felt so

sad or hopeless almost every day for two weeks during the past 12 months that they stopped some usual activity, 19.6% seriously considered attempting suicide, 16.4% made a suicide plan, and 10.8% attempted suicide."

Of the total of 388 suicides in 2000, 43 were committed by persons age 5 to 24.

Juvenile Violence

During the period from 1999 to 2001, there were 1,705 arrests of juveniles for violent crimes including murder, nonnegligent manslaughter, rape, robbery, and aggravated assault. In this three-year period, the highest rates of juvenile arrests for violent crimes per 100,000 youth occurred in Mineral County (400.8), Carson City (424.9) and Washoe County (330.8). The rate for Clark County was 268.8. By contrast, Esmeralda, Eureka, Lincoln and Storey Counties reported no juvenile violent crime arrests.

During 2001, the 588 arrests for violent crimes accounted for 2.3% of the total 25,238 juvenile arrests. Most juvenile arrests in 2001 were for nonviolent crimes such as curfew and loitering violations (16.4%), larceny-theft (13.4%), non-aggravated assaults (10.4%), liquor law violations (6.0%) and drug abuse violations (5.8%).

2001 YRBS results indicate that 6.8% of students in grades 9 through 12 carry a weapon on school property. The survey also found a rate of physical fighting among adolescents of 34.7 per 1,000 students, which is slightly below the national average of 36.0 per 1,000.

Community Impact

Each of the issues covered in this section can produce physical harm or death to its victims. However, the toll of violence involving children extends far beyond the physical damage.

Children who grow up in violent homes are much more likely to become abusive partners or victims of abuse in adulthood. Over 80% of abusive partners had themselves either been victims of child abuse or had witnessed their mothers being abused. Children growing up in violent homes are 74% more likely to commit crimes than are children who were not exposed to violence. As adolescents, children who were exposed to domestic violence are also at increased risk for substance abuse, juvenile delinquency, and depression/suicide.

Child abuse and neglect is directly linked to psychological deficits in children such as aggression, depression, and posttraumatic stress disorder. Abused and neglected children also show deficits in learning such as learning impairment, difficulty concentrating, difficulty in schoolwork, reduced verbal and motor skills, and attention-deficit disorders. These effects translate into lower grades, standardized test scores, and rates of grade promotion.

Intervention is crucial to help break the cycle of violence. An abused child returned to parents without intervention has a 35% chance of being seriously re-injured. In cases of domestic violence, a national survey found that 50% of the men who frequently assaulted their wives also frequently assaulted their children.

Current Services and Funding

Fiscal year 2001-02 state government funding and service levels specifically related to violence and injury prevention that could be identified from budget information are shown below.

Program/Service	# Served	Total Funding
CHILD WELFARE:		
Department of Human Resources (DHR) Children and Family Administration: Includes Child Protective Services and Child Welfare Services (foster care, adoption, and other support services) for Rural Nevada plus overall administration	* See below	$25,662,686
DHR Child Welfare Integration: Transfer of child welfare services from the state to Clark and Washoe Counties	* See below	1,752,265
DHR, Youth Community Services: Out-of-home placements to abused and neglected youth plus payments for Clark and Washoe County CPS and Child Welfare Services	* See below	50,194,873

Program/Service	# Served	Total Funding
DHR, Children's Trust Fund: Grants to agencies/organizations to provide child abuse and neglect prevention programs and family support	18,509 child; 21,982 adult	1,945,242
Title XX Federal Social Services Block Grants related to child abuse and neglect	3,269	160,490
Fund for a Healthy Nevada (FHN): Grant to Family Counseling Services for counseling for abused children (Washoe County)	143	28,899
FHN: Grant to Big Brothers Big Sisters in Ely	15	90,297
Subtotal – Child Welfare		$79,834,852
DOMESTIC VIOLENCE:		
DHR: Victims of Domestic Violence	NA	$2,176,814
Title XX Federal Social Services Block Grants	506	66,494
Subtotal – Domestic Violence		$2,243,308
ACCIDENTAL INJURIES:		
Department of Public Safety, Bicycle Safety Programs	NA	$169,159
FHN: Grant to University Medical Center for child safety seats (Clark County)	1,323	61,731
Subtotal – Accidental Injuries		$230,890
JUVENILE CORRECTIONS:		
HR: Juvenile Accountability Block Grant	368+	$2,396,644
HR: Juvenile Correctional Facilities	** See below	2,790,123
HR: Caliente Youth Center	** See below	4,660,857
HR: Nevada Youth Training Center	** See below	6,454,459
HR: Youth Parole Services	1,088	4,882,333
HR: Youth Alternative Placement	278	1,650,085
Subtotal – Juvenile Corrections		$22,834,501
TOTAL		$105,443,551

* Service levels are not broken out in detail in available reports but include investigation of 13,277 reports by Child Protective Services, 254 adoptions, and an average statewide monthly child welfare caseload of 4,444 (2,896 in Clark County, 885 in Washoe County and 663 in Rural Nevada). The foster care system is an integral part of child welfare by moving abused and neglected children to safer environments.

** Summit View Youth Correctional Center in Clark County is a new 96-bed facility. The other centers combined have an average daily population of 305.

In addition to these programs, many other state-funded programs have a component that address aspects of child abuse and neglect, domestic violence, youth suicide, and juvenile violence. These include:

- Department of Human Resources, Community Connections: The Family to Family Connection program is included in this assessment under Maternal, Infant & Child Health but involves a proactive approach to preventing child abuse and neglect.
- Also under the Department of Human Resources, Family Resource Centers offer parenting classes and other services that can impact many aspects of injury and violence prevention. Head Start and Early Head Start programs can have a similar effect.
- Agencies within the State Health Division that impact injury and violence prevention through education and addressing family stress/risk factors include the Bureau of Family Health Services, the Bureau of Community Health, the Bureau of Alcohol and Drug Abuse, and the Division of Mental Health and Developmental Services (the latter of which specifically targets suicide prevention as an issue).

Data on local programs is much sketchier. The limited available information shows:

- Child abuse and neglect is an issue targeted by numerous community-based organizations providing children and family services, and collaborative efforts like the Nevada Coalition Against Sexual Violence. No data was available on service levels and funding specifically targeted to child abuse and neglect, although the Children's Trust Fund's Assessment of Nevada's Child

Abuse Prevention Services lists home visitation, parent education, respite care, and/or other relevant support services being available in every county except Esmeralda and Eureka Counties.

- Domestic violence services are available in all 17 counties; the only service and funding data available for this report was from the Committee to Aid Abused Women in Washoe County, with total program expenditures for fiscal year 2000-01 of $854,752 and 12,967 clients served in 2002.

- The Clark County and Washoe County Health Districts both operate programs to impact unintentional injuries and suicide. In fiscal year 2002-03, the Clark County Health District, budgeted $87,659 for a drowning prevention program and $25,000 for a suicide prevention public information project.

- The Nevada Division of Mental Health and Developmental Services' 2003 Nevada Suicide Prevention Resource Directory lists 30 programs in the south and 48 programs in northern and rural Nevada that assist with suicide prevention in some manner. Again, no information on service or funding levels was available.

- Juvenile violence is addressed in multiple ways, ranging from local law enforcement efforts to school-based programs that target campus violence/safety to community-based organizations offering services such as youth mentoring, youth counseling, and efforts to reduce gang participation and gang violence. Specific data on service or funding levels was not available for this report.

The Fund for a Healthy Nevada has approved a grant of $133,376 per year for two years starting in state fiscal year 2002-03 to the Parent Education and Child Enrichment Project for prevention-based programs in rural Nevada offering parent education and child support networks.

United Ways in Nevada have consistently supported programs related to injury and violence prevention, as evidenced by the grant levels shown in the table below for fiscal year 2001-02.

	Total	North	South
Child abuse	$137,410	$42,410	$95,000
Domestic violence	60,432	35,432	25,000
Youth suicide	11,038	11,038	-
Youth violence	2,388	2,388	-
Total	$211,268	$91,268	$120,000

Gaps in Services

Child Abuse and Neglect. Current services are clearly having an effect on child abuse and neglect, with the number of reports in 2001 almost 10% lower than 1997 levels and the number of substantiated reports having dropped 45% in the same time period, while the total population grew over 20%. The Children's Trust Fund noted in their 2001 *Assessment of Nevada's Child Abuse Prevention Services*:

> This new downward trend may be due to a much stronger prevention effort statewide in recent years, including the proliferation of community-based resources such as Family Resource Centers and the Family to Family Connection Program. In many areas of Nevada, Child Protective Services has also made a concerted effort to intervene early to offer families resources in an effort to decrease stress factors that often cause abuse.

The available information suggests that additional investments would have the most impact by focusing on family support and stress factors, preventing abuse and neglect through parent education with better follow up after completion of parenting education programs, reduction of drug and alcohol use in family settings, parenting classes specifically for parents who are recovering from substance abuse, and expanded respite options for parents and caregivers. Expanded bilingual capabilities are needed in some programs as well to assist the state's growing Hispanic population.

Domestic Violence. Existing programs deal primarily with the consequences of domestic violence, with prevention and early detection/ intervention efforts largely limited to family counseling programs and referrals from other social services that identify potential domestic violence problems. The findings from the Nevada Division of Child and Family Services' Task Force on Family Violence from 1999 appear to still be valid today. The findings include:

- More appropriate, safe and non-threatening options are needed to address the needs of children exposed to domestic violence;
- Many families experiencing domestic violence lack access to support and services due to linguistic or cultural differences, limitations in personal resources, or geographic isolation;
- Health and human service providers need more consistent, quality training on how to identify potential domestic violence and how to respond most appropriately; and
- Improved collaboration on the local and state levels is needed to develop more coordinated approaches to prevention and response to domestic violence.

Other Aspects of Injury and Violence Prevention. The information available for this report did not identify any specific gaps in services related to preventing accidents, youth suicide, and juvenile violence. These are areas that should be considered again in the future as better information becomes available.

Data Issues

Data issues affecting this section of the assessment are:

- There are some notable inconsistencies in how CPS investigations are recorded across the state, such as the type of mal-treatment being recorded as "other" in over 50% of the cases in Clark County and less than 1% of the cases in the rest of the state. Greater consistency in how investigations are conducted and documented would yield better information for policy and funding decisions.

- A much more complete inventory of existing programs, levels of service, and funding related to domestic violence is desirable. The data available for this report is much too sketchy to identify specific gaps in services, so the only recommendations that could be made are the rather broad statements derived from the work of the 1999 Task Force on Family Violence.

- Data was not gathered on the incidence of unintentional injuries to children not leading to death. Further research, starting with an analysis of hospital emergency room visits and inpatient discharges for unintentional injuries of children, is needed to determine whether there are significant needs to be addressed.

Data sources used to prepare this report are listed in Appendix 1.

Maternal and Infant Health

Conditions and Needs

Good health starts at conception. The health and choices made by the mother during pregnancy, including the extent to which timely and adequate health care is received during pregnancy, play major roles in determining the health of the child at birth. Health status at birth and during the infant and toddler years, in turn, has a great effect on the continued health of a person as they grow.

This section of the assessment focuses on several key aspects of early childhood health: prenatal care, birth weight, birth defects, and infant mortality. Other important issues in maternal, infant and child health are covered elsewhere in this report – the Tobacco Use section addresses smoking during pregnancy and exposure of children to secondhand smoke, the Injury and Violence Prevention section has information on abuse and neglect of young children, and the Substance Abuse section addresses alcohol and drug use during pregnancy.

Prenatal Care

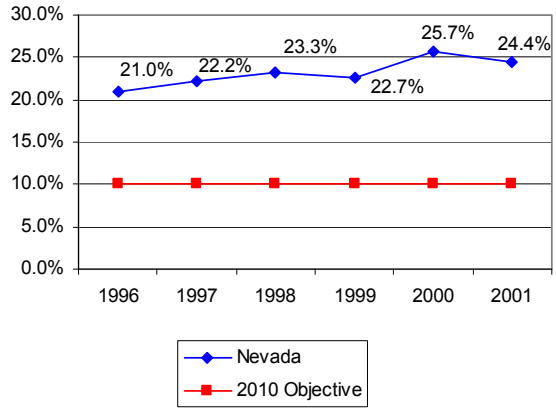
Regular health care visits by pregnant women are very important for maximizing the likelihood of having healthy babies. Prenatal care enables health professionals to check for normal development of the fetus, monitor conditions like gestational diabetes that can impact the health of the mother and baby alike, encourage mothers to avoid smoking and alcohol/drug use during pregnancy, and react quickly when problems develop.

Prenatal care should begin during the first trimester of pregnancy. "Inadequate prenatal care" is considered to be care that begins in the second or third trimester of pregnancy, or is not obtained at all.

In 2001, over 24% of Nevada mothers had inadequate prenatal care. According to *National Vital Statistics Reports*, only the District of Columbia had a higher percentage in the U.S. Of the Nevada mothers with inadequate prenatal care, 6,044 mothers (20.1% of births where data on prenatal care was available) delayed prenatal care until the second or third trimester of pregnancy, and 1,294 (4.3% of births) received no prenatal care.

Perhaps even more disturbing is that the trend is toward more mothers receiving late or no prenatal care. The levels for 2000 and 2001 are noticeably higher than 1996-1999 rates, which were bad to begin with. The Healthy Nevada 2010 objective is for 10% of births to occur to mothers with inadequate prenatal care.

Percent of Births to Mothers with Inadequate Prenatal Care, 1996-2001



Source: Center for Health Data and Research, Nevada Vital Statistics

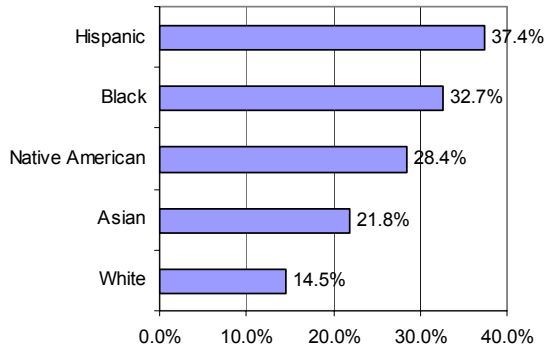
Other key findings related to prenatal care are:

- Washoe County has had consistently better rates of prenatal care, with the percent of mothers receiving inadequate care ranging from 12.5% to 14.8% from 1996 to 2000 compared to the state averages of 21% and above. Rates for Clark County and rural Nevada were comparable, around 22-25%, until 2000 when the Clark County rate jumped to

28.8% at the same time that the rural Nevada rate "improved" to 23.2%.

- In 2001, Hispanic women were least likely to receive timely prenatal care; 37.4% of births to Hispanic mothers involved late or no prenatal care. This has been a consistent pattern in recent years – in 2000, almost 40% of Hispanic mothers had late or no prenatal care.

% of Births to Mothers With Inadequate (Late or No) Prenatal Care, 2001



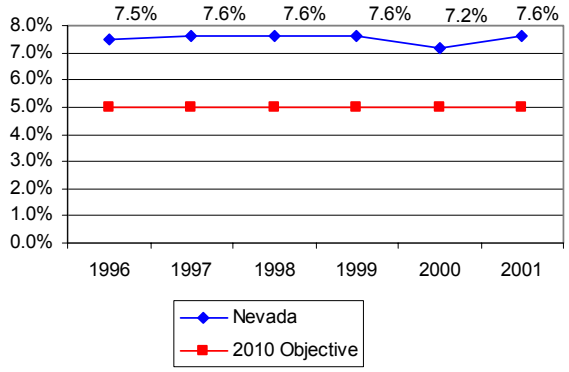
Source: Nevada KIDS COUNT Data Book, 2003

Low Birth Weight Babies

Low birth weight babies are those weighing less than 2,500 grams (about 5.5 pounds) at birth. Studies have shown that low birth weight babies have higher risks of health problems or death as infants, have a higher rate of long-term disabilities, and are more likely to experience cognitive and social developmental delays. A number of factors influence birth weight including genetic conditions, the health of the mother during pregnancy, smoking during pregnancy, and alcohol and drug use during pregnancy.

The percent of babies born to Nevada mothers weighing less than 2,500 grams has stayed remarkably consistent at around 7.6% since 1996, the same as the national average but well above the Healthy Nevada 2010 objective of 5.0%. The 2001 rate of 7.6% meant that 2,371 Nevada babies were born with low birth weight.

Percent of Births with Low Birth Weight, 1996-2001

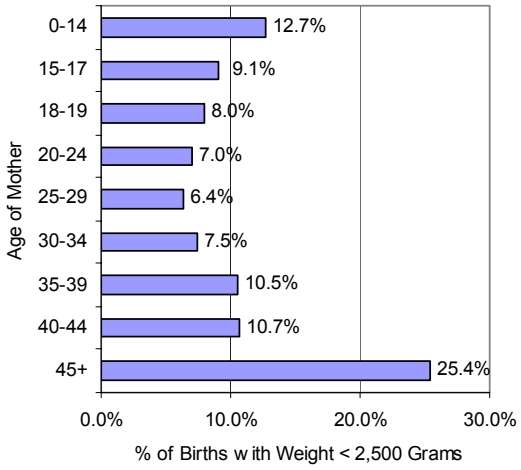


Source: Center for Health Data and Research, Nevada Vital Statistics

There is no difference by geographic area in the rate of low birth weight babies. The 2001 rates by region were 7.5% for Clark County, 7.6% for Washoe County, and 7.6% for the rest of the state combined.

Two variables that do appear to make a difference are the age and the race/ethnicity of the mother. Teenage mothers and mothers age 35 and over have significantly higher rates of low birth weight babies.

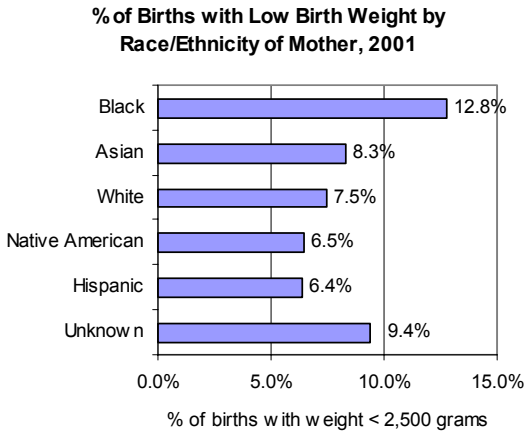
% of Births with Low Birth Weight by Age of Mother, 2001



Source: Nevada KIDS COUNT Data Book, 2003

Black and Asian mothers also have higher incidence of low birth weight babies as a percentage of births, although due to the total

number of births, 77% of all low birth weight babies were born to either White (1,146 babies) or Hispanic (688 babies) mothers.



Source: Nevada KIDS COUNT Data Book, 2003

Birth Defects

Birth defects are one of the leading causes of infant mortality in the United States and in Nevada. As defined by the March of Dimes Birth Defects Foundation, a birth defect is an abnormality of structure, function or metabolism (body chemistry) present at birth that results in physical or mental disability, or is fatal. Several thousand different birth defects have been identified.

In 2000, 455 out of 30,130 babies born (1.5%) had at least one congenital anomaly (birth defect). 151 of these babies had two or more anomalies. The most prevalent anomalies were:

Other circulatory/respiratory anomalies	136
Heart malformation	31
Other central nervous system anomalies	30
Cleft lip/palate	24
Other urogenital anomalies	23

A provision report by the Nevada Birth Defects Registry indicated that during 2000, there were 1,114 Nevada children age 0-6 years old who were hospitalized in Clark County and were diagnosed with one or more birth defects. This provides some indication of the ongoing medical needs of children with birth defects.

Infant Mortality

As reported by the Nevada KIDS COUNT Data Book 2003, between 1999 and 2001, 563 infants out of 90,269 babies born died before their first birthday. This represents an infant mortality rate of 6.2 per 1,000 babies over this three-year period compared to national averages of 6.9-7.1.

Infant mortality rates in Nevada have been dropping steadily since 1990 and are continuing to improve. Per the State Health Division's Biennial Report 2000-2001, the infant mortality rate declined in 2001 to a low of 5.24 deaths per 1,000 live births to Nevada residents, one of the lowest in the nation. Information from the Center for Health Data and Research places the Nevada infant mortality rate at a slightly higher 5.7 per 1,000 live births, which is still an improvement over prior years.

KIDS COUNT also noted that in 2000 the three major causes of infant mortality in the United States were congenital malformations, low birth weight, and sudden infant death syndrome (SIDS). Together, these three factors accounted for 45% of all infant deaths nationally.

Center for Health Data and Research data shows the following primary causes for infant deaths occurring in Nevada in the year 2000:

Perinatal period conditions (conditions developing from five months before birth to one month after)	80
Congenital malformations	47
Sudden infant death syndrome	16

The above causes accounted for over 71% of the 201 infant deaths in 2000. No other single factor caused more than seven infant deaths that year.

Community Impact

The issues presented in this section are closely related to each other, and collectively play a major role in the long-term health and well being of children.

Timely and appropriate prenatal care can address important issues such as nutrition, smoking, drinking, anemia, and diabetes with the mother. These factors can, in turn, greatly

affect the health of babies at birth. Getting late or no prenatal care is associated with a greater likelihood of having babies who are born at low birth weights, who are stillborn, or who die in the first year of life.

Babies who are born at low birth weights have increased risks of birth defects, death from Sudden Infant Death Syndrome and other causes of infant mortality, developmental delays, cerebral palsy, and long-term disabilities. The March of Dimes estimates that low birth weight is a factor in 65% of all infant deaths.

Birth defects are one of the primary causes of infant mortality, along with low birth weight. Children with birth defects who survive their first years often have lifelong physical, mental and/or developmental disabilities. Besides costing hundreds of millions of dollars in medical and rehabilitation costs each year, birth defects present tremendous emotional and financial stresses for affected families and individuals.

Current Services and Funding

State-level programs focused on maternal and infant health are listed below, with funding and service levels for fiscal year 2001-02 where available.

Program/Service	# Served	Total Funding
Community Connections: Family to Family Connection	7,960 family	$1,306,726
Community Connections: Family Resource Centers	28,682	1,457,772
Bureau of Family Health Services: Maternal & Child Health Services include Baby Your Baby (BYB) program and payment for prenatal care for eligible women	BYB: 16,812 Prenat care: 400	3,936,236
TOTAL		$6,700,734

The Family to Family Connection program has 18 New Baby Centers located around the state – 5 in the Las Vegas area, 3 in Washoe County, and 10 around the rest of the state.

38 Family Resource Centers are also in operation, with 18 located in the south, 8 in Washoe County, and 12 across the rest of the state.

The "Baby Your Baby" (BYB) program of the Bureau of Family Health Services has received national attention as being a particularly effective model. Women who accessed care through BYB had lower rates of low birth weight and very low birth weight, and higher rates of accessing early prenatal care. Infant mortality rates have dropped significantly since the inception of this program in 1991.

All of the components of the state's health care delivery system (described in the Access to Health Care section of this report) – hospitals, Community Health Centers, Tribal Health Centers, Community Health Nursing clinics, County Health Districts, and other nonprofit organizations – also have prenatal and infant care services. The only data available for this report on service level for specific programs is from the Economic Opportunity Board of Clark County, whose Maternal Care program served 2,381 clients (344 new clients and 2,037 returning clients) in fiscal year 2001-02, almost all of which were Hispanic and without prior prenatal care. The United Ways in Nevada also allocated $120,000 to programs with a maternal/infant health component in fiscal year 2001-02.

Gaps in Services

The central issue related to maternal and infant health appears to be reducing the percent of births to mothers receiving late or no prenatal care. Improving access and utilization of prenatal care, coupled with more effective ways to reduce smoking during pregnancy as addressed in the Tobacco Use section of this report, should have a measurable impact on reducing the rates of low birth weight babies and infant mortality.

Because of some gaps and ambiguities in the available data, what is not clear is the best type of intervention(s) in which to invest in order to improve prenatal care access. No solid information was found during the research for this report regarding why the percent of women

with timely and adequate prenatal care is consistently so low. It is not hard to speculate on the reasons, given information presented elsewhere in this report; lack of health insurance, an inadequate number of health professionals (and particular OB/GYN physicians), and potential language, cultural and other barriers that disproportionately affect Hispanic and Black women are all probable contributors to the dismal prenatal care rates. However, making funding decisions based on this kind of speculation rather than upon good research can greatly increase the risk of "creating the whole solution to the wrong problem (or even the right problem)."

Data Issues

The issue just mentioned about lack of solid information regarding the underlying causes of the low rates of timely prenatal care access is the main data challenge encountered for maternal and infant health.

One other data issue relates to tracking the percentage of births that occur before the full term of pregnancy has been completed. A birth is considered "preterm" or premature when it occurs three or more weeks before the due date. Babies born too soon can have lifelong or life-threatening health problems, particularly respiratory distress syndrome and bleeding in the brain. The March of Dimes reports that from 1998-2000, 12.7% of Nevada babies were born prematurely. However, the issue of preterm births was not spotlighted in any of the materials obtained for this report. In fact, the only data found on the subject was from the Center for Health Data and Research indicating that 10.1% of births in 2001 were preterm, of which 8.8% occurred from 32 to 36 weeks of gestation and 1.3% occurred after less than 32 weeks of gestation. Consideration should be given to researching this issue further so that appropriate education and treatments to reduce preterm births can be incorporated into prenatal care and other programs if appropriate.

Data sources used to prepare this report are listed in Appendix 1.

Fitness and Nutrition

Conditions and Needs

Two important determinants of overall health are the extent to which people receive adequate nutrition and are physically fit, which includes being at an appropriate body weight and exercising regularly.

Food Security and Nutrition

Food insecurity is defined by the U.S. Department of Agriculture (USDA) as "lack of assured access at all times to enough food for healthy, active lives." Hunger is defined as "having insufficient food or insufficient resources to acquire enough food to meet daily nutrition requirements."

Statistics from the Food Bank of Northern Nevada indicate that 8.4% of Nevada residents are food insecure, and almost 4% are food insecure with hunger. Based on 2002 state population levels, this translates into over 185,000 people who are food insecure and approximately 88,000 who are food insecure with hunger.

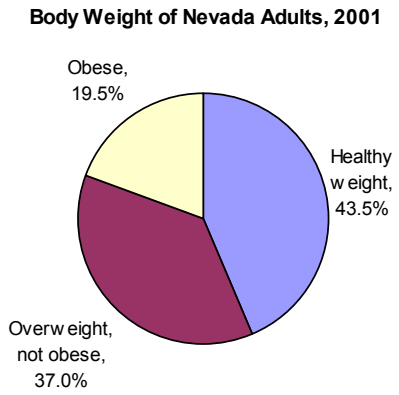
Hunger has a large impact on children. A 1999 study by the Food Research and Action Center found that more than 44,000 children in Nevada may experience hunger on a regular basis. More than 90,000 children in the state of Nevada are eligible to receive free and reduced cost lunch at school. These children live in households that are categorized by the USDA as "at risk of hunger." Many of these children depend on school breakfast and lunch as their primary source of nutrition. When they are not in school, a significant portion - 25% or more – may have little to eat. All these children and their siblings are eligible for summer food service programs (SFSP), which replace the national school lunch/breakfast programs when children are not in school. However, in 1999, only 8% of potentially eligible school children in Nevada had access to the summer food program.

Single, female-headed households make up 54% of clients who use Nevada emergency food pantries to supplement their household food supply.

Body Weight

According to results of the 2001 Behavioral Risk Factor Surveillance Survey (BRFSS), 19.5% of adults in Nevada are obese, defined as having a body mass index (BMI) greater than or equal to 30.0. This compares to 20.1% of all U.S. adults per 2001 national BRFSS data. The Healthy Nevada 2010 objective is 15.0%.

Another 37% of Nevada adults are overweight but not obese, defined as having a BMI between 25.0 and 29.9. Only 43.5% of Nevada adults are at a healthy weight (BMI below 25.0), which is slightly better than the U.S. average of 42.9% but well below the 2010 objective of 60.0%.



Applied to 2002 population levels, the BRFSS results suggest that over 315,000 adults in Nevada may be obese and another 600,000 are overweight.

Among teens, about 26% of Nevada high school students reported that they were slightly overweight and 4% reported they were very overweight, according to the 2001 Youth Risk Behavior Survey (YRBS).

Exercise and Physical Fitness

The 2001 BRFSS results indicate that Nevada is somewhat close to meeting the 2010 targets related to exercise and physical fitness. The table below contains key indicators for physical activity with comparison to national levels per the 2001 BRFSS and to the 2010 objectives. In each case, Nevada's rates are better than the national average.

Indicator	2001 Nevada	2001 U.S.	2010 Objective
Reduce the proportion of adults who engage in no leisure-time physical activity	22.6%	25.7%	20.0%
Increase the proportion of adults who engage regularly in moderate physical activity for at least 30 minutes per day	49.8%	32.0%	50.0%
Increase the proportion of adults who engage in vigorous physical activity three or more days per week for 20 or more minutes per occasion	26.7%	23.0%	30.0%
Increase the proportion of *adolescents* who engage in vigorous physical activity three or more days per week for 20 or more minutes per occasion	66.3%	65.0%	85.0%

Community Impact

Food insecurity and particularly hunger can greatly affect the health, development, and behavior of children. Studies show that the consequences of under-nutrition for children include poor overall health and depressed immune systems, elevated occurrences of specific health problems affecting school attendance such as stomach aches, headaches, and ear infections, impaired cognitive functioning, reduced ability to learn and poor school achievement, increased tardiness and absence, and increased need for mental health services. These are but some of the well documented effects of childhood hunger.

Just as too little food or proper nutrition is harmful, being overweight and failing to engage in sufficient physical activity can have serious health consequences. These include increased risks of high blood pressure, heart disease, diabetes, and some types of cancer.

According to a June 2003 statement by Julie Gerberding, Director of the U.S. Centers for Disease Control and Prevention, tobacco is the largest cause of death in the United States but obesity and a general lack of physical fitness is rapidly catching up and needs to become a priority for the country's healthcare system. "We just recalculated the actual causes of death in the U.S. and we did see that obesity moved up very close to tobacco, and is almost the number one health threat," she said.

Excess body weight also carries significant economic costs. According to a new study funded by the U.S. Centers for Disease Control and Prevention, annual medical costs for an obese person are about 37.7% more, or $732 higher, than the costs for someone of normal weight. This equates to $230 million a year in additional health care costs for Nevada. The annual medical spending attributable to overweight and obesity is about 9.1% of national medical costs.

Current Services and Funding

State-level programs focused on maternal and infant health are listed below, with funding and service levels for fiscal year 2001-02 where available.

Program/Service	# Served	Total Funding
FOOD AND NUTRITION:		
Women, Infants and Children (WIC): Food and nutrition support	40,800/ month	$31,382,629
Food Stamps (*note: funding number does not include personnel costs for eligibility determination, processing and administration*)	162,686	6,300,272

Program/Service	# Served	Total Funding
Fund for a Healthy Nevada grant: Food Bank of Northern Nevada , meals for low-income children and youth (*note: funding level is for one year, FY03-04*)	NA	300,000
FITNESS:		
Fund for a Healthy Nevada grant: Pershing County School District fitness and nutrition program (*note: funding level is for one year, FY03-04*)	NA	40,306
TOTAL		$38,023,207

As noted in the table, the two main state programs related to nutrition are the Women, Infants, and Children (WIC) Program and the Food Stamp Program. The purpose of WIC is to improve the nutritional health status of low-income women, infants, and young children to age five during critical periods of growth and development. To be eligible for WIC, a person must be a Nevada resident; under 185% of poverty; pregnant, breastfeeding (up to 12 months after delivery), or postpartum (non-breastfeeding, up to six months after delivery) woman, infant, or child up to age five; and have a nutritional risk factor. A nutritional assessment is conducted with each applicant.

A total of 33 WIC clinics are operated by five different agencies throughout Nevada. Washoe County Health District operates 4 clinics in Washoe County. In Clark County, the EOB (Economic Opportunity Board) operates 7 clinics, Clark County Health District operates 3 clinics, and Sunrise Hospital operates 4 clinics in Clark County and the clinic in Pahrump. The State WIC Program operates 14 clinics in the rural/frontier counties of Nevada.

In the 2000-02 biennium, WIC participation rose 2.5% from the previous biennium to an average of 40,000 participants each month.

The Food Stamp Program is available to all households at 135% of poverty. Nationally, about half those receiving food stamps are children. At this time however, fewer than 60% of eligible households in Nevada use the program, due to lack of knowledge, red tape, complex eligibility requirements, literacy issues and the stigma attached. In December 2002, 149,848 people or 6.7% of all Nevada residents received food stamps, of which 115,488 (77% of all food stamp recipients) were in Clark County, 18,533 (12%) were in Washoe County, and the remaining 15,827 (11%) were from the rest of the state. The total dollar value of the food stamps given was $88,811,716 in 2002.

There are 148 nonprofit and county emergency food providers in Nevada. An additional five providers in other states provide limited assistance to Nevada residents. The table below shows the distribution of Nevada emergency food providers by county, compared to the percent of the total state population found in each county.

County	Number of Emergency Food Providers	% of Emergency Food Providers	% of State Population
Carson City	3	2.03%	2.70%
Churchill	4	2.70%	1.23%
Clark	91	61.49%	70.70%
Douglas	1	0.68%	2.12%
Elko	4	2.70%	2.33%
Esmeralda	0	0.00%	0.05%
Eureka	1	0.68%	0.08%
Humboldt	0	0.00%	0.83%
Lander	3	2.03%	0.30%
Lincoln	3	2.03%	0.21%
Lyon	3	2.03%	1.77%
Mineral	2	1.35%	0.26%
Nye	13	8.78%	1.67%
Pershing	2	1.35%	0.34%
Storey	1	0.68%	0.17%
Washoe	16	10.81%	17.45%
White Pine	1	0.68%	0.47%
TOTAL	148	100%	100.00%

According to survey results presented in the April 2003 report *Mapping Nevada's Patterns of Hunger*, a total of 118,347 people were served in Nevada each month in 2002 by these emergency food providers (note: there may be some duplication in this count where the same people were served by multiple providers). Of these, 78,277 (66%) were in Clark County, 13,539 (11%)

were in Washoe County, 9,663 (8%) were in Carson City, and the remainder of 16,868 (14%) were spread across the rest of the state.

Local funding that was identified related to food and nutrition support programs in fiscal year 2001-02 was:

Clark County CDBG funds	$136,949
United Way of Southern NV	173,250
United Way of Northern NV	103,114
Total	$413,313

With respect to programs to reduce obesity and promote physical fitness, the Clark County Health District prepared an inventory of current programs, which showed the following:

- Six programs were listed in Clark County that had explicit activities to help people control their weight and increase the level of physical fitness. Funding levels were only available for two programs, which totaled $110,000. One is specifically a child obesity prevention project.
- Two research projects are being conducted to assess and improve the physical activity of children.

No other data was found on specific programs, service levels and funding dedicated to promoting healthy body weights and physical activity. Clearly there are many such programs, ranging from facilities and activities sponsored by City and County Parks and Recreation Departments around the state to a multitude of private for-profit fitness and weight loss businesses.

Gaps in Services

The food support network in Nevada is strong. Sustained funding is certainly important; the point here is that many excellent services are in place that are able to reach almost all communities in the state.

The main gap related to food and nutrition that can be gleaned from the data available for this report is the need to reach many more children that participate in the free/reduced-cost lunch program during the school year but do not have enough to eat during the summer months.

Regarding obesity and physical fitness, there are substantial benefits to be gained from an expanded and integrated effort to increase the percentage of adolescents and adults at a healthy body weight. Making progress on obesity does not appear to be a current state priority, but medical research suggests that it should be. Further, this is a statewide issue; it is not isolated to any geographic area.

Data Issues

The most recent data on the incidence of food insecurity and hunger in Nevada uses estimates that are based largely on economic indicators, such as poverty rates, along with service levels for programs such as Food Stamps and nonprofit emergency food providers. Such methods can actually underestimate the incidence of hunger by not fully reflecting the multitude of family and economic pressures experienced by households; even supposedly "middle income" families can be food insecure. Consideration should be given to conducting new research using population-based methods such as surveying a statistically-valid sample of residents – possibly even incorporating a food security module into the BRFSS – in order to get a more precise picture of the presence of hunger in Nevada.

Data sources used to prepare this report are listed in Appendix 1.

Substance Abuse

Conditions and Needs

Substance abuse refers to the excess use of drugs that include both legal drugs, such as alcohol and prescription drugs, and illegal drugs like marijuana, cocaine, methamphetamine, heroin, and all other controlled substances. Tobacco use is not included here, as a separate section of this report has been devoted exclusively to tobacco use.

The analysis of substance abuse is divided into four sections: overall incidence of substance abuse, youth alcohol and drug use, alcohol and drug use during pregnancy, and drug-related crime.

Overall Incidence of Substance Abuse

Substance abuse is clearly a significant problem in Nevada. A 1998 study conducted by the University of Nevada Reno estimated that approximately 13% of Nevada's population is in need of substance abuse services. This translates into over 211,000 people if applied to the total number of adults in Nevada in 2002.

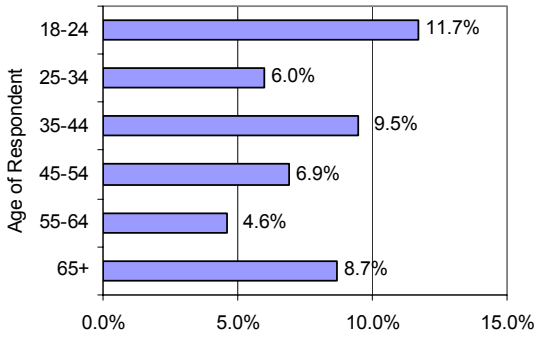
The proportion of Nevada's population using alcohol and illegal drugs is among the highest in the country. According to the 1999 National Household Survey by the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA), Nevada ranks:

- 1st highest for past-month use of illicit drugs other than marijuana;
- 1st along with Alaska in reporting illicit drug dependence during the past year;
- 5th highest in reporting past year use of any illicit drug or alcohol dependence; and
- 8th highest in reporting of past month binge alcohol use.

There were over 500 drug and alcohol-related deaths in Nevada in 2001. Nevada's 2001 age-adjusted rate of drug-induced deaths of 12.7 per 100,000 population was almost double the national rate of 7.1 per 100,000 and far over the Healthy Nevada 2010 objective of 1.0 per 100,000. Similarly, Nevada's 2001 rate of cirrhosis deaths (tied to sustained alcohol abuse) of 14.2 per 100,000 was almost 50% higher than the national rate of 9.6 per 100,000 and almost five times the Healthy Nevada 2010 target of 3.0 per 100,000.

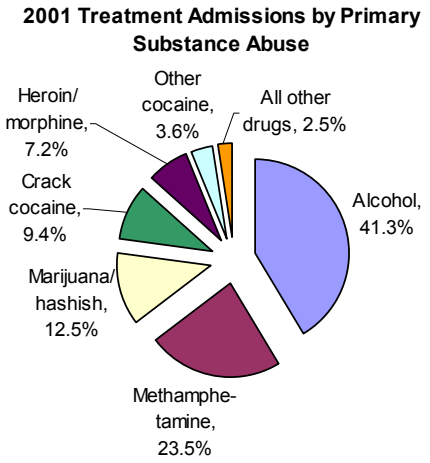
7.8% of adults in Nevada report heavy alcohol consumption, defined as more than two drinks per day for men and more than one drink per day for women, per the 2001 Behavioral Risk Factor Surveillance Survey (BRFSS). Heavy drinking rates are highest in rural Nevada at 11% of adults, compared to 7.2% in Clark County and 7.6% in Washoe County. Rates also vary significantly by age, as shown in the graph below.

Percent of Adults Reporting Heavy Alcohol Consumption by Age, 2001



Source: 2001 Behavioral Risk Factor Surveillance Survey results, obtained from online database at www.health2k.state.nv.us/nihds

Alcohol is the primary substance abuse problem in Nevada, but there are also significant problems with methamphetamine, marijuana/hashish, crack cocaine, and heroin/morphine. 41% of admissions to BADA-funded treatment programs in calendar year 2001 were for alcohol abuse, followed by methamphetamine as the primary cause for 23% of treatment admissions.



Percentages reflect only admissions to BADA-funded treatment programs. There were 11,102 such admissions during calendar year 2001.

Source: Nevada Bureau of Alcohol and Drug Abuse, Client Data System, April 2002.

Youth Alcohol and Drug Use

Results from the 2001 Youth Risk Behavior Survey (YRBS), as reported in the Nevada KIDS COUNT Data Book 2003, show some recent reductions in alcohol use among high school students. 47.5% of high school students reported having had at least one drink of alcohol or more in the past 30 days, as compared to 53.0% in 1999. A perhaps more disturbing statistic is that 32.6% of high school students reported engaging in binge drinking of alcohol during the past month.

About 33% of high school students reported they had their first drink of alcohol, other than a few sips, before their 13th birthday, down from 38% in 1999.

One factor in reducing teenage alcohol use may be improved enforcement of laws against sale of alcohol to minors. According to the Nevada Department of Human Resource's Annual Report, compliance in establishments refusing to sell alcohol to minors has increased to 71% from 48% two years ago, and has resulted in youth reporting a 35% decrease in availability of alcohol. Nevada's "Stand Tall - Don't Fall" programs have been highlighted in two national publications and two audio teleconferences as the model state program in the nation.

Marijuana use, however, has increased slightly from 25.9% in 1999 to 26.6% in 2001. Data was not found on the proportion of youth who are using other illegal drugs.

Alcohol and Drug Use During Pregnancy

The latest data from the Center for Health Data and Research showed that 98.7% of Nevada women who gave birth in 2001 indicated that they abstained from alcohol during pregnancy. This is better than the 2010 objective of 94%.

Other data sources, however, provide a somewhat different picture that indicates that alcohol and other drug use by pregnant women may be a problem area. The Bureau of Alcohol and Drug Abuse (BADA) 2001 Strategic Plan for Pregnant and Parenting Women reported that:

- 6% of women admitted to BADA-funded substance abuse treatment programs in 2002 were pregnant. This was a total of roughly 200 pregnant women receiving treatment.
- Of Nevada women participating in the 2000 Baby Your Baby prenatal care program, 17% used alcohol and 15% used illicit drugs.

A national survey in 2000 by the Substance Abuse and Mental Health Services Administration (SAMHSA) found that 12% of pregnant women reported drinking alcohol and 4% were binge drinkers during pregnancy. Since in 1999 significantly more Nevada women were current drinkers than the national average (57.2% in Nevada versus 45.9% nationally), it is not unreasonable to think that alcohol use during pregnancy is higher in Nevada than the national averages from the SAMHSA study.

Drug-Related Crime

There were 31,010 drug and alcohol-related arrests in Nevada in 2001. The following table provides a breakdown of these arrests.

DRUG ARRESTS:	
Drug sales and manufacturing	2,999
Drug possession	7,325
Nevada Highway Patrol drug arrests	910
Total drug arrests	11,234
ALCOHOL-RELATED ARRESTS:	
Driving under the influence (DUI)	12,014
Liquor law violations	7,762
Total alcohol-related arrests	19,776
TOTAL	31,010

Source: State of Nevada Department of Public Safety, 2001 Crime and Justice in Nevada

Key findings about drug and alcohol arrests are:

- The 21-29 age group accounted for almost one-third of all drug arrests, the most of any age group.
- 84% of juvenile drug arrests were for possession, while 16% were for sale and/or manufacturing of illegal drugs.
- Only 82 out of the 12,014 DUI arrests – less than 1% - were of persons under the age of 18. The age 30-39 group had the highest arrest rate for DUI, accounting for 29% of all DUI arrests. Also, 83% of DUI arrests were of males and only 17% involved females.
- Over 42% of the referrals to BADA-funded treatment programs came from the criminal justice system.

Community Impact

Alcohol and other drug use is directly linked to numerous health problems including cirrhosis of the liver and heart disease. Death can occur quickly through overdose, accidents while driving under the influence, and other accidents.

Substance abuse also leads to a host of social problems including increased levels of child abuse, domestic violence, sexual assault, crime in general (both property and violent crime), school dropouts, teen pregnancy, and unplanned pregnancies.

A study prepared by The Lewin Group for the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism estimated the total economic cost of alcohol and drug abuse in the United States to be $245.7 billion for 1992. Of this cost, $97.7 billion was due to drug abuse.

Drug and alcohol use by youth is of particular concern because of the long-term effects of such use. The earlier young people begin to use drugs, the greater the likelihood that they will have problems with this behavior later on. For example, research shows that young people that initiate drug use before the age of 15 are at twice the risk of having drug problems as those who wait until after the age of 19.

Prenatal alcohol exposure can place the fetus at risk for a variety of negative outcomes such as smaller heads, deformed facial features, abnormal joints and limbs, poor coordination, and problems with learning and short-term memory. In addition, studies show that children with fetal alcohol syndrome experience behavioral problems, mental health problems, inappropriate sexual behavior, trouble with the law, alcohol and drug problems, and difficulty caring for themselves later in life.

Current Services and Funding

Listed below are state programs and funding that could be identified which is directed to substance abuse prevention and/or treatment. Service and funding levels are for fiscal year 2001-02.

Program/Service	# Served	Total Funding
Bureau of Alcohol and Drug Abuse (BADA): Prevention and treatment programs	See below	$14,761,636
Health Alcohol Tax: Used to treat alcohol addition in Nevada	NA	932,587
Department of Public Safety, Drug Commission: Substance abuse prevention education, enforcement and treatment	NA	76,970

Program/Service	# Served	Total Funding
Department of Public Safety, Narcotics Control: Deter and disrupt trafficking and availability of narcotics and illegal drugs	NA	1,568,011
Title XX Federal Social Services Block Grant	94	37,241
Fund for a Healthy Nevada: Treatment services, Clark County	228	29,585
Fund for a Healthy Nevada: Early intervention services, Clark County	3,824	259,229
Fund for a Healthy Nevada: Treatment services, Washoe County	47	192,904
TOTAL		$17,858,163

Substance abuse prevention programs accounted for $2,023,457 of the total BADA budget in fiscal year 2001-02. 40% of these funds were directed to Clark County, 25% to Washoe County, and 35% to the rest of the state. 8,430 children and adolescents benefited from prevention programs in fiscal year 2000-01.

BADA-funded treatment programs have been very consistent in the number of people served, measured by admissions to treatment services. Total admissions were 11,113 in fiscal year 1999-00; 11,187 in fiscal year 2000-01; and 11,279 in fiscal year 2001-02. The 2001-02 service levels broke down into 1,286 adolescent treatment admissions and 9,993 adult admissions.

In fiscal year 2002-03, BADA funded 43 primary prevention providers, who disseminate information, conduct prevention education, promote alternate activities to drug use, and help identify problems and make referrals. BADA also funded 26 substance abuse treatment programs that offer services in 53 locations in 29 communities through the state. Treatment services include evaluation of drug and alcohol problems, detoxification, residential treatment, and outpatient treatment.

BADA is responsible for certification and regulatory oversight of all alcohol and other drug prevention and treatment programs, whether or not those programs receive BADA funding. The following table summarizes the number of prevention and treatment programs that are currently certified.

Type of Program	Nevada Total	Clark County	Washoe County	Rest of State
PREVENTION				
Prevention coalition	11	2	1	8
Primary prevention, youth/adolescent focus	22	9	3	10
Primary prevention, adults with youth and/or adolescents	18	4	6	8
Subtotal	51	15	10	26
TREATMENT				
Residential & outpatient: adults only	9	3	3	3
Residential & outpatient: youth allowed	3	1	1	1
Outpatient only: adults	21	14	3	4
Outpatient only: youth allowed	24	7	1	16
Evaluation or other services only	20	4	8	8
Subtotal	77	29	16	32
TOTAL	128	44	26	58

Source: Bureau of Alcohol and Drug Abuse, posted on website at www.health2k.state.nv.us/BADA

Primary prevention programs are operating in 13 counties and Carson City, covering all of the most populated areas of the state. Some form of treatment program is available in every county except Eureka and Esmeralda Counties.

Data was not obtained on the service capacity and funding for these programs, but the above table at least gives an indication of the presence of substance abuse prevention and treatment services around the state. The United Ways reported grants totaling $155,082 to substance abuse programs in fiscal year 2001-02.

Gaps in Services

Numerous gaps in substance abuse prevention and treatment services were identified.

1. ***Support for prevention efforts***. Less than 15% of total state substance abuse funding (excluding narcotics control efforts) is going toward prevention activities. The consistently high use rates for alcohol and illicit drugs indicate that more emphasis is needed on prevention in order to positively impact future use rates. Part of the challenge here is that much of BADA's funding comes from federal sources, which in turn place restrictions on the use of funds. For example, in fiscal year 2002-03, Nevada will receive nearly $11.3 million from the federal Substance Abuse Prevention and Treatment Block Grant, but by federal requirement, at least 70% must be allocated to treatment programming and at least 20% to prevention.

2. ***Overall treatment service capacity***. The total substance abuse treatment capacity is considerably short of the need for treatment services. According to state level estimates of the gap in treatment services prepared by SAMHSA in 2001, 1.81% of all persons aged 12 or older in Nevada – a total of 27,941 people – need but are not receiving treatment for an illicit drug problem. SAMHSA further estimates that this treatment gap is much more acute among young people. The breakdown of the service gap by age group is as follows:

Age Group	% of Persons Needing but Not Receiving Treatment	# of Persons Needing but Not Receiving Treatment
Age 12-17	4.65%	6,816
Age 18-25	5.27%	9,672
Age 26+	0.94%	11,453
Total	1.81%	27,941

The presence of a gap in treatment services is reinforced by a BADA report that 1,350 people were placed on waiting lists in calendar year 2002. Of these, 216 were either pregnant injection drug users, pregnant women, or male and non-pregnant female injection drug users. The presence of a growing waiting list is not surprising, since treatment admissions have remained level for four years while the total state population has grown by around 20%.

3. ***Treatment for youth***. The data presented in this report indicates high levels of youth drinking and drug use, with almost 7,000 youth age 12-17 requiring but not receiving treatment services. A review of the list of BADA-certified treatment programs only identified three residential programs in the entire state that accept youth, one each in Clark County, Washoe County and Elko County. 17 outpatient programs in Clark and Washoe Counties work only with adults; only 8 outpatient programs in these counties treat youth.

   The BADA 2001 Strategic Plan for Pregnant and Parenting Women also notes that "furthermore, there are presently no residential treatment facilities in Nevada that admit parenting teens with their children." The review of treatment programs currently certified by BADA indicates that this is still true.

4. ***Treatment for women***. There are specific needs for treatment services targeted to women, and especially women with children. Per the BADA 2001 Strategic Plan for Pregnant and Parenting Women, "conditions in Nevada demonstrate an overwhelming need for the gender-specific treatment and supportive services centered on women with addictive disorders and their families. There is a significant gap between Nevada's capacity to provide appropriate care for its low-income, chemically dependent female residents and the demand for services. The dearth of treatment options in Nevada for this special population is coupled with an unusually high prevalence of substance abuse among the women who reside here."

It should be noted that federal and state funding for substance abuse prevention and treatment services has been steadily increasing in recent

years. BADA's budget for fiscal year 2002-03 is $20,807,524, which represents a 42% increase over fiscal year 1998-99 levels.

Data Issues

Three main data issues were encountered in assessing the needs, current services, and gaps in services related to substance abuse.

- Reasonably good data is already available to understand the prevalence of alcohol use and abuse. However, the data is much sketchier with regard to use of illicit drugs such as crack, heroin, and methamphetamine. Little was found for this report to understand the extent to which these drugs are being used – and by whom, according to age, geographic area, race/ethnicity or other potentially relevant variables.

- More complete information is needed about the current capacity and service levels for prevention and treatment programs around the state. This would help service expansion efforts to be targeted more effectively. It is also important to inventory the support services that are being linked or integrated with prevention and treatment programs, as best practices from around the country consistently show that it is necessary to have a broad continuum of care and support options in order to have a lasting impact on substance abuse rates.

- Conflicting data was found regarding the extent to which pregnant women are using alcohol and other drugs. 2001 data from Nevada Vital Records could be interpreted to mean that drinking during pregnancy is not a major issue (only 1.3% of births occurred to mothers who did not abstain from alcohol during pregnancy) but other information sources show much more significant problems with both alcohol and illicit drug use by women during pregnancy. Given the significant health impact on both the mother and baby of alcohol/drug use during pregnancy, further investigation is warranted to determine the extent to which there is, or is not, an important issue to address here.

Data sources used to prepare this report are listed in Appendix 1.

Data Gaps

Summary of Data Gaps

The information obtained for this report provides an excellent foundation to understand and address the most significant health issues affecting Nevada. However, there are still some important gaps in the available data which, if addressed, could affect policy and funding decisions. These data gaps are summarized below. More complete descriptions of these gaps can be found in the Data Issues segment at the end of each section covering one of the twelve health focus areas addressed in this assessment.

General Data Issues

Several data challenges are present in most or all of the health topic areas. These are:

- Information describing existing services, number of people served (broken down by relevant categories such as age, gender, race/ethnicity, income level and presence of disabilities), and funding levels was consistently limited or non-existent for programs operated outside of the state government structure. Data is especially limited on the activities of nonprofit health and human service organizations.

- Even where information is available from both state and non-state sources, it is often quite difficult to use the information to assemble a complete picture of health issues because of differences in definitions (such as how race/ethnicity is defined or what is considered to be a "disability" for purposes of data collection), data collection methods, timing of data collection, and fiscal years.

- Very little data was found on the effectiveness of services or program models in use. This makes it extremely difficult to assess the degree of impact that might be achieved through additional investments in services. Investments are being made by the Fund for a Healthy Nevada and other state agencies in evaluation of programs and services. These investments should help greatly once evaluation results start becoming available.

The remaining segments below identify unique data issues encountered for each of the twelve focus areas, beyond the three items listed above.

Tobacco Use Data

No substantive data gaps beyond the ones noted as General Data Issues.

Disabilities and Special Needs Data

- No solid data could be found regarding what portion of the state's 375,000 persons with a disability require assistance.

- The lack of integrated case management systems makes it difficult, if not impossible, to identify unduplicated people served in order to assess what portion of the disabled population that does need assistance is being served and what portion isn't.

- No data was found regarding the number and age of people who become disabled each year.

Respite and Independent Living Data

- Data on waiting lists or other indicators of unmet demand for additional services was not available.

Oral Health Data

- Good data exists regarding oral health conditions of elementary school children, but no data was found on the oral health status of preschool age children, middle school age children, and high school youth.

- No data was found on the oral health status of adults between ages 18 and 65. As a result, it was not possible to assess whether oral health issues are affecting people with disabilities to a significant degree.

- The best available data on the oral health of seniors is from 1999 and may not be useful for decision-making much longer because of the rapid growth and change in Nevada's population.

Chronic Diseases Data

- More thorough analysis of cardiovascular disease should be considered, along the lines of what is currently available for cancer, since cardiovascular disease is the leading cause of death and hospitalization in Nevada.

- No data was found on kidney conditions (nephritis, nephrotic syndrome and nephrosis) despite being the 7th most common cause of death in Nevada. It is therefore not clear if there are gaps in prevention and/or treatment of kidney disease that could be targeted through additional services.

Access to Health Care Data

- A complete statewide profile of existing physician capacity, demand for physicians, and level of unmet demand would be very useful. This type of analysis was only found for rural counties and then only for primary care physicians, pediatricians and obstetricians.

- A more complete assessment of the extent of unmet medical care needs is also desirable – the extent to which, when people need medical care, they cannot obtain it due to some barrier. Existing data required numerous inferences in order to derive an estimate of unmet need, which may or may not be valid.

- Inconsistent data was found on the extent to which low-income persons are uninsured, with one data source showing 37% of Nevadans with incomes below $25,000 lacking health insurance and another source saying around only 4% of people with incomes below 200% of the Federal Poverty Level are uninsured.

- There were also inconsistencies in the data regarding whether or not there is a shortage of nurses in Nevada, and if so, the location(s) and magnitude of the shortage.

Family Planning Data

Data gaps noted in this area all related to the general issues of insufficient information on the presence of current programs, how many people (and who) is being reached by those programs, and what level of non-state resources is being devoted to teen pregnancy prevention.

Immunizations Data

- No data was found on immunization rates of children older than 35 months.

- No analysis was found as to the reasons why parents are not having their children immunized and/or what barriers to service access may be hurting the immunization rates. Similarly, data was also not found on the ethnic composition of children who are, and aren't, being fully vaccinated so it is not known if there are potential cultural biases against immunization to be overcome.

- No information was obtained that describes current investments in public health education related to immunization.

Injury and Violence Prevention Data

- There are some notable inconsistencies in how CPS investigations are recorded across the state, such as the type of maltreatment being recorded as "other" in over 50% of the cases in Clark County and less than 1% of the cases in the rest of the state.

- Data was not gathered on the incidence of unintentional injuries to children not

leading to death. Further research, starting with an analysis of hospital emergency room visits and inpatient discharges for unintentional injuries of children, is needed to determine whether there are significant needs to be addressed.

Maternal and Infant Health Data

- There is little solid information regarding the underlying causes of the low rates of timely prenatal care access. Available data shows consistently low rates of adequate prenatal care but not insights into why this is happening.

- It does not appear that data is being actively tracked and analyzed on the percentage of births that occur before the full term of pregnancy has been completed. Groups like the March of Dimes suggest that this is an important health indicator that may deserve more attention in Nevada.

Fitness and Nutrition Data

- The most recent data on the incidence of food insecurity and hunger in Nevada uses estimates that are based largely on economic indicators that can underestimate the incidence of hunger by not fully reflecting the multitude of family and economic pressures experienced by households. Consideration should be given to conducting new research using population-based methods such as surveying a statistically-valid sample of residents in order to get a more precise picture of the presence of hunger in Nevada.

Substance Abuse Data

- Little data was found to understand the extent to which illicit drugs such as crack, heroin, and methamphetamine are being used – and by whom, according to age, geographic area, race/ethnicity or other potentially relevant variables.

- Conflicting data was found regarding the extent to which pregnant women are using alcohol and other drugs.

Studies in Progress

During the course of contacting organizations to provide information for this assessment, several people indicated that studies are currently in progress that may provide valuable data in the future. Research and data collection efforts that are currently underway are listed below. The list only contains studies identified by the people contacted for this assessment and should not be interpreted as a complete list of all data collection work in progress around the state.

- The United Way of Southern Nevada, in partnership with the Nevada Community Foundation, is currently in the process of conducting a community needs assessment for Clark County. The report is projected to be finished by the end of September 2003.

- The United Way of Southern Nevada is developing a database of public health services throughout Nevada, under a grant from the Robert Wood Johnson Foundation.

- The Behavioral Risk Factor Surveillance System (BRFSS) survey conducted in 2002 will contain additional modules with data on oral health and other issues. The new 2002 data are not expected to be available until July-August 2003 at the earliest.

- "Crack Down on Cancer" has created a Microsoft Access database and report on oral health screenings they have conducted in school years 2001-2002 and 2002-2003. The information was not available in time for this assessment report but should be available soon.

- The State Bureau of Community Health is conducting a new data collection project related to chronic diseases. Information has not been obtained yet to understand precisely what data is being collected or when it is expected to be available.

- The Clark County Teen Pregnancy Prevention Coalition is currently conducting a needs assessment related to teen pregnancy in Southern Nevada.

Recommendations

The following steps are recommended in order to address the major data gaps encountered in this assessment, while trying to be as efficient and cost-effective as possible.

1. Meet with Center for Health Data and Research representatives to review the data gaps and issues, in order to see which issues might be resolved through existing state level research and to obtain guidance on how to proceed with other issues. One example of possible linkage with existing state level research is to investigate whether the Behavioral Risk Factor Surveillance Survey can be expanded to obtain additional data in areas where important information gaps exist.

2. Distribute this assessment report as broadly as possible and invite people to submit information to correct, clarify and/or enhance what is presented here.

3. Plan to update this report during the 2003-04 fiscal year in order to incorporate input received per recommendation #2, and also to incorporate results from data collection efforts listed in the preceding Studies in Progress section.

4. Meet with leaders who are actively involved in the individual topic areas to discuss topic-specific data gaps and see if/how the Fund for a Healthy Nevada may be able to partner with them to address the data gaps. An example would be to talk with representatives of the Nevada Primary Care Development Center, the Great Basin Primary Care Association, and the Bureau of Licensure and Certification about addressing the data gaps within the topic area of access to health care.

5. Develop a more complete inventory of existing local and regional projects related to capture of health and human service information, and link with these projects to understand what is being done and to explore ways that local data collection can assist state-level planning and policy. Two examples are projects currently underway in Washoe County. One project led by the United Way will plan and develop information systems that can be used by many human service agencies to track service delivery and, if desired, assist integrated case management efforts across agencies. Another project is developing a homeless management information system. Although neither project will result in new data being gathered in the next year or so, they both offer excellent potential for long-term, cost-effective approaches to improving the quality of health and human service data.

6. For data gaps that are not resolved by the preceding steps, prioritize the gaps according to the relative significance of the health issue involved and invest in new issue-specific research to address those gaps. The existing information should at least be sufficient to triage the health issues into "very significant", "moderately significant" and "less significant" categories. Data gaps related to health issues in the "very significant" category can then be addressed first in order to obtain stronger information to use in developing service strategies that are likely to have the greatest positive effect within the constraints of the amount of funding available to invest in the issue.

Appendix 1: Data Sources

Listed below are all of the reports, documents, databases, and other data sources obtained for use in preparing this report. The information is organized by topic area for easier reference. If a particular resource contributed information for multiple topic areas, it will be listed under each topic area to which it applies.

Demographics

Center for Business and Economic Research, University of Nevada Las Vegas, *Nevada KIDS COUNT Data Book: 2003*.

Children's Defense Fund. *Children in Nevada*, January 2003.

Nevada State Demographer's Office. *Population Projections for Nevada and Nevada's Counties from 2002 to 2002*.

Nevada State Demographer's Office. *Age Sex Rate and Hispanic Origin Estimates from 1990 to 2001 and Projections from 2002 to 2022 for Nevada and Its Counties*.

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Tobacco Use

American Lung Association, State of Tobacco Control: 2002, report card and narrative available online at http://lungaction.org/reports/tobacco-control.html.

American Lung Association, statistics on at-risk groups for asthma, emphysema and chronic bronchitis, 2002.

Behavioral Risk Factor Surveillance Survey (BRFSS) results showing tobacco use by year through 2001, available online through the Nevada Interactive Health Database, Nevada Center for Health Data and Research, at http://health2k.state.nv.us/nihds/.

Nevada State Health Division, Second Hand Smoke, online information located at http://health2k.state.nv.us/tobacco/Second.htm

Nevada Tobacco Prevention & Education Program, *Five-Year Strategic Plan for 2003 – 2008*, prepared in 2002.

Nevada Tobacco Prevention & Education Program, *Nevada Tobacco Control Program*, 2002.

Nevada Tobacco Prevention & Education Program, Bureau of Community Health, Nevada State Health Division, Department of Human Resources. *Nevada Tobacco Profile: Surveillance Summary, 2002*.

Summaries of existing programs being funded with Center for Disease Control and Fund for a Healthy Nevada Grants, internal document prepared by Nevada Department of Human Resources staff.

Disabilities and Special Needs

Bureau of Health Planning and Statistics, Nevada State Health Division. *Mortality Analysis Among Mental Illness Clients in SNAMHS from 1990 to 2000: Matching the SNAMHS Database to Nevada's Death Database*, May 2001.

Nevada Department of Human Resources, *Annual Report*, 2002.

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Nevada Department of Human Resources, *Nevada Early Intervention Self-Improvement Plan*, July 2002.

Nevada Department of Human Resources. *Strategic Plan for People with Disabilities*. October 2002.

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Nevada Division of Mental Health and Developmental Services, 3rd Quarter FY 2003 Performance Indicators, April 2003.

Nevada Senior Services Task Force. *Act Now or Pay Later: Ten-Year Targets to Preserve the Health and Independence of Nevada Seniors Health*, August 2002.

Reno Area Alliance for the Homeless. Continuum of Care Strategy for the Homeless for Reno, Sparks and Washoe County, June 2002.

Rural Nevada Continuum of Care Strategy for the Homeless, June 2002.

Respite and Independent Living

Nevada Department of Human Resources, *Annual Report*, 2002.

Nevada Department of Human Resources. *Strategic Plan for People with Disabilities*. October 2002.

Nevada Department of Human Resources, internal report with outreach statistics for the Independent Living program for October 1, 2001 through June 30, 2002.

Nevada Division of Health Care Financing and Policy, memo from Tina Gerber-Winn, Chief, providing data on the number of recipients served through Medicaid's long-term care programs, April 2002.

Nevada Senior Services Task Force. *Act Now or Pay Later: Ten-Year Targets to Preserve the Health and Independence of Nevada Seniors Health*, August 2002.

Oral Health

Allston, Adam. "Improving Women's Health and Perinatal Outcomes: The Impact of Oral Diseases", research report from the Women's and Children's Health Policy Center, Johns Hopkins University, February 2002, posted online at www.med.jhu.edu/wchpc

Bureau of Family Health Services, Nevada Department of Human Resources, internal memo titled "Overview of Access to Oral Health in Nevada", 2003.

Great Basin Primary Care Association, progress report on increasing dental care access in rural areas, posted online at http://www.gbpca.org/dental/sitedev.htm

Nevada Department of Human Resources. *Annual Report*, 2002.

Nevada Department of Human Resources, Bureau of Family Health Services. *An Oral Health Plan for Nevada: Strategic Meeting of Oral Health Stakeholders*, January 2002.

Nevada Senior Services Task Force. *Act Now or Pay Later: Ten-Year Targets to Preserve the Health and Independence of Nevada Seniors Health*, August 2002.

Nevada State Health Division, internal report and tables with results of a survey conducted on the oral health status of Nevada school children during the 2002-03 school year, June 2003.

Nevada State Office of Rural Health, results of survey by the Center for Education and Health Services Outreach at University of Nevada Reno to identify Nevada counties that are designated as dental underserved areas, April 2003.

Saint Mary's Health System, letter prepared by Michael Johnson with statistics on the Saint Mary's Mobile Dental Outreach program, February 2003.

Southern Nevada Dental Hygienists' Association, spreadsheet of results from dental screening of 9,958 children grades K – 5th in the Clark County School District, 2000.

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Chronic Diseases

American Heart Association, summary of activities and events conducted in Nevada from July 2002 through June 2003.

American Lung Association, *Estimated Prevalence of Lung Disease*, May 2002.

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American Lung Association, statistics on at-risk groups for asthma, emphysema and chronic bronchitis, 2002.

Behavioral Risk Factor Surveillance Survey (BRFSS) results on the incidence of diabetes through 2001, available online through the Nevada Interactive Health Database, Nevada Center for Health Data and Research, at http://health2k.state.nv.us/nihds/.

Center for Health Data and Research, Bureau of Health Planning and Statistics, Nevada State Health Division, Department of Human Resources. *Nevada Vital Statistics 2000*, April 2002.

Center for Health Data and Research, Bureau of Health Planning and Statistics, Nevada State Health Division. *Report on Cancer in Nevada: 1996 – 2000, A Comprehensive Report on Cancer from Nevada Central Cancer Registry, Nevada Death Registry, Nevada Inpatient Hospital Discharge and Behavioral Risk Factor Surveillance Survey*.

Center for Health Data and Research, Bureau of Health Planning and Statistics, Nevada State Health Division, Department of Human Resources. Summary tables comparing Nevada health status to Healthy People 2010 objectives, June 2003.

Hospital Discharge and Cancer databases with incidence rates through 2001 and Death database with mortality rates, available online through the Nevada Interactive Health Database, Nevada Center for Health Data and Research, at http://health2k.state.nv.us/nihds/.

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Access to Health Care: Washoe County, report by Kari Demetras, Demetras Consulting Services from the Washoe County Community Forum on Access to Health Care, May 2002.

Behavioral Risk Factor Surveillance Survey (BRFSS) results on access to health care insurance through 2001, available online through the Nevada Interactive Health Database, Nevada Center for Health Data and Research, at http://health2k.state.nv.us/nihds/.

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EOB Community Action Partnership, memo from Cheryl Sonnenberg, Ph.D. describing health care needs for Hispanic adults and general health issues in Clark County.

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Washoe District Health Department, internal reports with statistics and funding levels for the Family Planning and Teen Health Mall programs through fiscal year 2001-02.

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Center for Health Data and Research, Bureau of Health Planning and Statistics, Nevada State Health Division, Department of Human Resources. Summary tables comparing Nevada health status to Healthy People 2010 objectives, June 2003.

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Nevada Department of Human Resources, *Annual Report*, 2002.

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Nevada Division of Mental Health and Developmental Services, *Nevada Suicide Prevention 2003 Resource Directory*.

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Truckee Meadows Tomorrow, *Quality of Life Annual Report 2003*, summary safety and welfare indicators for 2002 posted online at http://www.quality-of-life.org/2003_Safety.html.

Maternal and Infant Health

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Appendix 2: Contacts

Listed below are organizations who were contacted to request any existing information they might have to contribute to the health needs assessment. The list is presented in two sections: first, organizations that were successfully contacted and were able to either provide information or confirm that they did not have data to offer to the assessment (the "Contacts Made" table), and second, organizations where attempts were made at contact but no response was received (the "Contacts Attempted" table).

Contacts Made			
Organization	**Information Type(s)**	**Contact Person**	**Telephone**
State Government			
Division of Mental Health and Developmental Services, DHR	Mental Health and Developmental Services	Laura Valentine	(775) 684-5979
Bureau of Community Health, State Health Division, DHR	Tobacco Prevention and Cessation	Charlene Herst	(775) 684-5998
Bureau of Community Health, State Health Division, DHR	Chronic Disease	Kim Neiman	(775) 684-5949
Bureau of Alcohol and Drug Abuse, State Health Division, DHR	Substance Abuse	Brad Towle	(775) 684-4190
Bureau of Community Health, State Health Division, DHR	Immunization	Bob Salcido	(775) 684-5939
Bureau of Family Health Services, State Health Division, DHR	Oral Health	Chris Forsch or Thara Salamone	(775) 684-5953 or 684-4254
Division of Health Care Financing and Policy, DHR	Medicaid Funding for Disability Services	Tina Gerber-Winn	(775) 684-3750
Community Connections, DHR	Services to children with disabilities; general children's health	Janelle Mulvenon	(775) 688-2284 x241
Bureau of Family Health Services, State Health Division, DHR	Maternal, Infant and Child Health and Family Planning	Judy Wright	(775) 684-4271
Office of Community Based Services, Dept. of Employment, Training and Rehab	Disability Services	Todd Butterworth	(775) 687-8916
Bureau of Family Health Services, State Health Division, DHR	Injury and Violence Prevention	Kristen Rivas	(775) 684-4285
Center for Health Data and Research, State Health Division, DHR	Statewide health data collection	Wei Yang	(775) 684-4182
Rural Regional Center	Services and funding for disabled adults and related programs	Laura	(775) 687-5162

Contacts Made			
Organization	**Information Type(s)**	**Contact Person**	**Telephone**
Northern Nevada Adult Mental Health Services	Mental Health data, needs, issues, funding and services	Harold Cook	(775) 688-2001
Southern Nevada Adult Mental Health Services	Mental Health data, needs, issues, funding and services	James T. Northrop	(702) 486-6000
University of Nevada, Reno Office of Geriatric Medicine	Data and reports on health of seniors	Kim McKagie	(775) 327-2283
CCSN – Miles for Smiles	Data, reports, services, barriers and funding for dental health	Terri Clark	(702) 651-5744
Nevada State Department of Education, Health and Nutrition Team	Data on health, prevention efforts, free and reduced lunch, and immunization levels of children in school		(775) 687-4126
Nevada Highway Patrol Records and Identification Services Bureau, Uniform Crime Reporting Program	Crime rates including domestic violence	Tenna Hermann	(775) 687-1600 ext. 235
Nevada Public Health Foundation	Teen births, issues, services and funding for prevention	-	(775) 884-0392
Nevada Rural Health Services	Data on health needs, services and gaps in services; planning efforts	Betty Badgett	(775) 684-4200
Associations and Coalitions			
Nevada Association of County Human Services Administrators	County-based information and reports	Robert Hadfield	(775) 883-7863
Nevada Dental Association	Data, reports, services, barriers and funding for dental health	Maury Astley	(702) 255-4211
Nevada Dental Hygienists Association	Data, reports, services, barriers and funding for dental health	Shari Peterson	-
American Heart Association, Nevada Chapter	Data, services and gaps in services for populations with heart disease	Barbara Wood	(702) 367-1366
American Lung Association, Nevada Chapter	Data, services and gaps in services for populations with respiratory disease	Bunny Grangaard	(702) 431-6333
American Cancer Society, Nevada Chapter	Data, services and gaps in services for cancer victims	Phil Kalsman	(702) 798-6877
Great Basin Primary Care Association	Data regarding access and availability of health services including insurance	Roger Volker	(775) 887-1188
Clark County Health Access Consortium	Data on health needs, services and gaps in services	Garth Winckler	(702) 454-3662
Nevada Hospital Association	Data regarding access and availability of health services	-	(775) 827-0184

Contacts Made			
Organization	**Information Type(s)**	**Contact Person**	**Telephone**
Nevada State Medical Association	Data regarding access and availability of health services and physicians	Cynthia Rambo	(775) 825-6788
Nevada Nurses Association	Data regarding access and availability of health services and nurses	Lisa Black	(775) 747-2333
Nevada Coalition Against Sexual Violence	Data on sexual violence, services and prevention efforts	Katy Hanson	(775)828-1115
Join Together	Drug and alcohol use statistics	Kevin Quinn	(775) 324-7557
City/County Agency Service Providers			
Carson City Department of Social Services	Child abuse and health reports	-	(775) 887-2110
Reno Parks and Recreation Department and Community Services	Studies regarding fitness; services and programs for children and youth	Darryl Feemster	(775) 334-2262
Carson City Parks and Recreation Department	Studies regarding fitness; services and programs for children and youth	-	(775) 887-2363
Clark County Health District	Data on health needs, services and gaps in services; planning efforts	Donald Kwalick	702-385-1460
Washoe County District Health Department	Data on health needs, services and gaps in services; planning efforts	Barbara Lee Hunt	(775) 328-2410
Carson City Department of Environmental Health	Data on health needs, services and gaps in services; planning efforts	-	(775) 887-2190
Carson City Department of Social Services	Child abuse and health reports	-	(775) 887-2110
Nye County Department of Social Services	Child abuse and health reports	-	(775) 482-8125
Nonprofit Service Providers			
Economic Opportunity Board of Clark County	Data, services and gaps in services for children and families in southern Nevada	Cheryl Sonnenberg	(702) 647-2900
Nevada Disability Advocacy and Law Center	Data, services and gaps in services for children and adults with disabilities	Jack Mayes	(702) 257-8150
Health Access Washoe County	Data on health needs, services and gaps in services	Mike Rodolico	(775) 332-7812
Planned Parenthood of Southern Nevada	Teen births, issues, services and funding for prevention	-	(702) 878-3622

Contacts Made			
Organization	**Information Type(s)**	**Contact Person**	**Telephone**
The Children's Cabinet	Data, services and gaps in services for children and families in northern Nevada	Pam Becker	(775) 856-6200
Committee to Aid Abused Women	Data on domestic violence, services and prevention efforts	Joni Kaiser	(775) 329-4150
Child Assault Prevention Project	Data on violence against children, services and prevention efforts	Rebecca LeBeau, ED	(775) 348-0600
Suicide Prevention Center of Clark County	Facts and figures regarding suicide and prevention efforts	Dorothy Bryant	(702) 731-2990
Food Bank of Northern Nevada	Data on hunger, services and gaps in services	Cherie Jamason	(775) 331-3663
Washoe Association for Retarded Citizens	Data, funding, programs and other information regarding mentally disabled children and adults	Brian Lahren	(775) 333-9272
Bristlecone Family Resources	Drug and alcohol use statistics and programs	Tom Murtha	(775) 954-1400 x 115
Foundations and Other Funding Sources			
Washoe County Human Services Consortium	Community needs and gaps in services; recent grants	Gabrielle Enfield	(775) 328-2009
Clark County Community Resources Management Division	Community needs and gaps in services; recent grants	Brian Paulson	(702) 455-5025
United Way of the Sierra	Community needs and gaps in services; Recent grants	Anne Cory	(775) 322-8668
United Way of Southern Nevada	Community needs and gaps in services; Recent grants	Merlinda Gallegos	(702) 734-2273
Donald W. Reynolds Foundation	Studies sponsored and grants awarded	Lynn Mosier, CEO	(702) 804-6000
The Cord Foundation	Studies sponsored and grants awarded	-	(775) 323-0373
E.L. Wiegand Foundation	Studies sponsored and grants awarded	Kristen A. Avansino	(775) 333-0310
Children's Trust Fund	Data on child abuse and neglect	Toby Hyman	(702) 486-3530
Other			
Indian Health Services	Data, resources and gaps in services regarding health of Nevada's Native Americans	Sherrada James	(775) 688-1347

Contacts Attempted			
Organization	**Information Type(s)**	**Contact Person**	**Telephone**
State Government			
University of Nevada, Reno School of Medicine	Data on health needs, services and gaps in services; planning efforts	Caroline Ford	(775) 784-4841
Associations and Coalitions			
American Diabetes Association, Nevada Chapter	Data, services and gaps in services for populations with diabetes	Pat Klepzig	(702) 369-9995
Reno Cancer Foundation	Data, services and gaps in services for cancer victims	Lois Bynum	(775) 329-1970
March of Dimes Birth Defects Foundation	Data, services and gaps in services for pregnant mothers and children with birth defects	R. Dale Andreason	(702) 732-9255
Medical Liability Association of Nevada	Medical liabilities issues and impacts	-	(702) 804-7333
BEST Coalition	Drug and alcohol use statistics	Fernando Colon	-
Nevada State Association of School Nurses	Data regarding access and availability of health services and nurses	Virginia Smith	-
City/County Agencies			
Las Vegas Parks and Recreation Department	Studies regarding fitness; services and programs for children and youth	Mary Killion	702-229-6310
North Las Vegas Parks and Recreation Department	Studies regarding fitness; services and programs for children and youth	-	(702) 633-1177
Clark County Department of Social Services	Child abuse and health reports	-	(702) 455-4270
Washoe County Department of Social Services	Child abuse and health reports	Michael Capello	(775) 328-2300
Elko County Department of Social Services	Child abuse and health reports	-	(775) 738-4375
Douglas County Department of Social Services	Child abuse and health reports	-	(775) 782-9825
Churchill County Department of Social Services	Child abuse and health reports	-	(775) 423-6695
Lyon County Department of Social Services	Child abuse and health reports	-	(775) 577-5009
Humboldt County Department of Social Services	Child abuse and health reports	-	(775) 623-6342

Contacts Attempted			
Organization	**Information Type(s)**	**Contact Person**	**Telephone**
Nonprofit Service Providers			
RAVE Family Foundation	Number of families served with respite care	Rique Robb	(775) 334-9647
Disability Action Advocates	Data, services and gaps in services for children and adults with disabilities	Kathy Sheehan	(775) 359-6991
Carson City Center for Independent Living	Data and services available regarding adults with disabilities	Sandy Coyle	(775) 841-2580
Northern Nevada Center for Independent Living	Data and services available regarding adults with disabilities	Paul Gowins	(775) 353-3599
Southern Nevada Center for Independent Living	Data and services available regarding adults with disabilities	Mary Evilsizer	(702) 889-4216
Northern Nevada Center for Independent Living, Elko Office	Data and services available regarding adults with disabilities	Cindi Bliss	(775) 753-4300
Community Health Center of Southern Nevada	Data on health needs, services and gaps in services	-	(702) 631-8800
Planned Parenthood Mar Monte	Teen births, issues, services and funding for prevention	-	(408) 287-7532
Family and Child Treatment of Southern Nevada	Data on child abuse and domestic violence, services and prevention efforts	Victoria C. Graff	(702) 258-5855
Community Food Bank of Clark County	Data on hunger, services and gaps in services	Bessie Braggs	(702) 643-0074
Westcare, Inc. Community Triage Center	Drug and alcohol use statistics and services	James R. Osti	702-383-4044
Other			
Sierra Regional Center (SRC)	Services and funding for disabled adults and related programs	Peter Stienman	775-688-1930