Introduction

This Community Health Assessment (CHA) was conducted as a collaborative process to describe the health status of the Southern Nevadan population and to help identify the most critical public-health issues. This document describes changes in population health and highlights the key health issues faced by Clark County residents along with factors impacting health outcomes. Disparities in health or health risk-factors among population subsets and community or neighborhood conditions related to health status are also described where possible.

The CHA is intended to provide the necessary information to help the community decide where to commit resources with the intent to make the greatest possible impact on the population’s health status. It is also one of the key documents required for accreditation by the Public Health Accreditation Board, which the Southern Nevada Health District (SNHD) is currently pursuing.

Mobilizing Action through Planning and Partnership (MAPP) was the formal process that the CHA Steering Committee selected for completing the elements of this report. By following the MAPP process, four assessments (box) were conducted to gather a broad base of information.

- Community Health Status Assessment: Information (statistical data) about the health of our residents and factors important to our community health status.
- Community Themes and Strengths Assessment: What is important to our community, how quality of life is perceived by community members, and what assets we have that can be used to improve community health.
- Local Public Health System Assessment: The competencies, capacities, and future directions of our local public health and health care delivery systems.
- Forces of Change Assessment: What influences and changes the community’s health and quality of life and the local health system.

The four MAPP Assessments gathered both qualitative and quantitative data. The assessments were then carefully reviewed and a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis conducted on the information contained in each of the four assessments. In a collaborative effort among community partners, seven priority areas were selected that represent cross-cutting themes (i.e., were mentioned in more than one assessment). In the following pages of this report, detailed descriptions of how these issues arose, the process that was conducted, and the stakeholders that participated in each assessment will be discussed.

<table>
<thead>
<tr>
<th>Priority Issues</th>
<th>Health Status</th>
<th>Local Public Health System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rates of morbidity and mortality associated with:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infectious disease (influenza and pneumonia)</td>
<td></td>
<td>Policy and funding that support health and the LPHS</td>
</tr>
<tr>
<td>Chronic disease (leading causes)</td>
<td></td>
<td>Access to health and human services</td>
</tr>
<tr>
<td>Maternal-child health (pre-term birth, low birth-weight, teen birth)</td>
<td></td>
<td>Quality and continuity of health and human services</td>
</tr>
<tr>
<td>Injury (suicide and drug poisoning)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 The CHA steering committee includes members from numerous public health partner agencies in Southern Nevada
In addition to defining the priority issues, the CHA Steering Committee made recommendations to adopt some of the broader strategic issues as core values that should guide all aspects of community health improvement planning.

<table>
<thead>
<tr>
<th>Strategic Issue</th>
<th>Core Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decrease disparities by addressing social determinants</td>
<td>Equity</td>
</tr>
<tr>
<td>Strengthening the LPHS through evaluation, partnership development and collaboration</td>
<td>Collaboration</td>
</tr>
<tr>
<td>Increase understanding of health needs through research, improved data sources, monitoring and assessment</td>
<td>Assessment and monitoring</td>
</tr>
<tr>
<td>Promote environments that support health and wellbeing by investing in complete communities</td>
<td>Investment in Complete Communities</td>
</tr>
</tbody>
</table>

Findings from the CHA will be used to enter into a Community Health Improvement Plan (CHIP). The CHIP will be used to direct the development of the SNHD’s and other community partners’ strategic plans that will guide their activities through the next three to five years.

On behalf of the entire local public health system of Southern Nevada, the CHA Steering Committee looks forward to working together to move towards a community that offers healthy choices, safe neighborhoods, and a high quality of life for southern Nevada residents and visitors.
Table of Contents

Introduction ......................................................................................................................... i

Community Health Status Assessment .............................................................................. 5
  Demographic Characteristics .............................................................................................. 5
    Overall Demographics ..................................................................................................... 5
    Age/Sex Profile ................................................................................................................ 6
    Race/Ethnicity Distribution ............................................................................................... 7
  Socioeconomic Characteristics .......................................................................................... 8
    Unemployment .................................................................................................................. 8
    Poverty .............................................................................................................................. 9
    Household Income .......................................................................................................... 10
    Educational Attainment .................................................................................................. 10
  Clark County Visitor Data ................................................................................................... 11
  Health Resource Availability and Quality .......................................................................... 11
    Public Health Expenditures ............................................................................................. 12
  Quality of Life ..................................................................................................................... 12
  Health-Related Quality of Life ........................................................................................... 12
    Behavioral Risk Factors .................................................................................................. 12
    Self-Assessed Physical and Mental Health ...................................................................... 14
    Tobacco .......................................................................................................................... 16
    Alcohol ........................................................................................................................... 17
  Environmental Health Indicators ....................................................................................... 17
  Maternal and Child Health ............................................................................................... 18
    Neonatal and Infant Deaths ............................................................................................ 18
    Prenatal Care ................................................................................................................... 19
    Birth Outcomes .............................................................................................................. 19
    Substance Abstinence During Pregnancy ..................................................................... 22
    Teen Pregnancy and Births ............................................................................................. 23
  Health Status ...................................................................................................................... 24
    General Health Status .................................................................................................... 24
    Mortality .......................................................................................................................... 24
    Mortality among Children and Youth ............................................................................. 34
  Communicable Disease ....................................................................................................... 36
    Child Immunizations ....................................................................................................... 36
    Adult Immunizations ...................................................................................................... 37
    Tuberculosis .................................................................................................................... 38
Community Health Status Assessment

Demographic Characteristics

**Definition of Category:** Demographic characteristics include measures of total population as well as percent of total population by age group, gender, race and ethnicity, where these populations and sub-populations are located, and the rate of change in population density over time, due to births, deaths and migration patterns.

**Overall Demographics**

Clark County experienced a dramatic increase in population between 2000 and 2010 and was for part of that time the fastest growing community in the U.S. Clark County contained 72% of Nevada’s 2010 population and accounted for 82% of the state’s growth between 2000 and 2010. The county’s growth was 40.2% overall, but with notable variation among its cities and unincorporated areas, ranging from 0.7% to 84.5% growth (Figure 1). The U.S. Census occurs every ten years. Between census counts, the Nevada State Demographer gathers and analyzes data to enable postcensal estimates of the populations within the state and its counties. After each census, intercensal estimates are made to replace the postcensal estimates with more accurate numbers. Recent Clark County population trends are depicted in Figure 2. Growth is anticipated to continue at between 0.7% and 1.0% through 2033 (Nevada State Demographer).

![Figure 1. Percentage growth of the five Clark County cities, unincorporated Clark County, and Clark County overall, 2000-2014.](image-url)
Age/Sex Profile

Compared with the U.S. overall, Clark County’s population is less influenced by the numbers of baby boomers\(^b\), with younger ages accounting for the highest populations (Figure 3 and 4).

Race/Ethnicity Distribution

The racial and ethnic distribution of Clark County changed notably from 2000 to 2010. Persons of White Non-Hispanic race accounted for 61.7% of the population in 2000 but were no longer a majority in 2010, accounting for 49.5% of the population in the county. Much of this change can be attributed to racial and ethnic changes among the under-18 population, especially growth of the under-18 Hispanic population (Figure 5).
Socioeconomic Characteristics

Definition of Category: Socioeconomic characteristics include measures that have been shown to affect health status, such as income, education, and employment, and the proportion of the population represented by various levels of these variables.

Numerous indicators contribute to an overall assessment of the socioeconomic status of a community, including unemployment, poverty, household income, and education statistics. Some of Clark County’s socioeconomic statistics indicate that residents were faring better than the average U.S. resident while others show the opposite as of 2010 compared with 2000.

Unemployment
Prior to 2007, Clark County maintained relatively stable unemployment rates that fluctuated between 4% and 6% and were similar to the U.S unemployment rate. However, starting in 2008, while unemployment rates began to increase across the U.S., in Nevada, they rose higher, reaching 14%, compared with the U.S. peak unemployment rate of 10% by 2010 (Figure 6). As of the end of 2014, Clark County unemployment rates were still above the national average.
Poverty

Because studies have shown that low socioeconomic status has been associated with poorer health, a population’s financial demographics are an important factor in assessing the overall health of a community. Census data indicate that the financial status of Clark County residents declined in the decade since the year 2000. From 2000 to 2010, the proportion of Clark County residents of all ages who were living below the poverty level rose by 40%, from 10.8% to 15.1% (Tables 1a and 1b) and among children under 18 years of age, the poverty rate rose by 56%. Increases also occurred at the national level, but to a lesser degree.

<table>
<thead>
<tr>
<th>Year</th>
<th>Clark County</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>10.8%</td>
<td>12.4%</td>
</tr>
<tr>
<td>2010</td>
<td>15.1%</td>
<td>15.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Clark County</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>14.1%</td>
<td>16.1%</td>
</tr>
<tr>
<td>2010</td>
<td>22.8%</td>
<td>21.6%</td>
</tr>
</tbody>
</table>

Source: Census Bureau, American Fact Finder
Household Income
Household income is another important measure of socioeconomic status. The median household income in Clark County was 6% and 3% higher than the national average in 1999 and 2009\(^d\), respectively.

Educational Attainment
The third and final socioeconomic indicator we studied that has been shown to be associated with health was educational attainment. Unlike poverty, this educational attainment\(^e\) improved between 2000 and 2010 in Clark County and nationwide. However, Clark County residents have consistently attained slightly less education than the U.S. average during this time period (Table 2).

<table>
<thead>
<tr>
<th>Year</th>
<th>Clark County</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>79.5%</td>
<td>80.4%</td>
</tr>
<tr>
<td>2010</td>
<td>83.9%</td>
<td>85.6%</td>
</tr>
</tbody>
</table>


Educational attainment rates were calculated from current residents of Clark County population regardless of where their educations were received. However, high school dropout rates might be more representative of how effective Clark County is in educating its population. Figure 7 illustrates high school dropout rates for the school year 2010-2011, along with disparities between different racial/ethnic and gender categories. Males were more likely to drop out of school than females and the racial/ethnic group with the highest dropout rate was American Indian/Eskimo/Aleut. The lowest dropout rate was observed in the Asian/Pacific Islander group.

\(^d\) 2000 and 2010 censuses report 1999 and 2009 household income data, respectively.
\(^e\) Percentage of the population ≥25 years of age who reported having high school graduation (or equivalent) or higher education
Clark County Visitor Data
Tourism has a large economic effect on Clark County and visitors account for a substantial proportion of the population present at any given time. Each year from 2004–2014, 36–41 million people visited the Las Vegas metropolitan area and more than 40 million arrivals or departures via air occurred each year. In 2013, the average visitor stayed for 3.3 nights and 4.3 days. Therefore, the average daily visitor volume is estimated to have been more than 450,000.

Health Resource Availability and Quality
Definition of Category: This domain represents factors associated with health system capacity, which may include both the number of licensed and credentialed health personnel and the physical capacity of health facilities. In addition, the category of health resources may include measures of access, utilization, cost and quality of health care and prevention services.

Health resource availability and quality are functions of many factors, such as numbers of health care providers and hospital beds, the distances from and availability of transportation to healthcare facilities, insurance status and ability to pay, and deficiencies in standard of care. Nevada ranks poorly in many of these measures (Table 3). Additionally, in a Nevada-specific 2014 health data report, Clark County was noted to have had a lower number of primary care physicians than the other two Nevada urban areas (Washoe County and Carson City) and or the state overall (2014 data). Within Clark County, the highest proportions of uninsured persons are among young adults, especially men, half of whom were uninsured in 2010.
Table 3. Clark County and Nevada rankings in health resource availability or quality measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ranking</th>
<th>Year(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of licensed primary-care physicians (NV)</td>
<td>48th/50 states</td>
<td>2012</td>
</tr>
<tr>
<td>Number of physicians in any medical specialty (NV)</td>
<td>46th/50 states</td>
<td>2012</td>
</tr>
<tr>
<td>Proportion of residents who were uninsured (NV, 20.7%) (U.S. average 14.5%)</td>
<td>50th/51 (50 states + DC)</td>
<td>2013</td>
</tr>
<tr>
<td>Proportion of residents reporting inability to see a doctor due to cost (NV: 17.3%, U.S. average: 15.9%)</td>
<td>39th/53 (50 states + DC, Puerto Rico, and Guam)</td>
<td>2013</td>
</tr>
<tr>
<td>Number of beds per 1,000 persons (Clark County 1.8, NV 2.0, U.S. average 2.5)</td>
<td>42nd/51 (50 states + DC)</td>
<td>2013</td>
</tr>
<tr>
<td>Ability to pay for care</td>
<td>52nd/53 (50 states + DC, Puerto Rico, and Guam)</td>
<td>2013</td>
</tr>
<tr>
<td>Average number of deficiencies per nursing facility *NV 8.9%; 50% above the U.S. average)</td>
<td>44th/51 (50 states + DC)</td>
<td>2012</td>
</tr>
<tr>
<td>Combination of qualify of care, access to care, preventive care, cost, and potential for patients to lead healthy lives (Las Vegas Metro compared with 305 other major metropolitan areas)</td>
<td>268th/306 (major metropolitan areas)</td>
<td>2012</td>
</tr>
<tr>
<td>Per capita mental health services expenditures (NV was 25% below U.S. average)</td>
<td>33rd/51 (50 states + DC)</td>
<td>2013</td>
</tr>
<tr>
<td>Number of psychiatrists per 100,000 population (Clark County 6.1, other NV urban areas 14.8)</td>
<td>n/a</td>
<td>2013</td>
</tr>
</tbody>
</table>

Public Health Expenditures
Public health agencies focus on the health of communities. Their efforts complement clinical medicine in protecting the health of community residents. Funding of public health agencies is one measure of their potential for positively influencing health. The main external sources of revenue for local health departments are CDC, HRSA, and state governments. Per capita public health funding from these three sources varies widely by state across the U.S. For Fiscal Year 2013, Nevada’s per capita public health funding, at $39, was the lowest in the U.S. (range: $39–$224).

Quality of Life
Definition of Category: Quality of Life (QOL) is a construct that “connotes an overall sense of well-being when applied to an individual” and a “supportive environment when applied to a community” (Moriarty, 1996). While some dimensions of QOL can be quantified using indicators, research has shown to be related to determinants of health and community-well being, other valid dimensions of QOL include perceptions of community residents about aspects of their neighborhoods and communities that either enhance or diminish their quality of life.

Health-Related Quality of Life

Behavioral Risk Factors
Definition of Category: Risk factors in this category include behaviors which are believed to
cause, or to be contributing factors to, injuries, disease, and death during youth and adolescence and significant morbidity and mortality in later life.

The primary sources for behavioral risk factors are the Behavioral Risk Factor Surveillance System (BRFSS), which surveys U.S. adults\textsuperscript{15} and the Youth Risk Behavior Surveillance System\textsuperscript{16} (YRBSS) which surveys 9\textsuperscript{th}- to 12\textsuperscript{th}-grade students.

Among the most important and most easily modified behavioral risk factors are unhealthy diets and lack of exercise. They contribute to rising obesity rates\textsuperscript{17,18} and increase the risk for a number of health conditions like cardiovascular disease, type-2 diabetes, cancer, hypertension, stroke, liver disease, sleep apnea, respiratory problems, osteoarthritis, gynecological problems, and overall poor health status.\textsuperscript{19,20,21,22} Presence of risk factors results in excess health care expenditures\textsuperscript{19}.

In Clark County, obesity (defined as having a body mass index $\geq 30$) affected 27.4\% of surveyed adults (Table 4) and 21.9\% of adult respondents reported getting little to no exercise in 2012. County Health Rankings\textsuperscript{23} (CHR) compares data from BRFSS, YRBSS, and other sources among nearly all counties in the U.S. and applies a formula for calculating overall health of each county then ranks counties within individual states. Two of the measures used in CHR to determine rankings are obesity and physical inactivity. For each measure, the measures’ 90\textsuperscript{th} percentile values are given as representative of “top performer” counties in the U.S. The most recent CHR report was published in 2014. The 2014 CHR report includes obesity data through 2010. In 2010, Clark County’s proportion of obese persons was 25\%, equal to the 90\textsuperscript{th} percentile benchmark, while the proportion of persons reporting getting little or no exercise was 24\%, which was not below the 90\textsuperscript{th} percentile.

| Table 4. Behavioral Risk Factor by Life-Stage Clark County, Nevada |
|------------------|------------------|------------------|
| Behavioral Risk Factor | Youth* | Adult |
| Lifestyle |
| Less than one serving of fruit per day | 5.7\% | 38.7\%** |
| Less than one serving of vegetables per day | 6.8\% | 27.1\%** |
| Obesity | 12.1\% | 27.4\%*** |
| Little or No Exercise | 17.6\% | 21.9\%*** |
| Protective Factors (safety) |
| Seatbelt use (rarely or never) | 4.7\% | 5.6\%*** |
| Condom use (last sexual intercourse) | 56.4\% | NA |

*Source: YRBSS 2013, ** Source: BRFSS 2011, *** Source: BRFSS 2012

We examined these risk factors by gender and race/ethnicity (Table 5). Adult obesity was more prevalent in males than in females. Among youths there was a similar gender pattern
(males>females). Obesity prevalence in youths was highest among the Black non-Hispanics. Physical inactivity among adults and youths was more prevalent in females than males, with the highest prevalence among the Hispanic group. With regard to eating healthy foods, overall, males had less-healthy eating habits than females, in both the adult and the youth population. Examination of the data by race/ethnicity revealed that the Black non-Hispanics were the most likely to eat less than one serving of fruit per day and to eat less than one serving of vegetables per day. White non-Hispanics appeared to be the healthiest eaters. Regarding preventive screenings, Hispanics over age 50 were less likely to have had sigmoidoscopy or colonoscopy (2010 data) but female Hispanics were most likely to have had recent Pap smears. Mammography was most common among Hispanic and Black non-Hispanic women whereas Black non-Hispanics were most likely to have had their cholesterol checked in recent years.

**Self-Assessed Physical and Mental Health**

To feel healthy requires both physical and mental well-being. The number of days when people report that their mental health was not good represents an important facet of health-related quality of life. The 2014 CHR included 2012 BRFSS health-related quality of life indicators in its ranking calculations. The CHR’s national 90th percentile benchmarks for poor physical and mental health were 2.5 and 2.4 days (in the past month) respectively. In Clark County, both males and females had higher average numbers of physically and mentally unhealthy days than the benchmark (Table 6) and, overall, males perceived both their physical and mental health to be better than females did.

<table>
<thead>
<tr>
<th>Behavioral Risk Factor</th>
<th>Male</th>
<th>Female</th>
<th>WNH</th>
<th>BNH</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lifestyle</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult - Less than one serving of fruit per day**</td>
<td>44.7%</td>
<td>32.4%</td>
<td>37.8%</td>
<td>42.8%</td>
<td>40.0%</td>
</tr>
<tr>
<td>Adult - Less than one serving of vegetables per day**</td>
<td>33.2%</td>
<td>20.9%</td>
<td>24.1%</td>
<td>34.6%</td>
<td>27.0%</td>
</tr>
<tr>
<td>Youth - Less than one serving of fruit per day*</td>
<td>8.3%</td>
<td>3.3%</td>
<td>5.0%</td>
<td>10.0%</td>
<td>5.4%</td>
</tr>
<tr>
<td>Youth - Less than one serving of vegetables per day*</td>
<td>8.8%</td>
<td>5.1%</td>
<td>6.8%</td>
<td>8.4%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Adult Obesity***</td>
<td>27.6%</td>
<td>27.1%</td>
<td>27.1%</td>
<td>35.4%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Youth Obesity*</td>
<td>16.7%</td>
<td>7.9%</td>
<td>7.9%</td>
<td>17.4%</td>
<td>14.5%</td>
</tr>
<tr>
<td>Adult Little or No Exercise***</td>
<td>19.6%</td>
<td>24.2%</td>
<td>19.3%</td>
<td>21.8%</td>
<td>26.1%</td>
</tr>
<tr>
<td>Youth Little or No Exercise*</td>
<td>16.1%</td>
<td>18.9%</td>
<td>13.8%</td>
<td>18.8%</td>
<td>20.3%</td>
</tr>
<tr>
<td><strong>Screening</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adults aged 50+ who have ever had a sigmoidoscopy or colonoscopy (2010)*</td>
<td>61.1%</td>
<td>60.2%</td>
<td>61.6%</td>
<td>66.8%</td>
<td>43.1%</td>
</tr>
<tr>
<td>Adults who have had their cholesterol checked within the past five years (2009)*</td>
<td>76.9%</td>
<td>78.1%</td>
<td>78.6%</td>
<td>87.9%</td>
<td>62.8%</td>
</tr>
<tr>
<td>Adult Females 18+ Had a Pap Smear in past 3 years (2010)*</td>
<td>N/A</td>
<td>78.8%</td>
<td>78.4%</td>
<td>77.0%</td>
<td>81.3%</td>
</tr>
<tr>
<td>Adult Females 40+ who had Mammography in past 2 years (2010)*</td>
<td>N/A</td>
<td>67.5%</td>
<td>67.9%</td>
<td>70.4%</td>
<td>70.9%</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
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<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
</tbody>
</table>

*Source: YRBSS 2013, ** Source: BRFSS 2011, *** Source: BRFSS 2012
+ Source: BRFSS 2010, † Source: BRFSS 2009
### Table 6. Indicators by Special Populations, Clark County, Nevada

<table>
<thead>
<tr>
<th>Behavioral Risk Factors</th>
<th>Male</th>
<th>Female</th>
<th>WNH</th>
<th>BNH</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical and Mental Health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average number of physically unhealthy days in past month</td>
<td>3.7</td>
<td>4.6</td>
<td>4.4</td>
<td>3.8</td>
<td>4.3</td>
</tr>
<tr>
<td>Average number of days in past month when mental health was not good due to stress, depression and emotional problems</td>
<td>3.1</td>
<td>5.4</td>
<td>4.7</td>
<td>4.3</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Source: BRFSS 2012

### Tobacco

Cigarette smoking is identified as a cause of various cancers, cardiovascular disease, and respiratory conditions, as well as low birth weight and other adverse health outcomes. Measuring the prevalence of tobacco use in the population can alert communities to potential adverse health outcomes and can be valuable for assessing the need for cessation programs or the effectiveness of existing programs.

Over the past decade, SNHD’s nationally recognized Tobacco Control Program (TCP) has implemented evidence-based, comprehensive programming utilizing the Centers for Disease Control and Prevention’s Best Practices. TCP programs and policy efforts were shown in the 1st edition (2012) of the Clark County Community Health Status Assessment to have contributed to a decrease in youth smoking prevalence (30.7% in 1999 to 13.7% in 2007) and adult smoking prevalence (30% in 2001 to 22.4% in 2007). Continued efforts have resulted in sustained decreases in smoking prevalence among youth and adults to 7.8% and 17.0%, respectively (Table 7 and Table 8). According to currently available point estimates, male adults have higher smoking prevalence rates than females, non-Hispanic Whites have the highest prevalence (10%) while the non-Hispanic Blacks have the lowest (2.3%).

### Table 7. Behavioral Risk Factor by Life-Stage Clark County, Nevada

<table>
<thead>
<tr>
<th>Behavioral Risk Factors</th>
<th>Youth*</th>
<th>Adult**</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Substance Use and Abuse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Cigarette Smoker</td>
<td>7.8%</td>
<td>17.0%</td>
</tr>
<tr>
<td>Recent Binge Drinking</td>
<td>15.0%</td>
<td>13.8%</td>
</tr>
</tbody>
</table>

*Source: YRBSS 2013, ** Source: BRFSS 2012

The 2014 CHR showed the national 90th percentile benchmark for adult smoking as 14%. Smoking was defined by the CHR as percent of adults smoking ≥ 100 cigarettes and still smoking every day. The Clark County adult smoking rate in 2012 was 17.0%, which, despite the impressive reduction from 1999 rates of 30%, is still in excess of the CHR benchmark.
### Table 8. Tobacco and Alcohol Abuse by Special Populations, Clark County, Nevada

<table>
<thead>
<tr>
<th>Behavioral Risk Factor</th>
<th>Male</th>
<th>Female</th>
<th>WNH</th>
<th>BNH</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance Use and Abuse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult Current Cigarette Smoker*</td>
<td>9.0%</td>
<td>8.0%</td>
<td>10.0%</td>
<td>2.3%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Youth Current Cigarette Smoker**</td>
<td>7.3%</td>
<td>8.4%</td>
<td>8.9%</td>
<td>NA</td>
<td>8.0%</td>
</tr>
<tr>
<td>Adult Recent Binge Drinking*</td>
<td>9.5%</td>
<td>4.2%</td>
<td>6.5%</td>
<td>1.1%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Youth Recent Binge Drinking**</td>
<td>15.3%</td>
<td>14.7%</td>
<td>11.7%</td>
<td>8.5%</td>
<td>20.8%</td>
</tr>
</tbody>
</table>

* Source: BRFSS 2012; ** Source: YRBSS 2013

### Alcohol

A number of adverse health outcomes are associated with consumption of too much alcohol. These include, but are not limited to, alcohol poisoning, hypertension, acute myocardial infarction, sexually transmitted infections, fetal alcohol syndrome, motor-vehicle crash and other injuries, and interpersonal violence. Approximately 80,000 deaths annually are attributed to excessive drinking. It is the third leading lifestyle-related cause of death for people in the United States each year. CHR considered excessive drinking as being binge plus heavy drinking in its 2014 rankings calculations. However, to maintain a basis for comparison between life stage and race/ethnicity, we looked at binge drinking only (Table 7 and Table 8), which results in a lower percentage than the two categories of binge plus heavy drinking.

### Environmental Health Indicators

**Definition of Category:** The physical environment directly impacts health and quality of life. Clean air and water, as well as safely prepared food, are essential to physical health. Exposure to environmental substances such as lead or hazardous waste increases risk for preventable disease. Unintentional home, workplace or recreational injuries affect all age groups and may result in premature disability or mortality.

In the 2014 CHR five measures are used to represent environmental quality. According to the 2014 CHR (Table 9), Clark County has long way to go to meet national benchmarks in all five measures.

### Table 9. Physical Environment

<table>
<thead>
<tr>
<th>Physical Environment</th>
<th>Clark County</th>
<th>National Benchmark*</th>
<th>Nevada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air pollution - particulate matter</td>
<td>12.0</td>
<td>9.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Drinking water violations</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Severe housing problems</td>
<td>23%</td>
<td>9%</td>
<td>22%</td>
</tr>
<tr>
<td>Driving alone to work</td>
<td>79%</td>
<td>71%</td>
<td>78%</td>
</tr>
<tr>
<td>Long commute - driving alone</td>
<td>31%</td>
<td>15%</td>
<td>29%</td>
</tr>
</tbody>
</table>

Source: 2014 County Health Rankings
*90th percentile nationally
Indoor air quality is an important public health issue in Clark County due to the large number of public facilities that allow smoking. Despite the passing of the Nevada Clean Indoor Air Act in 2006, casinos and bars that do not serve food still allow smoking. This results in the passive exposure of both patrons and staff of these establishments.28

Nearly 90% of the Southern Nevada Water System’s drinking water comes from the Colorado River via Lake Mead. The remainder comes from wells that tap a deep aquifer beneath the Las Vegas Valley. The water system that serves the majority of Clark County residents has been fluoridated since March 2000 when voters voted. Potential sources of contamination of Lake Mead include urban chemicals such as fertilizers and pesticides, industrial activities and wildlife. However, Southern Nevada is fortunate because there is relatively little agriculture upstream along the Colorado River, which limits exposure to farming-related contaminants. Every month, scientists collect and analyze water samples from intakes to the treatment facilities and from the treated water. Water delivered by the Southern Nevada Water System meets or surpasses all State of Nevada and federal drinking-water standards.29

Maternal and Child Health
The health of a population is reflected in the health of its most vulnerable members, infants and children. Careful examination of data relating to maternal and child health provides opportunities for developing programs to improve birth outcomes, to reduce pregnancy and birth-related risks to mothers, and to monitor the success of programs focused on maternal and child health. Figure 8–Figure 12 below display trends in important maternal and child health indicators.

Neonatal and Infant Deaths
Neonatal deaths are those that occur between live birth and 28 days of life. Infant deaths are those that occur between live birth and one year of age and include neonatal deaths. Postneonatal deaths are those that occur after 28 days of life up to one year of age. Globally, the vast majority of infant deaths occur in developing nations and are often associated with low birth weight, infection/diarrheal disease, and malnutrition. Infant mortality in the U.S. is more likely to be associated with congenital malformations, sudden infant death syndrome, maternal complications during pregnancy, or unintentional injuries.
Prenatal Care
Prenatal care is important to track because, if given early enough and adequately, it is a way to help prevent poor birth outcomes such as congenital malformations, low birth weight, and infant death.

Birth Outcomes
Birth outcomes are measures that describe quality of health at birth. These outcomes, such as low birth weight (LBW), represent a child’s current and future morbidity — or whether a child has a healthy start — and serve as a health outcome related to maternal health risk.\(^{30}\)
Preterm Births

Preterm births, those occurring at least 3 weeks before the babies’ due dates, can result in a number of negative health outcomes, including breathing, heart, brain, gastrointestinal, and other problems, as well as long-term complications such as impaired cognitive skills, vision or hearing loss, cerebral palsy, and some chronic health issues. Most of these problems also create financial burden.31

Figure 10. Preterm birth rate, Clark County, NV, 2000-2013

Low Birth Weight (LBW) Infants

Low birth weight (LBW) is defined as a live-born infant weighing less than 2500 grams. It is the biggest factor affecting neonatal and post-neonatal mortality, giving the newborn 40 times the risk of dying during the first four weeks of life compared with a full-term infant. Other consequences of LBW include neurodevelopmental handicaps and lower respiratory tract illnesses.32 Many maternal health risk factors can affect birth weight, including the mother’s health behaviors, access to health care, the social and economic environment of the mother inhabits, and environmental risks to which she is exposed. Bailey et al. find that modifiable maternal health behaviors — including weight gain, smoking, and alcohol and substance use — account for more than 10% of the variation in birth weight. Maternal smoking alone accounts for 7% of variation in birth weight.33 Bergsjo and Villar’s systematic review of the evidence also finds that maternal nutrition, smoking, and excessive alcohol intake result in LBW.34

In terms of the infant’s health outcomes, LBW serves as a predictor of premature mortality and/or morbidity over the life course.35 Gestational age, which is correlated with birth weight, is inversely related to psychological distress.36 LBW children have greater developmental and growth problems, are at higher risk of cardiovascular disease later in life, and have a greater rate of respiratory conditions.37,38,39,40 In a systematic review, Whincup et al. found that LBW was
associated with an elevated risk of developing type 2 diabetes.\textsuperscript{41}

LBW has also been associated with cognitive development problems. Several authors find that LBW children have higher rates of sensorineural impairments, such as cerebral palsy, and visual, auditory, and intellectual impairments.\textsuperscript{28-30,42,43,44} However, Shenkin finds that parental social class accounted for a greater proportion of the variance in cognitive ability and the two variables were independent.\textsuperscript{33} Very preterm infants have lower median IQ scores at age 6, and they have global learning deficits compared to their peers.\textsuperscript{45} As a consequence, preterm birth and LBW can impose a substantial economic and societal burden on special education and social services, families and caretakers, and on society more broadly.\textsuperscript{46}

Overall, LBW rates in Clark County consistently over 8% (2004-2010), the Healthy People 2020 objective for low birth-weight infants is 7.8%.

\textbf{Very Low Birth Weight Infants}

The goal of 0.9 percent as set by Healthy People 2010 for very low birth weight babies was not attained in the years 2000-2010. It has remained ~1.25% with some minor fluctuations.
Substance Abstinence During Pregnancy

When a pregnant woman drinks alcohol, the alcohol in the mother's blood passes through the placenta to the baby through the umbilical cord. Drinking alcohol during pregnancy can cause miscarriage, stillbirth, and a range of lifelong disorders, known as fetal alcohol spectrum disorders (FASDs). The CDC urges pregnant women not to drink alcohol any time during pregnancy. FASDs are 100% preventable. Children with FASDs might have the following characteristics and behaviors:

- Abnormal facial features
- Small head size
- Shorter-than-average height
- Low body weight
- Poor coordination
- Hyperactive behavior
- Difficulty paying attention
- Poor memory
- Difficulty in school (especially with math)
- Learning disabilities
- Speech and language delays
- Intellectual disability or low IQ
- Poor reasoning and judgment skills
- Sleep and sucking problems as a baby
- Vision or hearing problems
- Problems with the heart, kidney, or bones
Risks associated with smoking during pregnancy include low birth weight, premature birth, certain birth defects (cleft lip or cleft palate), and infant death. Even second-hand smoke puts a woman and her unborn baby at risk for problems. Considering the potential risks, educating women about the effects of smoking and second hand smoke and helping them quit before becoming pregnant is an important public health issue. The proportion of women abstaining from cigarette smoking during pregnancy has fluctuated for Nevada and Clark County during 2000-2010 (Table 10) but has not yet reached the Healthy People 2010 target of 95 percent.

The Healthy People 2010 target was 95% of pregnant women abstaining from alcohol. The proportion of pregnant women abstaining from alcohol has fluctuated for Nevada and Clark County during 2000-2010 but has consistently been better than the target rate (Table 11). The county rate, on average, is slightly above the state rate.

### Table 10. Abstention from cigarette smoking during pregnancy, Clark County, NV, 2000-2012

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<thead>
<tr>
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<tbody>
<tr>
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<tr>
<td>%</td>
<td>89.6%</td>
<td>89.1%</td>
<td>90.4%</td>
<td>91.1%</td>
<td>92.5%</td>
<td>92.3%</td>
<td>92.8%</td>
<td>92.9%</td>
<td>93.6%</td>
<td>93.6%</td>
<td>93.3%</td>
<td>92.4%</td>
<td>91.2%</td>
</tr>
</tbody>
</table>

Source: Birth certificate files, preliminary for 2011 onwards.

### Table 11. Abstention from alcohol use during pregnancy, Clark County, NV, 2000-2012

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<thead>
<tr>
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</tr>
<tr>
<td>%</td>
<td>98.2%</td>
<td>97.8%</td>
<td>98.0%</td>
<td>97.8%</td>
<td>98.1%</td>
<td>97.8%</td>
<td>97.8%</td>
<td>97.6%</td>
<td>97.7%</td>
<td>97.6%</td>
<td>98.3%</td>
<td>97.8%</td>
<td>97.7%</td>
</tr>
</tbody>
</table>

Source: Birth certificate files, preliminary for 2011 onwards.

### Teen Pregnancy and Births

Teen mothers and their babies face increased risks to their health when compared with mothers over age 20 years. Pregnancy complications may include premature labor, anemia and high blood pressure. These risks are even greater for teens under 15 years old. Only 38% of teenagers who have children before age 18 go on to graduate from high school. Without a solid educational foundation, young women are more likely to have difficulty finding legitimate, well paying jobs, which affects their socio-economic status, likely resulting in increased costs to society from dependence on social programs. For these and other reasons, it is best if pregnancy is delayed until the teen years have passed.

The national benchmark in the 2014 CHR for teen births is 20/1,000 females aged 15-19. The rate for Clark County in the same report is 48/1,000, well in excess of the national benchmark. The U.S. average in 2013 was 29/1000.

The adolescent pregnancy rates for females 10-14 and 15-19 years are presented below. Note that the teen birth rate is not the same as the pregnancy rate. Pregnancy rate is the sum of birth,
fetal-death, and abortion rates (Table 12).

Table 12. Teen birth/pregnancy rates by age, Clark County-NV, 2010-2012

<table>
<thead>
<tr>
<th>Maternal age</th>
<th>Teen pregnancies</th>
<th>Teen pregnancy rate</th>
<th>Teen birth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 10-14</td>
<td>57</td>
<td>0.09%</td>
<td>0.06%</td>
</tr>
<tr>
<td>15-19</td>
<td>3178</td>
<td>5.02%</td>
<td>3.89%</td>
</tr>
<tr>
<td>2011 10-14</td>
<td>39</td>
<td>0.06%</td>
<td>0.04%</td>
</tr>
<tr>
<td>15-19</td>
<td>2831</td>
<td>4.59%</td>
<td>3.65%</td>
</tr>
<tr>
<td>2012 10-14</td>
<td>39</td>
<td>0.06%</td>
<td>0.04%</td>
</tr>
<tr>
<td>15-19</td>
<td>2648</td>
<td>4.27%</td>
<td>3.33%</td>
</tr>
</tbody>
</table>

Source: Birth certificate files, preliminary for 2011 onwards.
Note: Vintage 2013 postcensal population estimates used.

Health Status

General Health Status
The 2012 BRFSS included a question to allow respondents to give a self-assessment about their overall health status. Clark County respondents reported slightly better general health status than was reported by Nevada respondents overall, but not as good as the U.S. overall (Table 13). Male respondents reported better health than female respondents and Hispanics reported the poorer general health status overall than White non-Hispanics or Black non-Hispanics, although Black non-Hispanic had the highest proportion (24.1%) of respondents reported only fair or poor health, compared with White non-Hispanic (17.6%) and Hispanic (17.9%) respondents.

Table 13. Indicators by Special Populations, Clark County, Nevada 2012

<table>
<thead>
<tr>
<th>General Health Status</th>
<th>Male</th>
<th>Female</th>
<th>WNH</th>
<th>BNH</th>
<th>Hispanic</th>
<th>Nevada</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent self-reported health status</td>
<td>18.0%</td>
<td>15.3%</td>
<td>17.7%</td>
<td>16.5%</td>
<td>12.2%</td>
<td>17.4</td>
<td>18.8%</td>
</tr>
<tr>
<td>Very good self-reported health status</td>
<td>32.0%</td>
<td>28.8%</td>
<td>35.5%</td>
<td>31.3%</td>
<td>20.8%</td>
<td>30.8</td>
<td>33.4%</td>
</tr>
<tr>
<td>Good self-reported health status</td>
<td>32.6%</td>
<td>33.6%</td>
<td>28.9%</td>
<td>27.6%</td>
<td>43.9%</td>
<td>32.8</td>
<td>30.9%</td>
</tr>
<tr>
<td>Fair self-reported health status</td>
<td>12.5%</td>
<td>14.1%</td>
<td>12.2%</td>
<td>20.0%</td>
<td>15.2%</td>
<td>13.2</td>
<td>12.5%</td>
</tr>
<tr>
<td>Poor self-reported health status</td>
<td>4.8%</td>
<td>7.9%</td>
<td>5.4%</td>
<td>4.1%</td>
<td>7.7%</td>
<td>5.7</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

Source: BRFSS 2012

Mortality
In 2010, the top 10 leading causes of death in the United States were, in rank order, diseases of heart; malignant neoplasms; chronic lower respiratory diseases; cerebrovascular diseases; unintentional injuries; Alzheimer’s disease; diabetes mellitus; nephritis, nephritic syndrome and nephrosis; influenza and pneumonia; and suicide. In this report, we present 10 years (2004-2013) of mortality data for each of these diseases overall, by gender, and by race/ethnicity.
**Disease of Heart (Heart Disease)**

From 2004 to 2013, overall mortality rate from heart disease dropped by 20% (from about 250 per 1,000 to around 200 per 1,000 population) (Figure 13). Males have been consistently more likely to die from heart diseases than females. Their mortality rates were 1.5-2 times as high as females.

![Figure 13. Age-Adjusted Mortality Rate Caused by Disease of Heart by Gender, Clark County, Nevada, 2004-2013](image1)

Black non-Hispanics had the highest mortality rate from heart disease among all racial/ethnic groups, followed by White non-Hispanics. Over the years, Black non-Hispanics’ heart disease mortality rates have been about twice as high as those of Asian/Pacific Islanders or Hispanics (Figure 14).

![Figure 14. Age-Adjusted Mortality Rate Caused by Disease of Heart by Race/Ethnicity, Clark County, Nevada, 2004-2013](image2)
Malignant Neoplasms (Cancer)
Cancer mortality rates in Clark County decreased by 15%, from about 200 to about 170 per 100,000 population. This decrease is more evident among females than males (Figure 15).

Black non-Hispanics and White non-Hispanics started from higher cancer mortality rates in early years during the 10-year period. However, because of the decreasing rates among these two groups, and the increasing rates among Asian Pacific Islanders and Hispanics by the year 2013, rates among all racial/ethnic groups are becoming more similar, although Black non-Hispanics have consistently had the highest rates (Figure 16).
**Chronic Lower Respiratory Diseases**

Mortality rates from chronic lower respiratory diseases have been relatively stable, fluctuating around 50 per 100,000 during the ten years. Males consistently had higher mortality rates than females (Figure 17).

![Figure 17. Age-Adjusted Mortality Rate Caused by Chronic Lower Respiratory Diseases by Gender, Clark County, Nevada, 2004-2013](image)

White non-Hispanics had the highest mortality rates from chronic lower respiratory diseases among all racial/ethnic groups. The mortality rates among Black non-Hispanics increased significantly since 2009, reaching the highest in 2013, which doubled the rate in 2009 (Figure 18).

![Figure 18. Age-Adjusted Mortality Rate Caused by Chronic Lower Respiratory Diseases by Race/Ethnicity, Clark County, Nevada, 2004-2013](image)
**Cerebrovascular Diseases**

Mortality rates from cerebrovascular diseases decreased about 35% from 2004 to 2013. Males had slightly higher cerebrovascular diseases mortality rates than females. The gender difference seemed to become larger in most recent years, since 2011 (Figure 19).

![Age-Adjusted Mortality Rate Caused by Cerebrovascular Diseases by Gender, Clark County, Nevada, 2004-2013](image)

On average, over the ten years, Black non-Hispanics had highest mortality rates from cerebrovascular diseases, followed by Asian/Pacific Islanders and Hispanics (Figure 20). White non-Hispanics had the lowest mortality rates from cerebrovascular diseases, which were about 1/2-2/3 that of Black non-Hispanics.

![Age-Adjusted Mortality Rate Caused by Cerebrovascular Diseases by Race/Ethnicity, Clark County, Nevada, 2004-2013](image)
Unintentional Injuries

Mortality rates from unintentional injuries during the second half of the 10-year period were about 15% lower than the first half of the 10 years. On average, unintentional injury mortality rates among males were twice as high as those among females (Figure 21).

![Adjusted Mortality Rate Caused by Unintentional Injuries by Gender, Clark County, Nevada, 2004-2013](image1)

Generally unintentional injury mortality rates declined among all racial/ethnic groups. White and Black non-Hispanics were twice as likely to die from unintentional injuries as Asian/Pacific Islanders or Hispanics (Figure 22).

![Age-Adjusted Mortality Rate Caused by Unintentional Injuries by Race/Ethnicity, Clark County, Nevada, 2004-2013](image2)
**Alzheimer Disease**

Mortality from Alzheimer Disease have been declining with some ups and downs in the 10 years. The highest mortality rate was seen in 2005 (18.6 per 100,000 population), and the lowest was 2010 (8.0 per 100,000 population). Females had slightly higher mortality rates from Alzheimer Disease than males (Figure 23).

![Figure 23. Age-Adjusted Mortality Rate Caused by Alzheimer Disease by Gender, Clark County, Nevada, 2004-2013](image)

Mortality rates from Alzheimer Disease among Asians were about half of the other three racial/ethnic groups. There were no significant differences among the other three racial/ethnic groups (White non-Hispanic, Black non-Hispanic, and Hispanic) (Figure 24).

![Figure 24. Age-Adjusted Mortality Rate Caused by Alzheimer Disease by Race/Ethnicity, Clark County, Nevada, 2004-2013](image)
**Diabetes Mellitus**

Mortality rates from Diabetes Mellitus have been relatively stable during the 10 years (Figure 29). Males maintained higher Diabetes Mellitus mortality rates than females.

![Graph showing age-adjusted mortality rate caused by Diabetes Mellitus by gender, Clark County, Nevada, 2004-2013](image1)

Source: Clark County Vital Records Mortality Data 2004-2013

**Figure 25. Age-Adjusted Mortality Rate Caused by Diabetes Mellitus by Gender, Clark County, Nevada, 2004-2013**

On average, Black non-Hispanics had significantly higher mortality rates of Diabetes Mellitus than the other racial/ethnic groups, including White, Asian/Pacific Islander, and Hispanic (Figure 26).

![Graph showing age-adjusted mortality rate caused by Diabetes Mellitus by race/ethnicity, Clark County, Nevada, 2004-2013](image2)

Source: Clark County Vital Records Mortality Data 2004-2013

**Figure 26. Age-Adjusted Mortality Rate Caused by Diabetes Mellitus by Race/Ethnicity, Clark County, Nevada, 2004-2013**
**Influenza and Pneumonia**

During the ten years, the highest morality rates from Influenza and Pneumonia were seen in 2005 and 2009. Male mortality rates were about 30%-90% higher than female in each year (Figure 27).

On average, mortality rates of Influenza and Pneumonia among Black non-Hispanics were about 30% higher than the other racial/ethnic groups, while there were no significant difference between White, Asian/Pacific Islander, and the Hispanic (Figure 28).
**Nephritis, Nephrotic Syndrome and Nephrosis**

Mortalities from nephritis, nephrotic syndrome and nephrosis had a declining trend from 2004 to 2013. On average, male mortality rates were about 60% higher than female (Figure 29).

![Image of mortality data](source)

Black non-Hispanics had much higher mortality rates of nephritis, nephrotic syndrome and nephrosis than the other racial/ethnic groups. White non-Hispanics had the lowest average mortality rate among the four race/ethnicity groups (Figure 30).

![Image of mortality data by race/ethnicity](source)

**Suicide**

Suicide is the 10th leading cause of death nationally. However, in Clark County, suicide mortality
rates have been higher than Alzheimer Disease and Diabetes Mellitus since 2006, and higher than nephritis, nephrotic syndrome, and nephrosis since 2012. No declining trend was apparent during the 10-year period studied. In most years, suicide mortality rates among males were more than 3 times as high as those among females (Figure 31).

![Age-Adjusted Mortality Rate Caused by Suicide by Gender, Clark County, Nevada, 2004-2013](source)

Suicide mortality rates among White non-Hispanics were more than twice as high as the rates among all other racial/ethnic groups combined (Figure 32). There were no significant differences between Black non-Hispanics, Asian/Pacific Islanders, and Hispanics.

![Age-Adjusted Mortality Rate Caused by Suicide by Race/Ethnicity, Clark County, Nevada, 2004-2013](source)

**Mortality among Children and Youth**

Unintentional injuries are the leading cause of deaths among children and youth 1-24 years old.
Motor vehicle crashes are the leading cause of injury deaths among the 5-24-year-old age group. Among the younger children, suffocation resulted in the most infant (<1 year) deaths, while drowning killed the most 1-4-year-olds (Table 15).

### Table 14. Leading Causes and Total 10-Year Numbers of Deaths, by Age Group, Ages 0-24 years, Clark County, Nevada, 2004-2013

<table>
<thead>
<tr>
<th>Rank</th>
<th>&lt; 1</th>
<th>1-4</th>
<th>5-9</th>
<th>10-14</th>
<th>15-19</th>
<th>20-24</th>
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<tr>
<td></td>
<td>Congenital Anomalies 372</td>
<td>Unintentional Injury 109</td>
<td>Unintentional Injury 38</td>
<td>Unintentional Injury 63</td>
<td>Unintentional Injury 315</td>
<td>Unintentional Injury 529</td>
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<td></td>
<td>Preterm/Low Birth Weight 146</td>
<td>Congenital Anomalies 36</td>
<td>Malignant Neoplasms 22</td>
<td>Suicide 24</td>
<td>Homicide 146</td>
<td>Homicide 199</td>
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<td>Unintentional Injury 125</td>
<td>Homicide 32</td>
<td>Congenital Anomalies ****</td>
<td>Malignant Neoplasms 22</td>
<td>Suicide 101</td>
<td>Suicide 186</td>
</tr>
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<tr>
<td></td>
<td>Maternal Complications 104</td>
<td>Malignant Neoplasms 22</td>
<td>Chronic Lower Respiratory Disease ****</td>
<td>Homicide 20</td>
<td>Malignant Neoplasms 40</td>
<td>Heart Disease 73</td>
</tr>
<tr>
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<tr>
<td></td>
<td>Neonatal Hemorrhage 61</td>
<td>Heart Disease 15</td>
<td>Homicide ****</td>
<td>Congenital Anomalies 13</td>
<td>Heart Disease 20</td>
<td>Malignant Neoplasms 55</td>
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</tbody>
</table>

****Cell values less than 10 are suppressed.  
Cells containing injury-related fatalities are shaded.  

Source: Clark County Vital Records Mortality Data 2004-2013

### Table 15. Leading Causes and Total 10-Year Numbers of Injury-Related Deaths, by Age Group, Ages 0-24 years, Clark County, Nevada, 2004-2013

<table>
<thead>
<tr>
<th>Rank</th>
<th>&lt; 1</th>
<th>1-4</th>
<th>5-9</th>
<th>10-14</th>
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<td>Suffocation 104</td>
<td>Drowning 54</td>
<td>Motor Vehicle Trauma 20</td>
<td>Motor Vehicle Trauma 38</td>
<td>Motor Vehicle Trauma 171</td>
<td>Motor Vehicle Trauma 232</td>
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<tr>
<td></td>
<td>Homicide 26</td>
<td>Homicide 32</td>
<td>Homicide ****</td>
<td>Suicide 24</td>
<td>Homicide 146</td>
<td>Poisoning 229</td>
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<tr>
<td></td>
<td>Motor Vehicle Trauma ****</td>
<td>Motor Vehicle Trauma 17</td>
<td>Drowning ****</td>
<td>Homicide 20</td>
<td>Suicide 101</td>
<td>Homicide 199</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Drowning ****</td>
<td>Fall ****</td>
<td>Fire ****</td>
<td>Poisoning ****</td>
<td>Poisoning 95</td>
<td>Suicide 186</td>
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<td></td>
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<tr>
<td></td>
<td>• Fall</td>
<td>• Poisoning (Tied)</td>
<td>• Pedestrian Suffocation Other (Tied)</td>
<td>• Firearm Pedal cyclist Suffocation Other (Tied)</td>
<td>Fall ****</td>
<td>Drowning 16</td>
</tr>
</tbody>
</table>
Communicable Disease

Definition of Category: Measures within this category include diseases which are usually transmitted through person-to-person contact or shared use of contaminated instruments or materials. Many of these diseases can be prevented through high levels of vaccine coverage or through the use of other protective measures, such as condoms for the prevention of sexually-transmitted diseases.

Child Immunizations

Immunizations (vaccinations) are one of the best ways to avoid the serious effects of certain diseases. Vaccination success has been achieved for a number of illnesses in the developed world, such as polio, measles, mumps, and rubella and much progress through vaccination has been made globally as well. However, unless a disease is completely eradicated from the entire world, if vaccination efforts wane, the disease is likely to reestablish itself by infecting unvaccinated people. Recent resurgence of diseases like pertussis and measles in the U.S. has been facilitated by a growing population of people who have chosen not to vaccinate their children and at times has affected residents of Clark County. Because vaccination is so important, in Nevada and other states, vaccinations are required for entry into public school.

A retrospective immunization analysis of children enrolled in kindergarten and first grade for the 2009-2010 school year in the Clark County School District (CCSD) indicated that National Immunization Survey (NIS) point estimates for Nevada were generally accurate for Clark County. Immunization data for six vaccines was evaluated against data from two NIS surveys. Retrospective immunization rates were found to be within the 95% confidence intervals calculated for the NIS.

For 2010 (the most recent year for which data are available), 4:3:1:4:3:1 ((4 DTP, 3 polio, 1 MMR, 3 Hib, 3 Hep B and 1 varicella) vaccination rates were estimated at 64.1% (+/- 7.0%). In comparison, the state with the highest vaccination rates, New Hampshire, vaccinates 81.1% (+/- 6.4%) of children. Given the wide confidence interval for point estimates on the NIS, state rankings are discouraged. Specific numerical ranking aside, Nevada (and Clark County) fall near the bottom of the lowest quartile of vaccination rates.

CCSD kindergarten student vaccination rates for both the 2008-2009 and 2009-2010 school years exceed healthy people 2020 goals (95%) for all vaccines with the exception of 2 doses of varicella (only one doses is required for CCSD enrollment). In addition, unlike many school districts, hepatitis A vaccination is required for CCSD enrollment; 1 dose of hepatitis A exceeded

**** Cell values are less than 10 are suppressed.
Each listed mechanism is unintentional except suicide and homicide.
Source: Clark County Vital Records Mortality Data 2004-2013
95% of students for 2008-2009 and 2009-2010 school years, and two doses exceeded 85% for both school years.

**Adult Immunizations**

Adults 65 years and over are at risk for developing serious complications from influenza infection. It is recommended that senior citizens get immunized annually for influenza. The annual Nevada BRFSS survey revealed that although vaccination rates for seniors has improved in 2008 in comparison to the previous seven years, it still remains below 65% in Clark County (Figure 33). Among Medicare beneficiaries, Influenza immunization rate was 42.6% during 2012-2013 influenza season, and 40.7% during 2013-2014 influenza season. The national Healthy People 2010 target for this age group is 90%.

![Figure 33. Proportion of Adults Aged > 65 Years Vaccinated Against Influenza, Clark County and Nevada](image)

When the BRFSS data are examined by Race/Ethnicity (Table 16), an interesting picture emerges. White non-Hispanics and Hispanics have much better influenza immunization rates than any other racial-ethnic group, with Hispanics leading the pack.

<table>
<thead>
<tr>
<th>Behavioral Risk Factor</th>
<th>Male</th>
<th>Female</th>
<th>White non-Hispanic</th>
<th>Black non-Hispanic</th>
<th>AEA</th>
<th>Asian/Pacific Islander</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults aged 65+ who have had a flu shot within the past year (2010)</td>
<td>60.0%</td>
<td>58.5%</td>
<td>63.6%</td>
<td>30.5%</td>
<td>37.3%</td>
<td>31.9%</td>
<td>65.8%</td>
</tr>
</tbody>
</table>

Source: BRFSS 2010

Severe morbidity and death can result from pneumococcal bacterial infections of the bloodstream and the central nervous system. Data from community-based studies indicate that
overall annual incidence of pneumococcal bacteremia in the United States is estimated at 15-30 cases per 100,000 population; the rate is higher for persons aged ≥ 65 years (50-83 cases per 100,000 population). Pneumococcal infection causes an estimated 40,000 deaths annually in the United States, accounting for more deaths than any other vaccine-preventable bacterial disease. Approximately half of these deaths potentially could be prevented through the use of vaccine. Case-fatality rates are highest for meningitis and bacteremia, and the highest mortality occurs among the elderly and patients who have underlying medical conditions. The Advisory Committee on Immunization Practices recommends adults ≥ 65 years receive the pneumococcal vaccine.52

The BFRSS survey revealed that Clark County is well below the 2010 goal of 90% of persons ≥ 65 years having a history of pneumococcal vaccination (Figure 34). Clark County has frequently been below 60% and at the peak, has not exceeded 65%.

![Figure 34. Proportion of Adults ≥ 65, Ever Received Pneumococcal Vaccine, 2000–2008, Clark County and Nevada](source: BRFSS 2010)

**Tuberculosis**

Although both the annual numbers and rates of active TB cases reported in the U.S. overall have steadily declined since 1992, including during the most recent decade (Figure 35), the numbers of cases in Clark County have risen slightly overall since 2004 and dropped back in 2012 (Figure 36). The increase can mainly be attributed to the dramatic increase in population in Clark County since 2000, as noted previously. However, unlike the U.S. average rates, Clark County TB case rates have remained relatively stable (Figure 37). In 2010, the average U.S. rate was
3.6/100,000. The State of Nevada had the 9th highest rate among the 50 states (4.3/100,000) with Clark County’s TB rate being 5.0/100,000 persons (Figure 38 Error! Reference source not found.).

![Figure 35. Number of TB cases by year, 1982–2012, U.S.](http://www.cdc.gov/tb/publications/factsheets/statistics/Trends.pdf)

**Figure 35.** Number of TB cases by year, 1982–2012, U.S.


![Figure 36. Number of TB cases by year, 2004–2013, Clark County](http://example.com/tb_cases_clark_county.png)

**Figure 36.** Number of TB cases by year, 2004–2013, Clark County

Source: Southern Nevada Health District TB program internal data
Male patients have consistently been diagnosed with TB more frequently than women in Clark County, although as illustrated by Figure 39, the numbers of diagnosed cases among female patients has risen since 2003. Rates of disease among male and female patients have both remained relatively constant, however, indicating that the increase in numbers is mainly due to increased population size (Figure 40).
Although rates of TB cases in Clark County within most age categories fluctuated between 2003 and 2010 with at most slight increases or decreases over the time period, an alarming increase in cases was observed in the under-5-year-old age group (Figure 41). Rates among that age group in the U.S. have not been increasing, however (Figure 42). Although formal epidemiologic studies have not yet been performed, SNHD intends to evaluate this important finding in depth in the near future. Results from epidemiologic analyses could lead us to develop interventions specifically targeted to prevent cases of TB in this age group. Anecdotally, the factors thought to

\[1\] Data for years 2000–2002 are thought to be incomplete and possibly inaccurate; therefore data for 2011 are included to increase the span of data to 9 years.
be most frequently associated with the increase in pediatric disease rates are that the affected children have been close contacts of other persons diagnosed with TB (as opposed to the disease having been community-acquired) and that those contact persons are often persons who have previously been housed in a corrections facility.

![Graph showing TB incidence by age category, 2003–2010 — Clark County](image)

**Figure 41.** TB incidence by age category, 2003–2010 — Clark County

Note: The under-5 age group (in bold red) is the only group showing dramatic increase since 2003.

![Graph showing incidence of tuberculosis among age group <5 years, Clark County vs. U.S., 2000-2010](image)

**Figure 42.** Incidence of tuberculosis among age group <5 years, Clark County vs. U.S., 2000-2010

SNHD collects data on a number of other risk factors (besides history of incarceration) for acquiring tuberculosis. Our knowing the greatest risk factors for disease can help us target certain populations to screen for and to education about TB. In Clark County, as in the U.S., the most important risk factor, by far, is having been born in a country other than the U.S., even though many TB patients have lived in the U.S. for many years before being diagnosed with
tuberculosis (Figure 43). Some risk factors predispose people to the disease because they are associated with impaired immunity, such as having diabetes or HIV/AIDS, or being a smoker. Other factors increase the risk of acquiring disease because they raise the probability of coming in contact with a contagious person, such as being born in a country where TB is more prevalent than it is in the U.S., being incarcerated, having had a close contact with TB, or being homeless.

![Figure 43. Risk factors for contracting active tuberculosis disease in Clark County, 2003–2010.](image)

Although the numbers and rates of TB cases are remaining stable or decreasing slightly, the proportion of TB patients who were foreign born has been increasing in Nevada and in the U.S. overall. (Figure 44) In Clark County, the proportion (which ranged between 65% and 89% of cases) has shown no clear trend between 2003 and 2011, although the proportion has been consistently greater than the U.S. proportion of TB patients who were foreign-born and often higher than the Nevada rate as well.

![Figure 44. Proportion of TB patients who were foreign born, known to have had contact <=2 y ago, previous incomplete LTBI Tx, smoking, substance abuse, diabetic, homeless, and HIV/AIDS in Clark County, Nevada, and the U.S.](image)
Sexually Transmitted Diseases (STD)
The Southern Nevada Health District tracks cases of Chlamydia, Gonorrhea, and Treponema palladium (syphilis) infections. Sexually transmitted disease overall incidence has been increasing in recent years, driven by dramatic increases in cases of Chlamydia and Treponema palladium (syphilis) infections. (Figure 45–Figure 47)
We also compared Clark County sexually transmitted disease rates with rates in the State of Nevada as a whole and with the U.S. (Figure 48–Figure 50) The increasing trend in rates of Chlamydia infection is observed on a nationwide basis, although Figure 48 shows that Clark County rates are well above the national average. Trends in Gonorrhea infection rates are also similar throughout the country (Figure 49). We see a rise and fall of the rates among both men and women in the U.S. that was even more dramatic in Clark County between the years of 2002 and 2007, after which rates in Clark County dropped well below national average rates. More recently, however, rates have risen slightly in the state. Nevada was ranked 24th among the 50 states in rates of newly diagnosed Gonorrhea infections\textsuperscript{53} and 25th for newly diagnosed Chlamydia infections\textsuperscript{54} in 2013. In contrast with the improvements seen in Gonorrhea cases, the increasing rates of newly diagnosed syphilis cases in Clark County is more concerning (Figure 50). Rates have actually dropped slightly among women in 2008 and 2009 compared with previous years, so the increase in overall rates is totally attributable to the rise in rates among men.
Congenital syphilis is a serious but preventable condition that can result in stillbirth, hydrops fetalis, or preterm birth. It also may be asymptomatic at birth and children born with syphilis infection can develop latent syphilis, the symptoms of which can involve the central nervous system (CNS), bones and joints, teeth, eyes, and skin\textsuperscript{55}. We are lacking readily accessible data prior to 2006, but beginning that year, Clark County congenital syphilis cases have been recorded and counts have been on a decline through 2010 (Figure 51). When we compare the rates in Clark County with the U.S. average, we see that Clark County congenital syphilis case rates (per 100,000 live births) have declined over the most recently reported years (Figure 52). However, prior to 2009, these rates had been much higher than the national average. As of
2009, the congenital syphilis rate in Clark County had dropped to 143% of the U.S. average, a big improvement compared with 2006 when the rate was more than 5 times the national average.

![Figure 51. Numbers of congenital syphilis cases by year, Clark County, 2006-2010](image)

![Figure 52. Rates of congenital syphilis in Clark County and the U.S., 2000–2010](image)

**Figure 51.** Numbers of congenital syphilis cases by year, Clark County, 2006-2010

**Figure 52.** Rates of congenital syphilis in Clark County and the U.S., 2000–2010

Clark County congenital syphilis cases include confirmed and stillborn/presumptive cases. The State of Nevada does not publish data for congenital syphilis cases or case rates. No Clark County congenital syphilis case data are available prior to 2006.

**HIV/AIDS**

Accurate tracking of HIV and AIDS cases has been hampered by a surveillance system that, until 2010, recorded cases of HIV and AIDS separately without noting which persons were diagnosed with HIV and AIDS simultaneously. Prior to 2010, although we had case counts for HIV and AIDS separately, we were unable to determine accurately how many people in Nevada were affected by either HIV or AIDS. Before HIV medications became highly effective at increasing survival rates, measuring AIDS cases and deaths was a reasonable surveillance substitute for...
HIV cases. However, with survival times having dramatically increased, it has become important to learn more detail about individuals living with HIV and to have accurate counts of HIV cases, not just AIDS cases and deaths. Therefore, as of 2010, the surveillance system was changed. HIV cases are now recorded as HIV-only or as HIV diagnosed concurrently with AIDS, giving us a case count of all persons affected by HIV.

Another challenge to using HIV/AIDS surveillance data is that case-count alterations often occur, up to several years after they were recorded, to eliminate duplicate reporting of patients’ cases that occur when they are inadvertently reported in multiple jurisdictions. During reconciliation, each patient-case is assigned to a single jurisdiction and case counts are adjusted between jurisdictions accordingly. A 2010 upgrade to the HIV/AIDS reporting system used throughout the State of Nevada has increased the ability to identify and reconcile these sorts of duplicate entries more quickly. However, reconciliation is also performed on a national level by CDC, a time-consuming process that occurs infrequently and also often results in adjustments in case counts years after they were originally recorded.

Due to these challenges in interpreting HIV/AIDS surveillance data through 2009, we chose to evaluate trends in AIDS cases and death counts, even though, with length of survival having risen substantially since the mid 1990s, these counts now correlate less closely the incidence of new HIV cases.

Figure 53 shows the trends in annual counts of new AIDS diagnoses and of AIDS-related deaths. Peak counts for each occurred in the early to mid-1990s. By 2011, the annual number of AIDS-related deaths has declined by 93% compared with its peak (275) in 1992. Similarly, we observed a 49% decline in newly diagnosed AIDS cases since its peak (363) in 1995. These observations represent the combination of decreasing numbers of newly diagnosed HIV cases, patients living longer with HIV illness before the disease progresses to AIDS, and longer survival rates overall. The trends we observed in Clark County are similar to those observed elsewhere in the U.S. during the same time period.
Graphing the ratio of the numbers of AIDS-related deaths to the numbers of newly diagnosed AIDS cases by year further illustrates how the average length of survival following a Clark County patient’s diagnosis of AIDS has dramatically changed in recent years (Figure 54).

Prior to 1992, this ratio was close to 1:1, but has been steadily declining ever since, which is consistent with a continuing increase in the number of years the average patient with AIDS survives. This sort of increased survival is consistent with what is being observed throughout the U.S.
Through 2011, the majority of AIDS cases in Clark County have occurred among adolescents or adults 13 years and older, among whom 4850/5675 (85%) were among male patients. From 1982–2011, a total of 26 cases among children under 13 years of age (14 girls and 12 boys) have been documented. The majority of them (24) had mothers with HIV or at risk for HIV infection. The other two children had received transplants or infusions of blood, blood components or tissue. Among adult men, the most commonly associated risk factors were male-to-male sexual contact (75%), injection drug use (12%), or both (9%). Heterosexual contact was considered the most likely associated risk factor for only 3% of male case-patients. Among women, the most associated risk factors were heterosexual contact (60%) and injection drug use (31%). For 2% of men and 8% of women, risk factors either could not be identified or were not documented. Cumulatively, through 2011, 53% of AIDS patients have been White non-Hispanic, 18% have been Hispanic, and 25% have been Black non-Hispanic, the latter of which is disproportionately large compared with 2010 Census data showing that Blacks or African Americans make up only 12.0% of Clark County’s population.\(^9\)

**Hepatitis**

**Hepatitis A**

SNHD closely tracks and initiates public health actions related to reported cases of Hepatitis A. While most people fully recover from Hepatitis A infections, on rare occasions, the disease can cause liver damage severe enough to require transplantation and it can sometimes be fatal. Through the mid 1990s, Clark County had high among the highest incidence of Hepatitis A infection in the U.S. Accordingly, ours was one of the first communities in the country specifically targeted, in 1996 and 1999, by the Advisory Committee for Immunization Practices, in its recommendations to administer Hepatitis A vaccine routinely to children. Implementation of these recommendations in Clark County resulted in a dramatic decline in incidence of the disease, which is evident during the years 2000 – 2014 (Figure 55). This decrease has occurred among all age groups, but is the most dramatic among children under 15 (Figure 56).

\(^9\) Does not include persons who are multiracial.
Hepatitis B

Hepatitis B incidence has been declining overall in Clark County (Figure 57). Cases of Hepatitis B are reported to SNHD, but we do not perform case investigations except when the diagnosis has been made in patients under the age 18 or over age 50. However, Hepatitis B rarely occurs among children below age 15 and no cases among the <1 yr age group were reported for 2000–2011 (Figure 58). In Clark County, persons in the 25-39 year age group have consistently had the highest rates of newly diagnosed Hepatitis B infection.

**Figure 57.** Incidence of Hepatitis B in Clark County, 2000–2011.

Incidence of Hepatitis B infection in Clark County, 2000–2011, by age group. No Hepatitis B cases were reported in the <1 yr age group in the 2000 to 2011 time frame.

**Figure 58.** Incidence of Hepatitis B infection in Clark County, 2000–2011, by age group. No Hepatitis B cases were reported in the <1 yr age group in the 2000 to 2011 time frame.

**Hepatitis C**

Incidence of Hepatitis C in Clark County has remained relatively low and steady during the past decade, with one year’s exception (Figure 59). In 2008, a much higher than normal number of Hepatitis C cases were reported, many of which were believed to have been part of an outbreak, the cause of which we traced to unsafe injection practices at an endoscopy clinic. The outbreak primarily affected persons 40 years and older. With the exception of 2008, the vast majority of reported cases of Hepatitis C in Clark County have been among persons 25 to 64 years of age (Figure 60). One other spike in cases can be seen. In 2011, a higher than normal number of cases among persons in the 25-39 year age category was observed. Further investigation found
no links among these persons although most of them had one or more of the most common risk factors for acquiring Hepatitis C infection, such as having a history of IV drug use.

**Figure 59.** Incidence of Hepatitis C infection in Clark County, 2000–2011.

**Figure 60.** Incidence of Hepatitis C infection in Clark County, 2000–2011, by age group. No Hepatitis C cases were reported in the <1 yr, 1–4 yr, 5–14 yr, or ≥ 65 yr age groups in the 2000 to 2011 time frame.

**Outbreaks**

Definition of Category: A disease outbreak is the occurrence of cases of disease in excess of what would normally be expected in a defined community, geographical area or season. An outbreak may occur in a restricted geographical area, or may extend over several countries. It may last for a few days or weeks, or for several years. A single case of a communicable disease long absent from a population, or caused by an agent (e.g. bacterium or virus) not previously recognized in that community or area, or the emergence of a previously unknown disease, may also constitute an outbreak and should be reported and investigated.
Communicable disease outbreaks in Clark County in the last two years (2012-2013) were listed in chronological order (most recent first) below.

**Norovirus Gastroenteritis Outbreak among Participants of the Western Division National Youth Football Championships – Las Vegas, Nevada, November, 2013**
On November 29, 2013, the Southern Nevada Health District investigated a norovirus gastroenteritis outbreak among participants of the western National Youth Football Championships (NYFC), hosted by the Rio All-Suites Hotel and Casino in Las Vegas, Nevada (Rio Hotel). The norovirus outbreak affected at least 182 people, who reported being ill at a number of locations, including the Rio Hotel, other local hotels, schools, parks, and other venues where participants stayed, gathered, and frequented.

**Salmonella Gastroenteritis Outbreak Associated with a Potluck Event - Logandale, Nevada, October, 2013**
A gastroenteritis outbreak occurred among attendees of a potluck dinner that was held in Logandale, Nevada on October 19, 2013. Approximately 125-150 of 250 attendees became ill. Confirmatory test results indicate that Salmonella infantis was the causative agent.

**Norovirus Gastroenteritis Outbreak among Patrons of Buca di Beppo Restaurant Excalibur Location – Las Vegas, Nevada, May 2013**
Twenty of 47 local high school students were reported to suffer from gastrointestinal illnesses, subsequent to their having eaten a group meal at Buca di Beppo Restaurant located within the Excalibur Hotel and Casino on May 11, 2013. It is unclear as to how norovirus entered Buca di Beppo. However, we concluded that at least one group of patrons and likely some employees were exposed to norovirus in the restaurant on May 10, and that other groups of patrons became infected with the same genogroup of norovirus on later dates.

**Salmonella I 4,5,12:i:- Gastroenteritis Outbreak among Patrons of Firefly on Paradise Restaurant – Las Vegas, Nevada, April-May, 2013**
The Southern Nevada Health District confirmed a Salmonella I 4,5,12:i:- gastroenteritis outbreak in April–May 2013 at Firefly on Paradise restaurant in Las Vegas, Nevada. The outbreak affected at least 336 people, and was likely due to cross-contamination in the restaurant’s kitchen.

**Norovirus Outbreak among Wedding Reception Guests, Anthem Country Club, Henderson, Nevada, November, 2012**
This norovirus outbreak affected at least 26 people, all of whom were guests at a wedding reception at Anthem Country Club on November 24, 2012. All ill guests had similar symptoms, diarrhea and vomiting, typical of norovirus infections. The outbreak etiology was confirmed through laboratory testing to be norovirus genogroup II.
Norovirus Outbreak among Attendees of a Dinner Gala at Griffin Mansions – Las Vegas, Nevada, May 2012

A norovirus outbreak occurred among 203 attendees of a dinner gala at Griffin Mansions on May 9, 2012 in Las Vegas, Nevada. The source of the norovirus infection was not identified, but the investigation revealed an unlicensed kitchen and a domestic well that might have provided contaminated potable water.
Community Themes and Strengths Assessment
Community Themes and Strengths

Background
The Mobilizing for Action through Planning and Partnerships (MAPP) is a strategic planning framework for improving community health. MAPP was developed by the National Association of County and City Health Officials (NACCHO) and the Centers for Disease Control and Prevention (CDC) to aid communities in devising creative solutions to public health problems in partnership with their local public health agency (NACCHO, 2010). The Lincy Fellowship supports a partnership between the fellow at the University of Nevada Las Vegas (UNLV) School of Nursing (SON) and the Southern Nevada Health District (SNHD) to complete one phase of this strategic planning process for improving this community’s health. This phase is the Community Themes and Strengths Assessment (CTSA), which is intended to provide a deep understanding of the issues that residents feel are important by answering the questions:

- What is important to our community?
- How is quality of life perceived in our community?
- What assets do we have that can be used to improve community health?

This report meets the first objective of the project: To complete a qualitative assessment of the community’s perceptions of issues of importance, health related quality of life, and resources available to improve health.

Methods
To obtain the first phase of qualitative data, two large group meetings were held at the UNLV Student Union on April 12, 2011 (4 hour afternoon session) and April 13, 2011 (4 hour morning session), with either lunch or breakfast provided as appropriate. The SNHD provided in-kind assistance by assigning administrative personnel to send out e-mailed and faxed invitations to 350 people representing a cross-section of the community and a variety of community organizations and agencies.

During the large group meetings, the facilitator elicited not only themes of what is important to our community, but also an assessment as to how well the community is doing on each important theme. In addition, the facilitator conducted an exercise in which participants moved in small groups to various stations to write names of assets under categories, such as History. One of the stations was a large map of Clark County, where participants used push pins to identify community assets. At the end of the exercise, a participant read each of the items listed at each station. The facilitator then conducted a group discussion on the findings. At the large group meetings, we asked attendees to complete a short written qualitative survey about quality of life in the Las Vegas area.
At the conclusion of the large group meetings, we identified sectors not represented and arranged focus groups or individual interviews to fill in gaps. We obtained UNLV Institutional Review Board approval for the interviews and focus groups.

There were a total of 62 attendees at the large group meetings. We gathered focus group or interview data from an additional 12 persons.

Table 1: Community Sectors Represented

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Community As Partner Framework</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community Core: Its people, history, values, and characteristics</strong></td>
<td>Hispanic organizations, African-American organizations, Religious organizations, Citizens</td>
<td>Native Americans, Asian Americans</td>
</tr>
<tr>
<td><strong>Physical Environment: Built and air, water, ground environment; climate</strong></td>
<td>Foundation stewarding public lands, Municipal government employees</td>
<td>Water supply/ treatment, Land developers</td>
</tr>
<tr>
<td><strong>Health and Social Services</strong></td>
<td>Child health research/policy, Hospitals, Health care providers, Homeless service providers, Mental health providers, Hospital nurses, School nurses, Social service agencies, Social workers, Lincy Institute</td>
<td>Physicians</td>
</tr>
<tr>
<td><strong>Safety &amp; Transportation: Public protection, mobility resources</strong></td>
<td>Metro police, Fire departments, Ambulance, Transportation providers, Transportation planners</td>
<td></td>
</tr>
<tr>
<td><strong>Communication: Media</strong></td>
<td>Print/on-line news</td>
<td>Television, radio</td>
</tr>
<tr>
<td><strong>Government &amp; Politics: Laws, policies, agencies, regulators</strong></td>
<td>U.S. Senator, U.S. Congressman, Municipal government employees, Health District employees, State agency employees</td>
<td>Local and state elected officials, Zoning boards</td>
</tr>
<tr>
<td><strong>Education: K – 12, higher education</strong></td>
<td>PTA, UNLV and NSC, CCSD</td>
<td>Technical schools, Private higher ed.</td>
</tr>
<tr>
<td><strong>Economics: Financial characteristics and effects</strong></td>
<td>Businesses, Unions</td>
<td></td>
</tr>
<tr>
<td><strong>Recreation: Organized or casual</strong></td>
<td>YMCA</td>
<td></td>
</tr>
</tbody>
</table>

**Results**

What is important to our community?

The following themes (listed alphabetically) emerged in both group meetings, as well as in focus
groups/ interviews. The colors indicate how well (in general) participants think the community is doing on these themes: **Good**, **Okay**, or **Poor**.

1. Community engagement
2. Built environment
3. Diversified economy
4. Education (access, commitment, quality)
5. Healthcare (access, quality, continuity)
6. Public safety

The following themes emerged in one group meeting, as well as in focus groups/interviews.

7. Cultural opportunities
8. Family support
9. Good government
10. Recreation (second group included this under Built Environment)
11. Social services

The following themes emerged in the focus groups/interviews only.

12. Mental health services
13. Provision of public services at an adequate level
14. Synergy between education and economy
15. Healthy public policies
16. Partnership/communication among organizations
17. Leadership (as distinct from government)
18. Beauty in natural environment

The large groups on Day 1 and Day 2 wrote definitions of the themes. These are their unedited summaries.

*Community engagement:*

- Day 1. “In the arena of community engagement, a key characteristic of a healthy community is an organized collaboration of active dedicated volunteers as illustrated by meeting community needs, adequate volunteer resources, recruitment and training, increased sense of community, and an increase in grass root movements.”
• Day 2. “In the arena of community engagement, a key characteristic of a healthy community is an engaged public invested in their community as illustrated by volunteerism, parental engagement in education, public/private partnerships, and public dialogue.”

*Education:*

• Day 1. "In the arena of education, a key characteristic of a healthy community is affordable, available, equitable, instruction that spans the lifetime and engages students, legal guardians, and the community as illustrated by appropriate class size, qualified teachers, access to current materials and technology, availability of career guidance, increased literacy rates, increased graduation rates, increased number of post graduates, variety of educational opportunities, and adequate support services."

• Day 2. "In the arena of education, a key characteristic of a healthy community is access to quality and affordable education as illustrated by graduation rates and lifelong learning opportunities."

*Built environment:*

• Day 1. "In the arena of built environment, a key characteristic of a healthy community is safe, multimodal, urban planning, mix of housing, transportation access, knowing and interacting with your neighbors."

• Day 2. "In the arena of built environment, a key characteristic of a healthy community is affordable development for all income levels that promotes a connected community as illustrated by access to parks and trails, access to healthy and sustainable food, access to public transit systems, and access to nature."

*Diversified economy:*

• Day 1. "In the arena of economy, a key characteristic of a healthy community is a diverse and sustainable economy and taxes are fair and stay in the state, as illustrated by adequate jobs, living wages, and a healthy business climate."

• Day 2. “In the arena of economy, a key characteristic of a healthy community is a diverse business community as illustrated by low unemployment rate, job training and career planning, low poverty rate—job availability (living wage jobs) and diversity, quality of jobs, and opportunities for growth and improvement.”

*Health care:*

60
• Day 1. “In the arena of healthcare, a key characteristic of a healthy community is access to quality healthcare as illustrated by prevention, affordability, education, accessibility, comprehensive, and adequate supply of primary care providers.”

• Day 2. “In the arena of healthcare, a key characteristic of a healthy community is access to quality, affordable care as illustrated by affordable health insurance, primary care providers and specialists, mental health, comprehensive prevention and wellness, academic medical centers for training, patient safety/transparency, and accountability in healthcare industry.”

Public safety:

• Day 1. “In the arena of public safety, a key characteristic of a healthy community is police and fire protection awareness, education, and communication as illustrated by freedom from fear and public readiness.”

• Day 2. “In the arena of public safety, a key characteristic of a healthy community is to live and work in an environment protected from lawlessness through good relationships among neighborhood residents and public service personnel.”

Cultural opportunities:

• Day 1. “In the arena of culture, a key characteristic of a healthy community is the successful identification and promotion of opportunities as illustrated by increased participation community wide!”

Family support:

• Day 2: “In the arena of family support, key characteristic of a healthy community are access and availability of service and resources to fully participate in community activities; availability and access to wrap-around services for families (inclusive of elderly, disabled) as illustrated by youth programming is available, equal access (no barriers), business sponsorship (public-private partnerships, internships for students or adopt a school), and some funding by the state and county for youth services, family support health, etc…..‘match funds.’”

Good government:
• Day 2. “In the arena of government, a key characteristic of a healthy community is honest government, wise spending of tax dollars ($$) and integration of resources as illustrated by effective communication, transparency of government operations, sustainable tax resources, and wise government spending.”

Recreation:

• Day 2: "In the arena of recreation, a key characteristic of a healthy community is availability of parks and recreational facilities and programs for all ages as illustrated by parks, famers’ markets, and community activity programs."

Social services:

• Day 1. “In the arena of social services, a key characteristic of a healthy community is a variety of comprehensive social services for all ages backed with adequate funding as illustrated by programs and services for (both inpatient and outpatient): mental health, addiction, youth and families, and seniors."

What are our community’s assets?

Participants were able to identify long lists of assets in all of the categories: History, Future Plans, Informal Sector, Public Sector, Private Sector, Voluntary Sector, Environmental, and Map (see Appendix). Recurrent themes were good weather, demographic diversity, wealthy individuals, access to politicians, name recognition for Las Vegas, RTC, casinos, faith community, Three Square, Opportunity Village, Southern Nevada Health District, Hoover Dam, Nellis AFB, and celebrities. Several participants identified the schools as assets because they are widely distributed and could be used to build social capital in neighborhoods. A focus group of school nurses identified themselves as public sector assets. The longest list of all was Voluntary Sector Assets, which in the group discussion following the activity, the participants concluded that residents created a result of state and local governments providing so few social and public health services.

The surface of the map after two days of asset mapping was covered with push pins, which identified parks and other recreational venues, schools, hospitals, the airport, tourist attractions, and Nellis Air Force Base.

What is our quality of life?

The results from this 12 question survey indicate that respondents (n=57), on average, rated
Southern Nevada as a 2.5 on a scale of 1 – 5 (worst to best) for achieving the benchmarks of a healthy community. The Cronbach’s alpha coefficient for internal reliability was .85, indicating adequate reliability. Table 2 has a list of individual variables with the mean score for each.

Table 2. Quality of Life Questionnaire (scale 1= worst to 5 = best)

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are you satisfied with the quality of life in our community?</td>
<td>2.77</td>
</tr>
<tr>
<td>2. Are you satisfied with the health care system in the community?</td>
<td>2.14</td>
</tr>
<tr>
<td>3. Is this community a good place to raise children?</td>
<td>2.12</td>
</tr>
<tr>
<td>4. Is this community a good place to grow old?</td>
<td>2.56</td>
</tr>
<tr>
<td>5. Is there economic opportunity in the community?</td>
<td>2.21</td>
</tr>
<tr>
<td>6. Is the community a safe place to live?</td>
<td>3.03</td>
</tr>
<tr>
<td>7. Are their networks of support for individuals and families?</td>
<td>2.79</td>
</tr>
<tr>
<td>8. Do all individuals and groups have the opportunity to contribute to and participate in the community’s quality of life?</td>
<td>2.70</td>
</tr>
<tr>
<td>Continued…</td>
<td></td>
</tr>
<tr>
<td>Table 2, continued.</td>
<td></td>
</tr>
<tr>
<td>9. Do all residents perceive that they – individually and collectively – can make the community a better place to live?</td>
<td>2.32</td>
</tr>
<tr>
<td>10. Are community assets broad-based and multi-sectoral?</td>
<td>2.26</td>
</tr>
<tr>
<td>11. Are levels of mutual trust and respect increasing among community partners as they participate in collaborative activities to achieve shared community goals?</td>
<td>2.97</td>
</tr>
<tr>
<td>12. Is there an active sense of civic responsibility and engagement and of civic pride in shared accomplishments?</td>
<td>2.37</td>
</tr>
</tbody>
</table>

**Discussion**

It was challenging for the facilitator and the focus group leader to keep participants on track to identifying community themes and strengths, as many wished to report problems instead. However, we were able to limit such discussions by refocusing participants on the major questions and by assisting them to reframe negative observations as positives. For example, when participants made comments such as “The state doesn’t provide enough funding for education,” the moderator would respond, “So, you are saying access to education is important for a healthy community. Is that correct?”

In many ways, this was a visioning process, with participants describing the type of community they would find ideal and might look for if relocating. This was also an educational process for attendees who had little previous experience with community assessment. Although many
participants had not previously heard of the concept of built environment, when a small group introduced it into the large group discussions, most embraced it as encompassing many of their desired community attributes, such as zoning that promotes exercise and interaction of neighbors, adequate parks and open space, options for public transportation, and access to healthy food sources, such as full service grocery stores. At the same time, this concept elicited some insight into the fact that the governments in the Clark County area have not managed its enormous, rapid population growth in the past twenty years in a way that benefits quality of life.

Participants were able to identify themes important to the community. However the best that the Las Vegas area ranked in any of these was “okay,” with most of them getting a “poor” ranking. As it is not possible to infer rank order for those most in need of improvement, the SNHD may consider structuring the other MAPP assessments to identify areas that need priority attention.

Participants ranked quality of life in the area as below average (2.5 out of 5), indicating the need to improve. The large number and variety of assets offer possible resources for community improvement. A focus group participant mentioned that even casino executives were beginning to recognize the value of improving the education level of residents, as a good school system helps them attract managerial talent to Las Vegas, while providing a labor supply better suited to an increasingly sophisticated clientele.

Although the convened groups ranked Southern Nevada as “okay” or “poor” on many aspects of community engagement, the list for Voluntary Sector assets was the longest. In education, many physical assets were listed, such as UNLV and CCSD, but there was no listing of adequate funding or community support for these public entities.

Under private sector assets, the groups listed only “stroke centers of excellence,” which are associated with for profit hospitals. No hospitals other than UMC were listed, although several were identified on the asset map. Two separate focus groups identified the rich array of media in Southern Nevada, which some identified as possible assets for uniting and educating the community.

**Limitations**

Due to the county’s large population size (1.9 million), it was not possible to conduct a random sample survey that would be representative. Instead, the focus was on people and organizations that represent major sectors of this community. For various reasons, some sectors were not represented. For example, we were unable to interview physicians or members of the Moapa Band of the Paiute due to their non-response to repeated invitations. The Nevada Legislature was in session during the large meetings, with legislators in Carson City and unable to attend.
On the day of the event, the lone elected official who had planned to attend called to cancel. Asians, in particular, were under-represented in the sample.

**Conclusions and Recommendations**

A positive observation is that so many individuals were willing to invest many hours to participate in this process. They praised the ToP facilitator and the method used. They were pleased that the Lincy Foundation funded this project and that the SNHD was reaching out to the community. There was consensus that they would like to stay involved in the process and receive a report of findings. This core group represents an asset for community involvement.

In general, however, participants concluded that Southern Nevada falls short of the mark in many of the requirements important for a healthy community and desirable quality of life. The need for improvements in education, health care, the economy, and built environment dominated much of the discussion. One person interviewed identified wise government leadership as key to achieving improvements in these areas.

As a result of this CTSA, and in collaboration with SNHD leaders, we completed a Values and Visioning document. See document by that name attached to this email. The next step is to structure the remaining MAPP assessments, based on data obtained from this assessment.

- The Local Public Health System Assessment (LPHSA) focuses on all the organizations and entities that contribute to the public’s health. The LPHSA answers the questions: “What are the components, activities, competencies, and capacities of our local public health system,” and “How are Essential Services being provided to our community?”
- The Community Health Status Assessment identifies priority community health and quality of life issues. Questions answered include: “How healthy are our residents?” and “What does the health status of our community look like?” The Forces of Change Assessment focuses on identifying forces such as legislation, technology, and other impending changes that affect the context in which the community and its public health system operate. This answers the questions: “What is occurring or might occur that affects the health of our community or the local public health system?” and “What specific threats or opportunities are generated by these occurrences?”

The organizations that sent participants to the group meetings should be included in the LPHSA. In particular, some participants mentioned that there was duplication and lack of coordination among the various service providers (including the SNHD) when it came to providing essential services. The SNHD might consider its role in assurance, not only by looking at what is not
provided but also in what is being provided by multiple organizations.

There are relatively minor events that will not have as much of an impact as stabilizing population, increasing Hispanic population, declining funding for public health, continuing unemployment (with loss of health insurance), and other larger forces affecting public health. Given the non-participation of elected state and local officials in the CTSA, the SNHD should ensure their participation in the Forces of Change Assessment.
Local Public Health System Assessment
Local Public Health System Assessment

It takes more than healthcare providers and public health agencies to address the social, economic, environmental and individual factors which influence health. The local public health system is comprised of agencies, organizations, individuals and businesses that must work together to create conditions for improved health in a community (below).

The Local Public Health System Assessment (LPHSA) is one of four MAPP assessments that inform the development of a strategic community health improvement plan. The purpose of the assessment is to identify the activities and capacities of our local public health system and identify areas for strengthening the system's ability to respond to day-to-day public health issues and to public health emergencies. The LPHSA uses the National Public Health Performance Standards Program (NPHPSP) local instrument, developed collaboratively by seven national public health organizations. The assessment focuses on standards that are based on the Ten Essential Public Health Services by which local public health system performance can be determined.

Background
The Southern Nevada Health District (SNHD) received a grant from NACCHO to complete the remaining three MAPP assessments. It assembled a task force to complete the LPHSA within the time required by the grant. The Task Force reviewed the NPHPSP Tool Kit to determine the best method for this jurisdiction, which has a population of approximately 2 million people.
Methods: Assessment Process

The LPHSA Task Force decided to conduct the assessment using two approaches, one broad and one targeted. The NPHPSP Local Instrument (a valid and reliable tool) is divided into separate surveys for each of the Ten Essential Services. For each of the Essential Services, the NPHPSP has established two to four model standards that describe the key aspects of an optimally performing public health system. Each model standard is followed by assessment questions that serve as measures of performance. Responses to these questions should indicate how well the model standard – which portrays the highest level of performance or “gold standard” – is being met.

The broad approach involved putting each survey online using Survey Monkey, then inviting specific individuals/agencies to complete one or two surveys that most closely fit with their area of expertise or responsibility. For example, many model standards for Essential Service 6 concern public health laws and their enforcement, so members of the Southern Nevada Board of Health, among others, were invited to complete this survey. The Task Force met to determine which agencies and individuals should receive an e-mailed invitation to complete one or more specific surveys. To extend our reach, we used snowball sampling, requesting that individuals receiving the invitation forward it to others in the LPHS who were knowledgeable about the particular Essential Service. The survey was anonymous, with a space to self-identify if the individual was interested in assisting with the assessment process in more depth. All participants were asked to identify which segment of the LPHS they represented; e.g., health care provider, nursing home.

The responder was asked to answer each question with one of the following standard choices: No, Minimal, Moderate, Significant, Optimal. Because these surveys were being sent to individuals who might have knowledge of only some of the model standards, we added an additional category of No Knowledge to try to avert blanks or selection of a random response.

There were 761 e-mail invitations sent on January 9, 2012, with a reminder e-mail sent three weeks later. The surveys were closed on January 31, 2012, with all data downloaded from Survey Monkey for data analysis using IBM SPSS Statistics Version19. Responses were coded from 1 to 5, with 1 representing No and 5 representing Optimal. Descriptive statistics, including mean and median, were calculated. Further, t-tests for independent samples were completed to identify differences between responses from SNHD employees compared to non-employees. For model standards that had large standard deviations, we used the median instead of the mean.
Concurrent with deploying the surveys, the Task Force planned a half day retreat to assess in person a small subset of the LPHS’s Model Standards, based on the preliminary analysis of the survey data. The Task Force invited to this retreat those individuals who had self-identified as interested on the survey, all of the original survey invitees, and selected SNHD administrators and managers. For this event, the Task Force employed a facilitator who had assisted with the Community Themes and Strengths Assessment. The facilitator uses a technique called the Technology of Participation to achieve consensus from large groups. This method allowed participants to use the Discussion Toolboxes in the survey, which was not possible for the online survey. When we had achieved consensus on this subset of Model Standards for Essential Services 3, 4, and 9, we used those results in place of the online survey results. The retreat was held on February 16, 2012.

The results for all model standards (rounded up or down as appropriate to select one of the categorical answers) were submitted to the NPHPSP for analysis. Its full report is in the Appendix. This summary report includes highlights from the full report.

**Results**
There were 440 surveys returned. Responses by Essential Services are below.

<table>
<thead>
<tr>
<th>Essential Service</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>64</td>
</tr>
<tr>
<td>2</td>
<td>38</td>
</tr>
<tr>
<td>3</td>
<td>84</td>
</tr>
<tr>
<td>4</td>
<td>91</td>
</tr>
<tr>
<td>5</td>
<td>45</td>
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<tr>
<td>6</td>
<td>15</td>
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<tr>
<td>7</td>
<td>62</td>
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<tr>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
</tr>
</tbody>
</table>
Survey respondents are categorized by agency below.

<table>
<thead>
<tr>
<th>Mental health care provider</th>
<th>Survey 1</th>
<th>Survey 2</th>
<th>Survey 3</th>
<th>Survey 4</th>
<th>Survey 5</th>
<th>Survey 6</th>
<th>Survey 7</th>
<th>Survey 8</th>
<th>Survey 9</th>
<th>Survey 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood organization</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Non-profit organization/public advocacy group</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Nursing home</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
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<tr>
<td>Other community organization</td>
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<td>1</td>
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<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>Public safety and emergency response organization</td>
<td>6</td>
<td>4</td>
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<td>1</td>
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<td>Professional organization</td>
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<tr>
<td>Social service provider</td>
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<td>Southern Nevada Board of Health</td>
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<tr>
<td>Transportation provider</td>
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<td>62</td>
<td>63</td>
<td>64</td>
<td>65</td>
<td>66</td>
</tr>
</tbody>
</table>

There were 84 attendees at the half day retreat. Seventy percent of the attendees were non-SNHD employees. The represented wide variety of the LPHS, including health care providers; hospitals; public safety and emergency response; clergy; city, county, and state government; college and universities; charities; social services; insurers; advocacy organizations; public utilities (water); and the media.

Charts on the following pages depict summary scores for a series of questions. Findings for each section highlight scores related to the key questions represented by the summary chart. The meaning of each category is identified below.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO ACTIVITY</td>
<td>0% or absolutely no activity.</td>
</tr>
<tr>
<td>MINIMAL ACTIVITY</td>
<td>Greater than zero, but no more than 25% of the activity described within the question is met.</td>
</tr>
<tr>
<td>MODERATE ACTIVITY</td>
<td>Greater than 25%, but no more than 50% of the activity described within the question is met.</td>
</tr>
<tr>
<td>SIGNIFICANT ACTIVITY</td>
<td>Greater than 50%, but no more than 75% of the activity described within the question is met.</td>
</tr>
<tr>
<td>OPTIMAL ACTIVITY</td>
<td>Greater than 75% of the activity described within the question is met.</td>
</tr>
</tbody>
</table>

Using the responses to all of the assessment questions, a scoring process generates scores.
for each first-tier or "stem" question, model standard, Essential Service, and one overall score.

**Executive Summary**

How well did the system perform the ten Essential Public Health Services (EPHS)? Summary of EPHS performance scores and overall score (with range)

![Bar chart showing performance scores for each Essential Public Health Service (EPHS)]

**Overall Findings:** While no areas overall were ranked as No or Minimal Activity, none were ranked as Optimal Activity. Assuring a Competent Workforce had the greatest variability in scores and should be investigated further. By rank order, the lowest performance scores (Moderate) were for Essential Services 1, 4, 8, 9, and 10. The highest scoring Essential Service was 6. Enforce Laws (Significant).

**Monitor Health Status to Identify Community Health Problems**

**Key Questions:** Does our local public health system conduct community-wide health assessments to create a community health profile on a regular basis? Do we use technology to interpret and communicate the assessment data? Is there collaboration in our local public health system to use population health registries?
Findings: The population-based Community Health Profile had the largest variability in responses, from Minimal to Significant Activity.

Diagnose and Investigate Health Problems and Health Hazards in the Community

Key Questions: Does our local public health system conduct surveillance to identify health threats? How well do we investigate and respond to public health threats and emergencies? Is there access to laboratory support for investigation of health threats?

Findings: There was little variability between categories with an overall score of Moderate.

Inform, Educate, and Empower Individuals and Communities about Health Issues

Key Questions: Does the local public health system collaborate to create and deliver health education and promotion activities? Do we use health communication plans to inform and influence individual and community decisions about health? Are there risk communication processes in our local public health system to inform and mobilize the community in times of crisis?

Findings: There was great variability in this model standard, primarily because sections of this Essential Service were assessed during the retreat. While survey takers in general rated these model standards as having Moderate Activity, the consensus retreat rated sections 3.1.1 and 3.2.1 as Minimal Activity. Some of the comments below from the small group exercise reflect participants’ view that the LPHS is the SNHD. During the consensus phase, we were able to
broaden participants’ views of the components of the LPHS.

Comments:

“Limited communication between LPHS and primary care physicians except for emergency preparedness.”

“There is a lack of local/state data available to support policy change.”

“Need a holistic approach to maximize resources/alignment of activities & priorities.”

“LPHS and health care systems need better communication.”

“Communication among organizations in general is limited.”

“Information is provided through website but unclear how effectively. Effectiveness relates to which audience. Need to communicate better to policy makers & public stakeholders than to public.”

“Have educational tools available for general public, but not doing well at communicating how to find these materials.”

“Governor has a strategic plan, but who had input?”

“All on the side streets; no one on the main road.”

“Much communication but needs to be coordinated in the system.”

“Need to be able to articulate value of public health that translates into support for health in all policies (land use, medical, education, etc.)”

*Mobilize Community Partnerships to Identify and Solve Health Problems*

**Key Questions:** Is there a process in place to develop collaborative relationships between current and potential constituents in the local public health system? Is there a broad-based community partnership to assure a comprehensive approach to improving health?
Findings: Sections 4.1.2, 4.1.4, and 4.2.1 were ranked as Minimal Activity by the retreat attendees, whereas responses to the online survey ranged from Moderate to Significant Activity.

Comments:

“Much good stuff is happening but not systematically. Who is responsible for coordinating/fostering system?”

“Partners do share. Fire/emergency works well. Sometimes a partner can’t help because it doesn’t have resources.”

“Collaboration within refugee communities good; other programs not so much.”

“Overall is minimal because until we are in partnerships driven by needs, the likelihood of partnerships forming is minimal.”

“What can we do to make things better?”

“No horizontal communication. No overall planning or coordination, leading to duplication of services. Some efforts are present, but much still occurs in a silo. Need method to maintain/update resources.”

“Territoriality. Groups tend to focus on their particular interest, not necessarily what is in community’s interest in terms of Essential PH Services.”

“There are gaps in communications between organizations. No over-arching communication.”

“Unless mandated or required by law, this (responsibilities) does not seem to occur.”

“Smaller agencies can have difficulty releasing staff to participate in “partnerships.”

“Lack of clear communication about community’s health – lack of data. Responsibility -- SNHD.”

“Need to identify barriers to effective communication. Need method to maintain/update resources.”

“Depoliticize Nevada Department of Health.”

Develop Policies and Plans that Support Individual and Community Health Efforts

Key Questions: Is there a local governmental public health presence in our community? Does the local public health system review and develop policies to protect and promote health? Does the local public health system have a strategic planning process for community health improvement? Is there community-level planning for responding to public health emergencies?
Findings: There were significant differences in responses between SNHD employees and non-employees on these standards, with SNHD employees averaging Significant for 5.1, compared to Moderate for non-Employees.

Enforce Laws and Regulations that Protect Health and Ensure Safety

Key Questions: Are health and safety laws, regulations and ordinances reviewed, and are they revised or improved to align with best practices? Are there appropriate enforcement activities in our local public health system to assure compliance with health and safety laws and regulations?

Findings: This was the highest ranked Essential Service, although it did not quite reach Optimal Activity. There was little variability among responses or between SNHD employees and non-employees.

Link People to Needed Personal Health Services and Assure the Provision of Health Care When Otherwise Unavailable

Key Questions: Does the local public health system identify personal health service needs of at-risk populations? Do we assure the linkage of people to personal health services?
Findings: There was little variation in responses to this question and no significant differences between responses from SNHD employees and non-employees.

Assure a Competent Public and Personal Health Care Workforce

Key Questions: Is an assessment of workers within the local public health system conducted, are gaps addressed, and are assessment results distributed? Does the local public health system develop and maintain standards for its workforce? Do life-long continuing education opportunities exist for the public health workforce? Are there leadership development opportunities in the local public health system?

Findings: This model standard was ranked the lowest, tied with #10. There was great variability among responses. There were double the number of responses from SNHD employees (n=16) than for none. Leadership development was ranked the lowest.

Evaluate Effectiveness, Accessibility and Quality of Personal and Population-based Health Services

Key Questions: Have population-based health services been evaluated in our community? Have personal health services been evaluated in our community? Has the performance of the overall local public health system been evaluated?
Findings: Subsections 9.1.1, 9.1.2, 9.1.4, 9.2.1, 9.2.3, and 9.2.5 were consensus standards at the retreat, which contributed to the variability shown. All were rated as Minimal Activity, except for 9.1.4 and 9.2.3, which were Moderate Activity. The wide variability between consensus and survey findings indicates the need for further examination of the LPHS performance.

Comments:

“Nevadans have the worst access to health care services.”

“There has been no global assessment of the local health system. There are a lot of assessments done by various organizations, but there is no clear report that summarizes the results a venue where to get the results.”

“On a personal basis, health services are effective and accessible on a moderate level. On a population basis, health services are on a very minimal basis.”

“Need money in the system and partnerships.”

“There are attempts to collect surveys, but only certain groups are being targeted. No funding for ongoing research.”

“The system is overwhelmed – shortage, but there’s no resources to improve even if they want to.”

Research for New Insights and Innovative Solutions to Health Problems

**Key Questions:** Do organizations within the local public health system foster innovation to strengthen public health practice? Are there linkages with institutions of higher learning and research within the public health system? Is there capacity in our community to initiate or participate in public health research?
Findings: This survey had the fewest responses (n=6) and was tied for lowest rank. Further investigation into performance is recommended because of the small sample size and great variability in responses to Research Capacity.

Limitations
In addition to the data limitations noted in Appendix A, there are several other limitations. The assessment used a convenience sample that may or may not have been representative of the LPHS. The sample size was small relative to the size of the area’s population. There was no system in place to prevent a respondent from taking a survey multiple times.

Conclusions and Recommendations
The LPHS is not functioning at Optimum Activity. There was a general lack of knowledge among the community that they were part of the LPHS, which emerged during the retreat. Many responses in the surveys were No Knowledge, indicating a need to educate all members of the LPHS of their roles.

Focus groups to identify themes for Essential Services 8, 9, and 10 would assist in prioritizing areas for action, one of the steps recommended in developing a performance improvement plan. Both 8 and 10 were tied for lowest rank.

For Essential Service 4, Mobilize Partnerships, the consensus retreat ranked some sections of this area as Minimal Activity, indicating a need for improvement not reflected in the summary scores. Of particular note was the need for increased coordination and communication among agencies, which are functioning in silos, according to the comments.
Forces of Change Assessment
Forces of Change Assessment

Purpose
The Forces of Change Assessment (FOCA) is one of the four assessments conducted as part of the Mobilizing for Action through Planning and Partnership (MAPP) framework for strategic planning to improve community health. The FOCA is a qualitative assessment designed to help communities answer the following questions: "What is occurring or might occur that affects the health of our community or the local public health system?" and "What specific threats or opportunities are generated by these occurrences?" Together the four assessments comprise a comprehensive Community Health Assessment (CHA).

Background
In 2012, the Southern Nevada Health District partnered with the University of Nevada, Las Vegas School of Nursing to conduct a FOCA. Focus groups and key informant interviews with community partners were conducted to collect information about the community’s ideas of the major forces that were acting on the local public health system and impacting the health and quality of life of Southern Nevada residents. FOCA participants in 2012 identified the following forces:

1. Access to Care (Affordable Care Act)
2. Economics (high unemployment)
3. Education (inadequate funding)
4. Healthcare (healthcare provider shortage, quality of care)
5. Government (people want services but are unwilling to pay)
6. Climate Change (drought and air pollution)

The purpose of the 2015 FOCA was to verify whether these forces were still relevant and to identify any new forces.

Methodology
Design. The 2015 Forces of Change Assessment survey was developed by SNHD staff who comprise the MAPP subcommittee and was based on the National Association of County and City Health Officials’ (NACCHO) guidelines for the assessment, the 2012 FOCA, and input from the CHA Steering Committee. The survey was designed to collect qualitative data on the forces that are influencing the health or quality of life of Clark County residents and impacting the local public health system. The survey was administered using the internet program SurveyMonkey. It was piloted internally by three SNHD staff members before being sent out to the CHA Steering Committee and other key informants.

Target participants. The 2015 FOCA was designed to get a broad base of input from the local public health infrastructure as defined by NACCHO’s Jellybean Diagram) of the Local Public Health System (LPHS) (Appendix A). Committee members constructed a list of key informants by identifying at least two agencies or organizations from each sector of the LPHS. Efforts were made to ensure that all sectors were represented, with a minimum of 25 participants (with the goal of at least one participant per sector) completing the survey.

Mode & Recruitment. The survey was disseminated in two waves - first to the CHA Steering Committee and second to a larger set of key informants.
Wave 1. Surveys were sent in advance of the February CHA Steering Committee meeting by the Accreditation Coordinator via SurveyMonkey. The survey was discussed in this meeting to garner support from those who had yet to complete the survey and to identify other potential survey respondents. An email reminder was sent to all CHA Steering Committee members after the February meeting.

Wave 2. All targeted participants received an electronic invitation (Appendix B) to participate in the survey from a representative of the CHA Steering Committee or designee, along with information on the purpose of the assessment and a link to the survey via SurveyMonkey. The survey was open for one week, and a reminder was emailed out to the participants before the close of the survey. Prior to the final reminder, gaps in participant sectors were identified and follow-up calls and/or emails were made to persons within sectors having no participation. Where possible, these follow-up calls were made by persons who had previously established relationships with the targeted sector representatives.

Analysis
The CHA Subcommittee assembled a team of five people from diverse public health disciplines to review the data. The team prioritized the identified forces of change into major and minor forces based on frequency. An inductive coding process common in qualitative data analysis was used (along with some deductive elements) to analyze the open-ended information gathered through the survey responses. The team reviewed the data for major themes and combined some categories that were related (e.g., services for mental health and services for substance abuse). Similar themes and forces were grouped together and enumerated where appropriate to quantify common responses. Patterns and trends were analyzed in relation to the forces identified in 2012. All data were anonymous; efforts were taken to remove any identifying information when quoting survey responses.

Results
Participants. Fifty-two participants responded to the survey. Of the respondents, 36 respondents self-identified as belonging in at least one of the listed sectors; 16 respondents skipped this question. Participants represented at least twenty-one different sectors that comprise the local public health system.

Findings. The majority of respondents (77%, n=40) felt that the forces that were identified in the 2012 survey were still relevant in 2015. No discrete new forces were identified; however, qualitative data helped further define the forces that are currently impacting the health and quality of life of the population and the ability of the local public health system to operate. The Figure presents the overall forces identified for 2015, while the Table is a summary of the assessment results grouped by type of force and the opportunities and threats created by each force.
### Economic Forces of Change

<table>
<thead>
<tr>
<th>FORCES</th>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Un- and under-employment</td>
<td>Unemployment rates dropping</td>
<td>Low wages</td>
</tr>
<tr>
<td></td>
<td>Increased hiring (new businesses)</td>
<td>Lack of living wage</td>
</tr>
<tr>
<td></td>
<td>School of Medicine bringing new jobs</td>
<td>High unemployment</td>
</tr>
<tr>
<td></td>
<td>Jobs with benefits</td>
<td>Access to insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Population growth with improving economic picture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poverty</td>
</tr>
</tbody>
</table>

### Political Forces of Change

<table>
<thead>
<tr>
<th>FORCES</th>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordable Care Act</td>
<td>ACA</td>
<td>Poor implementation and utilization – misuse – not working how intended</td>
</tr>
<tr>
<td></td>
<td>Reduced burden on SNHD Access to physician care</td>
<td>Supreme Court Decision may impact</td>
</tr>
<tr>
<td>Inadequate government funding</td>
<td>Education Governor Sandoval’s new Education Plan Technical Education, STEM</td>
<td>Poor education Lack of community support for education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Limited spending for public health</td>
</tr>
</tbody>
</table>

### Environmental Forces of Change

<table>
<thead>
<tr>
<th>FORCES</th>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Built Environment</td>
<td>Better planning and collaboration</td>
<td>Transportation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate planning Uncontrolled growth</td>
</tr>
<tr>
<td>Climate Change</td>
<td>No opportunities were provided</td>
<td>No threats were listed</td>
</tr>
<tr>
<td>Water resources</td>
<td>No opportunities were provided</td>
<td>Water shortage Unaffordable utilities Population growth</td>
</tr>
</tbody>
</table>

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* Bolded opportunities and threats were identified by multiple respondents.

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83
| HEALTHCARE |
|------------|-----------------|------------------|
| **FORCES** | **OPPORTUNITIES** | **THREATS** |
| Access to Care | **Access to providers**<br>Outreach around options to close gap in access<br>Community-based paramedicine<br>MLK Clinic<br>Free and reduced cost services | **Cost Transportation**<br>Economics<br>Travel<br>Undocumented persons receiving health care<br>Mental Health<br>Clinics not accepting NV Medicaid |
| Provider Shortage and Service Gaps | **Proposed schools of medicine** | **Decreased availability**<br>and increased wait times<br>**Lack of mental health care providers** and training<br>Decreased access to providers<br>Lack of specialists and qualified physicians<br>Physician care<br>Lack of funding leading to lack of knowledgeable educators and junk scientists filling the gap |
| Utilization | **Creating outpatient services for mental health** | **Immigrants who are undocumented**<br>Emergency room overcrowding<br>Poor reimbursement |
| Quality of Care | **No opportunities were provided** | **No threats were provided** |
| Poor Coordination of Care and of LPHS | **Collaboration with others**<br>Electronic Health Care Records<br>Health Information Exchange | Lack of knowledge of services<br>Difficulty navigating system (healthcare and social service) |

**Recommendations**

The results of this assessment provide context by which the data generated by the other MAPP assessments can be analyzed to identify strategic issues for the LPHS to target in their community health improvement planning. External forces of change are an important aspect of this process as they represent impending changes outside of the system that may assist or impede the success of our improvement efforts.

Based on the results of the 2015 FOCA, Southern Nevada should pay attention to:

- the impact of political changes:
  - the Affordable Care Act
  - funding allocations
- the composition and quality of the healthcare system
- environmental changes:
  - climate change
  - water scarcity
- socio-economic forces such as
  - unemployment
  - education
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Appendix 1 – List of Tables

Tables 1a&1b. Poverty Estimates, Clark County and Nevada, 2000 vs. 2010 9
Table 3. Clark County and Nevada rankings in health resource availability or quality measures 12
Table 4. Behavioral Risk Factor by Life-Stage Clark County, Nevada 13
Table 5. Behavioral Risk Factor by Special Populations, Clark County, Nevada 14
Table 6. Indicators by Special Populations, Clark County, Nevada 16
Table 7. Behavioral Risk Factor by Life-Stage Clark County, Nevada 16
Table 8. Tobacco and Alcohol Abuse by Special Populations, Clark County, Nevada 17
Table 9. Physical Environment 17
Table 10. Abstention from cigarette smoking during pregnancy, Clark County, NV, 2000-2012 23
Table 11. Abstention from alcohol use during pregnancy, Clark County, NV, 2000-2012 23
Table 12. Teen birth/pregnancy rates by age, Clark County-NV, 2010-2012 24
Table 13. Indicators by Special Populations, Clark County, Nevada 2012 24
Table 14. Leading Causes and Total 10-Year Numbers of Deaths, by Age Group, Ages 0-24 years, Clark County, Nevada, 2004-2013 35
Table 15. Leading Causes and Total 10-Year Numbers of Injury-Related Deaths, by Age Group, Ages 0-24 years, Clark County, Nevada, 2004-2013 35
Table 16. Adults Aged 65 Years Vaccinated Against Influenza within Past Year, Clark County, Nevada 2010 37
Appendix 2 – List of Figures

Figure 2. Population estimates and census counts, Clark County, 1990-2014 6
Figure 3. 2000 Population Histogram, Clark County, All Race/Ethnicity 6
Figure 6. Unemployment Rates, U.S. and Clark County, Nevada, 2000-2014 9
Figure 7. High School Dropout Rates – 2010-2011 School Year 11
Figure 8. Neonatal Death Rate (First 28 Days of Life), Clark County and Nevada, 2000-2008 19
Figure 9. Prenatal care rates, Clark County, NV, 2000-2013 19
Figure 10. Preterm birth rate, Clark County, NV, 2000-2013 20
Figure 11. Low birth-weight infants, Clark County, NV, 2000-2013 21
Figure 12. Very low birth weight infants, Clark County, NV 2000-2013 22
Figure 13. Age-Adjusted Mortality Rate Caused by Disease of Heart by Gender, Clark County, Nevada, 2004-2013 25
Figure 14. Age-Adjusted Mortality Rate Caused by Disease of Heart by Race/Ethnicity, Clark County, Nevada, 2004-2013 25
Figure 15. Age-Adjusted Mortality Rate Caused by Malignant Neoplasms by Gender, Clark County, Nevada, 2004-2013 26
Figure 16. Age-Adjusted Mortality Rate Caused by Malignant Neoplasms by Race/Ethnicity, Clark County, Nevada, 2004-2013 26
Figure 17. Age-Adjusted Mortality Rate Caused by Chronic Lower Respiratory Diseases by Gender, Clark County, Nevada, 2004-2013 27
Figure 18. Age-Adjusted Mortality Rate Caused by Chronic Lower Respiratory Diseases by Race/Ethnicity, Clark County, Nevada, 2004-2013 27
Figure 19. Age-Adjusted Mortality Rate Caused by Cerebrovascular Diseases by Gender, Clark County, Nevada, 2004-2013 28
Figure 20. Age-Adjusted Mortality Rate Caused by Cerebrovascular Diseases by Race/Ethnicity, Clark County, Nevada, 2004-2013 28
Figure 21. Adjusted Mortality Rate Caused by Unintentional Injuries by Gender, Clark County, Nevada, 2004-2013 29
Figure 22. Age-Adjusted Mortality Rate Caused by Unintentional Injuries by Race/Ethnicity, Clark County, Nevada, 2004-2013 29
Figure 23. Age-Adjusted Mortality Rate Caused by Alzheimer Disease by Gender, Clark County, Nevada, 2004-2013 30
Figure 24. Age-Adjusted Mortality Rate Caused by Alzheimer Disease by Race/Ethnicity, Clark County, Nevada, 2004-2013 30
Figure 25. Age-Adjusted Mortality Rate Caused by Diabetes Mellitus by Gender, Clark County, Nevada, 2004-2013 31
Figure 26. Age-Adjusted Mortality Rate Caused by Diabetes Mellitus by Race/Ethnicity, Clark County, Nevada, 2004-2013 31
Figure 27. Age-Adjusted Mortality Rate Caused by Influenza and Pneumonia by Gender, Clark County, Nevada, 2004-2013 32
Figure 28. Age-Adjusted Mortality Rate Caused by Influenza and Pneumonia by Race/Ethnicity, Clark County, Nevada, 2004-2013 32
Figure 29. Age-Adjusted Mortality Rate Caused by Nephritis, Nephrotic Syndrome and Nephrosis by Gender, Clark County, Nevada, 2004-2013 33
Figure 30. Age-Adjusted Mortality Rate Caused by Nephritis, Nephrotic Syndrome and Nephrosis by Race/Ethnicity, Clark County, Nevada, 2004-2013 33
Figure 31. Age-Adjusted Mortality Rate Caused by Suicide by Gender, Clark County, Nevada, 2004-2013 34
Figure 32. Age-Adjusted Mortality Rate Caused by Suicide by Race/Ethnicity, Clark County, Nevada, 2004-2013...
Figure 33. Proportion of Adults Aged > 65 Years Vaccinated Against Influenza, Clark County and Nevada...
Figure 34. Proportion of Adults > 65, Ever Received Pneumococcal Vaccine, 2000–2008, Clark County and Nevada...
Figure 35. Number of TB cases by year, 1982–2012, U.S....
Figure 36. Number of TB cases by year, 2004–2013, Clark County Source: Southern Nevada Health District TB program internal data...
Figure 37. TB rates by year, 2004–2013, Clark County...
Figure 38. Nevada TB rates higher than the U.S. average, 2010...
Figure 39. Numbers of TB Cases by Gender, 2003 – 2011, -- Clark County...
Figure 40. TB Rates by Gender, 2003–2010 – Clark County...
Figure 41. TB incidence by age category, 2003–2010 -- Clark County...
Figure 42. Incidence of tuberculosis among age group <5 years, Clark County vs. U.S., 2000-201042...
Figure 43. Risk factors for contracting active tuberculosis disease in Clark County, 2003–2010...
Figure 44. Percent of total TB patients born outside the U.S.1999-2011, Clark County, Nevada, and U.S.44...
Figure 45. Chlamydia cases, 2000-2011 – Clark County44...
Figure 46. Gonorrhea cases, 2000-2011 – Clark County44...
Figure 47. Syphilis cases, 2000–2011, Clark County45...
Figure 48. Chlamydia infection rates, 2000–2010 – Clark County, Nevada, and the U.S.46...
Figure 49. Gonorrhea infection rates, 2000–2010 – Clark County, Nevada, and the U.S.46...
Figure 50. Syphilis rates (all stages, including congenital), 2000-2010, Clark County, Nevada, and the U.S.46...
Figure 51. Numbers of congenital syphilis cases by year, Clark County, 2006-201047...
Figure 52. Rates of congenital syphilis in Clark County and the U.S., 2000–201047...
Figure 53. Numbers of new AIDS cases and AIDS-related deaths by year, Clark County, 1984–201149...
Figure 54. Ratio of AIDS-related deaths to newly diagnosed AIDS cases, Clark County, 1984–2011.49...
Figure 55. Annual Hepatitis A Incidence in Clark County, 2000 – 2014.51...
Figure 56. Reported Hepatitis A in Clark County by Age Group, 2000 – 2011.51...
Figure 57. Incidence of Hepatitis B in Clark County, 2000–2011.52...
Figure 58. Incidence of Hepatitis B infection in Clark County, 2000–2011, by age group.52...
Figure 59. Incidence of Hepatitis C infection in Clark County, 2000–2011.53...
Figure 60. Incidence of Hepatitis C infection in Clark County, 2000–2011, by age group.53...
Community Health Assessment

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