



2018–2020
Washoe County
Community Health
Needs Assessment

The 2018-2020 Washoe County Community Health Needs Assessment was sponsored in full by the Washoe County Health District and Renown Health in collaboration with Truckee Meadows Healthy Communities.

**WASHOE COUNTY
HEALTH DISTRICT**
ENHANCING QUALITY OF LIFE

Renown[®]
HEALTH



TRUCKEE MEADOWS
HEALTHY COMMUNITIES

Published January 2018

2018-2020 Washoe County Community Health Needs Assessment

Acknowledgments..... i

Introduction 1

Contents, Methodology, & Community Survey Demographics..... 2

Technical Notes..... 9

Washoe County Geography & Demographics 11

Socioeconomic Status 17

Housing 46

Food & Hunger 59

Access to Healthcare..... 69

Environmental Health 87

Unintentional Injuries & Deaths 101

Crime & Violent-Related Behaviors 111

Nutrition & Physical Activity 125

General Health 141

Substance Use..... 148

Mental Health 172

Sexual Health 182

Maternal & Child Health 191

Immunizations & Screenings..... 212

Communicable Diseases 223

Chronic Diseases 234

Mortality 255

Community Needs Index..... 261

Community Strengths & Challenges 271

Scoring, Ranking, & Prioritization 292

Conclusion..... 298

Appendix 299

ACKNOWLEDGMENTS

Heather Kerwin, MPH, CPH, Author & CHNA Coordinator

CHNA Workgroup Members: *Attended regular update and planning meetings related to the assessment, including review of indicators, development and dissemination of online community survey, and creation of focus areas.*

Sara Behl, Former Director of Programs & Projects, Washoe County Health District

Lee Bryant, MPH, Health Educator, Washoe County Health District

Wendy Damonte, Vice President Advocacy & Community Partnerships, Renown Health

Kevin Dick, District Health Officer, Washoe County Health District

Erin Dixon, MS, Public Health Supervisor, Washoe County Health District

Rayona Dixon, Health Educator, Washoe County Health District

Melanie Flores, MSW, Former Program Coordinator, Washoe County Health District

Falisa Hilliard, Office Support Specialist, Washoe County Health District

Nicole Lamboley, Administrator, Child Health Institute, Renown Health

Chris Needham, Director of Member Health & Wellness, Renown Health

Catrina Peters, MS, RD, Director of Programs & Projects, Washoe County Health District

Cristina Want, MBA, Community Benefit Liaison, Renown Health

Annie Zucker, Manager of Community Impact, Renown Health

Subject Matter Experts: *Reviewed indicators for quality and completeness, and provided feedback and edits to draft sections.*

Nevada Department of Health & Human Services, Division of Public & Behavioral Health

Jennifer Bonk, MS, Chronic Disease Prevention & Health Promotion Section Manager

Vickie Ives, MA, Maternal, Child and Adolescent Health Section Manager

Scott Jones, PhD, Primary Care Officer Manager

Melissa Peek-Bullock, State Epidemiologist

Outside Organizations

Jennifer DeLett-Snyder, MS, Executive Director & Certified Prevention Specialist, Join Together Northern Nevada

Andy Gebhardt, Director Customer Relations, Truckee Meadows Water Authority

Jeff Hardcastle, State Demographer

Cari Herrington, MBA, Executive Director, Nevada Cancer Coalition

Cherie Jamason, Director of Ending Hunger Initiatives, Food Bank of Northern Nevada

Mike Kazmierski, President & CEO, Economic Development Authority of Western Nevada (EDAWN)

Sheila Leslie, Behavioral Health Program Coordinator, Washoe County Human Services Agency

Heidi Parker, MA, Executive Director, Immunize Nevada

Kristen Power, Communications Director, Nevada Cancer Coalition

Kim Robinson, MUP, Executive Director, Truckee Meadows Regional Planning Agency

Steven A. Shane, MD, MS, Pediatrician, Community Health Alliance

Jeremy M. Smith, PhD, GIS Coordinator, Truckee Meadows Regional Planning Agency

Alex Woodley, Code Enforcement Manager, City of Reno

Melvin D. Zeldin, Environmental Consultant

University of Nevada, Reno

Jamie Benedict, PhD, RD, LD, Associate Professor, Director of Didactic Program in Dietetics, Department of Agriculture, Nutrition & Veterinary Sciences

Kristen Clements-Nolle, PhD, MPH, Associate Professor, Epidemiology, School of Community Health Sciences

Reka Danko, MD, Clinical Assistant Professor, School of Medicine

Melanie Flores, MSW, Field Educator, Nevada Public Health Training Center, School of Community Health Sciences

Tabor Griswold, PhD, Health Services Research Analyst, Office of Rural Health & Statewide Initiatives, School of Medicine

John Packham, PhD, Director of Health Policy Research, Office of Rural Health & Statewide Initiatives, School of Medicine

Renown Health

Nicole Lamboley, Administrator, Child Health Institute

Valerie Luevano, MSW, LSW, Director, Center for Social Justice & Health Equity

Natalie Nicholson, MBA, MSN, RN, CNML, Director of Nursing - Women Services

ACKNOWLEDGMENTS

Quinn Pauly, MD, FAAP, Section Chief, Renown Wellness Network & American College of Lifestyle Medicine, Board of Directors
Anthony Slonim, MD, DrPH, President & CEO, Renown Health
Vanessa Slots, MD, Department Chief, General Pediatrics & Behavioral Health
Cristina Want, MBA, Community Benefit Liaison

Washoe County Health District

Charlene Albee, Director of Air Quality Management Division
Nicole Alberti, MA, Health Educator
Lei Chen, PhD, Senior Epidemiologist & Epidemiology Program Manager
Stephanie Chen, MPH, Health Educator
Brittany Dayton, MPA, EMS Coordinator
Kevin Dick, District Health Officer
Erin Dixon, MS, Public Health Supervisor
Rayona Dixon, Health Educator
Jim English, REHS, CP-FS, Environmental Health Specialist Supervisor
Luke Franklin, REHS, BS, Senior Environmental Health Specialist
Linda Gabor, MSN, RN, Public Health Nurse Supervisor
Kelli Goatley-Seals, MPH, Health Educator Coordinator
Daniel Inouye, Branch Chief of Air Quality Management Division
Dave Kelly, REHS, Environmental Health Specialist
Steve Kutz, RN, MPH, Director of Community & Clinical Health Services Division
Lisa Lottritz, RN, MPH, Public Health Nurse Supervisor
Catrina Peters, MS, RD, Director of Programs & Projects
Randall Todd, PhD, Director of Epidemiology & Public Health Preparedness Division
Lynn Shore, RN, BSN, Public Health Nurse II & Immunization Program Coordinator

Special thanks to...

- The many Divisions of the Washoe County Health District and the Nevada Office of Public Health Informatics and Epidemiology for providing data for several health indicators.
- Dawn Spinola, Catrina Peters, & Rayona Dixon of the Washoe County Health District for assistance in assembling the final document.

Spanish translators

Ruth Castillo, Community Health Aide, Washoe County Health District
Isabel Chaidez, Community Health Aide, Washoe County Health District
Cristina Want, MBA, Community Benefit Liaison, Renown Health

The following agencies for disseminating the online community survey or allowing for hardcopy survey distribution

Access to Healthcare Network	Join Together Northern Nevada
ACTIONN	Medical Reserve Corps
Bristlecone Family Resources	Northern Nevada HOPES
Catholic Charities of Northern Nevada	Northern Nevada Literacy Council
Children's Advocacy Alliance	REMSA
Children's Cabinet	Reno-Sparks Chamber of Commerce
Citizen Corps	Renown Health
City of Reno	Project MANA
City of Sparks	Truckee Meadows Healthy Communities
Communities in Schools	Two Chicks Restaurant
Community Health Alliance	United Way
Community Services Agency	UNR Adjunct Faculty
ENGAGE, Inc	Washoe County
EDAWN	Washoe County Chronic Disease Coalition
Food Bank of Northern Nevada	Washoe County Food Policy Council
Get Healthy Washoe County	Washoe County Health District
Girls on the Run	Washoe County Library System
Human Services Network	Washoe County School District
Immunize Nevada	Washoe County Senior Services

Introduction

The 2018-2020 Washoe County Community Health Needs Assessment (CHNA) is a comprehensive health overview informing the development of two action plans; the Community Health Improvement Plan and Renown Health's Community Benefit Plan. Additionally, the CHNA serves as a resource for organizations working in social and human services capacities to address health in Washoe County. The 2018-2020 CHNA utilizes validated and reliable secondary data sources, results from an online community survey, input from subject matter experts, as well as contributions from participants in a Community Workshop. Each source of information provided additional insight into the health needs of Washoe County's residents and the social circumstances that impact health in the region.

The Patient Protection and Affordable Care Act (Public Law 111-148), passed March 2010, added Section 501(r)(3) to the Internal Revenue Code, which requires non-profit hospitals to conduct a community health needs assessment every three years and adopt an implementation strategy (Community Benefit Plan) to meet health needs identified through the CHNA.¹ While Renown Health serves a broad area, including nearly 80,000 square miles across northern Nevada, the majority of patients come from Washoe County and adjacent surrounding rural communities. For clarity and focus of this report, the health needs were narrowed in scope to the geopolitical boundary of Washoe County. Similarly, state, tribal, local, and territorial health departments conduct CHNAs in accordance with the Public Health Accreditation Board (PHAB) standards for accreditation. Additionally, a Fundamental Review of the Washoe County Health District by the Public Health Foundation, recommended a community health needs assessment be conducted and the District Board of Health provide direction to implement that recommendation.²

The two entities determined there was an opportunity to collaborate to produce one singular document on the health needs and service gaps in Washoe County. The first collaborative assessment was created in 2014 and released in coordination with the 2015 Truckee Meadows Healthy Communities Conference held at the University of Nevada, Reno on January 8, 2015. This document, the 2018-2020 Community Health Needs Assessment, is the second collaborative assessment and was produced through funding provided by Renown Health and Washoe County Health District.

¹ The Patient Protection and Affordable Care Act of 2010, Pub. L. No. 111-148, 124 Stat 119 (2010). Accessed <http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/pdf/PLAW-111publ148.pdf>.

² Public Health Foundation. (2014). Washoe County Public Health: A Fundamental Review. PHF Assessment Team, Washington, D.C.

Contents, Methodology, & Community Survey Demographics

There are 20 main sections within the assessment; including, 18 sections specific to health topics containing secondary data for over 250 health indicators, one section detailing sociodemographic indicators of high needs ZIP codes, a description of community strengths and challenges, and a section of the final prioritized health needs.

Secondary Data

Secondary data are health indicators systematically gathered for other purposes or surveys. Major secondary data sources used throughout the assessment include the Youth Risk Behavioral Survey (YRBS), the Behavioral Risk Factor Surveillance Survey (BRFSS), and the American Community Survey (ACS) data. These surveys collect data through a variety of means and descriptions of the methodology for major sources of data can be found in the Technical Notes. Secondary data for several of the indicators were provided by the local and state health departments. State and some local health data were provided by the Nevada Office of Public Health Informatics and Epidemiology (OPHIE), a department within the Nevada Department of Health and Human Services, Division of Public and Behavioral Health. Other local health data were provided by several Divisions within the Washoe County Health District. State and local health data include standardized and reportable health-related statistics, which are tracked on an ongoing basis. Only high quality, reliable sources of data were utilized, so secondary data estimates provided are generalizable to Washoe County's overall population. Secondary data sources for each of the tables and figures are located at the end of each corresponding section.

Selection of Secondary Data Indicators

The initial set of secondary data indicators was developed based on the Nevada Core Health Indicators list. The Nevada Core Health Indicators were developed by a statewide taskforce in 2013 and defines a minimum set of data to be included in local and state health assessments conducted in Nevada. The list of secondary data health indicators were presented to the Washoe County CHNA workgroup and workgroup members were provided the opportunity to add or make changes to the list. The revised indicators were then grouped into 18 topic areas and sent to the respective subject matter experts (SMEs) for each of the 18 topic areas. The SMEs were asked to provide input on the indicators to be included and made revisions, substitutions, or additions to any of the indicators within their corresponding topic(s).

Presentation of Secondary Data

A snapshot of the secondary data indicators, trends, most recent year of data for Washoe County, and any associated Healthy People 2020 target objectives are shown at the beginning of each

section. When identical data were available, the health indicator includes percentages or rates at the local (Washoe County), state (Nevada), and national (United States) levels for comparison purposes. If a Healthy People 2020 objective aligned with an indicator, those were also illustrated in the figure. When available, trend data were provided to understand changes over a five to ten year period.

Primary Data

Primary data are data or input collected directly from a population of interest. Primary data can be obtained through a variety of means including public forums, focus groups, surveys, interviews and/or panel discussions. For the 2018-2020 Washoe County Community Health Needs Assessment, primary data were obtained via an online community survey.

2018-2020 Online Community Survey Development

Community survey questions were designed to gather additional information not widely available at the county level in order to understand the factors that influence health behaviors. For example, secondary data show the proportion of adults that consume fruits and vegetables or the proportion of high school students that engage in physical activity. The community survey questions were developed to better understand what about Washoe County makes it challenging to eat more healthy foods or which barriers could be addressed to increase physical activity levels. Additionally the survey asked respondents to rank major health topics, providing residents an opportunity to “vote” on what they perceive as important. The survey questions were initially drafted by the CHNA author using a combination of standardized questions, brought to the Washoe County CHNA workgroup for revisions and input, and then piloted with a variety of individuals to test for clarity, length, and overall content. The online survey instrument was translated and back-translated into Spanish and adapted for distribution as a hardcopy as well.

The 44 question survey assessed respondents’ perceived barriers to engaging in physical activity, eating healthy foods more often, accessing healthcare in Washoe County, and asked respondents what would help to reduce those barriers. Other questions included food insecurity, perceived stress, housing and financial challenges, as well as enrollment in government supportive services. A key question asked survey respondents to rate health topics, these ratings were used as a criteria metric to score, ranked and identify the health priorities in Washoe County.

2018-2020 Online Community Survey Dissemination

Information regarding the survey’s purpose and a link to the surveys (English and Spanish versions) were provided via email to over 30 community partner agencies. These agencies disseminated the survey through a variety of means including sending the links to employees, providing survey links in

organizational and community newsletters/announcements, and posting the survey links to websites and social media. Some organizations permitted hardcopy distribution of the survey in locations such as clinic waiting rooms, food bank lines, at educational classes, health fairs, and senior centers. The survey was open from April 19 to August 15, 2017 and resulted in 1,438 respondents.

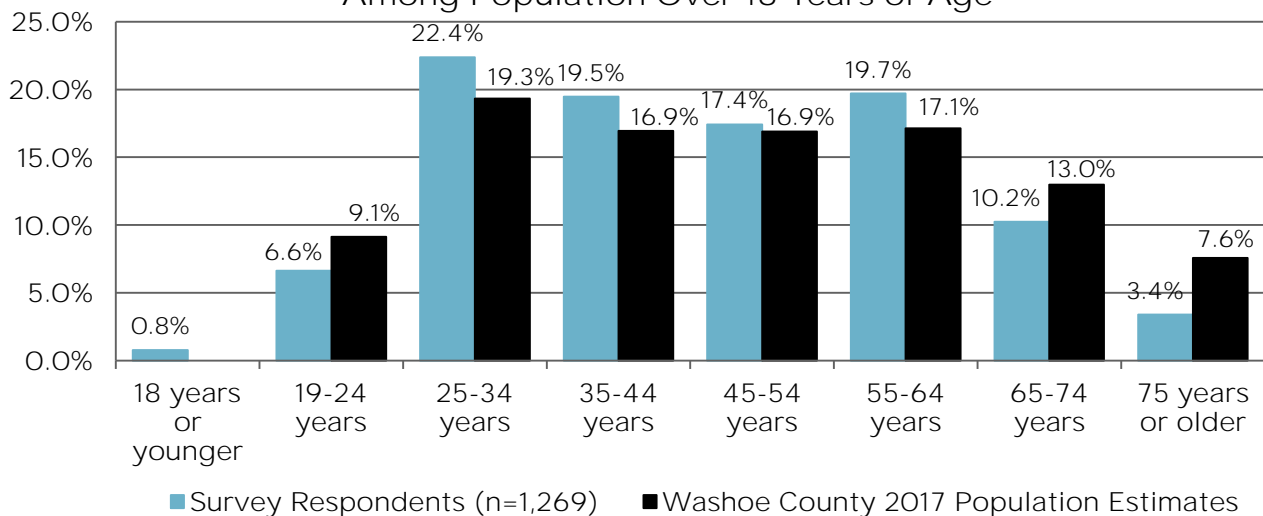
Presentation of Primary Data

Primary data results are included throughout the assessment within associated sections of the report and are always presented after secondary data. In lieu of presenting all community survey results within a single section, the survey results are grouped within associated topic areas. The community survey questions did not include all health-related topics, therefore not every section of the report contains primary data.

2018-2020 Online Community Survey Demographics

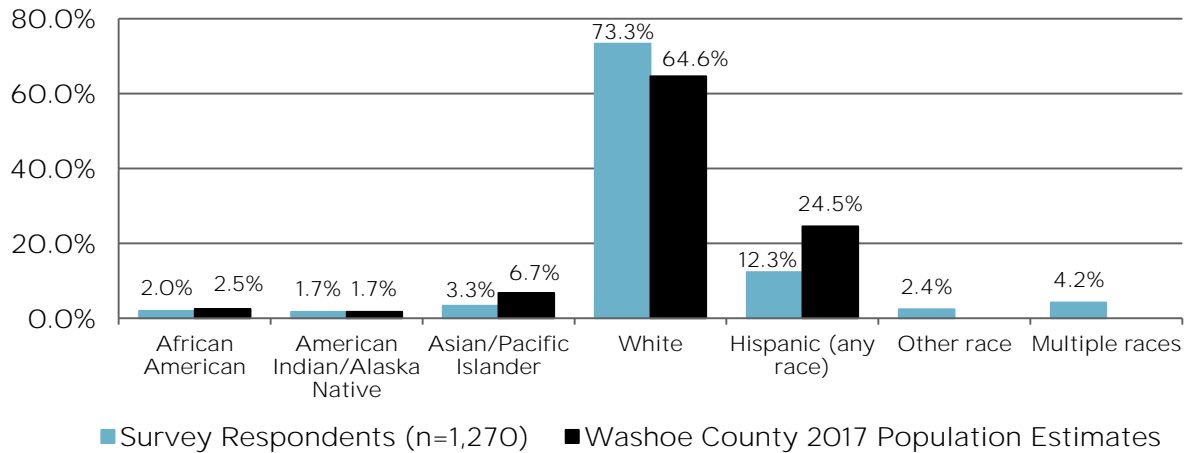
The online community survey was not designed to obtain a statistically reliable population sample and data were not weighted for age, race/ethnicity, or any other demographic variable. Results and findings from the online community survey are not intended to be applied to or descriptive of all Washoe County residents and only represent the survey respondents themselves. Overall, the 1,438 online community survey respondents were slightly younger, proportionally less Hispanic, and had higher educational attainment relative to Washoe County’s general population.

Fig 1: Comparison of Survey Respondents by Age Group Among Population Over 18 Years of Age



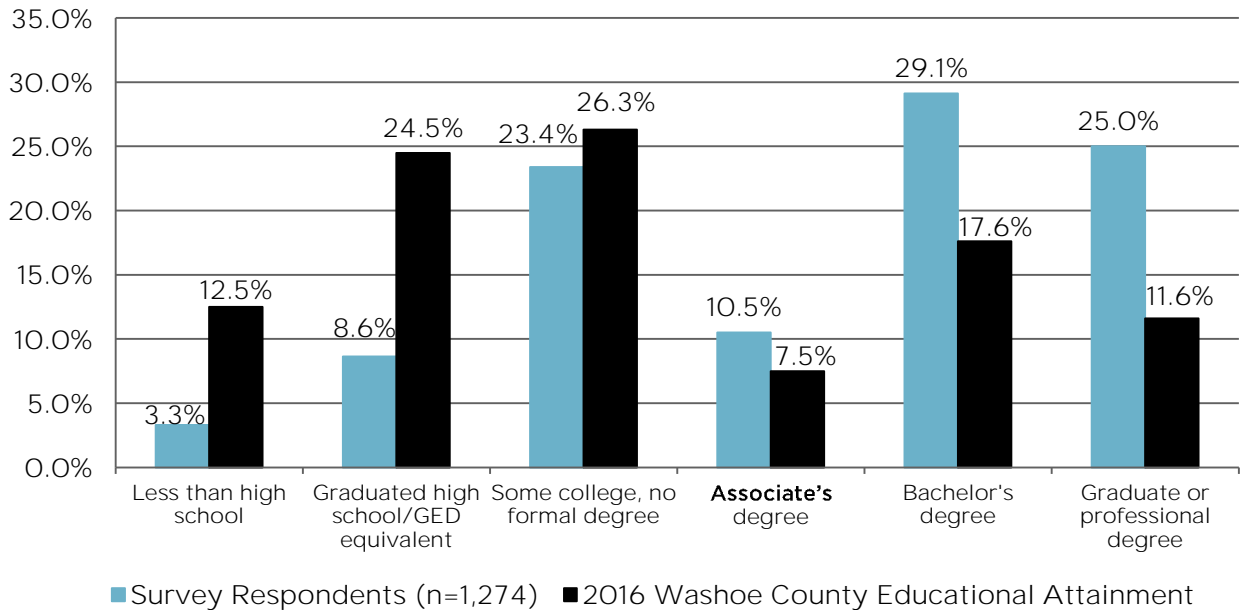
- Among the 1,269 survey respondents who indicated which age group they were in, they were proportionately similar in age to Washoe County residents overall. Slightly less percentage of survey respondents were aged 65 years and older compared to county population.
- Age was unknown (left blank) for approximately 11.7% of the 1,438 total survey respondents.

Fig 2: Comparison of Survey Respondents by Race & Ethnicity



- Among the 1,270 survey respondents who indicated their race and ethnicity, a higher proportion of were white, non-Hispanic (73.3%) compared to Washoe County’s overall populations (64.6%).
- Additionally a lower proportion of survey respondents were Hispanic (12.3%) compared to Washoe County overall (24.5%).
- Race and ethnicity were unknown (left blank) for 11.7% of the 1,438 total survey respondents.

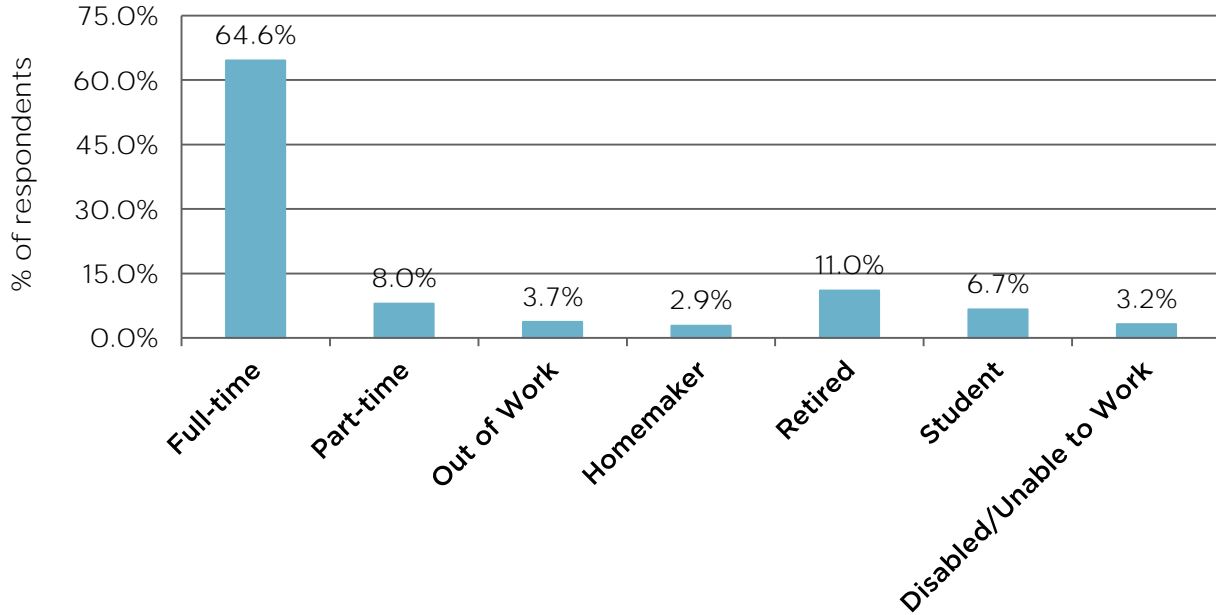
Fig 3: Comparison of Survey Respondents by Educational Attainment



- Among the 1,274 survey respondents who indicated their educational attainment, a higher proportion had a Bachelor’s degree (29.1%) compared to the overall Washoe County population (17.6%).
- A higher proportion had a Graduate or professional degree or higher (25.0%) compared to the overall Washoe County population (11.6%).

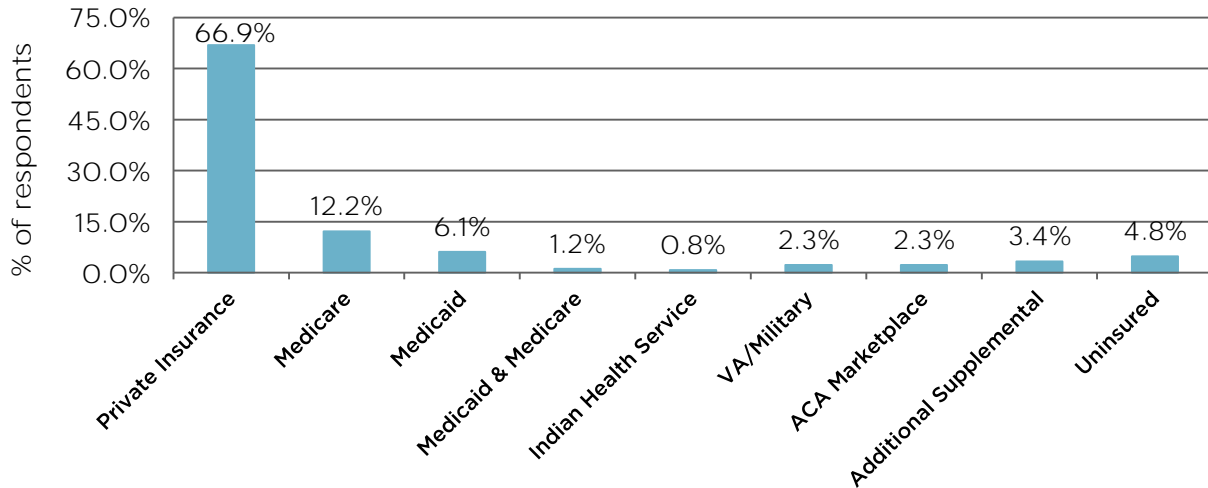
- Educational attainment was unknown (left blank) for 11.4% of the 1,438 total survey respondents.

Fig 4: Employment Status Among Survey Respondents (n=1,263)



- Among the 1,263 survey respondents who indicated their current employment status, the majority were employed full-time (64.6%), while 11.0% were retired, and 8.0% were employed in one or more part-time positions.
- Employment status was unknown (left blank) by 12.2% of survey respondents.

Fig 5: Insurance Coverage Among Survey Respondents (n=1,304)

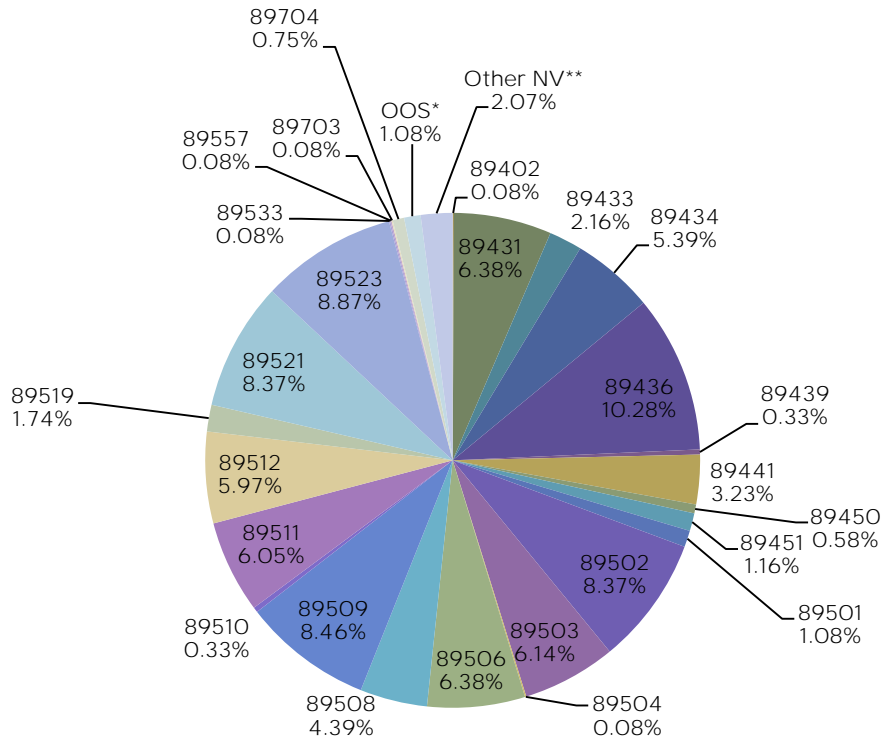


- Among the 1,304 survey respondents who indicated their current health insurance status, the majority were insured through private insurance including an employer (66.9%), while 12.2%

were insured through Medicare, 6.1% were insured through Medicaid, and 4.8% were uninsured.

- Health insurance status was unknown for 9.3% of survey respondents.

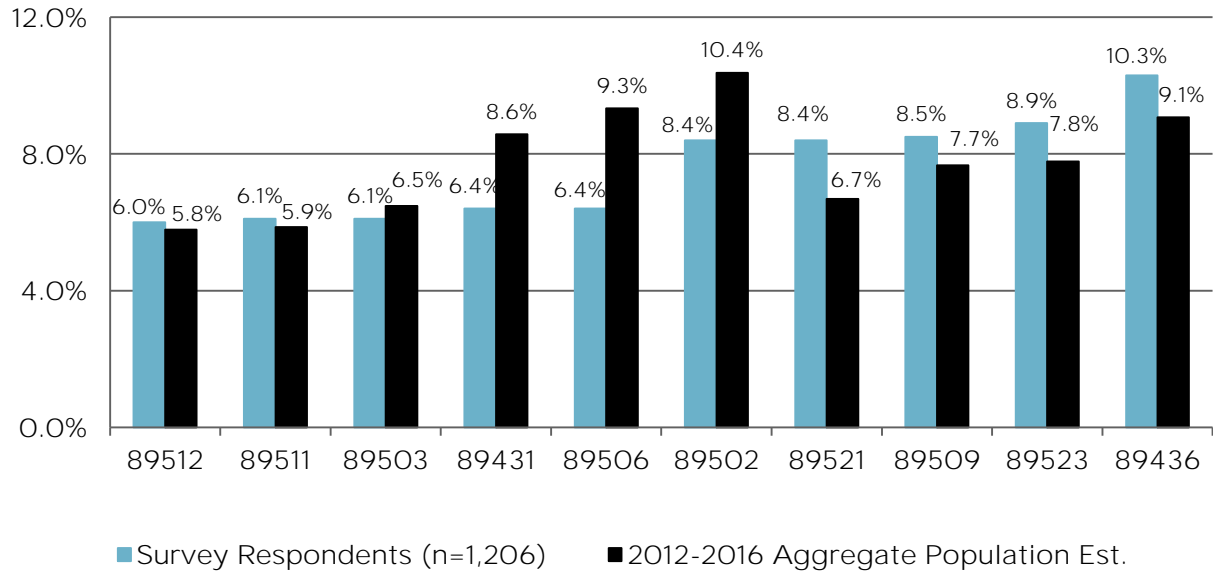
Fig 6: Survey Responents by ZIP Code (n=1,206)



Note: *OOS is out of state; **Other NV is other Nevada county

- It was important to the CHNA Workgroup to include those who were homeless as well as those who were obtaining services in Washoe County, but from other Nevada counties, therefore all survey respondents regardless of ZIP code (or lack of ZIP code) were included.
- Zip code was unknown for 16.1% of survey respondents.

Fig 7: Comparison of Survey Respondent Top 10 ZIP Codes



Technical Notes

The following describes major sources of secondary data utilized throughout the assessment and the methods by which those data are collected. These sources of data are commonly utilized and referenced by public health professionals as well as other entities, on regular basis. Additionally, these data are publically available and most are updated annually.

American Community Survey

The American Community Survey (ACS) is administered by the United States Census Bureau each year. Approximately one in 38 U.S. households receives an invitation to complete the survey either as a hardcopy or online. Questions are diverse and relate to socioeconomics, demographics, household composition, occupational status, housing status, educational attainment, and more. The resulting data are available from the national to the local levels and are often available at the census tract or census block level.

Nevada Behavioral Risk Factor Surveillance Survey

The Behavioral Risk Factor Surveillance Survey (BRFSS) is a health survey administered via telephone annually in all 50 states, the District of Colombia, and three U.S. territories. The BRFSS is the largest continuously conducted health survey in the world and asks adults questions regarding risk behaviors, chronic health conditions, and use of preventive screening and immunization services. There is a fixed core module, rotating modules which are asked in either even or odd years, emerging modules, and states may elect to include state-specific questions within the BRFSS.

Nevada Office of Public Health Informatics and Epidemiology

The Nevada Office of Public Health Informatics and Epidemiology (OPHIE) operates under the Nevada Division of Public and Behavioral Health and is largely in charge of investigations, data collection, and the compiling of statistics related to the following areas:

- Communicable and infectious diseases
- Sexually transmitted diseases
- Adult hepatitis
- Behavioral Risk Factor Surveillance System (BRFSS)
- Nevada Birth Outcomes Monitoring System
- Nevada Central Cancer registry
- Syndromic surveillance
- Youth Risk Behavioral Survey (YRBS)

Nevada Youth Risk Behavioral Survey

The Youth Risk Behavioral Survey (YRBS) is administered to middle and high school students on odd years in every state across the nation. The YRBS provides an estimated prevalence of risk behaviors and protective factors among adolescents. The survey is voluntary and results include self-reported responses to questions related to the following areas:

- Violence and violent behaviors
- Physical activity, nutrition, and obesity
- Substance use
- Sexual health behaviors
- Home and family environment

Nevada Report Card

Nevada Department of Education releases school district data on an annual basis and makes most data elements available at the state, district (county), and school level. Most data are collected from students or as reported by the schools and include topics such as demographics, funding, staff, test scores among others.

Geography & Demographics

Nevada is the 7th largest state in size, with an estimated population of 2.8 million as of 2017.³ There are few urban areas across the state, which are separated by large tracts of unoccupied rural and frontier land. Washoe County is home to approximately 15.2% of the state’s population, making it the second most populated county in the state.

Table 1: Comparative Population & Geographic Summary, 2017

Location	2017 projected population	Square land miles	Population Density (persons per square mile)	% of State Population
Washoe County	439,221	6,302 mi ²	69.7	15.2%
Clark County	2,122,899	7,891 mi ²	269.0	73.4%
All other counties	328,876	95,588 mi ²	3.4	11.4%
Nevada	2,890,996	109,781 mi²	26.3	100.0%

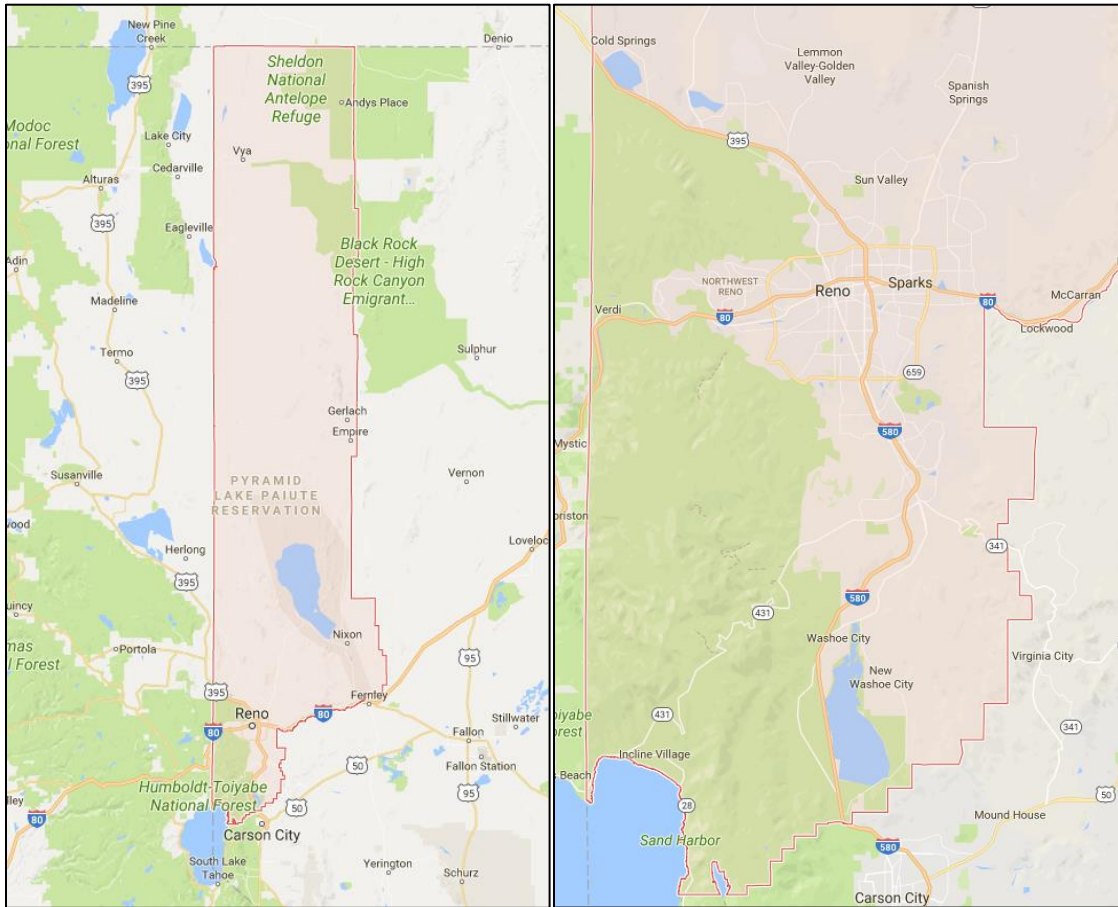
Washoe County is located in the Northwestern corner of the state along the east side of the Sierra Nevada mountain range and shares borders with California to the west and Oregon to the north. The county is long and narrow as it takes over five hours to drive the length of the county north to south and only one hour to drive the width - east to west. Washoe County is approximately 6,302 square land miles and contains two incorporated cities, Reno and Sparks, and several smaller towns. Reno is the county seat of Washoe County and the third largest city in Nevada, while Sparks is a smaller city, just east of Reno. Two major highways intersect in the Reno-Sparks area, Interstate 80 running east to west and Highway 395/Interstate 580 running north to south. This intersection is viewed as a hub for commerce, transit of goods, and as a strategic location for storage and shipping of textiles.

Although the Reno-Sparks area is largely urbanized, there are unique health issues for residents of the rural and frontier parts of the county, including challenges to accessing various types of services, especially healthcare. Additionally, Washoe County contains services and amenities, not available in other rural counties across Northern Nevada. Therefore, residents of neighboring counties often travel to the Reno-Sparks area to obtain health-related services.

³ Nevada Department of Taxation, Nevada State Demographer (2016). Source: Nevada County Age, Sex, Race, and Hispanic Origin Estimates and Projections 2000 to 2035. Accessed <https://tax.nv.gov>.

Image 1: Washoe County

Image 2: Reno-Sparks Enlarged



Defining a community in terms of size, growth, and demographic characteristics helps determine public health needs and potentially where to allocate resources to meet those needs. From 2000 to 2010 the national growth rate was 9.7% however, during the same time period Nevada saw a population increase of 35.1%. Nevada is the only state that experienced a growth rate exceeding 25% over the past three decades and has remained the fastest growing state in the nation for the past five decades.⁴ Although the rate of growth did slow down during the recession, estimates continue to predict continued growth in the future.

Washoe County has become more ethnically diverse, with the largest increase among the Hispanic population (+27.3%) from 2007 to 2017. Another subpopulation experiencing continued growth during this time were among elderly adults; one in five Washoe County residents were 60 years or older in 2017. Issues related to the health of these two growing subpopulations are important to take into consideration for future planning.

⁴ Mackun, P. & Wilson, S. (2011). Population Distribution and Change: 2000 to 2010. United States Census Brief Accessed <https://www.census.gov/prod/cen2010/briefs/c2010br-01.pdf>

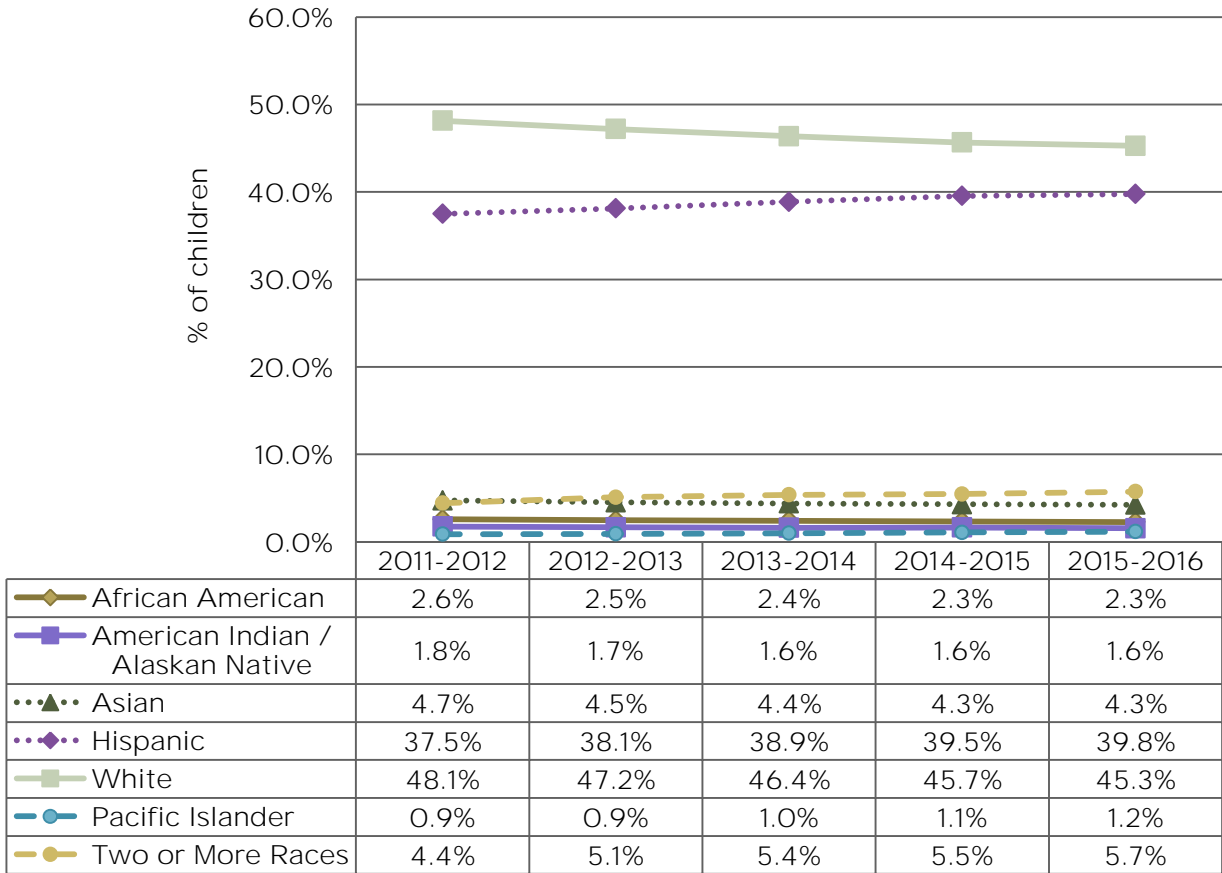
1.0 GEOGRAPHY & DEMOGRAPHICS

Table 2: Estimated Population Growth by Select Demographics, Washoe County, 2007 & 2017

Demographics	2007		2017		% Change
	#	%	#	%	
Sex					
Female	199,209	49.5%	218,752	49.8%	9.8%
Male	203,142	50.5%	220,469	50.2%	8.5%
Age Group					
0-9 years	57,231	14.2%	54,605	12.4%	-4.6%
10-19 years	53,493	13.3%	58,337	13.3%	9.1%
20-29 years	59,009	14.7%	59,960	13.7%	1.6%
30-39 years	52,252	13.0%	61,058	13.9%	16.9%
40-49 years	57,987	14.4%	53,019	12.1%	-8.6%
50-59 years	54,896	13.6%	57,294	13.0%	4.4%
60-69 years	38,597	9.6%	51,603	11.7%	33.7%
70-79 years	18,460	4.6%	30,807	7.0%	66.9%
80 + years	10,427	2.6%	12,539	2.9%	20.3%
Race/Ethnicity					
African American, non-Hispanic	9,355	2.3%	10,894	2.5%	16.5%
American Indian/Alaska Native, non-Hispanic	6,725	1.7%	7,289	1.7%	8.4%
Asian/Pacific Islander, non-Hispanic	24,978	6.2%	29,614	6.7%	18.6%
White, non-Hispanic	276,679	68.8%	283,687	64.6%	2.5%
Hispanic (any race)	84,614	21.0%	107,736	24.5%	27.3%
Total	402,351	100.0%	439,221	100.0%	9.2%

- From 2007 to 2017 the overall Washoe County estimated population growth increased by 9.2%.
- Growth was largest among those 30 to 39 years of age and among those 60 years and older.
- Washoe County experienced a noted increase among Hispanic population (27.3%), the Asian/Pacific Islander population (18.6%), and the African American population (16.5%).
- In 2017, white, non-Hispanics accounted for 64.6% of Washoe County's population, Hispanics were an estimated 24.5%, Asian/Pacific Islanders 6.7%, African Americans 2.5%, and American Indian/Alaska Natives were an estimated 1.7% of the county population.

Fig 8: Washoe County School District Grade K-12 by Race/Ethnicity, 2011-2012 to 2015-2016



- The proportion of students in Washoe County School District (grade K-12) who were white decreased from the 2011-2012 school year (48.1%) to the 2015-2016 school year (45.3%).
- The proportions of students in Washoe County School District (grade K-12) who were Hispanic increased from the 2011-2012 school year (37.5%) to the 2015-2016 school year (39.8%).
- The proportion of students in Washoe County School District (grade K-12) who were African American, American Indian/Alaska Native, Asian, Pacific Islander, or two or more races combined remained low from the 2011-2012 school year to the 2015-2016 school year.

Predicted Growth

Table 3: Estimated Predicted Population Growth by Select Demographics, Washoe County, 2017 & 2022

Demographics	2017		2022		% Change
	#	%	#	%	
Sex					
Female	218,752	49.8%	232,527	49.9%	6.3%
Male	220,469	50.2%	233,017	50.1%	5.7%
Age group					
0-9 years	54,605	12.4%	56,321	12.1%	3.1%
10-19 years	58,337	13.3%	62,207	13.4%	6.6%
20-29 years	59,960	13.7%	63,247	13.6%	5.5%
30-39 years	61,058	13.9%	64,540	13.9%	5.7%
40-49 years	53,019	12.1%	56,269	12.1%	6.1%
50-59 years	57,294	13.0%	55,416	11.9%	-3.3%
60-69 years	51,603	11.7%	55,383	11.9%	7.3%
70-79 years	30,807	7.0%	36,504	7.8%	18.5%
80 + years	12,539	2.9%	15,657	3.4%	24.9%
Race/Ethnicity					
African American, non-Hispanic	10,894	2.5%	12,061	2.6%	10.7%
American Indian/Alaska Native, non-Hispanic	7,289	1.7%	7,486	1.6%	2.7%
Asian/Pacific Islander, non-Hispanic	29,614	6.7%	33,083	7.1%	11.7%
White, non-Hispanic	283,687	64.6%	289,656	62.2%	2.1%
Hispanic (any race)	107,736	24.5%	123,259	26.5%	14.4%
Total	439,220	100.0%	465,544	100.0%	6.0%

- The estimated predicted population growth from 2017 to 2022 for Washoe County overall is 6.0%.
- Growth is predicted to be largest among those 70 years of age and older.
- Continued growth among Hispanic population (14.4%), the Asian/Pacific Islander population (11.7%), and the African American population (10.7%) is predicted over the next 5 years.

Summary of Geography & Demographics

Washoe County’s population faces unique dichotomous challenges due to the geographic nature of the county. The majority of the county’s population resides in the Reno-Sparks metropolitan area. Due to rapid population growth, many urban residents face issues related to the limited amount of resources being stretched thin. There have been shortages of adequate and affordable housing, the schools are overcrowded, and many healthcare facilities are often at or nearing capacity. Conversely, much of the county land is rural in nature and although relatively few people reside in the rural and frontier areas, they face a different set of challenges. Rural issues include having a lack of choices in services and resources such as grocery stores, health clinics, libraries, and indoor recreation options. Many rural residents travel long distances (over an hour) to reach the nearest hospital or health clinic and full-service grocery stores. Additionally, Washoe County receives residents of surrounding rural counties; therefore examining only the population of Washoe County may underestimate the true utilization of certain services, especially healthcare providers and facilities.

Although population growth has slowed, relative to the population boom of the 1990's through the late 2000's, continued growth is expected. Notable growth of the Hispanic and elderly (60 years and older) populations has occurred and is predicted to continue. Additionally, Washoe County has continued to become increasingly ethnically diverse, as the school-aged children (grades K-12) are no longer majority white, non-Hispanic. Service providers across all spectrums should actively ensure they have resources in place to meet the needs of a growing population and are able to communicate effectively with clients of all ages and diverse cultural backgrounds.

Geography & Demographics Sources

Table 1: Comparative Population & Geographic Summary, 2017

Nevada State Demographer's Office. (2016). Nevada County Age, Sex, Race, and Hispanic Origin Estimates and Projections 2000 to 2032 Estimates from 2000 to 2015 and Projections from 2016 to 2032. Carson City, NV.

Square land miles: United States Census Bureau Factsheet

Image 1-Image 2 SAME SOURCE

Image 1: Washoe County

Image 2: Reno-Sparks Enlarged

Google Maps

Table 2: Estimated Population Growth by Select Demographics, Washoe County, 2007 & 2017

Nevada State Demographer's Office. (2016). Nevada County Age, Sex, Race, and Hispanic Origin Estimates and Projections 2000 to 2032 Estimates from 2000 to 2015 and Projections from 2016 to 2032. Carson City, NV.

Fig 8: Washoe County School District Grade K-12 by Race/Ethnicity, 2011-2012 to 2015-2016

Nevada Department of Education. Nevada Report Card. Accessed <http://nevadareportcard.com/di/>

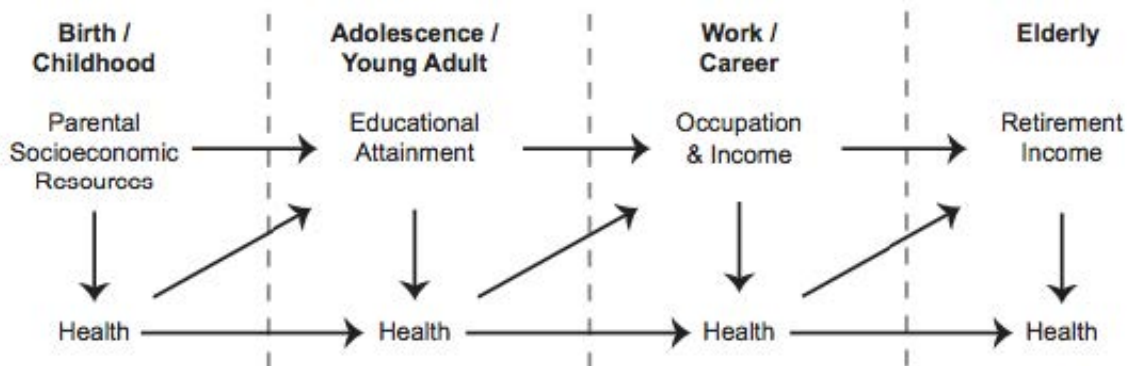
Table 3: Estimated Predicted Population Growth by Select Demographics, Washoe County, 2017 & 2022

Nevada Department of Taxation, Nevada State Demographer (2016). Source: Nevada County Age, Sex, Race, and Hispanic Origin Estimates and Projections 2000 to 2035. Carson City, NV.

Socioeconomic Status

Socioeconomic status (SES) is measured by education, occupation, and earned income, which frame the hierarchy of a person’s social standing. The factors used to measure SES are predictors of health across the lifespan and overall life expectancy. Those with a higher SES are more likely to achieve higher levels of education, find employment in higher paying jobs, and have increased access to healthcare and preventive services. Additionally, research shows those with a higher SES have lower levels of chronic stress as measured by cortisol in the bloodstream.^{5,6} Conversely people with a lower SES are more likely to engage in unhealthy behaviors such as smoking and physical inactivity, and they often live in low-income neighborhoods with fewer resources.⁷ Persons with a lower SES experience higher rates of poor health outcomes such as obesity, stroke, cardiovascular disease, depression, and diabetes.^{8,9,10} The effects of socioeconomic status on quality of life and life expectancy are interrelated and challenging to measure independent of one another.

Image 3: How SES & Health Affect Each Other Over Time



⁵ National Center for Health Statistics. (2012). Health, United States, 2011: With Special Feature on Socioeconomic Status and Health. Hyattsville, MD.

⁶ Agency for Healthcare Research and Quality. (2012). National Healthcare Disparities Report, 2011. Rockville, MD.

⁷ National Center for Health Statistics. (2012). Health, United States, 2011: With Special Feature on Socioeconomic Status and Health. Hyattsville, MD.

⁸ Telfair, J. & Shelton, T.L. (2012). Educational Attainment as a Social Determinant of Health. *North Carolina Medical Journal*. 73(5); 358-365.

⁹ Chen, Edith & Paterson, Laurel, Q. (2006). Neighborhood, Family and Subjective Socioeconomic Status: How Do They Relate to Adolescent Health?. *Health Psychology*. 25(6); 704-714.

¹⁰ Goodman, E. (1999). The Role of Socioeconomic Status Gradients in Explaining Differences in US Adolescents’ Health. *American Journal of Public Health*. 89; 1522-1528.

1.1 SOCIOECONOMIC STATUS

Indicator	Trend	Most Recent Year
Education		
3 rd grade reading proficiency	~	44.0% proficient (2016-2017)
3 rd grade mathematics proficiency	~	49.7% proficient (2016-2017)
11 th grade mathematics proficiency	Increasing	81.1% proficient (2014-2015)
11 th grade reading proficiency	Decreasing	83.9% proficient (2014-2015)
11 th grade science proficiency	Increasing	82.0% proficient (2014-2015)
11 th grade writing proficiency	STABLE	82.7% proficient (2014-2015)
High school graduation rates	Increasing	76.6% (2016)
Transiency rates	Decreasing	18.8% (2016-2017)
Remediation rates	Decreasing	27.4% (2015-2016)
School district funding source	~	various
Per pupil expenditures	Increasing	\$9,308 (2015-2016)
Educational attainment adults 18-24 years	~	various
Educational attainment adults 25+ years	~	various
Employment		
Unemployment rate	Decreasing	5.0% (2016)
Occupation & Industry		
Industry as a percent of employment	~	various
Employment by occupation	Increasing	Varies by occupation
Growing and declining occupations	~	various
Growing and declining industries	~	various
Top 10 employers	~	various
Income & Wages		
Median household income	Increasing	\$58,175 (2016)
Median family income, by family type	~	various
Living wage, by family type	~	various
Percent of income by expense type, family of 4	~	various
Personal bankruptcy filing rate	Decreasing	2.5 per 1,000 population (2016)
Poverty		
Population in poverty	Decreasing	12.2% (2016)
Children <18 years in poverty	Decreasing	16.0% (2016)
Seniors 65+ in poverty	Increasing	8.0% (2016)
~ not able to assess for trend		

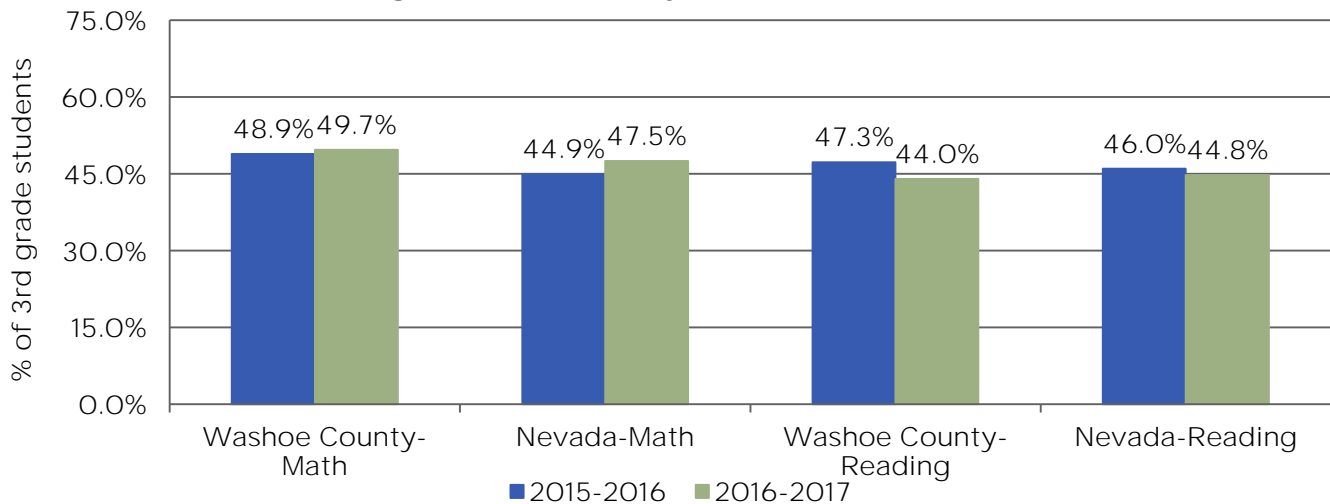
1.1 SOCIOECONOMIC STATUS

Education

Overall quality of life is largely impacted and influenced by educational attainment. Persons without a high school diploma or GED equivalent are more likely to have poorer health and live shorter lives. The relationship between education and quality of life has been demonstrated worldwide; however, the relationship is much more apparent in the United States. Education impacts various health outcomes such as decision-making in regard to healthy choices, occupational options, and income.^{11,12,13}

3rd Grade Proficiency

Fig 9: Percent of 3rd Grade Students Proficient in Mathematics & Reading, Washoe County & Nevada, 2015-2016 & 2016-2017



- Although higher than the state, less than half of 3rd grades students in Washoe County were proficient in mathematics during both the 2015-2016 (48.9%) and 2016-2017 (49.7%) school years.
- Less than half of 3rd grades students in Washoe County were proficient in reading during both the 2015-2016 (47.3%) and 2016-2017 (44.0%) school years.

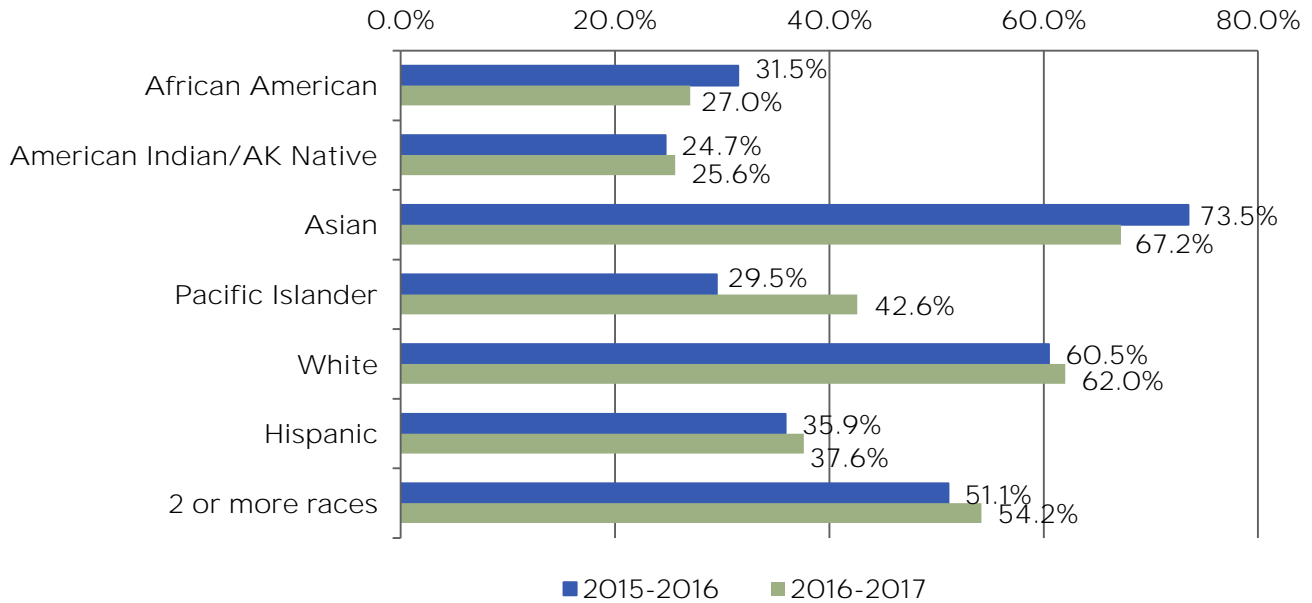
¹¹ Cutler, D.M. & Lleras-Muney, A. (2006). Education and Health: Evaluating Theories and Evidence. National Bureau of Economic Research. Cambridge, MA.

¹² National Center for Health Statistics. (2012). Health, United States, 2011: With Special Feature on Socioeconomic Status and Health. Hyattsville, MD.

¹³ Telfair, J. & Shelton, T. L. (2012). Educational Attainment as a Social Determinant of Health. 2012. *North Carolina Medical Journal*. 73(5); 358-365.

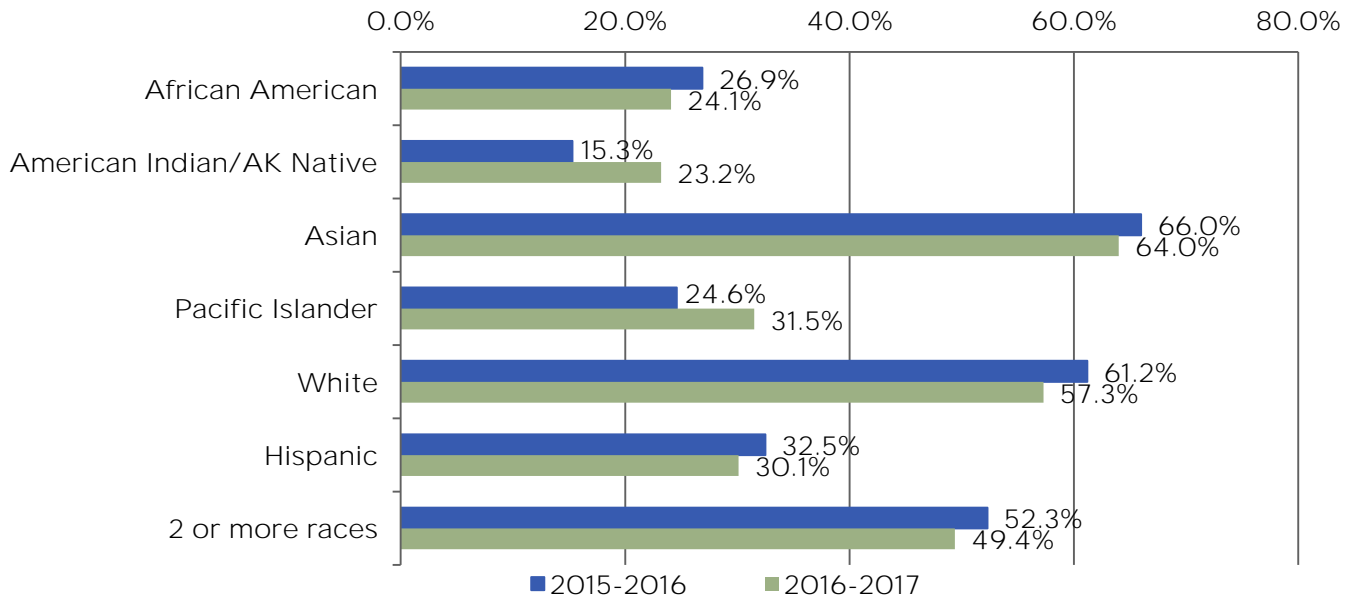
1.1 SOCIOECONOMIC STATUS

Fig 10: Percent of 3rd Grade Students Proficient at Mathematics by Race/Ethnicity, Washoe County, 2015-2016 & 2016-2017



- The percentage of 3rd grade students in Washoe County who were proficient in mathematics was highest among Asians and whites and lowest among American Indian/Alaska Natives, as well as African American, and Hispanic students during both the 2015-2016 and 2016-2017 school years.

Fig 11: Percent of 3rd Grade Students Proficient at Reading by Race/Ethnicity, Washoe County, 2015-2016 & 2016-2017

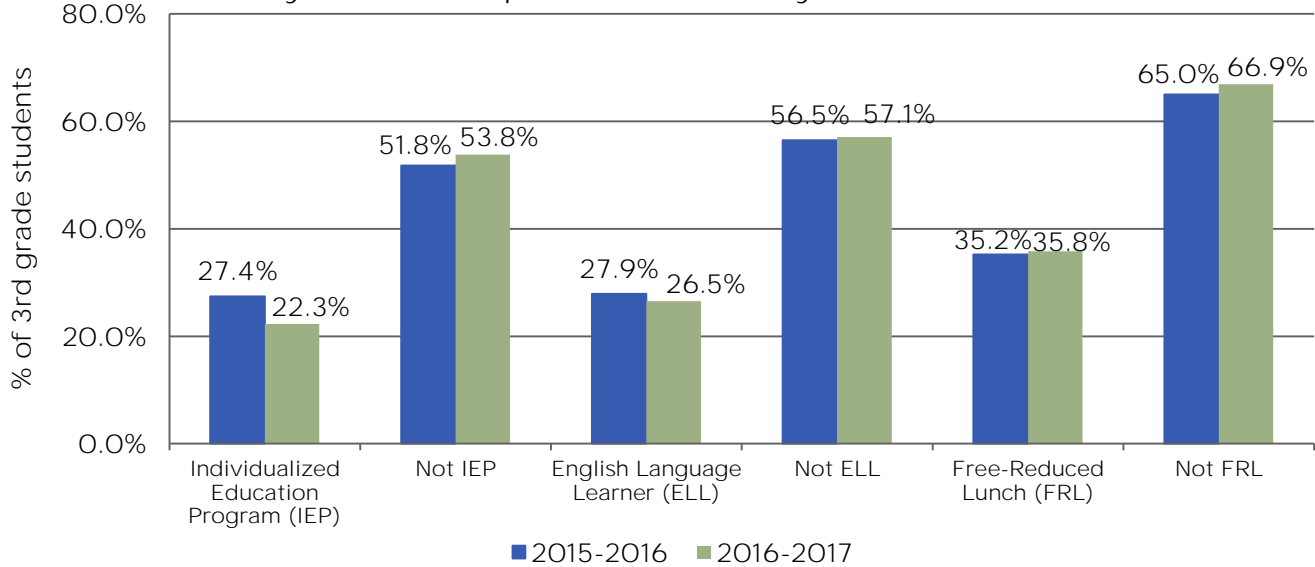


- The percentage of 3rd grade students in Washoe County who were proficient at reading was highest among Asians, whites, and students of two or more races.

1.1 SOCIOECONOMIC STATUS

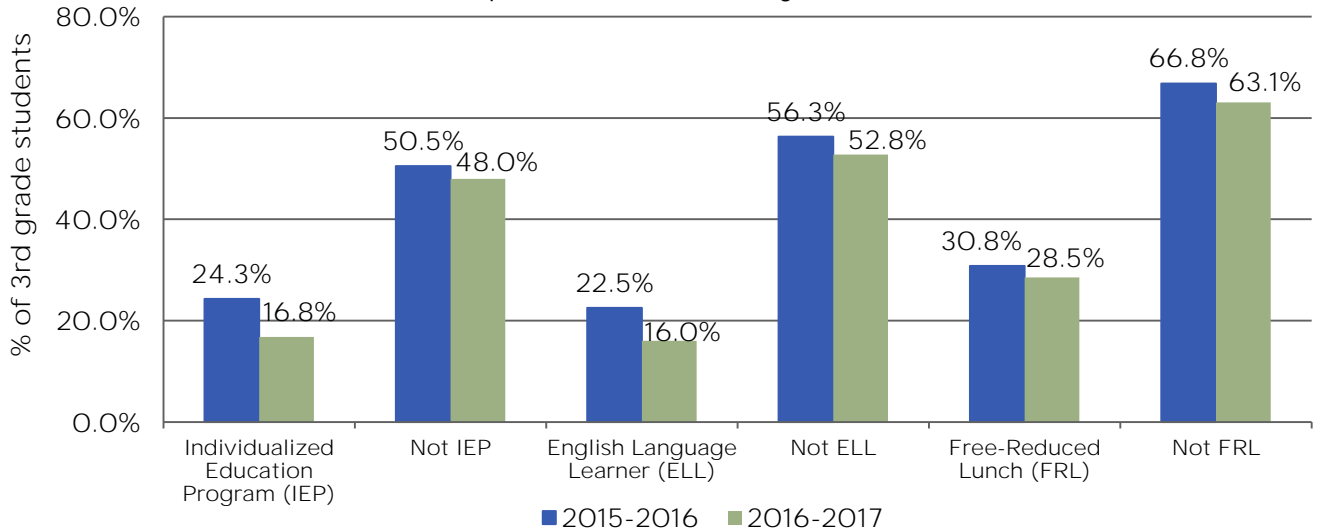
- The percentage of 3rd grade students in Washoe County who were proficient at reading was lowest among American Indian/Alaska Natives, African American, and Pacific Islander students during both the 2015-2016 and 2016-2017 school years.

Fig 12: Percent of 3rd Grade Students Proficient at Mathematics by Select Groups, Washoe County, 2015-2016 & 2016-2017



- Students who had an Individualized Education Program (IEP) or were English language learners (ELL) had among the lowest proficiency rates for mathematics during both the 2015-2016 and 2016-2017 school years.
- Students who were not qualified for free-reduced lunch had among the highest rates of proficiency for mathematics during both the 2015-2016 and 2016-2017 school years.

Fig 13: Percent of 3rd Grade Students Proficient at Reading by Select Groups, Washoe County, 2015-2016 & 2016-2017



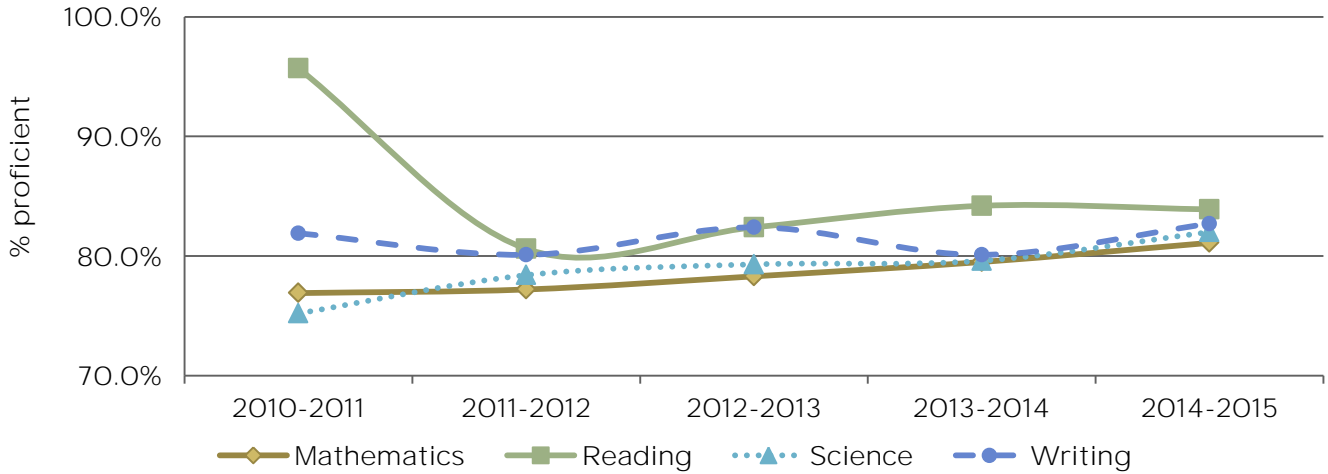
- Students who had an Individualized Education Program (IEP) or were English language learners (ELL) had among the lowest reading proficiency rates during both the 2015-2016 and 2016-2017 school years.

1.1 SOCIOECONOMIC STATUS

- Students who were not qualified for free-reduced lunch had among the highest reading proficiency rates during both the 2015-2016 and 2016-2017 school years.

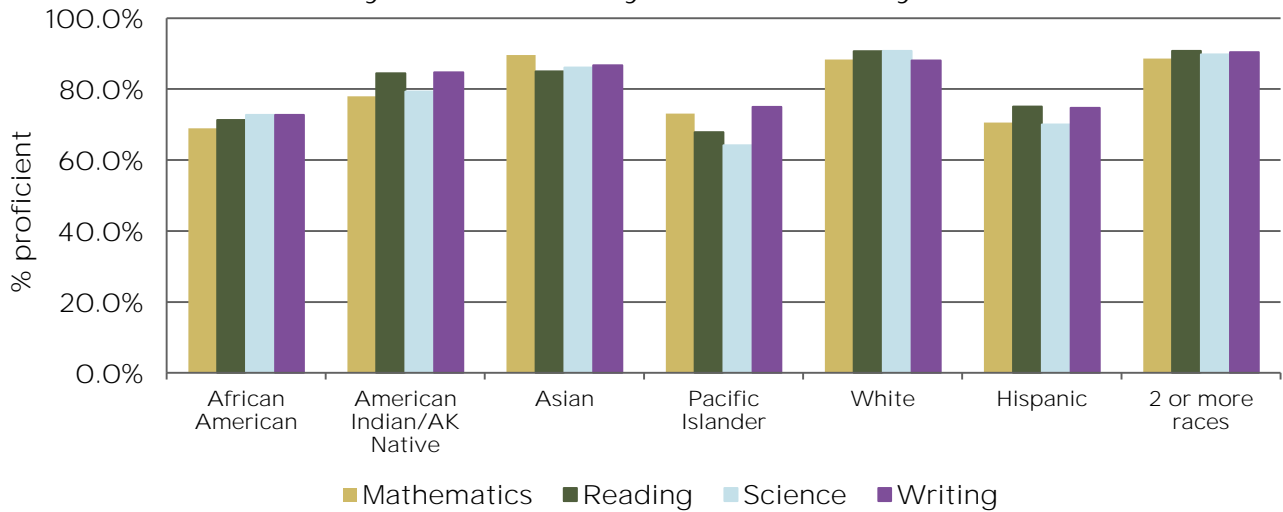
11th Grade Proficiency

Fig 14: High School Proficiency Exam, Percent of 11th Graders Proficient by Subject, Washoe County, 2010-2011 through 2014-2015



- The percentage of 11th grade students who were proficient in mathematics increased from 2010-2011 (76.9%) to 2014-2015 (81.1%).
- The percentage of 11th grade students who were proficient in reading decreased from 2010-2011 (95.7%) to 2014-2015 (83.9%). The high percentage noted in 2010-2011 is accurate according to the data and the decrease in following years was not explained.
- The percentage of 11th grade students who were proficient in science increased from 2010-2011 (75.2%) to 2014-2015 (82.0%).
- The percentage of 11th grade students who were proficient in writing increased from 2010-2011 (81.9%) to 2014-2015 (82.7%).

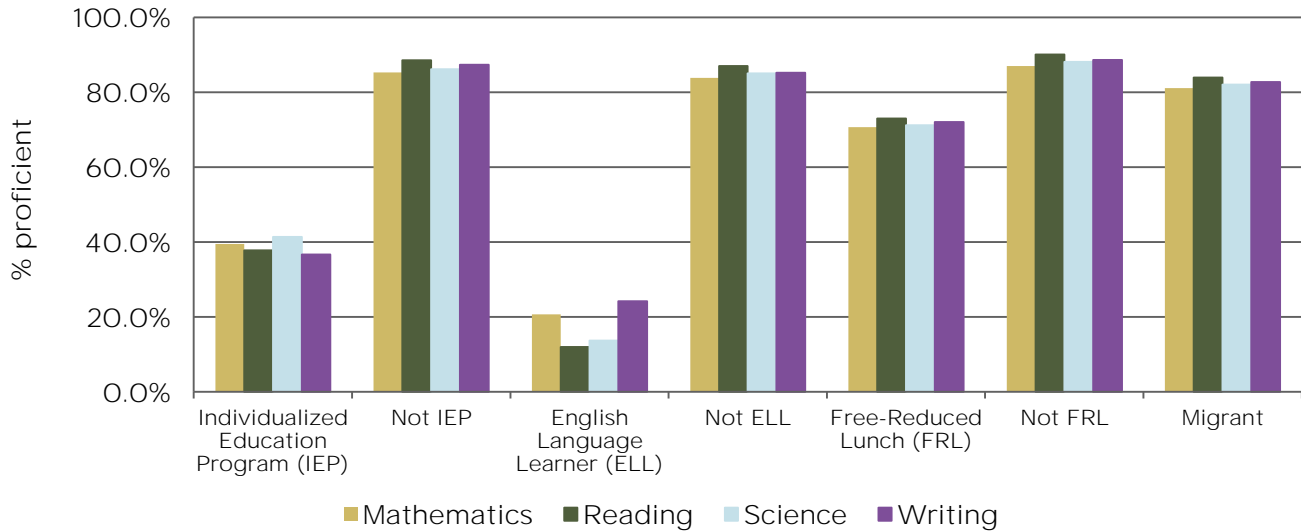
Fig 15: Percent of 11th Grade Students Proficient by Subject & by Race/ Ethnicity, Washoe County, 2014-2015



1.1 SOCIOECONOMIC STATUS

- During the 2014-2015 school year, proficiency in mathematics, reading, science and writing was highest among 11th grade students who were Asian, white, or 2 or more races.
- Proficiency was lowest among 11th grade students who were African American, Pacific Islander, or Hispanic.

Fig 16: Percent of 11th Grade Students Proficient by Subject & by Select Groups, Washoe County, 2014-2015



- During the 2014-2015 school year, proficiency in mathematics, reading, science and writing was highest among 11th grade students who were migrants, students who were not receiving free-reduced lunch (FRL), students who were not on an Individualized Education Program (IEP), as well as those who were not an English language learner (ELL).

High School Graduation Rates

Graduation rates in Washoe County have been increasing and reached a new record high with the Class of 2017 graduation rate at 84%; however those with limited English proficiency (LEP), also known as English language learners (ELL), as well as students with disabilities who require an Individualized Education Program or plan (IEP), continue to experience much lower graduation rates.¹⁴ As of the 2016-2017 school year students who require an IEP (13%) and those who qualify as an ELL (15%) equate to 28% of the total Washoe County School District student population.¹⁵ Although not provided in Figure 17, the preliminary estimated high school graduation rate for the Washoe County School District Class of 2017 was reported be a new high of 83.7%.¹⁶

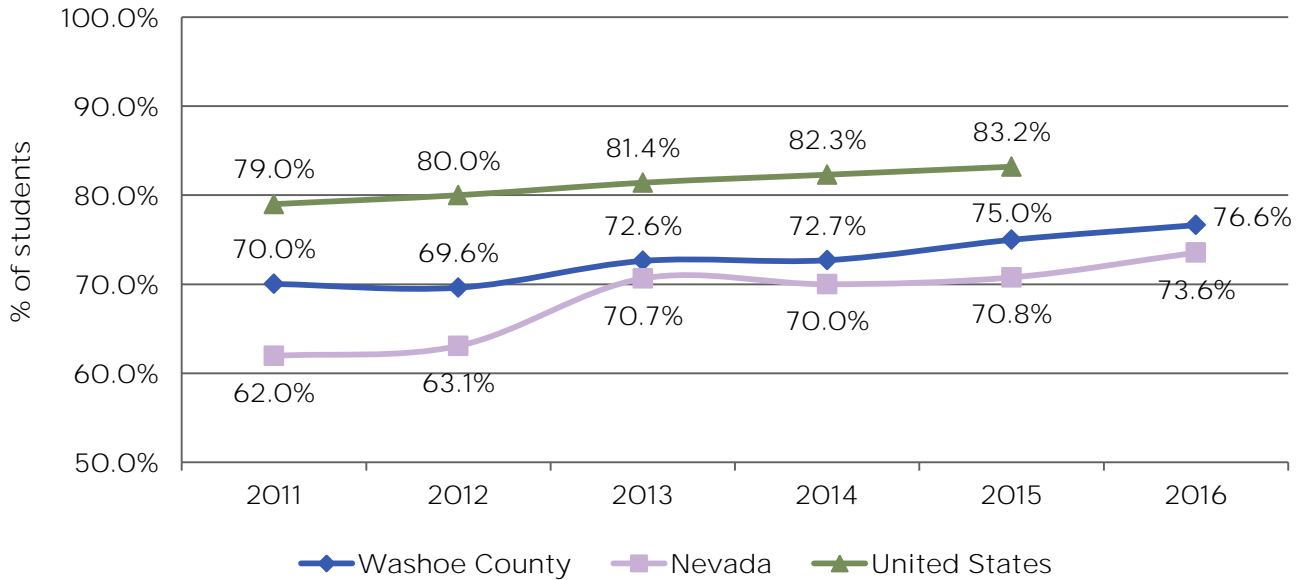
¹⁴ Washoe County School District. WCS D Sets new Graduation Record for Fifth Consecutive Year. Accessed <https://www.washoeschools.net/site/default.aspx?PageType=3&ModuleInstanceID=2000&ViewID=7b97f7ed-8e5e-4120-848f-a8b4987d588f&RenderLoc=0&FlexDataID=21614&PageID=1>

¹⁵ Nevada Department of Education. Nevada Report Card Demographic Profile. Accessed nevadareportcard.com

¹⁶ Washoe County School District. Graduation by the Numbers. Accessed <http://www.wcsddata.net/data-topics/graduation/>

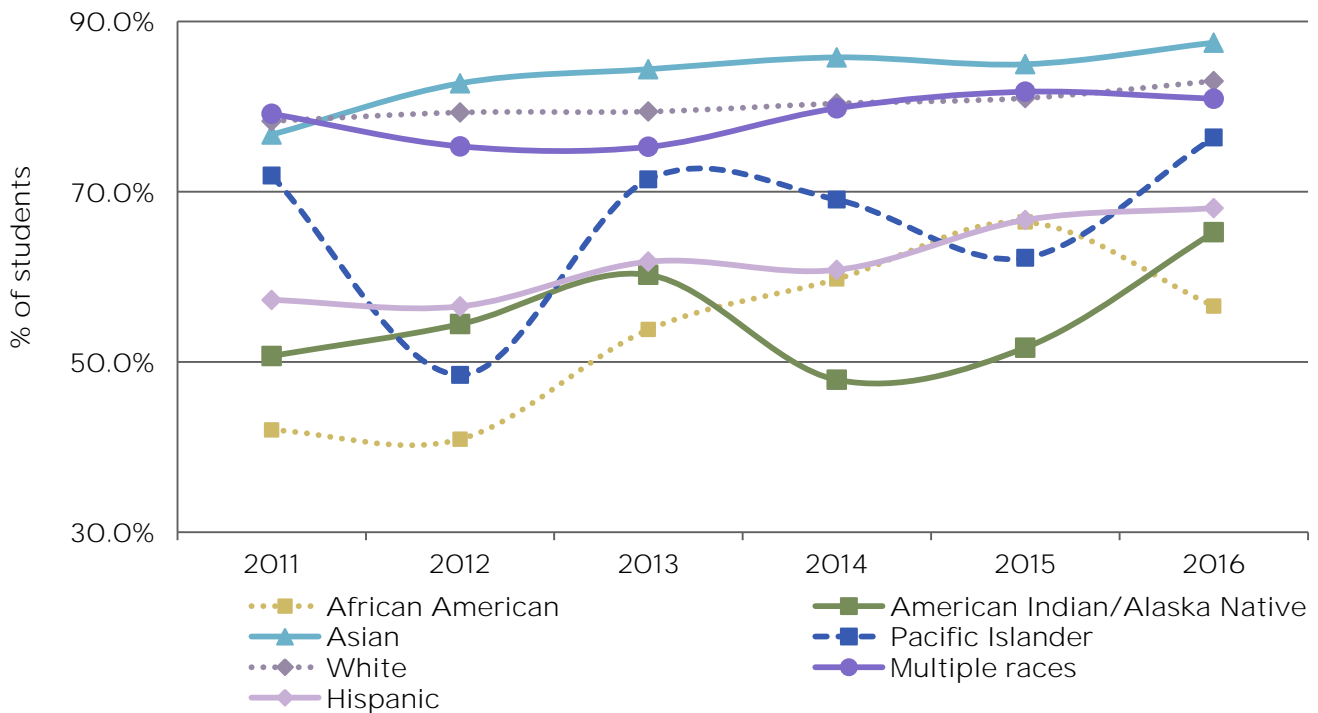
1.1 SOCIOECONOMIC STATUS

Fig 17: High School Cohort Graduation Rates, Washoe County, Nevada, & the United States, Class of 2011 - Class of 2016



- The high school graduation rates in Washoe County increased from 2011-2012 (70.0%) to 2016-2017 (76.6%).
- During the 2016-2017 school year the high school graduation rates in Washoe County (76.6%) were higher than Nevada (73.6%).

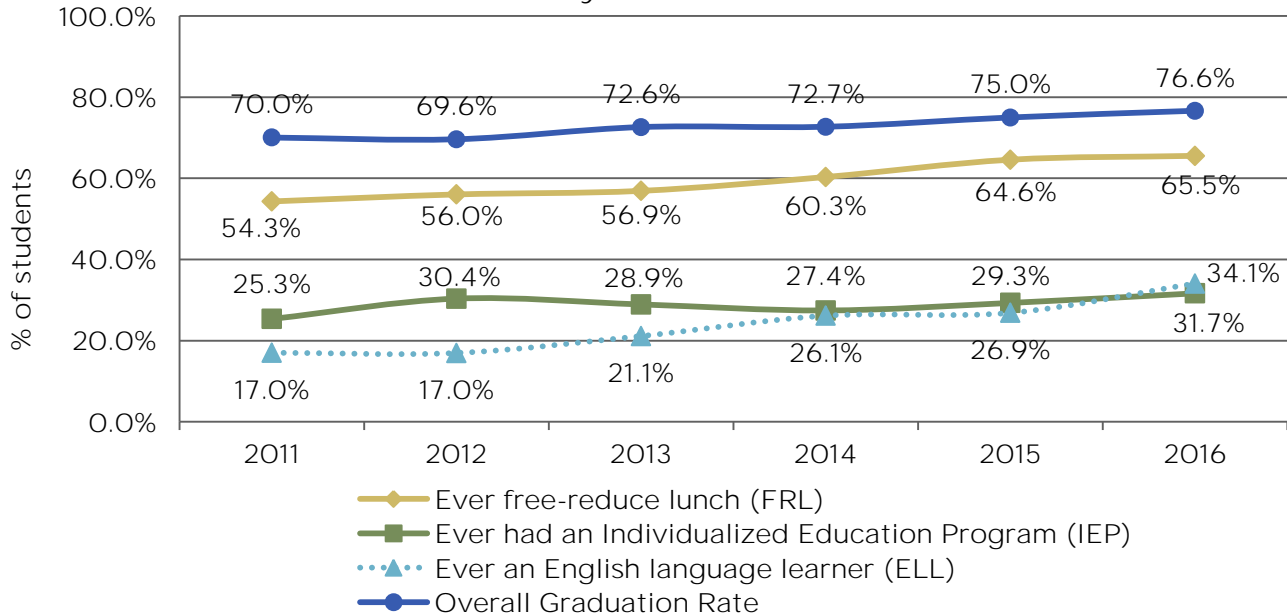
Fig 18: High School Graduation Rate, by Race/Ethnicity, Washoe County, Class of 2011-Class of 2016



1.1 SOCIOECONOMIC STATUS

- High school graduation rates from 2011-2012 through 2016-2017 were highest among Asian, white, and students who were multiple races.
- Although still among the lowest, high school graduation rates improved among African American, American Indian/Alaska Native, and Hispanic students from 2011-2012 through 2016-2017.

Fig 19: High School Graduation Rate, by Select Groups, Washoe County, Class of 2011-Class of 2016



- Graduation rates among all select groups in Washoe County increased from 2011-2012 to 2016-2017, however students in these groups still remain at risk for not completing high school education.

Transiency & Remediation

Transiency is defined as a student who moves after starting the school year; those who move due to school rezoning changes do not count as transient. Transient students may face challenges including disrupting social supports and friend groups, curriculum gaps or repetition from one school to the next, and inconsistency in environment and educational expectations. Developing a sense of belonging and self-worth are foundational needs, which must be met prior to engaging in higher-level thinking.¹⁷ Studies have demonstrated a link between higher mobility (transiency) rates and lower test scores.¹⁸

The percentage of freshmen students enrolled in remedial courses in an institution of higher education is an indication of the readiness of those students once they have completed high school. Remedial courses are designed for students who are not ready for college level course work, remedial credits do not count towards graduation and are not covered by all forms of financial aid. The University of Nevada, Reno (UNR) created stretch courses, a remedial course with additional lecture time. These stretch courses are covered by financial

¹⁷ Maslow, A.H. (1970). *Motivation and Personality*. New York City, NY.

¹⁸ Welsh, R.O. (2016). *Student Mobility, Segregation, and Achievement Gaps: Evidence from Clark County, Nevada*. *Urban Education*. <https://doi.org/10.1177/0042085916660349>

1.1 SOCIOECONOMIC STATUS

aid and they do count towards graduation.¹⁹ As of fall 2015, a shift occurred from enrollment in traditional remedial courses to the stretch courses [Table 4].

Table 4: Percent of Students who were Transient & Percent Remediated, Washoe County, 2010-2011 through 2016-2017

% of students	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Transient	30.9%	22.1%	23.7%	22.8%	22.0%	19.1%	18.8%
Remediated	48.0%	44.0%	43.2%	40.9%	41.3%	27.4%	~

Note: Transient defined as a student who does not enroll for an entire school year in the same school starting Count Day

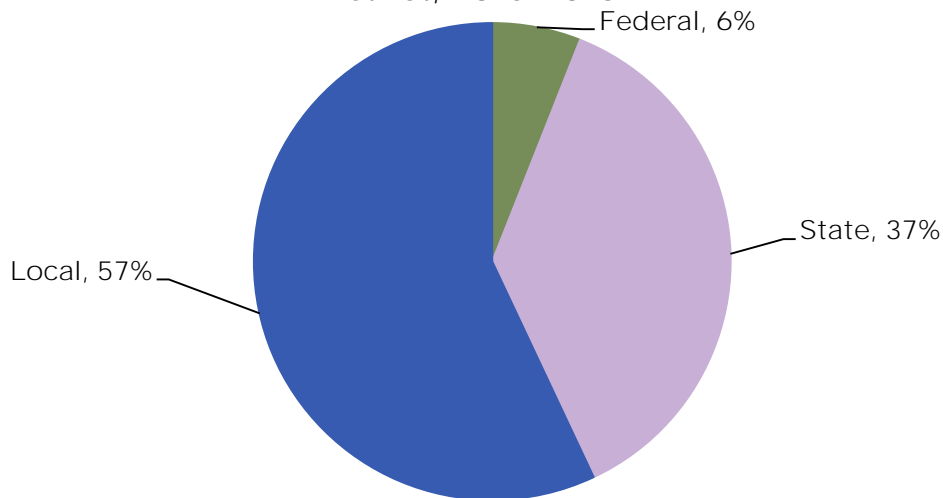
Note: Remedial defined as the percentage of students who graduated in the immediately preceding year and enrolled in remedial courses in reading, writing, or mathematics at a university or community college within the Nevada System of Higher Education (NSHE).

- The percentage of students grades K-12 considered to be transient decreased from 2010-2011 (30.9%) to 2016-2017 (18.8%).
- The percentage of students who graduated and enrolled in remedial courses in a university or community college within the Nevada System of Higher Education declined from 2010-2011 (48.0%) to 2015-2016 (27.4%).

Education Funding Sources

The proportion of Washoe County School District funds provided by local government decreased from 63% (2003-2004) to 57% (2015-2016), while state funding increased from 29% (2003-2004) to 37% (2015-2016). The proportion of federal funds remained relatively stable over the same time period, 8% (2003-2004) to 6% (2015-2016).²⁰

Fig 20: Percent of Funding by Source, Washoe County School District, 2015-2016



¹⁹ Reno Gazette Journal. Fast tracking remediation at UNR. Nov 13, 2016. Accessed <http://www.rgj.com/story/news/education/2016/11/13/fast-tracking-remediation/93619594/>

²⁰ Nevada Department of Education. Nevada Report Card. Fiscal Information (Reported for Prior School Year). Accessed nevadareportcard.com

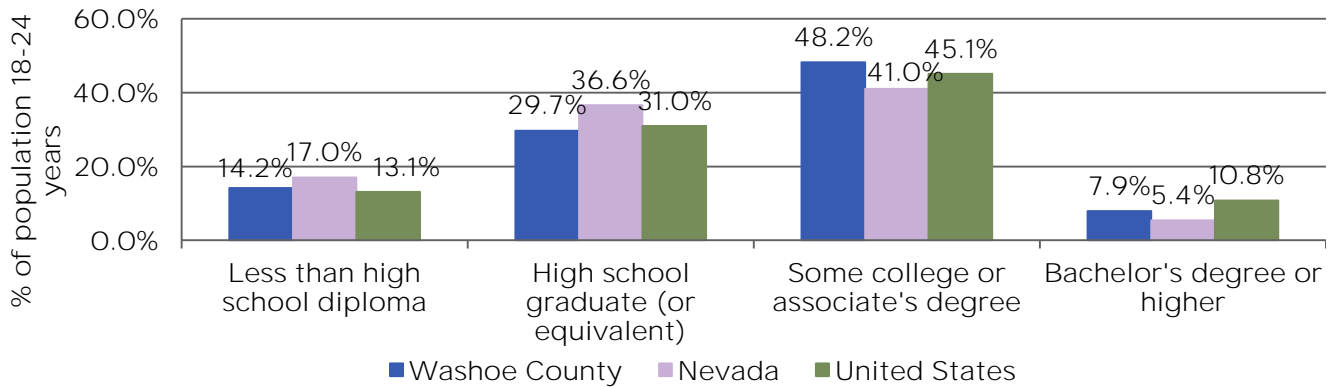
Expenditures per Student

Location	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Washoe County	\$7,992	\$8,635	\$8,506	\$8,638	\$9,029	\$9,308
Nevada	\$7,716	\$8,353	\$8,274	\$8,576	\$8,785	\$9,079

- The expenditures per student by Washoe County School District increased from 2010-2011 (\$7,992) to 2015-2016 (\$9,308).
- In 2015-2016, the expenditures per student in Washoe County School District were higher (\$9,308) than Nevada overall (\$9,079).

Educational Attainment

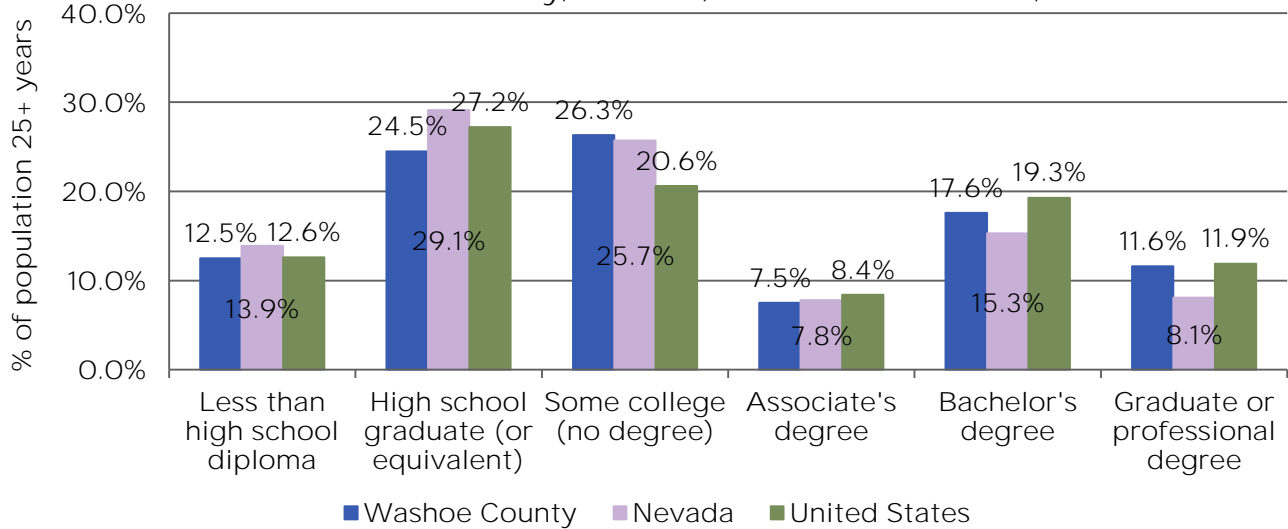
Fig 21: Educational Attainment among those 18-24 years, Washoe County, Nevada, & the United States, 2016



- In 2016, 14.2% of Washoe County residents aged between 18 and 24 years had less than a high school diploma, which was lower than Nevada (17.0%), however slightly higher than the United States (13.1%).
- Approximately 29.7% of Washoe County residents aged between 18 and 24 years had a high school diploma or a GED equivalent, which was lower than Nevada (36.6%), and the United States (31.0%).
- Approximately 48.2% of Washoe County residents aged between 18 and 24 years had some college or an associate’s degree, which was higher than Nevada (41.0%), and the United States (45.1%).
- In 2016, 7.9% of Washoe County residents aged between 18 and 24 years had a bachelor’s degree or higher, which was higher than Nevada (5.4%), however lower than the United States (10.8%).

1.1 SOCIOECONOMIC STATUS

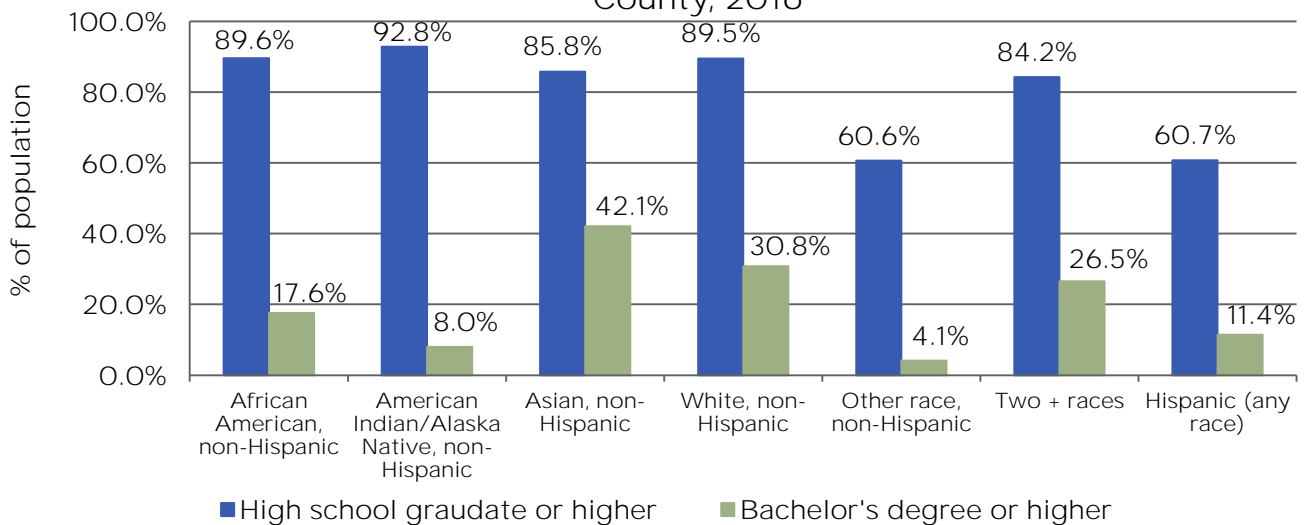
Fig 22: Educational Attainment among those 25+ Years, Washoe County, Nevada, & the United States, 2016



- In 2016, 37% of Washoe County residents 25 years and older had a high school diploma or less (combined), which was lower than Nevada (43.0%), and the United States (39.8%).
- Approximately 87.5% of Washoe County residents 25 years and older had at least a high school diploma more (combined), which was higher than Nevada (86.0%), and relatively similar to the United States (87.4%).
- In 2016, 29.2% of Washoe County residents 25 years and older had a bachelor's degree or higher (combined), which was higher than Nevada (23.4%), however lower than the United States (31.2%).

Figure 23 shows the percentage of the population that has obtained at least a high school graduation or more as well as the percentage of the population that has at least a bachelor's degree or more by race/ethnicity.

Fig 23: Educational Attainment by Race/Ethnicity, Washoe County, 2016



Note: All persons identified within each specific race/ethnicity with a bachelor's degree or higher are also counted in the high school graduate or higher column. Combined, columns do not equate to 100% of the population.

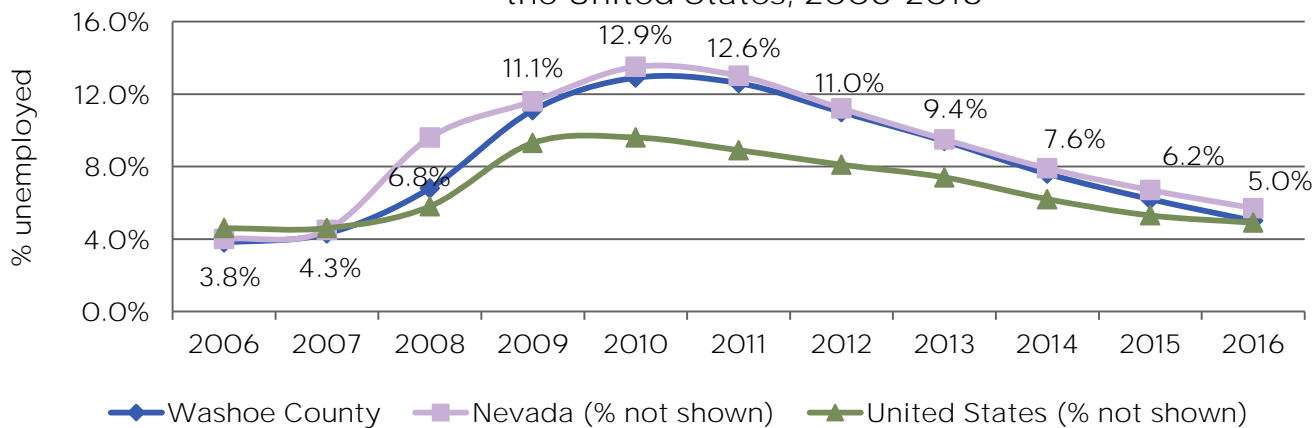
1.1 SOCIOECONOMIC STATUS

- In 2016, educational attainment was lowest among Washoe County residents who identify as an “other race” (60.6% high school graduate or higher) as well as those who identify as Hispanic (60.7% high school graduate or higher).
- Although 92.8% of those who identify as American Indian/Alaska Native had graduated from high school or attained a higher level of education, only 8.0% had a bachelor’s degree or higher.
- Educational attainment was highest among Washoe County residents who identify as Asian, non-Hispanic as 42.1% had a bachelor’s degree or higher, followed by residents who identify as white, non-Hispanic as 30.8% had a bachelor’s degree or higher.

Employment

A steady and reliable source of income is important to be able to afford the basic amenities such as housing, transportation, and food. However, when unemployment remains high for long periods of time, the entire health and wellness of the community can be negatively impacted due to the increased demand on public services and resources. Following the Great Recession of 2007, there were more people unemployed nationwide for longer periods of time and the consequences of long-term unemployment can be even more devastating.²¹ The unemployment rates during the Recession in Washoe County were among the highest in the nation and although have declined to near pre-Recession rates, there has been an ongoing impact to the community.

Fig 24: Annual Unemployment Rate, Washoe County, Nevada, & the United States, 2006-2016



- Prior to the Great Recession, the rate of unemployment in Washoe County during 2006 was (3.8%) lower than Nevada (4.0%) and the United States (4.6%).
- During the Great Recession the unemployment rate in Washoe County more than tripled over a four year period (2006-2010). The Washoe County unemployment rate reached a high of 12.9% in 2010, which was lower than the statewide rate (13.0%) and higher than the United States (9.6%).
- In 2016, the unemployment rate in Washoe County fell to 5.0%, which was lower than Nevada (5.7%) and slightly higher than the United States rate (4.9%).

²¹ Nichols, A., Michell, J., & Linder, S. (2013). Consequences of Long-Term Unemployment. Urban Institute, Washington, D.C.

Occupation & Industry

Reno-Sparks is widely recognized as an events town, hosting multiple large annual gatherings including the Reno Rodeo, Artown, Hot August Nights, Street Vibrations, Barracuda Championship PGA Tour Golf Tournament, Great Reno Balloon Races, the International Air Races and serves as a hub for visitors attending Burning Man. These events in combination with the gaming sector, have created a larger than average market for jobs in the service industries, specifically food and beverage services. In 2016, food preparation and serving-related jobs were the third largest occupational group in Washoe County, defined by the number of persons employed in that profession; however, they represented the lowest average wage (\$10.99) among all major occupational groups.²² Employees in the service industry typically earn a lower base wage, relying largely on tips for income.

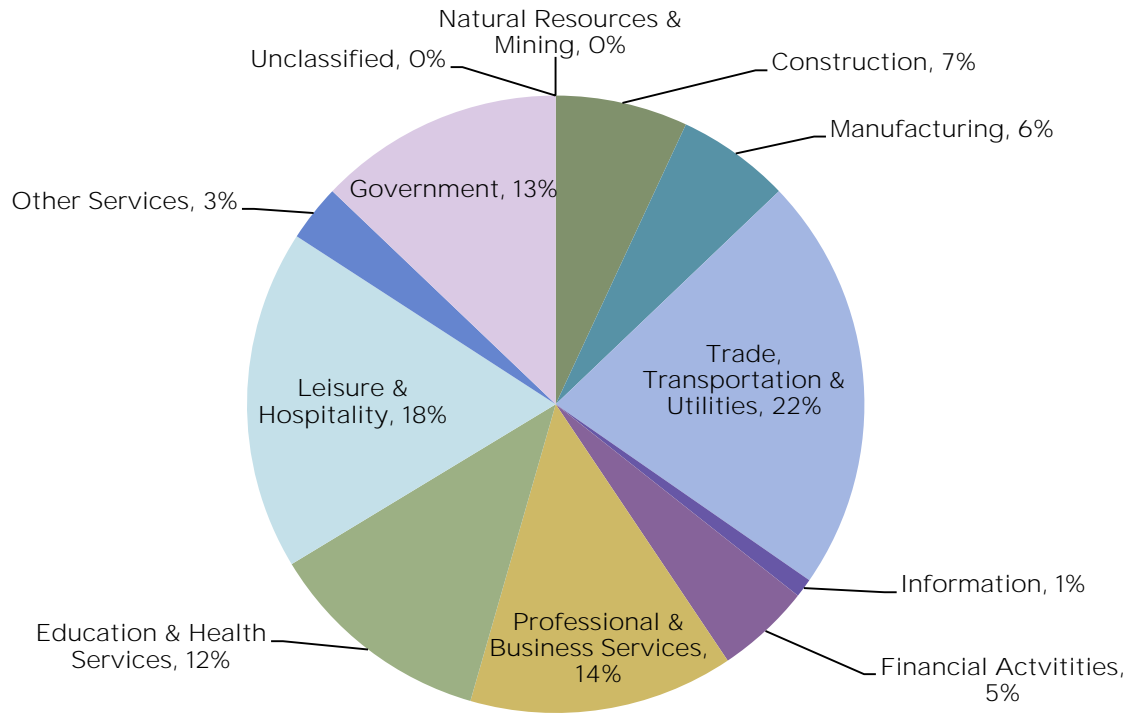
Washoe County is also home to one of the largest Federal Trade Zones (FTZ) in the United States. Companies that operate in a FTZ can defer, reduce or eliminate customs duties, entry procedures, and federal excise taxes on foreign products admitted into area for storage, exhibition, assembly, manufacturing and processing.²³ Several national and international corporations have massive warehouses for storage and shipping in the Reno-Sparks area, largely due to the pro-business tax structure in Nevada and the geographic location of Reno-Sparks. Many freight, stock, storage, and warehouse-affiliated jobs (materials movers) pay among the lowest wages, involve semi-automated and repetitive tasks, and require little to no higher education.²⁴ Being employed is important; however having a decent paying job may be more difficult to come by.

²² Nevada Department of Employment, Training and Rehabilitation. Occupational Employment Statistics. Accessed <http://nevadaworkforce.com/OES>

²³ Nevada Governor's Office of Economic Development, Diversify Nevada. The ABC's of Foreign Trade Zones in Nevada. Accessed http://www.diversifynevada.com/documents/division_documents/THE_ABCs_of_FTZs-Nevada.pdf

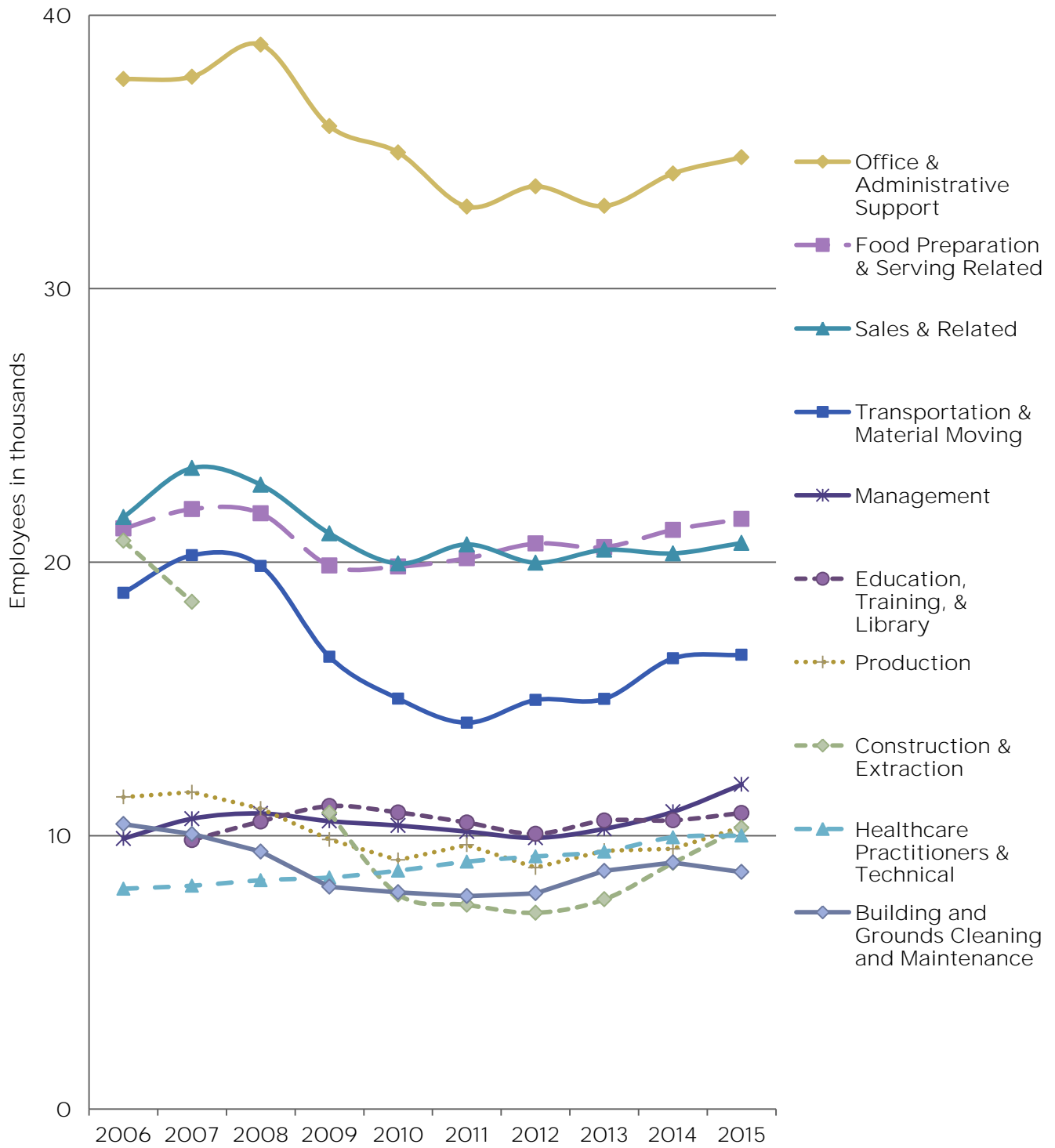
²⁴ Nevada Department of Employment, Training and Rehabilitation. (2016). Occupational Employment Statistics (OES) Wages Data. Reno MSA. Accessed <http://nevadaworkforce.com/OES>

Fig 25: Percent of Total Employment by Industry, Washoe County, 2016



1.1 SOCIOECONOMIC STATUS

Fig 26: Employees in Thousands, Top 10 Major Occupational Groups, Reno-Sparks, 2006-2015



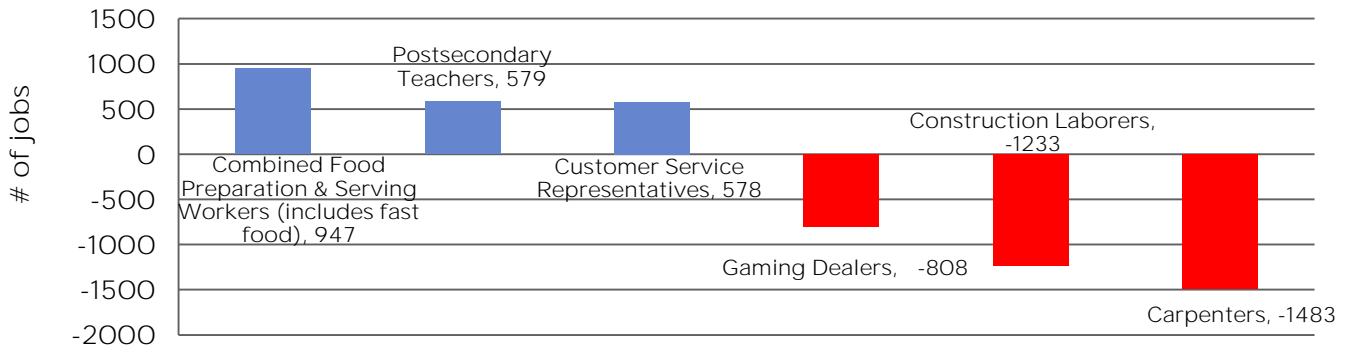
Note: Excludes self-employed

Note: Education, Training and Library not classified as a Major Occupational Group in 2006

Occupational Trends

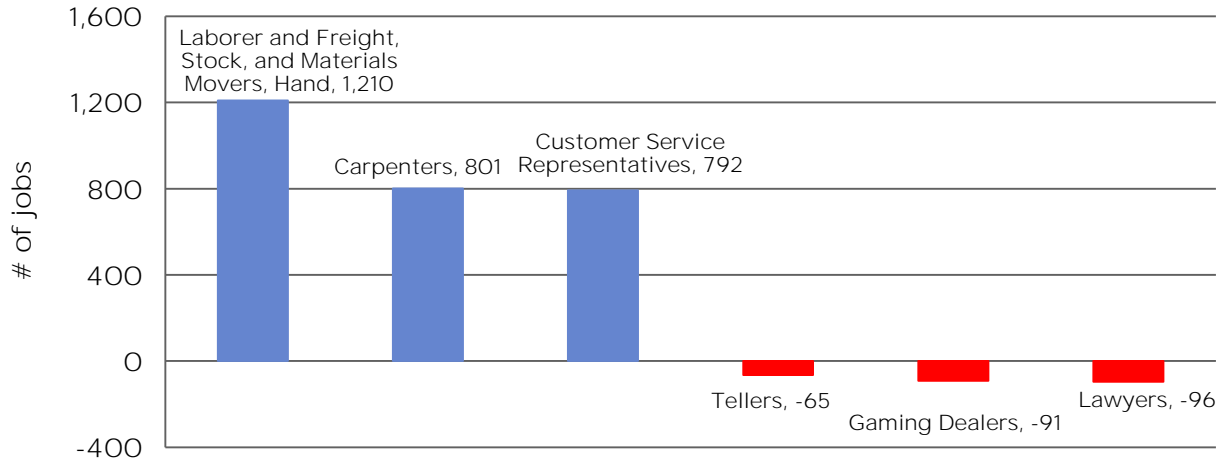
The following graphs illustrate differences in occupational employment over a 10-year period, 2006-2016 [Figure 27] and post-Recession, 2010-2016 [Figure 28].

Fig 27: Change in Jobs, by Occupation, Washoe County, 2006 to 2016



- Over the past 10 years (2006-2016), the number of jobs by occupation increased for Food Preparation and Service Industry, Postsecondary Teachers, and Customer Service Representatives.
- Over the past 10 years (2006-2016), the number of jobs by occupation decreased for Gaming Dealers, Construction Laborers, and Carpenters.

Fig 28: Change in Jobs, by Occupation, Washoe County, 2010 to 2016



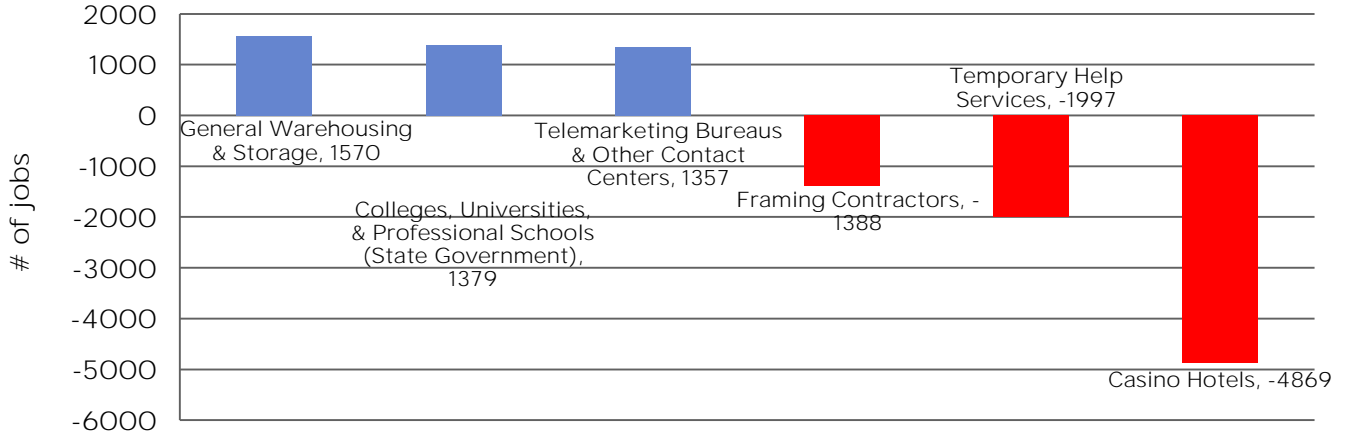
- Measured from 2010 to 2016, jobs in the laborers and freight, stock, and materials movers, carpenter, and customer service representative occupations have increased, while tellers, gaming dealers and lawyers have decreased.

1.1 SOCIOECONOMIC STATUS

Industrial Trends

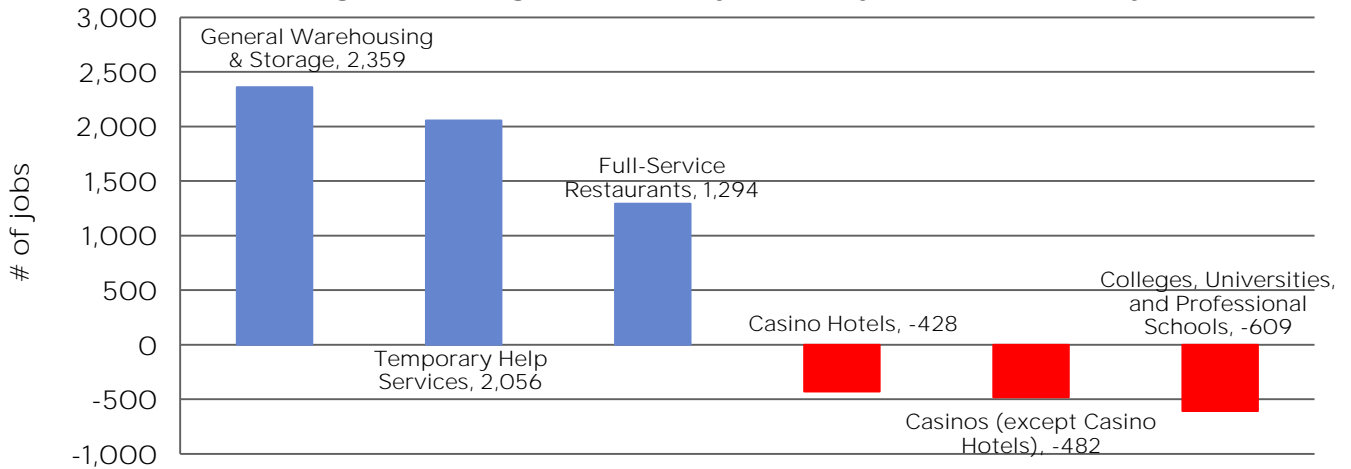
The following graphs illustrate differences in industrial job growth over a 10-year period, 2006-2016 [Figure 29] and post-Recession, 2010-2016 [Figure 30].

Fig 29: Change in Jobs, by Industry, Washoe County, 2006-2016



- Over the past 10 years (2006-2016), the number of jobs by industry increased for General Warehousing and Storage, Colleges, Universities, and Professional Schools, and Telemarketing Bureaus and Other Contact Centers.
- Over the past 10 years (2006-2016), the number of jobs by industry decreased for Framing Contractors, Temporary Help Services, and Casino Hotels.

Fig 30: Change in Jobs, by Industry, Washoe County, 2010-2016

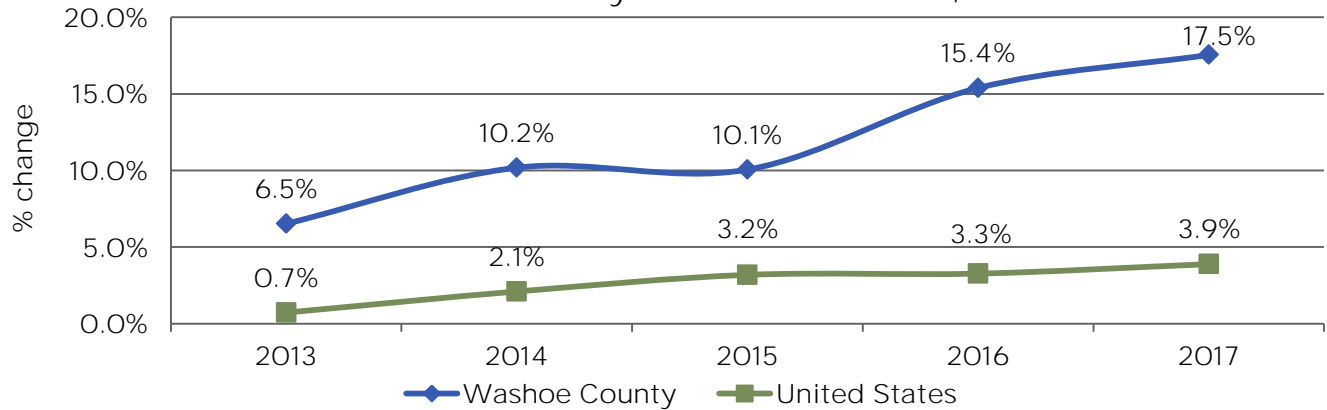


- Measured from 2010 to 2016, jobs in the general warehousing and storage, temporary help, and full-service restaurants industries have increased, while casino hotels, casinos (except casino hotels), and colleges, universities, and professional schools decreased.

1.1 SOCIOECONOMIC STATUS

There has been a regional focus on bringing in manufacturing industries to the area. As a result, manufacturing as an industry has experienced an increase in more recent years relative to the United States overall, as demonstrated by Figure 31.

Fig 31: Percent Change in Payroll Employment for Manufacturing, Washoe County & the United States, 2012-2017



Top Employers

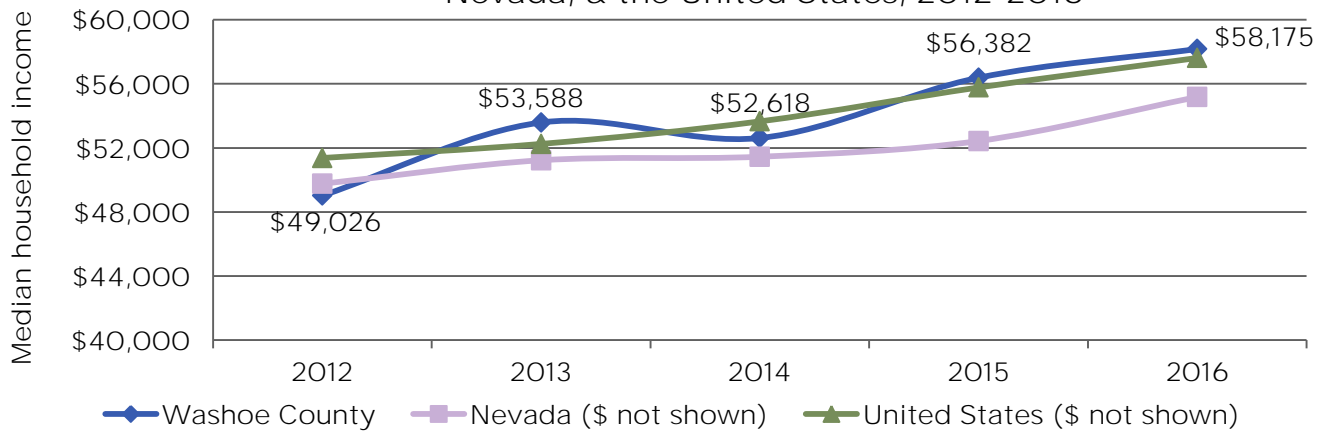
Table 6: Top 10 Employers, Washoe County, 3rd quarter-2016

Rank	Trade Name	Sizeclass
1	Washoe County School District	7000 to 7499 employees
2	University of Nevada, Reno	4500 to 4999 employees
3	Renown Regional Medical Center	3000 to 3499 employees
4	Washoe County Comptroller	2500 to 2999 employees
5	Peppermill Hotel Casino (Reno)	2000 to 2499 employees
6	Grand Sierra Resort and Casino	2000 to 2499 employees
7	IGT	1500 to 1999 employees
8	Atlantis Casino Resort	1500 to 1999 employees
9	Silver Legacy Resort Casino	1500 to 1999 employees
10	Saint Mary's	1500 to 1999 employees

- During the 3rd quarter of 2016, the top employer in Washoe County was the Washoe County School District, followed by the University of Nevada, Reno, and Renown Regional Medical Center.

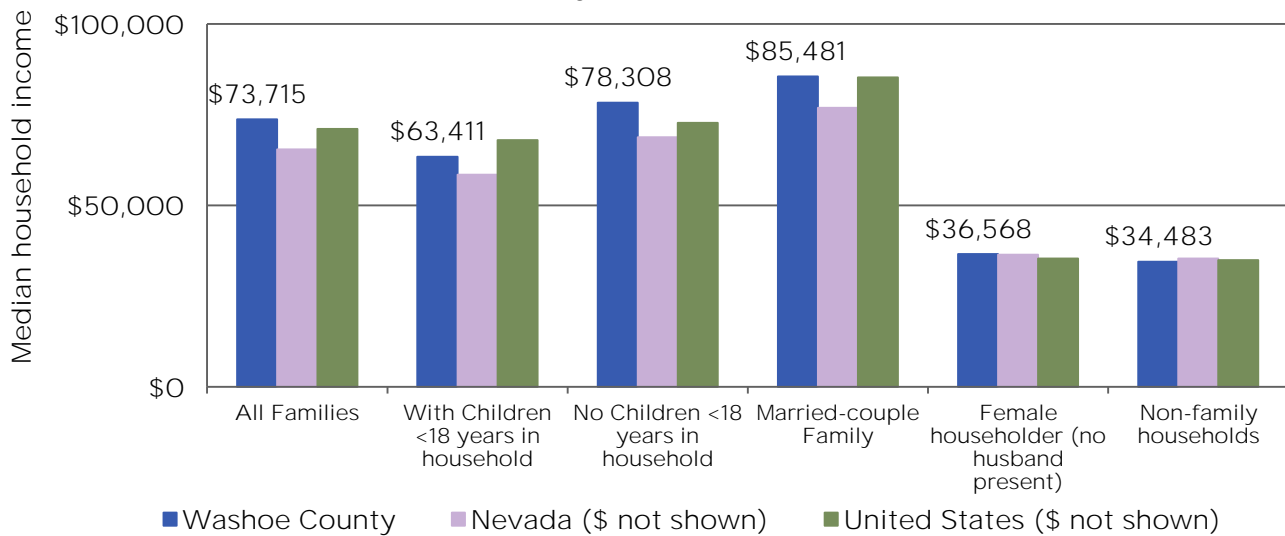
Income & Wages

Fig 32: Median Annual Household Income, Washoe County, Nevada, & the United States, 2012-2016



- The median household income in Washoe County increased from 2012 (\$49,026) to 2016 (\$58,175).
- In 2016, the median household income in Washoe County (\$58,175) was higher than Nevada (\$55,180) and the United States (\$57,617).

Fig 33: Median Annual Household Income by Family Type, Washoe County, Nevada, & the United States, 2016



- In 2016, with the exception of non-family households, all types of households in Washoe County reported a higher median household income than Nevada and the United States.
- Families with a female head of household (no husband present) and non-family households reported the lowest median household income.
- Married-couple families reported the highest median incomes compared to other types of family and non-family households.

1.1 SOCIOECONOMIC STATUS

Table 7: Select Hourly Wages by Family Type, Washoe County, 2016

Family Type	Living Wage	Poverty Wage
1 Adult, 1 Child	\$22.76	\$7.00
1 Adult, 2 Children	\$29.01	\$10.00
2 Adults (both working), 1 Child	\$12.62	\$5.00
2 Adults (both working), 2 Children	\$15.80	\$5.00

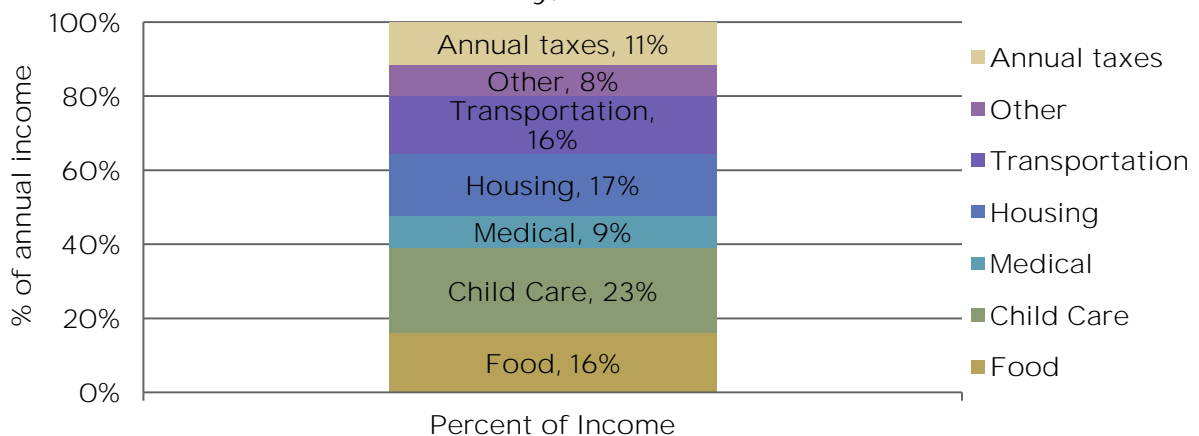
- The estimated living wage for one working adult with one child was \$22.76 in 2016, while the living wage for one adult (single earner) with two children increased to \$29.01/hour.
- In Washoe County, one working adult supporting two children and making \$10/hour or less was estimated to be living in poverty.

Table 8: Select Wages for Single Adult with no Children, Washoe County & Nevada, 2016

Location	Living Wage	Poverty Wage	Current Minimum Wage
Washoe County	\$10.02	\$5.00	\$8.25
Nevada	\$10.44	\$5.00	\$8.25

- The estimated living wage for a single adult with no children in 2016 for Washoe County was \$10.02/hour, which was 42 cents lower than the estimated living wage for Nevada overall at \$10.44/hour.

Fig 34: Estimated Percent of Annual Income per Expense Type, for Two Adults Working Full Time with Two Children, Washoe County, 2016



- According to the 2016 MIT Living Wage Estimates for Washoe County, the proportion of income earned by two adults working full time with two children (dependents) primarily goes towards child care (23%), housing (17%), transportation (16%), and food (16%).

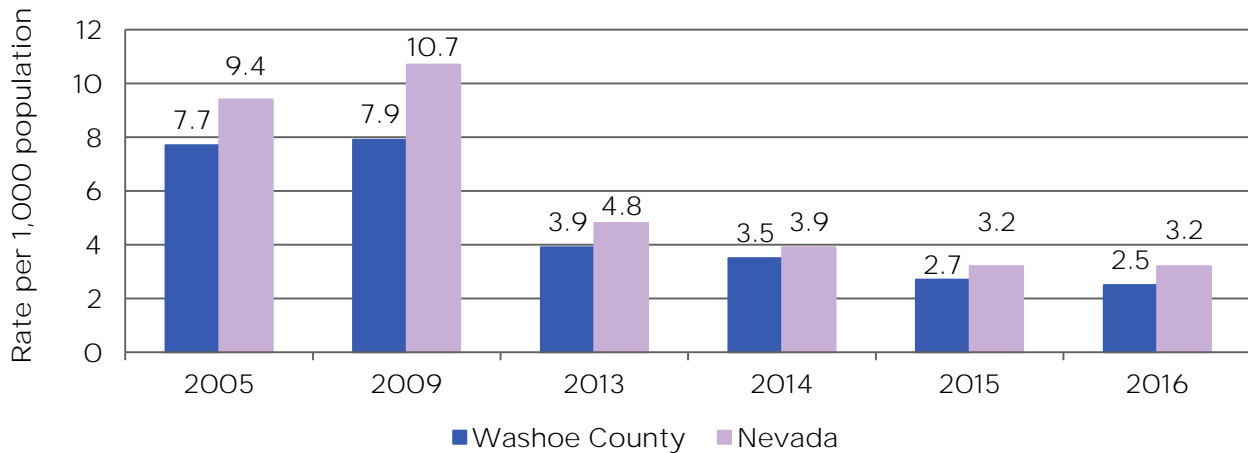
Bankruptcy & Financial Assets

According to 2013 CFED estimates approximately 18.1% of the population in Washoe County was underbanked, while 7.4% was unbanked, meaning they do not have a checking or savings account. Underbanked is defined as a household with either a checking or savings account that has used an alternative financial service from non-bank providers in the past year, money order, check cashing, remittances, payday loans, refund anticipation loans, rent to own services, pawn shop loans, or auto title loans. Additionally, nearly one in four

1.1 SOCIOECONOMIC STATUS

people (24.8%) were estimated to be living in a household without sufficient new worth to live at the FPL for three months in the absence of income.²⁵

Fig 35: Personal Bankruptcy Filing Rate, Washoe County & Nevada, 2005, 2009, & 2013-2016



- The personal bankruptcy rate in Washoe County has decreased from a high of 7.9 per 100,000 population in 2009 to 2.5 per 100,000 population in 2016.
- The personal bankruptcy rate in Washoe County was lower than Nevada for all years depicted in Figure 35.

Poverty

Poverty is one of the strongest predictors of negative health outcomes, which include high infant and maternal mortality rate and a higher prevalence of risk factors for disease such as obesity, depression, high blood pressure, and substance use. Higher rates of poverty are associated with higher prevalence of poor health behaviors and poor health outcomes, thus resulting in premature death.^{26,27}

Table 9: Percent of Population at or Below Poverty Level, 2012-2016					
Location	2012	2013	2014	2015	2016
Washoe County	18.3%	15.1%	15.6%	13.7%	12.2%
Nevada	16.4%	15.8%	15.2%	14.7%	13.8%
United States	15.9%	15.8%	15.5%	14.7%	14.0%

- The rate of poverty in Washoe County decreased from 2012 (18.3%) to 2016 (12.2%).
- In 2016, the poverty rates in Washoe County (12.2%) were lower than Nevada (13.8%) and the United States (14.0%).

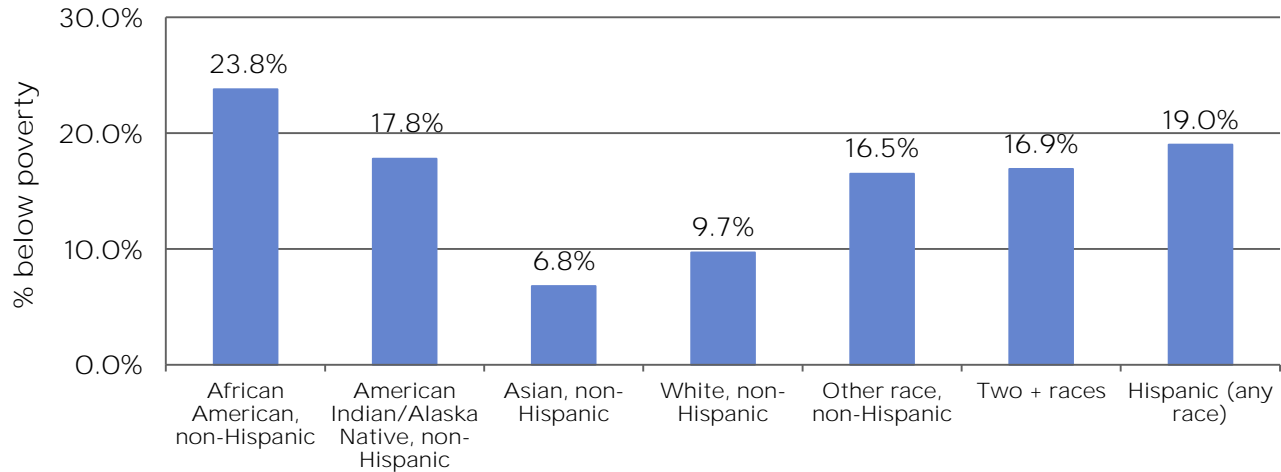
²⁵ CEFD, CITI Community Development. Assets & Opportunity Local Data Center. Washoe County. Accessed <http://localdata.assetsandopportunity.org/reports>

²⁶ UC Davis Center for Poverty Research. (2014). Focus on Poverty and Health. Spring Issue. Davis, CA

²⁷ World Health Organization, Organisation for Economic Co-operation and Development. (2003). DAC Guidelines and Reference Series Poverty and Health. OECD Publications Service, Paris France.

1.1 SOCIOECONOMIC STATUS

Fig 36: Percent of Population Living Below Poverty by Race/Ethnicity, Washoe County, 2016



- In 2016, the proportion of people living below poverty was highest among non-Hispanic African Americans (23.8%), followed by those of Hispanic ethnicity (19.0%), and non-Hispanic American Indian/Alaska Natives (17.8%).
- In 2016, the proportion of people living below poverty was lowest among non-Hispanic Asian (6.8%) residents and whites (9.7%).

Table 10: Percent of Children Under 18 years at or Below Poverty Level, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	27.2%	19.2%	18.8%	17.7%	16.0%
Nevada	24.0%	22.7%	22.0%	20.9%	19.1%
United States	22.6%	22.2%	21.7%	20.7%	19.5%

- The rate of poverty among children under 18 years in Washoe County decreased from 2012 (27.2%) to 2016 (16.0%).
- In 2016, the poverty rate among children in Washoe County (16.0%) was lower than Nevada (19.1%) and the United States (19.5%).

Table 11: Percent of Seniors 65+ years at or Below Poverty Level, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	7.3%	7.3%	7.6%	6.4%	8.0%
Nevada	8.1%	8.7%	8.3%	8.4%	8.7%
United States	9.5%	9.6%	9.5%	9.0%	9.2%

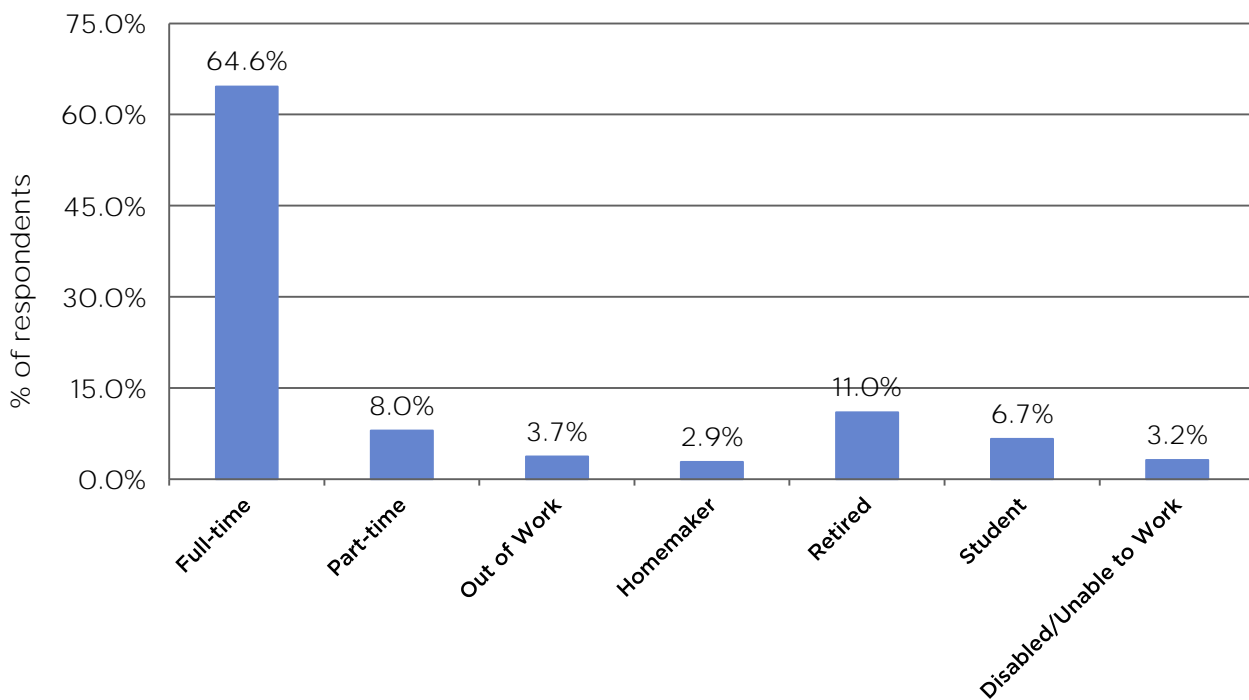
- The rate of poverty among seniors 65 years and older in Washoe County increased from 2012 (7.3%) to 2016 (8.0%).
- From 2012 through 2016 the poverty rate among seniors 65 years and older in Washoe County was lower than Nevada and the United States.
- In 2016 the poverty rate among seniors 65 years and older in Washoe County (8.0%) was lower than Nevada (8.7%) and the United States (9.2%).

Primary Data Related to Socioeconomic Status

Primary data were collected via an online community survey from over 1,400 survey participants. The survey included 44 questions and analysis for questions related to socioeconomics are provided within this section. Results and findings from the online community survey are not intended to be applied to or descriptive of all Washoe County residents and only represent the survey respondents themselves. Overall, the online community survey respondents were slightly younger, proportionally less Hispanic, and had higher educational attainment relative to the general Washoe County population. For complete survey methodology and participant demographics refer to the Contents, Methodology, & Community Survey Demographics section.

Question: “What is your current employment status? Select all that apply.”

Fig 37: Employment Status among Survey Respondents (n=1,263)



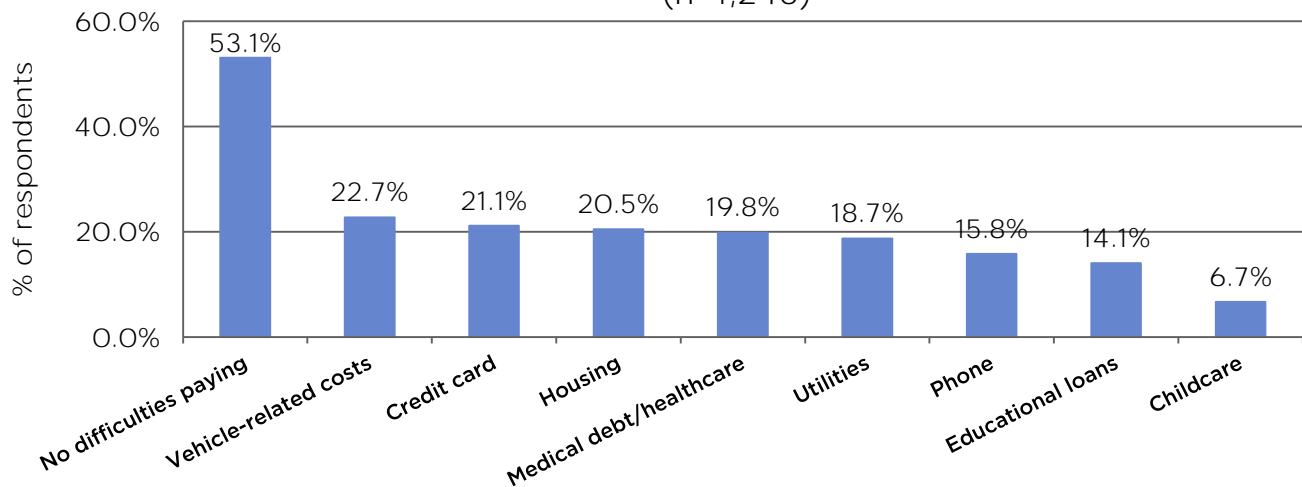
- The majority of respondents were employed full-time (64.6%), while 11.0% were retired, 8.0% were employed part-time, 6.7% were students, 3.7% were out of work and another 3.2% were disabled or unable to work.

1.1 SOCIOECONOMIC STATUS

Question: “Indicate if your household has had a hard time paying for any of the following within the past 12 months.”

Among the 1,245 respondents to the above question, 53.1% indicated they did not have difficulties paying for necessities or other amenities; however, 46.9% of respondents indicated they had difficulties paying for at least one of these services.

Fig 38: Household had Difficulties Paying in the Past 12 Months (n=1,245)

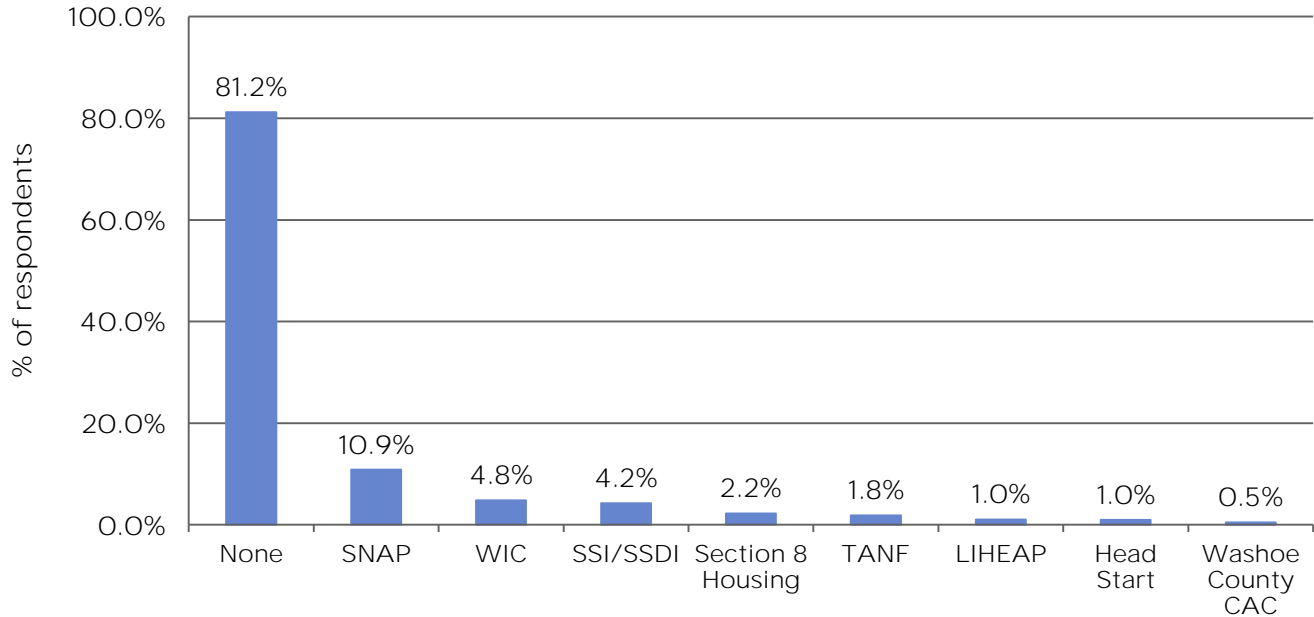


- Over one in five (22.7%) respondents indicated they had difficulties paying for vehicle-related costs, including car payments, vehicle maintenance, or transportation.
- Credit card payments were the second most commonly indicated financial challenge with 21.1% indicating their household had difficulties paying within the past 12 months.
- Housing (20.5%) and medical care/healthcare (19.8%) were the third and fourth most commonly identified financial strain on households, followed by utilities (18.7%).
- Phone bills (15.8%) and educational loans (14.1%) were among the least frequently identified financial strain, as over one in 10 respondents indicating they had difficulties paying for those over the past 12 months.
- Childcare costs were the least frequently identified financial challenge with 6.7% of respondents indicating their household had difficulties paying those in the past 12 months.

1.1 SOCIOECONOMIC STATUS

Question: “Which of the following services have you or someone in your household received benefits from or been enrolled in within the past 12 months?”

Fig 39: Percent of Respondents Enrolled in Services in Past 12 Months, by Type (n=1,253)



Note: SNAP= Supplemental Nutrition Assistance Program; WIC= Women Infants Children, nutritional assistance; SSI/SSDI = Supplemental Security Income/Social Security Disability Income; TANF = Temporary Assistance for Needy Families; LIHEAP= Low-income Home Energy Assistance Program; Washoe County CAC= Community Assistance Center

- The majority of respondents (81.2%) indicated no one in their household were enrolled or received benefits from the above programs within the past 12 months.
- The food assistance programs, SNAP (10.9%) and WIC (4.8%), were among the top services respondents received benefits from/were enrolled in within the past 12 months.

Summary of Socioeconomic Status

Education has been a longstanding focal point in Washoe County, with an emphasis in improving test scores across all subjects and increasing graduation rates. While proficiency scores for science, mathematics, and writing have increased, reading proficiency has declined. Additionally, approximately 20% of 11th grade students were not proficient in each of the major subjects during the 2015-2016 school year. County-wide high school graduation rates have improved; however, there are populations of students that have historically continued to see a low rate of graduation. Although trend data for educational attainment were not presented within the document, the proportion of the population without a high school diploma has declined over recent years, a positive trend for Washoe County. When split by race and ethnicity there are staggering discrepancies in educational attainment, with nearly 42.1% of Asians having received a Bachelor’s degree or higher, compared to only 8.0% of American Indian/Alaskan Natives, or 11.4% of Hispanics.

1.1 SOCIOECONOMIC STATUS

The Washoe County region appears to be recovering from the Great Recession of 2007, as measured by the usual economic indicators, a decline in unemployment rates, an increase in median household incomes, and a reduction of the population living in poverty. Despite broad economic recovery, some of the occupations that employ a larger proportion of workers are the lowest paying wages. Simply having a low unemployment rate does not equate to a healthy community; according to MIT analysts, the living wage in Washoe County for a single adult with no children is \$10.02/hour, while minimum wage is \$8.25/hour and the living wage for one working adult supporting one child is \$22.76/hour.²⁸ Additional challenges remains as there are large disparities in income, earnings, and poverty among various racial and ethnic groups in Washoe County, these disparities mirror the trends in educational attainment.

According to the Community Health Needs Assessment survey respondents, one in five people reported difficulties paying for vehicle related costs, credit card payments, housing, and medical debt or healthcare within the past 12 months. Simply because a person has a job, does not equate to quality of life, the ability to support basic needs such as housing, food, transportation, financial stability, or ensure equal access to amenities. Unfortunately, many indicate that they no longer qualify for governmental or supplemental assistance because they earn an income just above the cut-off point. This often leaves them and their families in a weaker financial situation although they have employment.

Continued improvement in educational outcomes will help to ensure youth in Washoe County will have the option to enroll in higher education or skilled training programs. This can improve chances for success in obtaining an adequate paying job or the opportunity to be employed in an occupation of interest. Additionally, supporting economic growth and diversity in the types of high skilled jobs and industries of the future, that encourage employees to engage in continued learning and opportunities to better their career, will help foster economic stability and improve overall health outcomes.

For detailed documents related to socioeconomics in Washoe County refer to:

- Education Alliance’s Washoe County School District data profiles <https://ed-alliance.org/resources/data-profile-information/>
- EDAWN EPIC Reports: <http://edawn.org/epic-report/>
- Nevada Office of Economic Development <http://nevadadashboard.com/statewide>
- Nevada Department of Employment, Training and Rehabilitation employment and wages reports <http://nevadaworkforce.com/QCEW>

²⁸ Glasmeier, A.K. Massachusetts Institute of Technology. Living Wage Calculation for Washoe County, Nevada. Accessed <http://livingwage.mit.edu/counties/32031>

Socioeconomic Sources

Image 3: How SES & Health Affect Each Other Over Time

Robert, Stephanie. (2012). Social Policy Is Health Policy: The Importance of Non-Medical Determinants of Health. [Slide presentation.] Institute for Research on Poverty Lecture to Morgridge Badger Volunteers. University of Wisconsin–Madison.

Fig 9-Fig 16; Table 4-Table 5; Same Source

Fig 9: Percent of 3rd Grade Students Proficient in Mathematics & Reading, Washoe County & Nevada, 2015-2016 & 2016-2017

Fig 10: Percent of 3rd Grade Students Proficient at Mathematics by Race/Ethnicity, Washoe County, 2015-2016 & 2016-2017

Fig 11: Percent of 3rd Grade Students Proficient at Reading by Race/Ethnicity, Washoe County, 2015-2016 & 2016-2017

Fig 12: Percent of 3rd Grade Students Proficient at Mathematics by Select Groups, Washoe County, 2015-2016 & 2016-2017

Fig 13: Percent of 3rd Grade Students Proficient at Reading by Select Groups, Washoe County, 2015-2016 & 2016-2017

Fig 14: High School Proficiency Exam, Percent of 11th Graders Proficient by Subject, Washoe County, 2010-2011 through 2014-2015

Fig 15: Percent of 11th Grade Students Proficient by Subject & by Race/Ethnicity, Washoe County, 2014-2015

Fig 16: Percent of 11th Grade Students Proficient by Subject & by Select Groups, Washoe County, 2014-2015

Fig 18: High School Graduation Rate, by Race/Ethnicity, Washoe County, Class of 2011-Class of 2016

Fig 19: High School Graduation Rate, by Select Groups, Washoe County, Class of 2011-Class of 2016

Table 4: Percent of Students who were Transient & Percent Remediated, Washoe County, 2010-2011 through 2016-2017

Fig 20: Percent of Funding by Source, Washoe County School District, 2015-2016

Table 5: Per Student Expenditures, Washoe County, 2010-2011 through 2015-2016

Nevada and Washoe County: Nevada Department of Education. Nevada Report Card. Accessed <http://nevadareportcard.com/di/>

Fig 17: High School Cohort Graduation Rates, Washoe County, Nevada, & the United States, Class of 2011 - Class of 2016

Nevada and Washoe County: Nevada Department of Education. Nevada Report Card. Accessed

<http://nevadareportcard.com/di/>

United States: U.S. Department of Education, national center for Education Statistics; EDfacts, Four-year adjusted cohort graduation rate data. Accessed

<https://www.whitehouse.gov/sites/whitehouse.gov/files/images/State%20by%20State%20Graduation%20Rates.pdf>

Fig 18-Fig 20 Same Source

Fig 18: High School Graduation Rate, by Race/Ethnicity, Washoe County, Class of 2011-Class of 2016

Fig 19: High School Graduation Rate, by Select Groups, Washoe County, Class of 2011-Class of 2016

Table 4: Percent of Students who were Transient & Percent Remediated, Washoe County, 2010-2011 through 2016-2017

Fig 20: Percent of Funding by Source, Washoe County School District, 2015-2016

Table 5: Per Student Expenditures, Washoe County, 2010-2011 through 2015-2016

Nevada and Washoe County: Nevada Department of Education. Nevada Report Card. Accessed

<http://nevadareportcard.com/di/>

Fig 21-Fig 23 Same Source

Fig 21: Educational Attainment among those 18-24 years, Washoe County, Nevada, & the United States, 2016

Fig 22: Educational Attainment among those 25+ Years, Washoe County, Nevada, & the United States, 2016

Fig 23: Educational Attainment by Race/Ethnicity, Washoe County, 2016

U.S. Census, 2016 American Community Survey -1 year estimates- TABLE S1501- Educational Attainment

Fig 24: Annual Unemployment Rate, Washoe County, Nevada, & the United States, 2006-2016

Nevada Department of Employment, Training and Rehabilitation, Nevada Labor Market Information, Local Area Unemployment Statistics (LAUS). Accessed <http://nevadaworkforce.com/LAUS>

Fig 25: Percent of Total Employment by Industry, Washoe County, 2016

Nevada Department of Employment, Training and Rehabilitation Research and Analysis Bureau. (2016). Nevada Employment and Payrolls, 2016. Accessed

<http://nevadaworkforce.com/Portals/139/Other%20Publications/Employment%20and%20Payrolls/2016%20E%20and%20P%20Final.pdf>

Fig 26: Employees in Thousands, Top 10 Major Occupational Groups, Reno-Sparks, 2006-2015

U.S. Department of Labor, Bureau of Labor Statistics, Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates. Accessed <https://www.bls.gov/oes>

1.1 SOCIOECONOMIC STATUS

Fig 27: Change in Jobs, by Occupation, Washoe County, 2006 to 2016

Nevada Governor's Office of Economic Development. (2016). Washoe County Economic Overview. Accessed <http://www.diversifynevada.com/images/uploads/Washoe.pdf>

Fig 28: Change in Jobs, by Occupation, Washoe County, 2010 to 2016

Nevada Governor's Office of Economic Development. (2017). Washoe County Economic Overview. Accessed <http://nevadadashboard.com/pdf/Washoe.pdf>

Fig 29: Change in Jobs, by Industry, Washoe County, 2006-2016

Nevada Governor's Office of Economic Development. (2016). Washoe County Economic Overview. Accessed <http://www.diversifynevada.com/images/uploads/Washoe.pdf>

Fig 30: Change in Jobs, by Industry, Washoe County, 2010-2016

Nevada Governor's Office of Economic Development. (2017). Washoe County Economic Overview. Accessed <http://nevadadashboard.com/pdf/Washoe.pdf>

Fig 31: Percent Change in Payroll Employment for Manufacturing, Washoe County & the United States, 2012-2017

Nevada Governor's Office of Economic Development. Data provided upon request. Carson City, NV.

Table 6: Top 10 Employers, Washoe County, 3rd quarter-2016

Nevada Department of Employment, Training, and Reinforcement. Nevada Labor Market Information. Accessed <http://nevadaworkforce.com/top-employers>

Fig 32: Median Annual Household Income, Washoe County, Nevada, & the United States, 2012-2016

U.S. Census, 2016 American Community Survey -1 year estimates-TABLE S1901 - MEDIAN INCOME IN THE PAST 12 MONTHS

Fig 33: Median Annual Household Income by Family Type, Washoe County, Nevada, & the United States, 2016

Source: U.S. Census, 2016 American Community Survey -1 year estimates-TABLE S1903 - MEDIAN INCOME IN THE PAST 12 MONTHS

Table 7-Table 8; Fig 34 Same Source

Table 7: Select Hourly Wages by Family Type, Washoe County, 2016

Table 8: Select Wages for Single Adult with no Children, Washoe County & Nevada, 2016

Fig 34: Estimated Percent of Annual Income per Expense Type, for Two Adults Working Full Time with Two Children, Washoe County, 2016

Glasmeyer, A.K. Massachusetts Institute of Technology. Living Wage Calculation for Washoe County, Nevada. Accessed <http://livingwage.mit.edu/counties/32031>

Fig 35: Personal Bankruptcy Filing Rate, Washoe County & Nevada, 2005, 2009, & 2013-2016

University of Nevada, Reno, School of Medicine, Office of Statewide Initiatives. Instant Atlas. Accessed <http://med.unr.edu/statewide/instant-atlas/county-data-map>

Table 9: Percent of Population at or Below Poverty Level, 2012-2016

U.S. Census, 2016 American Community Survey -1 year estimates- TABLE S1701 - POVERTY STATUS IN THE PAST 12 MONTHS

Fig 36; Table 10-Table 11 Same Source

Fig 36: Percent of Population Living Below Poverty by Race & Ethnicity, Washoe County, 2016

Table 10: Percent of Children Under 18 years at or Below Poverty Level, 2012-2016

Table 11: Percent of Seniors 65+ years at or Below Poverty Level, 2012-2016

U.S. Census, 2016 American Community Survey -1 year estimates- TABLE S1701 - POVERTY STATUS IN THE PAST 12 MONTHS

Following Figures from the Online Community Survey

Fig 37: Employment Status among Survey Respondents (n=1,263)

Fig 38: Household had Difficulties Paying in the Past 12 Months (n=1,245)

Fig 39: Percent of Respondents Enrolled in Services in Past 12 Months, by Type (n=1,253)

Housing

Safe, adequate, and affordable housing plays a major role in a person’s ability to have sufficient funds to pay for necessities such as utilities, food, clothing, transportation, and services, including higher education and healthcare. The U.S. Department of Housing and Urban Development states those paying more than 30% of monthly income on housing are cost burdened and the associated housing cost is therefore deemed to be “unaffordable”.²⁹ In addition to being affordable, housing needs to be of sufficient-quality to minimize the potential impacts of environmental toxins such as lead, which may be present in older paints or water lines, or mold, due to inadequate or outdated flooring and roofing. In 2015, a summary of research found several additional health factors associated with housing including food security, stress, mental health, asthma, unintended injury, and linkage and connectivity to supportive services.³⁰

According to a recent housing study conducted by Truckee Meadows Regional Planning Authority (TMRPA), over the past two decades the cost of single-family detached house has increased by 60%, while household incomes have only increased 17%.³¹ This outlines the burden of the cost of housing in Washoe County.

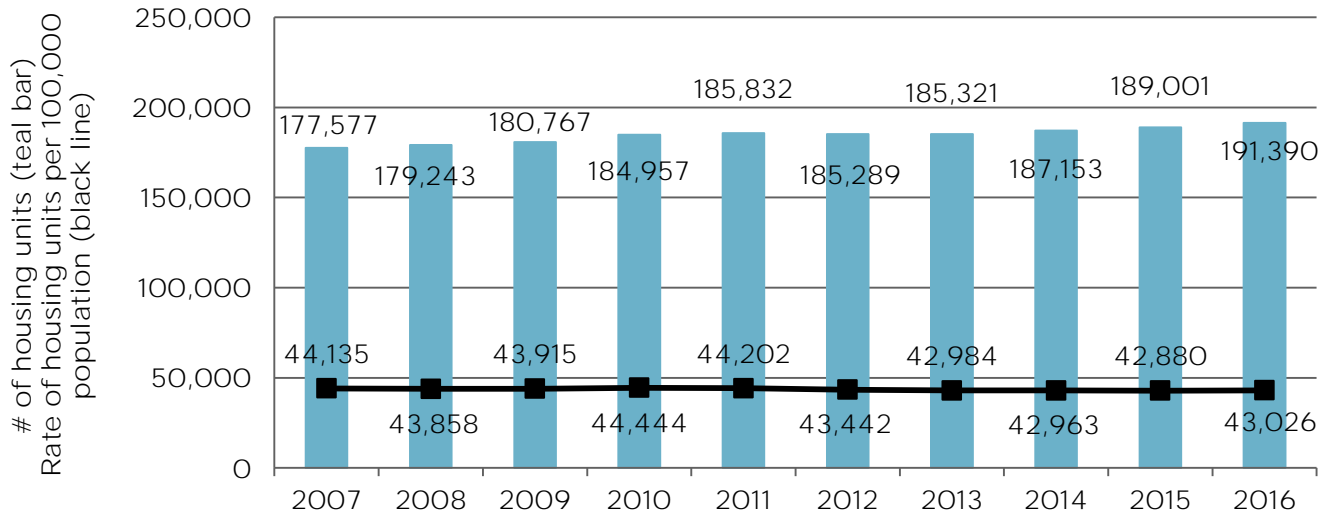
Indicator	Trend	Most Recent Year
Number of housing units	Increasing	191,390 (2016)
Number of housing units per capita	Decreasing	43,026 houses per 100,000 population (2016)
Percent of homes occupied	Increasing	91.3% (2016)
Percent of homes occupied by owner	Decreasing	57.3% (2016)
Median household value	Increasing	\$299,100 (2016)
Unaffordable mortgage	Decreasing	29.3% (2016)
Unaffordable rent	STABLE	48.7% (2016)
Number of homeless persons	Increasing	989 persons (2016)
Shelter type among homeless	~	various
Children in Transition (CIT-homeless youth)	Increasing	3,359 grades K-12 (2016-2017)
~not able to assess for trend		

²⁹ U.S. Department of Housing and Urban Development. Affordable Housing. Accessed https://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/

³⁰ Maqbool, N., Viveiros, J., & Ault, M. (2015). The Impacts of Affordable Housing on Health: A Research Summary. Center for Housing Policy. Washington, DC.

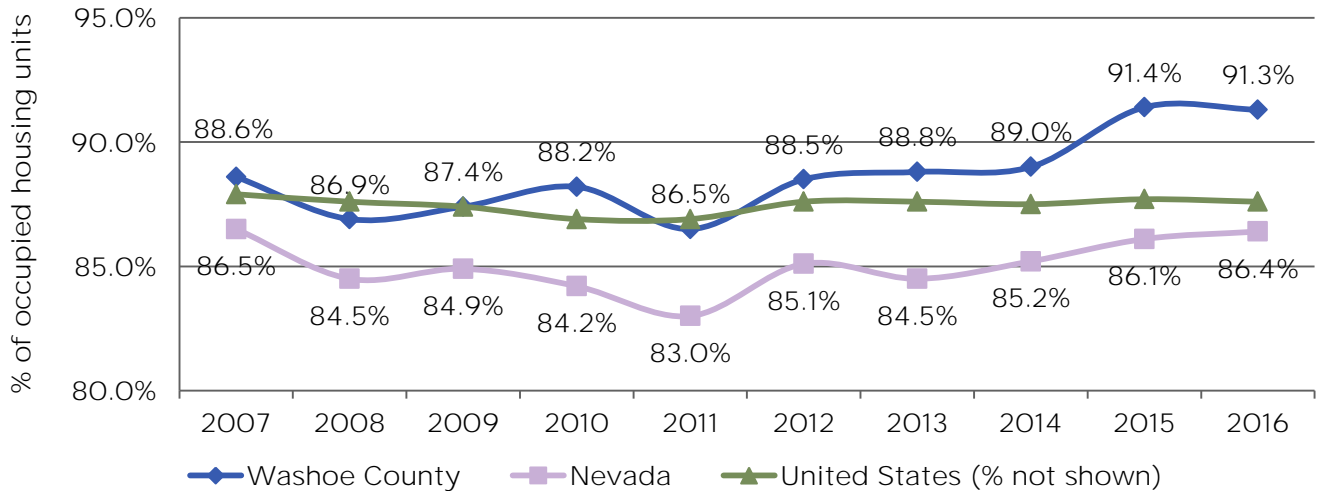
³¹ Truckee Meadows Regional Planning Agency. (2017). Truckee Meadows Housing Study. Accessed <http://tmrpa.org/truckee-meadows-housing-study/>

Fig 40: Number & Rate of Housing Units, Washoe County, 2007-2016



- The estimated number of housing units in Washoe County increased from 2007 through 2010 and again from 2012 to 2016.
- Although the overall number of housing units increased, the rate of housing units per 100,000 population decreased from 2007 (44,135 housing units per 100,000) to 2016 (43,026 housing units per 100,000). This indicates there were fewer houses available per capita.

Fig 41: Percent of Occupied Housing Units, Washoe County, Nevada, & the United States, 2007-2016



- There was a decline in the percent of housing units that were occupied from 2010 to 2011, largely due to the 2007 Great Recession and housing market crash.
- Since 2011, the percent of occupied housing units in Washoe County increased and remained higher than Nevada and the United States.

Table 12: Percent of Occupied Households Occupied by Owner, 2007-2016

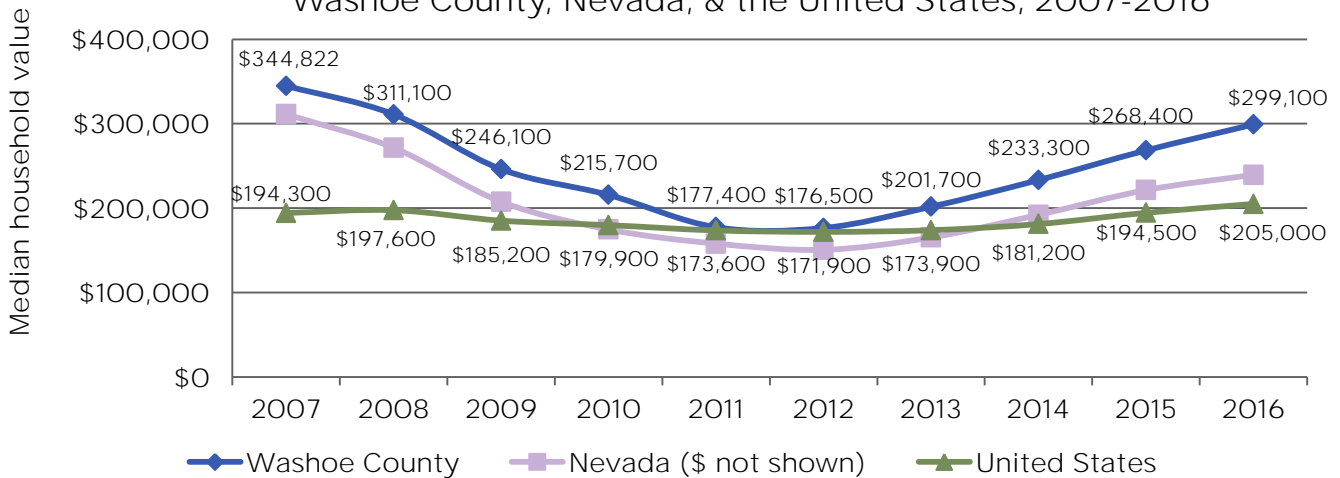
Location	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Washoe County	60.9%	59.8%	60.9%	57.5%	57.5%	56.9%	56.0%	57.1%	55.7%	57.3%
Nevada	60.4%	59.7%	59.3%	57.2%	56.3%	54.9%	54.3%	53.6%	54.0%	54.9%
United States	67.2%	66.6%	65.9%	65.4%	64.6%	63.9%	63.5%	63.1%	63.0%	63.1%

- The percentage of households occupied by the owner of the house decreased from 2007 (60.9%) to 2016 (57.3%) and has remained lower than the United States over the same time period.

Median Household Value

Although 2017 data are not provided in Figure 42, the median sales price for single-family residential homes sold in Washoe County during the 3rd quarter of 2017 was \$350,000, indicating continued increase since the end of calendar year 2016.³²

Fig 42: Median Household Value (Owner-occupied Houses), Washoe County, Nevada, & the United States, 2007-2016

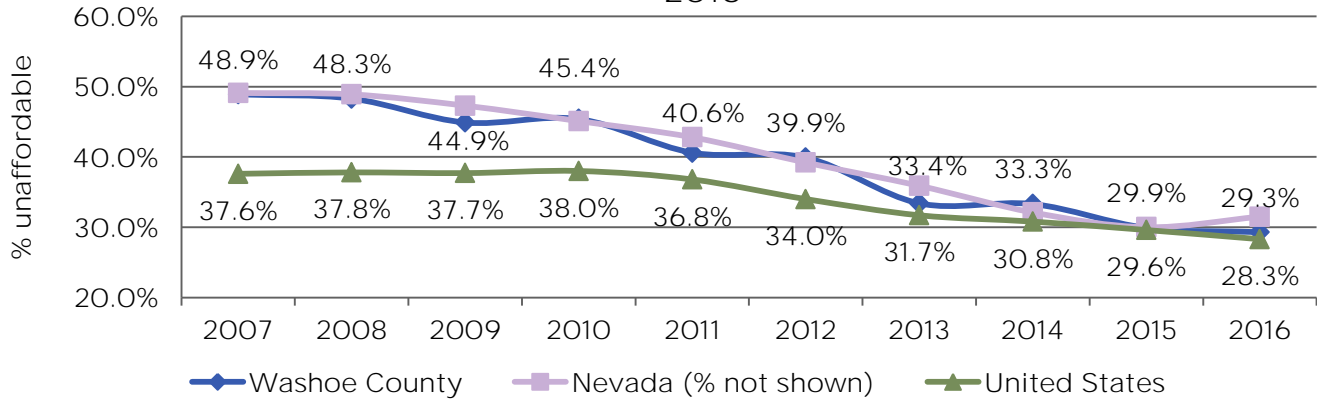


- The median household value in Washoe County, among houses occupied by owners, decreased sharply during the Great Recession. However, since 2012 the median price of owner-occupied houses has increased and in 2016 was \$299,100.
- The median household value of owner-occupied houses in Washoe County has been higher than the median household value of owner-occupied houses in Nevada and the United States from 2007 through 2016.

³² Washoe County Assessor. Real Property, Median Sales Chart. Accessed <https://www.washoecounty.us/assessor>

1.2 HOUSING

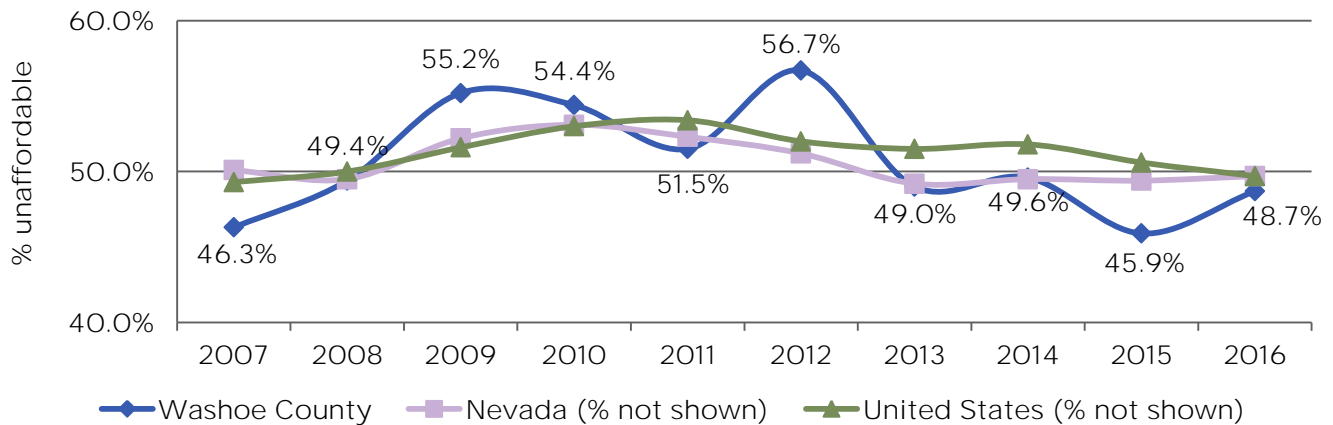
Fig 43: Percent of Owners Who Pay Unaffordable* Monthly Mortgage, Washoe County, Nevada, & the United States, 2007-2016



*Note: Unaffordable mortgage defined as a monthly mortgage greater than 30% of the monthly income

- Prior to the Great Recession a higher proportion of home owners in Washoe County were paying an unaffordable monthly mortgage.
- The proportion of home owners in Washoe County that pay an unaffordable monthly mortgage in Washoe County decreased from 2007 (48.9%) to 2016 (29.3%).
- In 2016, the proportion of home owners in Washoe County that were paying an unaffordable monthly mortgage was slightly lower (29.3%) than Nevada (31.5%) and slightly higher than the United States (28.3%).

Fig 44: Percent of Renters Who Pay Unaffordable* Monthly Rent, Washoe County, Nevada, & the United States, 2007-2016



*Note: Unaffordable rent is monthly rent greater than 30% of the monthly income

- The proportion of renters in Washoe County that paid an unaffordable monthly rent increased between 2007 (46.3%) to 2009 (55.2%) and again in 2012 (56.7%).
- In 2016, the proportion of renters in Washoe County paying an unaffordable monthly rent was lower (48.7%) than Nevada (49.7%) and the United States (49.7%).

Homelessness

Table 13: Homelessness by Shelter Type, Washoe County, 2009-2016

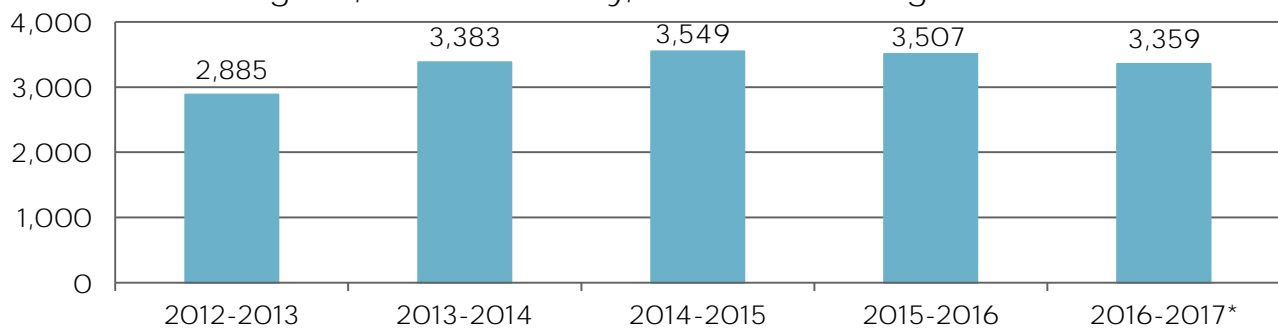
Number of Persons	2009	2010	2011	2012	2013	2014	2015	2016
Emergency Shelter	432	464	409	407	380	349	454	452
Transitional Housing	213	231	266	298	277	323	340	417
Unsheltered	55	239	175	164	89	97	113	120
Total	700	934	850	869	746	769	907	989

- From 2009 through 2016, the number of homeless persons in Washoe County has fluctuated between 700 to just under 1,000.
- The number of people in emergency shelters remained relatively stable from 2009 (432) through 2016 (452), however the number of people residing in transitional housing nearly doubled, and persons living in unsheltered conditions has more than doubled over the same time period.

Homeless Youth

The Washoe County Children in Transition (CIT) program collaborates with other agencies to locate homeless school aged (k-12) children and youth. A child qualifies for CIT if they meet the definition of “homeless children and youths” meaning individuals who lack a fixed, regular, and adequate nighttime residency. This includes youth who live in a shelter, hotel/motel, campgrounds, cars, or on the streets. The CIT Advocates and CIT Liaisons help provide homeless youth with access to transportation to and from school, enrolling in free school meals, and obtaining backpacks and other school supplies, as well as clothing if necessary. CIT removes barriers to school enrollment specifically for those without mandatory documents such as birth certificates, medical records, or proof of guardianship.³³

Fig 45: Number of Students in the Children in Transition Program, Washoe County, 2012-2013 through 2016-2017



Note: The federal qualifying definition “homeless children and youths” changed, effective 2016 and youth awaiting foster care placement are no longer included, unless they meet requirement through another defined category.

³³ Washoe County School District. Children in Transition, FAQ. Accessed <https://www.washoeschools.net/cms/lib/NV01912265/Centricity/Domain/164/Frequently%20Asked%20Questions.pdf>

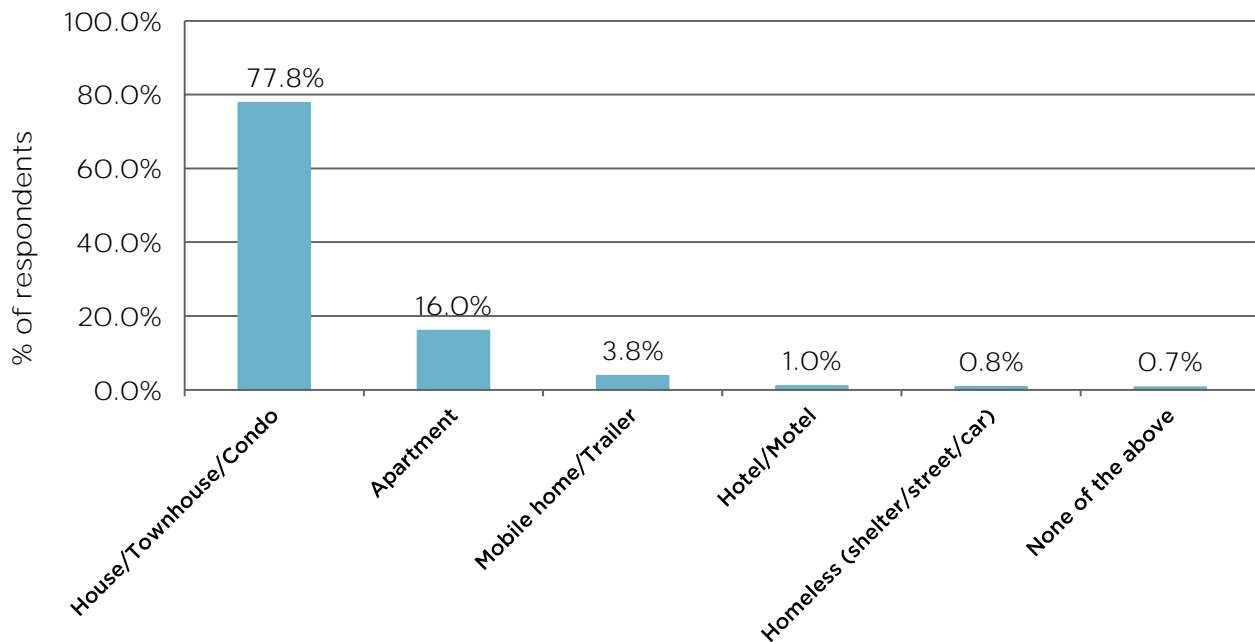
- The number of school-aged (grades k-12) youth enrolled in the CIT program increased from the 2012-2013 school year (n=2,885) to the 2016-2017 school year (n=3,359).
- Although the 2016-2017 school year illustrates a decrease in number of students qualified as CIT, the definition changed under McKinney-Vento Act (a primary CIT program funding source) per the Every Student Success Act (ESSA) reauthorization. As of 2016 youth awaiting foster care are no longer defined as a “homeless child or youth”, therefore do not qualify for CIT programming. The decrease may be a reflection of the change in definition and not a reflection of the number of homeless youth.

Primary Survey Data Related to Housing

Primary data were collected via an online community survey from over 1,400 survey participants. The survey included 44 questions and analyses for questions related to housing are provided within this section. Results and findings from the online community survey are not intended to be applied to or descriptive of all Washoe County residents and only represent the survey respondents themselves. Overall, the online community survey respondents were slightly younger, proportionally less Hispanic, and had higher educational attainment relative to the general Washoe County population. For complete survey methodology and participant demographics refer to the Contents, Methodology, & Community Survey Demographics section.

Question: “Which type of place best describes where you currently live?”

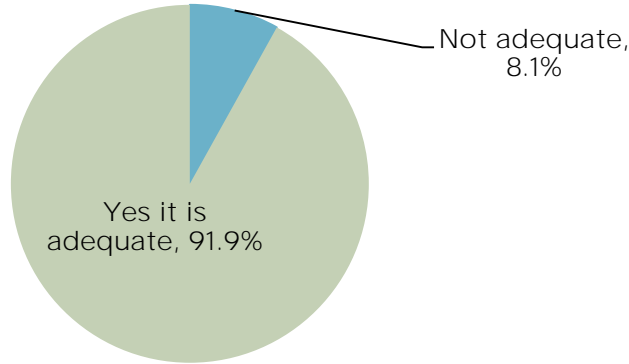
Fig 46: Housing Type (n=1,299)



- The majority (77.8%) of survey respondents indicate they currently lived in a house, townhouse or condo.
- Apartments were the second most frequently identified type of housing (16.0%).

Question: “Do you consider where you currently live to be an adequate size for the number of people living in your household?”

Fig 47: Adequate Size for Number of People in Household (n=1,300)

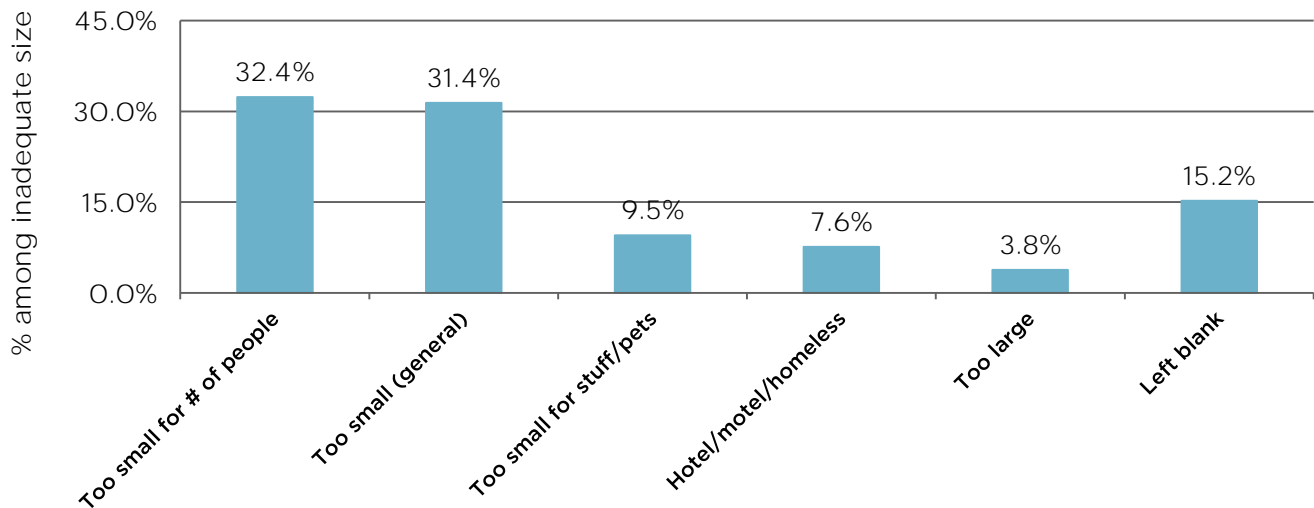


- Among the 1,300 respondents to the above question, the vast majority (91.9%) indicated they perceive their current house to be an adequate size.
- Of note, not all respondents who indicated their house was not an adequate size thought their house was too small. Further details regarding the adequacy of the size of the house are provided in the following figure.

***Question: “Explain why your household is not an adequate size.”**

*Asked only among the 105 respondents who indicated the place they currently live is NOT an adequate size for the number of people living the household.

Fig 48: Reason Household Not Adequate Size (n=105)



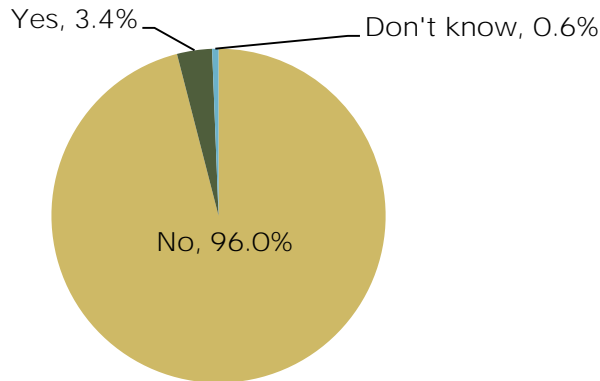
- The majority of respondents who indicated their household was not an adequate size felt the space was too small (63.8%). About one in three respondents explained specifically that people are doubled up, sharing bedrooms or there are not enough bathrooms per people (32.4%), while another 31.4% of respondents indicated only that the house is too small, with no reference to number of people.

1.2 HOUSING

- Nearly one in 10 respondents (9.5%) indicated they did not have enough space for pets or storage for objects.
- Some survey respondents were homeless/living in a hotel/motel (7.6%), indicating they were in an inadequate living situation.
- A handful of respondents (3.8%) indicated their living space was too large for the number of people.

Question: "Have you ever been evicted while living in Washoe County?"

Fig 49: Ever Been Evicted in Washoe County (n=1,247)

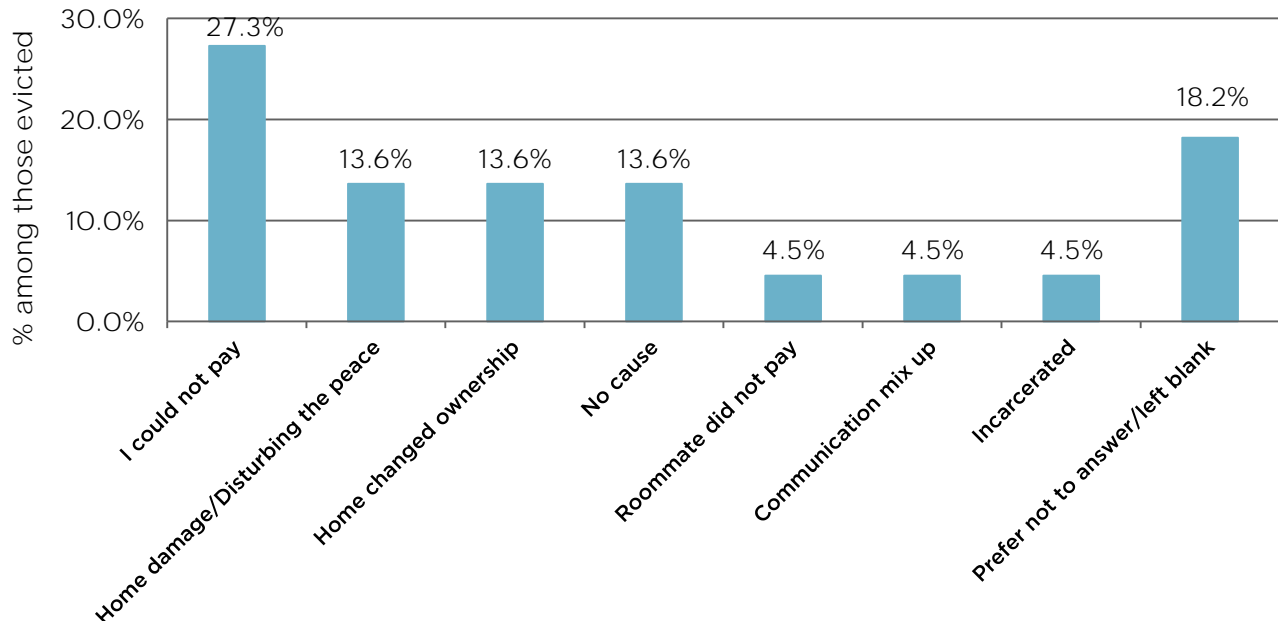


- The majority of respondents (96.0%) indicated they had never been evicted while living in Washoe County.

***Question: "Explain why you were evicted."**

*Asked only of the 44 respondents who indicated they had ever been evicted in Washoe County.

Fig 50: Reason for Eviction (n=44)



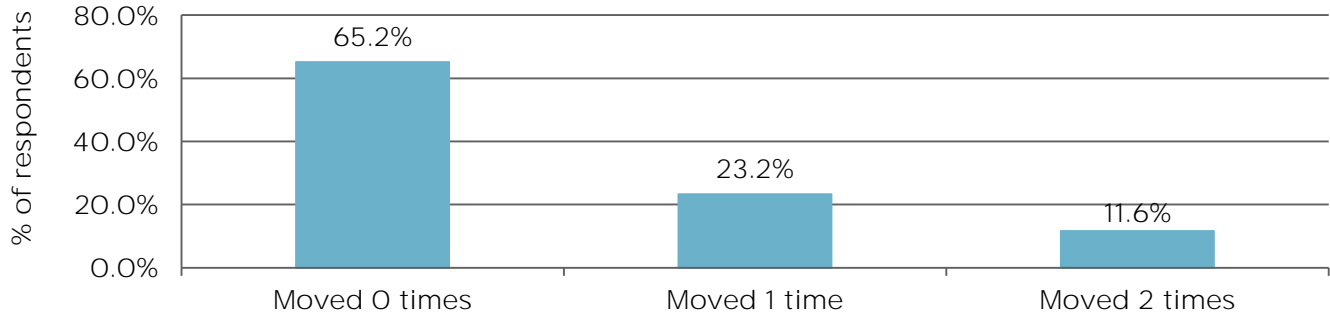
- Among the 44 respondents who had been evicted in Washoe County, 27.3% stated the reason for their eviction was due to inability to pay rent.

1.2 HOUSING

- Approximately 13.6% indicated someone they lived with or they themselves were accused of domestic disturbance or damage to the structure, 13.6% stated the home changed owners and they were asked to leave, and another 13.6% stated there was no cause for the eviction.

Question: “How many times have you moved in the past 2 years?”

Fig 51: Number of Times Moved in the Past 2 Years (n=1,300)



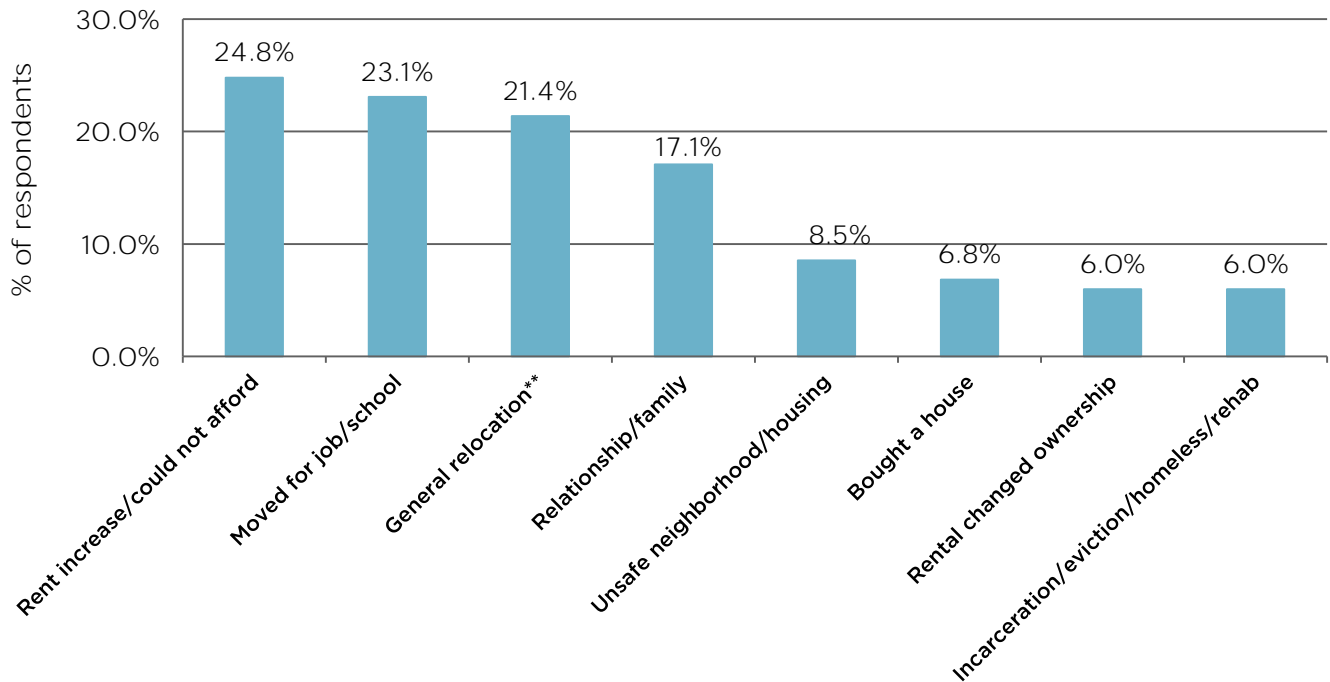
- The majority of respondents (65.2%) indicated they had not moved within the past 2 years. While slightly less than one in three indicated they had moved once (23.2%) or two or more times (11.6%).

***Question: “Describe why you had to or chose to move 2 or more times in the past 2 years.”**

*Asked only of the 151 respondents who indicated they had moved 2+ times in the past 2 years.

Only 117 of those respondents identified reasons why they moved.

Fig 52: Reasons Moved 2+ Times in Past 2 Years (n=117)*



*151 survey respondents indicated they had moved 2 or more times in the past 2 years however, only 117 responded to the follow up question. Respondents listed different reasons for each move; therefore, answers may fall into one or more categories.

**No mention of work or financial-related reasons for moving, often listed as moving into out of state or country.

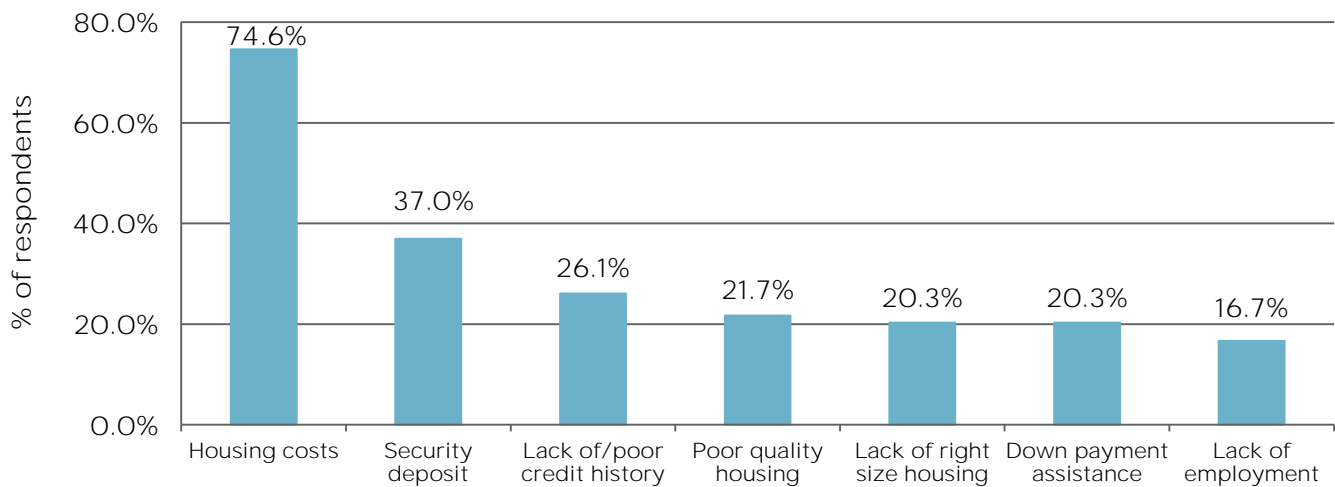
1.2 HOUSING

- Nearly one in four of the 117 respondents indicated they moved to avoid a rent increase or that they could no longer afford the rent (24.8%), while nearly another quarter indicated they had to move for a job or school (23.1%).
- Nearly one in five did not list specific reasons (21.4%), only that they relocated from another state or country or listed “relocation” without specific mention of financial or employment-related reasons.
- Relationship changes, roommate changes, family reasons were mentioned by 17.1% of respondents as reasons for moving two or more times.

***Question: “Which of the following are barriers to finding stable housing?”**

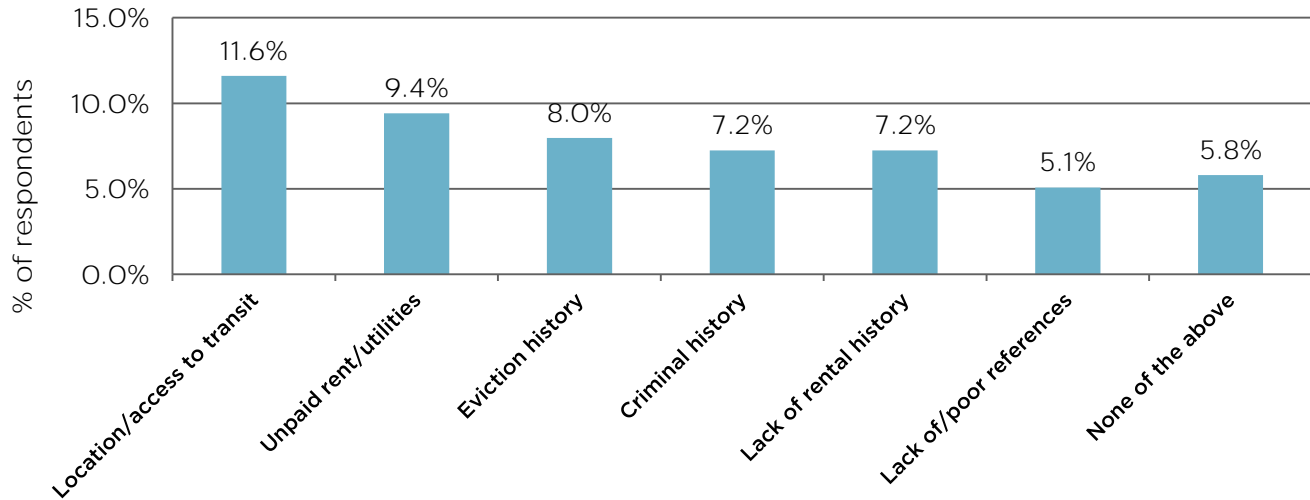
*Asked only of the 151 respondents who indicated they had moved 2+ times in the past 2 years. Only 138 of those respondents identified barriers.

Fig 53: Top 7 Barriers to Finding Housing (n=138)



- The majority of those who had moved 2 or more times in the past 2 years indicated housing cost (74.6%) were a barrier to finding stable housing.
- Over one in three indicated the security deposit (37.0%) was a barrier to finding stable housing.
- Another one in four indicated they had a lack of or poor credit history (26.1%), while one in five indicated housing was of poor quality (21.7%), there was a lack of right sized housing (20.3%), or they needed down payment assistance (20.3%).
- 16.7% of question respondents indicated employment as a barrier to stable housing.

Fig 54: Other Barriers to Finding Housing (n=138)



- The housing location or lack of access to public transit was identified as barriers by 11.6% of the 138 respondents.
- Fewer than one in ten indicated unpaid rent/utilities (9.4%), eviction history (8.0%), criminal history (7.2%), lack of rental history (7.2%), or a lack of or poor references (5.1%) were barriers to obtaining stable housing.

Summary of Housing

Washoe County faces three major housing challenges. The first is the unavailability of housing in general. The number of houses per capita decreased each year from 2012 through 2016, creating a shortage of available housing on the market for buyers, as well as a reduction in housing available for rent. Although representative of a small subset of houses, a 3rd Quarter (2017) Reno/Sparks Metro Area apartment survey found apartment vacancy was only 2.41% compared to 5.64% during 2011, following the highest unemployment peak of the 2007 Great Recession.³⁴ This demonstrates that the traditional more affordable styles of housing are in high demand as well.

A second major challenge is the financial burden and high cost of housing, again both for residents looking to purchase a house as well as those who are renting. Although the percentage of persons paying an unaffordable mortgage declined from a high in 2007 (48.9%) to 2016 (29.3%), the percentage of renters paying an unaffordable monthly rent has remained relatively stable at approximately 50% from 2007 through 2016. Affordable housing is a challenge many people face including those who are gainfully employed, best demonstrated by the disparity in cost of housing relative to wages. From 2012 to 2016, there was a 70% increase in median home value, while the median income only increased 19% over the same period.

³⁴ Johnson, Perkins, Griffin. (2017). Apartment Survey: 3rd Quarter 2017 Data, Reno/Sparks Metro Area. Accessed <http://jggnv.com/wp-content/uploads/2017/10/Q3-ApartmentSurvey2017.pdf>

The third major challenge related to housing is an increase in the number of homeless persons, largely in the downtown Reno area. Several motels and hotels near the downtown corridor advertise as “weekly motels” and are used as semi-permanent housing. The homeless Point in Time (PIT) counts do not indicate a massive increase in overall number of homeless individuals; however, the homeless shelters have been reaching capacity more and more frequently and the number of unsheltered persons has more than doubled from 2009 to 2016, indicating more and more persons are in the streets.

Although high household values are beneficial for sellers, buyers are finding both availability and affordability a challenge, motivating many to look for housing in neighboring counties. Many renters already faced with financial burdens are being displaced as current property owners are finding the market attractive and selling to prospective homeowners. Addressing the housing issue in the Reno-Sparks metropolitan area needs to incorporate not just housing, but amenities and key infrastructure such as schools, hospitals, and other municipal services, as those are already strained and over capacity.

For detailed documents related to housing in Washoe County refer to:

Truckee Meadows Regional Planning Agency Housing Study <http://tmrpa.org/truckee-meadows-housing-study/>

Washoe County Assessor data <https://www.washoecounty.us/assessor/index.php>

Housing Sources

Fig 40-Fig 41; Table 12 Same Source

Fig 40: Number & Rate of Housing Units, Washoe County, 2007-2016

Fig 41: Percent of Occupied Housing Units, Washoe County, Nevada, & the United States, 2007-2016

Table 12: Percent of Occupied Households Occupied by Owner, 2007-2016

2007-2009: U.S. Census, American Community Survey. Table CP04 1-year estimates – Selected Housing Characteristics.

2010-2016: U.S. Census, American Community Survey. Table DP04 1-year estimates – Selected Housing Characteristics.

Fig 42: Median Household Value (Owner-occupied Houses), Washoe County, Nevada, & the United States, 2007-2016

U.S. Census, American Community Survey. Table B25077 1-year estimates – Median Value (Dollars) Universe: Owner-occupied housing units.

Fig 43-Fig 44 Same Source

Fig 43: Percent of Owners Who Pay Unaffordable* Monthly Mortgage, Washoe County, Nevada, & the United States, 2007-2016

Fig 44: Percent of Renters Who Pay Unaffordable* Monthly Rent, Washoe County, Nevada, & the United States, 2007-2016

2007-2009: U.S. Census, American Community Survey. Table CP04 1-year estimates – Selected Housing Characteristics.

2010-2016: U.S. Census, American Community Survey. Table DP04 1-year estimates – Selected Housing Characteristics.

Table 13: Homelessness by Shelter Type, Washoe County, 2009-2016

HUD Exchange, Continuum of Care Homeless Populations and Subpopulations Reports. Reno, Sparks/Washoe County CoC. Accessed www.hudexchange.info

Fig 45: Number of Students in the Children in Transition Program, Washoe County, 2012-2013 through 2016-2017

Washoe County School District, Children in Transition program. Data provided upon request. Reno, NV.

Following Figures from the Online Community Survey

Fig 46: Housing Type (n=1,299)

Fig 47: Adequate Size for Number of People in Household (n=1,300)

Fig 48: Reason Household Not Adequate Size (n=105)

1.2 HOUSING

Fig 49: Ever Been Evicted in Washoe County (n=1,247)

Fig 50: Reason for Eviction (n=44)

Fig 51: Number of Times Moved in the Past 2 Years (n=1,300)

Fig 52: Reasons Moved 2+ Times in Past 2 Years (n=117)

Fig 53: Top 7 Barriers to Finding Housing (n=138)

Fig 54: Other Barriers to Finding Housing (n=138)

Food & Hunger

Access to healthy and affordable food can vary greatly based on a variety of factors including income, financial stability, the neighborhood in which one lives, and a person’s race or ethnicity.³⁵ Having the ability to afford and access a variety of healthy foods is instrumental for proper development and health through all stages of life and plays a major role in maintaining a healthy weight. While the rate of adults who are overweight or obese continues to increase, the number of people reliant on federal nutrition support and public assistance in order to obtain food has reached an all-time high.^{36,37,38} This trend has been attributed to various factors including economic recovery and the abundance and accessibility of cheap, unhealthy food.³⁹

Those who are unable to afford food are often unable to afford other basic living necessities, such as housing, utilities, or healthcare, and have to make choices on which to forego each month. The 2014 Hunger in America survey of the Food Bank of Northern Nevada clients found 85% of respondents reported they purchase inexpensive, unhealthy food simply because it is more affordable and accessible than healthy food.⁴⁰ Seniors, and other populations on fixed incomes, are especially vulnerable to financial burdens and food is often a basic need that presents an ongoing challenge. While there are many programs working to address food access and hunger, the need to increase access to healthy food remains.

The largest and most predominant federal nutrition programs will be discussed in the section including the Supplemental Nutrition Assistance Program (SNAP) and the national School Lunch Program. Although the Women, Infants, and Children (WIC) Program is a federally funded supplemental nutrition program, WIC indicators are presented in the Maternal Child Health section of the assessment.

Indicator	Trend	Most Recent Year
Free and Reduced Lunch eligibility	STABLE	46.7% (2016-2017)
Free and Reduced Lunch participation	STABLE	39.2% (2016-2017)
SNAP enrollment	Increasing	12.9% (2014)
Food insecurity estimates	Decreasing	12.7% (2015)
Food deserts	~	10 census tracts
~ not able to assess for trend		

³⁵ Morland K., Wing S., Diez Roux A., & Poole C. (2002). Neighborhood Characteristics Associated with the Location of Food Stores and Food Service Places. *American Journal of Preventive Medicine*. 22(1): 23-29.

³⁶ Hales, C.M., Carroll, M.D., Fryar, C.D., & Ogden, C.L. (2017). Prevalence of Obesity among Adults and Youth: United States, 2015-2016. NCHS Data Brief, No 288. Hyattsville, MD: National Center of for Health Statistics.

³⁷ Weinfeld N.S., Mills G., Borger C., et al. (2014). *Hunger in America 2014 Report for Food Bank of Northern Nevada*. Westat and the Urban Institute, Washington D.C. 2014.

³⁸ Weinfeld N.S., Mills G., Borger C., et al. (2014). *Hunger in America 2014 National Report*. Westat and the Urban Institute, Washington D.C. 2014. Provided upon request by Food Bank of Northern Nevada.

³⁹ Ver Ploeg M., Breneman V., Farrigan T., et al. (2009). *Access to Affordable and Nutritious Food: Measuring and Understanding Food Deserts and Their Consequences*. Administrative Publication No. (AP-036) Report to Congress. United States Department of Agriculture, Economic Research Service.

⁴⁰ Weinfeld N.S., Mills G., Borger C., et al. (2014). *Hunger in America 2014 Report for Food Bank of Northern Nevada*. Westat and the Urban Institute, Washington D.C. 2014. Provided upon request by Food Bank of Northern Nevada.

Free and Reduced Price Meals

The National School Lunch Program is a federal program that provides free and reduced-price (FRP) meals to school-aged children nationwide. Eligibility requirements for the reduced-price and free meals are based on household income which is reported by households to each school district, although any student at a participating school is able to access school meals offered.⁴¹ According to Washoe County School District data, although nearly half of the students in Washoe County School District are eligible for the National School Lunch Program, only 39% of students participated and participation rates have remained stable over the past five years.⁴² This indicates that while the proportion of students who qualify for FRP lunch is high, less than half of the eligible students utilize the service.

Table 14: Percent of Students Eligible for Free & Reduced Lunch Program, 2012-2013 through 2016-2017

Location	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Washoe County	45.3%	47.2%	47.8%	47.1%	46.7%
Nevada	53.6%	54.7%	55.3%	59.8%	57.9%

- Nearly half of children enrolled in the Washoe County School District from 2012-2013 school year through 2016-2017 school year were estimated to be eligible for FRP lunch.
- A lower proportion of children enrolled in the Washoe County School District were eligible for FRP lunch compared to Nevada overall from 2012-2013 through 2016-2017.

Table 15: Percent of Students who Participate in the National School Lunch Program, Washoe County by Grade, Nevada, & the United States 2012-2013 through 2016-2017

Location	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Washoe County (Overall)	39.6%	41.2%	41.1%	41.3%	39.2%
<i>WCSD Elementary Schools</i>	53.3%	56.4%	56.3%	56.5%	53.6%
<i>WCSD Middle Schools</i>	32.5%	31.6%	31.3%	31.0%	31.1%
<i>WCSD High Schools</i>	19.5%	19.3%	19.1%	19.5%	17.3%
Nevada	47.7%	45.9%	49.4%	50.3%	45.8%
United States	59.5%	58.9%	58.5%	59.0%	58.1%

- The percentage of students who are eligible for the National School Lunch Program in Washoe County remained relatively stable from the 2012-2013 school year through the 2016-2017 school year, at approximately 40%.
- In Washoe County, the proportion of total students participating decreases as grade level increases. Participation declines from just over 50% in elementary schools to less than 20% by the time students are in high school.
- During the 2016-2017 school year, a lower percentage of Washoe County students participated in the National School Lunch Program (39.2%) compared to Nevada (45.8%) and the United States (58.1%).

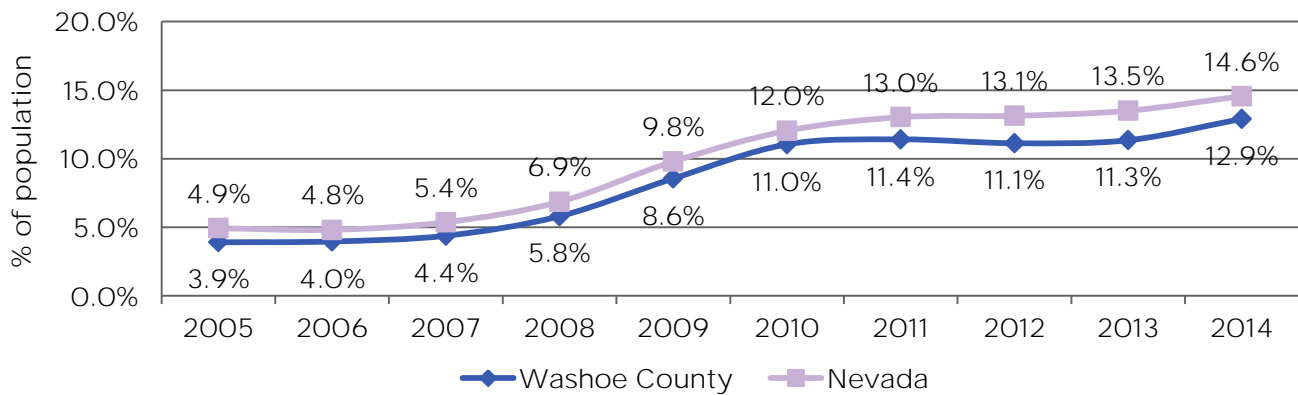
⁴¹ Nevada Department of Agriculture, Child Nutrition Program. National School Lunch Program Overview. Accessed [http://nutrition.nv.gov/Programs/National_School_Lunch_Program_\(NSLP\)/](http://nutrition.nv.gov/Programs/National_School_Lunch_Program_(NSLP)/)

⁴² Washoe County School District. Data provided upon request. Reno, NV.

Supplemental Nutrition Assistance Program (SNAP)

The Supplemental Nutrition Assistance Program (SNAP), formerly known as food stamps, is a federal program that provides eligible individuals and families with funds to purchase food, or seeds and plants that produce food, from SNAP authorized retailers. SNAP benefits are not allowed to be redeemed for alcoholic beverages, non-food items, vitamins, medicine, or foods that are to be eaten in a store (hot foods, prepared foods).⁴³ Nevada SNAP recipients receive SNAP funds at midnight of the first day of each month. Data from June 9, 2017 estimated 224,551 households in Nevada were enrolled in SNAP during March, 2017 and participants received on average \$118.48 per person for food expenditures for one month.⁴⁴ As of 2017, 41.4% of the 51,382 SNAP participants in Washoe County were children.⁴⁵ SNAP participation rates in Nevada have remained relatively low, most recent aggregate data from 2012-2014 show only an estimated 65% of eligible persons were participating, one of the lowest in the nation.⁴⁶

Fig 55: Percent of Population Enrolled in SNAP, Washoe County & Nevada, 2005-2014



- The proportion of the population in Washoe County enrolled in SNAP increased from 2005 (3.9%) to 2014 (12.9%).
- The proportion of the population in Washoe County enrolled in SNAP has remained lower than Nevada from 2005 through 2014.

Food Security

Food security as defined by the United States Department of Agriculture is a “household-level economic and social condition of limited or uncertain access to adequate food”, or having a reduced quality, variety or

⁴³ U.S. Department of Agriculture, Food and Nutrition Service. Supplemental Nutrition Assistance Program (SNAP. Accessed <https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program-snap>

⁴⁴ U.S. Department of Agriculture, Food and Nutrition Service. Supplemental Nutrition Assistance Program National and/or State Level March 2017 Participation & Benefits. Accessed <https://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap>

⁴⁵ Nevada Department of Health and Human Services, Division of Welfare and Supportive Services. Data provided upon request. Carson City, NV.

⁴⁶ U.S. Department of Agriculture, Mathematics Policy Research, (2017). Reaching those in Need: Estimates of State Supplemental Nutrition Assistance Program Participation Rates in 2014. Washington, DC.

desirability of diet or disrupted eating patterns and reduced food intake.⁴⁷ Long-term or severe food insecurity may result in hunger, adverse health outcomes and developmental delays, among other challenges.

According to 2015 Mind the Meal Gap data, an estimated 13.7% of Nevadans were food insecure, while 12.7% of Washoe County residents and 21.6% of children in Washoe County were estimated to be food insecure.⁴⁸ The Nevada Office of Health Informatics and Epidemiology recently published a report which utilized data from the 2015 Youth Risk Behavior Survey (YRBS) to estimate food insecurity among middle and high school students. The report estimated 16.0% of middle school students and 17.0% of high school students in Washoe County were food insecure.⁴⁹

Location	2013	2014	2015
Washoe County	14.7%	13.7%	12.7%
Nevada	15.8%	14.9%	13.7%
United States	15.8%	15.4%	13.4%

Food Deserts

Having access to affordable healthy food is important to maintain a healthy balanced diet and research has shown lack of access to a supermarket is associated with fewer purchases of healthy foods.⁵⁰ A food desert is a term used to categorize low-income census tracts which have limited access to supermarkets, grocery stores, or other sources of healthy and affordable food. The U.S. Department of Agriculture (USDA) has defined food deserts across the nation as low-income neighborhoods with low-access to healthy food.

A low-income neighborhood is defined as any census tract where: A) 20% or more of the census tract population is living at the poverty rate or B) the median family income is less than or equal to 80% of the state or metropolitan areas median family income. Low-access is defined as a significant number (at least 500 people) or 33% of the census tract population is more than 1 mile (urban) or 10 miles (rural) from the nearest supermarket, supercenter, or large grocery store.⁵¹

The USDA-defined food deserts in Washoe County are shown for 2010 and 2015. In 2010, there were nine census tracts in Washoe County that were defined as a food desert, in 2015 this increased to 10 census

⁴⁷ U.S. Department of Agriculture. Definitions of Food Security. Accessed <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security/>

⁴⁸ Feeding American, Map the Meal Gap. 2015 Food Insecurity in Nevada. Accessed <http://map.feedingamerica.org/county/2015/overall/nevada>

⁴⁹ Nevada Department of Health and Human Services, Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. (2016). Food Security in Nevada 2013-2015: A Review of Youth Risk Behavioral Survey (YRBS) and Behavioral Risk Factor Surveillance Survey (BRFSS). Carson City, NV.

⁵⁰ Ver Ploeg M., Breneman V., Farrigan T., et al. (2009). Access to Affordable and Nutritious Food: Measuring and Understanding Food Deserts and Their Consequences. Administrative Publication No. (AP-036) Report to Congress. United States Department of Agriculture, Economic Research Service.

⁵¹ U.S. Department of Agriculture, Economic Research Service. Food Access Research Atlas Documentation. Accessed <https://www.ers.usda.gov/data-products/food-access-research-atlas/documentation/>

tracts. The area encompassing the Pyramid Lake Paiute Reservation, was classified as a food desert in both 2010 and 2015, and is shown on the following page.

Image 4: 2010 USDA ERS Food Deserts in Washoe County

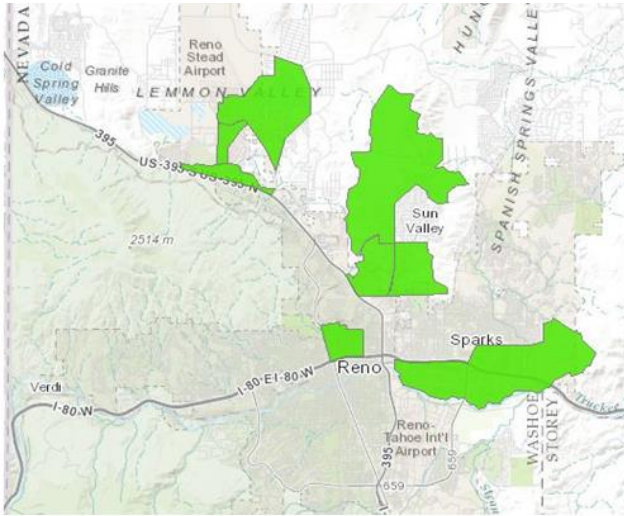


Image 5: 2015 USDA ERS Food Deserts in Washoe County

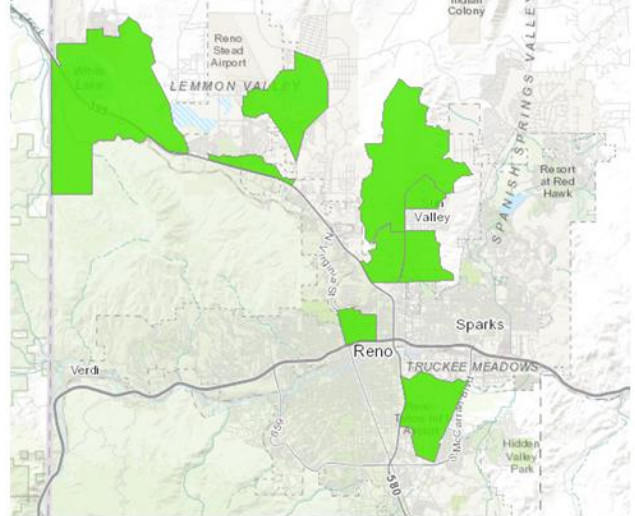
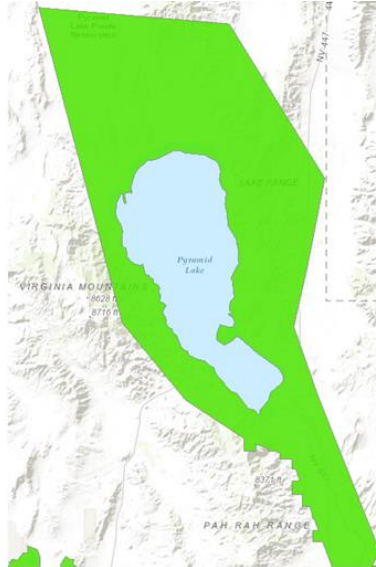


Image 6: 2010 & 2015 USDA ERS Food Desert, Pyramid Lake Paiute Reservation



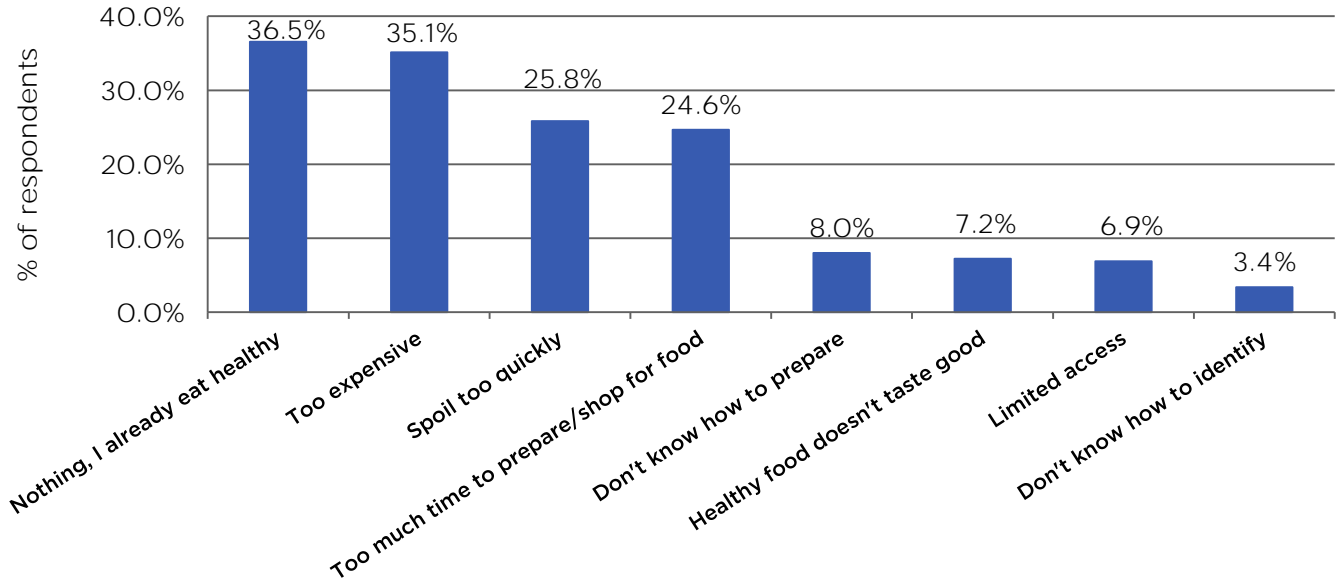
Primary Data Related to Food & Hunger

Primary data were collected via an online community survey from over 1,400 survey participants. The survey included 44 questions and analyses for questions related to food security are provided within this section. Results and findings from the online community survey are not intended to be applied to or descriptive of all Washoe County residents and only represent the survey respondents themselves. Overall, the online community survey respondents were slightly younger, proportionally less Hispanic, and had higher educational

attainment relative to the general Washoe County population. For complete survey methodology and participant demographics refer to the Contents, Methodology, & Community Survey Demographics section.

Question: “Which of the following are the largest barriers to you eating healthy food more often? Select up to three.

Fig 56: Barriers to Eating Healthy Food More Often (n=1,412)

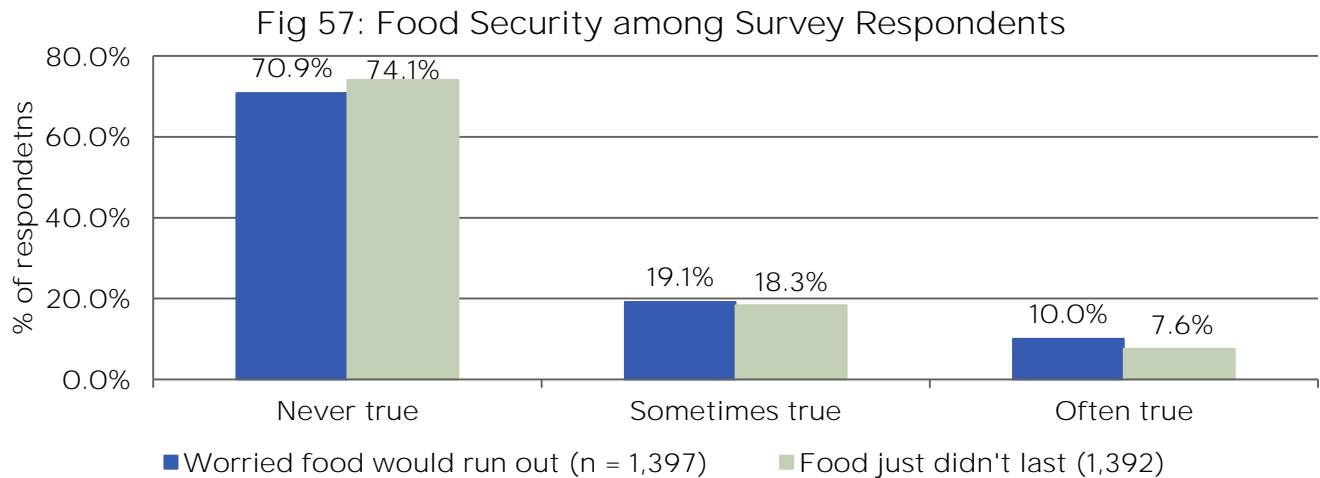


- One in three respondents indicated they already eat enough healthy foods (36.5%).
- Healthy food is expensive (35.1%), spoils too quickly (25.8%) and takes too much time to shop for and/or prepare (24.6%) were the top three barriers identified by respondents.
- Less than 10% of respondents indicated lack of knowledge on food preparation (8.0%), limited access to healthy food (6.9%), not liking the taste of healthy food (7.2%), and lack of ability to identify healthy foods (3.4%) as barriers to eating healthy food more often.

Food Insecurity

A two-item screening tool was utilized to provide a food insecurity estimate among survey respondents. The two-item screening asked respondents to indicate if the two statements were “never true”, “sometimes true” or “often true”. An affirmative answer, “sometimes true” or “often true”, to either or both of the statements is associated with food insecurity.⁵² Additional research has found an affirmative answer to either or both of the statements is also associated with poor child health, increased risk for hospitalization, and developmental risk.⁵³

- 1) **“Within the past 12 months we worried whether our food would run out before we got money to buy more.”**
- 2) **“Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.”**



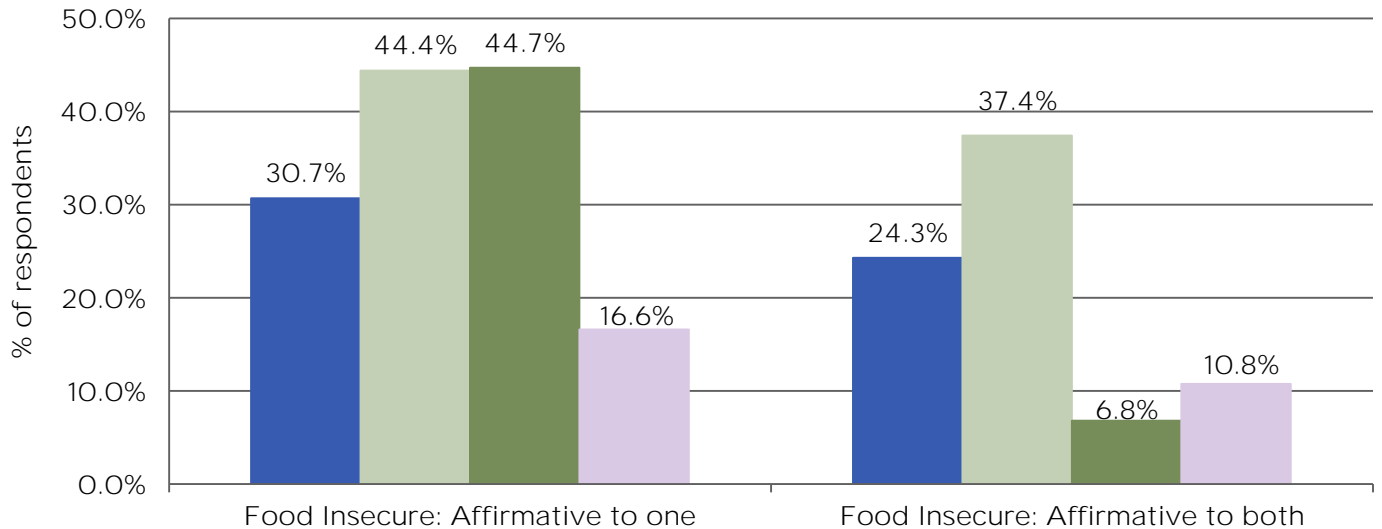
- The majority of survey respondents indicated the above statements were “never true” in the past 12 months.
- Almost one in five survey respondent’s indicated the above statements were “sometimes true”.
- One in ten (10.0%) survey respondents indicated they worried whether their food would run out before they had money to buy more often in the past 12 months, while another 7.6% indicated the food they bought did not last and they did not have money to get more often in the past 12 months.

⁵² Pooler, J.U., Hoffman, V., Karva, F., Levin, M, & Lewin-Zwedling, A. (2016). Addressing Food Insecurity in Primary Care: Models for Patient Screening and Referral. AARP Foundation.

⁵³Hager, E.R., Quigg, A.M., Black, M.M., Coleman, S.M., Heeren, T. & Rose-Jacobs, R. et.al. (2010). Development and Validity of a 2-Item Screen to Identify Families at Risk for Food Insecurity. American Academy of Pediatrics. 126; e26-e32.

***Figure 58 shows responses among those who answered both the food security questions as well as the educational attainment question.**

Fig 58: Food Insecurity among Survey Respondents by Educational Attainment



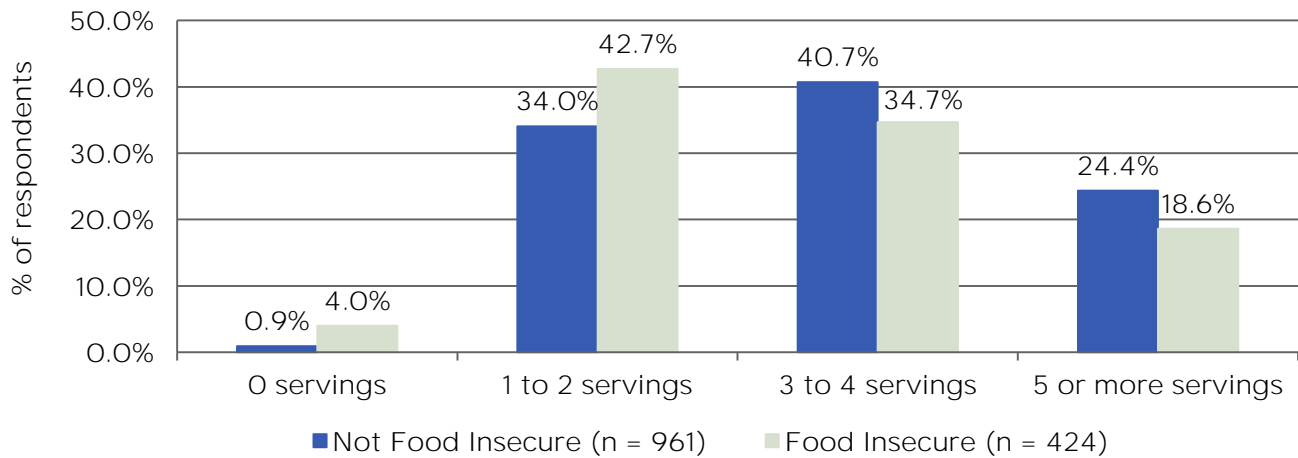
■ All respondents (n = 1,391)
 ■ Low Edu; No college degree or lower (n = 572)
 ■ Medium; Associate's Degree (n = 132)
 ■ High Edu; Bachelor's or higher (n = 687)

- Among all respondents, 30.7% were estimated to be food insecure, as denoted by answering in the affirmative to either of the screening items.
- Among those with lower educational attainment (no college degree, a high school degree, and those with no high school diploma or GED equivalent) approximately 44.4% were estimated to be food insecure, and among those with an associate’s degree 44.7% were estimated to be food insecure.
- Food insecurity was lowest at 16.6% among survey respondents with a high educational attainment (bachelor’s degree, master’s degree, or PhD).
- Although food insecurity is indicated by an affirmative response to either of the statements, nearly one in four survey respondents (24.3%) indicated an affirmative response to both statements. Among respondent’s with a low educational attainment (no college education, high school graduate, and those without a high school diploma), 37.4% responded in the affirmative to both statements, compared to only 10.8% of those with a high educational attainment (bachelor’s degree, master’s degree, or PhD).

Figure 59 illustrates survey respondents who answered both the food security questions as well as the following question:

“During the past week, about how many servings of fruit and vegetables (combined) did you eat each day? Include fresh, frozen or cooked fruits and vegetables. DO NOT COUNT items such as fruit drinks, French fries, or potato chips.”

Fig 59: Fruit & Vegetable Consumption by Food Security Status



- The number of servings of fruits and vegetables consumed in the previous week differed among those who were not food insecure versus those who were food insecure.
- A higher proportion of respondents who screened positive for food insecurity indicated they ate 0 servings (4.0%) or 1 to 2 servings (42.7%) of fruits and vegetables each day over the past week, compared to those who were not food insecure who reported eating 0 servings (0.9%) or 1 to 2 servings (34.0%) of fruits and vegetables each day.
- Conversely, a higher proportion of respondents who were not food insecure (40.7%) reported consuming 3 to 4 servings of fruits and vegetables each day within the previous week, compared to respondents that were food insecure (34.7%).
- Again, a higher proportion of respondents that were not food insecure (24.4%) reporting eating or 5 or more servings of fruits and vegetables each day over the past week, compared to those who were food insecure (18.6%).

Summary of Food & Hunger

Nevada has historically had low utilization of programs such as SNAP, WIC, and the National School Lunch programs; however, in Washoe County SNAP enrollment increased during the Great Recession and has not yet decreased to pre-Recession levels. Meanwhile, FRP lunch eligibility rates remained relatively stable for the past 5 years and enrollment in WIC has decreased. The number of households and individuals that report being food insecure has decreased from 2013 (15.8%) to 2015 (13.7%). It is challenging to determine overall trend in needs for food assistance using indicators for federal nutrition assistance program enrollment, as they vary from program to program. Utilization of these services may be reflective of successful outreach and program enrollment efforts.

Even though enrollment in social welfare programs can help reduce financial challenges, efforts aimed at reducing food insecurity should recognize perceived barriers to eating more healthy foods including cost, issues with food spoilage (mainly fruits and vegetables), and the time burden of shopping for and preparing food. Although the economy appears to be recovering per employment trends and other economic growth indicators, there are still many competing financial strains on families in Washoe County. These challenges should be considered when developing opportunities to reduce barriers and improve access to healthy foods. Washoe County has a strong collaborative network of engaged organizations working to reduce food insecurity and increase access to healthy food. Implementation of evidence-based solutions, along with a coordinated delivery of strong and consistent messages to the community will further the success of those working to reduce food insecurity and hunger.

Food & Hunger Sources

Table 14: Percent of Students Eligible for Free & Reduced Lunch Program, 2012-2013 through 2016-2017

Nevada Department of Agriculture. Nevada Schools: Number of Free and Reduced Students, School Years 2012-2013 through 2015-2016. Accessed <http://nutrition.nv.gov/data/>

Table 15: Percent of Students who Participate in the National School Lunch Program, Washoe County by Grade, Nevada, & the United States 2012-2013 through 2016-2017

Washoe County: Washoe County School District. Data provided upon request. Reno, NV.
Nevada & United States: United States Department of Agriculture. Data provided upon request. San Francisco, CA.

Fig 55: Percent of Population Enrolled in SNAP, Washoe County & Nevada, 2005-2014

U.S. Census Bureau, Small Area Income and Poverty Estimates. County SNAP benefits data. Accessed <https://www.census.gov/did/www/saipe/data/model/tables.html>

Table 16: Percent of Population Estimated to be Food Insecure

Feeding America. Mind the Meal Gap. Food Insecurity in the United States. Accessed map.feedingamerica.org

Image 4-Image 6 Same Source

Image 4: 2010 USDA ERS Food Deserts in Washoe County

Image 5: 2015 USDA ERS Food Deserts in Washoe County

Image 6: 2010 & 2015 USDA ERS Food Desert, Pyramid Lake Paiute Reservation

United States Department of Agriculture, Economic Research Service. Food Access Research Atlas. Accessed <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>

Following Figures from the Online Community Survey

Fig 56: Barriers to Eating Healthy Food More Often (n=1,412)

Fig 57: Food Security among Survey Respondents

Fig 58: Food Insecurity among Survey Respondents by Educational Attainment

Fig 59: Fruit & Vegetable Consumption by Food Security Status

1.4 ACCESS TO HEALTHCARE

Access to Healthcare

Adequate access to healthcare means having the ability to obtain health services in a timely order to achieve the best possible health outcomes. In 2015, the national healthcare expenditures in the United States totaled \$3.2 trillion and the per capita expenditure was an estimated \$9,990.⁵⁴ The costs of healthcare have skyrocketed over the past five decades, while the median income has not. Meanwhile, the quality of care and equity of services fall short of expectations, resulting in poorer health outcomes compared to other developed nations.⁵⁵ Obtaining affordable health insurance is the first challenge in accessing health services in the United States. Additional barriers include the affordability and availability of services, clinic hours and locations, types of health insurance accepted, and having a sufficient number of healthcare providers in the workforce.⁵⁶

Indicator	Trend	Most Recent Year	HP 2020 Objective
Insurance Coverage			
Children <18 years that are uninsured	Decreasing	5.8% (2016)	NA
Adults 18-64 years that have health insurance	Increasing	86.0% (2016)	NA
Medicaid enrollment	Increasing	19.0% (2016)	
Could not see doctor due to cost (adults)	Decreasing	16.3% (2016)	
Provider Access			
Adults that have a personal healthcare provider	Decreasing	72.2% (2016)	NA
Time since last physical (adults)	Increasing	64.7% within past year (2016)	NA
Saw a dentist past year (adolescents)	~	73.6% (2015)	49.0%
Saw a dentist past year (adults)	Increasing	65.4% (2016)	49.0%
Healthcare Provider Workforce			
Percent of population living in HRSA primary care provider shortage area	Increasing	35.4% (2016)	NA
Percent of population living in HRSA dental shortage area	Increasing	35.4% (2016)	NA
Percent of population living in HRSA mental health provider shortage area	STABLE	100.0% (2016)	NA
Ratio of providers to population (primary, dental, and mental care)	~	1,360:1 (Primary Care-2014) 1,480:1 (Dentists-2014) 390:1 (Mental Health-2014)	NA
Physicians by type per 100,000 population	~	~	NA
Full time equivalents at Washoe County Health District	Decreasing	3.4 per 10,000 (FY17-18)	NA
~not able to assess for trend; NA=identical HP 2020 objective not available			

⁵⁴ Department of Health and Human Services. (2017). Health, United States, 2016: With Chartbook on Long-term Trends in Health. Hyattsville, MD.

⁵⁵ Institute of Medicine, Committee on the Learning Health Care System in America. (2013). *Best Care at Lower Cost: The Path to Continuously Learning Health Care in America*. Washington, DC.

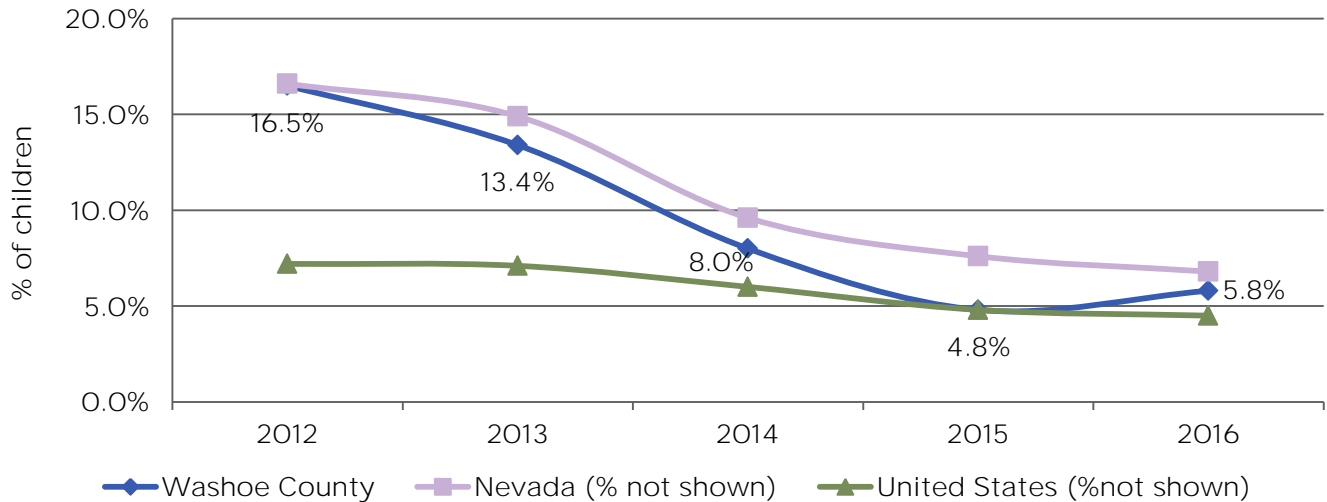
⁵⁶ Institute of Medicine, Committee on Monitoring Access to Personal Health Care Services. (1993). *Access to Healthcare in America*. Washington, DC.

1.4 ACCESS TO HEALTHCARE

Insurance Coverage

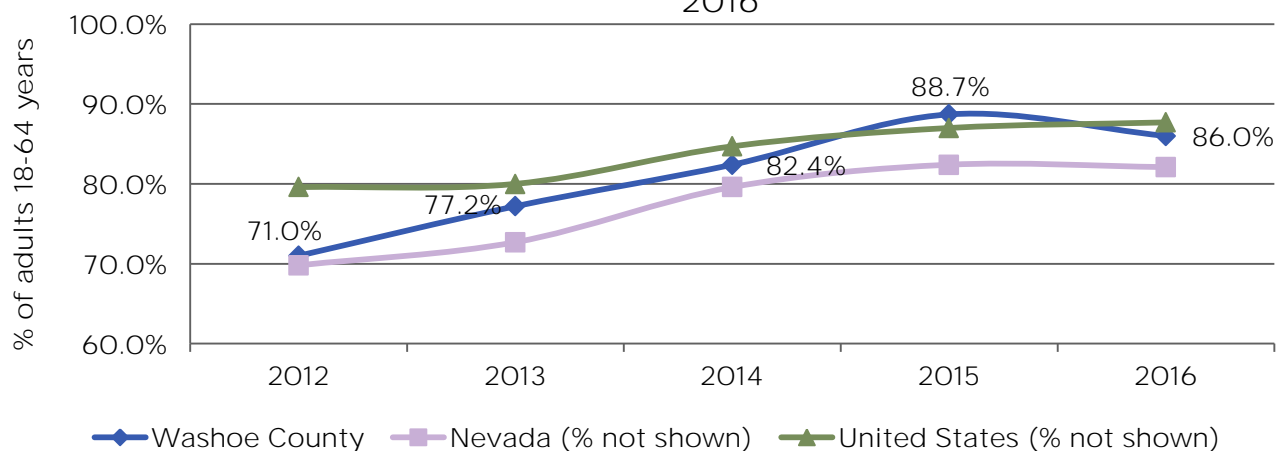
As of 2016, largely due to the passage of the Affordable Care Act (ACA), both the percentage of children and adults who were uninsured and the percentage of adults reporting they could not see a provider due to cost declined.⁵⁷

Fig 60: Uninsured Children < 18 Years, Washoe County, Nevada, & the United States, 2012-2016



- The percentage of uninsured children under 18 years old in Washoe County decreased from 2012 (16.5%) to 2016 (5.8%).
- Historically the rate of uninsured children in Washoe County has been relatively higher than the national average, however starting in 2013, the rates of uninsured children in Washoe County decreased and over the course of three years (2013-2015) fell to the national average.

Fig 61: Percent of Adults 18-64 Years with Any Form of Health Insurance, Washoe County, Nevada, & the United States, 2012-2016



⁵⁷ U.S. Department of Health and Human Services, (2016). Health, United States, 2015: With Special Feature on Racial and Ethnic Health Disparities. Hyattsville, MD.

1.4 ACCESS TO HEALTHCARE

- The percentage of adults aged 18 to 64 years in Washoe County with health insurance increased from 2012 (71.0%) to 2016 (86.0%).
- The percentage of adults aged 18 to 64 years in Washoe County with health insurance was lower than the national average from 2012-2014, until 2015 when the percent of adults 18-64 years old with any form of health insurance increased above the national average to 88.7% in Washoe County.

Table 17: Percent of Population Enrolled in Medicaid, 2004, 2011, & 2014-2016

Location	2004	2011	2014	2015	2016
Washoe County	7.0%	12.7%	19.6%	19.5%	19.0%
Nevada	8.3%	13.5%	20.3%	22.6%	21.9%

- The percentage of Washoe County residents enrolled in Medicaid more than doubled from 2004 (7.0%) to 2016 (19.0%), primarily due to Medicaid expansion in 2014.
- In 2004, 2011 and 2014-2016 the percentage of population in Washoe County enrolled in Medicaid was lower than Nevada.

Table 18: Percent of Adults 18 to 64 years who could Not See a Doctor Due to Cost*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	18.0%	17.1%	15.6%	13.0%	16.3%
Nevada	18.5%	17.3%	17.1%	15.1%	16.0%

*in the past 12 months

- The percentage of adults in Washoe County who reported they could not see a doctor due to cost decreased from 2012 (18.0%) to 2016 (16.3%).
- The percentage of adults in Washoe County who reported they could not see a doctor due to cost has been lower than Nevada from 2012 through 2015; in 2016, it rose above statewide rates.

Provider Access

Table 19: Percent of Adults with One Person they think of as their Personal Healthcare Provider, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	74.6%	71.9%	72.4%	75.4%	72.2%
Nevada	60.1%	58.9%	56.5%	66.8%	69.2%
United States	~	77.1%	76.7%	79.0%	77.7%

~ data not available

- The percentage of adults in Washoe County with one person they think of as their personal healthcare provider decreased from 2012 (74.6%) to 2016 (72.2%).
- The percentage of adults in Washoe County with one person they think of as their personal healthcare provider has been higher than Nevada, but lower than the United States from 2012 through 2016.

Table 20: Time since Last Physical among Adults, Washoe County, 2012-2016

Duration	2012	2013	2014	2015	2016
In the past year	60.3%	62.6%	62.0%	65.8%	64.7%
In the past 2 years	15.2%	15.8%	14.9%	14.1%	14.5%
In the past 5 years	12.3%	9.7%	12.7%	8.3%	9.7%
5 years or more	9.9%	9.1%	8.4%	9.5%	9.0%
Never	2.3%	2.9%	2.0%	2.4%	2.1%

- The percentage of adults in Washoe County who obtained a routine physical within the past year increased from 2012 (60.3%) to 2016 (64.7%).

1.4 ACCESS TO HEALTHCARE

- The percentage of adults in Washoe County who obtained a routine physical in the past 2 years, the past 5 years, or more than 5 years ago decreased over the same time period
- Although improving, the percentage of adults in Washoe County who obtained a routine physical within the past year has been lower than the United States from 2012 through 2016.

Table 21: Time since Last Physical among Adults, Nevada, 2012-2016

Duration	2012	2013	2014	2015	2016
In the past year	63.9%	65.8%	63.9%	66.2%	69.1%
In the past 2 years	15.2%	15.5%	14.6%	11.8%	12.7%
In the past 5 years	9.1%	8.1%	10.5%	9.5%	7.4%
5 years or more	9.8%	8.8%	9.2%	9.7%	9.1%
Never	1.9%	1.8%	1.8%	2.8%	1.6%

Table 22: Time since Last Physical among Adults, United States, 2013-2016

Duration	2013	2014	2015	2016
In the past year	68.2%	69.6%	70.2%	70.4%
In the past 2 years	13.1%	13.2%	13.3%	12.8%
In the past 5 years	8.3%	8.2%	8.2%	7.4%
5 years or more	8.4%	8.3%	8.3%	6.9%
Never	1.2%	1.1%	1.1%	1.2%

Table 23: Percent of High School Students who Visited a Dentist*, 2013 & 2015

Location	2013	2015
Washoe County	69.3%	73.6%
Nevada	68.1%	69.7%
United States	~	74.4%

*for a check-up, exam, teeth cleaning, or other dental work during the 12 months before the survey

- The percentage of high school students in Washoe County who visited a dentist within the past year increased from 2013 (69.3%) to 2015 (73.6%).
- In 2015, the percentage of high school students in Washoe County who visited a dentist within the past year was higher (73.6%) than Nevada (69.7%), and it was lower than the United States (74.4%).

Table 24: Percent of Adults who Visited a Dentist or Dental Clinic*, 2012, 2014 & 2016

Location	2012	2014	2016
Washoe County	64.8%	64.0%	65.4%
Nevada	60.8%	60.0%	60.4%
United States	67.2%	65.3%	65.1%

* for any reason within the past 12 months

- The percentage of adults in Washoe County who visited a dentist or dental clinic within the past year increased slightly from 2012 (64.8%) to 2016 (65.4%).
- In 2016 the percentage of adults in Washoe County who visited a dentist or dental clinic within the past year was higher (65.4%) than Nevada (60.4%), and slightly higher than the United States (65.1%).

1.4 ACCESS TO HEALTHCARE

Table 25: Time Since Last Dental Visit* among Adults, Washoe County, 2012, 2014, & 2016

Duration	2012	2014	2016
In the past year	64.8%	64.0%	65.4%
1 to 2 years	11.3%	12.8%	11.0%
2 to 5 years	10.6%	10.4%	12.2%
5 years or more	11.2%	12.1%	10.7%
Never	2.2%	0.9%	0.7%

*visited a dentist or dental clinic for any reason

- The percentage of adults in Washoe County who visited a dentist within the past year increased slightly from 2012 (64.8%) to 2016 (65.4%).

Healthcare Provider Workforce

The rapid population growth in Nevada and Washoe County has resulted in one of the lowest rates of physicians per capita in the nation.⁵⁸ As the population continues to grow, residents face challenges accessing healthcare in a timely manner and finding providers who are accepting new patients. This is due to the limited number of providers per 100,000 population.

Health Professional Shortage Areas

Health Professional Shortage Areas (HPSAs) are geographic, population, or facility-based designations indicating a health professional shortage in primary care, dental health, or mental health. A geographic shortage encompasses a shortage of providers for an entire population within a geographic area, e.g. a county. A population-based shortage indicates a shortage of providers within a geographic area for a specific population group, such as low income or migrant workers. A facility-based shortage is a shortage within a specific type of facility, for example, state mental hospitals, federally qualified health centers, Indian health facilities, or correctional facilities. The Health Resources and Services Administration (HRSA) reviews HPSA applications to determine if they meet eligibility criteria for designation. Once designated, each HPSA receives a score indicating severity of the shortage, the higher the score (16-25), the more severe the shortage.⁵⁹

Table 26: Percent of Population Residing in Health Professional Shortage Area by Type, Washoe County, 2012, 2014, & 2016

Provider Type	2012	2014	2016
Primary care	32.2%	34.2%	35.4%
Dental health	32.9%	32.7%	35.4%
Mental health	~	100.0%	100.0%

⁵⁸ U.S. Department of Health and Human Services, (2016). Health, United States, 2015: With Special Feature on Racial and Ethnic Health Disparities. Hyattsville, MD.

⁵⁹ Health Resources and Services Administration. Health Professional Shortage Areas (HPSAs). Accessed <https://bh.w.hrsa.gov/shortage-designation/hpsas>

1.4 ACCESS TO HEALTHCARE

2017 HRSA Designated Health Professional Shortage Areas

The 2017 HPSAs have changed in geographic size from previous years; therefore, a direct comparison from 2016 to 2017 HPSAs is not feasible. The following tables illustrate further details regarding the 2017 HPSA designations in Washoe County in conjunction with provider survey data from the Nevada Primary Care Office. Provider surveys are conducted on a period basis to identify primary care and psychiatrist provider practice location, patient care hours, and acceptance of Medicaid and/or sliding fee scale payments. These data inform the population to provider ratios for the 2017 HPSAs illustrated in Table 27, Table 28, and Table 29.

Table 27: Primary Care¹ Health Professional Shortage Areas, Washoe County, 2017

Health Professional Shortage Area (HPSA) Name	Provider FTEs ² Short	HPSA Provider FTE	HPSA Designation Population	Total Population	Population to 1 Provider Ratio	HPSA Score
LI ³ Reno PC ⁴	26.93	16.62	130,595	291,046	7,858	16
Northern Washoe PC Geo ⁵	1.54	0.00	5,403	5,403	5,403	17
Incline Village PC Geo	0.57	1.83	8,395	8,395	4,587	9
Total / Average⁶	29.04	18.45	144,393	304,844	5,949	14

¹Primary care providers include family medicine, internal medicine, general medicine, OB/GYN, pediatric, and geriatric MDs and DOs that provide primary outpatient care.

²Full Time Equivalent (FTE): 1 FTE = 40 hour workweek of outpatient care. FTE short indicates the number of providers needed to remove the HPSA provider shortage in a designated area.

³Low income (LI) FTE is calculated by adding the percentages of care given to Medicaid and sliding fee scale patients and multiplying it by the provider's FTE. A sliding fee scale is designed to provide discounts for low-income individuals based on family size and income. For Low Income HPSAs, the population considered is those at or under the 200% federal poverty threshold. The LI HPSA population to provider ratio threshold needs to be at or above 3000:1 to qualify as a LI HPSA.

⁴PC = Primary Care

⁵Geographic (Geo) HPSA. The FTE for Geo HPSAs include the complete provider FTE. The population utilized is the total civilian non-institutionalized population. The Geo population to provider ratio threshold is 3500:1 to qualify as a shortage area.

⁶Totals are provided for the Provider FTE Short, HPSA Provider FTE, HPSA Designation Population and Total Population columns. The remainder of the columns are averages.

- Among total residents in the county, 304,844 or 71.88% of residents were located within a primary care HPSA in 2017. The increase from previous years is mostly due to a change in the geographic area that was newly designated as primary care HPSA in 2017.
- The primary care physician workforce would need to increase by 157% in Washoe County to meet the demands of the populations within these HPSAs.

Table 28: Mental Health Care¹ Health Professional Shortage Areas in Northern Nevada², 2017

Health Professional Shortage Area (HPSA) Name	Provider FTEs ³ Short	HPSA Provider FTE	HPSA Designation Population	Total Population	Population to 1 Provider Ratio ⁴	HPSA Score
Urban Washoe MH LI ⁵	1.29	4.90	123,803	261,221	25,266	14
Northern Washoe MH Geo ⁶	0.27	0.00	5,403	5,403	5,403	15
Total / Average⁷	1.56	4.90	129,206	266,624	15,334	15

¹Mental health providers are defined as psychiatrists engaged in outpatient care.

²All Mental Health HPSAs are currently under federal review and are subject to change.

³Full Time Equivalent (FTE): 1 FTE = 40 hour workweek of outpatient care. FTE short indicates the number of providers needed to remove the HPSA provider shortage in a designated area.

⁴Population to provider ratio threshold of 20000:1. The threshold determines the value over which an area is considered to have a provider shortage.

⁵Low income (LI) FTE is calculated by adding the percentages of care given to Medicaid and sliding fee scale patients and multiplying it by the provider's FTE. A sliding fee scale is designed to provide discounts for low-income individuals based on family size and income. For Low Income HPSAs, the population considered is those at or under the 200% federal poverty threshold. The LI HPSA population to provider ratio threshold needs to be at or above 20000:1 to qualify as a LI HPSA.

⁶Geographic (Geo) HPSA. The FTE for Geo HPSAs include the complete provider FTE. The population utilized is the total civilian non-institutionalized population. The Geo Population to provider ratio threshold needs to be at or above 20000:1 to qualify as a shortage area.

⁷Totals are provided for the Provider FTE Short, HPSA Provider FTE, HPSA Designation Population and Total Population columns. The remainder of the columns are averages.

1.4 ACCESS TO HEALTHCARE

- Among the total residents in the county, 266,624 or 62.87% of residents are located within a mental health care HPSA. The decrease from previous years is mostly due to a change in the geographic area that was designated as mental health provider HPSA in 2017.
- The mental providers (psychiatrist) workforce would need to increase by 32% in Washoe County to meet the demands of the populations within these HPSAs.

Table 29: Dental Health Care¹ Health Professional Shortage Areas in Northern Nevada², 2017

Health Professional Shortage Area (HPSA) Name	Provider FTEs ³ Short	HPSA Provider FTE	HPSA Designation Population	Total Population	Population to 1 Provider Ratio ⁴	HPSA Score
Washoe County DH LI ⁵	23.80	14.65	153,792	424,089	10,498	18
Total / Average⁶	23.80	14.65	153,792	424,089	10,498	18

¹Dental health providers are defined as dentists.

²This HPSA is currently under federal review and is subject to change.

³Full Time Equivalent (FTE): 1 FTE = 40 hour workweek of outpatient care. FTE short indicates the number of providers needed to remove the HPSA provider shortage in a designated area.

⁴Population to provider ratio threshold of 4000:1. The threshold determines the value over which an area is considered to have a provider shortage.

⁵Low income (LI) FTE is calculated by adding the percentages of care given to Medicaid and sliding fee scale patients and multiplying it by the provider's FTE. A sliding fee scale is designed to provide discounts for low-income individuals based on family size and income. For Low Income HPSAs, the population considered is those at or under the 200% federal poverty threshold. The LI HPSA population to provider ratio threshold needs to be at or above 4000:1 to qualify as a LI HPSA.

⁶Totals are provided for the Provider FTE Short, HPSA Provider FTE, HPSA Designation Population and Total Population columns. The remainder of the columns are averages.

- According to the geographic location of the 2017 HPSA, 100% of Washoe County residents are located within a dental health care HPSA. The increase from previous years is mostly due to a change in the geographic area that was designated as dental health care HPSA in 2017.
- The dental provider workforce would need to increase by 162% in Washoe County to meet the demands of the populations within these HPSAs.

Providers per Population

Table 30: Ratio of Providers to Population, 2014

Provider type	Washoe County	Nevada
Primary care	1,360:1	1,750:1
Dentists	1,480:1	1,690:1
Mental health	390:1	580:1

- In 2014, the ratio of primary care providers per capita (1,360:1), dentists per capita (1,480:1), and mental health providers (390:1) in Washoe County were lower than Nevada.

1.4 ACCESS TO HEALTHCARE

Table 31: Licensed Physicians (MD) per 100,000 Population, 2017

Specialty	Washoe County	Nevada	United States
Aerospace Medicine	-	0.1	0.1
Allergy	1.6	0.7	1.4
Anesthesiology	21.6	14.3	14.6
Cardiovascular Diseases	9.4	6.2	7.5
Child / Adolescent Psychiatry	2.0	1.0	2.6
Colon / Rectal Surgery	0.2	0.1	0.5
Dermatology	4.0	2.0	3.8
Diagnostic Radiology	9.7	6.4	8.5
Emergency Medicine	23.2	10.8	12.1
Family Medicine	36.9	20.3	29.6
Gastroenterology	5.4	3.0	4.5
General Practice	0.9	1.8	2.1
General Surgery	11.5	7.1	12.4
Internal Medicine	50.2	39.0	56.0
Medical Genetics	0.2	0.1	0.2
Neurology	3.6	3.0	5.7
Nuclear Medicine	-	0.0	0.4
Neurological Surgery	3.8	1.2	2.0
Obstetrics / Gynecology	13.5	9.9	14.0
Occupational Medicine	1.1	0.7	0.7
Ophthalmology	7.4	3.9	6.1
Orthopedics	12.8	5.9	8.4
Otolaryngology	3.8	1.7	3.4
Pathology, Anatomic	4.7	3.0	6.1
Pathology, Forensic	0.7	0.1	3.8
Pediatrics	15.1	14.4	26.7
Pediatric Cardiology	0.4	0.5	0.8
Phys Med & Rehab	5.8	2.8	3.3
Plastic Surgery	2.5	1.1	2.5
Psychiatry	13.3	6.2	12.9
PH & Gen Preventive Medicine	0.4	0.1	0.5
Pulmonary Diseases	4.0	1.5	4.0
Radiology	2.2	1.5	3.2
Radiation Oncology	1.1	0.9	1.6
Thoracic Surgery	1.3	0.9	1.5
Urology	3.4	1.7	3.5
Other Specialties	1.6	1.3	3.7
Total	278.3	175.0	261.8

- In 2017, Washoe County had a higher rate (per 100,000 population) of the majority of licensed providers compared to Nevada.
- In 2017, Washoe County had higher rate (per 100,000 population) for 15 of the 37 licensed medical providers, an identical rate for 3 of the 37, and a lower rate (per 100,000 population) for 19 of the 37 licensed medical provider types compared to the United States.

1.4 ACCESS TO HEALTHCARE

Full Time Equivalents (FTE) at Local Health Department

Washoe County Health District has experienced a reduction in the number of budgeted full-time employees (FTE) and rate of FTE per capita over the past decade [Table 32]. In 2016, the national average FTE was 159 among local health departments that serve populations between 250,000-499,999 persons; this equates to a rate of 4.3 FTE per 10,000 population.⁶⁰ The Washoe County Health District serves a population of approximately 439,000 and had 151.4 FTE budgeted for FY17-18, resulting in a rate of 3.4 FTE per 10,000 population.

Table 32: Rate of Budgeted Full Time Equivalents, Washoe County Health District, FY06-07 to FY17-18

Fiscal Year	Budgeted FTE	Rate per 10,000 population
FY06-07	203.93	5.2
FY07-08	203.60	5.1
FY08-09	193.00	4.7
FY09-10	193.00	4.7
FY10-11	166.68	4.0
FY11-12	165.48	3.9
FY12-13	156.72	3.7
FY13-14	149.43	3.5
FY14-15	149.83	3.4
FY15-16	150.01	3.4
FY16-17	151.41	3.4
FY17-18	151.42	3.4

- The number of budgeted full-time employees (FTE) for Washoe County's Health District decreased from FY06-07 (203.93 FTE) to FY17-18 (151.42 FTE).
- The rate of budgeted FTE at the Washoe County Health District per 10,000 Washoe County residents has decreased from FY 06-07 (5.2 per 10,000 population) to FY17-18 (3.4 per 10,000 population).
- The rate of budgeted FTE for the Washoe County Health District has not changed since FY 14-15 through FY17-18 and has remained at a 12-year low of 3.4 FTE per 10,000 population.

Primary Data Related to Access to Healthcare

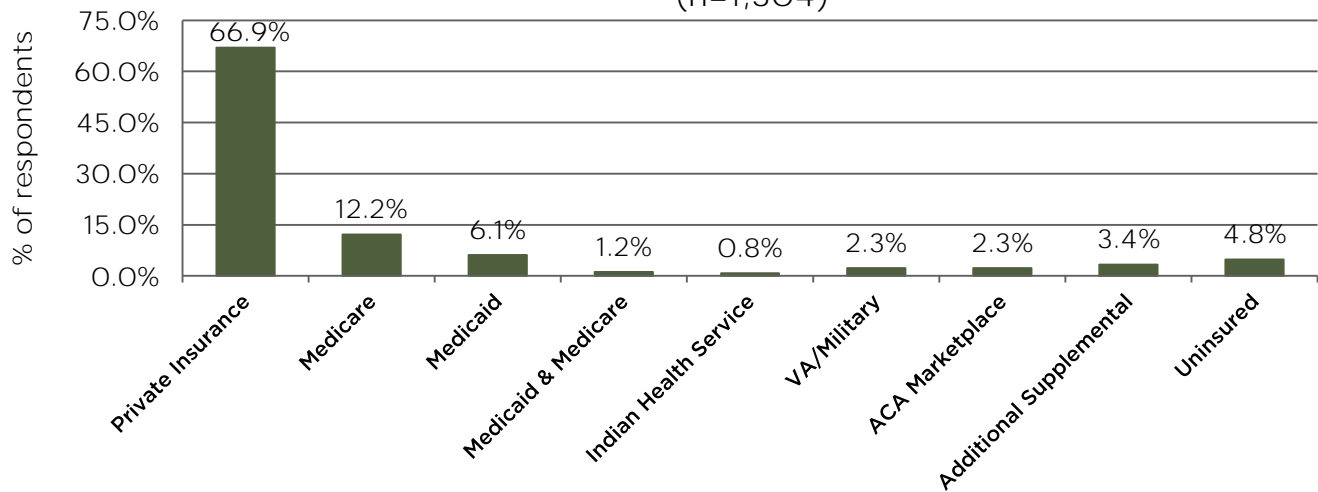
Primary data were collected via an online community survey from over 1,400 survey participants. The survey included 44 questions and analyses for questions related to accessing healthcare are provided within this section. Results and findings from the online community survey are not intended to be applied to or descriptive of all Washoe County residents and only represent the survey respondents themselves. Overall, the online community survey respondents were slightly younger, proportionally less Hispanic, and had higher educational attainment relative to the general Washoe County population. For complete survey methodology and participant demographics refer to the Contents, Methodology, & Community Survey Demographics section.

⁶⁰ National Association of County & City Health Officials. (2017). 2016 National Profile of Local Health Departments. Accessed http://nacchoprofilestudy.org/wp-content/uploads/2017/04/ProfileReport_Final3b.pdf

1.4 ACCESS TO HEALTHCARE

Question: “What type of health insurance coverage do you currently have? Select all that apply.”

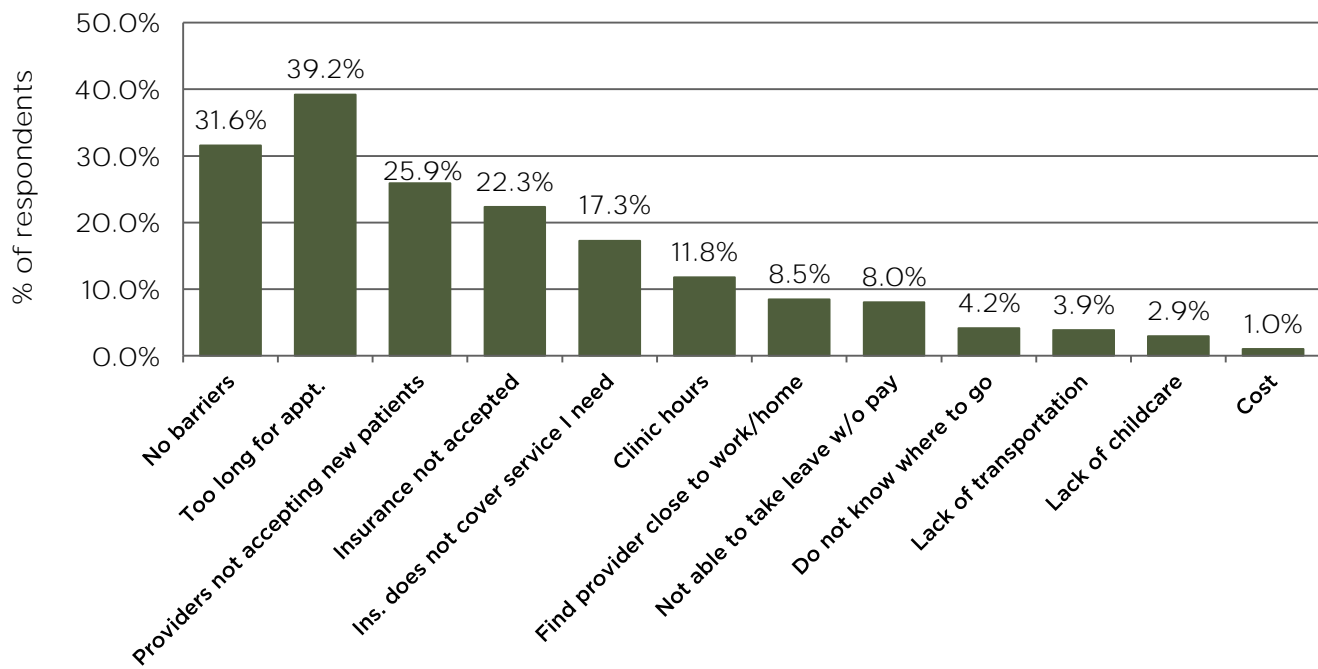
Fig 62: Insurance Coverage among Survey Respondents (n=1,304)



- The majority of survey respondents (66.9%) identified they were insured through a private insurance provider, typically through an employer.
- Approximately 12.2% of respondents indicated they have Medicare coverage, followed by 6.1% covered by Medicaid. Among respondents 1.2% were insured under both Medicare and Medicaid.
- Among the 1,304 respondents to the question, 4.8% indicated they were uninsured.

Question: “What are the main barriers you face when accessing healthcare in Washoe County? Select all that apply.”

Fig 63: Barriers to Accessing Healthcare (n=1,298)

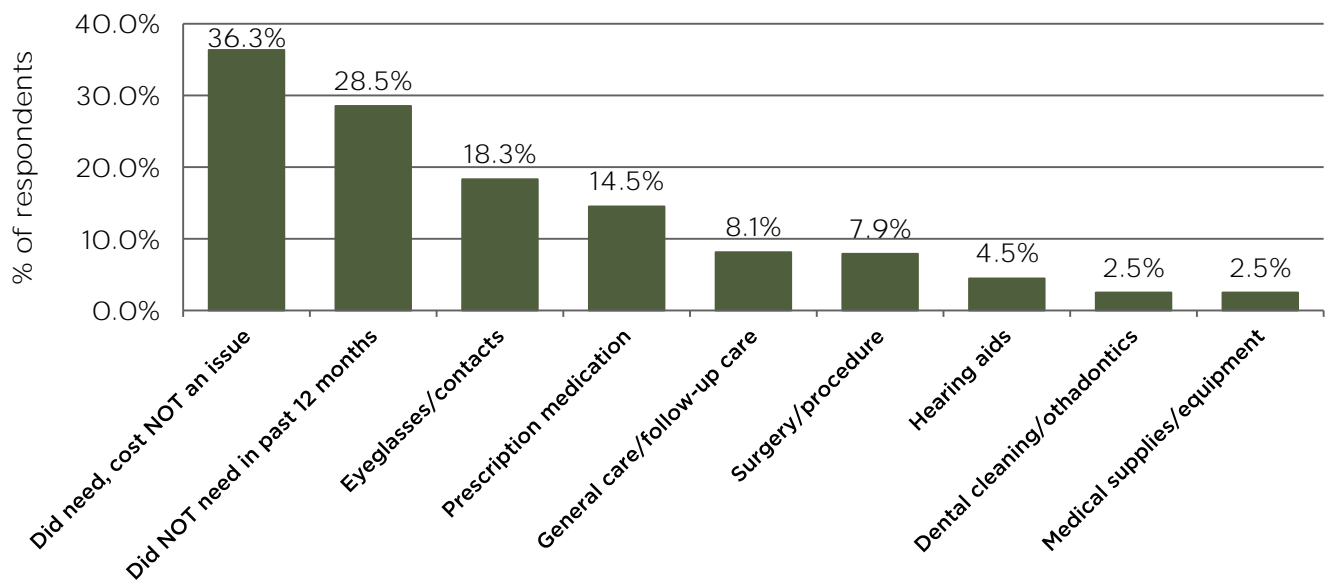


1.4 ACCESS TO HEALTHCARE

- Slightly less than one in three (31.6%) of survey respondents indicated they had no barriers in accessing healthcare.
- The most commonly identified barrier to accessing healthcare was that it takes too long for an appointment (39.2%).
- One in four respondents (25.9%) indicated they have challenges finding providers who are accepting new patients, one in five stated their insurance is not accepted (22.3%), and 17.3% indicate their insurance did not cover the service(s) they needed.

Question: “In the past 12 months did you need any of the following, but could not receive them because of cost? Select all that apply.

Fig 64: Services Needed but Could Not Obtain Due to Cost, Past 12 Months (n=1,256)

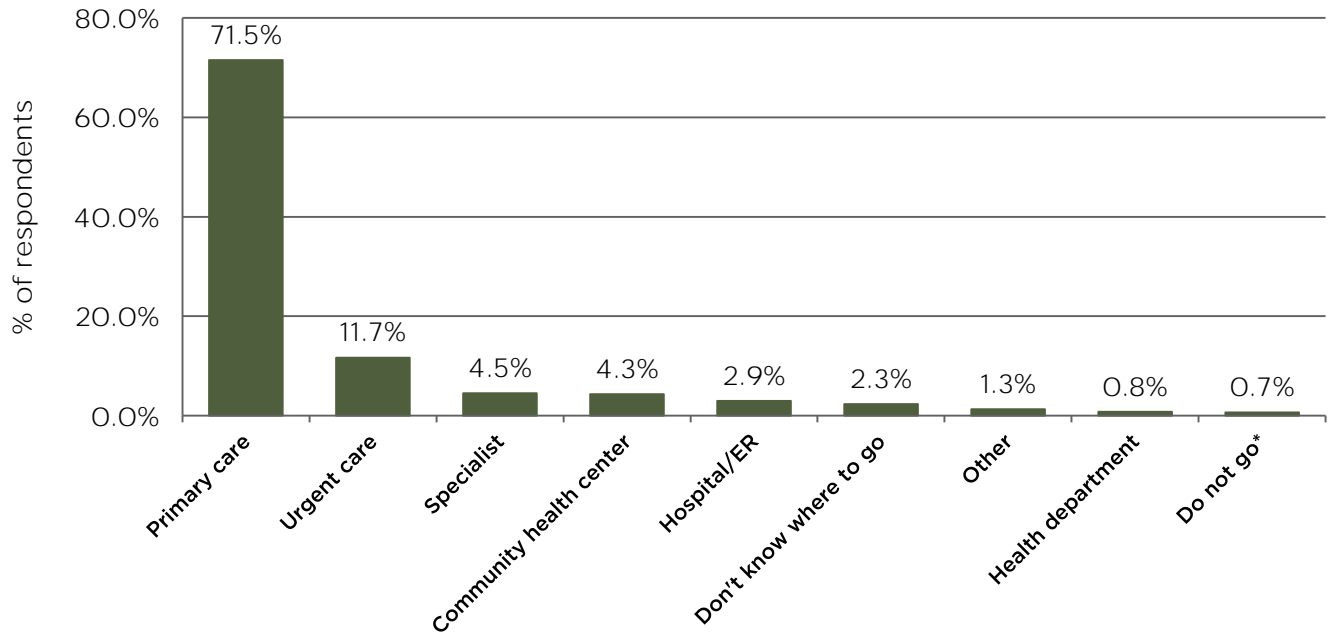


- Slightly over one in three (36.3%) indicated they did need at least one service, but that cost was not a barrier. Another 28.5% of survey respondents indicated they did not need any of the services in the past 12 months.
- The most frequently identified medical need was eyeglasses/contacts (18.3%), followed by prescription medication (14.5%), general care or follow-up care (8.1%), and surgery/medical procedure (7.9%).

1.4 ACCESS TO HEALTHCARE

Question: “If you or someone in your household needs to see a doctor or healthcare provider, where do you go most often?”

Fig 65: Where Receive Healthcare Most Often (n=1,327)



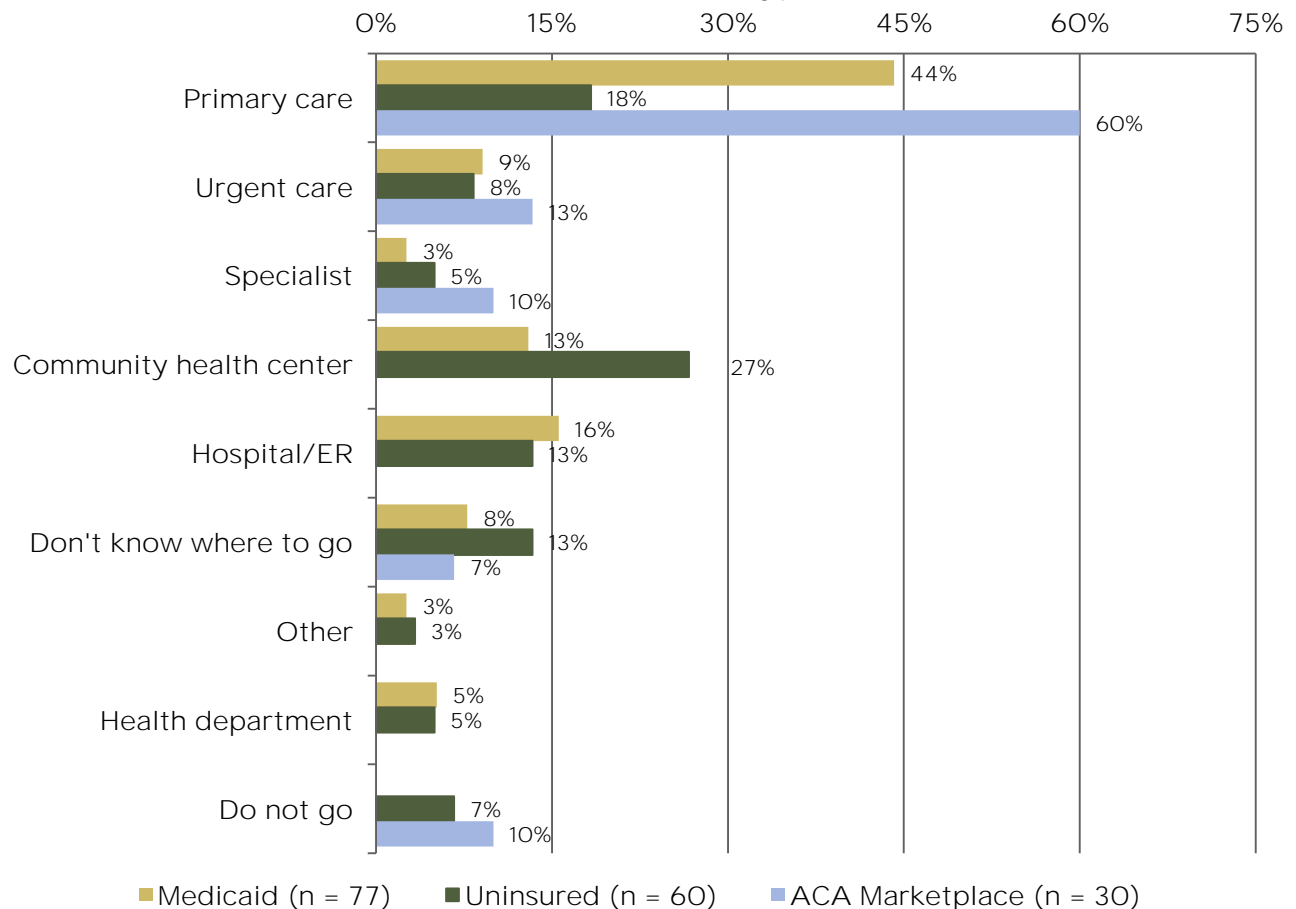
- The majority of survey respondents (71.5%) indicated they/household members most often go to a primary care facility to obtain healthcare. Slightly more than one in ten respondents (11.7%) indicated they go to urgent care facilities most often.

1.4 ACCESS TO HEALTHCARE

Figure 66 illustrates survey respondents who answered both the following questions; however includes only those covered under Medicaid, ACA Marketplace insurance, or were uninsured, as these individuals typically face a larger burden in accessing healthcare.

1. “Where do you go most often?”
2. “The type of insurance they currently were covered under”

Fig 66: Where Receive Healthcare Most Often by Select Health Insurance Type



Among the 77 survey respondents who answered both questions and were insured through Medicaid:

- Less than half (44%) indicated they see a primary care provider most often.
- Approximately 16% indicated they go to a hospital or the emergency room and 13% report most often received healthcare in community health center.

Among the 60 survey respondents who answered both questions and were uninsured:

- More than one in four (27%) indicate they receive healthcare at a community health center most often.
- 18% see a primary care provider, and 13% indicated they don't know where to go or (13%) go to a hospital or an emergency room most often.

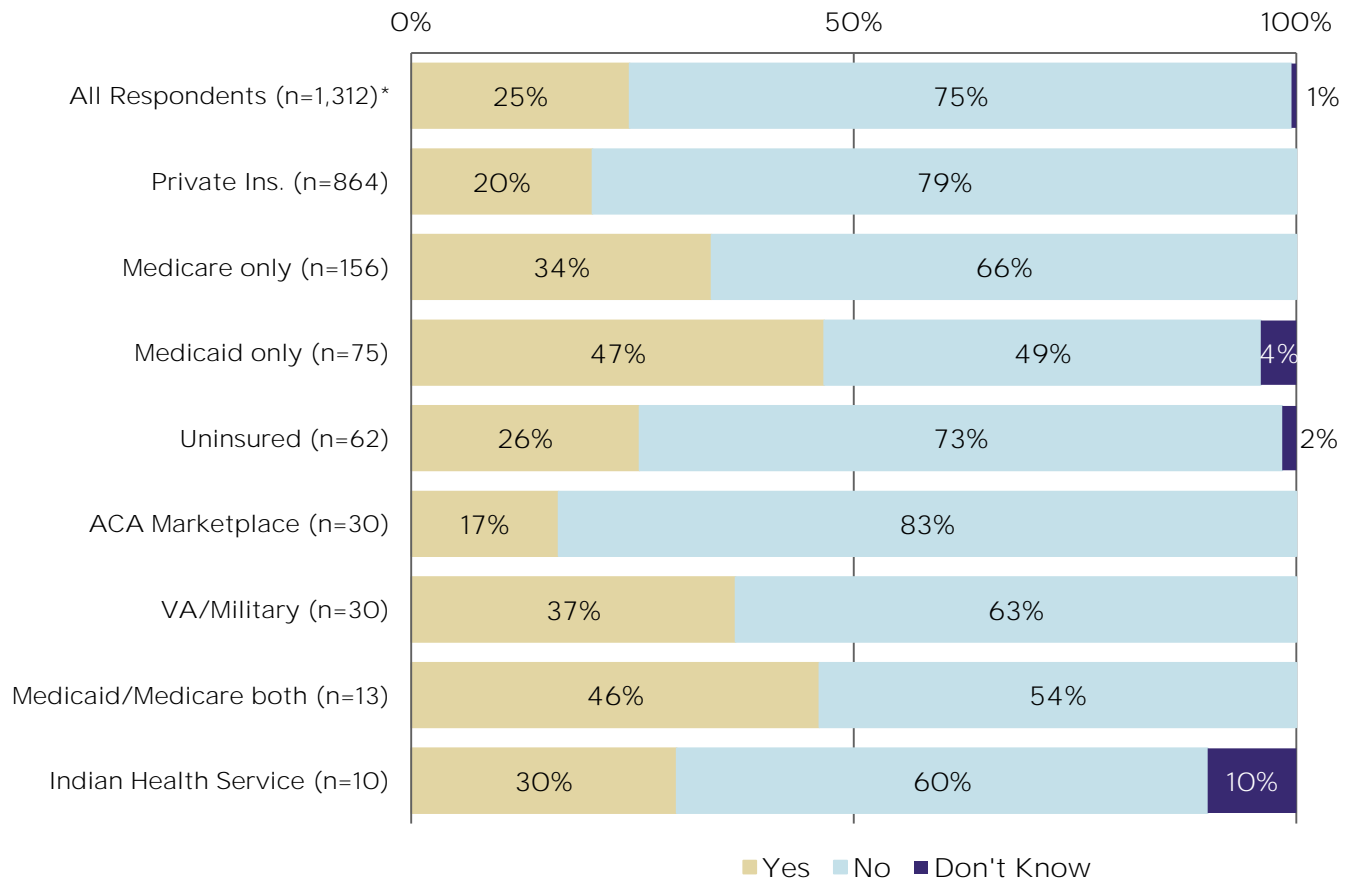
Among the 30 survey respondents who answered both questions and were insured through an ACA Marketplace insurance provider, 60% indicated they most often received healthcare from a primary care provider.

1.4 ACCESS TO HEALTHCARE

Figure 67 illustrates survey respondents who answered both the following questions

1. "In the past 12 months have you used an emergency room?"
2. "The type of insurance they currently were covered under"

Fig 67: Used Emergency Room At Least Once in Past 12 Months by Health Insurance Type



*Note: All Respondents to question about emergency room use in past 12 months, regardless if they answered the insurance type question.

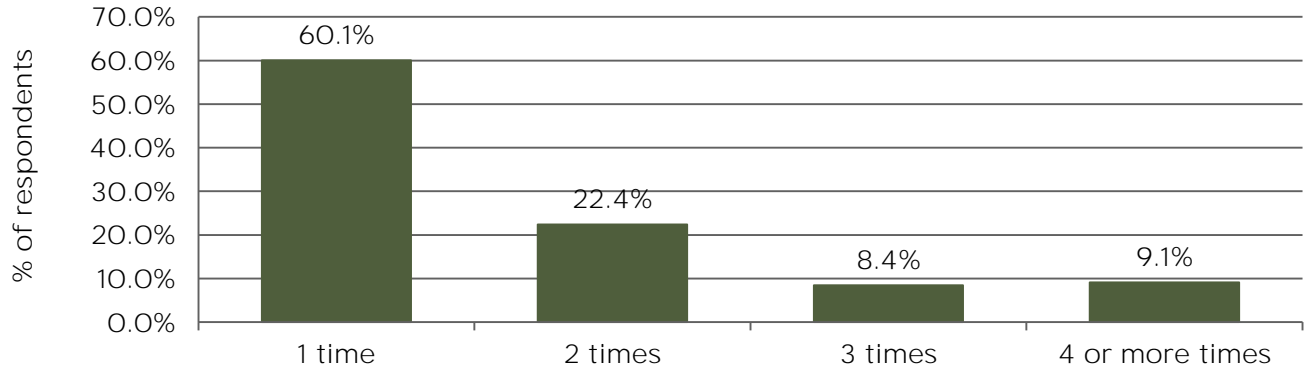
- Among all survey respondents (n = 1,312) one in four (25%) indicated they had gone to the emergency room at least once in the past 12 months.
- A higher percentage of respondents who were covered under only Medicaid (47%), Medicaid and Medicare (46%), the VA/Military (37%), only Medicare (34%), and Indian Health Services (30%) indicated they had gone to the emergency room at least once in the past 12 months.
- A lower percentage of respondents who were covered under an ACA Marketplace insurance provider (17%) or by private insurance (20%) indicated they had gone to the emergency room at least once in the past 12 months.

1.4 ACCESS TO HEALTHCARE

***Question: “How many times in the past 12 months have you gone to the emergency room?”**

*Only asked among the 324 respondents who indicated they had gone to an emergency room at least once in the past 12 months.

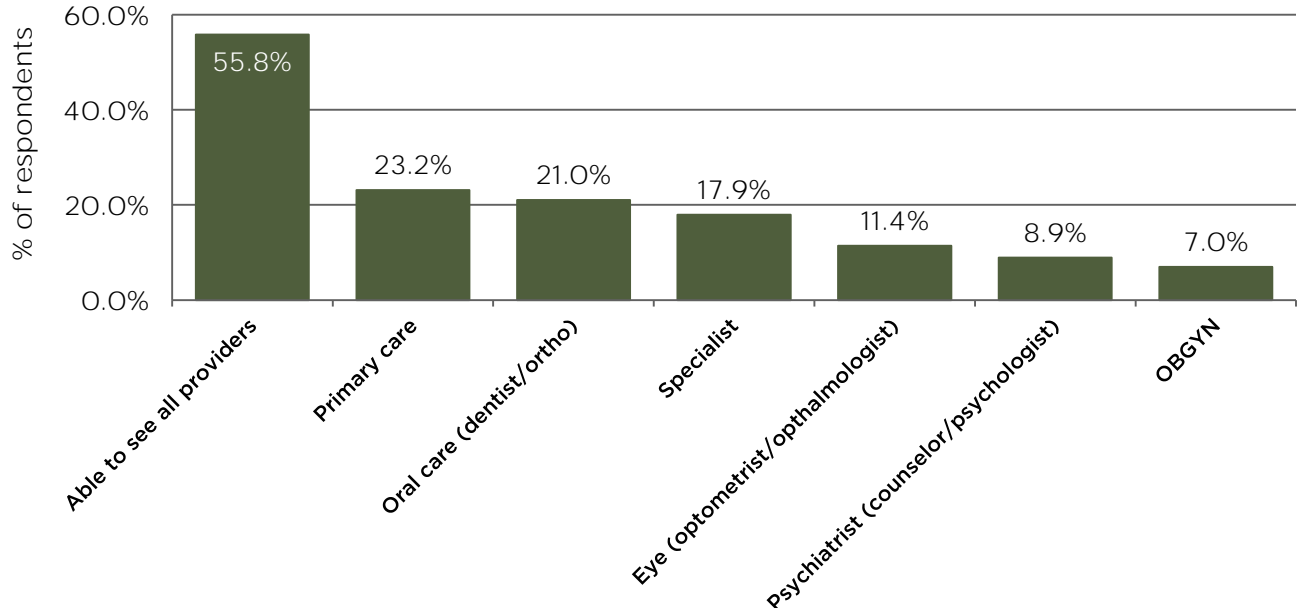
Fig 68: Number of Times Been to the Emergency Room in Past 12 Months (n=308)



- The majority of people who had gone to an emergency room at least once in the past 2 months had only gone 1 time (60.1%); however, one in five respondents had gone twice, and nearly one in ten had gone four or more times in the past 12 months.

Question: “In the past 12 months, which of the following healthcare providers have you needed to see but couldn’t? Select all that apply.”

Fig 69: Type of Provider Needed but Could Not See, Past 12 Months (n=1,304)



- Over half of respondents (55.8%) indicated they were able to see all the providers they needed to see within the past 12 months.
- The most frequently identified provider needed, but unable to see within the past year was primary care (23.2%), followed by oral care -- dentist (21.0%), and a specialist (17.9%).

Summary of Access to Healthcare

The percentage of children (< 18 years) and adults (18-64 years) who were uninsured in Washoe County has decreased in recent years, largely due to the Affordable Care Act (ACA) and resulting Medicaid expansion. In 2016, 19% of Washoe County's population was enrolled in Medicaid, many of whom are served by a few community health clinics. A higher percentage of adults in Washoe County reported having seen a provider in the past year, including dental providers, and fewer people reported cost as a barrier to receiving healthcare services compared to pre-ACA periods.

There are no psychiatrists outside Washoe County in the more rural areas across Northern Nevada, therefore these mental health providers are accessed either through telehealth or long-distance travel, which adds an additional burden to the mental healthcare system in Washoe County. In 2017, Washoe County had a higher rate of licensed providers by specialty (per 100,000 persons) compared to Nevada; however, there is already an existing deficit of internists, OB-GYN, pediatricians and other specialists is critical, this coupled with an aging healthcare workforce and continued population growth does not bode well. The loss of only a few physicians in any specialty could flip the county negatively. Additionally, the Washoe County Health District's budgeted full-time employee rate declined from FY06-07 to FY14-15 and remained at 3.4 FTE per 10,000 residents through FY17-18.

Having access to healthcare begins with affordability of basic preventive services such as immunizations, annual physicals, and screening for chronic diseases. However, the continued growth in population, coupled with the increase in proportion of people with health insurance and an ongoing shortage of healthcare providers across the spectrum, has magnified challenges in accessing healthcare for all residents regardless of insurance status.

Short-term solutions to accessing healthcare include increasing education regarding appropriate pathways for accessing healthcare, which could reduce unnecessary burdens on emergency rooms-- the most expensive entry point. Additionally, creating a continuum of care such as one-stop-shop options for vulnerable populations and frequent utilizers of the healthcare system is another way to maximize efficiency. A cost-effective solution to the overall shortage of providers includes expanding graduate medical education (GME) programs with the University of Nevada, Reno School of Medicine and regional healthcare providers. GME residency programs increase the number of providers available to treat patients during the course of the residency and slightly more than half of individuals stay in the communities where they conduct their residency.⁶¹

⁶¹ Association of American Medical Colleges. (2016). Report on Residents. Table C4. Physician Retention in State of Residency Training, by last Completed SME Specialty, 2006-2015. Accessed <https://www.aamc.org/data/448492/c4table.html>

Access to Healthcare Sources

Fig 60: Uninsured Children Under 18 Years, Washoe County, Nevada, & the United States, 2012-2016

U.S. Census, 2016 American Community Survey -1 year estimates-Table S2701 - SELECTED CHARACTERISTICS OF HEALTH INSURANCE COVERAGE IN THE UNITED STATES

Fig 61: Percent of Adults 18-64 Years with Any Form of Health Insurance, Washoe County, Nevada, & the United States, 2012-2016

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. 2012-2016 Nevada BRFSS Data. Data provided upon request. Carson City, NV.

Table 17: Percent of Population Enrolled in Medicaid, 2004, 2011, & 2014-2016

University of Nevada, Reno school of Medicine, Office of Statewide Initiatives. Nevada Instant Atlas. Accessed <https://med.unr.edu/statewide/instant-atlas/county-data-map>

Table 18-Table 22 Same Source

Table 18: Percent of Adults 18 to 64 years who could Not See a Doctor Due to Cost*, 2012-2016

Table 19: Percent of Adults with One Person they think of as their Personal Healthcare Provider, 2012-2016

Table 20: Time since Last Physical among Adults, Washoe County, 2012-2016

Table 21: Time since Last Physical among Adults, Nevada, 2012-2016

Table 22: Time since Last Physical among Adults, United States, 2013-2016

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. 2012-2016 Nevada BRFSS Data. Data provided upon request. Carson City, NV.

Table 23: Percent of High School Students who Visited a Dentist*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 24-Table 25 Same Source

Table 24: Percent of Adults who Visited a Dentist or Dental Clinic*, 2012, 2014 & 2016

Table 25: Time since Last Dental Visit* among Adults, Washoe County, 2012, 2014, & 2016

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. 2012-2016 Nevada BRFSS Data. Data provided upon request. Carson City, NV.

Table 26: Percent of Population Residing in Health Professional Shortage Area by Type, Washoe County, 2012, 2014, & 2016

University of Nevada, Reno School of Medicine, Office of Statewide Initiatives. Instant Atlas, County data. Accessed <https://med.unr.edu/statewide/instant-atlas/county-data-map>

Table 27-Table 29 Same Source

Table 27: Primary Care¹ Health Professional Shortage Areas, Washoe County, 2017

Table 28: Mental Health Care¹ Health Professional Shortage Areas in Northern Nevada², 2017

Table 29: Dental Health Care¹ Health Professional Shortage Areas in Northern Nevada², 2017

Nevada Department of Health and Human Services, Division of Public and Behavioral Health, Nevada Office of Primary Care. Data provided up on request. Carson City, NV.

Table 30: Ratio of Providers to Population, 2014

Robert Wood Johnson Foundation. 2017 County Health Rankings. Accessed <http://www.countyhealthrankings.org/app/nevada/2017/measure/factors/4/map>

1.4 ACCESS TO HEALTHCARE

Table 31: Licensed Physicians (MD) per 100,000 Population, 2017

University of Nevada School of Medicine, Office of Statewide Initiatives. Data provided upon request. Reno, NV.

Table 32: Rate of Budgeted Full Time Equivalent, Washoe County Health District, FY06-07 to FY17-18

Washoe County Health District, Office of District Health Officer. Data provided upon request. Reno, NV.

Following Figures from the Online Community Survey

Fig 62: Insurance Coverage among Survey Respondents (n=1,304)

Fig 63: Barriers to Accessing Healthcare (n=1,298)

Fig 64: Services Needed but Could Not Obtain Due to Cost, Past 12 Months (n=1,256)

Fig 65: Where Receive Healthcare Most Often (n=1,327)

Fig 66: Where Receive Healthcare Most Often by Select Health Insurance Type

Fig 67: Used Emergency Room At Least Once in Past 12 Months by Health Insurance Type

Fig 68: Number of Times Been to the Emergency Room in Past 12 Months (n=308)

Fig 69: Type of Provider Needed but Could Not See, Past 12 Months (n=1,304)

Environmental Health

Environmental health encompasses the physical, chemical, and biological factors which people are exposed to including indoor and outside ambient air, drinking and recreational water quality, and waste. Natural disasters, occupational hazards, and the built environment (infrastructure) are also considered to be environmental factors which may impact a person’s quality of life and overall health.

Indicator	Trend	Most Recent Year
Air		
Air Quality Index summary	~	various
Air Quality Index summary with most current standards applied	Decreasing (Good days)	235 good days (2016)
Air quality exceedances	STABLE	7 exceedances (2016)
Indoor radon	~	78% homes below EPA action level (1989-2015)
Water		
Percent of community drinking water systems in compliance	STABLE	89.66% (2016)
Cryptosporidiosis rates	Decreasing	2.0 per 100,000 (2016)
Giardia rates	Decreasing	4.5 per 100,000 (2016)
Waste		
Tons of waste per year (recycled + disposed)	Increasing	1,168,235.05 tons (2016)
Pounds of waste per person	Decreasing	2,798 lbs/person (2016)
Recycling rates	Decreasing	32.8% (2016)
~not able to assess for trend		

Air Quality

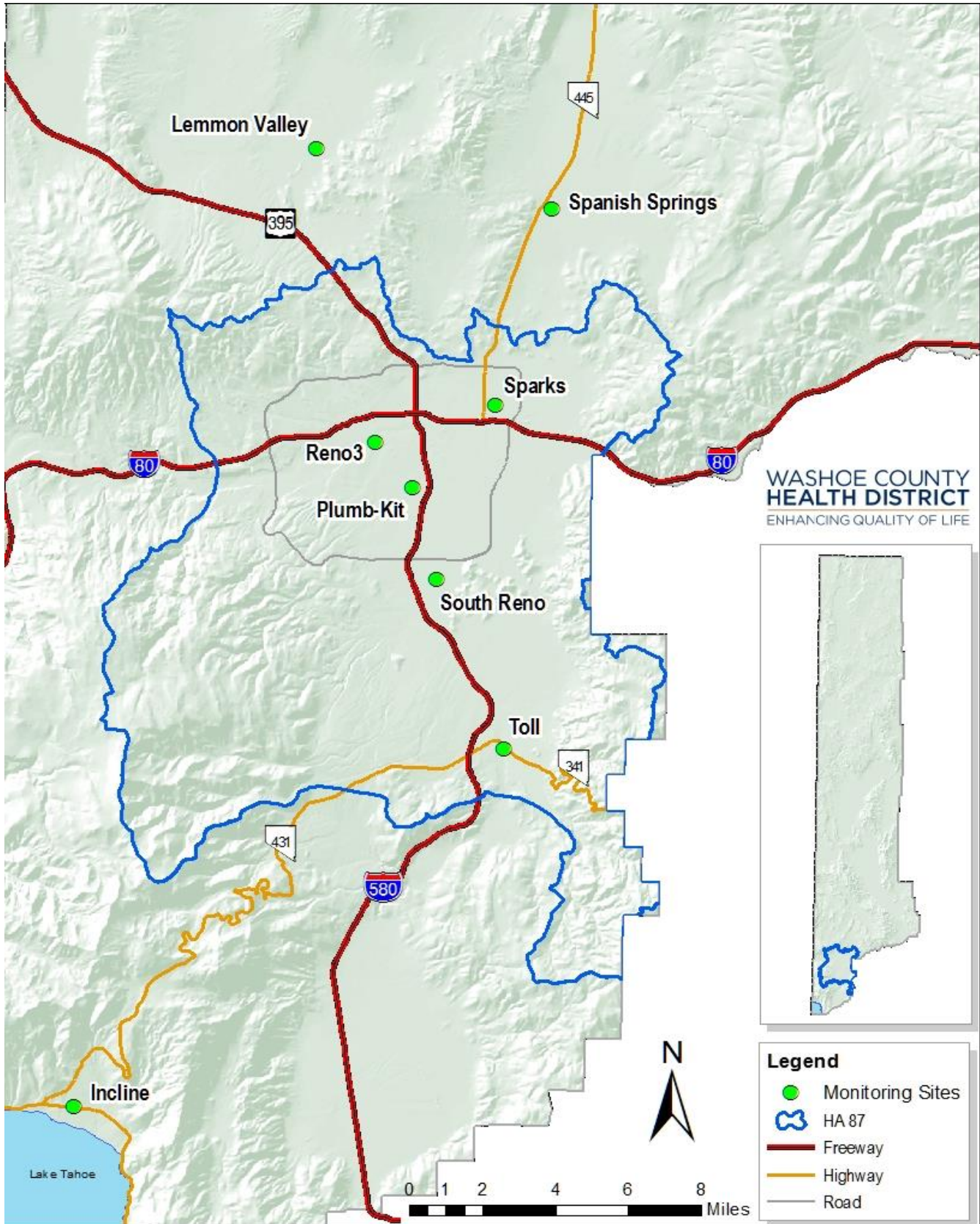
According to the Environmental Protection Agency (EPA), air pollution can lead to health problems including increased respiratory and cardiovascular disease, decreased lung function, increased frequency and severity of respiratory symptoms such as difficulty breathing and coughing, and an increased susceptibility to respiratory infections. Additional negative health impacts of poor air quality include effects on the nervous system, and impacts on learning, memory, and behavior, some cancers, and premature death.⁶²

Criteria Air Quality Pollutants

The Clean Air Act requires the EPA to monitor six criteria air pollutants including particulate matter (PM_{2.5} and PM₁₀), ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂) and lead (Pb). Image 7 illustrates the locations of air monitoring stations in Washoe County as of 2017.

⁶² United States Environmental Protection Agency. (2012). National Air Quality: Status and Trends of Key Air Pollutants. Accessed <https://www.epa.gov/air-trends>

Image 7: Washoe County Ambient Air Monitoring Sites 2017



Particulate Matter

Particulate matter is a mixture of exceptionally small particles and liquid droplets composed of acids, organic chemicals, metals, and soil or dust particles. Particles that are 10 micrometers in diameter (PM_{10}) or smaller ($PM_{2.5}$) are of concern because particles that size can pass through the throat, nose and lungs. Once inhaled, these particles affect the heart and lungs and can decrease lung function, aggravate asthma, result in the development of chronic bronchitis, can produce an irregular heartbeat, trigger nonfatal heart attacks, and potentially cause premature death in people with heart or lung disease. People with preexisting heart and lung conditions, children and older adults are the most likely to be affected by exposure to particulate matter, however even healthy people can experience symptoms from exposure to high levels of particulate matter. The EPA categorizes particle pollution into two criteria pollutants:

1. Inhalable coarse particles (PM_{10}), which are usually found near roadways and dusty industries, these are between 2.5 and 10 micrometers in diameter.
2. Fine particles ($PM_{2.5}$), these are typically from fireplace/woodstove or wildfire smoke, or they can form when gases from power plants, industries, and automobiles react in the air. These are 2.5 micrometers in diameter and smaller.

PM levels vary between the seasons. “Unhealthy for Sensitive Groups” and “Unhealthy AQI” levels of $PM_{2.5}$ happen during calm, cold wintertime inversions and wildfire episodes. PM_{10} levels have been increasing, especially during the wintertime inversions and the days after snowstorms. Regulations related to woodstoves, street sanding and sweeping, and industry have all helped decrease particulate pollution in Reno/Sparks.

Ozone

Motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents, as well as natural sources, emit oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) which form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form in harmful concentrations. Ground-level ozone affects the respiratory system by reducing the body’s ability to take in more oxygen. Symptoms such as chest pains, coughing and throat irritation can occur by breathing in ozone. Among individuals with preexisting conditions such as bronchitis, emphysema, or asthma, ingestion of ozone can be extremely dangerous. Ozone levels for Reno/Sparks have been very close to the ambient air quality standards and occasionally have reached the “Unhealthy for Sensitive Groups” air quality index level, since the 2008 standard began. Ozone is a primary summertime pollutant of concern for the area and will remain a challenge as future air quality standards strengthen.

Nitrogen Dioxide

Short-term nitrogen dioxide (NO_2) exposure, ranging from 30 minutes to 24 hours, can cause airway inflammation in healthy people and increase respiratory symptoms in people with asthma. Studies show a connection between short-term exposure to elevated NO_2 concentrations and an increase in emergency room and hospital admissions for respiratory issues, especially asthma. The Washoe County Air Quality Management District has been monitoring NO_2 since 2009; however NO_2 has not been a concern in Washoe County compared to ozone and particulate matter.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas which can cause harmful health effects by reducing oxygen delivery to the body’s organs and tissues. For a person with heart disease, a single exposure to low levels of CO may cause chest pain and reduce the ability to exercise. Exposure to high levels of CO can result in vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death. Carbon monoxide has not been an ambient air quality problem since the early 1990s in Washoe County.

Sulfur Dioxide

Short-term exposure to sulfur dioxide (SO_2) has been linked to constricted airway passages in the lungs and exacerbate asthma symptoms. SO_2 and other sulfur oxides react with compounds to create small particles, which can cause or worsen respiratory diseases such as emphysema and bronchitis, as well as aggravate heart disease causing increased hospital admissions and even premature death.

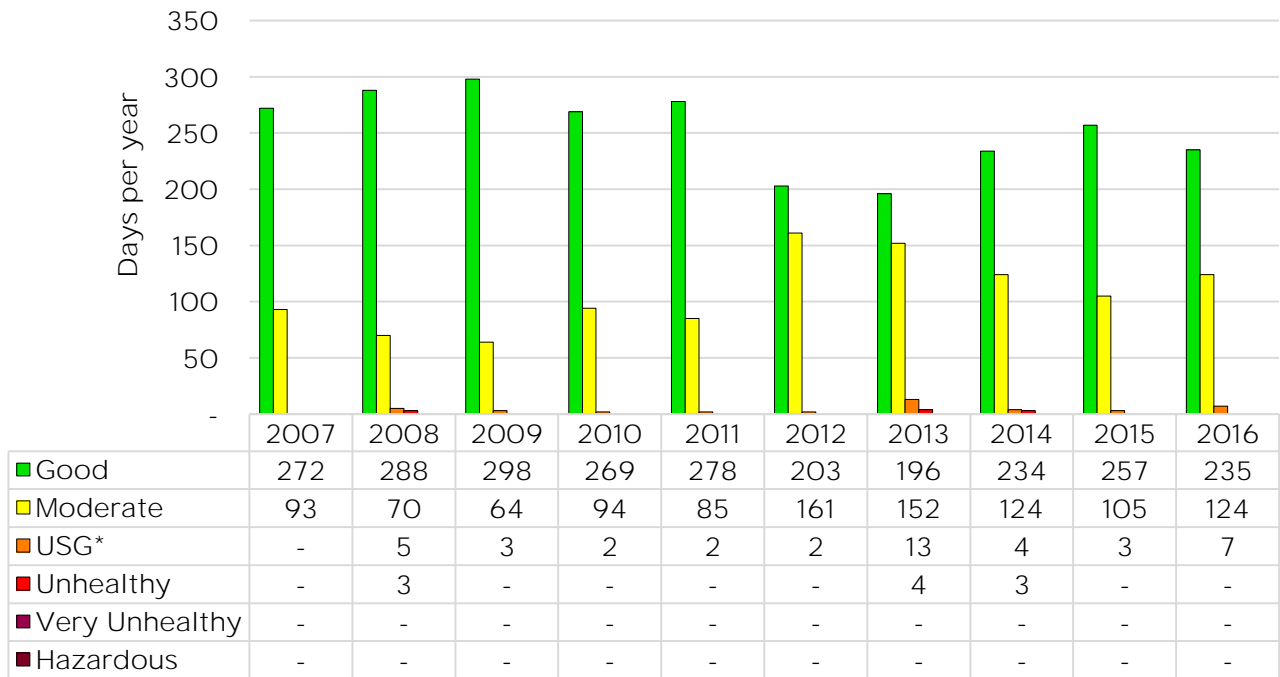
Lead

Lead (Pb) is a naturally occurring metal, which historically was used in gasoline, water pipes and paint. Pb accumulates in the bones impacting the nervous system, immune system, reproductive systems, developmental systems, and impairing kidney function. Pb exposure has been linked to high blood pressure and heart disease in adults and is associated with behavioral problems, learning deficits, and decreased IQ levels in children.

National Ambient Air Quality Standards & Air Quality Index

The EPA developed standards known as National Ambient Air Quality Standards (NAAQS), these are the regulatory levels at which air is considered unhealthy. The Air Quality Index (AQI) is a metric for reporting air quality each day; the AQI was also established by the EPA and accounts for the major air pollutants combined. There have been NAAQS revisions in 2008, 2012, and 2015 which changed the AQI category ranges and number of days per year in each range. Fig 70 provides a summary of the AQI for the measured criteria air pollutants combined, Fig 71 shows summary of the AQI for the measured criteria air pollutants compared to most current NAAQS, and Fig 72 illustrates the number of NAAQS exceedances occurring each year (2007-2016) in Washoe County by criteria air pollutant type.

Fig 70: Air Quality Index Summary, Washoe County, 2007-2016



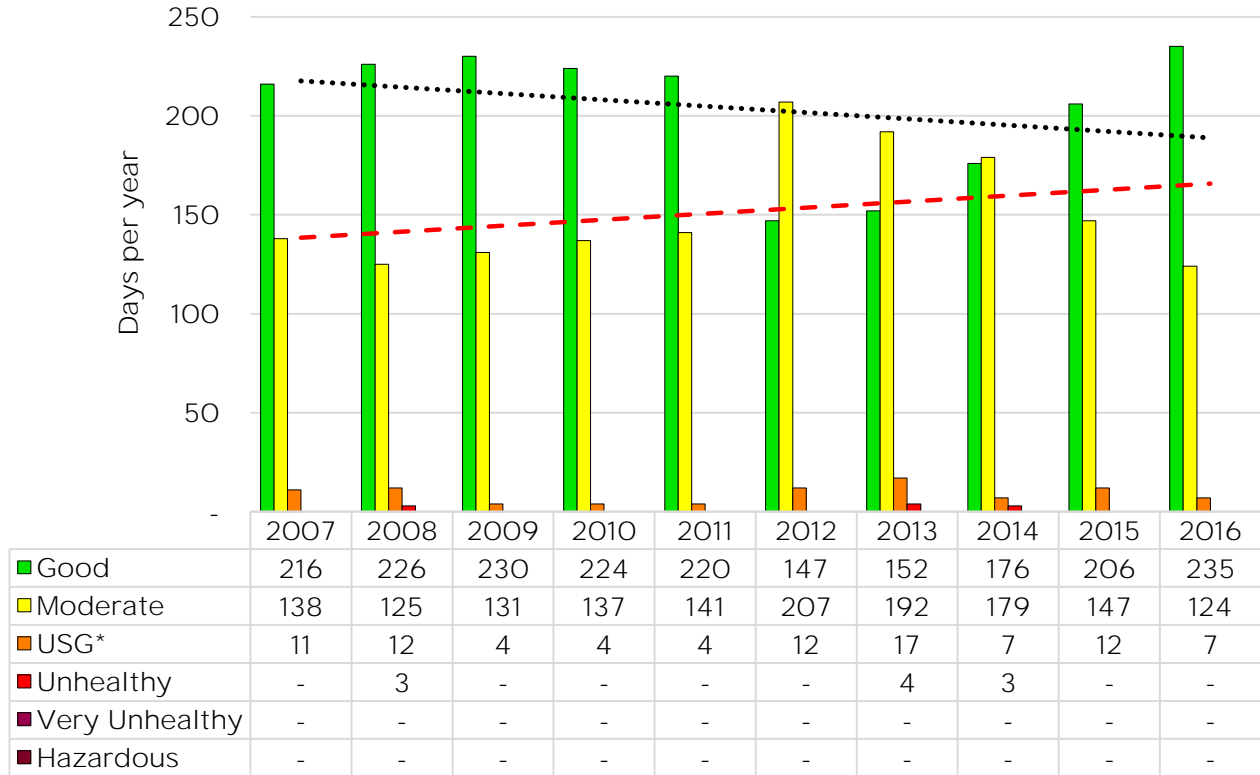
*USG: Unhealthy for Sensitive Groups;

Note: 2008: 8-hour O₃ NAAQS strengthened from 0.08 to 0.075 ppm; 2012: Annual PM_{2.5} NAAQS strengthened from 15.0 to 12.0 µg/m³; 2015: 8-hour O₃ NAAQS strengthened from 0.075 to 0.070 ppm

- From 2007 through 2016 Washoe County experienced over 200 days of “good” air quality annually, with the exception of 2013 (196 “good” days).

- The number of days categorized as “moderate” in Washoe County doubled from 2011 (85 days) to 2012 (161 days), and remained above 100 days since 2012. This due to the changes in the NAAQS and not a reflection of air quality, see following Figure 71 for comparative trend.
- From 2007 through 2016 there were only three years with measured “unhealthy” air quality days in Washoe County, 2008 (three “unhealthy” days), 2013 (four “unhealthy” days), and 2014 (three “unhealthy” days). Unhealthy days are typically due to smoke from wild fires across northern California and Nevada.

Fig 71: Air Quality Index Summary, Washoe County, 2007-2016 with NAAQS as of 12/31/2016 Applied Across all Years

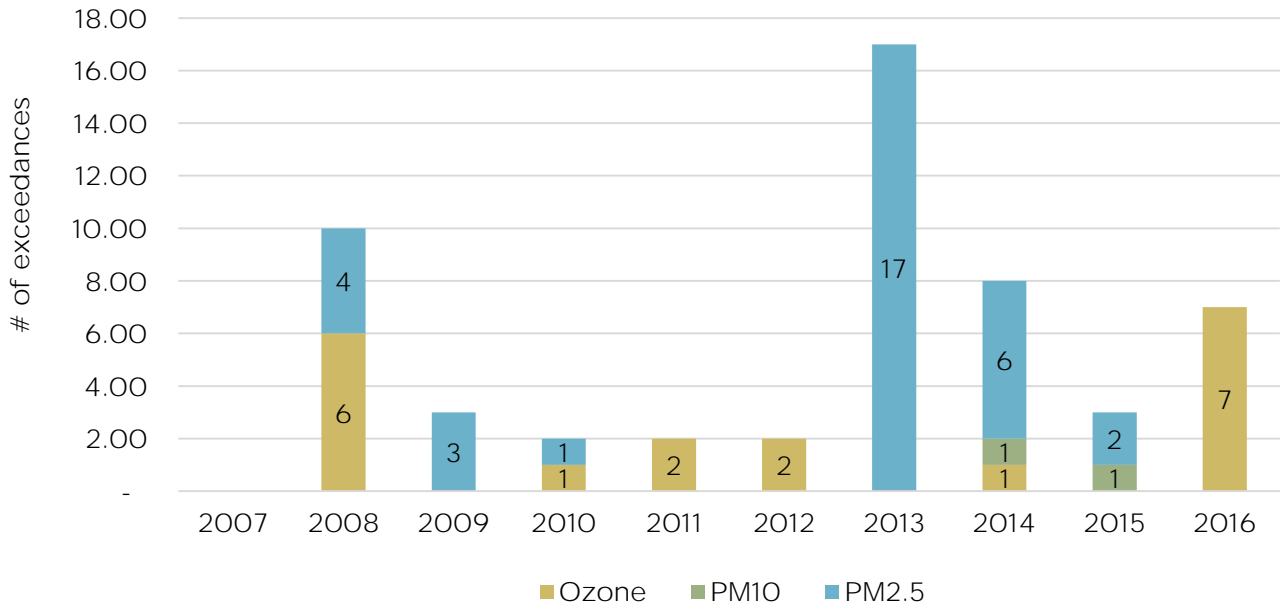


*USG: Unhealthy for Sensitive Groups;

Note: NAAQS as of 12/31/2016 were applied across all years

- With the most recent NAAQS applied across all years, overall the number of days categorized as “good” in Washoe County have trended down over the 10 year period illustrated by the dotted black line, although the number between 2007 (216 good days) to 2016 (235 good days) increased.
- With the most recent NAAQS applied across all years, overall the number of days categorized as “moderate” in Washoe County have trended upward over the 10 year period illustrated by the red dashed line, although the number of days between 2007 (138 days) to 2016 (124 days) decreased.
- These trends are due to relatively worse air quality that occurred during the three-year period 2012 to 2014. Aside from these three years, the other seven years are quite similar with respect to better air quality.

Fig 72: Number of Air Quality Pollutant Exceedances by Criteria Pollutant Type, Washoe County, 2007-2016



Note: There were no exceedances for carbon monoxide, lead, nitrogen dioxide, or sulfur dioxide in Washoe County from 2007-2016; therefore data are not shown for those criteria air pollutants.

- The criteria air pollutant which most frequently exceeded EPA standards between 2007 and 2016 in Washoe County was PM_{2.5}, followed by ozone, and PM₁₀.

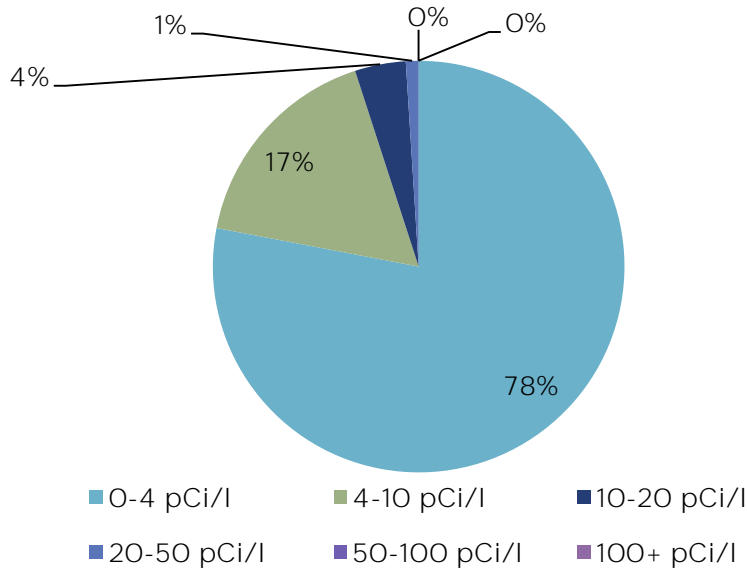
Indoor Radon

Radon is a naturally occurring colorless, odorless, and tasteless radioactive gas. Radon is produced when uranium, radium and thorium break down in rocks, soil, and groundwater. Radon is estimated to be the second leading cause of lung cancer in the United States responsible for 21,000 lung cancer deaths each year. Lung cancer due to radon exposure costs an estimated \$2 billion in medical expenses and lost productivity every year. People are exposed to radon primarily through cracks and gaps in homes and other buildings. The EPA estimates 1 in 15 homes in the United States have high radon levels. The Surgeon General and EPA recommend fixing homes that have an indoor air radon level of 4pCi/l or higher.⁶³

The only way to know the radon level in a home is to have it tested. The University of Nevada, Reno’s Cooperative Extension offers short-term radon test kits for \$10. For more information and to find the nearest location offering test kits call 1-888-RADON10 (888-723-6610).

⁶³ Centers for Disease Control and Prevention. Household Radon. Accessed <https://www.cdc.gov/cancer/dccp/pdf/householdradon.pdf>

Fig 73: Percent of Homes Tested by Radon Level Ranges, Washoe County, 1989-2015 Aggregate Data



Note: data are based on independently tested homes in Washoe County from 1989 through June 30, 2015 and are not a scientific sample.

- The majority of homes tested for radon in Washoe County (78%) have indoor radon levels below the recommended EPA action level of 4 pCi/l or higher.
- Slightly more than one in five (22%) homes tested for radon in Washoe County have an indoor radon level above the recommended action level of 4 pCi/l or higher.

Water

Water treated for public utilization is not typically a major concern among developed nations. However, without regular monitoring, sources of pollution or naturally occurring substances may be present in high levels, which when exposed to over a long enough period of time, could result in negative health effects. Waterborne infectious diseases are primarily due to exposures during recreation on lakes or rivers or when a person consumes untreated water.

Water Systems in Compliance

A public or community water system is any system that provides water for human consumption with at least 15 service connections or that serves an average of 25 persons for at least 60 days out of the year.⁶⁴ There are over 100 community water systems in Washoe County and all are expected to maintain compliance with the regulations set forth in the Safe Drinking Water Act. Water systems are regularly tested for water contaminants including microorganisms, disinfectant residuals, disinfectant byproducts, radionuclides, as well as organic and inorganic chemicals. If a water sample test indicates a contaminate is above the EPA maximum contaminant level (MCL) the sample has to be retested and the contaminate must fall back under the MCL within a set period

⁶⁴ Environmental Protection Agency. Public Water Systems. Accessed <https://www.epa.gov/dwreginfo/information-about-public-water-systems>

of time or else the water system is designated as out of compliance. Once a water system is out of compliance the local health authority ensures the water system will distribute guidelines to either boil water from the tap or switch to bottled water depending on the type of contaminate in violation.

Truckee Meadows Water Authority (TMWA) oversees the city water supply for the majority of the Reno-Sparks population (77%). More than 85% of the drinking water delivered by TMWA originates from Lake Tahoe, which is primarily fed by snow melt and rain throughout the Tahoe basin. The remaining 15% of drinking water comes from more than 90 wells drilled in deep-water aquifers located within TMWA’s service area.⁶⁵

Find your water system consumer confidence report by accessing this interactive website

https://ofmpub.epa.gov/apex/safewater/f?p=ccr_wyl:102

Table 33: Community Water Systems (CWS) & Population Served by CWS without MCL Violations by Year, Washoe County, 2011-2016

Indicator	2011	2012	2013	2014	2015	2016
Percent of CWS with no violations	89.66%	89.66%	96.55%	96.55%	89.66%	89.66%
Total number of people served by all CWS	352,158	352,158	352,158	352,158	352,158	352,158
Percent of population served with no violation	99.96%	99.95%	99.98%	99.98%	99.93%	99.94%

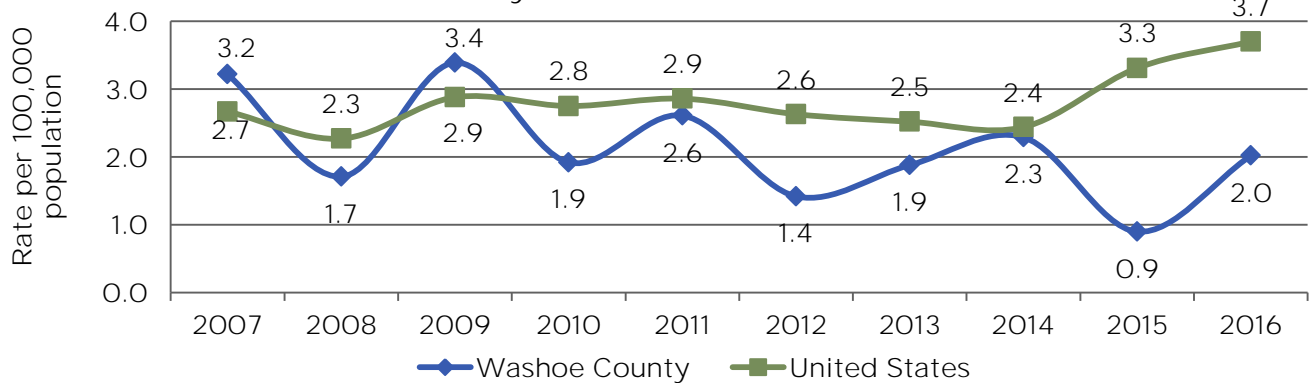
- The majority of community drinking water systems in Washoe County did not have any violations from 2011 through 2016.
- The majority of people served through community water systems were not impacted by MCL violations in any given year from 2011 through 2016.

⁶⁵ Truckee Meadows Water Authority. Accessed <http://tmwa.com/your-water/topics-facts/water-quality/>

Cryptosporidiosis

Cryptosporidium parvum is a parasite which causes Cryptosporidiosis, a diarrheal disease which can be transmitted through the fecal/oral route. Cryptosporidiosis is one of the most common waterborne diseases in the United States and is often spread by a person coming into contact with water contaminated by stool from humans or animals, although can also be spread through contaminated or uncooked food. Symptoms usually begin within two to 10 days of infection, can last up to two weeks, and include watery diarrhea, stomach cramps, nausea, vomiting, fever, and weight loss.⁶⁶

Fig 74: Rates of Reported Cases of Cryptosporidiosis, Washoe County & the United States, 2007-2016



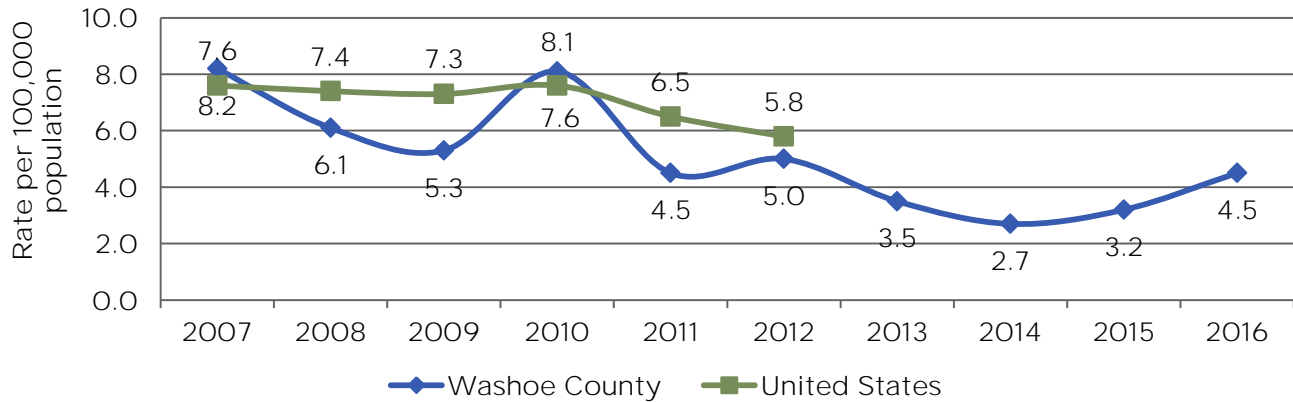
- The rate of reported cryptosporidiosis in Washoe County fluctuated from a low in 2015 (0.9 per 100,000 population) to a high in 2009 (3.4 per 100,000 population).
- From 2010 through 2016, the rate of reported cases of cryptosporidiosis in Washoe County has remained lower than the rate in the United States.

⁶⁶ Centers for Disease Control and Prevention. Parasites-Cryptosporidium (also known as “Crypto”). Accessed https://www.cdc.gov/parasites/crypto/gen_info/infect.html

Giardiasis

Giardia lamblia is a parasite which causes Giardiasis, a diarrheal disease which can be transmitted through the fecal/oral route. *Giardia* is spread by a person coming into contact with water contaminated by stool from humans or animals, contaminated, uncooked food and can be transmitted from person-to-person contact with someone who is ill. Symptoms usually begin within 1-3 weeks of infection, can last up to six weeks, and include diarrhea, gas/flatulence, greasy stool, nausea, and dehydration.⁶⁷

Fig 75: Rates of Reported Cases of Giardia, Washoe County & the United States, 2007-2016



Note: United States data unavailable from 2013 through 2016

- The rate of reported cases of giardia in Washoe County decreased from 2007 (7.6 per 100,000 population) to 2016 (4.5 per 100,000 population). However, the reported rates of giardia have increased in recent years (2015-2016).

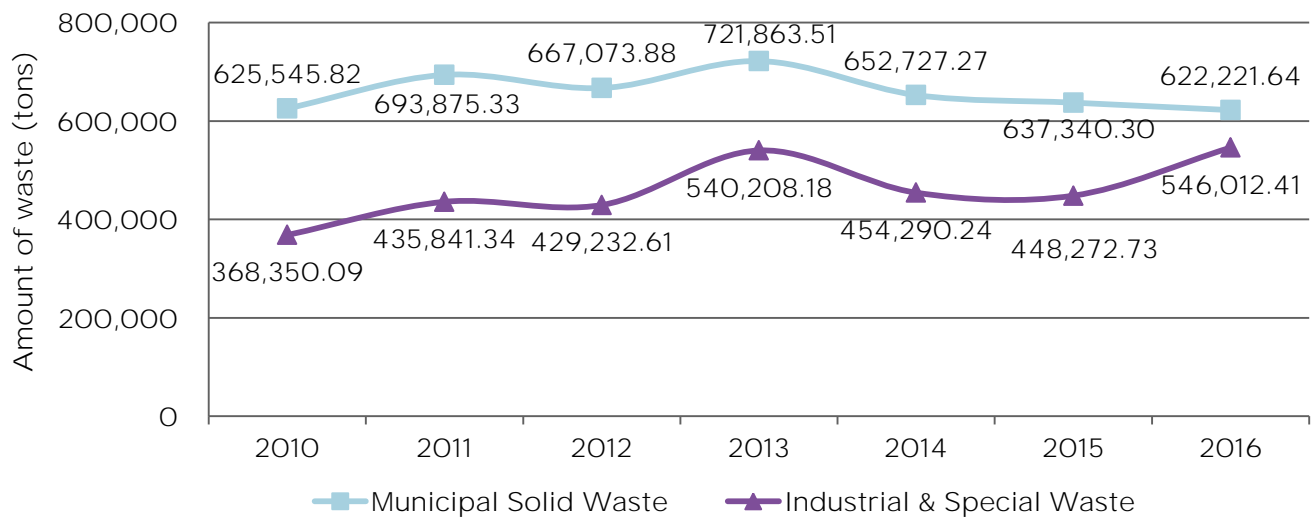
⁶⁷ Centers for Disease Control and Prevention. Parasites-Giardia. Accessed <https://www.cdc.gov/parasites/giardia/general-info.html>

Waste Management

Municipal solid waste (MSW) is the trash or garbage from homes, schools, and businesses. According to the EPA in 2013, Americans generated 254 million tons of trash and composted or recycled approximately 34.3% of the trash generated. The EPA encourages preventing waste by using products designed with less packaging, recycling materials such as glass, paper, plastics, and metals, and composting organic waste in order to reduce the impact of garbage on the environment.⁶⁸

Waste Generated & Disposed

Fig 76: Amount of Waste by Source*, Washoe County, 2010-2016



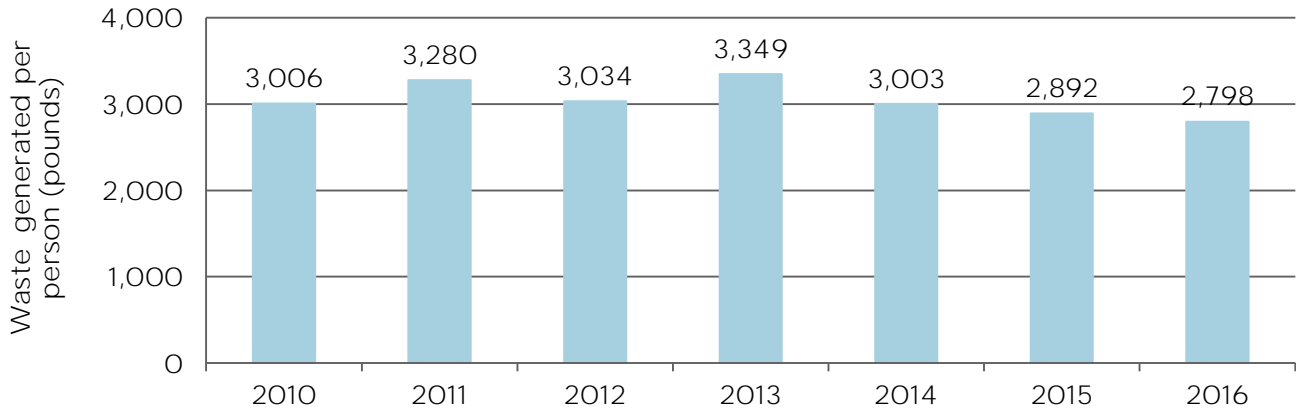
*Waste refers to total amounts disposed plus total amounts recycled in Washoe County.

Note: Nevada solid waste regulations do not require disposal facilities to report the county of origin for Industrial & Special Waste only the county of disposal. Industrial & Special Waste includes debris generated by Construction & Demolition.

- From 2010 through 2016 the majority of waste generated in Washoe County was municipal solid waste.
- The amount of industrial and special waste (in tons) being disposed of in Washoe County increased from 2015 to 2016.

⁶⁸ United States Environmental Protection Agency. Municipal Solid Waste. Accessed <https://archive.epa.gov/epawaste/nonhaz/municipal/web/html/>

Fig 77: Pounds of Municipal Solid Waste Generated per Person, Washoe County, 2010-2016



- The amount of solid waste generated per person in Washoe County decreased from 2010 (3,006 lbs/person) to 2016 (2,798 lbs/person).

Recycling

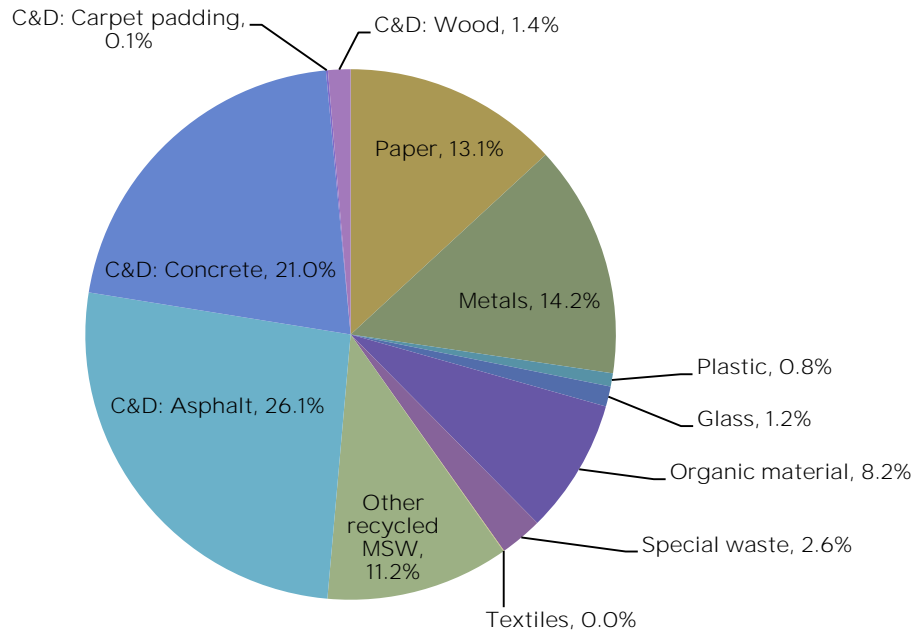
In 2016 a combined total of 383,663 tons of MSW and construction and demolition debris was recycled in Washoe County. Figure 78 shows the percentage of municipal solid waste recycled compared to total waste recycled. Total waste includes MSW and construction and demolition debris combined. Figure 79 illustrates the percentage, by weight in tons, of material recycled in 2016.

Fig 78: Percent of MSW & Total Waste Recycled, Washoe County, 2010-2016



- The percent of municipal solid waste (MSW) that was recycled in Washoe County increased from 2010 (27.1%) to 2016 (31.7%). However, since reaching a high of 36.6% in 2013, the proportion of MSW waste that has been recycled has decreased.
- From 2010 to 2016 the overall percent of waste recycled was higher than the proportion of MSW waste recycled. The total waste accounts for debris generated by Construction and Demolition as well as Special Waste.

Fig 79: Percent of Recycled Material by Type as Measured by Weight in Tons, Washoe County, 2016



- In 2016, slightly over half (51.4%) of waste generated in Washoe County are municipal solid wastes, largely composed of metal (14.2%) and paper (13.1%).
- The proportion of recycled material in Washoe County classified as debris from Construction and Demolition (48.6%) was largely due to asphalt (26.1%) and concrete (21.0%) in 2016.

Summary of Environmental Health

Overall air quality as measured by the NAAQS and annual exceedances has remained relatively stable over the past 10 years (2007-2016) in Washoe County, with a few higher number of exceedances during the 2012-2014 time period. Seasonal exceedances are often due to smoke from wildfires in the summer months and strong inversions which are more likely to occur during the winter months. Indoor air quality is often impacted by smoking tobacco products indoors, however naturally occurring radon is a phenomenon Washoe County residents should be aware of and test for in their homes.

The majority of community water systems in Washoe County have remained in compliance with the EPA defined MCLs from 2011-2016. Reported cases of water borne illness, such as cryptosporidiosis and giardia which are cause by drinking untreated water, or eating food contaminated by untreated water, have both declined from 2007 through 2016.

The amount of municipal solid waste disposed of or recycled in Washoe County has remained stable from 2010 through 2016, however industrial and special waste has increased. Overall, nearly one third of waste is recycled.

The state and local health authorities work diligently to ensure the county meets air quality standards, residents have access to safe and clean drinking water, and that waste is properly managed.

For detailed documents related to environmental health in Washoe County refer to:

Washoe County Health District's Air Quality Management Division's reports

<https://www.washoecounty.us/health/programs-and-services/air-quality/air-quality-reports-and-data.php>

Washoe County Health District's Environmental Health Division's food safety inspections, waste management plan and other helpful information <https://www.washoecounty.us/health/programs-and-services/environmental-health/index.php>

Environmental Health Sources

Image 7; Fig 70-Fig 72 Same Source

Image 7: Washoe County Ambient Air Monitoring Sites 2017

Fig 70: Air Quality Index Summary, Washoe County, 2007-2016

Fig 71: Air Quality Index Summary, Washoe County, 2007-2016 with NAAQS as of 12/31/2016 Applied Across all Years

Fig 72: Number of Air Quality Pollutant Exceedances by Criteria Pollutant Type, Washoe County, 2007-2016

Washoe County Health District, Air Quality Management Division. Data provided upon request. Reno, NV.

Fig 73: Percent of Homes Tested by Radon Level Ranges, Washoe County, 1989-2015 Aggregate Data

University of Nevada, Reno, Cooperative Extension, Nevada Radon Education Program. Accessed

<http://www.unce.unr.edu/programs/sites/radon/files/pdf/WashoeAverage2015.pdf>

Table 33: Community Water Systems (CWS) & Population Served by CWS without MCL Violations by Year, Washoe County, 2011-2016

Nevada Division of Environmental Protection, Bureau of Safe Drinking Water. Data provided up on request. Carson City, NV.

Fig 74: Rates of Reported Cases of Cryptosporidiosis, Washoe County & the United States, 2007-2016

Washoe County: Washoe County Washoe County Health District, Communicable Disease and Epidemiology Program. Data provided upon request. Reno, NV.

United States 2007-2015: Centers for Disease Control and Prevention, FoodNet. Table 2b. Incidence of infection by Pathogen all sites, 2004-2015. Accessed <https://www.cdc.gov/foodnet/reports/data/infections.html>

United States 2016: Marder E.P., Cieslak P.R., Cronquist A.B., et al. (2017). Incidence and Trends of Infections with Pathogens Transmitted Commonly Through Food and the Effect of Increasing Use of Culture-Independent Diagnostic Tests on Surveillance - Foodborne Diseases Active Surveillance Network, 10 U.S. Sites, 2013–2016. MMWR Morbidity and Mortality Weekly Report; 66:397–403.

Fig 75: Rates of Reported Cases of Giardia, Washoe County & the United States, 2007-2016

Washoe County: Washoe County Washoe County Health District, Communicable Disease and Epidemiology Program. Data provided upon request. Reno, NV.

United States 2011-201: Centers for Disease Control and Prevention, MMWR. (2015). Giardiasis Surveillance-United States, 2011-2012. 64(SS03);15-25.

United States 2009-2010: Centers for Disease Control and Prevention, MMWR. (2012). Giardiasis Surveillance-United States, 2009-2010. 61(SS05);13-23.

United States 2006-2008: Centers for Disease Control and Prevention, MMWR. (2010). Giardiasis Surveillance-United States, 2006-2008. 59(SS06); 15-25.

Fig 76-Fig 79 Same Source

Fig 76: Amount of Waste by Source*, Washoe County, 2010-2016

Fig 77: Pounds of Municipal Solid Waste Generated per Person, Washoe County, 2010-2016

Fig 78: Percent of MSW & Total Waste Recycled, Washoe County, 2010-2016

Fig 79: Percent of Recycled Material by Type as Measured by Weight in Tons, Washoe County, 2016

Washoe County Health District, Environmental Health Division. Data provided upon request. Reno, NV.

1.6 UNINTENTIONAL INJURIES & DEATHS

Unintentional Injuries & Deaths

There are three categories of injury and deaths caused by injuries; intentional, unintentional and undetermined. This section contains only injuries and deaths resulting from injuries, which were classified as unintentional, or accidental. The Crime & Violent-related Behaviors section contains data related to intentional injuries and fatalities.

In 2014, the fourth highest cause of death was unintentional injuries, accounting for 59% of all deaths among persons 1 to 44 years of age in the United States. Poisonings, motor vehicle accidents, and falls account for the majority of unintentional deaths, while motor vehicle accidents and falls attribute to the largest proportion of non-fatal traumatic injuries. In 2013, injury and violence resulted in a \$671 billion cost due to medical expenditures and work loss related-costs.⁶⁹ The consequences of injury can have long-lasting impacts. Taking proper safety precautions and being aware of potential hazards at all times can prevent and reduce the burden of unintentional injuries.

Indicator	Trend	Most Recent Year
Unintentional Injuries		
Unintentional death rate	Increasing	48.7 per 100,000 (2015)
Cause of unintentional death ranked by rate	~	various
Number of deaths by cause of death	Increasing	various
Unintentional traumatic injury, by mechanism of injury	~	various
Traffic Safety		
Helmet use among adolescents	~	24.4% wore helmet (2015)
Seat belt use among adolescents	~	93.7% wore seat belt (2015)
Texting while driving among adolescents	~	35.3% (2015)
Riding with driver under the influence among adolescents	~	22.1% (2015)
Driving while under the influence among adolescents	~	8.2% (2015)
Motor vehicle fatality rates	STABLE	8.4 per 100,000 (2015)
Pedestrian fatality rates	STABLE	1.3 per 100,000 (2015)
Percent of fatal traffic accidents with BAC .08+	Increasing	38.0% (2015)
Falls		
Deaths due to falls	Increasing	12.2 per 100,000 (2015)
~not able to assess for trend		

Unintentional Death Rates

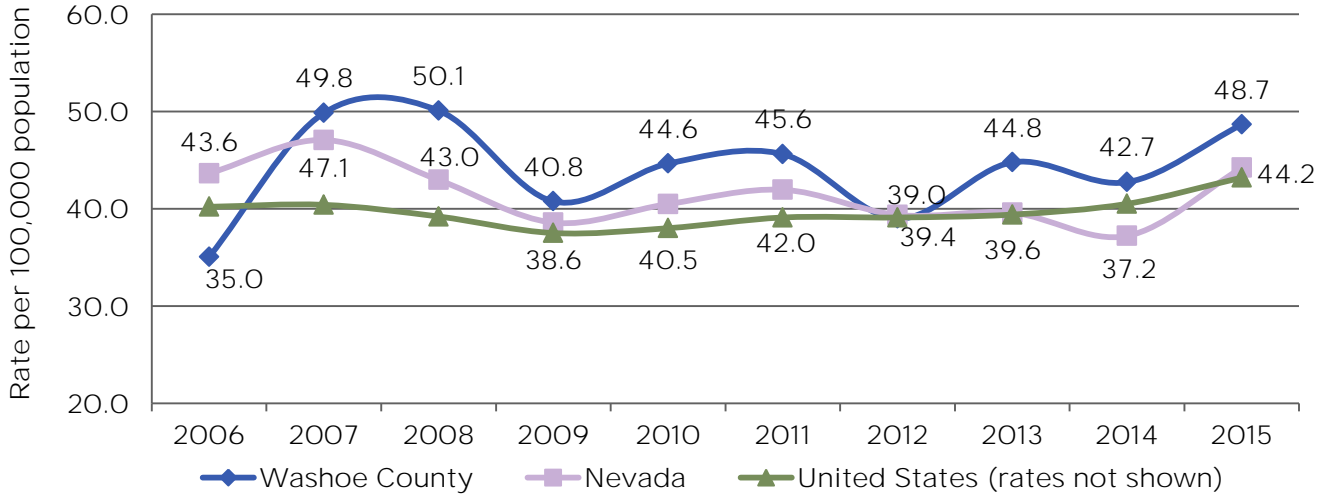
The rates of death due to unintentional poisonings have drastically increased over the past few decades. Data specific to deaths due to poisonings are presented in the Substance Use section. The United States age-

⁶⁹ Centers for Disease Control and Prevention. Injury Prevention & Control. Key Injury and Violence Data. Accessed https://www.cdc.gov/injury/wisqars/overview/key_data.html

1.6 UNINTENTIONAL INJURIES & DEATHS

adjusted death rate due to unintentional poisonings in 1999 was 4.4 per 100,000 compared to the 2015 rate of 14.8 per 100,000. Washoe County unintentional poisoning death rates mirror this trend from 1999 to 2015.⁷⁰

Fig 80: Age-adjusted Unintentional Death Rate, Washoe County, Nevada, & the United States, 2006-2015



- The age-adjusted rate of unintended deaths in Washoe County increased from 2006 (35.0 per 100,000) to 2016 (48.7 per 100,000).
- As of 2016, the age-adjusted rate of unintended deaths in Washoe County (48.7 per 100,000) was higher than Nevada (44.2 per 100,000) and the United States (43.2 per 100,000).

Cause of Unintentional Deaths

Rank	Cause	Washoe County	Nevada	United States
1	Poisoning	18.3	17.5	14.8
2	Motor vehicle accidents	12.1	11.9	10.9
3	Falls	12.2	8.4	9.0
4	Other non-transport accidents	4.1	3.9	~
5	Drowning and submersion	0.8	1.4	1.1

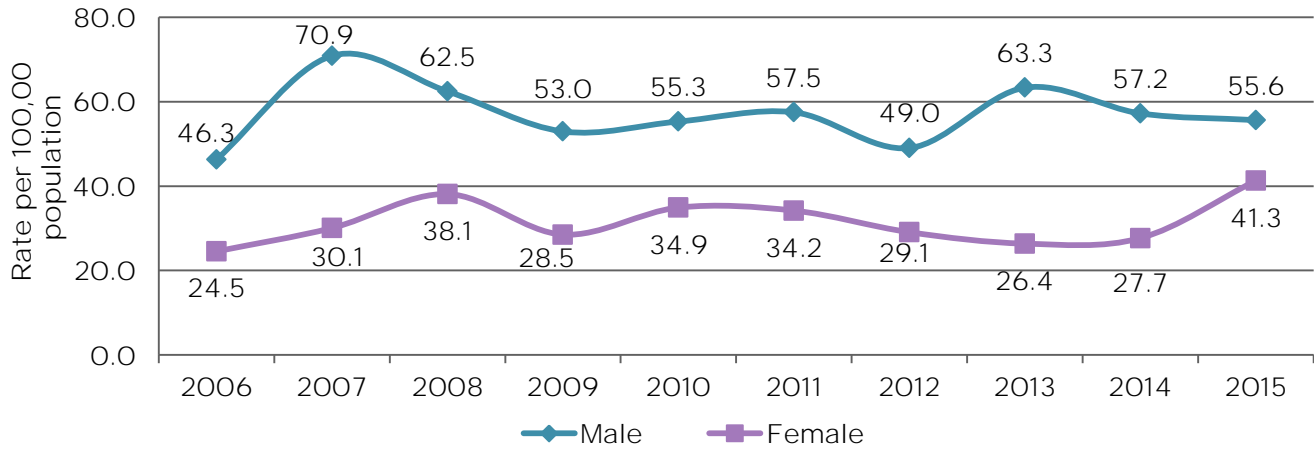
~data not available

- In 2015, poisonings, motor vehicle accidents, and falls were the top three causes of unintentional deaths across Washoe County, Nevada, and the United States.
- As of 2015, the rate of unintended death in Washoe County was higher than Nevada and the United States for all three top causes of death.

⁷⁰ Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2015 on CDC WONDER Online Database, released December, 2016. Data are from the Multiple Cause of Death Files, 1999-2015, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed <http://wonder.cdc.gov/ucd-icd10.html>

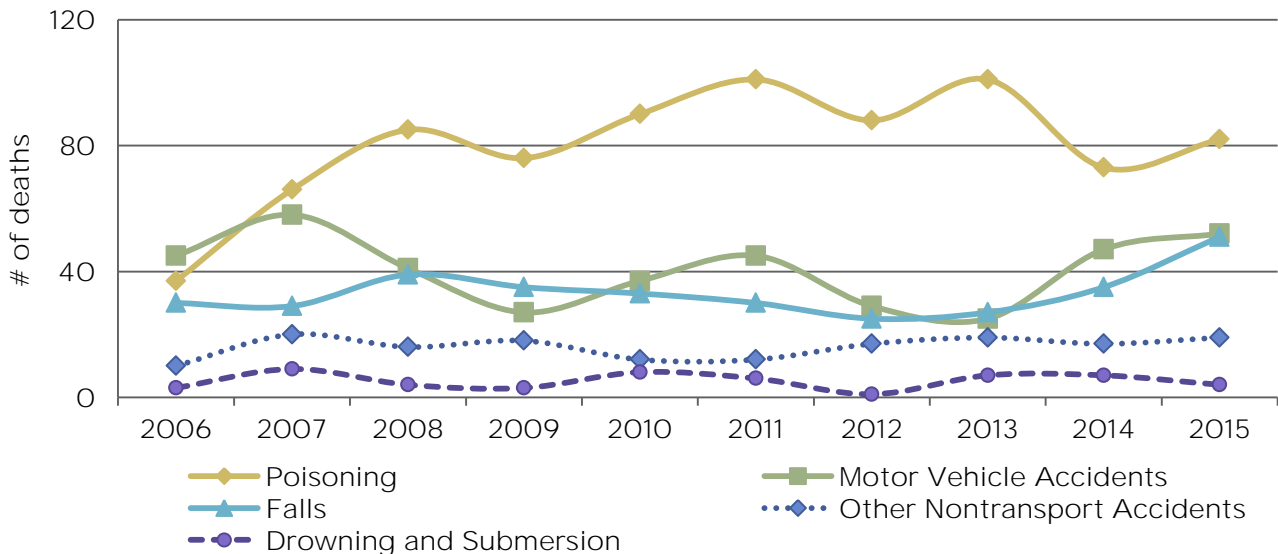
1.6 UNINTENTIONAL INJURIES & DEATHS

Fig 81: Age-adjusted Unintentional Death Rate by Sex, Washoe County, 2006-2015



- The rate of unintended death was higher among males in Washoe County compared to females from 2006 through 2015.
- The rate of unintended deaths among males has increased from 2006 (46.3 per 100,000) to 2015 (55.6 per 100,000). However, the rate of unintended deaths among females have increased more from 2006 (24.5 per 100,000) to 2015 (41.3 per 100,000).

Fig 82: Number of Deaths Due to Unintentional Injury by Type, Washoe County, 2006-2015



- The number of deaths due to poisonings increased from 2006 through 2015. Since 2008, the number of deaths due to poisoning has been nearly twice as high as the second highest cause of death, motor vehicle accidents.
- Deaths due to motor vehicle accidents, other transport accidents, and drowning/submersion have remained fairly stable from 2006 through 2015.
- Deaths due to falls have increased since 2013 and continue to rise.

1.6 UNINTENTIONAL INJURIES & DEATHS

Unintentional Traumatic Injury

The majority of traumatic injuries do not result in death; however, non-fatal injuries often result in long-term impacts including mental, physical, and financial complications. For every fatality due to injury and violence, there are 13 people hospitalized, and another 135 people treated in an emergency room in the United States.⁷¹

Table 35: Unintentional Traumatic Incidents by Mechanism of Injury, Washoe County, 2016

Mechanism of Injury	Number of Incidents	Percent of Incidents
Cut/Pierce	10	0.5%
Fall	840	44.8%
Fire/Burn	11	0.6%
Firearm	13	0.7%
Machinery	8	0.4%
Motor vehicle	602	32.1%
Natural/Environmental factors	12	0.6%
Other specified, classifiable	7	0.4%
Other specified, not elsewhere classifiable	1	0.1%
Overexertion	1	0.1%
Pedal Cyclist, other	61	3.3%
Pedestrian, other	7	0.4%
Struck by/Against	89	4.8%
Transport-other	212	11.3%
Unspecified	1	0.1%

- In 2016, the largest proportion of unintended traumatic injuries in Washoe County were due to falls (44.8%), followed by motor vehicle accidents (32.1%), and other transport mechanisms (11.3%).

Traffic Safety

Motor vehicle accidents continue to be one of the leading causes in the United States and when not fatal, contribute to traumatic injury and long-term disability. Driving under the influence is a major contributor, as approximately one in three fatal traffic accidents from 2006 through 2015 involved a driver with a blood-alcohol content (BAC) equal to or over the legal limit of .08 in the United States.⁷² In 2015, Nevada ranked as the 5th highest state (out of 51-including the District of Columbia) in the United States for pedestrian fatalities at 2.28 per 100,000 population. The national rate was 1.67 per 100,000 population, ranging from a high of 3.70 per 100,000 population in Delaware, to a low of 0.48 pedestrian fatalities per 100,000 population in Idaho.⁷³

⁷¹ Centers for Disease Control and Prevention. Injury Prevention & Control. Key Injury and Violence Data. Accessed https://www.cdc.gov/injury/wisqars/overview/key_data.html

⁷² National Highway Traffic Safety Administration, Fatality Analysis Reporting System. Accessed <https://www-fars.nhtsa.dot.gov/Trends/TrendsGeneral.aspx>

⁷³ U.S. Department of Transportation, National Highway Traffic Safety Administration. (2016). Traffic Safety Facts 2015: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System. Washington, D.C.

1.6 UNINTENTIONAL INJURIES & DEATHS

Additionally, motor vehicle accidents accounted for nearly one in three trauma patients in Washoe County during 2015 and 2016.⁷⁴

Table 36: Percent of High School Students who Rarely/Never Wore Bicycle Helmet, 2013 & 2015

Location	2013	2015
Washoe County	80.4%	75.6%
Nevada	87.3%	85.0%
United States	87.9%	81.4%

*among those that had ridden a bicycle during the 12 months before the survey

- The percentage of Washoe County high school students who reported they rarely/never wear a helmet while riding a bicycle decreased from 2013 (80.4%) to 2015 (75.6%).
- The percentage of high school students in Washoe County reporting rarely/never wearing a helmet while riding a bicycle has been lower than Nevada and the United States in both 2013 and 2015.

Table 37: Percent of High School Students who Rarely/Never Wore Seat Belt, 2013 & 2015

Location	2013	2015
Washoe County	8.4%	6.3%
Nevada	5.8%	6.2%
United States	7.6%	6.1%

*when riding in a car driven by someone else

- The percentage of Washoe County high school students who reported they rarely/never wear a seatbelt decreased from 2013 (8.4%) to 2015 (6.3%).
- The percentage of high school students in Washoe County reporting rarely/never wear a seatbelt has been higher than Nevada and the United States during 2013 and 2015.

Table 38: Percent of High School Students who Texted/Emailed while Driving a Car or Other Vehicle, 2013 & 2015

Location	2013	2015
Washoe County	36.9%	35.3%
Nevada	35.6%	37.7%
United States	41.4%	41.5%

*on at least 1 day during the 30 days before the survey; among those that had driven

- The percentage of Washoe County high school students who reported they texted/emailed while driving decreased from 2013 (36.9%) to 2015 (35.3%).
- The percentage of high school students in Washoe County reporting they texted/emailed while driving was lower in 2015 (35.3%) compared to Nevada (37.7%) and the United States (41.5%).

Table 39: Percent of High School Students who Rode with a Driver that had Been Drinking Alcohol, 2013 & 2015

Location	2013	2015
Washoe County	24.7%	22.1%
Nevada	21.4%	21.4%
United States	21.9%	20.0%

*in a car or other vehicle on at least 1 day during the 30 days before the survey

⁷⁴ Nevada Trauma Registry Data. 2015 and 2016 Washoe County Trauma data provided upon request. Carson City, NV.

1.6 UNINTENTIONAL INJURIES & DEATHS

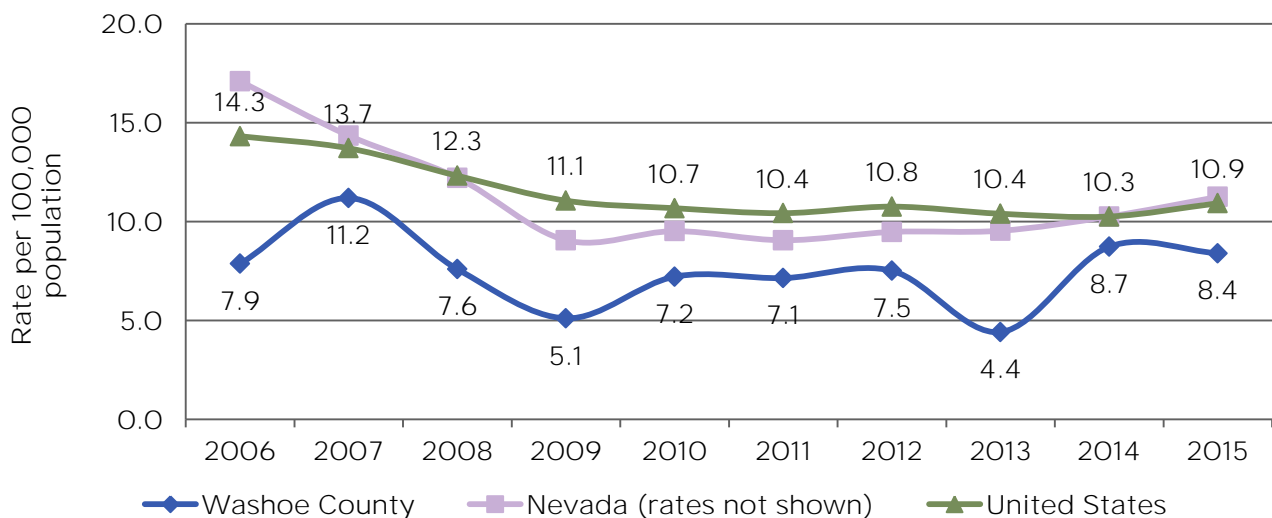
- The percentage of Washoe County high school students who reported they rode in a vehicle with a driver that had been drinking decreased from 2013 (24.7%) to 2015 (22.1%).
- The percentage of high school students in Washoe County reporting they rode in a vehicle with a driver that had been drinking has been higher than Nevada and the United States in 2013 and 2015.

Location	2013	2015
Washoe County	11.7%	8.2%
Nevada	7.0%	6.9%
United States	10.0%	7.8%

*on at least 1 day during the 30 days before the survey; among those that had driven

- The percentage of Washoe County high school students who reported they drove when they had been drinking alcohol decreased from 2013 (11.7%) to 2015 (8.2%).
- The percentage of high school students in Washoe County reporting they drove when they had been drinking alcohol was higher in 2015 (8.2%) compared to Nevada (6.9%) and the United States (7.8%).

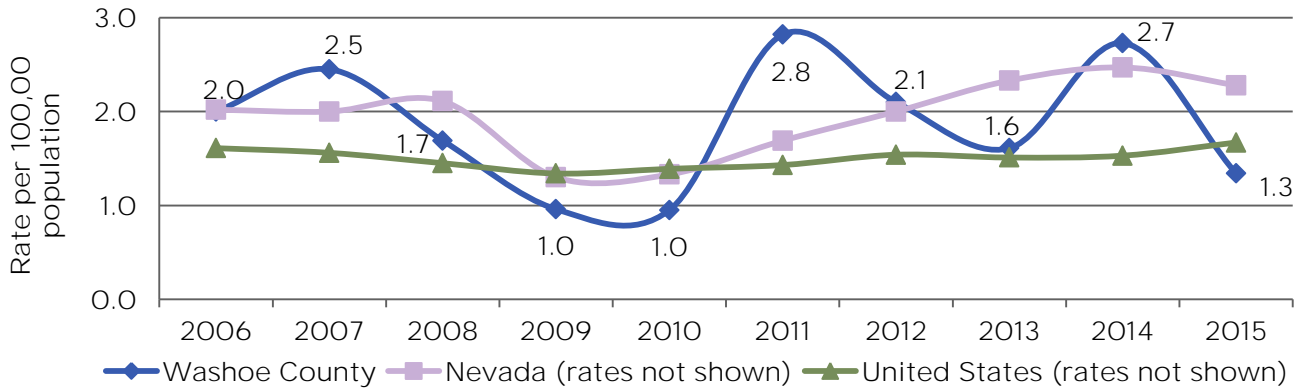
Fig 83: Rate of Death Due to Motor Vehicles, Washoe County, Nevada, & the United States, 2006-2015



- The rate of death due to motor vehicles in Washoe County increased from 2006 (7.9 per 100,000) to 2015 (8.4 per 100,000). However, rates fluctuated from a low in 2013 (4.4 per 100,000) to a high in 2007 (11.2 per 100,000).
- The rate of motor vehicle fatalities (per 100,000 population) in Washoe County was lower than Nevada and the United States from 2006 through 2015.

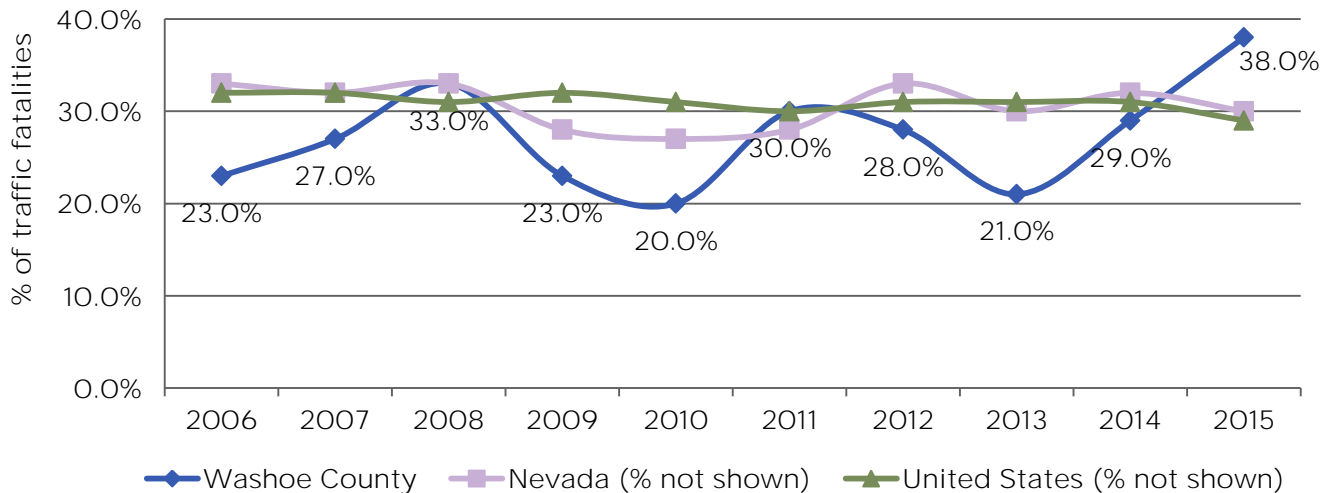
1.6 UNINTENTIONAL INJURIES & DEATHS

Fig 84: Pedestrian Fatality Rate, Washoe County, Nevada, & the United States, 2006-2015



- Overall the rate of pedestrian fatalities in Washoe County decreased slightly from 2006 (2.0 per 100,000) to 2015 (1.3 per 100,000). However, rates fluctuated from a low in 2009 and 2010 (1.0 per 100,000) to a high in 2011 (2.8 per 100,000).
- The rate of pedestrian fatalities per 100,000 population increased in Nevada and the United States from 2011 through 2015.

Fig 85: Percent of Traffic Fatalities with Highest Driver Blood Alcohol Content $\geq .08$ (BAC = .08 or Greater), Washoe County, Nevada, & the United States, 2006-2015



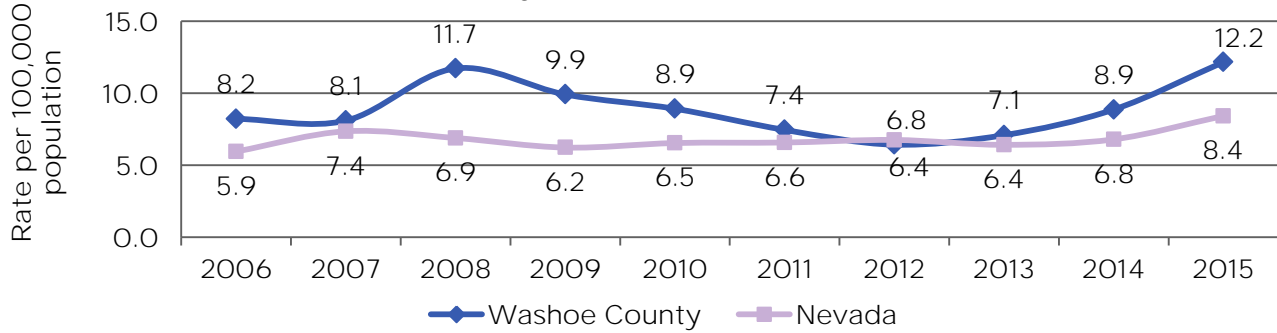
- From 2006 through 2014 approximately one in five traffic fatalities in Washoe County involved a driver with a blood alcohol content (BAC) equal to or higher than the legal limit (.08).
- In 2015, a record high of 38.0% of fatalities involved a driver with blood alcohol content at or higher than the legal limit.

1.6 UNINTENTIONAL INJURIES & DEATHS

Falls

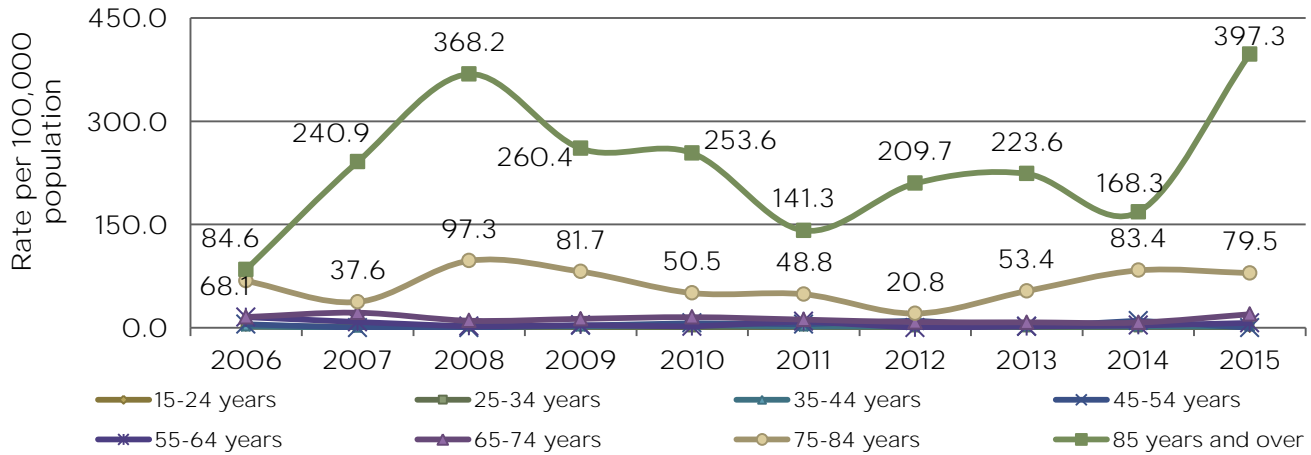
The death rate due to falls has increased in recent years, nationally and in Washoe County. This trend is expected to continue to rise with the aging of the Baby Boomer generation. When not fatal, falls cause serious injury such as broken bones and head injury. In 2015, the cost for falls to Medicare totaled over \$31 billion.⁷⁵

Fig 86: Age-Adjusted Rate of Death Due to Falls, Washoe County & Nevada, 2006-2015



- The death rate due to falls in Washoe County has increased from 2006 (8.2 per 100,000 population) to 2015 (12.2 per 100,000).
- The death rate due to falls in Washoe County remained higher than Nevada from 2006 through 2015, with the exception of 2012.

Fig 87: Rate of Death Due to Falls, by Age Group, Washoe County, 2006-2015



- The death rate due to falls in Washoe County among those older than 75 years was higher than all other age groups less than 75 years.

⁷⁵ Vellas B.J., Wayne S.J., Romero L.J., Baumgartner R.N., & Garry P.J.(1997). Fear of falling and restriction of mobility in elderly fallers. *Age and Ageing*. 26:189-193.

Summary of Unintentional Injuries & Deaths

Many of those who survive injuries may suffer from long-term consequences leading to high health-care costs and reduced quality of life. From 2007 through 2016, the rates of unintentional deaths in Washoe County have been higher than Nevada and the United States. Since 2006, poisonings, motor vehicle accidents, and falls were the top three causes of unintended deaths in Washoe County, Nevada, and the United States. Washoe County's rates of death for the three top causes of unintentional death were also higher than Nevada and the United States. Rates of unintended deaths are higher among males, although the rates among females have been increasing in recent years in Washoe County.

Falls, motor vehicle accidents, and other transport accidents were responsible for a large proportion of traumatic injury in Washoe County during 2016. The rate of deaths due to falls increased in recent years and was higher in Washoe County compared to Nevada. Falls are especially frequent among elderly populations and when they are not fatal, often result in debilitating injury including pelvic and back fractures and head injuries. As Washoe County's elderly population continues to experience a higher rate growth, this is a topic to continue to monitor.

In 2015, over one in five high school students in Washoe County (22.1%) reported having ridden in a car with a driver who had been drinking alcohol and 8.2% reported they had drove when drinking alcohol. Additionally in 2015, a record high of 38% of motor vehicle fatalities in Washoe County involved a driver with blood alcohol content at or above the legal limit (BAC 0.08). Injury and deaths due to people driving under the influence are 100% preventable, there is no excuse for driving while intoxicated. The increasing numbers of unintentional injury and unintended deaths warrant attention to improve and expand on preventive efforts to reduce fatal and non-fatal injuries.

For detailed documents related to unintentional injuries in Washoe County refer to:

2015 and 2016 Washoe County Trauma Report https://www.washoecounty.us/health/files/emergency-medical-services/NVTR_1516_FINAL.pdf

Unintentional Injury Sources

Fig 80: Age-adjusted Unintentional Death Rate, Washoe County, Nevada, & the United States, 2006-2015

Washoe County & Nevada: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2015 on CDC WONDER Online Database, released December, 2016. Data are from the Multiple Cause of Death Files, 1999-2015, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on Jul 21, 2017 4:09:00 PM

Table 34: Age-adjusted Rate of Unintentional Deaths by Cause & Rank, 2015

Washoe County & Nevada: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

1.6 UNINTENTIONAL INJURIES & DEATHS

United States: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2015 on CDC WONDER Online Database, released December, 2016. Data are from the Multiple Cause of Death Files, 1999-2015, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html>

Fig 81-Fig 82 Same Source

Fig 81: Age-adjusted Unintentional Death Rate by Sex, Washoe County, 2006-2015

Fig 82: Number of Deaths Due to Unintentional Injury by Type, Washoe County, 2006-2015

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Table 35: Unintentional Traumatic Incidents by Mechanism of Injury, Washoe County, 2016

Nevada Division of Public and Behavioral Health. 2016 Nevada Trauma Registry. Data provided up on request.

Table 36-Table 40 Same Source

Table 36: Percent of High School Students who Rarely/Never Wore Bicycle Helmet, 2013 & 2015

Table 37: Percent of High School Students who Rarely/Never Wore Seat Belt, 2013 & 2015

Table 38: Percent of High School Students who Texted/Emailed while Driving a Car or Other Vehicle, 2013 & 2015

Table 39: Percent of High School Students who Rode with a Driver that had Been Drinking Alcohol, 2013 & 2015

Table 40: Percent of High School Students that Drove when Drinking Alcohol, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Fig 83-Fig 85 Same Source

Fig 83: Rate of Death Due to Motor Vehicles, Washoe County, Nevada, & the United States, 2006-2015

Fig 84: Pedestrian Fatality Rate, Washoe County, Nevada, & the United States, 2006-2015

Fig 85: Percent of Traffic Fatalities with Highest Driver Blood Alcohol Content $\geq .08$ (BAC = .08 or Greater), Washoe County, Nevada, & the United States, 2006-2015

National Highway Traffic Safety Administration, Fatality Analysis Reporting System. Accessed <https://www-fars.nhtsa.dot.gov/States>

Fig 86-Fig 87 Same Source

Fig 86: Age-Adjusted Rate of Death Due to Falls, Washoe County & Nevada, 2006-2015

Fig 87: Rate of Death Due to Falls, by Age Group, Washoe County, 2006-2015

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Crime & Violent-Related Behaviors

Exposure to violence and being a victim of crime or violence is detrimental to health, and effects often last beyond the initial threat or incident. Other than direct bodily harm, the lasting health impacts include psychological and behavioral changes such as chronic stress, depression, anxiety, sleep disturbances, and may result in unhealthy coping mechanisms such as increased substance use. Persons exposed to violence and violent behaviors are more likely to be a victim of violence and commit violence acts against others in the future.⁷⁶

Indicator	Trend	Most Recent Year
Violent crime, <i>by type</i>	STABLE	514.5 per 100,000 (2016)
Property crime, <i>by type</i>	Decreasing	2,593.3 per 100,000 (2016)
Washoe County School District K-12 bullying	STABLE	16% reported incidents substantiated 2016-2017
Washoe County School District K-12 cyber bullying	Increasing	41% of reported incidents substantiated 2016-2017
Violent Behaviors & Victims of Violence (Adolescents)		
Carried a weapon	~	19.7% (2015)
In a physical fight	~	22.2% (2015)
Electronically bullied	~	16.8% (2015)
Bullied on school property	~	20.8% (2015)
Missed school because feel unsafe at/on their way to and from school	~	9.0% (2015)
Threatened/injured on school property	~	8.1% (2015)
Experienced physical dating violence	~	10.8% (2015)
Experienced sexual dating violence	~	12.1% (2015)
Forced to have sexual intercourse	~	9.1% (2015)
Been physically hurt by an adult	~	17.7% (2015)
Have seen adults in their home be physically violent to one another	~	16.6% (2015)
Death due to homicide/assault	STABLE	6.0 per 100,000 (2015)
~ unable to assess for trend		

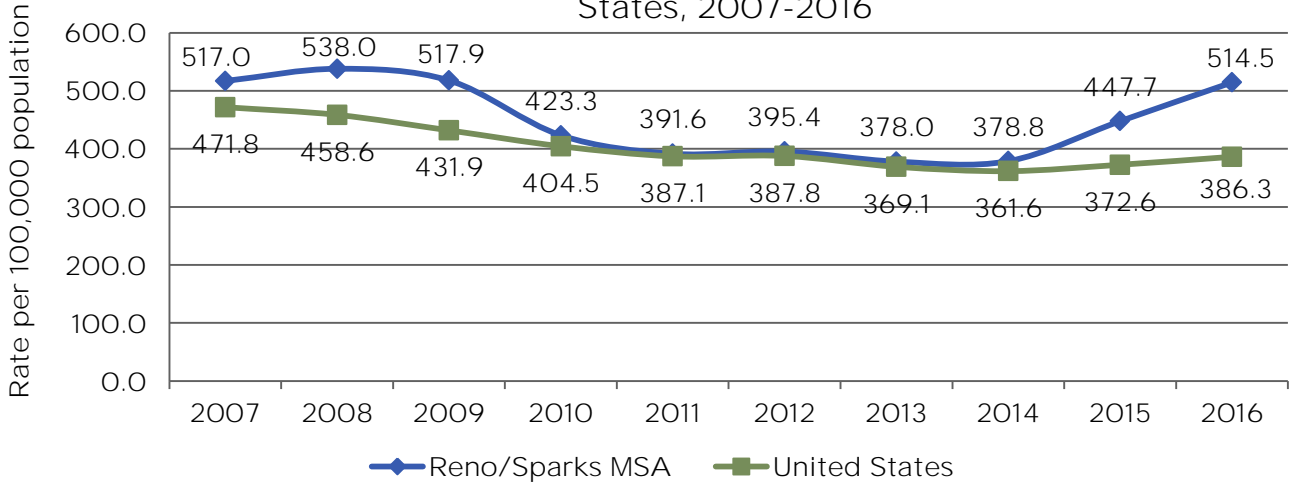
⁷⁶ Wilkins, N., Tsao, B., Hertz, M., Davis, R., Klevens, J. (2014). Connecting the Dots: An Overview of the Links Among Multiple Forms of Violence. Atlanta, Georgia: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Oakland, California: Prevention Institute.

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

Violent Crime

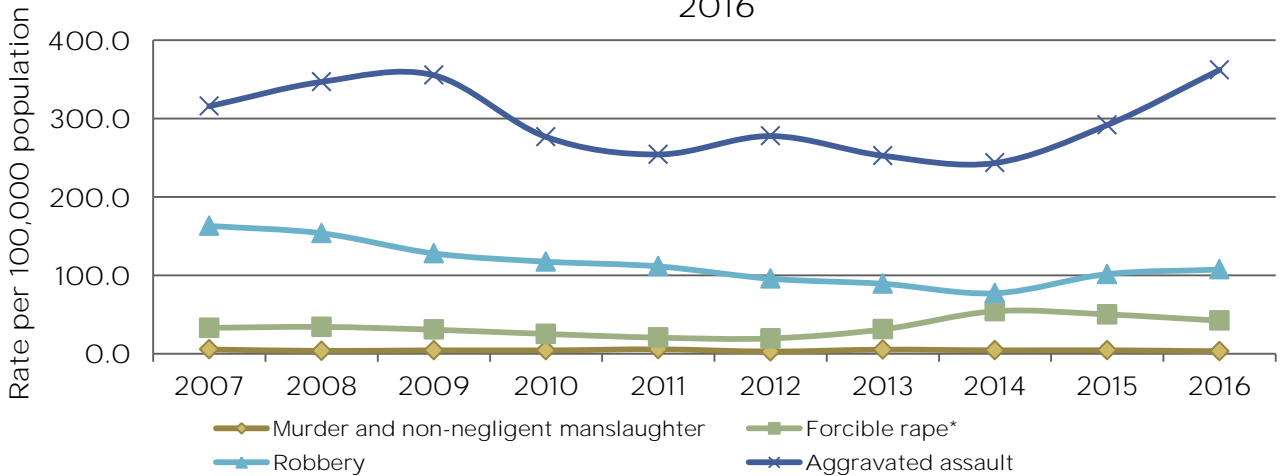
Violent crimes involve force or threats of force and include aggravated assault, robbery, forcible rape, murder, and non-negligent manslaughter.

Fig 88: Violent Crime Rate, Reno/Sparks MSA & the United States, 2007-2016



- The violent crime rate per 100,000 population in the Reno/Sparks metropolitan statistical area (MSA) has been higher than the rate in the U.S. every year from 2007 through 2016.
- From 2010 through 2013 the violent crime rate in the Reno/Sparks MSA was only slightly higher than the U.S. rate, however in 2014 Washoe County’s rate began to increase and in 2016 was higher than the United States.

Fig 89: Violent Crime Rate by Type, Reno/Sparks MSA, 2007-2016



Note: Legacy definition of rape (prior to 2013), included forcibly and against will. In 2013 the term forcible was removed and the revised definition of rape includes “Penetration, no matter how slight, of the vagina or anus with any body part or object, or oral penetration by a sex organ of another person, without the consent of the victim. Attempts or assaults to commit rape are also included; however, statutory rape and incest are excluded.”

- Aggravated assault crimes have been the largest contributor to the violent crime rate in the Reno/Sparks MSA from 2007 through 2016 and have been increasing since 2014.
- The rate of robberies per 100,000 population fell from 2007 to 2014, however began to increase in 2014.

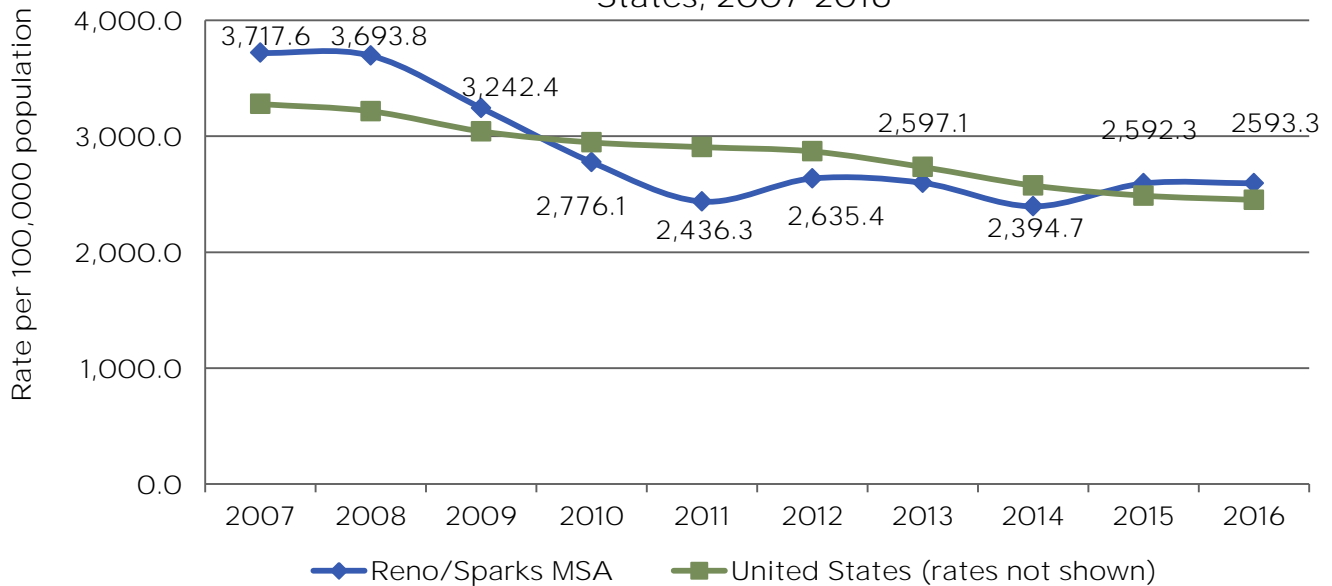
1.7 CRIME & VIOLENT-RELATED BEHAVIORS

- Due to the change in definition of rape, the rate of forcible rape appears to have increased since 2013; however this may be a reflection of the change in definition and not a true increase of rape—see note under Figure 89.
- The rate of murder and non-negligent manslaughter has remained less than 6.0 per 100,000 population from 2007 through 2016.

Property Crime

Property crimes do not involve force or threat to the victims of crime and include burglary, larceny-theft, motor vehicle theft, and arson.⁷⁷

Fig 90: Property Crime Rate, Reno/Sparks MSA & the United States, 2007-2016

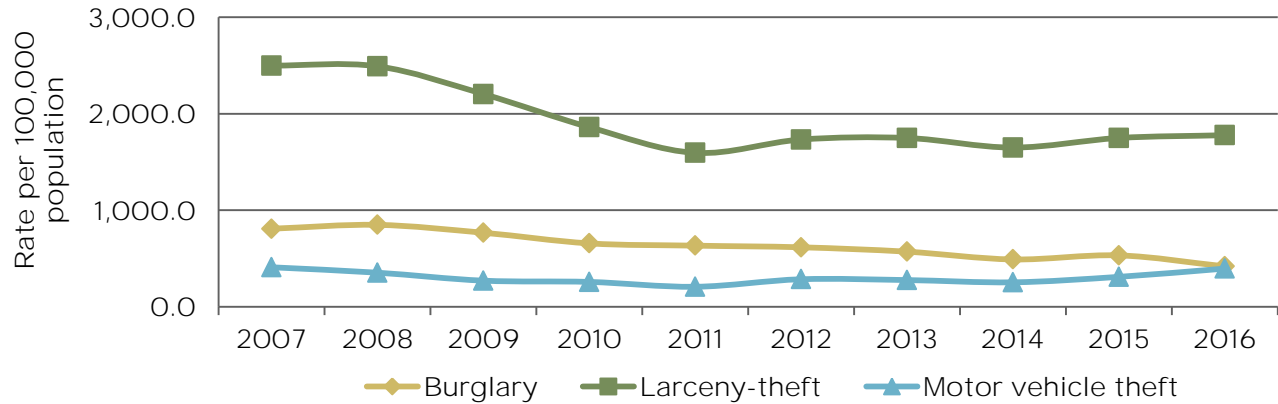


- As of 2010, the rate of property crime per 100,000 population was lower in the Reno/Sparks MSA compared to the U.S. rates, however in 2016 the Reno/Sparks MSA property crime rate increased (2,593.3 per 100,000) and was higher than the U.S. rates (2,450.7 per 100,000).

⁷⁷ Note: Due to varying collection procedures by local law enforcement agencies, limited data are available for arson and are not included in the data for violent crimes.

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

Fig 91: Property Crime Rate by Type, Reno/Sparks MSA, 2007-2016



- Larceny-theft has been the largest contributor to overall property crimes in the Reno/Sparks MSA from 2007 through 2016.
- The rate of burglary per 100,000 population in the Reno/Sparks MSA decreased from 2007 through 2014, and reached a new low in 2016.
- Motor vehicle theft per 100,000 population in the Reno/Sparks MSA decreased from 2007 through 2011, however has increased since then.

Bullying-Washoe County School District Grades K-12

Table 41: Bullying Incidents in Washoe County School District, Reported, Determined to be so, & Resulting in Suspension/Expulsion, 2013-2014 through 2015-2016

School year	# Reported	Found to be Bullying % (#)	Resulting in Suspension or Expulsion % (#)
2013-2014	899	66% (n=595)	22% (n=200)
2014-2015	681	64% (n=436)	21% (n=147)
2015-2016	853	57% (n=489)	18% (n=156)
2016-2017	870	57% (n=496)	16% (n=142)

- The raw number of bullying events reported in Washoe County School District (grades K-12) decreased slightly from the 2013-2014 (n=899) school year to 2016-2017 school year (n=870).
- Over half of all reported and investigated events of bullying were substantiated, while around 1 in 5 resulted in suspension or expulsion.

Table 42: Cyber Bullying Incidents in Washoe County School District, Reported, Determined to be so, & Resulting in Suspension/Expulsion, 2013-2014 through 2015-2016

School year	# Reported	Found to be Bullying % (#)	Resulting in Suspension or Expulsion % (#)
2013-2014	26	100% (n=26)	38% (n=10)
2014-2015	14	100% (n=14)	28% (n=4)
2015-2016	26	100% (n=26)	46% (n=12)
2016-2017	29	100% (n=29)	41% (n=12)

- 100% of reported and investigated cyber bullying incidents were substantiated, and in 2016-2017, 41% resulted in suspension or expulsion.

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

Violent Behaviors & Victims of Violence

Table 43: Percent of High School Students who carried a Weapon*, 2013 & 2015

Location	2013	2015
Washoe County	20.3%	19.7%
Nevada	15.8%	16.9%
United States	17.9%	16.2%

*such as a gun, knife, or club on at least 1 day during the 30 days before the survey

- A higher percentage of high school students in Washoe County reported they have carried a weapon at least once in the past 30 days (prior to the survey), compared to Nevada and the U.S. in both 2013 and 2015.
- The percentage of high school students in Washoe County reported having carried a weapon slightly decreased from 2013 (20.3%) to 2015 (19.7%).

Table 44: Percent of High School Students who were in a Physical Fight*, 2013 & 2015

Location	2013	2015
Washoe County	28.8%	22.2%
Nevada	23.5%	19.3%
United States	24.7%	22.6%

*one or more times during the 12 months before the survey

- A higher percentage of high school students in Washoe County reported they were in a physical fight in the past 12 months (prior to the survey), compared to Nevada in both 2013 and 2015.
- The percentage of high school students who reported they were in a physical fight was lower in Washoe County and Nevada compared to the U.S. in 2015.
- The percentage of high school students in Washoe County reporting they were in a physical fight decreased from 2013 (28.8%) to 2015 (22.2%).

Table 45: Percent of High School Students who were Electronically Bullied*, 2013 & 2015

Location	2013	2015
Washoe County	16.9%	16.8%
Nevada	15.1%	13.8%
United States	14.8%	15.5%

*including being bullied through email, chat rooms, instant messaging, websites, or texting during the 12 months before the survey

- A higher percentage of high school students in Washoe County reported they were electronically bullied in the past 12 months (prior to the survey), compared to Nevada and the U.S. in both 2013 and 2015.
- The percentage of high school students in Washoe County reporting they were electronically bullied remained relatively unchanged from 2013 (16.9%) to 2015 (16.8%).

Table 46: Percent of High School Students who were Bullied on School Property*, 2013 & 2015

Location	2013	2015
Washoe County	21.7%	20.8%
Nevada	19.6%	18.5%
United States	19.6%	20.2%

*during the 12 months before the survey

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

- A higher percentage of high school students in Washoe County reported they were bullied on school property in the past 12 months (prior to the survey), compared to Nevada and the U.S. in both 2013 and 2015.
- The percentage of high school students in Washoe County reporting they were bullied on school property slightly decreased from 2013 (21.7%) to 2015 (20.8%).

Table 47: Percent of High School Students who did not go to School Because they feel Unsafe at School or on their way to and from School*, 2013 & 2015

Location	2013	2015
Washoe County	14.9%	9.0%
Nevada	11.1%	7.6%
United States	7.1%	5.6%

*on at least 1 day during the 30 days before the survey

- A higher percentage of high school students in Washoe County reported they did not go to school because they feel unsafe, compared to Nevada and the U.S. in both 2013 and 2015.
- The percentage of high school students in Washoe County reporting they did not go to school because they feel unsafe, decreased from 2013 (14.9%) to 2015 (9.0%).

Table 48: Percent of High School Students who were Threatened or Injured with a Weapon on School Property*, 2013 & 2015

Location	2013	2015
Washoe County	8.7%	8.1%
Nevada	6.5%	6.7%
United States	6.9%	6.0%

*such as a gun, knife, or club one or more times during the 12 months before the survey

- A higher percentage of high school students in Washoe County reported they were threatened or injured with a weapon on school property, compared to Nevada and the U.S. in both 2013 and 2015.
- The percentage of high school students in Washoe County reporting they were threatened or injured with a weapon on school property, slightly decreased from 2013 (8.7%) to 2015 (8.1%).

Table 49: Percent of High School Students who Experienced Physical Dating Violence*, 2013 & 2015

Location	2013	2015
Washoe County	12.8%	10.8%
Nevada	10.4%	9.9%
United States	10.3%	9.6%

*one or more times during the 12 months before the survey, including being hit, slammed into something, or injured with a weapon on purpose by someone they were dating or going out with among students who dated or went out with someone during the 12 months before the survey

- A higher percentage of high school students in Washoe County reported they had experienced physical dating violence in the past 12 months (prior to the survey), compared to Nevada and the U.S. in both 2013 and 2015.
- Among high school students in Washoe County who reported they had been going out with or dating someone in the past 12 months, the percentage who had experienced physical dating violence, decreased from 2013 (12.8%) to 2015 (10.8%).

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

Table 50: Percent of High School Students who Experienced Sexual Dating Violence*, 2013 & 2015

Location	2013	2015
Washoe County	13.3%	12.1%
Nevada	13.0%	11.2%
United States	10.4%	10.6%

*one or more times during the 12 months before the survey, including kissing, touching, or being physically forced to have sexual intercourse when they did not want to by someone they were dating or going out with among students who dated or went out with someone during the 12 months before the survey

- A higher percentage of high school students in Washoe County reported they had experienced sexual dating violence in the past 12 months (prior to the survey), compared to Nevada and the U.S. in both 2013 and 2015.
- Among high school students in Washoe County who reported they had been going out with or dating someone in the past 12 months, the percentage who had experienced sexual dating violence, decreased from 2013 (13.3%) to 2015 (12.1%).

Table 51: Percent of High School Students who were ever Physically Forced to have Sexual Intercourse*, 2013 & 2015

Location	2013	2015
Washoe County	10.8%	9.1%
Nevada	11.4%	9.0%
United States	7.3%	6.7%

*when they did not want to

- A higher percentage of high school students in Washoe County (9.1%) reported they had ever been physically forced to have sexual intercourse, compared to Nevada (9.0%) and the U.S. (6.7%) in 2015.
- High school students in Washoe County who reported they had ever been physically forced to have sexual intercourse, decreased from 2013 (10.8%) to 2015 (9.1%).

Table 52: Percent of High School Students who have ever been Hit, Beaten, Kicked or Physically Hurt in Anyway by an Adult*, 2015

Location	2015
Washoe County	17.7%
Nevada	15.8%

*not including spanking for bad behavior

- A higher percentage of high school students in Washoe County (17.7%) reported they had ever been physically hurt by an adult, compared to Nevada (15.8%) in 2015.

Table 53: Percent of High School Students who have ever seen Adults in their Home Slap, Hit, Kick, Punch, or Beat each Other Up, 2015

Location	2015
Washoe County	16.6%
Nevada	16.4%

- A slightly higher percentage of high school students in Washoe County (16.6%) reported they had ever seen adults in their home be physically violent, compared to Nevada (16.4%) in 2015.

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

Child Abuse

When a child in Washoe County discloses sexual abuse or extreme physical abuse the case is referred by social services or law enforcement personnel to the Washoe County Children’s Advocacy Center. A multidisciplinary team determines if a medical exam is warranted and which additional follow up services should be offered to the child. Child Wellness Exams are conducted on each child placed into social services custody to ensure medical needs are being met. A researched-based Forensic Interview is conducted for all children 17 years and younger to obtain information from a child regarding abuse allegations. A Child Abuse Response and Evaluations (CARES) exam is provided to those children 12 years and older who has experienced suspected age-inappropriate sexual activity. A Sexual Assault Response Team (SART) is the term used to describe an evidentiary medical exam, which provides sensitive and thorough medical care and collects evidence that may be necessary to prosecute the case. The SART exam is only conducted on those children 13 years and older.

Table 54: Number of Services Provided by Washoe County Children's Advocacy Center by Type, 2014-2016

Type of Service	2014	2015	2016
Forensic Interviews	259	329	429
CARES	80	61	76
SART	217	181	186
Counseling	~	339	614

~Counseling services not provided in 2014

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

Table 55: Number & Percent of Alleged Child Abuse Victims by Demographic Characteristics, Washoe County, 2016

Sex (n=596)	% of Alleged Clients/Victims
Unknown sex	3%
Female	77%
Male	21%
Age Group (n=602)	
Unknown age	5%
0-6 years	26%
7-12 years	36%
13-17 years	33%
Race/Ethnicity (n=596)	
Unknown	29%
American Indian/Alaska Native	2%
Asian/Pacific Islander	2%
Black/African American	5%
Hispanic/Latino	15%
Indian	0%
Other	1%
White	47%

- In 2016, the majority of alleged victims of child abuse in Washoe County were female (77%).
- Approximately one in three alleged victims of child abuse were between the ages of 7-12 years (36%), one in three were between the ages of 13-17 years (33%), and one in four were 0-6 years (26%).
- Nearly half of alleged victims of child abuse were white (47%), while race/ethnicity was unknown for 29% of alleged victims, another 15% were Hispanic.

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

Table 56: Number & Percent of Alleged Child Abuse Offenders by Demographic Characteristics, Washoe County, 2016

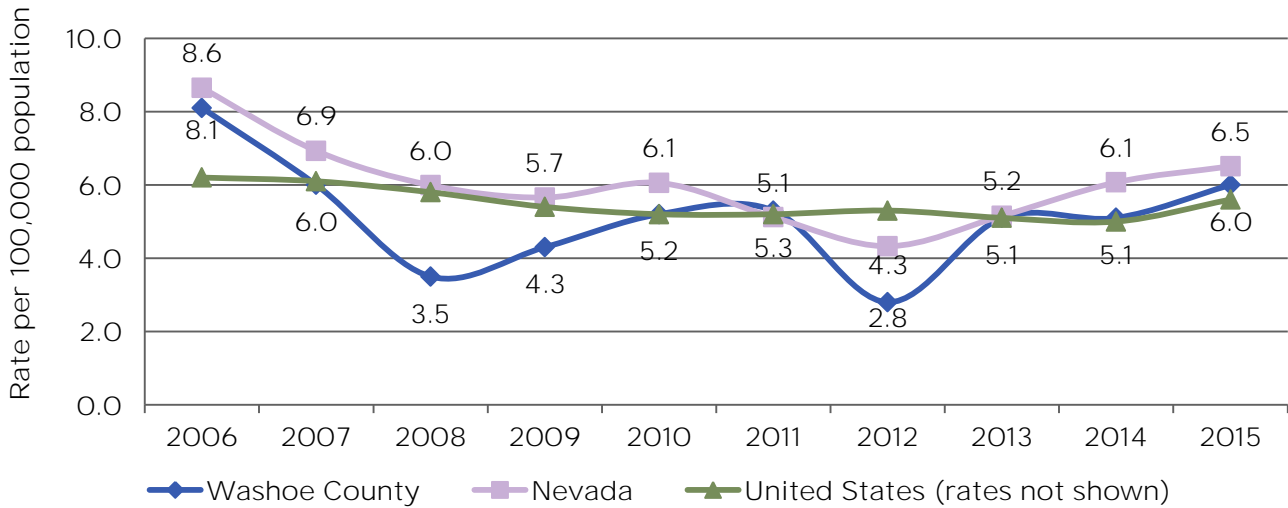
Sex (n=431)	% of Alleged Offenders
Unknown sex	1%
Female	14%
Male	85%
Age Group (n=437)	
Unknown age	13%
0-17 years	18%
18-35 years	34%
36-53 years	27%
54-65 years	5%
66-100 years	3%
Race/Ethnicity (n=431)	
Unknown race/ethnicity	35%
American Indian/Alaska Native	0%
Asian/Pacific Islander	1%
Black/African American	5%
Hispanic/Latino	14%
Indian	0%
Other	0%
White	44%
Relationship to Alleged Victim/Client (n=448)	
Other known person	27%
Other Relative	19%
Parent	28%
Parent's boy/girlfriend	7%
Stepparent	5%
Unknown relationship to victim/client	14%

- In 2016, the majority of alleged child abuse offenders in Washoe County were male (85%).
- Approximately one in three alleged child abuse offenders were between the ages of 18-35 years (34%).
- Although race/ethnicity was unknown for 35% of alleged child abuse offenders, 44% were white and 14% were Hispanic.
- Approximately one in four alleged child abuse offenders were parents of the purportedly abused child (28%), another one in four were some other known person but not directly related (27%), and other relatives were the third highest group (19%) of alleged child abuse offenders in regard to the relationship to the victim.

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

Deaths Due to Homicide/Assault

Fig 92: Age-adjusted Rate of Death Due to Homicide/Assault, Washoe County, Nevada, & the United States, 2006-2015



- The rate of death due to homicide/assault in Washoe County decreased from 2006 (8.1 per 100,000) to 2015 (6.0 per 100,000); however this rate has been increasing since 2012.
- The rate of deaths due to homicide/assault in Washoe County has been lower than the rate for Nevada from 2006 through 2010 and again from 2012 through 2016.

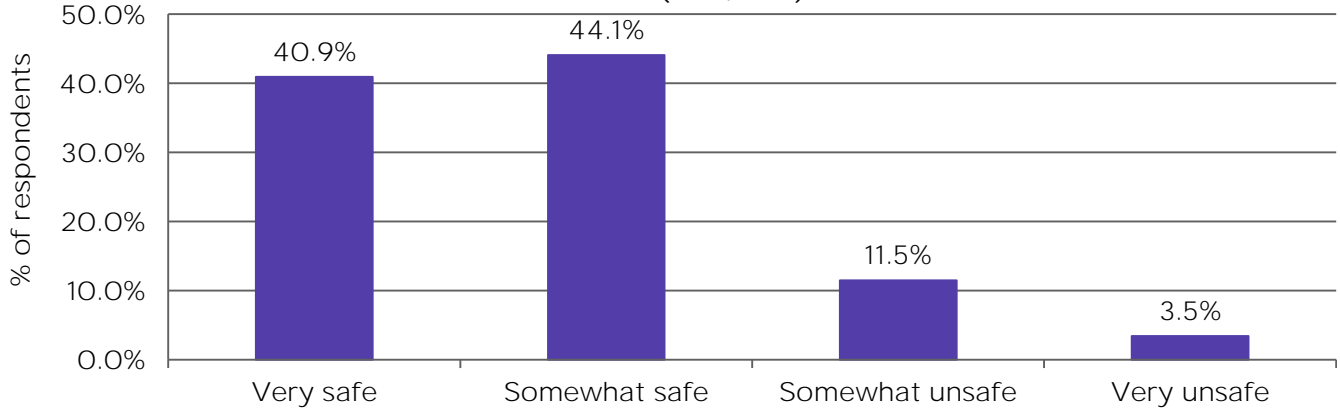
Primary Data Related to Crime & Violence

Primary data were collected via an online community survey from over 1,400 survey participants. The survey included 44 questions and analyses for questions related to Crime and Violent-Related Behaviors are provided within this section. Results and findings from the online community survey are not intended to be applied to or descriptive of all Washoe County residents and only represent the survey respondents themselves. Overall, the online community survey respondents were slightly younger, proportionally less Hispanic, and had higher educational attainment relative to the general Washoe County population. For complete survey methodology and participant demographics refer to the Contents, Methodology, & Community Survey Demographics section.

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

Question: “How safe do you feel your neighborhood is from crime?”

Fig 93: How safe do you Feel Your Neighborhood is From Crime?
(n=1,358)

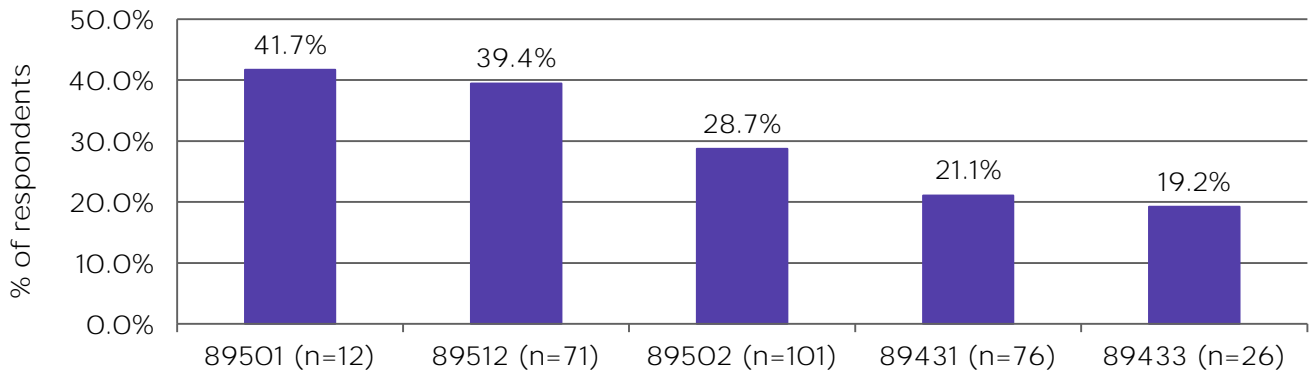


- The majority of survey respondents indicated they feel their neighborhood is very safe (40.9%) or somewhat safe (44.1%) from crime.
- Approximately one in ten (11.5%) respondents indicated they feel their neighborhood is somewhat unsafe and another 3.5% feel their neighborhood is very unsafe from crime.

Neighborhood Safety by ZIP Code

Responses to the neighborhood safety question were grouped into Safe (Very safe and Somewhat safe) and Unsafe (Somewhat unsafe and Very unsafe) and broken down by ZIP code. Figure 94 illustrates the ZIP codes with the highest proportion of respondents indicating they felt their neighborhood was unsafe.

Fig 94: Percent of Respondents that Feel Their Neighborhood is Somewhat Unsafe or Very Unsafe From Crime, Top 5 ZIP Codes



- Among the 12 respondents that lived in 89501, the downtown Reno area, 41.7% indicated they feel the neighborhood is unsafe.
- Among the 71 respondents that lived in 89512, the northeast Reno area, 39.4% indicated they feel the neighborhood is unsafe.
- Among the 101 respondents that lived in 89502, the southeast Reno area, 28.7% indicated they feel the neighborhood is unsafe.
- Among the 76 respondents that lived in 89431, the central Sparks area, 21.1% indicated they feel the neighborhood is unsafe.

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

- Among the 26 respondents that lived in 89433, the central Sparks area, 19.2% indicated they feel the neighborhood is unsafe.
- These five ZIP codes were also the five highest needs ZIP codes as identified by the Community Needs Index (CNI) scores, more details are provided in the CNI Section.

Summary of Crime & Violent-Related Behaviors

The Reno/Sparks MSA has historically seen higher rates of violent crime and property crimes compared to the United States (2007-2016). Although rates of crime appeared to have decreased since 2007 and remained relatively stable from 2010 to 2014, the rates of both violent and property crime increased in 2015.

Additionally, most of the select violent-related behaviors reported among high school students in Washoe County were higher than Nevada and United States rates during both 2013 and 2015.

The majority of survey respondents indicated they feel their neighborhood is very or somewhat safe from crime. However, when broken out by ZIP code, the ZIP codes with the highest proportion of residents indicating they felt their neighborhood is somewhat or very unsafe are the same five ZIP codes with the highest Community Needs Index (CNI) scores.

Having been a victim or witness of violence results in negative impacts across several aspects of health and carries consequences far beyond the initial incident; reducing a person's exposure to all forms of violence, both in and outside of the home, play a major part in increasing the health and safety of a community.

Crime & Violent-Related Behaviors Sources

Fig 88: Violent Crime Rate, Reno/Sparks MSA & the United States, 2007-2016

Washoe County: U.S. Department of Justice, Federal Bureau of Investigation: Uniform Crime Rates. Table 6 Crime in the United States, by Metropolitan Statistical Area, 2007-2016. www.ucr.fbi.gov

United States: U.S. Department of Justice, Federal Bureau of Investigation: Uniform Crime Rates. Table 1 Crime in the United States, by Volume and Rate per 100,000 Inhabitants, 1996-2016. www.ucr.fbi.gov

Fig 89: Violent Crime Rate by Type, Reno/Sparks MSA, 2007-2016

U.S. Department of Justice, Federal Bureau of Investigation: Uniform Crime Rates. Table 6 Crime in the United States, by Metropolitan Statistical Area, 2007-2016. www.ucr.fbi.gov

Fig 90: Property Crime Rate, Reno/Sparks MSA & the United States, 2007-2016

Washoe County: U.S. Department of Justice, Federal Bureau of Investigation: Uniform Crime Rates. Table 6 Crime in the United States, by Metropolitan Statistical Area, 2007-2016. www.ucr.fbi.gov

United States: U.S. Department of Justice, Federal Bureau of Investigation: Uniform Crime Rates. Table 1 Crime in the United States, by Volume and Rate per 100,000 Inhabitants, 1996-2016. www.ucr.fbi.gov

Fig 91: Property Crime Rate by Type, Reno/Sparks MSA, 2007-2016

U.S. Department of Justice, Federal Bureau of Investigation: Uniform Crime Rates. Table 6 Crime in the United States, by Metropolitan Statistical Area, 2007-2015. www.ucr.fbi.gov

Table 41-table 42 Same Source

Table 41: Bullying Incidents in Washoe County School District, Reported, Determined to be so, & Resulting in Suspension/Expulsion, 2013-2014 through 2015-2016

Table 42: Cyber Bullying Incidents in Washoe County School District, Reported, Determined to be so, & Resulting in Suspension/Expulsion, 2013-2014 through 2015-2016

Nevada Department of Education. Nevada Report Card. Accessed <http://nevadareportcard.com/di/>

1.7 CRIME & VIOLENT-RELATED BEHAVIORS

Table 43-Table 53 Same Source

Table 43: Percent of High School Students who carried a Weapon, 2013 & 2015

Table 44: Percent of High School Students who were in a Physical Fight, 2013 & 2015

Table 45: Percent of High School Students who were Electronically Bullied, 2013 & 2015

Table 46: Percent of High School Students who were Bullied on School Property, 2013 & 2015

Table 47: Percent of High School Students who did not go to School Because they feel Unsafe at School or on their way to and from School, 2013 & 2015

Table 48: Percent of High School Students who were Threatened or Injured with a Weapon on School Property, 2013 & 2015

Table 49: Percent of High School Students who Experienced Physical Dating Violence, 2013 & 2015

Table 50: Percent of High School Students who Experienced Sexual Dating Violence, 2013 & 2015

Table 51: Percent of High School Students who were ever Physically Forced to have Sexual Intercourse, 2013 & 2015

Table 52: Percent of High School Students who have ever been Hit, Beaten, Kicked or Physically Hurt in Anyway by an Adult, 2015

Table 53: Percent of High School Students who have ever seen Adults in their Home Slap, Hit, Kick, Punch, or Beat each Other Up, 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 54 –Table 56 Same Source

Table 54: Number of Services Provided by Washoe County Children's Advocacy Center by Type, 2014-2016

Table 55: Number & Percent of Alleged Child Abuse Victims by Demographic Characteristics, Washoe County, 2016

Table 56: Number & Percent of Alleged Child Abuse Offenders by Demographic Characteristics, Washoe County, 2016
Washoe County Children's Advocacy Center. Data provided upon request. Reno, NV.

Fig 92: Age-adjusted Rate of Death Due to Homicide/Assault, Washoe County, Nevada, & the United States, 2006-2015

Washoe County & Nevada: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2015 on CDC WONDER Online Database, released December, 2016. Data are from the Multiple Cause of Death Files, 1999-2015, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on Jul 7, 2017 3:19:14 PM

Following Figures from the Online Community Survey

Fig 93: How safe do you Feel Your Neighborhood is From Crime? (n=1,358)

Fig 94: Percent of Respondents that Feel Their Neighborhood is Somewhat Unsafe or Very Unsafe From Crime, Top 5 ZIP Codes

Nutrition & Physical Activity

Eating a healthy diet and engaging in adequate amounts of physical activity are among the most effective prevention activities to reduce or slow weight gain. A lifestyle that incorporates healthy eating and physical activity decreases the risk for many of the leading causes of death including cardiovascular disease, heart disease, stroke, and diabetes.⁷⁸

Indicator	Most Recent Year	HP 2020 Objective
Nutrition		
Fruit consumption among adolescents	32.2% 2+ times/day (2015)	NA
Vegetable consumption among adolescents	27.2% 2+ times/day (2015)	NA
Soda consumption among adolescents	13.4% 1+ soda/day (2015)	NA
Milk consumption among adolescents	37.0% 1+ glass/day (2015)	NA
Breakfast consumption among adolescents	14.7% did not eat breakfast (2015)	NA
Fruit consumption among adults	65.7% 1+ servings/day (2015)	NA
Vegetable consumption among adults	80.8% 1+ servings/day (2015)	NA
Physical Activity		
Physical activity among adolescents	27.0% (2015) 7+ days/week	31.6%
Physical education among adolescents	22.5% (2015) 5 days/week	36.6%
Adolescents that played on sports team	50.8% (2015)	NA
Adults that met the aerobic guidelines	32.5% (2015)	NA
Adults that met the strength guidelines	7.9% (2015)	24.1%
Adults that met the aerobic & strength guidelines	28.5% met both (2015)	20.1% met both
Sedentary Behavior		
Adolescents that watched 3+ hrs of television	20.9% (2015)	NA
Adolescents that played videogames or used the computer 3+ hrs	33.6% (2015)	NA
All indicators contain only data from 2013 & 2015, therefore indicators were unable to be assessed for trend and the column was not included for this section.; NA=identical HP 2020 objectives not available		

Nutrition

According to the 2015-2020 Dietary Guidelines for the United States, a healthful diet includes a variety of vegetables and fruits, whole grains, fat-free or low-fat dairy, and a variety of proteins such as seafood, lean meats, beans, nuts, and seeds.⁷⁹ Additionally, the Centers for Disease Control and Prevention (CDC) developed documentation on strategies to increase and promote the consumption of fruits and vegetables reinforcing their importance in the prevention of obesity and related chronic diseases.

⁷⁸ Centers for Disease Control and Prevention. (2009). The Power of Prevention: Chronic Disease the Challenge of the 21st Century.

⁷⁹ United States Department of Health and Human Services and United States Department of Agriculture. (2015). 2015-2020 Dietary Guidelines for Americans 8th Edition. Washington, DC.

1.8 NUTRITION & PHYSICAL ACTIVITY

Fruit Consumption - Adolescents

Table 57: Percent of High School Students who did not Eat Fruit/Drink 100% Fruit Juice*, 2013 & 2015

Location	2013	2015
Washoe County	5.2%	4.3%
Nevada	5.6%	5.0%
United States	5.0%	5.2%

*during the 7 days before the survey

- Slightly lower percentage of Washoe County high school students reported not eating fruit or drinking fruit juice in 2015 (4.3%) compared to 2013 (5.2%).
- In 2015, the percentage of Washoe County high school students reporting not eating fruit or drinking fruit juice (4.3%) was lower than Nevada (5.0%) and the United States (5.2%).

Table 58: Percent of High School Students who ate Fruit/Drank 100% Fruit Juice 1 or more Times per Day*, 2013 & 2015

Location	2013	2015
Washoe County	62.3%	61.5%
Nevada	57.9%	58.4%
United States	62.6%	63.3%

*during the 7 days before the survey

Table 59: Percent of High School Students who ate Fruit/Drank 100% Fruit Juice 2 or more Times per Day*, 2013 & 2015

Location	2013	2015
Washoe County	30.7%	32.2%
Nevada	29.7%	28.3%
United States	33.2%	31.5%

*during the 7 days before the survey

Table 60: Percent of High School Students who ate Fruit/Drank 100% Fruit Juice 3 or more Times per Day*, 2013 & 2015

Location	2013	2015
Washoe County	18.4%	19.6%
Nevada	17.9%	17.3%
United States	21.9%	20.0%

*during the 7 days before the survey

Vegetable Consumption - Adolescents

Table 61: Percent of High School Students who did not eat Vegetables*, 2013 & 2015

Location	2013	2015
Washoe County	6.1%	5.5%
Nevada	6.5%	6.7%
United States	6.6%	6.7%

*green salad, potatoes (excluding French fries, fried potatoes, or potato chips), carrots, or other vegetables during the 7 days before the survey

- Slightly lower percentage of Washoe County high school students reported not eating vegetables in 2015 (5.5%) compared to 2013 (6.1%).

1.8 NUTRITION & PHYSICAL ACTIVITY

- In 2015, the percentage of Washoe County high school students that reported not eating vegetables (5.5%) was lower than Nevada (6.7%) and the United States (6.7%).

Table 62: Percent of High School Students who ate Vegetables 1 or more Times per Day*, 2013 & 2015

Location	2013	2015
Washoe County	82.3%	60.4%
Nevada	57.9%	56.9%
United States	61.5%	61.0%

*green salad, potatoes (excluding French fries, fried potatoes, or potato chips), carrots, or other vegetables during the 7 days before the survey

- There was a large decrease in the percentage of Washoe County high school students reporting they ate vegetables at least once a day from 2013 (82.3%) to 2015 (60.4%).

Table 63: Percent of High School Students that ate Vegetables 2 or more Times per Day*, 2013 & 2015

Location	2013	2015
Washoe County	26.4%	27.2%
Nevada	24.2%	23.2%
United States	28.4%	28.0%

*green salad, potatoes (excluding French fries, fried potatoes, or potato chips), carrots, or other vegetables during the 7 days before the survey

Table 64: Percent of High School Students who ate Vegetables 3 or more Times per Day*, 2013 & 2015

Location	2013	2015
Washoe County	12.9%	14.6%
Nevada	12.1%	11.5%
United States	15.7%	14.8%

*green salad, potatoes (excluding French fries, fried potatoes, or potato chips), carrots, or other vegetables during the 7 days before the survey

Soda Consumption -Adolescents

Table 65: Percent of High School Students who did not Drink soda or pop*, 2013 & 2015

Location	2013	2015
Washoe County	24.7%	31.2%
Nevada	28.5%	29.4%
United States	22.3%	26.2%

*can, bottle, or glass of soda (not including diet-soda or diet-pop) during the 7 days before the survey

- Slightly higher percentage of Washoe County high school students reported not drinking soda in 2015 (31.2%) compared to 2013 (24.7%).
- In 2015, the percentage of Washoe County high school students reporting not drinking soda (31.2%) was higher than Nevada (29.4%) and the United States (26.2%).

1.8 NUTRITION & PHYSICAL ACTIVITY

Table 66: Percent of High School Students who Drank Soda 1 or more Times per Day*, 2013 & 2015

Location	2013	2015
Washoe County	17.9%	13.4%
Nevada	16.3%	14.5%
United States	27.0%	20.4%

*can, bottle, or glass of soda (not including diet-soda or diet-pop) during the 7 days before the survey

- A lower percentage of Washoe County high school students reported drinking soda one or more times per day in 2015 (13.4%) compared to 2013 (17.9%).
- In 2015, the percentage of Washoe County high school students reporting drinking soda one or more times a day (13.4%) was lower than Nevada (14.5%) and the United States (20.4%).

Milk Consumption - Adolescents

Table 67: Percent of High School Students who did not Drink Milk*, 2013 & 2015

Location	2013	2015
Washoe County	17.0%	19.5%
Nevada	21.8%	22.7%
United States	19.4%	21.5%

*during the 7 days before the survey

- Slightly higher percentage of Washoe County high school students reported not drinking milk in 2015 (19.5%) compared to 2013 (17.0%).
- In 2015, the percentage of Washoe County high school students reporting not drinking milk (19.5%) was lower than Nevada (22.7%) and the United States (21.5%).

Table 68: Percent of High School Students who Drank 1 or more Glasses of Milk per Day*, 2013 & 2015

Location	2013	2015
Washoe County	38.1%	37.0%
Nevada	33.8%	31.6%
United States	40.3%	37.5%

*during the 7 days before the survey

- A slightly lower percentage of Washoe County high school students reported drinking milk one or more times per day in 2015 (37.0%) compared to 2013 (38.1%).
- In 2015, the percentage of Washoe County high school students reporting drinking milk one or more times a day (37.0%) was higher than Nevada (31.6%) and relatively similar to the United States (37.5%).

Breakfast Consumption - Adolescents

Table 69: Percent of High School Students who did not eat Breakfast*, 2013 & 2015

Location	2013	2015
Washoe County	13.6%	14.7%
Nevada	17.3%	16.7%
United States	13.7%	13.8%

*during the 7 days before the survey

- Slightly higher percentage of Washoe County high school students reported not eating breakfast in 2015 (14.7%) compared to 2013 (13.6%).
- In 2015, the percentage of Washoe County high school students reporting not eating breakfast (14.7%) was lower than Nevada (16.7%), however was higher than the United States (13.8%).

1.8 NUTRITION & PHYSICAL ACTIVITY

Table 70: Percent of High School Students who ate Breakfast on all 7 Days*, 2013 & 2015

Location	2013	2015
Washoe County	36.8%	38.9%
Nevada	34.5%	34.1%
United States	38.1%	36.3%

*during the 7 days before the survey

- A higher percentage of Washoe County high school students reported eating breakfast on all seven days prior to the survey in 2015 (38.9%) compared to 2013 (36.8%).
- In 2015, the percentage of Washoe County high school students reporting eating breakfast (38.9%) was higher than Nevada (34.1%) and the United States (36.3%).

Fruit Consumption - Adults

Table 71: Percent of Adults who had at least 1 Serving of Fruit per Day, 2013 & 2015

Location	2013	2015
Washoe County	66.9%	65.7%
Nevada	64.4%	63.1%
United States	60.8%	60.3%

- The percentage of adults in Washoe County that reported having at least one serving of fruit per day decreased slightly from 2013 (66.9%) to 2015 (65.7%).
- In 2015, the percentage of adults in Washoe County that reported having at least one serving of fruit per day (65.7%) was higher than Nevada (63.1%) and the United States (60.3%).

Vegetable Consumption -Adults

Table 72: Percent of Adults who had at least 1 Serving of Vegetables per Day, 2013 & 2015

Location	2013	2015
Washoe County	83.3%	80.8%
Nevada	79.1%	80.8%
United States	77.1%	77.9%

- The percentage of adults in Washoe County that reported having at least one serving of vegetables per day decreased from 2013 (83.3%) to 2015 (80.8%).
- In 2015, the percentage of adults in Washoe County that reported having at least one serving of vegetables per day (80.8%) was equal to Nevada and higher than the United States (77.9%).

Physical Activity

The 2008 Physical Activity Guidelines for children and adolescents recommend 60 or more minutes of physical activity each day with a combination of aerobic activity (at least three days a week), as well as muscle and bone-strengthening activities (at least three days a week). The recommendations for adults are 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity aerobic activity per week, with two or more days of muscle-strengthening activities for all major muscle groups.⁸⁰

⁸⁰ United States Department of Health and Human services. (2008). 2008 Physical Activity Guidelines for Americans. ODPHP Publication No. U0036. Washington, DC.

1.8 NUTRITION & PHYSICAL ACTIVITY

Physical Activity -Adolescents

Table 73: Percent of High School Students who did not Participate in Physical Activity for at least 60 Minutes on 1 day*, 2013 & 2015

Location	2013	2015
Washoe County	15.1%	11.2%
Nevada	16.4%	13.9%
United States	15.2%	14.3%

*doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey

- A higher percentage of Washoe County high school students reported they did not participate in physical activity in 2013 (15.1%) compared to 2015 (11.2%).
- In 2015, a lower percentage of Washoe County high school students reported they did not participate in physical activity (11.2%) compared to Nevada (13.9%) and the United States (14.3%).

Table 74: Percent of High School Students who were Physically Active for 60 or more Minutes on 7 or more Days*, 2013 & 2015

Location	2013	2015
Washoe County	23.9%	27.0%
Nevada	23.3%	27.6%
United States	27.1%	27.1%

*doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey

- A higher percentage of Washoe County high school students reported they were physically active on each of the seven days prior to the survey in 2015 (27.0%) compared to 2013 (23.9%).
- In 2015, a relatively similar percentage of Washoe County high school students reported they were physically active on the seven days preceding the survey (27.0%) compared to Nevada (27.6%) and the United States (27.1%).

Table 75: Percent of High School Students who Attended Physical Education Classes on all 5 Days*, 2013 & 2015

Location	2013	2015
Washoe County	18.8%	22.5%
Nevada	24.8%	27.8%
United States	29.4%	29.8%

*in an average week when they were in school

- A higher percentage of high school students in Washoe County reported they attended P.E. classes on five or more days in 2015 (22.5%) compared to 2013 (18.8%).
- In 2015, a much lower percentage of Washoe County high school students reported they attended P.E. classes on five or more days (22.5%) compared to Nevada (27.8%) and the United States (29.8%).

Table 76: Percent of High School Students who Played on at least 1 Sports Team*, 2013 & 2015

Location	2013	2015
Washoe County	51.8%	50.8%
Nevada	49.2%	50.1%
United States	54.0%	57.6%

*run by their school or community group during the 12 months before the survey

- A slightly lower percentage of high school students in Washoe County reported having played on a sports team in 2015 (50.8%) compared to 2013 (51.8%).

1.8 NUTRITION & PHYSICAL ACTIVITY

- In 2015, the percentage of Washoe County high school students reporting having played on a sports team (50.8%) was relatively similar to Nevada (50.1%), and both were much lower than the United States (57.6%).

Physical Activity - Adults

Table 77: Percent of Adults who met the Aerobic & Strength Guidelines, Washoe County, 2013 & 2015

Guideline met	2013	2015
Met aerobic	32.7%	32.5%
Met strength	7.0%	7.9%
Met both aerobic and strength	28.0%	28.5%
Met neither	32.3%	31.0%

- The percentage of adults in Washoe County that met the aerobic guidelines remained stable from 2013 (32.7%) to 2015 (32.5%)
- The percentage of adults that met the strength guidelines also remained relatively stable from 2013 (7.0%) to 2015 (7.9%).
- In 2015, 28.5% of adults in Washoe County met both the aerobic and strength guidelines, which was higher than Nevada (24.9%)-Table 78, and the United States (20.3%)-Table 79; however, in 2015 31.0% of adults in Washoe County met neither the aerobic nor the strengthening guidelines.

Table 78: Percent of Adults who met the Aerobic & Strength Guidelines, Nevada, 2013 & 2015

Guideline met	2013	2015
Met aerobic	29.5%	29.7%
Met strength	9.3%	9.7%
Met both aerobic and strength	22.8%	24.9%
Met neither	38.5%	35.7%

Table 79: Percent of Adults who met the Aerobic & Strength Guidelines, United States, 2013 & 2015

Guideline met	2013	2015
Met both aerobic and strength	20.5%	20.3%

Sedentary Behavior- Adolescents

Table 80: Percent of High School Students who Watched Television 3 or more Hours a Day*, 2013 & 2015

Location	2013	2015
Washoe County	28.8%	20.9%
Nevada	30.2%	22.9%
United States	32.5%	24.7%

*on an average school day

- A much lower percentage of Washoe County high school students reported having watched three or more hours of T.V. each day in 2015 (20.9%) compared to 2013 (28.8%).
- In 2015, the percentage of Washoe County high school students reporting having watched three or more hours of T.V. each day (20.9%) was lower than Nevada (22.9%) and the United States (24.7%).

Table 81: Percent of High School Students who Played Video or Computer Games or used a Computer 3 or more hours per day*, 2013 & 2015

Location	2013	2015
Washoe County	36.2%	33.6%
Nevada	38.0%	38.3%
United States	41.3%	41.7%

*used a computer that was not for school work, on an average school day

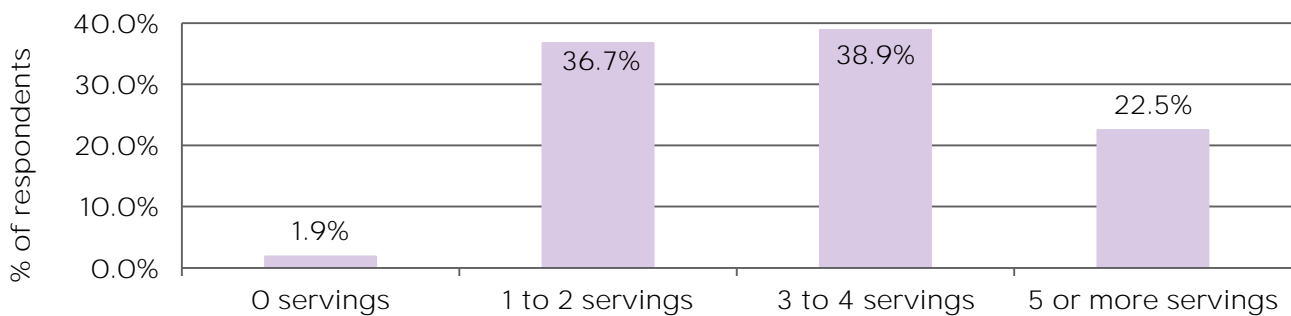
- A lower percentage of Washoe County high school students reported having played videogames or using the computer (not for school work) for three or more hours per day in 2015 (33.6%) compared to 2013 (36.2%).
- In 2015, the percentage of Washoe County high school students reporting having played videogames or using the computer (not for school work) for three or more hours per day (33.6%) was much lower than Nevada (38.3%) and the United States (41.7%).

Primary Data Related to Nutrition & Physical Activity

Primary data were collected via an online community survey from over 1,400 survey participants. The survey included 44 questions and analyses for questions related to nutrition and physical activity are provided within this section. Results and findings from the online community survey are not intended to be applied to or descriptive of all Washoe County residents and only represent the survey respondents themselves. Overall, the online community survey respondents were slightly younger, proportionally less Hispanic, and had higher educational attainment relative to the general Washoe County population. For complete survey methodology and participant demographics refer to the Contents, Methodology, & Community survey Demographics section.

Question: “During the past week, about how many servings of fruit and vegetables (combined) did you eat each day? Include fresh, frozen or cooked fruits and vegetables. DO NOT COUNT items such as fruit drinks, French fries, or potato chips.”

Fig 95: Fruit & Vegetable Consumption per Day in Past Week (n=1,399)

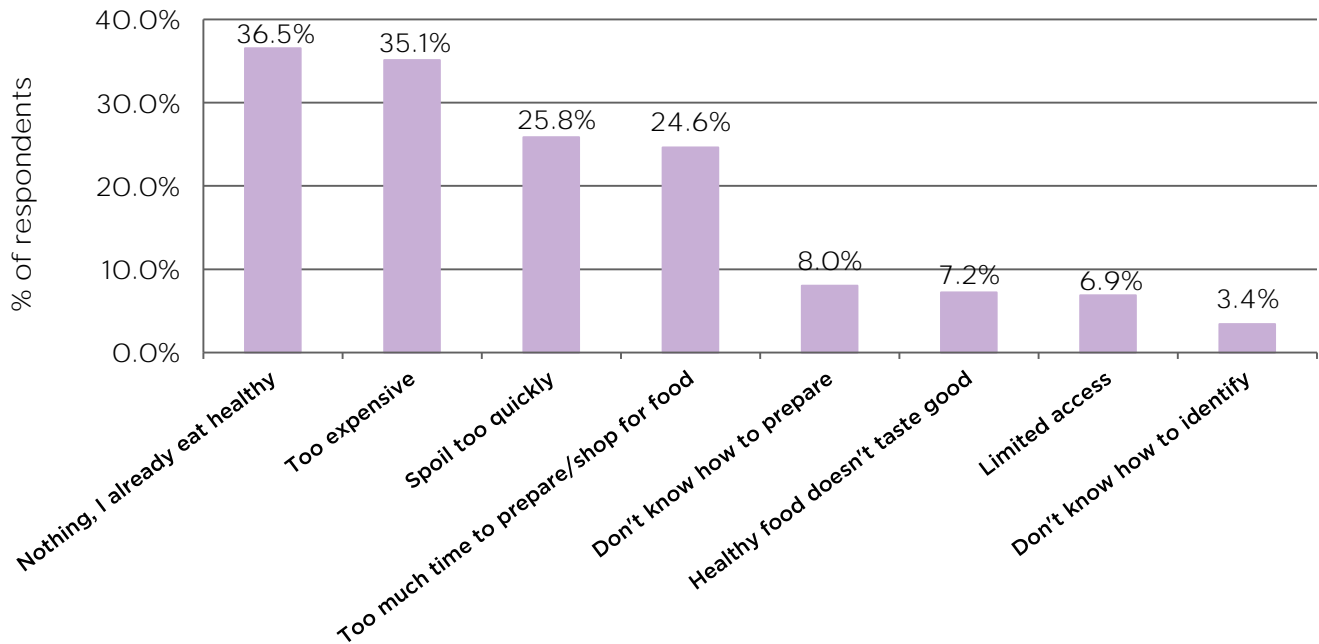


- Over one in three respondents (36.7%) ate between 1 to 2 servings of fruit and vegetables combined, while another third (38.9%) ate 3 to 4 servings of fruit and vegetables combined each day in the past week.
- Over one in five respondents (22.5%) indicated they ate 5 or more servings of fruits and vegetables each day in the past week.

1.8 NUTRITION & PHYSICAL ACTIVITY

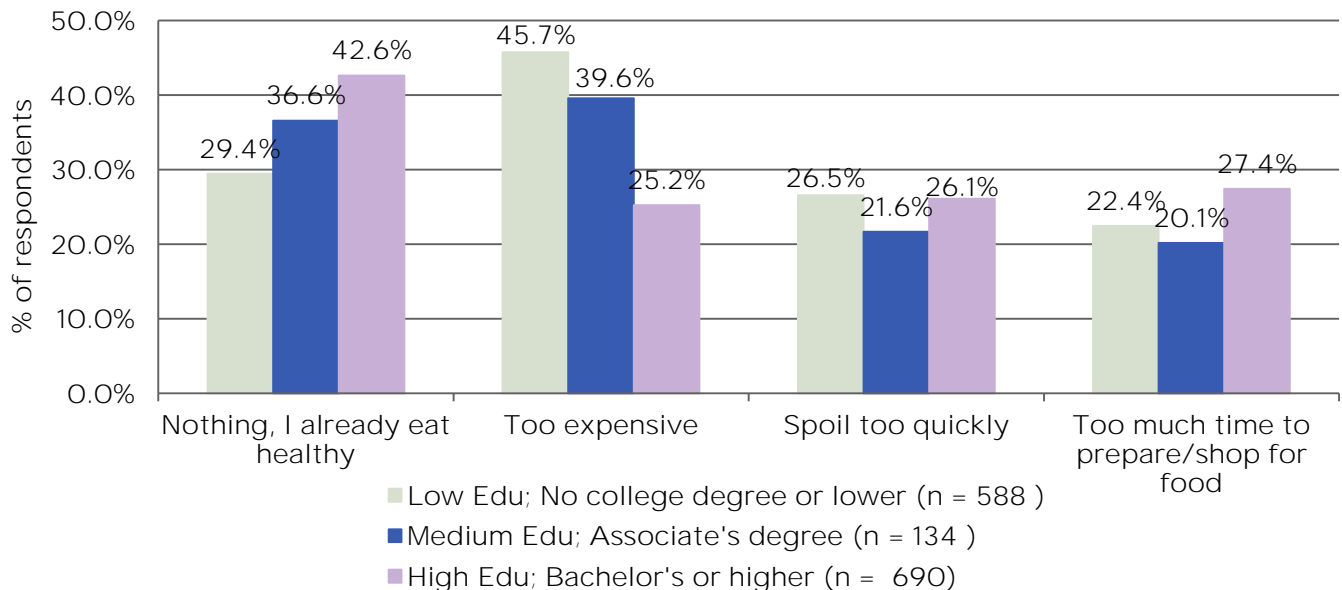
Question: “Which of the following are the largest barriers to you eating healthy food more often? Select up to three.”

Fig 96: Barriers to Eating Healthy Food More Often (n=1,412)



- One in three respondents indicated they already eat enough healthy foods (36.5%).
- Healthy food is too expensive (35.1%), spoils too quickly (25.8%), and takes too much time to shop for and/or prepare (24.6%) were the top three barriers identified by respondents.
- Less than 10% of respondents indicated lack of knowledge on food preparation (8.0%), not liking the taste of healthy food (7.2%), limited access (6.9%), and lack of ability to identify healthy foods (3.4%) as barriers to eating healthy food more often.

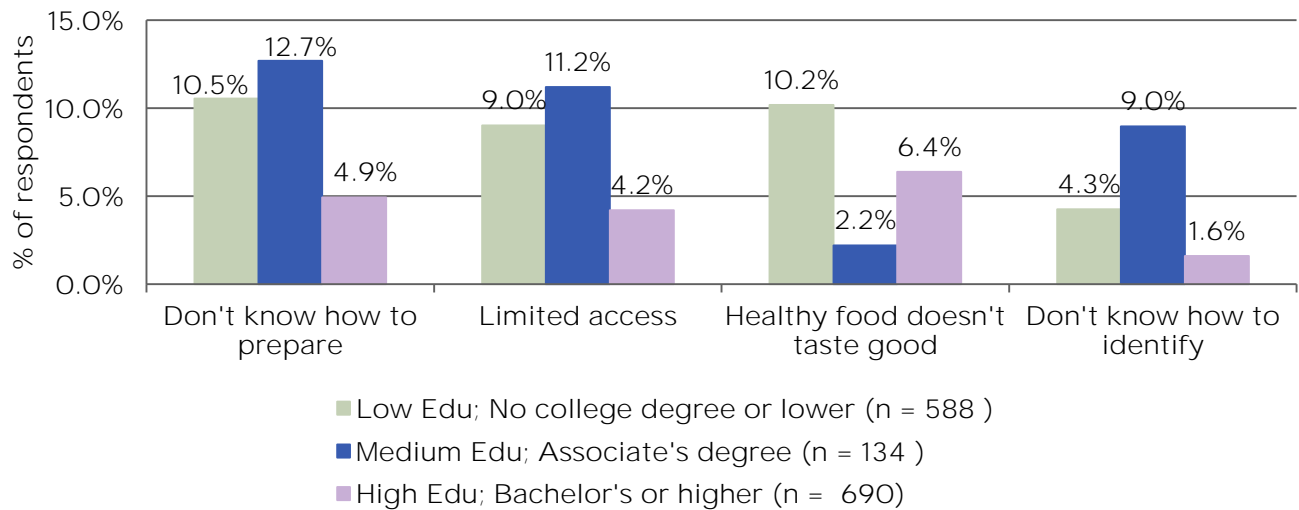
Fig 97: Top Three Barriers to Eating Healthy Food More Often by Educational Attainment



1.8 NUTRITION & PHYSICAL ACTIVITY

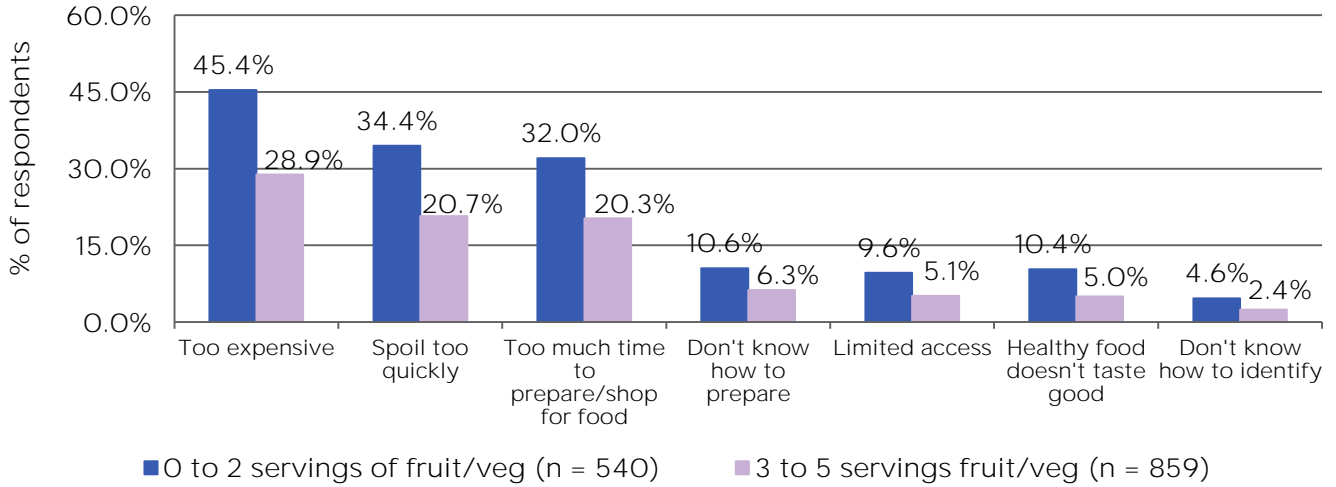
- As educational attainment increased, so did the proportion of respondents who indicated they already eat enough healthy foods.
- Among those with a lower education level (no college degree or lower), nearly half (45.7%) indicated healthy food is too expensive, 26.5% indicated healthy food spoils too quickly, and 22.4% of respondents with a lower educational attainment indicated healthy food takes too much time to prepare or shop for.
- Among those with a medium education level (associate's degree), 39.6% indicated healthy food is too expensive, 21.6% indicated healthy food spoils too quickly, and 20.1% of respondents with a medium educational attainment indicated healthy food takes too much time to prepare or shop for.
- Among those with a high education level (bachelor's degree or higher), 25.2% indicated healthy food is too expensive, 26.1% indicated healthy food spoils too quickly, and 27.4% of respondents with a medium educational attainment indicated healthy food takes too much time to prepare or shop for.

Fig 98: Other Identified Barriers to Eating Healthy Food More Often by Educational Attainment



- The least often identified barriers to eating healthy food more often were lack of knowledge of how to prepare healthy foods, having limited access to healthy foods, believing healthy foods do not taste good, and lack of knowledge how to identify healthy food.

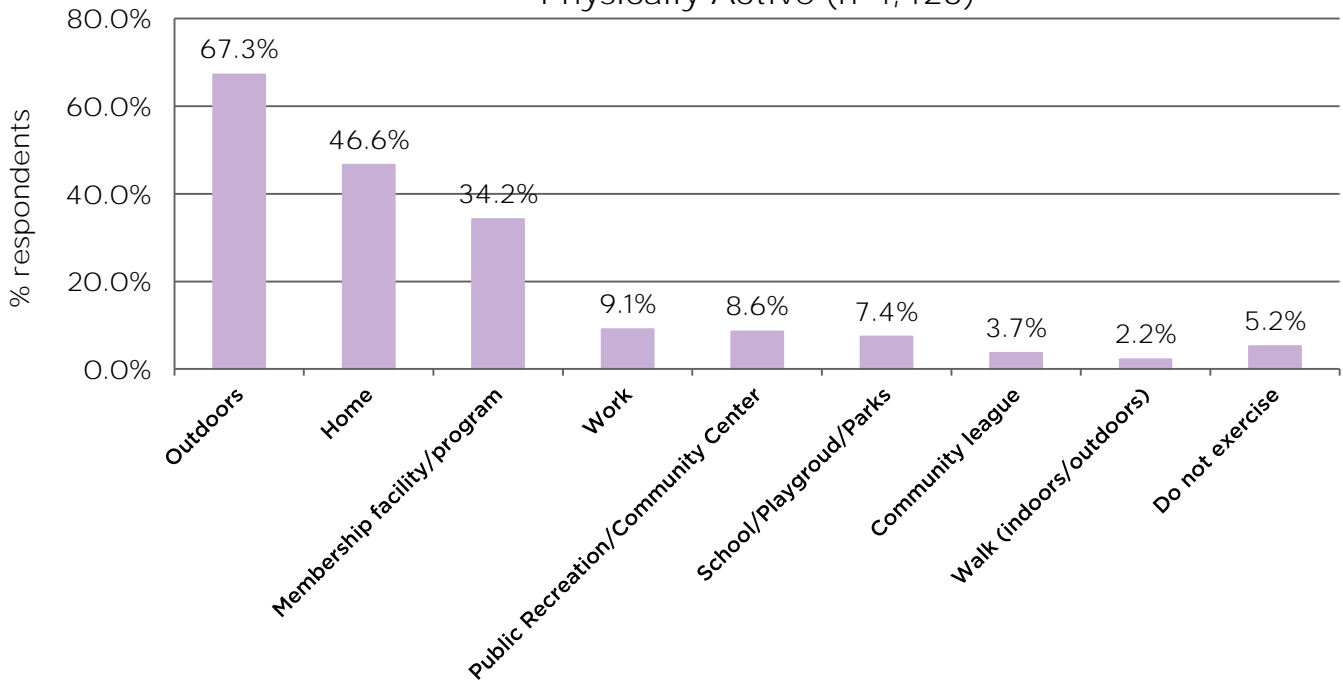
Fig 99: Barriers to Eating Healthy More Often by Fruit & Vegetable Consumption



- Respondents who reported consuming a lower number of servings of fruit and vegetables (0 to 2 servings) each day within the previous week reported each of the barriers to eating more healthy more often than respondents that reported a higher number (3 to 5 servings) of servings of fruit and vegetables each day.

Question: “Where do you currently go most often to be physically active? Select all that apply.”

Fig 100: Places Survey Respondents Go Most Often to be Physically Active (n=1,423)



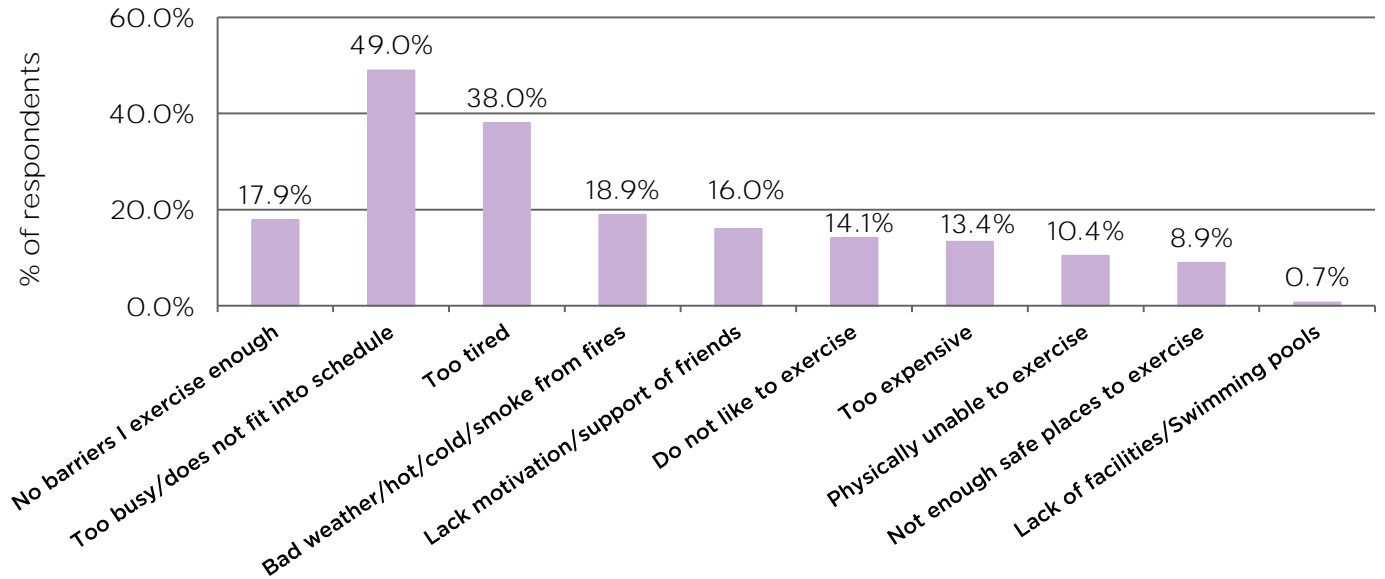
- The majority of respondents reported they go outdoors to be physically active (67.3%), followed by the home (46.6%), and a membership facility or paid class (34.2%).

1.8 NUTRITION & PHYSICAL ACTIVITY

- Less than one in ten participants indicated they go to work (9.1%), a public recreation or community center (8.6%), schools, playgrounds, parks (7.4%), community league (3.7%), or they just walk (2.2%) (i.e. shopping, walking at the mall).
- Approximately 5.2% of survey respondents indicate they do not exercise.

Question: “Which of the following are the largest barriers to you being more physically active? Select up to three.”

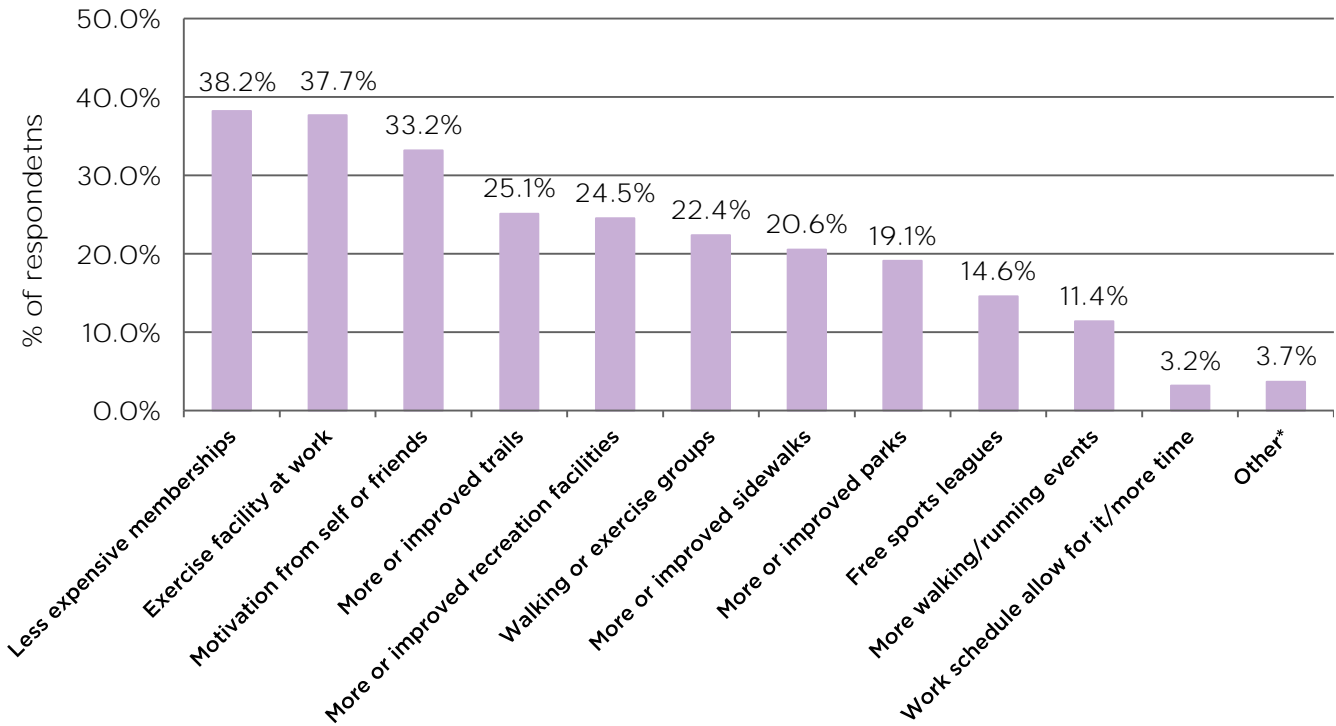
Fig 101: Barriers to Being More Physically Active (n=1,438)



- Only 17.9% of respondents indicated they believe they exercise enough.
- Nearly half of the respondents (49.0%) indicated they are too busy/exercise does not fit into their current schedule, the second most commonly cited barrier to being more physically active was being too tired (38.0%), followed by bad weather, either too hot too cold or having poor air quality from fires (18.9%).
- Lack of facilities/swimming pools was not one of the options provided, however these were frequently cited in the comments sections and were grouped into one category.

Question: “Which of the following would help you to increase your physical activity levels? Select all that apply.”

Fig 102: What Would Help to Increase Physical Activity Levels (n=1,377)



Note: Other includes having more public pools, access to transportation, child care options, and safer areas to engage in exercise.

- Survey respondents most frequently identified having less expensive memberships (38.2%), having an exercise facility at work (37.7%) and having motivation either self motivation or from friends (33.2%) as methods to increase physical activity levels.
- One in four respondents indicated the desire to have more or improved trails (25.1%) for biking, walking, running, and more or improving existing recreation facilities (24.5%) as some respondents stated they did not have a facility close to where they lived. More walking/exercise groups (22.4%) and more or improved sidewalks (20.6%) were especially noted among elderly adults 65 years and older.
- Free sport leagues (14.6%) and more walking and running events (11.4%) were among the least frequently cited options for increasing physical activity, although still relatively common.
- Having a work schedule that allows for flexibility to incorporate physical activity (3.2%) was not among the options provided, but listed so frequently in the comments it was given it’s own category.

Summary of Nutrition & Physical Activity

According to the 2013 and 2015 Youth Risk Behavior Survey (YRBS) data, fruit and vegetable consumption reported by Washoe County high school students was relatively similar to the United States. Soda consumption among Washoe County high school students was lower than the United States and reported milk consumption among Washoe County high school students was relatively similar to the United States. In 2015,

1.8 NUTRITION & PHYSICAL ACTIVITY

reported fruit and vegetable consumption among Washoe County adults was slightly higher than adults nationwide.

In 2015, less than one-third (27.0%) of Washoe County high school students met the recommended physical activity guidelines for adolescents (physically active for 60 minutes daily). Additionally, less than one-third (28.5%) of adults in Washoe County were reported to have met both the aerobic and strengthening guidelines. In 2015, one in five (20.9%) Washoe County high school students reported watching television for three or more hours each day and one in three (33.6%) reported playing videogames or using a computer (not for schoolwork) for three or more hours each day. While these appear high, Washoe County's rates were lower than the rest of the United States.

Analyses of the community survey responses indicate just over one in five respondents (22.5%) were close to consuming the daily recommended amount of fruit and vegetables. The largest reported barriers to eating healthy food more often were "healthy food is too expensive" (35.1%), "spoils too quickly" (25.8%), and "takes too much time to shop and prepare healthy food" (24.6%). Lack of knowledge on how to prepare healthy food (8.0%), not liking the taste of healthy food (7.2%), having limited access (6.9%), and the lack of ability to identify healthy foods (3.4%) were among the least frequently cited barriers. Respondents that reported eating a higher number of servings of fruits and vegetables (3 to 5 servings) were less likely to identify any of the above reasons as barriers to healthy eating.

The majority of survey respondents indicated they engage in physical activity outdoors (67.3%) or at home (46.6%). The most frequently cited barriers to being more physically active were "being too busy" (49.0%), "too tired" (38.0%), or "bad weather" including too hot, too cold, and smoke from wild fires (18.9%). Over one in three respondents indicated having less expensive memberships (38.2%), exercise facilities at work (37.7%), and self-motivation or motivation/support from friends (33.2%) would help to increase physical activity levels.

People can significantly reduce their risk for the most prevalent chronic conditions and seven of the top 10 leading causes of death by eating a healthy diet consisting of nutrient-dense foods from each food group and limiting saturated fats, sugars, and sodium, as well as engaging in regular and adequate physical activity to help maintain a healthy weight.

Nutrition & Physical Activity Sources

Table 57-Table 70; SAME SOURCE

Table 57: Percent of High School Students who did not Eat Fruit/Drink 100% Fruit Juice, 2013 & 2015

Table 58: Percent of High School Students who ate Fruit/Drank 100% Fruit Juice 1 or more Times per Day*, 2013 & 2015

Table 59: Percent of High School Students who ate Fruit/Drank 100% Fruit Juice 2 or more Times per Day*, 2013 & 2015

Table 60: Percent of High School Students who ate Fruit/Drank 100% Fruit Juice 3 or more Times per Day*, 2013 & 2015

Table 61: Percent of High School Students who did not eat Vegetables*, 2013 & 2015

Table 62: Percent of High School Students that ate Vegetables 1 or more Times per Day*, 2013 & 2015

Table 63: Percent of High School Students that ate Vegetables 2 or more Times per Day*, 2013 & 2015

Table 64: Percent of High School Students that ate Vegetables 3 or more Times per Day*, 2013 & 2015

1.8 NUTRITION & PHYSICAL ACTIVITY

Table 65: Percent of High School Students who did not Drink soda or pop*, 2013 & 2015

Table 66: Percent of High School Students who Drank Soda 1 or more Times per Day*, 2013 & 2015

Table 67: Percent of High School Students who did not Drink Milk*, 2013 & 2015

Table 68: Percent of High School Students that Drank 1 or more Glasses of Milk per Day*, 2013 & 2015

Table 69: Percent of High School Students who did not eat Breakfast*, 2013 & 2015

Table 70: Percent of High School Students who ate Breakfast on all 7 Days*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 71-Table 72 Same Source

Table 71: Percent of Adults who had at least 1 Serving of Fruit per Day, 2013 & 2015

Table 72: Percent of Adults who had at least 1 Serving of Vegetables per Day, 2013 & 2015

Nevada and Washoe County: Nevada Office of Public Health Informatics and Epidemiology. Nevada Behavioral Risk Factor Surveillance Survey (BRFSS). Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention. BRFSS Prevalence and Trends Data query tool, Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

Table 73-Table 76 Same Source

Table 73: Percent of High School Students who did not Participate in Physical Activity for at least 60 Minutes on 1 day*, 2013 & 2015

Table 74: Percent of High School Students who were Physically Active for 60 or more Minutes on 7 or more Days*, 2013 & 2015

Table 75: Percent of High School students who Attended Physical Education Classes on all 5 Days*, 2013 & 2015

Table 76: Percent of High School Students who Played on at least 1 Sports Team*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 77-79 Same Source

Table 77: Percent of Adults who met the Aerobic & Strength Guidelines, Washoe County, 2013 & 2015

Table 78: Percent of Adults who met the Aerobic & Strength Guidelines, Nevada, 2013 & 2015

Table 79: Percent of Adults who met the Aerobic & Strength Guidelines, United States, 2013 & 2015

Nevada and Washoe County: Nevada Office of Public Health Informatics and Epidemiology. Nevada Behavioral Risk Factor Surveillance Survey (BRFSS). Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention. BRFSS Prevalence and Trends Data query tool, Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

Table 80-Table 81 Same Source

Table 80: Percent of High School Students who Watched Television 3 or more Hours a Day*, 2013 & 2015

1.8 NUTRITION & PHYSICAL ACTIVITY

Table 81: Percent of High School Students who Played Video or Computer Games or used a Computer 3 or more hours per day*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Following Figures from the Online Community Survey

Fig 95: Fruit & Vegetable Consumption per Day in Past Week (n=1,399)

Fig 96: Barriers to Eating Healthy Food More Often (n=1,412)

Fig 97: Top Three Barriers to Eating Healthy Food More Often by Educational Attainment

Fig 98: Other Identified Barriers to Eating Healthy Food More Often by Educational Attainment

Fig 99: Barriers to Eating Healthy More Often by Fruit & Vegetable Consumption

Fig 100: Places Survey Respondents Go Most Often to be Physically Active (n=1,423)

Fig 101: Barriers to Being More Physically Active (n=1,438)

Fig 102: What Would Help to Increase Physical Activity Levels (n=1,377)

General Health

Health behaviors, education, socioeconomic, and environmental conditions not only impact health and health outcomes, but also influence an individual's perceived importance of health and ability to overcome health issues. Perceived self-reported health status is a validated proxy indicator for assessing population health. The categories of self-reported health status range from "excellent" to "poor". These categories are a predictor of morbidity and mortality and correlate with socioeconomic indicators such as educational attainment and income.^{81,82} Weight status is included within the General Health section since being overweight or obese increases the risk for the majority of the leading causes of death in the United States. Becoming overweight or obese is a result of a variety of factors including diet, exercise, genetic predisposition, and even medication use. However, in 1960, only 13.4% of Americans were obese, compared to 37.9% of adults as of 2013-2014.⁸³ In 2015, two in every three adults and one in every three adolescents in the United States were overweight or obese.^{84,85}

Obesity may be the single largest threat, to not only public health, but the economy as well.⁸⁶ A study utilizing data from 2000-2005 estimated the annual cost of obesity in the United States was \$209.7 billion (2008 dollars).⁸⁷ Obese individuals spend approximately 36% more on healthcare related costs compared to the general population and spend 21% more than daily smokers and 14% more than heavy drinkers on general health services.⁸⁸

⁸¹ Milunpalo S., Vuori I., Oja P., Pasanen M., & Urponen H. (1997). Self-Rated Health Status as a Health Measure: The Predictive Value of Self-Reported Health Status on the Use of Physician Services and on Mortality in the Working-Age Population. *Journal of Clinical Epidemiology*. 50(5); 517-528.

⁸² Goldberg, P., Gueguen, A., Schumas, A., Nakacha, J.P., & Goldberg, M. (2001). Longitudinal Study of Associations between Perceived Health Status and Self-Reported Diseases in the French Gazel Cohort. *Journal of Epidemiology and Community Health*. 55; 233-238.

⁸³ Fryar C.D., Carroll M.D., & Ogden C.L. (2016). Prevalence of Overweight, Obesity, and Extreme Obesity Among Adults Aged 20 and Over: United States, 1960-1962 through 2013-2014. Atlanta, GA.

⁸⁴ 2015 Behavioral Risk Factor Surveillance System data for the United States. Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

⁸⁵ Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. *MMWR*, 65(6) 1-174.

⁸⁶ Trust for America's Health and the Robert Wood Johnson Foundation. (2013). *F as in Fat: How Obesity Threatens America's Future*, 2013. Accessed <http://www.rwjf.org/content/dam/farm/reports/reports/2013/rwjf407528>

⁸⁷ Cawley, J. & Meyerhoefer, C. (2012). The medical care costs of obesity: An instrumental variables approach. *Journal of Health Economics*. 31; 219-230.

⁸⁸ Sturm R., & Wells K.B. The Health Risks of Obesity: Worse than Smoking, Drinking or Poverty. *RAND Health*. Accessed https://www.rand.org/pubs/research_briefs/RB4549.readonline.html

1.9 GENERAL HEALTH

Indicator	Trend	Most Recent Year
Perceived Health Status		
Perceived health status among adults 18+ years	Increasing (fair/poor)	18.7% fair/poor (2016)
Perceived health status among adults 65+ years	Increasing (fair/poor)	24.0% fair/poor (2016)
Weight Status		
Weight status among 4 th graders	Decreasing (overweight/obese)	15.6% overweight; 15.6% obese (2015-2016 school year)
Weight status among 7 th graders	Increasing (overweight/obese)	17.4% overweight; 20.8% obese (2015-2016 school year)
Weight status among 10 th graders	STABLE (overweight/obese)	17.2% overweight; 17.7% obese (2015-2016 school year)
Percent of adolescents overweight	~	13.9% (2015)
Percent of adolescents obese	~	9.9% (2015)
Weight status among adults	Increasing (overweight/obese)	36.4% overweight; 26.4% obese (2016)
~not able to assess for trend		

Perceived Health Status

Table 82: Percent of Adults 18+ years who Report their Health Status as Fair or Poor, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	16.5%	18.0%	17.1%	15.7%	18.7%
Nevada	18.5%	17.3%	18.9%	17.6%	20.9%
United States	16.9%	16.7%	16.8%	16.4%	17.9%

- The percent of adults in Washoe County who reported they perceive their personal health status to be fair or poor increased from 2012 (16.5%) to 2016 (18.7%).
- As of 2016, the percentage of adults in Washoe County who reported their perceived health status to be fair or poor (18.7%) was lower than Nevada (20.9%), but higher than the United States (17.9%).

Table 83: Percent of Adults 65+ years who Report Health status as Fair or Poor, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	22.3%	22.9%	24.3%	19.7%	24.0%
Nevada	22.9%	21.8%	26.4%	21.8%	26.8%

- The percent of adults 65 years and older in Washoe County who reported they perceive their personal health status to be fair or poor increased from 2012 (22.3%) to 2016 (24.0%).
- As of 2016, the percentage of adults 65 years and older in Washoe County who reported their perceived health status to be fair or poor (24.0%) was lower than Nevada (26.8%).

Weight Status

This section provides weight status among various groups, as measured by body mass index (BMI). Body mass index is a calculation of a person's weight in kilograms divided by square height in meters. The resulting number is used to classify and screen for overweight and obesity. Although BMI is moderately correlated with body fat, it does not measure body fat directly nor does it necessarily determine an individual's health status.

1.9 GENERAL HEALTH

BMI is however, strongly correlated with a variety of adverse health outcomes that are associated with being overweight or obese.⁸⁹

Data caveat: The data provided in Table 84, Table 85, and Table 86 illustrate weight classification based on BMI calculated from student’s height and weight as measured by school nurses. This source of data collection differs from Youth Risk Behavior Survey (YRBS) data presented in Table 87 and Table 88. For the YRBS, BMI is calculated from the student’s self-reported height and weight.

Weight Status - 4th, 7th & 10th Grade Students

Table 84: Weight Classification of 4th graders, Washoe County, 2011-2012 through 2015-2016

Weight Classification	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Underweight	3.0%	3.7%	4.7%	4.9%	6.1%
Healthy weight	62.7%	61.2%	62.2%	61.8%	62.7%
Overweight	16.0%	15.4%	16.1%	15.3%	15.6%
Obese	18.4%	19.7%	17.0%	18.0%	15.6%

- The percentage of fourth grade students in Washoe County classified as underweight increased from 2011-2012 (3.0%) to 2015-2016 (6.1%).
- The percentage of fourth grade students classified as healthy weight remained stable from 2011-2012 (62.7%) to 2015-2016 (62.7%).
- The percentage of fourth grade students classified as overweight decreased slightly from 2011-2012 (16.0%) to 2015-2016 (15.6%).
- The percentage of fourth grade students in Washoe County classified as obese decreased from 2011-2012 (18.4%) to 2015-2016 (15.6%).

Table 85: Weight Classification of 7th graders, Washoe County, 2011-2012 through 2015-2016

Weight Classification	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Underweight	3.1%	4.1%	4.5%	3.0%	4.3%
Healthy weight	62.5%	60.7%	62.9%	61.1%	57.6%
Overweight	17.0%	18.0%	17.3%	17.3%	17.4%
Obese	17.4%	17.2%	15.3%	18.5%	20.8%

- The percentage of seventh grade students in Washoe County classified as underweight increased from 2011-2012 (3.1%) to 2015-2016 (4.3%).
- The percentage of seventh grade students classified as healthy weight decreased from 2011-2012 (62.5%) to 2015-2016 (57.6%).
- The percentage of seventh grade students classified as overweight increased slightly from 2011-2012 (17.0%) to 2015-2016 (17.4%).
- The percentage of seventh grade students in Washoe County classified as obese increased from 2011-2012 (17.4%) to 2015-2016 (20.8%).

⁸⁹ Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion. About Adult BMI. Accessed https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/

1.9 GENERAL HEALTH

Table 86: Weight Classification of 10th graders, Washoe County, 2011-2012 through 2015-2016

Weight Classification	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Underweight	2.4%	1.7%	3.1%	2.8%	3.2%
Healthy weight	62.9%	62.8%	61.7%	62.4%	61.8%
Overweight	18.5%	16.8%	18.1%	17.3%	17.2%
Obese	16.2%	18.7%	17.1%	17.5%	17.7%

- The percentage of tenth grade students in Washoe County classified as underweight increased from 2011-2012 (2.4%) to 2015-2016 (3.2%).
- The percentage of tenth grade students classified as healthy weight decreased slightly from 2011-2012 (62.9%) to 2015-2016 (61.8%).
- The percentage of tenth grade students classified as overweight decreased slightly from 2011-2012 (18.5%) to 2015-2016 (17.2%).
- The percentage of tenth grade students in Washoe County classified as obese increased slightly from 2011-2012 (16.2%) to 2015-2016 (17.7%).

Weight Status - Adolescents

Table 87: Percent of High School Students who were Overweight*, 2013 & 2015

Location	2013	2015
Washoe County	14.9%	13.9%
Nevada	14.9%	15.8%
United States	16.6%	16.0%

*Students who were ≥85th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts

- The percentage of high school students in Washoe County classified as overweight decreased slightly from 2013 (14.9%) to 2015 (13.9%) and remained lower than the United States in both 2013 and 2015.

Table 88: Percent of High School Students who were Obese*, 2013 & 2015

Location	2013	2015
Washoe County	8.7%	9.9%
Nevada	11.5%	11.4%
United States	13.7%	13.9%

*Students who were ≥95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts

- The percentage of high school students in Washoe County classified as obese increased slightly from 2013 (8.7%) to 2015 (9.9%), however remained lower than Nevada and the United States in both 2013 and 2015.

Weight Status – Adults

Table 89: Weight Classification of Adults, Washoe County, 2012-2016

Weight Classification	2012	2013	2014	2015	2016
Underweight	3.3%	1.9%	2.0%	1.6%	2.7%
Healthy weight	39.3%	38.5%	38.6%	40.4%	34.6%
Overweight	35.3%	35.7%	39.8%	37.1%	36.4%
Obese	22.1%	23.9%	19.6%	20.9%	26.4%
Total overweight/obese	57.4%	59.6%	59.4%	58.0%	62.8%

- The percentage of adults in Washoe County classified as either overweight or obese increased from 2012 (57.4%) to 2016 (62.8%), however was lower than Nevada until 2016 [Table 90].

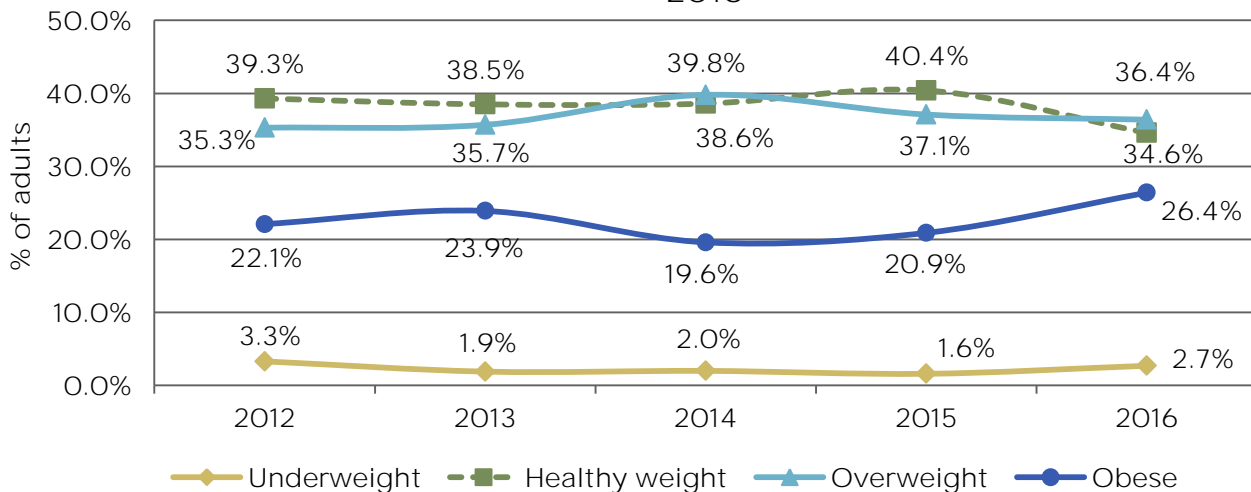
1.9 GENERAL HEALTH

- The percentage of adults classified as overweight or obese in Washoe County remained lower than the United States from 2012 through 2016 [Table 91].

Weight Classification	2012	2013	2014	2015	2016
Underweight	2.6%	1.7%	2.4%	1.8%	1.8%
Healthy weight	34.8%	33.4%	34.1%	33.6%	35.9%
Overweight	36.3%	38.7%	35.9%	37.9%	36.5%
Obese	26.2%	26.2%	27.6%	26.7%	25.8%
Total overweight/obese	62.5%	64.9%	63.5%	64.6%	62.3%

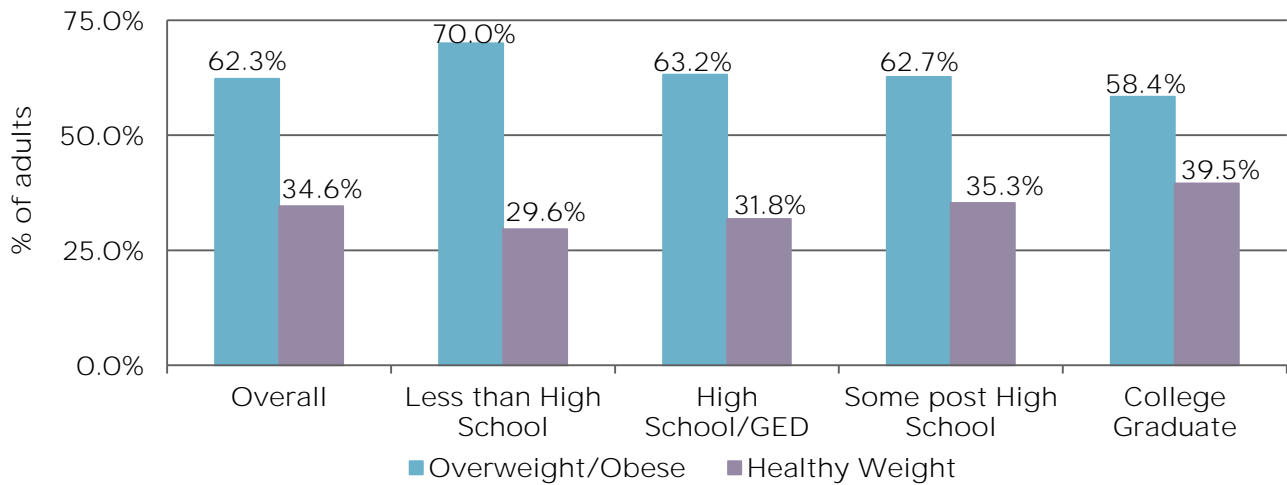
Weight Classification	2012	2013	2014	2015	2016
Underweight	1.8%	1.8%	1.8%	1.8%	2.0%
Healthy weight	34.2%	33.4%	33.4%	32.7%	33.2%
Overweight	35.8%	35.4%	35.4%	35.5%	35.2%
Obese	27.6%	29.4%	29.6%	29.8%	29.6%
Total overweight/obese	63.4%	64.8%	65.0%	65.3%	64.8%

Fig 103: Weight Status among Adults, Washoe County, 2012-2016



- The proportion of adults in Washoe County classified as healthy weight, decreased from 2012 (39.3%) to 2016 (34.6%).
- The proportion of adults in Washoe County classified as overweight, increased from 2012 (35.3%) to 2016 (36.4%).
- The proportion of adults in Washoe County classified as obese, increased from 2012 (22.1%) to 2016 (26.4%).
- In 2016, 62.8% of adults in Washoe County were classified as either overweight or obese.

Fig 104: Percentage of Population Classified as Healthy Weight Compared to Overweight & Obese (combined) by Educational Attainment, Washoe County, 2016



- In 2016, nearly two out of every three (62.3%) adults in Washoe County were either overweight or obese. However, an estimated 70.0% of adults in Washoe County with less than a high school education were classified as either overweight or obese, compared to 58.4% of adults who were college graduates.
- In 2016, only one in three adults (34.6%) in Washoe County were classified as a healthy weight. While 29.6% of adults with less than a high school education were a healthy weight, 39.5% of college graduates were classified as a healthy weight.

Summary of General Health

The proportion of adults 18 years and older and adults 65 years in Washoe County that perceive their health status to be fair or poor increased from 2012 to 2016, indicating the perceived quality of life may be declining among Washoe County residents. The trends in weight status among 4th, 7th and 10th graders vary, however the proportion of students classified as a “healthy weight” has remained stable (4th graders) or declined (7th and 10th graders) among all three groups. The proportion of adults classified as a “healthy weight” also declined, while the percentage of adults classified as overweight or obese increased from 2012 to 2016.

The trends in perceived self-reported health status and weight status among youth and adults in Washoe County are concerning. Both of these indicators are associated with a wide range of poor health outcomes and are influenced by a multitude of factors. Perceived health status is an indicator not just of physical health, but also of other forms of health including mental and spiritual. Preventing or reducing obesity by increasing physical activity levels and improving dietary quality should be a top priority for everybody.

General Health Sources

Table 82-Table 83 Same Source

Table 82: Percent of Adults 18+ years who Report their Health Status as Fair or Poor, 2012-2016

Table 83: Percent of Adults 65+ years who Report Health status as Fair or Poor, 2012-2016

Nevada and Washoe County: Nevada Office of Public Health Informatics and Epidemiology. Nevada Behavioral Risk Factor Surveillance Survey (BRFSS). Data provided upon request. Carson City, NV.

1.9 GENERAL HEALTH

United States: Centers for Disease Control and Prevention. BRFSS Prevalence and Trends Data query tool, Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

Table 84-Table 86 Same Source

Table 84: Weight Classification of 4th graders, Washoe County, 2011-2012 through 2015-2016

Table 85: Weight Classification of 7th graders, Washoe County, 2011-2012 through 2015-2016

Table 86: Weight Classification of 10th graders, Washoe County, 2011-2012 through 2015-2016

Nevada BMI Reports. Washoe County Health District. Data provided up on request. Reno, NV.

Table 87-Table 88 Same Source

Table 87: Percent of High School Students who were Overweight*, 2013 & 2015

Table 88: Percent of High School Students who were Obese*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, NV.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, NV.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, NV.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, NV.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 89-Table 91; Fig 103-Fig 104 Same Source

Table 89: Weight Classification of Adults, Washoe County, 2012-2016

Table 90: Weight classification of Adults, Nevada, 2012-2016

Table 91: Weight Classification of Adults, United States, 2012-2016

Fig 103: Weight Status Among Adults, Washoe County, 2012-2016

Fig 104: Percentage of Population Classified as Healthy Weight Compared to Overweight & Obese (combined) by Educational Attainment, Washoe County, 2016

Nevada and Washoe County: Nevada Office of Public Health Informatics and Epidemiology. Nevada Behavioral Risk Factor Surveillance Survey (BRFSS). Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention. BRFSS Prevalence and Trends Data query tool, Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

Substance Use

Substance use is the ingestion of any substance, which has the ability to alter a person’s mental or physical status. Some substances, even when taken in small doses, can be immediately intoxicating and may lead to chemical dependency, while others only prove to be harmful when an excessive amount is consumed. Substances, both legal and illegal, may be ingested to provide relief or reprieve from a range of negative stimuli from daily stress to chronic pain. When substances are used in excess or in a manner other than intended, causing harm to the user or others around them, it is classified as substance misuse or abuse.⁹⁰

Combined, alcohol misuse, illicit drug use, misuse of medications, and substance use disorders are estimated to cost the United States over \$400 billion in workplace productivity, health care expenses, motor vehicle crashes, law enforcement, and criminal justice costs.^{91, 92} The effects of substance use and misuse often extend beyond the health of the individual user. Additional impacts include increased violence, sexual assault, and loss of employment, housing, and other financial assets.

Indicator	Trend	Most Recent Year
Tobacco Use		
Ever smoked cigarettes-Adolescents	~	36.2% (2015)
Currently smoke cigarettes-Adolescents, Adults	~ Decreasing-Adults	10.3% (2015-Adolescents) 15.3% (2016-Adults)
Ever used electronic vapor products - Adolescents, Adults	~ Decreasing -Adults	53.5% (2015-Adolescents) 6.3% (2016-Adults)
Currently use electronic vapor products- Adolescents, Adults	~ Decreasing-Adults	30.1% (2015-Adolescents) 6.3% (2016-Adults)
Currently use tobacco of any kind -Adolescents	~	14.4% (2015-Adolescents)
Alcohol Use		
Ever drank alcohol -Adolescents	~	65.6% (2015)
Currently drink alcohol -Adolescents, College Students	~ Decreasing -College Students	35.5% (2015-Adolescents) 59.9% (2016-College Students)
Drove after drinking -College Students	Decreasing	14.7% (2016-College Students)
Average number of drinks -College Students	Decreasing	2.8 (2016-College Students)
Binge drank -College Students, Adults	Increasing -College Students Increasing -Adults	29.7% (2016-College Students) 18.7% (2016-Adults)
Heavy drinkers - Adults	Increasing	8.0% (2016-Adults)
Marijuana Use		
Lifetime use marijuana -Adolescents	~	45.2% (2015)
Currently use marijuana -Adolescents, College Students, Adults	~ Increasing-College Students Increasing-Adults	24.6% (2015-Adolescents) 20.0% (2016-College Students) 11.6% (2016-Adults)

⁹⁰ U.S. Department of Health and Human Services, Office of the Surgeon General. (2016). Facing Addiction in America: The Surgeon General’s Report on Alcohol, Drugs, and Health. Washington, DC.

⁹¹ Sacks, J. J., Gonzales, K. R., Bouchery, E. E., Tomedi, L. E., & Brewer, R. D. (2015). 2010 National and State Costs of Excessive Alcohol Consumption. American Journal of Preventive Medicine, 49(5), e73-e79.

⁹² U.S. Department of Justice, National Drug Intelligence Center. (2011). National Drug Threat Assessment. Washington, DC.

1.10 SUBSTANCE USE

Indicator	Trend	Most Recent Year
Prescription Drug Use		
Lifetime use of any prescription drug-Adolescents	~	18.3% (2015)
Pain killers used in past year - College Students	Decreasing	5.6% (2016)
Sedatives used in past year - College Students	Decreasing	2.9% (2016)
Stimulants used in past year - College Students	Increasing	6.1% (2016)
Use of Other Drugs -Adolescents		
Lifetime use of synthetic marijuana, cocaine, heroin, ecstasy, methamphetamines, & inhalants	~	Range 3.5% to 11.1% (2015)
Treatment, Hospitalizations, & Deaths Due to Substance Use		
Needing but not receiving treatment for alcohol	~	7.61% (2012-2014 data combined)
Needing but not receiving treatment for illicit drugs	~	2.54% (2012-2014 data combined)
Hospitalizations due to opiates	Increasing	39.0 per 100,000 (2015)
Alcohol-related death rate	Increasing	39.6 per 100,000 (2015)
Prescription drug-related death rate	Increasing	16.3 per 100,000 (2015)
Illicit drug-related death rate	Increasing	17.4 per 100,000 (2015)
~not able to assess for trend		

Tobacco Use

Use of tobacco products accounts for one in every five deaths each year and is among the leading causes of preventable deaths in the United States. While legal, there is no determined “safe” limit for the consumption of tobacco due to the added chemicals which are ingested when these products are used. Cigarette smokers have been long studied and are proven to have a higher risk for developing lung cancer, liver cancer, colorectal cancer, chronic obstructive pulmonary disease (COPD), stroke, pneumonia, diabetes, heart disease, congenital birth defects, and many other negative health outcomes. Not only does smoking affect nearly every organ in the body, it also causes inflammation and reduces the immune system’s ability to function properly. A national economic analysis for 2009-2012 found the annual cost of direct medical care for conditions related to smoking is estimated to be over \$130 billion in the United States.⁹³

Tobacco Use - Adolescents

Location	2013	2015
Washoe County	40.8%	36.2%
Nevada	38.8%	32.4%
United States	41.1%	32.3%

*even one or two puffs

- The percentage of high school students in Washoe County who reported they had ever tried smoking cigarettes decreased from 2013 (40.8%) to 2015 (36.2%).

⁹³ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. (2014). The Health Consequences of Smoking-50 Years of Progress, a Report of the Surgeon General. Atlanta, GA.

1.10 SUBSTANCE USE

- In 2015, the percentage of high school students in Washoe County who reported having ever tried smoking cigarettes was higher (36.2%) than Nevada (32.4%) and the United States (32.3%).

Table 93: Percent of High School Students who Currently Smoke Cigarettes*, 2013 & 2015

Location	2013	2015
Washoe County	14.3%	10.3%
Nevada	10.2%	7.2%
United States	15.7%	10.8%

*on at least 1 day during the 30 days before the survey

- The percentage of high school students in Washoe County who reported they currently smoked cigarettes decreased from 2013 (14.3%) to 2015 (10.3%).
- In 2015, the percentage of high school students in Washoe County who reported they currently smoked cigarettes was higher (10.3%) than Nevada (7.2%), however was lower than the United States (10.8%).

Table 94: Percent of High School Students who ever Used Electronic Vapor Products*, 2013 & 2015

Location	2015
Washoe County	53.5%
Nevada	50.9%
United States	44.9%

*including e-cigarettes, e-pipes, vape pipes, vape pens, e-hookahs, and hookah pens

- In 2015 over half (53.5%) of high school students in Washoe County reported they ever used electronic vapor products.
- In 2015, the percentage of high school students in Washoe County who reported they ever used electronic vapor products was higher (53.5%) than Nevada (50.9%) and the United States (44.9%).

Table 95: Percent of High School Students who Currently use Electronic Vapor Products*, 2013 & 2015

Location	2015
Washoe County	30.1%
Nevada	26.1%
United States	24.1%

*including e-cigarettes, e-pipes, vape pipes, vape pens, e-hookahs, and hookah pens

- In 2015, 30.1% of high school students in Washoe County reported they currently used electronic vapor products.
- In 2015, the percentage of high school students in Washoe County who reported they currently used electronic vapor products was higher (30.1%) than Nevada (26.1%) and the United States (24.1%).

Table 96: Percent of High School Students who Currently use Tobacco*, 2013 & 2015

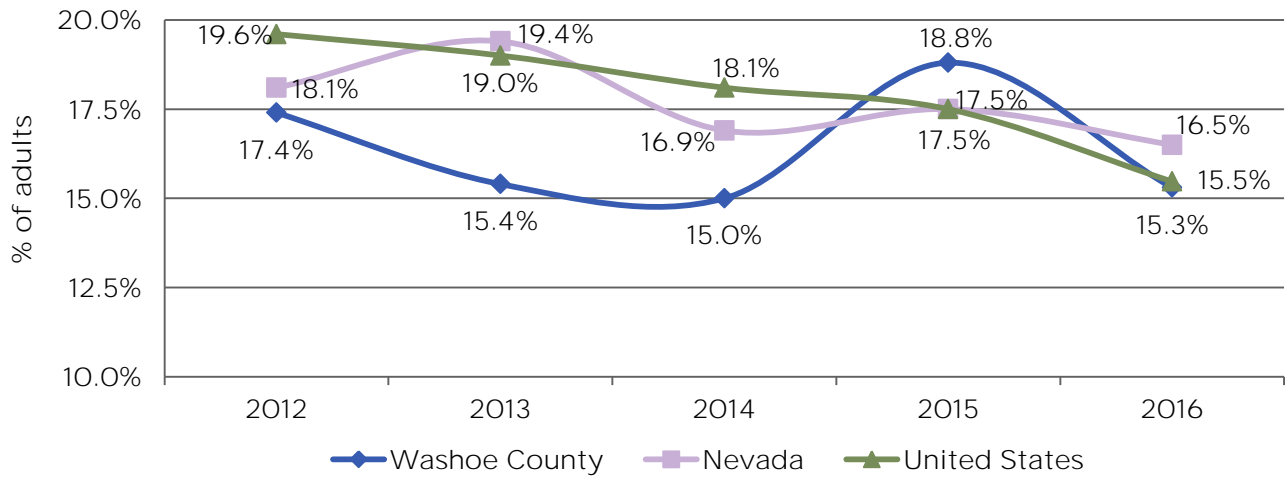
Location	2013	2015
Washoe County	18.3%	14.4%
Nevada	14.3%	11.4%
United States	22.4%	18.5%

*including cigars, cigarillos, or smokeless tobacco on at least 1 day during the 30 days before the survey

- The percentage of high school students in Washoe County who reported they currently used tobacco (any form) decreased from 2013 (18.3%) to 2015 (14.4%).
- In 2015, the percentage of high school students in Washoe County who reported they currently used tobacco (any form) was higher (14.4%) than Nevada (11.4%), however was lower than the United States (18.5%).

Tobacco Use - Adults

Fig 105: Percent of Adults that Currently Smoke Cigarettes, Washoe County, Nevada, & the United States, 2012-2016



- The percentage of adults in Washoe County who reported they currently smoked decreased from 2012 (17.4%) to 2016 (15.3%).
- In 2016 the percent of adults in Washoe County who reported they currently smoke was lower (15.3%) than Nevada (16.5%) and slightly lower than the United States (15.5%).

Table 97: Percent of Adults that Currently Smoke E-Cigarettes*, 2014-2016

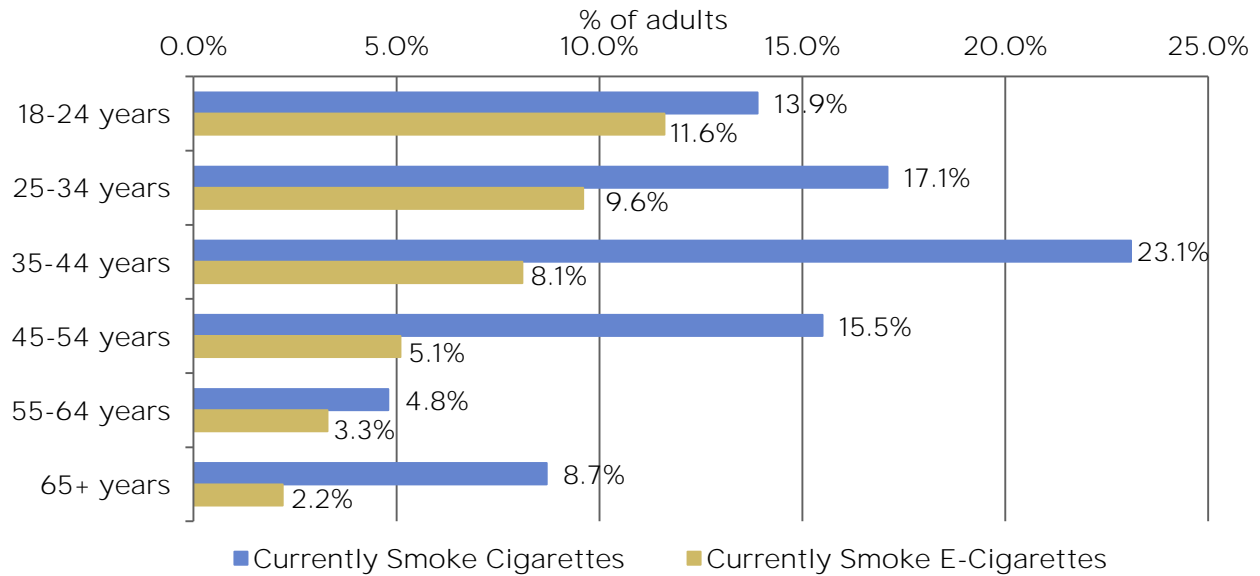
Location	2014	2015	2016
Washoe County	7.6%	5.0%	6.3%
Nevada	6.9%	5.8%	6.0%
United States	~	~	4.3%

*smoked e-cigarettes last 30 days; ~ data not available

- The percentage of adults in Washoe County who reported they currently smoked e-cigarettes decreased from 2012 (7.6%) to 2016 (6.3%).
- In 2016, the percent of adults in Washoe County who reported they currently smoked e-cigarettes was higher (6.3%) than Nevada (6.0%) and the United States (4.3%).

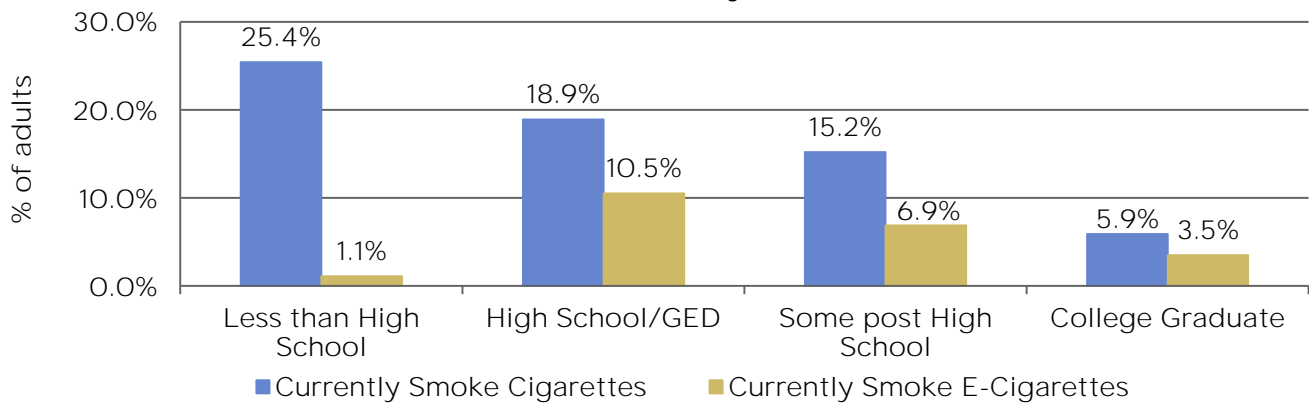
Adult Cigarette & E-Cigarette Use by Age Group & Educational Attainment

Fig 106: Percentage of Adults Reporting they Currently Smoke Cigarettes or E-Cigarettes by Age Group, Washoe County, 2016



- In 2016, cigarette smoking was highest among those aged 35 to 44 years (23.1%), with those aged 25 to 34 years ranked second highest (17.1%) among adults in Washoe County.
- The reported current use of e-cigarettes decreased as age increased as 11.6% of those aged 18 to 24 years reporting current use of e-cigarettes, compared to only 2.2% of those aged 65 years or older.

Fig 107: Percentage of Adults Reporting they Currently Smoke Cigarettes or E-Cigarettes by Educational Attainment, Washoe County, 2016



- The reported current use of cigarettes decreased as educational attainment increased as 25.4% of those with less than a high school education reported they currently smoke cigarettes, compared to only 3.5% of those who are college graduates.
- In 2016, reported use of e-cigarettes were highest among Washoe County adults with a high school education/GED equivalent (10.5%), while those with less than a high school education were lowest as 1.1% reported currently using e-cigarettes.

Alcohol Use

There are both immediate and long-term negative health effects related to alcohol consumption. The short-term effects of alcohol consumption include, impaired brain function, coordination and memory resulting in delayed reaction times and change in moods or behaviors. Consumption of alcohol also results in decreased immune system function, reducing the body’s ability to fight off infection, even 24 hours after intoxication.

Long-term health effects of alcohol consumption include increased stroke risk, high blood pressure, fatty liver, cirrhosis, risk of certain cancers, including cancer of the mouth, throat, liver, and breast, as well as an increased potential for chemical dependence.⁹⁴ Additionally, fetal alcohol syndrome (FAS) and other fetal malformations or fetal death can occur if a woman consumes alcohol while pregnant.⁹⁵ Additionally, one in every three motor vehicle fatalities in Nevada from 2011 through 2016 involved a driver over the legal limit for blood alcohol level (blood alcohol equal to or higher than 0.08).⁹⁶

Alcohol Use - Adolescents

Location	2013	2015
Washoe County	70.1%	65.6%
Nevada	67.4%	64.0%
United States	66.2%	63.2%

*at least 1 drink of alcohol on at least 1 day during their life

- The percentage of high school students in Washoe County who reported they ever drank alcohol decreased from 2013 (70.1%) to 2015 (65.6%).
- In 2015, the percentage of high school students in Washoe County who reported they ever drank alcohol was higher (65.6%) than Nevada (64.0%) and the United States (63.2%).

Location	2013	2015
Washoe County	36.5%	35.5%
Nevada	33.3%	30.6%
United States	34.9%	32.8%

*at least 1 drink of alcohol on at least 1 day during the 30 days before the survey

- The percentage of high school students in Washoe County who reported they currently drink alcohol decreased slightly from 2013 (36.5%) to 2015 (35.5%).
- In 2015, the percentage of high school students in Washoe County who reported they currently drink alcohol was higher (35.5%) than Nevada (30.6%) and the United States (32.8%).

⁹⁴ National Institute on Alcohol Abuse and Alcoholism. Alcohol’s Effects on the Body. Accessed <http://www.niaaa.nih.gov/alcohol-health/alcohols-effects-body>

⁹⁵ National Institute on Alcohol Abuse and Alcoholism. Fetal Alcohol Spectrum Disorders. Last updated March, 2013. Accessed <http://report.nih.gov/nihfactsheets/viewfactsheet.aspx?csid=27>

⁹⁶ U.S. Department of Transportation, National Highway Traffic Safety Administration. (2016). Traffic Safety Facts Nevada 2011-2015. Washington, DC.

Alcohol Use - College Students

Table 100: Percent of College Students who Currently Drink Alcohol*, 2010, 2012, 2014, & 2016

Location	2010	2012	2014	2016
Washoe County (UNR)	66.6%	65.2%	63.7%	59.9%
United States	65.1%	65.8%	66.8%	63.6%

*at least once in the past 30 days

- The percentage of UNR students who reported they currently drink alcohol decreased from 2010 (66.6%) to 2016 (59.9%) and has remained below the national percentage for 2012, 2014 and 2016.

Table 101: Percent of College Students who Drove after Drinking any Alcohol at all*, 2010, 2012, 2014, & 2016

Location	2010	2012	2014	2016
Washoe County (UNR)	23.6%	20.2%	19.0%	14.7%
United States	17.9%	15.7%	14.0%	12.6%

*in the past 30 days

- The percentage of UNR students who reported they drove after drinking alcohol decreased from 2010 (23.6%) to 2016 (14.7%).
- In 2016, the percentage of UNR students who reported they drove after drinking alcohol (14.7%) was higher than the national percentage (12.6%).

Table 102: College Students Average Number of Drinks, 2010, 2012, 2014, & 2016

Location	2010	2012	2014	2016
Washoe County (UNR)	3.4	3.3	3.0	2.8
United States	3.7	3.6	3.6	3.1

*last time "partied"/socialized

- The average number of drinks consumed by UNR students decreased from 3.4 drinks in 2010 to 2.8 drinks in 2016.
- In 2016, the average number of drinks consumed by UNR students was slightly lower at 2.8 drinks, compared to college students across the United States at an average of 3.1 drinks.

Table 103: Percent of College Students who are Binge Drinkers*, 2010, 2012, 2014, & 2016

Location	2010	2012	2014	2016
Washoe County (UNR)	27.2%	32.1%	26.8%	29.7%
United States	35.0%	34.1%	34.7%	31.2%

*5 or more drinks of alcohol at a sitting, past 2 weeks

- Approximately one in three UNR students reported binge drinking in the past two weeks from 2010 through 2016, ranging from a low of 26.8% in 2014 to a high of 32.1% in 2012.
- In 2016, the percentage of UNR students who reported binge drinking in the past two weeks (29.7%) was lower than the national percentage (31.2%).

Alcohol Use - Adults

Location	2012	2013	2014	2015	2016
Washoe County	17.7%	19.4%	20.7%	16.2%	18.7%
Nevada	15.1%	15.2%	15.9%	14.2%	15.8%
United States	16.9%	16.8%	16.0%	16.3%	15.6%

*for men-having 5 or more drinks on one occasion; for women-having 4 or more drinks on one occasion

- The percentage of adults classified as binge drinkers in Washoe County increased from 2012 (17.7%) to 2016 (18.7%).
- The percentage of adults in Washoe County classified as binge drinkers remained higher than Nevada and the United States from 2012 through 2016.
- In 2016, the percentage of adults in Washoe County classified as binge drinkers was 18.7%, which was higher than in Nevada (15.8%) and the United States (15.6%).

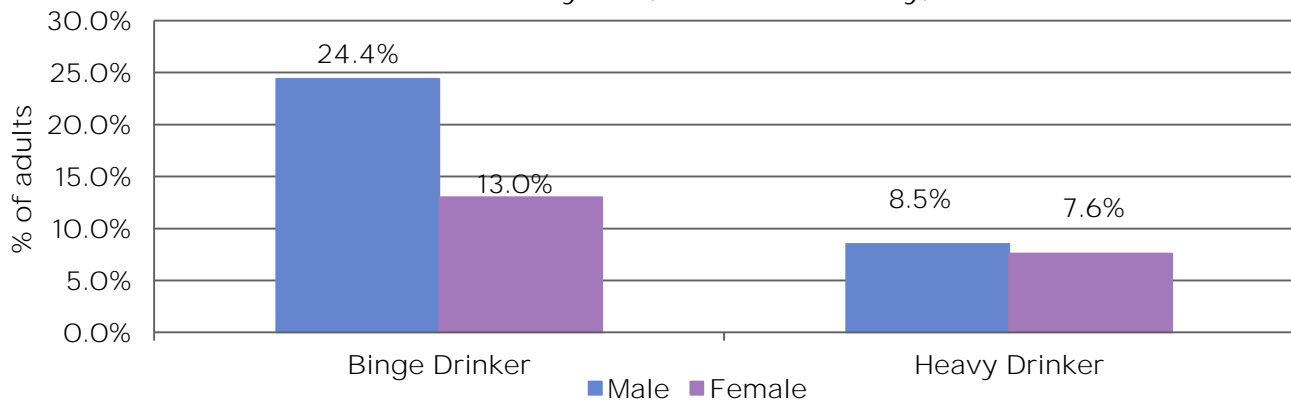
Location	2012*	2013*	2014*	2015**	2016**
Washoe County	7.4%	7.5%	9.7%	8.2%	8.0%
Nevada	6.5%	7.0%	6.9%	6.2%	6.3%
United States	6.1%	6.2%	5.9%	5.9%	5.9%

*for men-having more than 2 drinks per day; for women-having more than 1 drink per day
 **for men-having more than 14 drinks per week; for women-having more than 7 drinks per week

- The percentage of adults who were classified as heavy drinkers in Washoe County increased from 2012 (7.4%) to 2016 (8.0%).
- The percentage of adults in Washoe County classified as heavy drinkers remained higher than in Nevada and the United States from 2012 through 2016.
- In 2016, the percentage of adults in Washoe County classified as heavy drinkers was higher (8.0%) than in Nevada (6.3%) and the United States (5.9%).

Adult Binge & Heavy Drinking by Select Demographics

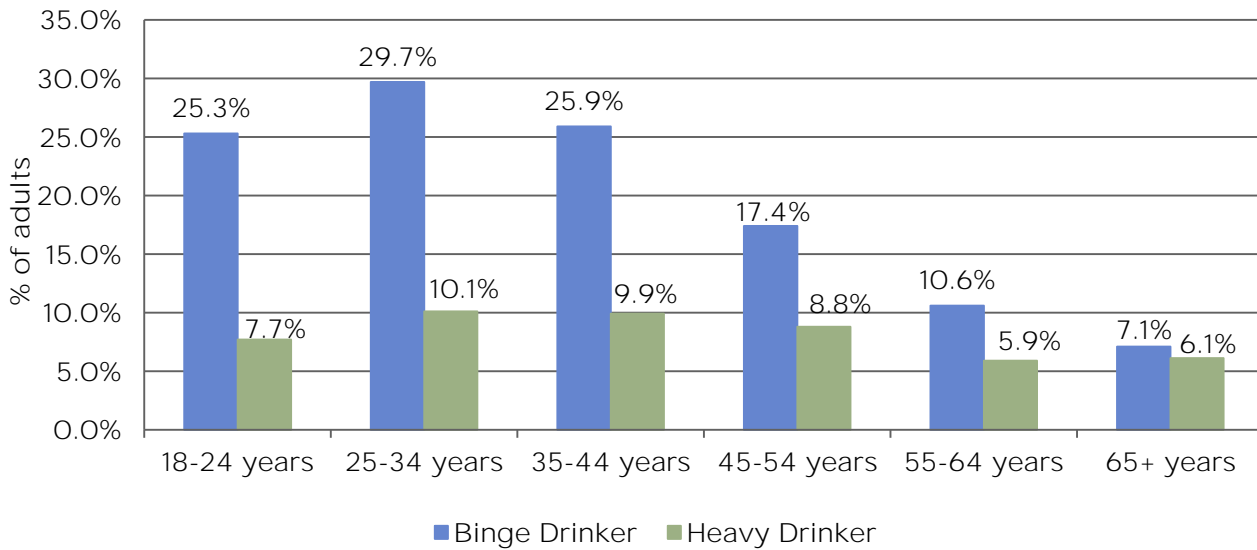
Fig 108: Percentage of Adults Classified as a Binge or Heavy Drinker by Sex, Washoe County, 2016



Note: Binge drinking for men having 5 or more drinks on one occasion; for women-having 4 or more drinks on one occasion
 Note: Heavy drinking classified for men-having more than 14 drinks per week; for women-having more than 7 drinks per week

- Adult males in Washoe County had a higher prevalence of both binge and heavy drinking compared to females in 2016.

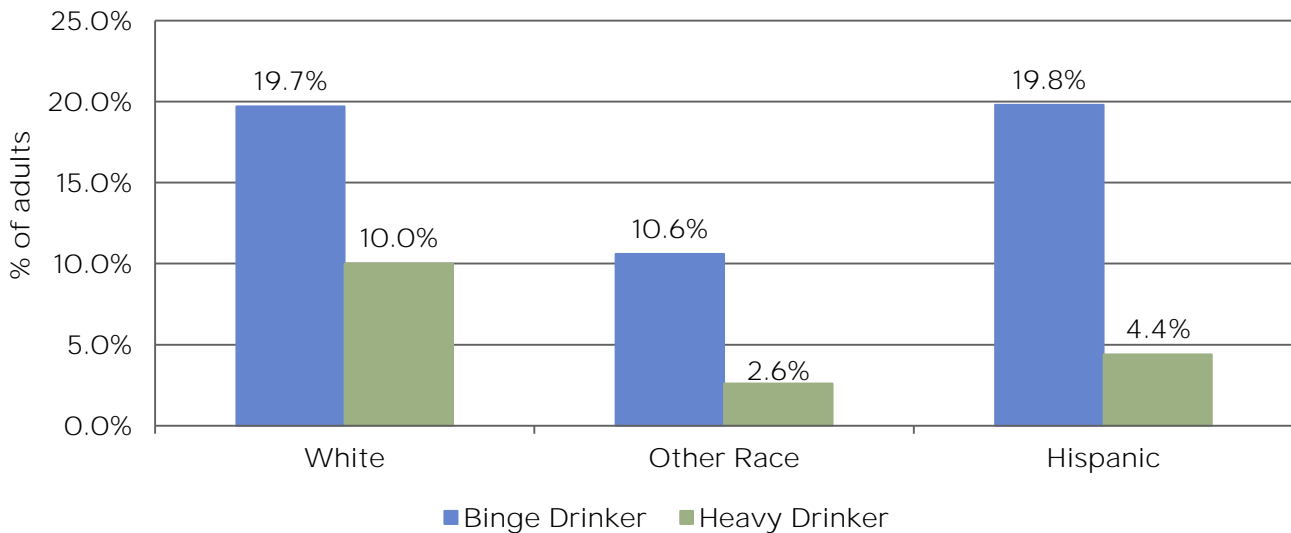
Fig 109: Percentage of Adults Classified as a Binge or Heavy Drinker by Age Group, Washoe County, 2016



Note: Binge drinking for men having 5 or more drinks on one occasion; for women-having 4 or more drinks on one occasion
 Note: Heavy drinking classified for men-having more than 14 drinks per week; for women-having more than 7 drinks per week

- Heavy and binge drinking was most prevalent among adults aged 25 to 34 years in Washoe County and the prevalence of binge and heavy drinking declined as age increased, with the exception of those aged 18 to 24 year and heavy drinking for those over age 65 years.

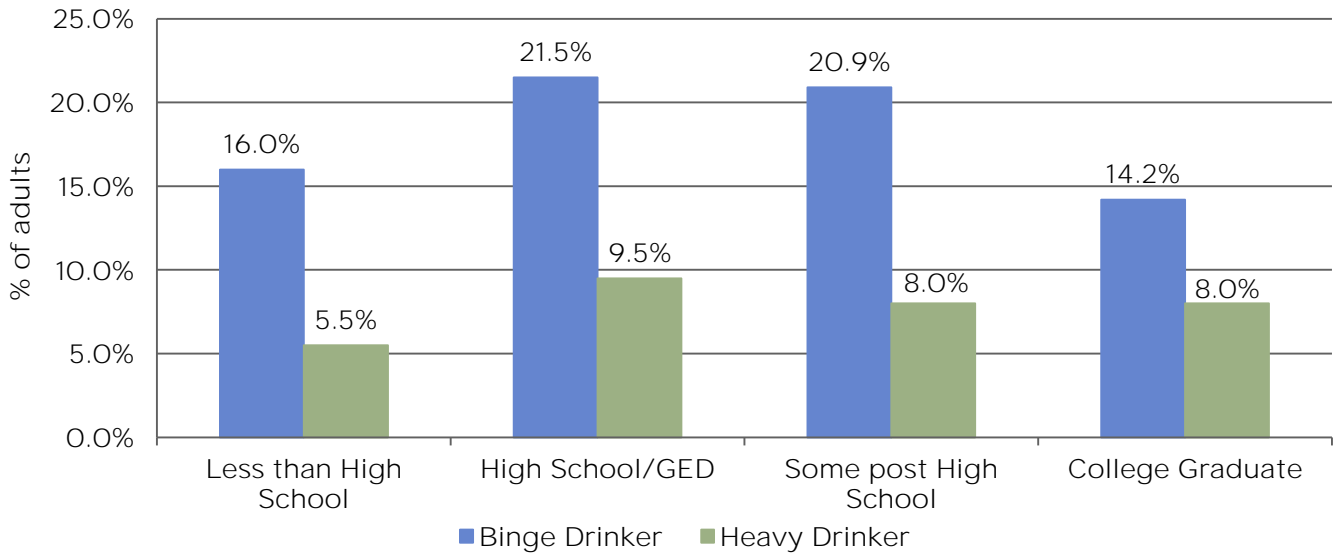
Fig 110: Percentage of Adults Classified as a Binge or Heavy Drinker by Race & Ethnicity, Washoe County, 2016



Note: Binge drinking for men having 5 or more drinks on one occasion; for women-having 4 or more drinks on one occasion
 Note: Heavy drinking classified for men-having more than 14 drinks per week; for women-having more than 7 drinks per week

- Binge drinking was highest among white (19.7%) and Hispanic (19.8%) adults in Washoe County.
- The percentage of white adults classified as a heavy drinker (10.0%) was double the percentage of Hispanic adults (4.4%) and nearly five times higher than adults of an “other race” (2.6%).

Fig 111: Percentage of Adults Classified as a Binge or Heavy Drinker by Educational Attainment, Washoe County, 2016



Note: Binge drinking for men having 5 or more drinks on one occasion; for women-having 4 or more drinks on one occasion
 Note: Heavy drinking classified for men-having more than 14 drinks per week; for women-having more than 7 drinks per week

- Adults with a high school education/GED equivalent had the highest prevalence of binge drinking (21.5%), followed closely by those with some education post high school (20.9%).
- Adults with a high school education/GED equivalent also had the highest prevalence of heavy drinking (9.5%), although heavy drinking was similar among those with some education post high school (8.0%), as well as college graduates (8.0%).

Marijuana Use

Marijuana is the most commonly used illicit drug and in 2015, 22.2 million persons across the United States 12 years and older reported having used it within the past month.⁹⁷ In 2016, Nevada residents voted to legalize recreational marijuana joining six other states and the District of Columbia; however it is federally classified as a Schedule I illicit drug. The perceived risk of marijuana use has declined in recent years, while rates of use have increased among adolescents and adults in Washoe County.⁹⁸

Marijuana Use - Adolescents

Location	2013	2015
Washoe County	49.1%	45.2%
Nevada	39.9%	39.4%
United States	40.7%	38.6%

*one or more times during their life

- The percentage of high school students in Washoe County who reported ever using marijuana decreased from 2013 (49.1%) to 2015 (45.2%).

⁹⁷ Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2016). Results from the 2015 National Survey on Drug Use and Health: Detailed tables. Rockville, MD.

⁹⁸ Join Together Northern Nevada. (2017). 2016 Comprehensive Community Prevention Plan. Reno, NV.

1.10 SUBSTANCE USE

- In 2015, the percentage of high school students in Washoe County who reported ever using marijuana was higher (45.2%) than in Nevada (39.4%) and the United States (38.6%).

Table 107: Percent of High School Students who Currently use Marijuana*, 2013 & 2015

Location	2013	2015
Washoe County	28.2%	24.6%
Nevada	18.5%	19.6%
United States	23.4%	21.7%

*one or more times during the 30 days before the survey

- The percentage of high school students in Washoe County who reported they currently use marijuana decreased from 2013 (28.2%) to 2015 (24.6%).
- In 2015, the percentage of high school students in Washoe County who reported they currently use marijuana was higher (24.6%) than in Nevada (19.6%) and the United States (21.7%).

Marijuana Use - College Students

Table 108: Percent of College Students who Currently use Marijuana*, 2010, 2012, 2014, & 2016

Location	2010	2012	2014	2016
Washoe County (UNR)	16.7%	18.3%	18.1%	20.0%
United States	16.9%	15.9%	18.4%	18.7%

*at least once in the past 30 days

- The percentage of UNR students who reported they currently use marijuana has increased from 2010 (16.7%) to 2016 (20.0%).
- In 2016, the percentage of UNR students who reported they currently use marijuana (20.0%) was higher than the national percentage (18.7%).

Marijuana Use - Adults

Table 109: Percent of Adults who Currently Smoke Marijuana or Hash*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	6.2%	~	8.8%	9.5%	11.6%
Nevada	5.4%	~	6.1%	7.3%	8.4%

*smoked marijuana or hash in last 30 days

~Not asked in 2013

- The percentage of adults in Washoe County who reported they currently use marijuana increased from 2012 (6.2%) to 2016 (11.6%).
- In 2016, the percentage of adults in Washoe County who reported they currently use marijuana was higher (11.6%) than in Nevada (8.4%).

Prescription Drug Use

The use of prescription drugs in the United States has increased over the past 30 years, in both the overall percentage of the population taking prescription drugs, as well as the number of prescription drugs each person is taking.⁹⁹ In 2015, approximately \$324.6 billion was spent on the purchase of prescription drugs in the United States, a 9% increase from the previous year.¹⁰⁰

Prescription drugs, specifically opioids, have been the driving factor in the 15-year increase in drug overdose deaths. In 2015, over half of all drug overdose deaths involved an opioid and among those deaths, nearly half were due to a prescription opioid, accounting for over 15,000 overdose deaths in the United States.¹⁰¹ Recent research has shown that the majority of heroin overdoses occur among those who had a history of using prescription opiates prior to using heroin.¹⁰² In 2016, the Centers for Disease Control and Prevention (CDC) released guidelines for prescribing opioids for chronic pain; these guidelines emphasize the risks associated with and recommendations for- the appropriate uses of long-term opioid therapy.¹⁰³

Prescription Drug Use - Adolescents

Table 110: Percent of High School Students who ever took Prescription Drugs without a Doctor's Prescription*, 2013 & 2015

Location	2013	2015
Washoe County	22.0%	18.3%
Nevada	18.4%	17.0%
United States	17.8%	16.8%

*such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax, one or more times during their life

- The percentage of high school students in Washoe County who reported they took prescription drugs without a doctor’s permission decreased from 2013 (22.0%) to 2015 (18.3%).
- In 2015, the percentage of high school students in Washoe County who reported they took prescription drugs without a doctor’s permission was higher (18.3%) than Nevada (17.0%) and the United States (16.8%).

⁹⁹ National Center for Health Statistics. (2014). Health, United States, 2013: With Special Feature on Prescription Drugs. Hyattsville, MD.

¹⁰⁰ National Center for Health Statistics. (2017). Health, United States, 2016: With Chartbook on Long-term Trends in Health. Hyattsville, MD.

¹⁰¹ Centers for Disease Control and Prevention. Wide-ranging online data for epidemiologic research (WONDER). Atlanta, GA: CDC, National Center for Health Statistics; 2016. Accessed <http://wonder.cdc.gov>

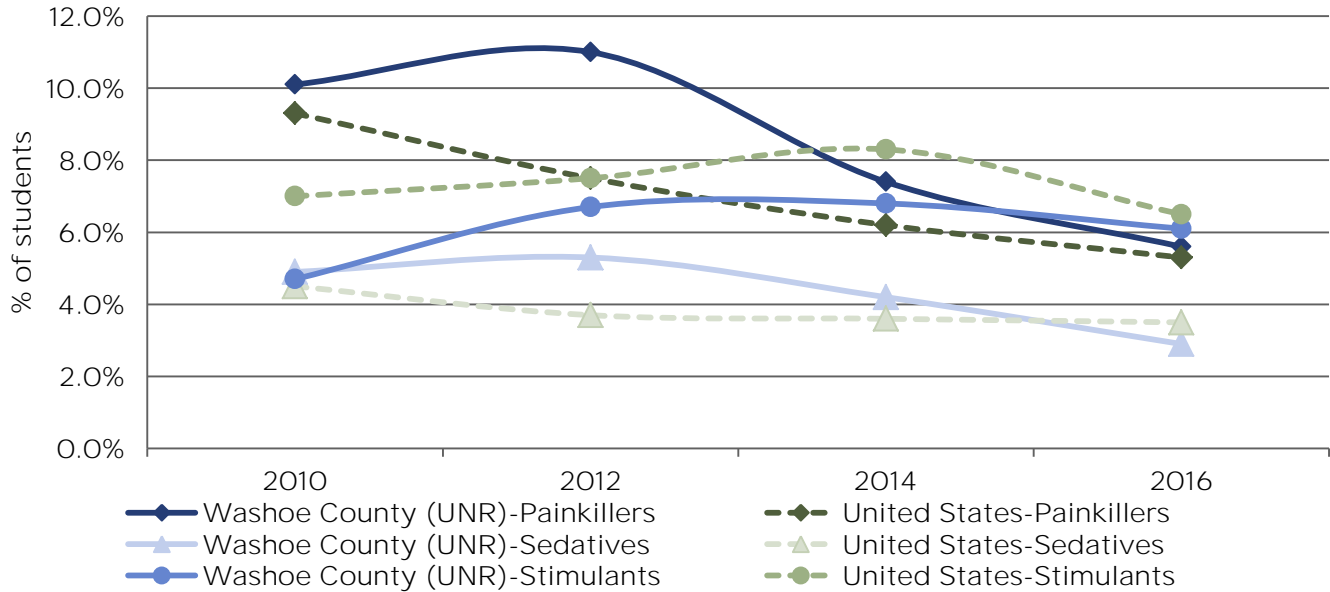
¹⁰² National Institute on Drug Abuse. Prescription Opioid and Heroin. Prescription opioid use is a risk factor for heroin use. Accessed <https://www.drugabuse.gov/publications/research-reports/relationship-between-prescription-drug-heroin-abuse/prescription-opioid-use-risk-factor-heroin-use>

¹⁰³ Dowell, D., Haegerish, T.T., Chou, R.. (2016). CDC Guideline for Prescribing Opioids for Chronic Pain-United States 2016. MMWR; No. RR-1 (65), 1-49.

1.10 SUBSTANCE USE

Prescription Drug Use - College Students

Fig 112: Use of Prescription Drugs in the Past Year* Among College Students, Washoe County & the United States, 2010, 2012, 2014, & 2016



Note: Painkillers such as OxyContin, Vicodin, and Codeine not prescribed to them; Sedatives such as Xanax, Valium not prescribed to them; Stimulants such as Ritalin, Adderall not prescribed to them

- The use of painkillers (such as OxyContin, Vicodin, and Codeine) among UNR students has decreased from 2010 (10.1%) to 2016 (5.6%); however in 2016, was higher at UNR (5.6%) than the United States (5.3%).
- The use of sedatives (such as Xanax, Valium) among UNR students has decreased from 2010 (4.9%) to 2016 (2.9%) and in 2016, was lower at UNR (2.9%) than the United States (3.5%).
- The use of stimulants (such as Ritalin, Adderall) among UNR students has increased from 2010 (4.7%) to 2016 (6.1%) and in 2016, was lower at UNR (6.1%) than the United States (6.5%).

Use of Other Drugs

Use of Other Drugs - Adolescents

All data in Table 111 through Table 116 for Washoe County high school indicate a decrease in the percentage of students reporting having ever used these drugs from 2013 to 2015. However, during 2015 the percentage of Washoe County high school students reported having ever used each of these drugs was higher than high school students in both Nevada and the United States.

Table 111: Percent of High School Students who ever used Synthetic Marijuana*, 2013 & 2015

Location	2013	2015
Washoe County	21.6%	11.1%
Nevada	17.4%	10.9%
United States	~	9.2%

*also called K2, Spice, fake weed, King Kong, Yucatan Fire, Skunk, or Moon Rocks, one or more times during their life
~data unavailable

1.10 SUBSTANCE USE

Table 112: Percent of High School Students who ever used Ecstasy*, 2013 & 2015

Location	2013	2015
Washoe County	16.2%	10.5%
Nevada	10.8%	7.0%
United States	6.6%	5.0%

*also called MDMA, one or more times during their life

Table 113: Percent of High School Students who ever used Cocaine*, 2013 & 2015

Location	2013	2015
Washoe County	11.3%	9.2%
Nevada	7.9%	6.1%
United States	5.5%	5.2%

*such as powder, crack, or freebase, one or more times during their life

Table 114: Percent of High School Students who ever used Inhalants*, 2013 & 2015

Location	2013	2015
Washoe County	11.6%	8.0%
Nevada	9.8%	6.9%
United States	8.9%	7.0%

*sniffed glue, breathed the contents of aerosol cans, or inhaled any paints or sprays to get high, one or more times during their life

Table 115: Percent of High School Students who ever used Methamphetamines*, 2013 & 2015

Location	2013	2015
Washoe County	6.7%	4.8%
Nevada	5.0%	3.4%
United States	3.2%	3.0%

*also called speed, crystal, crank, or ice, one or more times during their life

Table 116: Percent of High School Students who ever used Heroin*, 2013 & 2015

Location	2013	2015
Washoe County	4.6%	3.5%
Nevada	3.3%	2.5%
United States	2.2%	2.1%

*also called smack, junk, or China white, one or more times during their life

Treatment, Hospitalizations, & Deaths Due to Substance Use

Substance use disorders typically develop during adolescence and may continue to progress with age. Treatment for substance use is an ongoing process involving the identification of triggers for using substances, behavior modification, and reducing risk of relapse. Historically, substance use was viewed as a social problem, often handled through arrests and subsequent criminal justice interventions. Since the 1970's there has been movement to treat the underlying conditions and view substance use as a diagnosable medical issue with an increase in adoption of behavior changes to address use and abuse. Although there have been marked changes

1.10 SUBSTANCE USE

in dealing with substance use treatment, mainstream health care still does not often address the identification, prevention, and effective treatment for substance use. Full integration of the continuum of substance use disorder services into health care allows for improved health outcomes, reduced health care costs, and increased likelihood of recovery.¹⁰⁴

Treatment

Table 117: Needing but Not Receiving Treatment* Among Persons 12 Years & Older, Annual Average 2012, 2013, 2014 Combined

Substance	Washoe County	Nevada	United States
Alcohol use	7.61%	7.13%	6.29%
Illicit drug use	2.54%	2.37%	2.40%

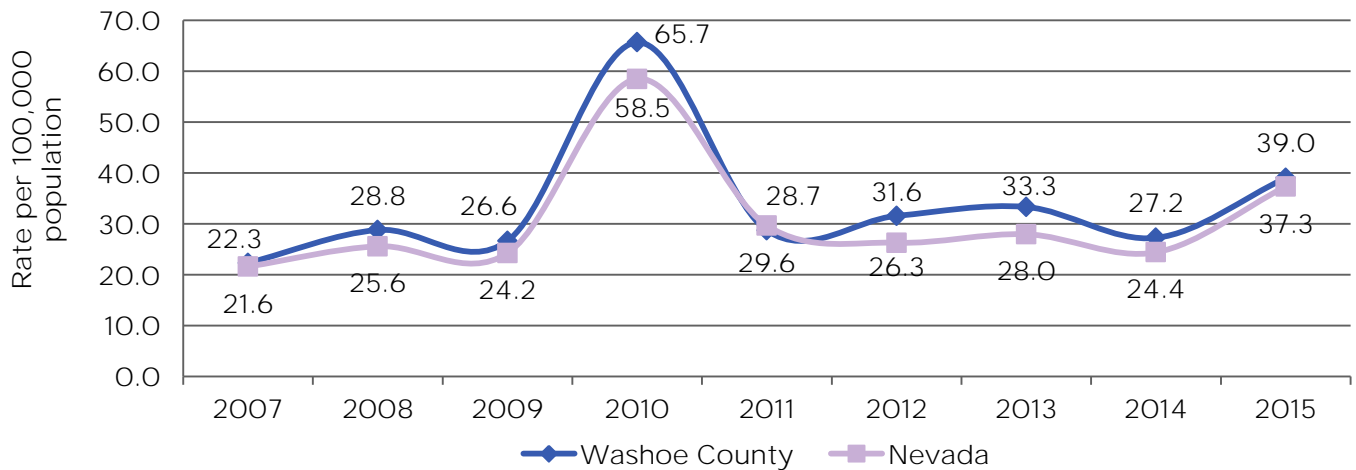
*in the past year

Note: Needing but not receiving treatment refers to respondents classified as needing treatment for alcohol, but not receiving treatment for an alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], or mental health centers).

- Persons needing but not able to receive treatment for alcohol use in Washoe County was higher (7.61%) than Nevada (7.13%) and the United States (6.29%).
- Persons needing but not able to receive treatment for illicit drug use in Washoe County was higher (2.54%) than Nevada (2.37%) and the United States (2.40%).

Hospitalizations

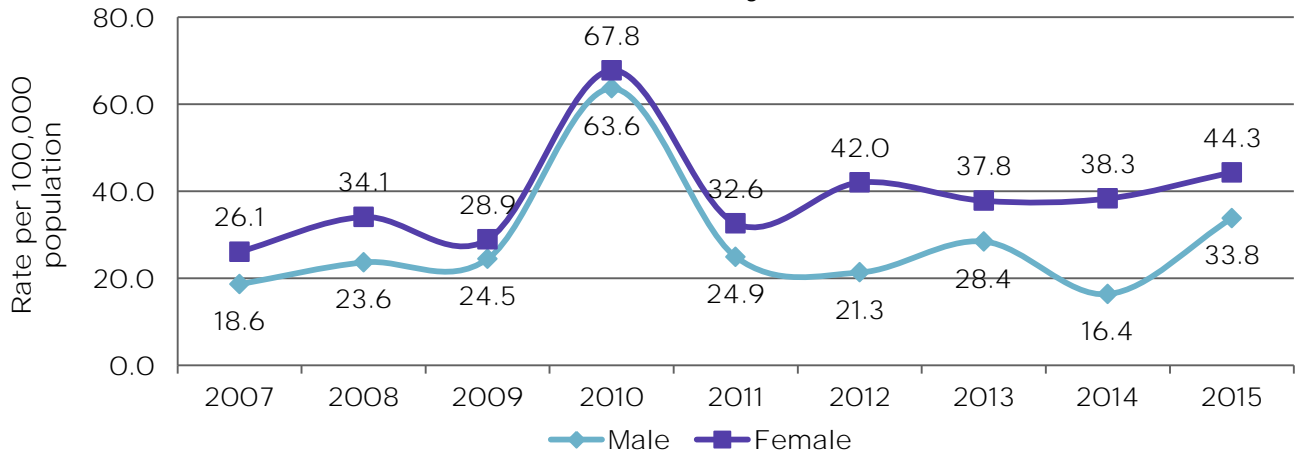
Fig 113: Hospitalization Rate Due to Opioid Poisoning, Washoe County & Nevada, 2007-2015



- The rate of hospitalizations due to opioid poisoning in Washoe County increased from 2007 (22.3 per 100,000) to 2015 (39.0 per 100,000).
- From 2007 through 2015 the rate of hospitalizations due to opioid poisoning was higher in Washoe County compared to Nevada.

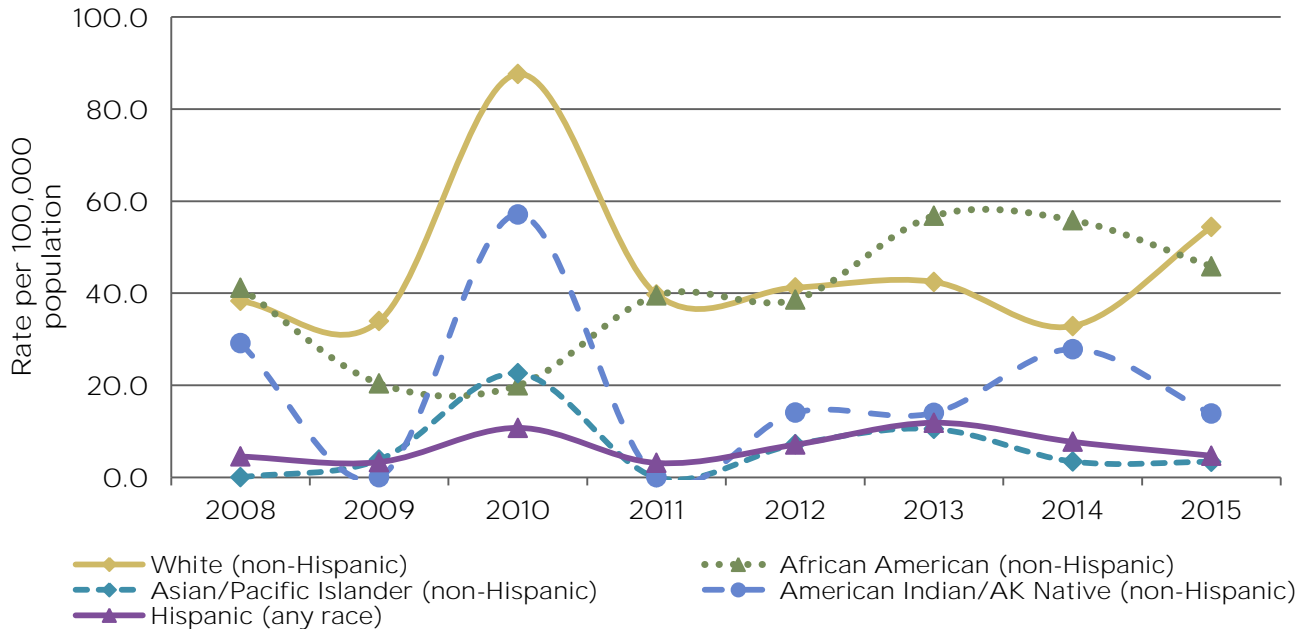
¹⁰⁴ United States of Health and Human Service, Office of the Surgeon General. (2016). Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health. Washington, DC.

Fig 114: Hospitalization Rate Due to Opioid Poisoning by Sex, Washoe County, 2007-2015



- The rate of hospitalizations due to opioid poisoning in Washoe County was higher among females compared to males every year from 2007 through 2015.
- The hospitalization rate due to opioid poisoning among female residents of Washoe County increased, nearly doubling, from 2007 (26.1 per 100,000) to 2015 (44.3 per 100,000).
- The hospitalization rate due to opioid poisoning among male residents of Washoe County increased, nearly doubling, from 2007 (18.6 per 100,000) to 2015 (33.8 per 100,000).

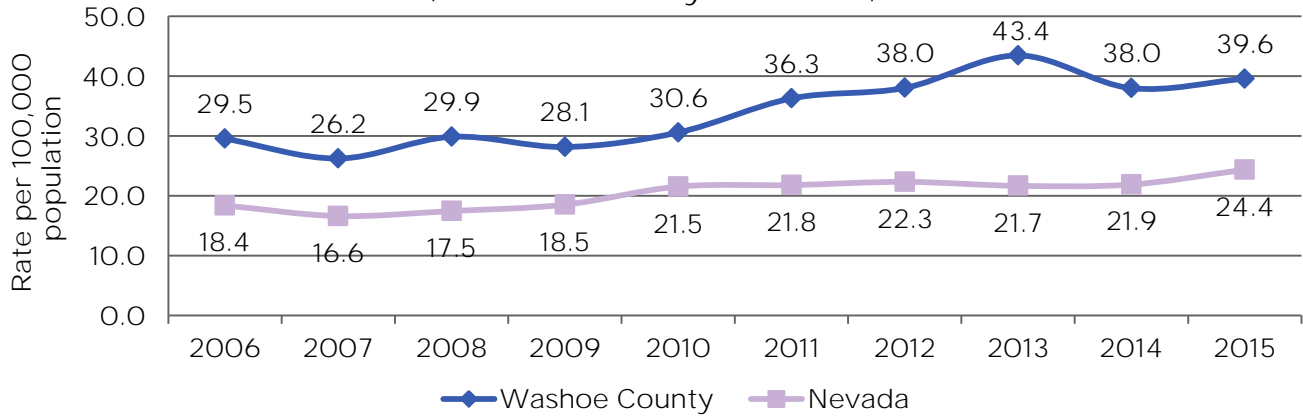
Fig 115: Hospitalization Rate Due to Opioid Poisoning by Race/Ethnicity, Washoe County, 2008-2015



- The rate of hospitalization in Washoe County due to opioid poisoning was highest among non-Hispanic whites and non-Hispanic African Americans from 2008 through 2015.
- The rate of hospitalization in Washoe County due to opioid poisoning among American Indian/Alaskan Natives fluctuated from 2008 through 2015.
- The rate of hospitalization in Washoe County due to opioid poisoning was lowest among non-Hispanic Asian/Pacific Islanders and Hispanics (any race) from 2008 through 2015.

Mortality

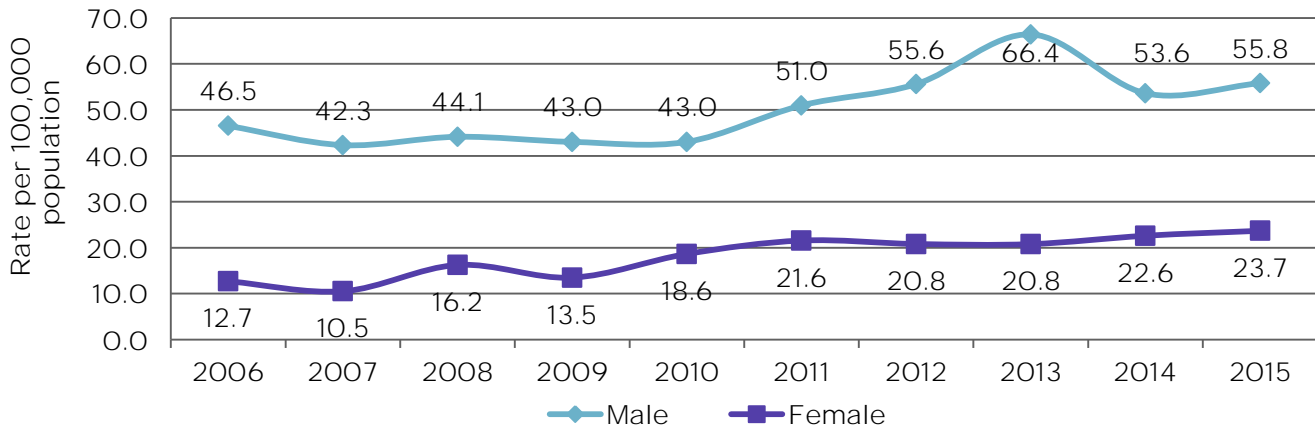
Fig 116: Age-adjusted Rate of Death Due to Alcohol-related Causes, Washoe County & Nevada, 2006-2015



Note: Includes mental and behavioral disorders due to use of alcohol, degenerative nervous system illnesses, gastrointestinal system illness, damage to fetus from alcohol, toxic effect of alcohol, accidental, undetermined, and intentional poisoning due to exposure to alcohol.

- The rate of deaths due to alcohol-related causes among Washoe County residents has increased from 2006 (29.5 per 100,000) to 2015 (39.6 per 100,000).
- The rate of deaths due to alcohol-related causes among Washoe County residents has remained higher than Nevada from 2006 through 2015.

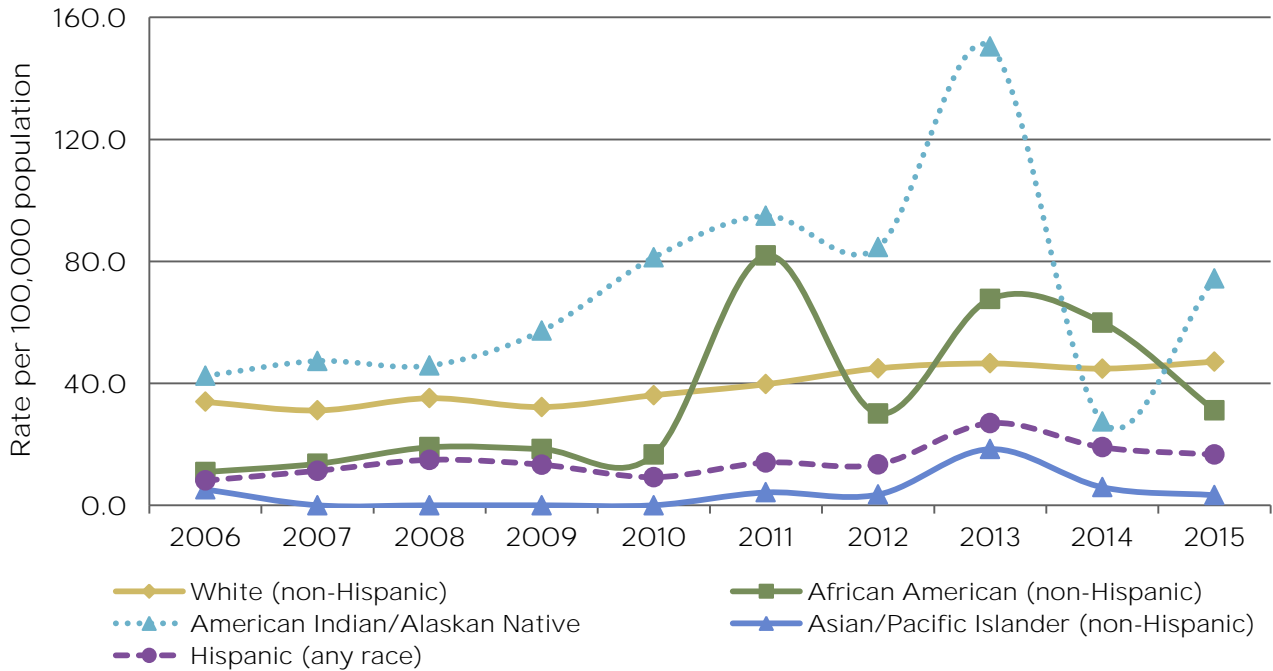
Fig 117: Age-adjusted Rate of Death Due to Alcohol-related Causes by Sex, Washoe County, 2006-2015



Note: Includes mental and behavioral disorders due to use of alcohol, degenerative nervous system illnesses, gastrointestinal system illness, damage to fetus from alcohol, toxic effect of alcohol, accidental, undetermined, and intentional poisoning due to exposure to alcohol.

- The rate of deaths due to alcohol-related causes among males in Washoe County has been much higher than the rate among females from 2006 through 2015.
- The rate of alcohol-related deaths among females has nearly doubled from 2006 (12.7 per 100,000 population) to 2015 (23.7 per 100,000 population).

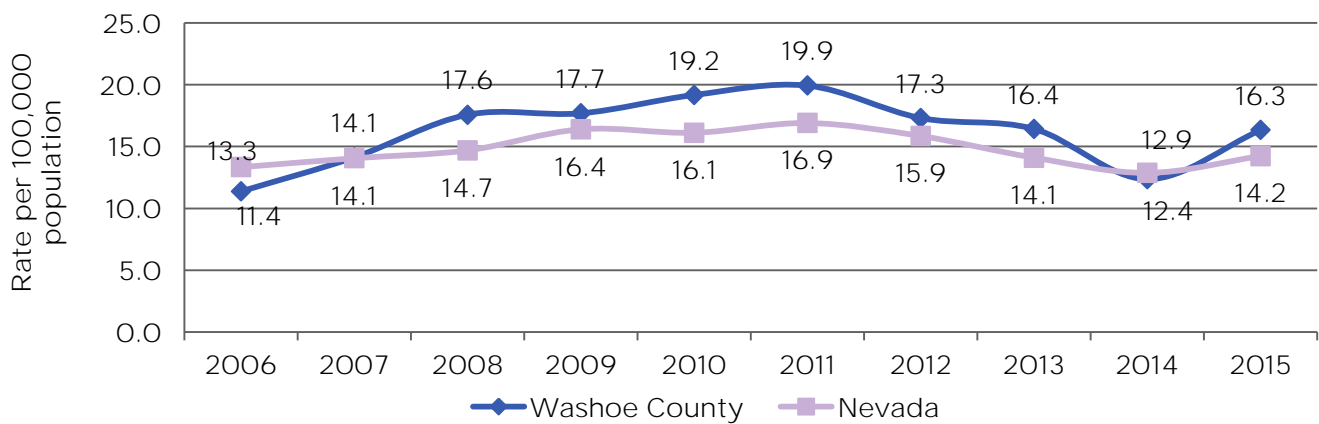
Fig 118: Age-adjusted Rate of Death Due to Alcohol-related Causes by Race/Ethnicity, Washoe County, 2006-2015



Note: Includes mental and behavioral disorders due to use of alcohol, degenerative nervous system illnesses, gastrointestinal system illness, damage to fetus from alcohol, toxic effect of alcohol, accidental, undetermined, and intentional poisoning due to exposure to alcohol.

- The rate of deaths due to alcohol-related causes among residents of Washoe County among all races and ethnicities, except for Hispanics (any race) has increased from 2006 to 2015, the largest increase has been among American Indian/Alaska Native, followed by African Americans.
- The death rate due to alcohol-related causes was highest among non-Hispanic whites for all years from 2006 through 2015, with the exception of 2014.

Fig 119: Age-adjusted Rate of Death Due to Prescription Drugs, Washoe County & Nevada, 2006-2015

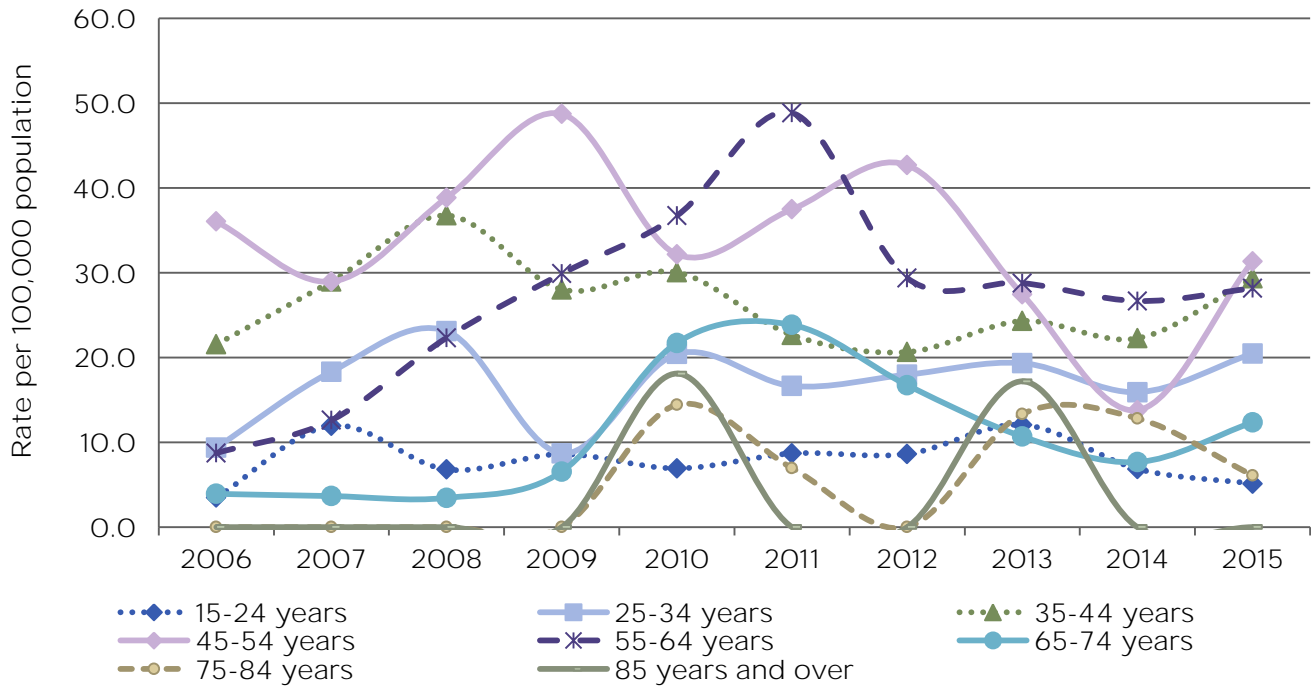


Note: Includes accidental, intentional, and undetermined poisonings by any class of non-illicit drug, may include deaths where a person was using a prescription drug in an illegal manner.

1.10 SUBSTANCE USE

- The rate of death due to prescription drugs among Washoe County residents has increased from 2006 (13.3 per 100,000) to 2015 (16.3 per 100,000).
- The rate of death due to prescription drugs among Washoe County residents has remained higher than the rate for Nevada from 2007 through 2013. As of 2015, Washoe County rates again rose above Nevada.

Fig 120: Age-adjusted Rate of Death Due to Prescription Drugs by Age Group, Washoe County, 2006-2015

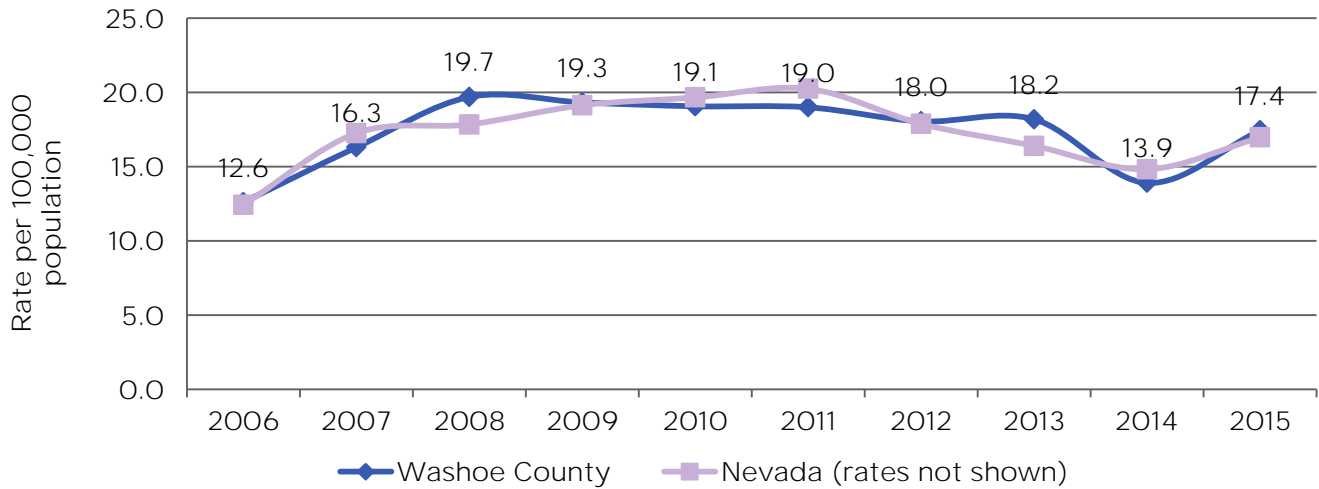


Note: Includes accidental, intentional, and undetermined poisonings by any class of non-illicit drug, may include deaths where a person was using a prescription drug in an illegal manner.

- The rate of death due to prescription drugs was highest among Washoe County residents aged 45-54 years and 55-64 years from 2006-2015.
- The rate of death due to prescription drugs among Washoe County residents increased from 2006 to 2015 among all age groups except for those aged 45-54 years.

1.10 SUBSTANCE USE

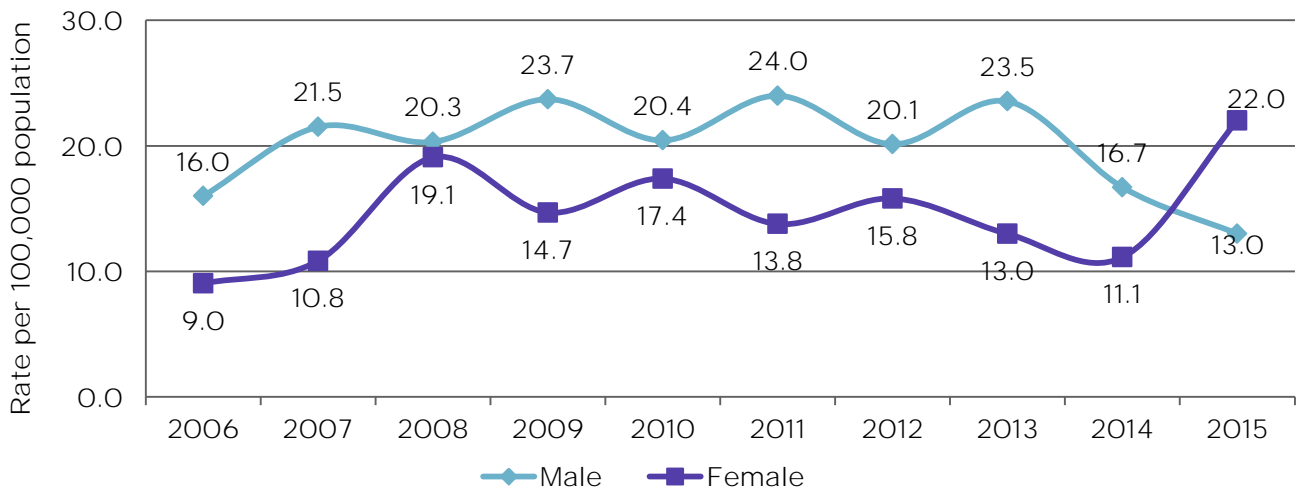
Fig 121: Age-adjusted Rate of Death Due to Illicit Drugs, Washoe County & Nevada, 2006-2015



Note: Includes mental and behavioral disorders due to use of opioids, cannabinoids, sedatives or hypnotics, cocaine, hallucinogens, psychodysleptics, and neonatal withdrawal from maternal use of drugs.

- The rate of death due to illicit drugs among Washoe County residents increased from 2006 (12.6 per 100,000) to 2015 (17.4 per 100,000).
- The rate of death due to illicit drugs among Washoe County residents has remained relatively similar to the rate for Nevada from 2006 through 2015.

Fig 122: Age-adjusted Rate of Death Due to Illicit Drugs by Sex, Washoe County, 2006-2015



Note: Includes mental and behavioral disorders due to use of opioids, cannabinoids, sedatives or hypnotics, cocaine, hallucinogens, psychodysleptics, and neonatal withdrawal from maternal use of drugs.

- The rate of death due to illicit drugs has been higher among males compared to females in Washoe County from 2006 through 2014. However, in 2015 the rate of death due to illicit drugs among females (22.0 per 100,000) doubled from the previous year and was higher than males (13.0 per 100,000).

Summary of Substance Use

In 2015, more than one in three (36.2%) Washoe County high school students reported they had ever smoked a cigarette and over half (53.5%) reported they had ever tried electronic vapor products. Additionally, two in three (65.6%) high school students in Washoe County reported having ever drunk alcohol and slightly more than one in three (35.5%) reported they currently drink alcohol; both rates are higher than Nevada and the United States. About two out of three UNR (college) students reported they currently drink alcohol and nearly one in three (29.7%) reported binge drinking in the two weeks prior. From 2012 through 2016, the percentage of adults in Washoe County classified as a heavy or binge drinker was higher than both Nevada and the United States. According to National Highway and Traffic Association, 38% of motor vehicle fatalities in Washoe County in 2015 involved a driver over the legal limit for alcohol (BAC > 0.08). Mortality rates for alcohol-related causes of death have increased county-wide and have remained higher than Nevada from 2006 through 2015.

The rates of current marijuana use among adolescents and college students have increased from previous years, are higher than rates for the United States, and are expected to continue to increase due to legalization of recreational use in Nevada. Although reported misuse of prescription drugs among adolescents and college students decreased from previous years, the rate of hospitalization for opioid poisonings in Washoe County have increased from 2007 through 2015 and have remained higher than Nevada.

Continued integration of substance use prevention, screening, and treatment into the traditional health care settings can decrease stigma and the burden on standalone treatment facilities, as well as increase opportunities for reducing poor health outcomes and improving quality of life.

For detailed documents related to substance use in Washoe County refer to:

Join Together Northern Nevada's Community Prevention Plans <http://www.jtnn.org/community-resources/community-assessment/>

Office of Public Health Informatics and Epidemiology, Division of Public and Behavioral Health, Department of Health and Human Service's Washoe County Behavioral Health Summary
<http://dphh.nv.gov/uploadedFiles/dphhnavgov/content/Programs/OPHIE/dta/Publications/Washoe%20County%20BH%20Report%2008.16.pdf>

Substance Use Sources

Table 92-Table 96 Same Source

Table 92: Percent of High School Students who ever Tried Cigarette Smoking*, 2013 & 2015

Table 93: Percent of High School Students who Currently Smoke Cigarettes*, 2013 & 2015

Table 94: Percent of High School Students who ever Used Electronic Vapor Products*, 2013 & 2015

Table 95: Percent of High School Students who Currently use Electronic Vapor Products*, 2013 & 2015

Table 96: Percent of High School Students who Currently use Tobacco*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

1.10 SUBSTANCE USE

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Fig 105; Table 97; Fig 106-Fig 107 Same Source

Fig 105: Percent of Adults that Currently Smoke Cigarettes, Washoe County, Nevada, & the United States, 2012-2016

Table 97: Percent of Adults that Currently Smoke E-Cigarettes*, 2014-2016

Fig 106: Percentage of Adults Reporting they Currently Smoke Cigarettes or E-Cigarettes by Age Group, Washoe County, 2016

Fig 107: Percentage of Adults Reporting they Currently Smoke Cigarettes or E-Cigarettes by Educational Attainment, Washoe County, 2016

Nevada and Washoe County: Nevada Office of Public Health Informatics and Epidemiology. Nevada Behavioral Risk Factor Surveillance Survey (BRFSS). Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention. BRFSS Prevalence and Trends Data query tool, Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

Table 98-Table 99 Same Source

Table 98: Percent of High School Students who ever Drank Alcohol*, 2013 & 2015

Table 99: Percent of High School Students who Currently Drink Alcohol*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 100-Table 103 Same Source

Table 100: Percent of College Students who Currently Drink Alcohol*, 2010, 2012, 2014, & 2016

Table 101: Percent of College Students who Drove after Drinking any Alcohol at all*, 2010, 2012, 2014, & 2016

Table 102: College Students Average Number of Drinks, 2010, 2012, 2014, & 2016

Table 103: Percent of College Students who are Binge Drinkers*, 2010, 2012, 2014, & 2016

Washoe County (UNR): American College Health Assessment-National College Health Assessment II data for Spring of 2010, 2012, 2014, and 2016. Unpublished data provided upon request. Reno, NV.

United States: American College Health Assessment-National College Health Assessment II Reference Group reports for Spring of 2010, 2012, 2014, and 2016. Accessed http://www.acha-ncha.org/pubs_rpts.html

Table 104-Table 105; Fig 108-Fig 111 Same Source

Table 104: Percent of Adults who are Binge Drinkers*, 2012-2016

Table 105: Percent of Adults who are Heavy Drinkers, 2012-2016

Fig 108: Percentage of Adults Classified as a Binge or Heavy Drinker by Sex, Washoe County, 2016

Fig 109: Percentage of Adults Classified as a Binge or Heavy Drinker by Age Group, Washoe County, 2016

Fig 110: Percentage of Adults Classified as a Binge or Heavy Drinker by Race & Ethnicity, Washoe County, 2016

Fig 111: Percentage of Adults Classified as a Binge or Heavy Drinker by Educational Attainment, Washoe County, 2016

1.10 SUBSTANCE USE

Nevada and Washoe County: Nevada Office of Public Health Informatics and Epidemiology. Nevada Behavioral Risk Factor Surveillance Survey (BRFSS). Data provided upon request. Carson City, NV.
United States: Centers for Disease Control and Prevention. BRFSS Prevalence and Trends Data query tool, Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

Table 106-Table 107 Same Source

Table 106: Percent of High School Students who ever used Marijuana*, 2013 & 2015

Table 107: Percent of High School Students who Currently use Marijuana*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 108: Percent of College Students who Currently use Marijuana*, 2010, 2012, 2014, & 2016

Washoe County (UNR): American College Health Assessment-National College Health Assessment II data for Spring of 2010, 2012, 2014, and 2016. Unpublished data provided upon request. Reno, NV.

United States: American College Health Assessment-National College Health Assessment II Reference Group reports for Spring of 2010, 2012, 2014, and 2016. Accessed http://www.acha-ncha.org/pubs_rpts.html

Table 109: Percent of Adults who Currently Smoke Marijuana or Hash*, 2012-2016

Nevada and Washoe County: Nevada Office of Public Health Informatics and Epidemiology. Nevada Behavioral Risk Factor Surveillance Survey (BRFSS). Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention. BRFSS Prevalence and Trends Data query tool, Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

Table 110: Percent of High School Students who ever took Prescription Drugs without a Doctor's Prescription*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Fig 112: Use of Prescription Drugs in the Past Year* Among College Students, Washoe County & the United States, 2010, 2012, 2014, & 2016

Washoe County (UNR): American College Health Assessment-National College Health Assessment II data for Spring of 2010, 2012, 2014, and 2016. Unpublished data provided upon request. Reno, NV.

United States: American College Health Assessment-National College Health Assessment II Reference Group reports for Spring of 2010, 2012, 2014, and 2016. Accessed http://www.acha-ncha.org/pubs_rpts.html

Table 111-Table 116 Same Source

Table 111: Percent of High School Students who ever used Synthetic Marijuana*, 2013 & 2015

1.10 SUBSTANCE USE

Table 112: Percent of High School Students who ever used Ecstasy*, 2013 & 2015

Table 113: Percent of High School Students who ever used Cocaine*, 2013 & 2015

Table 114: Percent of High School Students who ever used Inhalants*, 2013 & 2015

Table 115: Percent of High School Students who ever used Methamphetamines*, 2013 & 2015

Table 116: Percent of High School Students who ever used Heroin*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 117: Needing but Not Receiving Treatment* Among Persons 12 Years & Older, Annual Average 2012, 2013, 2014 Combined
Substance Abuse and Mental Health Services administration. Population Data/NSDUH. Substate/Metro 2012-2014 NSDUH Substate Region Estimates –Excel Tables and CSV Files. Accessed <https://www.samhsa.gov/data/population-data-nsduh/reports>

Fig 113-Fig 122 Same Source

Fig 113: Hospitalization Rate Due to Opioid Poisoning, Washoe County & Nevada, 2007-2015

Fig 114: Hospitalization Rate Due to Opioid Poisoning by Sex, Washoe County, 2007-2015

Fig 115: Hospitalization Rate Due to Opioid Poisoning by Race/Ethnicity, Washoe County, 2008-2015

Fig 116: Age-adjusted Rate of Death Due to Alcohol-related Causes, Washoe County & Nevada, 2006-2015

Fig 117: Age-adjusted Rate of Death Due to Alcohol-related Causes by Sex, Washoe County, 2006-2015

Fig 118: Age-adjusted Rate of Death Due to Alcohol-related Causes by Race/Ethnicity, Washoe County, 2006-2015

Fig 119: Age-adjusted Rate of Death Due to Prescription Drugs, Washoe County & Nevada, 2006-2015

Fig 120: Age-adjusted Rate of Death Due to Prescription Drugs by Age Group, Washoe County, 2006-2015

Fig 121: Age-adjusted Rate of Death Due to Illicit Drugs, Washoe County & Nevada, 2006-2015

Fig 122: Age-adjusted Rate of Death Due to Illicit Drugs by Sex, Washoe County, 2006-2015

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Mental Health

Mental health involves a person’s physical, emotional, and psychological well-being, and encompasses how a person copes with stress, how they respond towards unexpected events in their life, and how they engage socially with others. Mental health can impact physical health in various ways; stress and related anxiety for example, can cause stomachaches, headaches, lack of appetite, trouble sleeping, as well as unexplained increases or decreases in energy levels.¹⁰⁵ Chronic stress elevates cortisol levels in the blood stream which increases blood sugar, and inhibits memory and immune system function.¹⁰⁶ Additionally, chronic stress and cumulative stress has been shown to be associated with diagnosable mental illnesses such as depression and other psychiatric disorders.¹⁰⁷

Some types of mental illness may not produce symptoms such as fevers, or other visible physical signs, but instead are subjective and measured only by the person experiencing the condition. Any type of mental illness can be challenging to recognize, especially for someone not familiar with a person’s normal behavior.

The comorbidity of substance use disorders and mental illness are collectively referred to as behavioral health. This assessment contains a separate Substance Use section therefore this section encompasses only those indicators related to mental health and mental illness. Conditions involving mental impairment, such as developmental or intellectual disabilities, were not included.

Indicator	Trend	Most Recent Year
Depression & Mental Illness		
Adolescents that felt sad or hopeless	~	33.5% (2015)
Poor mental health among adults 18+ years	Increasing	14.1% 14+ poor mental health days (2016)
Depression among adults 18+ years	Decreasing	15.1% (2016)
Any mental illness among adults 18+ years	~	18.66% (2012-2014 aggregate data)
Serious mental illness among adults 18+ years	~	4.52% (2012-2014 aggregate data)
Major depressive episodes among adults 18+ years	~	6.36% (2012-2014 aggregate data)
Adolescents that lived with someone with depression, mentally ill, or suicidal	~	32.8% (2015)
Suicide		
Adolescents that seriously considered suicide	~	18.8% (2015)
Adolescents that attempted suicide	~	11.7% (2015)
Mortality rate due to suicide	STABLE	22.5 per 100,000 (2015)
~ not able to assess for trend		

¹⁰⁵ National Alliance on Mental Illness. Know the Warning Signs. Accessed <https://www.nami.org/Learn-More/Know-the-Warning-Signs>

¹⁰⁶ Kiecolt-Glaser, J.K., McGuire, L., Robles, T.F., and Glaser, R. (2002). Psychoneuroimmunology: Psychological influences on Immune Function and Health. *Journal of Consulting and Clinical Psychology*, 70(3), 537-47.

¹⁰⁷ Thoits, P.A. (2010). Stress and Health: Major findings and policy implications. *Journal of Health and Social Behavior*, 51(S) S41-S53.

1.11 MENTAL HEALTH

Depression & Mental Illness

Table 118: Percent of High School Students who felt Sad or Hopeless*, 2013 & 2015

Location	2013	2015
Washoe County	34.0%	33.5%
Nevada	31.7%	34.5%
United States	29.9%	29.9%

*almost every day for 2 or more weeks in a row so they stopped doing usual activities during the 12 months before the survey

- The percentage of high school students in Washoe County that reported having felt sad or hopeless for 2+ weeks in the past year slightly decreased from 2013 (34.0%) to 2015 (33.5%).
- In 2015, the percentage of high school students in Washoe County that reported having felt sad or hopeless for 2+ weeks in the past year (33.5%), was higher than Nevada (34.5%) and the United States (29.9%).

Table 119: Poor Mental Health days* among Adults in Washoe County, 2012-2016

Number of poor mental health days	2012	2013	2014	2015	2016
None	61.3%	61.0%	60.9%	59.0%	60.1%
1-13 days	25.6%	25.6%	26.5%	27.0%	25.8%
14 or more	13.1%	13.4%	12.7%	14.0%	14.1%

*in the past 30 days

Table 120: Poor Mental Health days* among Adults in Nevada, 2012-2016

Number of poor mental health days	2012	2013	2014	2015	2016
None	62.0%	65.1%	66.4%	64.1%	63.5%
1-13 days	23.5%	22.0%	21.7%	23.1%	22.4%
14 or more	14.5%	12.9%	12.0%	12.8%	14.2%

*in the past 30 days

- The percentage of adults in Washoe County that reported zero poor mental health days in the past month decreased from 2012 (61.3%) to 2016 (60.1%) and in 2016, was lower than Nevada (63.5%)
- The percentage of adults in Washoe County that reported between 1 and 13 days of poor mental health in the past month increased slightly from 2012 (25.6%) in 2012 to in 2016 (25.8%) and in 2016, was higher than Nevada (22.4%).
- The percentage of adults in Washoe County that reported 14 or more poor mental health days in the past month increased from 2012 (13.1%) to 2016 (14.1%) and in 2016, was slightly lower than Nevada (14.2%).

Table 121: Percent of Adults that had ever Been Told they had a Depression Disorder*, 2012-2016

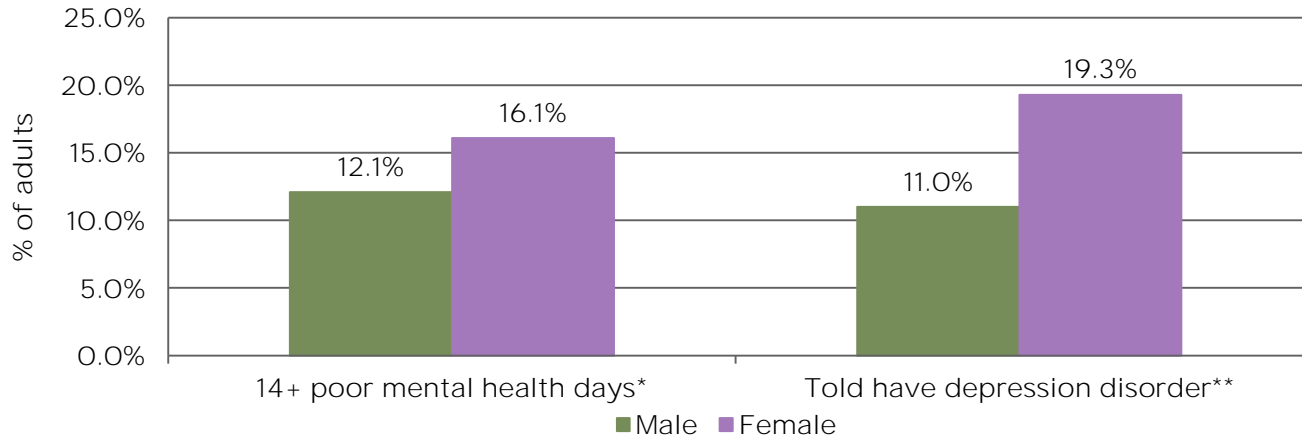
Location	2012	2013	2014	2015	2016
Washoe County	18.8%	16.2%	16.3%	16.6%	15.1%
Nevada	16.3%	17.6%	15.6%	16.6%	17.2%

*including depression, major depression, dysthymia, or minor depression

- The percentage of adults in Washoe County that reported they had ever been told they had a major depression disorder decreased from 2012 (18.8%) to 2016 (15.1%).
- In 2016 the percentage of adults Washoe County that reported they had ever been told they had a major depression disorder (15.1%), was lower for the first time from 2012 through 2015 than Nevada (17.2%).

1.11 MENTAL HEALTH

Fig 123: Poor Mental Health & Depression among Adults by Sex, Washoe County, 2016

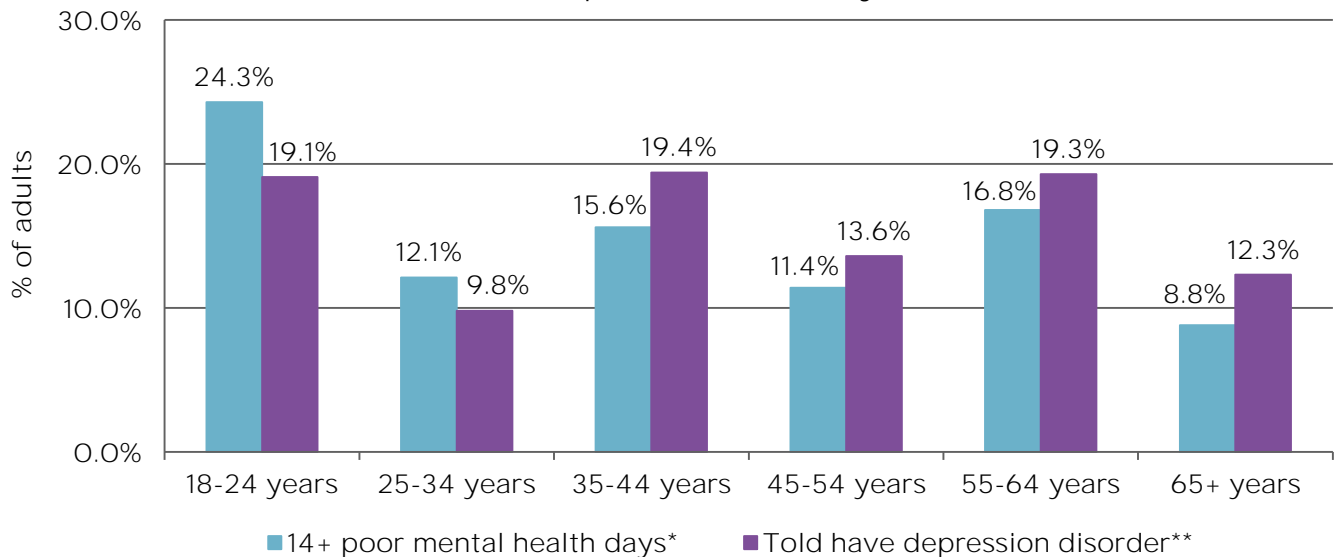


*in the past 30 days

** including depression, major depression, dysthymia, or minor depression

- Females in Washoe County had a higher prevalence of 14 or more poor mental health days in the month prior (16.1%) compared to males (12.1%).
- A higher percentage of females also reported they had been told they have a depression disorder (19.3%) compared to males (11.0%).

Fig 124: Poor Mental Health & Depression among Adults by Age Group, Washoe County, 2016



*in the past 30 days

** including depression, major depression, dysthymia, or minor depression

- Nearly one in four adults 18-24 years of age reported 14 or more poor mental health days (24.3%), while adults 65 years and older had the lowest reported percentage of 14 or more poor mental health days (8.8%) among all age groups.
- In 2016, nearly one in five adults aged 18-24 years (19.1%), adults 35-44 years (19.4%), and adults 55-64 years (19.3%) reported they have a depression disorder.

1.11 MENTAL HEALTH

Table 122: Prevalence of Mental Illness, Serious Mental Illness, & Major Depressive Episode in the past year among Adults 18+ years, 2012-2014 Aggregate Data

Behavioral Health Issue	Washoe County	Nevada	United States
Any mental illness *	18.66%	18.30%	18.39%
Serious mental illness**	4.52%	4.33%	4.13%
Major depressive episode†	6.36%	6.34%	6.71%

*diagnosable mental, behavioral, or emotional disorder other than a developmental or substance use disorder
 **SMI includes individuals with a diagnosis resulting in a serious functional impairment
 †at least 2 weeks when an individual experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms

- The percentage of adults 18 years and older in Washoe County reported to have had any mental illness in the past year (18.66%) was similar to, but slightly higher than both Nevada (18.30%) and the United States (18.39%).
- The percentage of adults 18 years and older in Washoe County reported to have had a serious mental illness, resulting in a serious functional impairment, in the past year (4.52%) was similar to, but slightly higher than both Nevada (4.33%) and the United States (4.13%).
- The percentage of adults 18 years and older in Washoe County reported to have had a major depressive episode in the past year (6.36%) was similar to Nevada (6.34%) and slightly lower than the United States (6.71%).

Table 123: Percent of High School Students that ever lived with Someone that was Depressed, Mentally ill, or Suicidal, 2015

Location	2015
Washoe County	32.8%
Nevada	30.4%

- In 2015, the percentage of high school students in Washoe County that reported having ever lived with someone that was depressed, mentally ill, or suicidal was higher (32.8%) than Nevada (30.4%).

Suicide

Table 124: Percent of High School Students who Seriously Considered Attempting Suicide*, 2013 & 2015

Location	2013	2015
Washoe County	20.9%	18.8%
Nevada	19.3%	17.7%
United States	17.0%	17.7%

*during the 12 months before the survey

- The percentage of high school students in Washoe County that seriously considered attempting suicide in the past year decreased from 2013 (20.9%) to 2015 (18.8%).
- In 2015, the percentage of high school students in Washoe County that seriously considered attempting suicide in the past year was higher (18.8%) than Nevada (17.7%) and the United States (17.7%).

Table 125: Percent of High School Students who Attempted Suicide*, 2013 & 2015

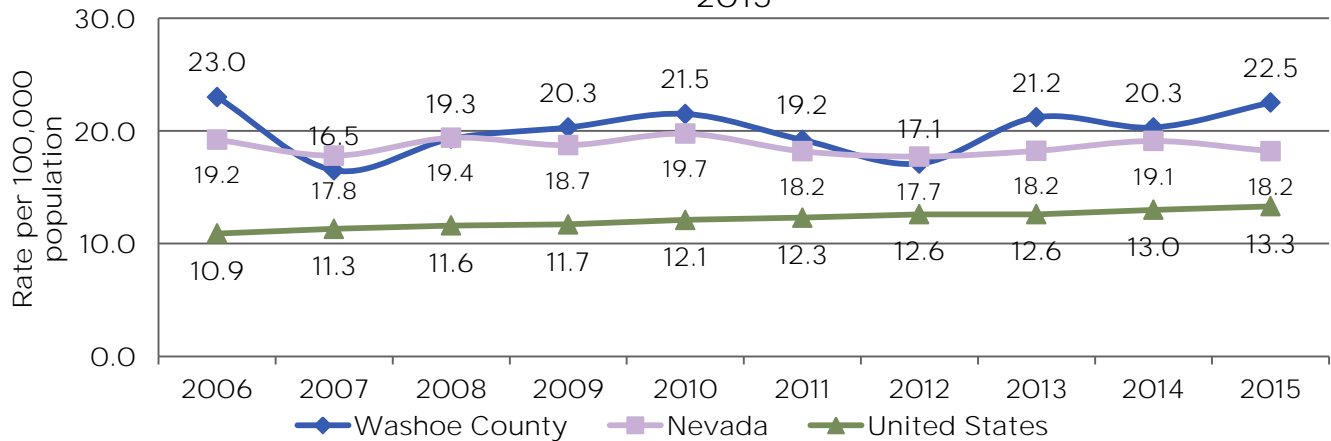
Location	2013	2015
Washoe County	13.7%	11.7%
Nevada	11.8%	9.8%
United States	8.0%	8.6%

*one or more times in the 12 months before the survey

1.11 MENTAL HEALTH

- The percentage of high school students in Washoe County that attempted suicide in the past year decreased from 2013 (13.7%) to 2015 (11.7%).
- In 2015, the percentage of high school students in Washoe County that attempted suicide in the past year was higher (11.7%) than Nevada (9.8%) and the United States (8.6%).

Fig 125: Age-adjusted Rate of Death Due to Suicide/Intentional Self Harm, Washoe County, Nevada, & the United States, 2006-2015



- The rate of suicide among Washoe County residents has remained relatively stable from 2006 (23.0 per 100,000) through 2015 (22.5 per 100,000).
- In 2015, the rate of suicide among Washoe County residents (22.5 per 100,000) was higher than Nevada (18.2 per 100,000) and the United States (13.3 per 100,000).

Primary Survey Data Related to Mental Health

Primary data were collected via an online community survey from over 1,400 survey participants. The survey included 44 questions and analyses for questions related to mental health are provided within this section. Results and findings from the online community survey are not intended to be applied to or descriptive of all Washoe County residents and only represent the survey respondents themselves. Overall, the online community survey respondents were slightly younger, proportionally less Hispanic, and had higher educational attainment relative to the general Washoe County population. For complete survey methodology and participant demographics refer to the Contents, Methodology, & Community Survey Demographics section.

Stress involves the brain and body's physical responses to a demand such as work, school, life changes, traumatic events, or even exercise. Stress can be chronic stemming from a routine daily occurrence such as rush hour traffic or a poor relationship with co-workers, friends or family, or stress can be brought on by a sudden event such as bad news, illness, assault, or natural disasters.

Not all types of stress are bad, for example, when faced with a perceived threat, a person's body undergoes physical changes - the pulse quickens delivering more oxygen and blood to the brain and organs and muscles tense up to prepare for action. The body's short-term instinctive responses to stress may be lifesaving

and bodily functions quickly return to normal levels after danger has passed. In modern time, humans are not usually faced with fight or flight conditions, but instead are coping with long-term stressors. Long-term or chronic stress results in impaired immune, cardiovascular, and digestive systems causing an inability to sleep, headaches, prolonged high blood pressure, heart disease, obesity, and diabetes. Stress also drives mental health disorders including depression and anxiety.^{108,109} Stress can be managed to a certain extent through a variety of healthy coping mechanisms including recognizing stressors and preparing, engaging in physical activity, meditation, goal setting, or connecting with close friends or family.

The community survey contained a series of four questions to assess for perceived stress. The respondents were asked the frequency they felt each of the following questions on a scale from “never”, “almost never”, “sometimes”, “fairly often”, to “very often”.

Question 1: “Within the last month, how often have you felt that you were unable to control important things in your life?”

Question 2: “Within the last month, how often have you felt difficulties were piling up so high that you could not overcome them?”

Question 3: “Within the last month, how often have you felt confident about your ability to handle your personal problems?”

Question 4: “Within the last month, how often have you felt that things were going your way?”

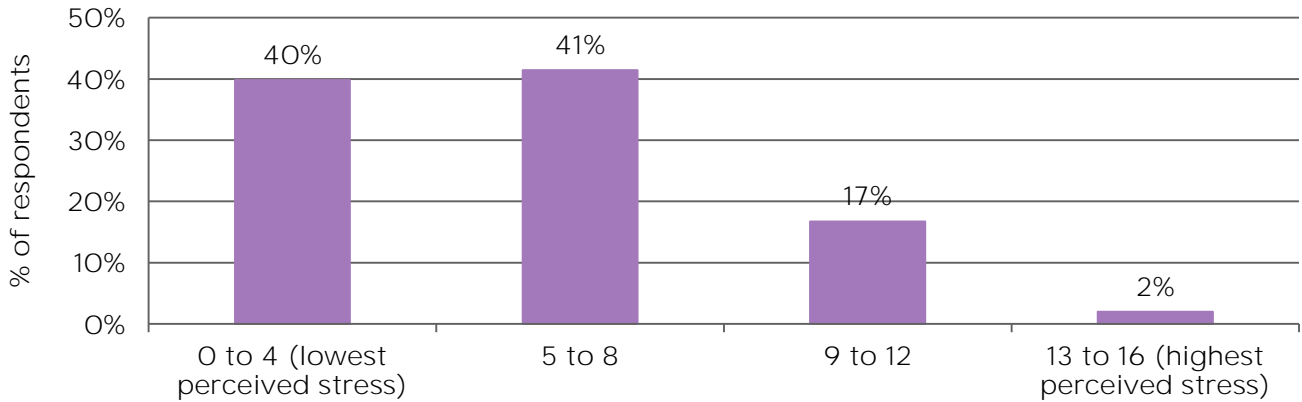
Scoring: The first and second questions were scored in ascending order meaning, “never” scored a “0” and a “very often” response was scored as “5”. The third and fourth questions were scored in descending order meaning, “never” scored a “5” and a “very often” response was scored as “0”. The higher the total score indicates a higher level of perceived stress. Total scores were calculated for only those participants that responded to all four questions in order to assess a true score.

The overall average perceived stress score was a 5.51 among the 1,358 respondents that answered all four questions.

¹⁰⁸ National Institutes of Health. 5 Things You Should Know About Stress. Accessed <https://www.nimh.nih.gov/health/publications/stress/index.shtml>

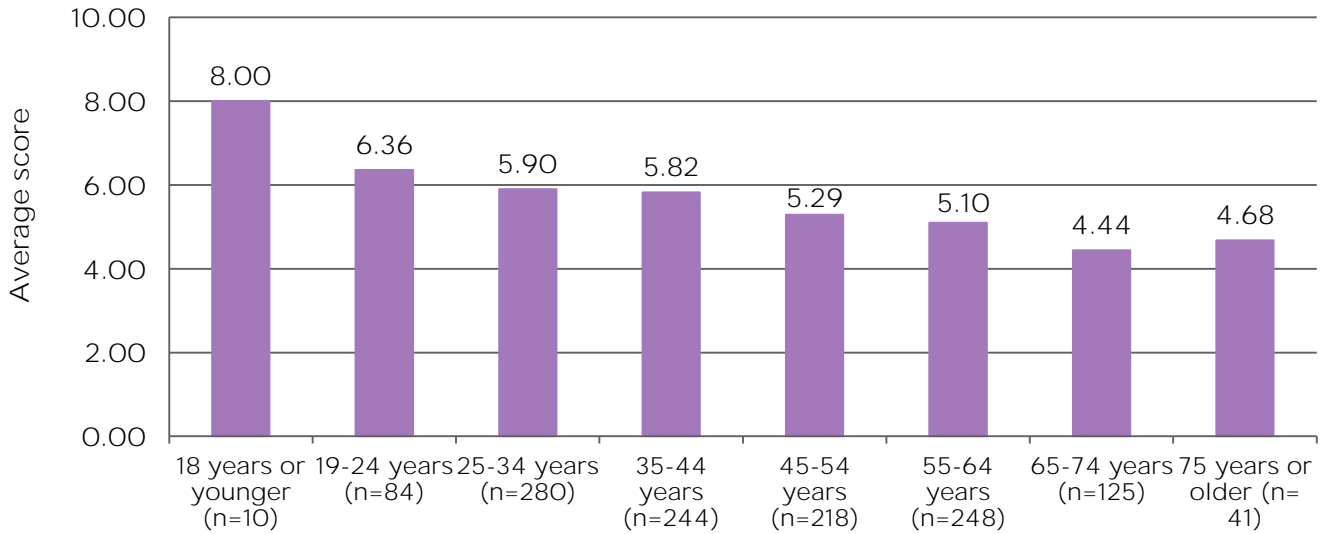
¹⁰⁹ American Institute of Stress. Stress Effects. Accessed <https://www.stress.org/stress-effects/>

Fig 126: Overall Perceived Stress Score Ranges (n=1,358)



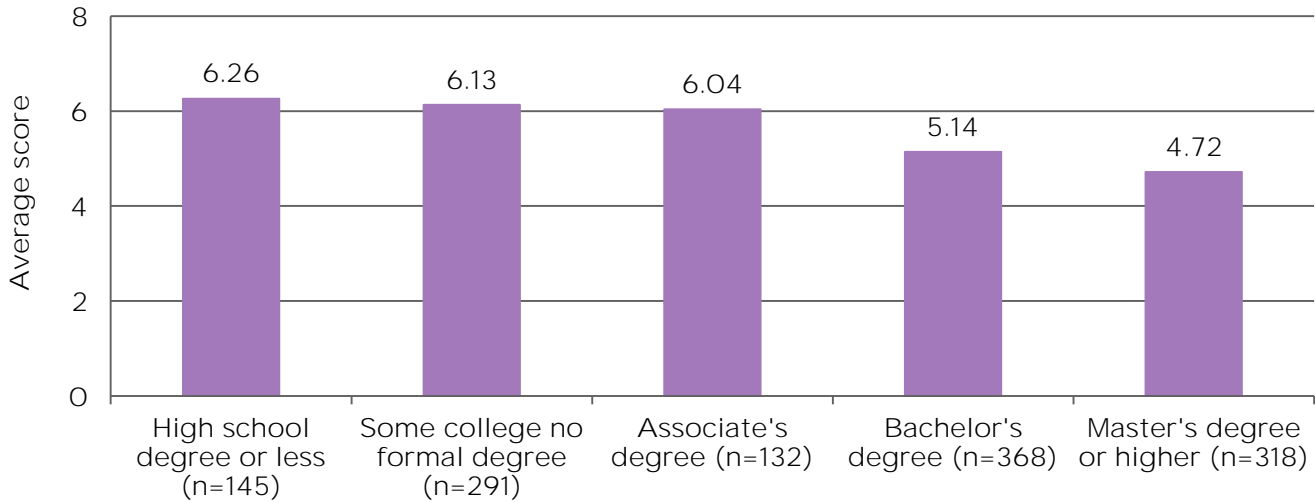
- The majority of the 1,358 respondents were on the lower end of the perceived stress score spectrum with 40% scoring a total from 0 to 4 (lowest perceived stress) and 41% scoring a total between 5 and 8.
- Only 2% of the 1,358 respondents to the four-question scale received a total score between 13 and 16 (highest perceived stress).

Fig 127: Perceived Stress Score by Age Group (n=1,250)



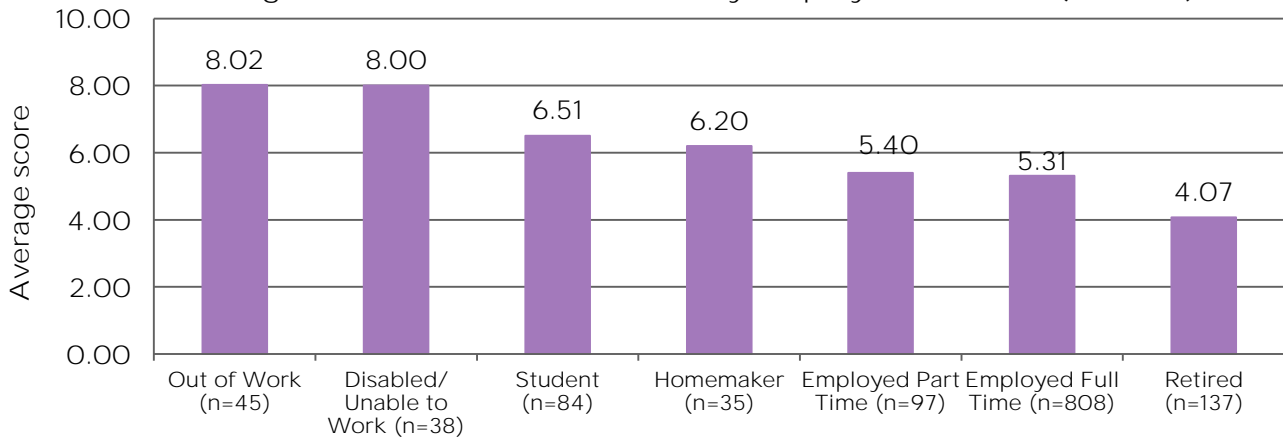
- When the average perceived stress scores were stratified by age group a clear pattern developed. As age increased, the average perceived stress score decreased.
- The mean perceived stress score among respondents 18 years and younger was 8.00, and with each increase in age group, perceived stress scores decreased, with a low score of 4.44 among those 65-74 years of age. There was a slight increase in the average perceived stress score among those 75+ years and older, 4.68.

Fig 128: Perceived Stress Scores by Educational Attainment (n=1,254)



- As educational attainment increased, the average perceived stress score decreased.
- Survey respondents that had a high school degree or less (no high school degree) had an average perceived stress score of 6.26, compared to respondents with a Master’s degree or higher (PhD, medical degree, law degree) with an average perceived stress score of 4.72.

Fig 129: Perceived Stress Score by Employment Status (n=1,244)



- There was a clear pattern in perceived stress when stratified by employment status. Those who were out of work (8.02) or unable to work (8.00) had the highest scores, followed by those who were students (6.51) or homemakers (6.20). Those with part time (5.40) or full time (5.31) employment had the second to lowest scores, while those who were retired (4.07) had the lowest perceived stress.
- This pattern is likely associated with age as well, as younger respondents had higher average perceived stress scores, while those in a retirement age bracket 65+ years had the lowest perceived stress scores.

Summary of Mental Health

In 2015 one in three high school students in Washoe County reported they felt sad or hopeless for two or more weeks (during the past year), a rate higher than Nevada and the United States. In 2016, the percentage of adults in Washoe County reporting poor mental health days was higher than Nevada and has remained relatively stable since 2012. Reportage depression disorders and 14 or more poor mental health days were higher among adult females compared to males in Washoe County. The percent of adults in Washoe County with any mental illness, a serious mental illness or a major depressive episode in the past year was slightly higher compared to Nevada and the United States, for all three conditions.

In 2015, nearly one in three (32.8%) of Washoe County high school students reported they had ever lived with someone that was depressed, mentally ill, or suicidal. In both 2013 and 2015 a higher percentage of Washoe County high school students reported considering attempting suicide and attempting suicide in the past year compared to Nevada and the United States. The mortality rate for suicide and intentional self-harm among adults remained relatively stable in Washoe County. In 2015, the mortality rate was 22.5 deaths per 100,000 population. However, this rate was higher than the overall state rate.

While stressors occur among people of all age groups, perceived stress and rates of depression appear to be more prevalent among younger adults compared to older adults in Washoe County. This may be due to generational differences, or technology such as utilization of social media, or even biological and developmental processes. Additionally chronic stress, including social and environmental stressors, contributes to poor health outcomes even among those who may not present with a clinically diagnosable mental disorder.

For detailed documents related to mental health in Washoe County refer to:

Office of Public Health Informatics and Epidemiology, Division of Public and Behavioral Health, Department of Health and Human Service's Washoe County Behavioral Health Summary
<http://dpbh.nv.gov/uploadedFiles/dpbhnavgov/content/Programs/OPHIE/dta/Publications/Washoe%20County%20BH%20Report%2008.16.pdf>

Mental Health Sources

Table 118: Percent of High School Students who felt Sad or Hopeless*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.
 Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.
 Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.
 Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.
 United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

1.11 MENTAL HEALTH

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 119-Table 121; Fig 123-Fig 124 Same Source

Table 119: Poor Mental Health days* among Adults in Washoe County, 2012-2016

Table 120: Poor Mental Health days* among Adults in Nevada, 2012-2016

Table 121: Percent of Adults that had ever Been Told they had a Depression Disorder*, 2012-2016

Fig 123: Poor Mental Health & Depression among Adults by Sex, Washoe County, 2016

Fig 124: Poor Mental Health & Depression among Adults by Age Group, Washoe County, 2016

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. 2012-2016 Nevada BRFSS Data. Data provided upon request. Carson City, NV.

Table 122: Prevalence of Mental Illness, Serious Mental Illness, & Major Depressive Episode in the past year among Adults 18+ years, 2012-2014 Aggregate Data

Substance Abuse and Mental Health Services Administration. Population Data/NSDUH. Substate/Metro 2012-2014 NSDUH Substate Region Estimates –Excel Tables and CSV Files. Accessed <https://www.samhsa.gov/data/population-data-nsduh/reports>

Table 123-Table 125 Same Source

Table 123: Percent of High School Students that ever lived with Someone that was Depressed, Mentally ill, or Suicidal, 2015

Table 124: Percent of High School Students who Seriously Considered Attempting Suicide*, 2013 & 2015

Table 125: Percent of High School Students who Attempted Suicide*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 118 –Table 120; Fig 118-Fig 119 SAME SOURCE

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. 2012-2016 Nevada BRFSS Data. Data provided upon request. Carson City, NV.

Fig 125: Age-adjusted Rate of Death Due to Suicide/Intentional Self Harm, Washoe County, Nevada, & the United States, 2006-2015

Nevada & Washoe County: Nevada Office of Public Health Informatics and Epidemiology. Data provided up on request. Carson City, NV.

United States: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2015 on CDC WONDER Online Database, released December, 2016. Data are from the Multiple Cause of Death Files, 1999-2015, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html>

Following Figures from the Online Community Survey

Fig 126: Overall Perceived Stress Score Ranges (n=1,358)

Fig 127: Perceived Stress Score by Age Group (n=1,250)

Fig 128: Perceived Stress Scores by Educational Attainment (n=1,254)

Fig 129: Perceived Stress Score by Employment Status (n=1,244)

Sexual Health

Sexual health encompasses physical, mental, emotional, and social well-being in relation to sex and sexuality. Poor sexual health outcomes include discrimination based on gender identity, as well as sexually transmitted infections and diseases, unintended pregnancy, and certain types of cancer. Sexual violence (rape and assault) and physical dating violence are also measures of sexual health; however, those data are presented in the Crime & Violent-Related Behaviors section.

Indicator	Trend	Most Recent Year
<i>Sexually Transmitted Infections & Diseases</i>		
Chlamydia	Increasing	493.0 per 100,000 population (2016)
Gonorrhea	Increasing	13.40 per 100,000 population (2016)
Syphilis, primary & secondary	Increasing	7.3 per 100,000 population (2016)
HIV	STABLE	9.6 per 100,000 population (2016)
<i>Sexual Health Behaviors</i>		
Ever had sexual intercourse-Adolescents	~	40.8% (2015)
Currently sexually active-Adolescents	~	29.8% (2015)
Used condom last time sexually active-Adolescents	~	53.6% (2015)
No method used to prevent pregnancy-Adolescents	~	12.2% (2015)
Teen birth rates among females aged 15-19 years	Decreasing	21.9 per 1,000 females (2016)
~not able to assess for trend		

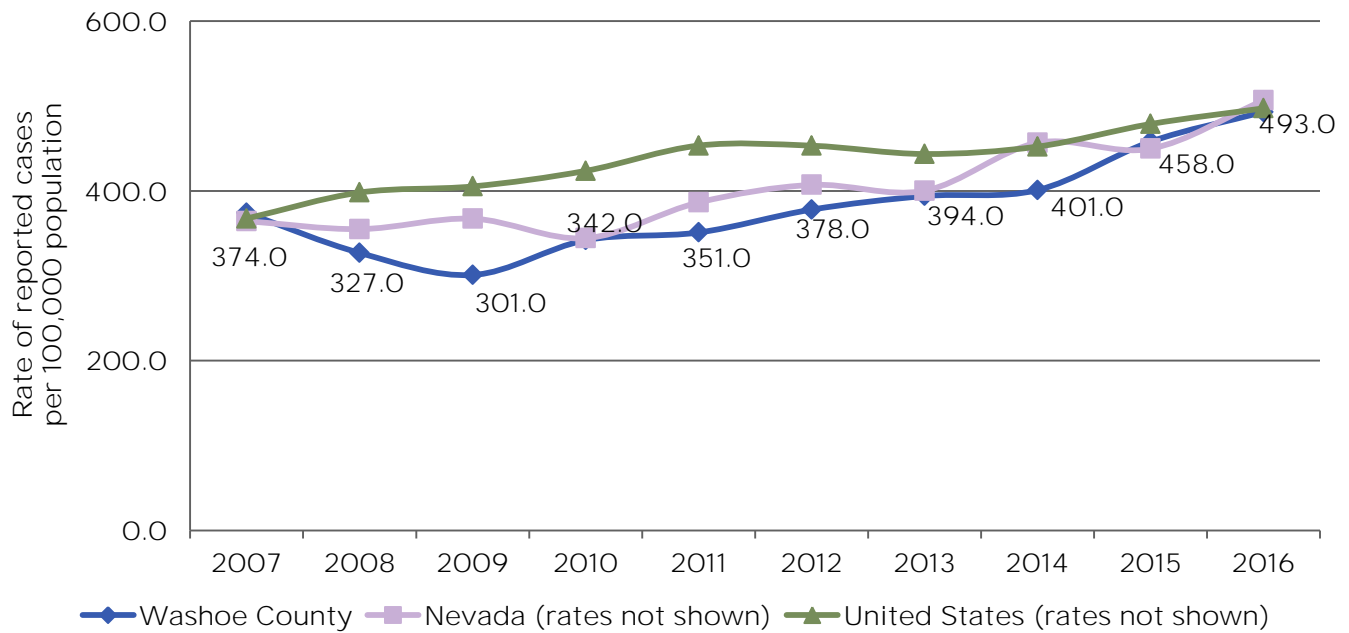
1.12 SEXUAL HEALTH

Sexually Transmitted Infections & Diseases

Chlamydia

Chlamydia trachomatis is the most frequently reported infectious disease in the United States, and is the most common sexually transmitted infections. Chlamydia is transmitted through vaginal, anal, and oral sexual intercourse and can be passed to a fetus during childbirth, which can lead to blindness and pneumonia of the infant. If left untreated, chlamydia can result in pelvic inflammatory disease (PID), a major cause of infertility, ectopic pregnancy, and chronic pelvic pain. Chlamydia is treatable with antibiotics; however continued intercourse with a partner who is also infected and not also treated, may result in repeated infections.¹¹⁰

Fig 130: Rate of Reported Cases of Chlamydia, Washoe County, Nevada, & the United States, 2007-2016



- The rate of reported cases (per 100,000 population) of chlamydia in Washoe County have increased steadily each year from 2009 through 2016.
- In 2016, the rate of reported cases of chlamydia in Washoe County (493.0 per 100,000) was lower than Nevada (506.7 per 100,000) and the United States (497.3 per 100,000).

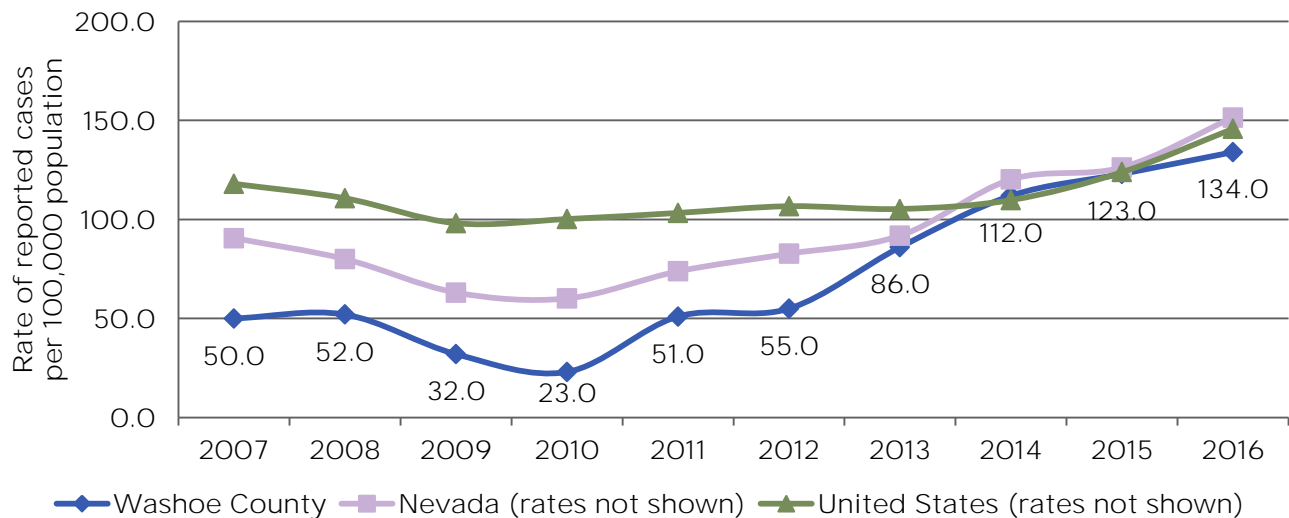
¹¹⁰ Centers for Disease Control and Prevention. (2014). Chlamydia –CDC Fact Sheet. Accessed <https://www.cdc.gov/std/chlamydia/stdfact-chlamydia.htm>

1.12 SEXUAL HEALTH

Gonorrhea

Gonorrhea is caused by *Neisseria gonorrhoeae*, and is the second most prevalent sexually transmitted disease in the United States. Similar to chlamydia, Gonorrhea is also transmitted through vaginal, anal, and oral sexual intercourse and can be passed to a fetus during childbirth. If left untreated, gonorrhea can result in serious and permanent health issues, including infertility in both men and women. Gonorrhea can spread to the uterus or fallopian tubes causing pelvic inflammatory disease, and can also spread to the blood stream resulting in an infection which can cause arthritis, tenosynovitis, or dermatitis.¹¹¹ Although gonorrhea can be treated, antibiotic-resistant strains have been emerging and gonorrhea is now resistant to penicillin, tetracycline, sulfanilamides, and fluoroquinolones, leaving one effective class of antibiotics (cephalosporins) available.¹¹²

Fig 131: Rate of Reported Cases of Gonorrhea, Washoe County, Nevada, & the United States, 2007-2016



- From 2007 through 2013, the rate of reported cases (per 100,000 population) of gonorrhea in Washoe County was lower than the rates reported in Nevada and the United States.
- The rate of gonorrhea in Washoe County has more than quadrupled since 2011; however, in 2016 was lower (134.0 per 100,000) than Nevada (151.5 per 100,000) and the United States (145.8 per 100,000).

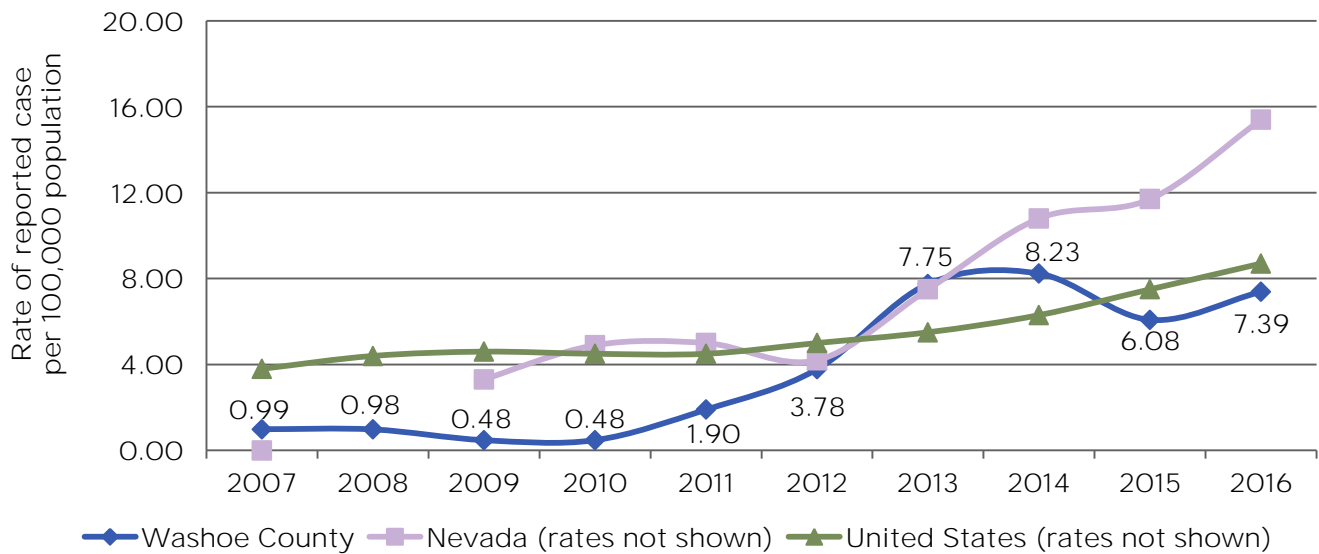
¹¹¹ Centers for Disease Control and Prevention. (2016). Gonorrhea-CDC Fact Sheet (Detailed Version). Accessed <https://www.cdc.gov/std/gonorrhea/stdfact-gonorrhea-detailed.htm>

¹¹² Centers for Disease Control and Prevention. (2013). Antibiotic-Resistance Gonorrhea Basic Information. Accessed <https://www.cdc.gov/std/gonorrhea/arg/basic.htm>

Primary & Secondary Syphilis

Syphilis is a complex STD caused by *Treponema palladium*. The primary and secondary stages of Syphilis are both contagious, while late latent stage (infection for more than one year) and tertiary syphilis are not. Symptoms of the primary stage of syphilis include a single chancre which is usually firm, round, small, and painless, typically lasting 3-6 weeks. The secondary stage is marked by a rough, red or reddish-brown rash on the trunk and extremities, swollen lymph nodes, fever, and some may experience patchy hair loss. Both the primary and secondary stages of syphilis may be asymptomatic, however if left untreated can progress to the latent and tertiary stages. Latent syphilis can affect the heart, brain, and other organs. All stages of syphilis can be treated; however treatment cannot reverse any damage to tissues or nerves.¹¹³

Fig 132: Rate of Reported Cases of Primary & Secondary Syphilis, Washoe County, Nevada, & the United States, 2007-2016



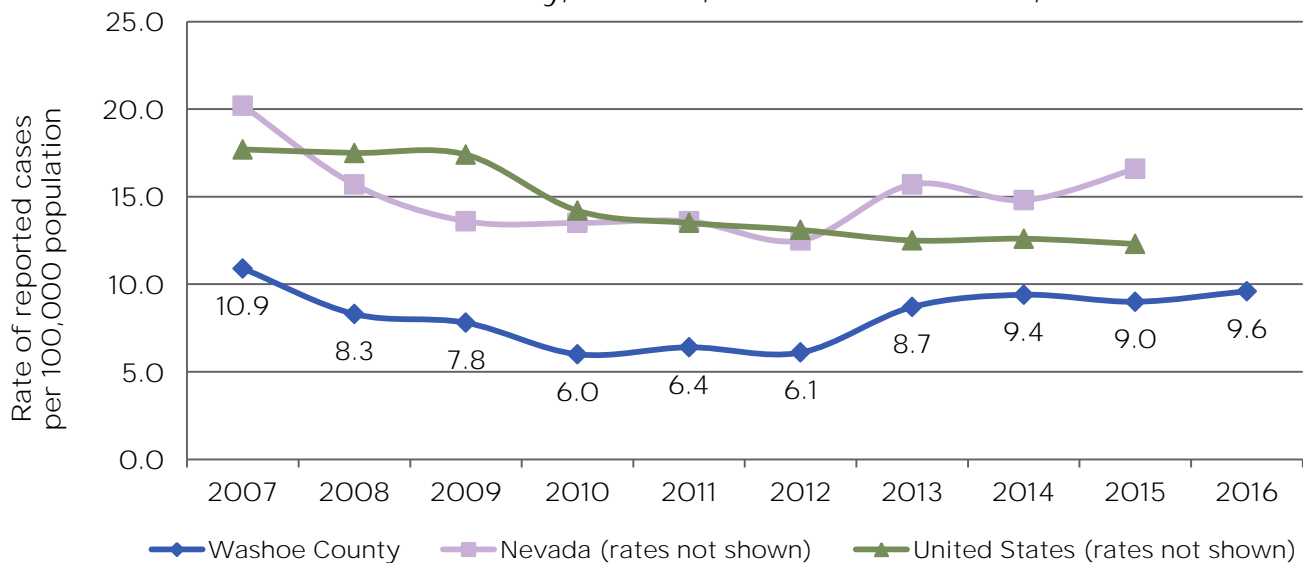
- From 2007 through 2012 the rate of reported cases (per 100,000 population) of primary and secondary syphilis in Washoe County were lower than Nevada and the United States.
- Washoe County experienced nearly double the rate of reported cases of primary and secondary syphilis from 2012 (3.78 per 100,000 population) to 2013 (7.75 per 100,000 population) and rates have remained high.
- In 2016, the rate of reported cases of primary and secondary syphilis in Washoe County (7.39 per 100,000) were lower than Nevada (15.4 per 100,000) and the United States (8.7 per 100,000).

¹¹³ Centers for Disease Control and Prevention. (2017). Syphilis-CDC Fact Sheet. Accessed <https://www.cdc.gov/std/syphilis/stdfact-syphilis.htm>

Human Immunodeficiency Virus (HIV)

Infection of Human Immunodeficiency Virus (HIV) leads to the development of Acquired Immune Deficiency Syndrome (AIDS). HIV is a virus which attacks the body's immune system, specifically CD4 or T-cells, and overtime results in the body being unable to fight off infections and diseases. A CD4 cell count of 200 cells/mm or less meets the diagnostic criteria for AIDS. Once a person has been diagnosed with AIDS, they are more likely to develop rare diseases and cancers, typically referred to as opportunistic infections. HIV is primarily transmitted through unprotected vaginal or anal intercourse, sharing of needles (including piercing and tattoo equipment), or equipment used to prepare and inject intravenous drugs. HIV can also be transmitted from mothers to infants during pregnancy, birth, or breastfeeding. Although there is no vaccine or cure for HIV, there have been new developments such as pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP), which when taken appropriately may reduce the likelihood of infection after a possible recent exposure (72 hours or less).¹¹⁴

Fig 133: Rate of Reported Newly Diagnosed HIV Infection, Washoe County, Nevada, & the United States, 2007-2016



- The rate of reported cases of newly diagnosed HIV infection in Washoe County decreased from 2007 (10.9 per 100,000) to 2016 (9.6 per 100,000).
- The rate of reported cases of newly diagnosed HIV infection in Washoe County has remained lower than Nevada and the United States from 2007 through 2015.

¹¹⁴ Centers for Disease Control and Prevention. (2017). HIV Basics. Accessed <https://www.cdc.gov/hiv/basics/index.html>

1.12 SEXUAL HEALTH

Sexual Health Behaviors

Table 126: Percent of High School Students who had ever had Sexual Intercourse, 2013 & 2015

Location	2013	2015
Washoe County	47.0%	40.8%
Nevada	43.0%	38.5%
United States	46.8%	41.2%

- The percentage of high school students in Washoe County who reported they had ever had sexual intercourse decreased from 2013 (47.0%) to 2015 (40.8%).
- In 2015, the percentage of high school students in Washoe County who had ever been sexually active was slightly higher than Nevada (38.5%), and slightly lower than the United States (41.2%).

Table 127: Percent of High School Students who are Currently Sexually Active*, 2013 & 2015

Location	2013	2015
Washoe County	29.1%	29.8%
Nevada	28.2%	27.1%
United States	34.0%	30.1%

*sexual intercourse with at least one person during the 3 months before the survey

- The percentage of high school students in Washoe County who reported they currently sexually active remained relatively stable from 2013 (29.1%) to 2015 (29.8%).
- In 2015, the percentage of high school students in Washoe County (29.8%) who reported they were currently sexually active was higher than Nevada (27.1%), and slightly lower than the United States (30.1%).

Table 128: Percent of High School Students who used a Condom*, 2013 & 2015

Location	2013	2015
Washoe County	53.2%	53.6%
Nevada	56.4%	56.9%
United States	59.1%	56.9%

*they or their partner used a condom during last sexual intercourse among those who were currently sexually active

- In 2015, just over half (53.6%) of sexually active high school students reported wearing a condom during last sexual intercourse in Washoe County. This remained relatively stable from 2013 to 2015.
- In 2015, the percentage of high school students in Washoe County (53.6%) who reported wearing a condom during their last sexual intercourse was lower than both Nevada (56.9%) and the United States (56.9%).

Table 129: Percent of High School Students who did not use any Method to Prevent Pregnancy*, 2013 & 2015

Location	2013	2015
Washoe County	18.7%	12.2%
Nevada	18.2%	12.4%
United States	13.7%	13.8%

* during last sexual intercourse among those who were currently sexually active

- In 2015, 12.2% of sexually active high school students reported they did not use any method to prevent pregnancy last sexual intercourse in Washoe County.

1.12 SEXUAL HEALTH

- The percent of high school students in Washoe County who reported they did not use any method to prevent pregnancy during last sexual intercourse decreased from 2013 (18.7%) to 2015 (12.2%).
- In 2015, the percentage of high school students in Washoe County (12.2%) who reported they did not use any method to prevent pregnancy during their last sexual intercourse, was lower than both Nevada (12.4%) and the United States (13.8%).

Teen Birth Rates

Pregnant adolescent females (15 to 19 years) are considered to have higher risks for negative health outcomes related to birth, not only impacting their child’s lives, but their own as well. Teen mothers are more likely to end pregnancy in abortion and are less likely to enroll in prenatal care during pregnancy.¹¹⁵

Additionally, women who give birth during their teen years are less likely to finish high school, earn a GED, and are more likely to live in poverty.^{116,117}

Infants of teen mothers have an increased chance of being born prematurely and having a low weight at birth and therefore an increased risk for infant mortality.¹¹⁸ Children of teen mothers have 2-4 times higher mortality rates, higher rates of hospitalizations, and are less likely to finish high school than children born of non-teenaged mothers.¹¹⁹ As adults, those born to teen mothers are more likely to grow up in poverty, give birth as a teenager, have higher unemployment rates and lower rates of income and as a result, experience more health issues through all stages of life.^{120,121}

Table 130: Teen Birth Rate* among Women 15-19 years, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	30.6	28.4	29.0	27.4	21.9
Nevada	31.9	28.7	27.4	26.1	22.6
United States	29.4	26.5	24.2	22.3	~

*Birth rate per 1,000 women; ~ data not available

- The rate of births among teens aged 15-19 years in Washoe County decreased from 2012 (30.6 per 1,000) to 2016 (21.9 per 1,000); however remained higher than the United States from 2012-2015.
- In 2016, the rate of births among teens 15-19 years in Washoe County was slightly lower (21.9 per 1,000) than Nevada (22.6 per 1,000).

¹¹⁵ Nevada Division of Health and Human Service, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

¹¹⁶ Perper K., Peterson K., & Manlove J. (2010). *Diploma Attainment Among Teen Mothers*. Child Trends, Fact Sheet Publication #2010-01: Washington, DC.

¹¹⁷ Hotz V.J., McElroy S.W., & Sanders S.G. *Kids Having Kids: Economic Costs and Social Consequences of Teen Pregnancy*. Washington, DC: The Urban Institute Press; 1997

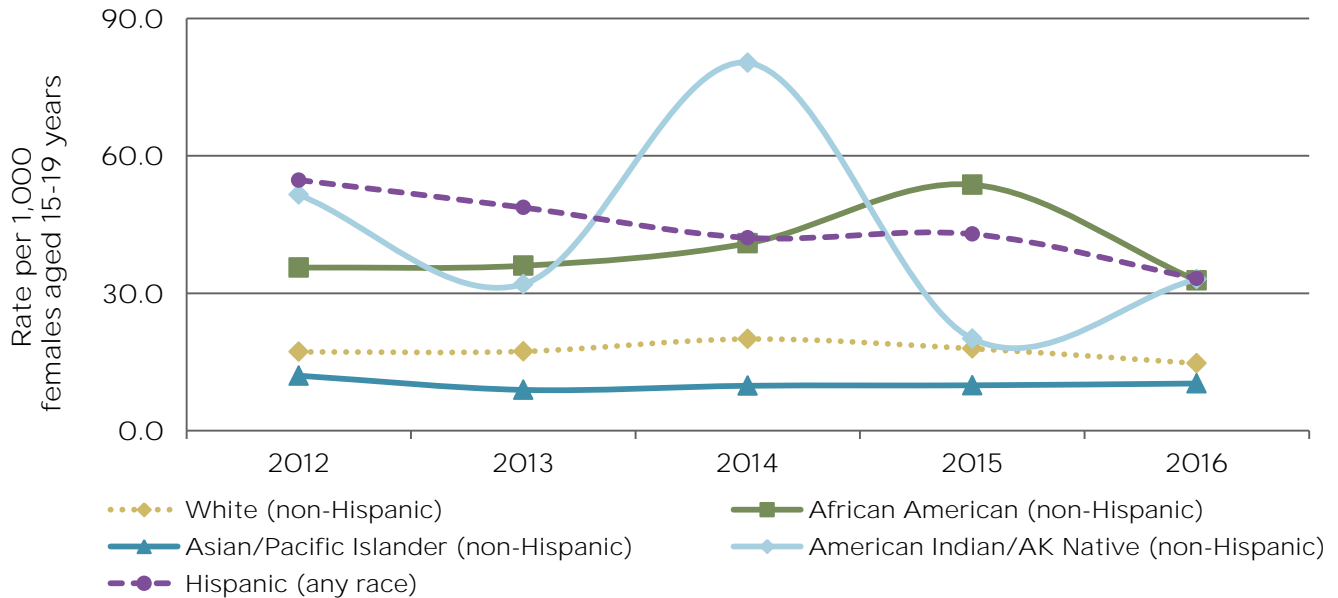
¹¹⁸ Martin J.A., Hamilton B.E., Osterman M.J.K., Curtin S.C., & Mathews T.J.. (2013). Births: Final Data for 2012. Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistic System. *National Vital Statistics Reports*; 62 (3).

¹¹⁹ Jutte, D.P., Roos, N.P., Bownell, M.D., Briggs, G. MacWilliam, L, & Roos, L.L.. (2010). The Ripples of Adolescent Motherhood: Social, Educational and Medical Outcomes for Children of Teen and Prior Teen Mothers. *Academic Pediatrics*. 10(5); 293-301.

¹²⁰ Abma, J.C., Martinez, G.M., & Copen, C.E.. Teenagers in the United States: Sexual Activity, Contraceptive Use, and Childbearing, National Survey of Family Growth 2006-2008. National Center for Health Statistics. *Vital Health Statistics* 23(30). 2010.

¹²¹ Jutte, D.P., Roos, N.P., Bownell, M.D., Briggs, G. MacWilliam, L, & Roos, L.L. (2010). The Ripples of Adolescent Motherhood: Social, Educational and Medical Outcomes for Children of Teen and Prior Teen Mothers. *Academic Pediatrics*. 10(5); 293-301.

Fig 134: Teen Birth Rate among Women 15-19 Years by Race & Ethnicity, Washoe County, 2012-2016



- Teen birth rates among females aged 15-19 years in Washoe County were higher among Hispanic and African American populations from 2012 through 2016.
- Teen birth rates among females aged 15-19 years in Washoe County were lowest among Asian/Pacific Islander and white, non-Hispanic populations from 2012 through 2016.

Summary of Sexual Health

Although historically low, the rates of reported cases of *Chlamydia* and gonorrhea in Washoe County have increased and in recent years have been nearing the state and national rates. The rates of reported primary and secondary syphilis have also increased dramatically since 2010.

In 2015, the percentage of high school students in Washoe County who reported they were ever or currently sexually active was relatively similar to the state and nation. Condom use among adolescents in Washoe County was slightly lower in Washoe County than Nevada and the United States. However, the percent of high school students reporting not using any form of birth control during their last sexual intercourse was slightly lower in Washoe County compared to Nevada and the United States. The rate of birth among teenage females in Washoe County decreased from 2012 to 2016, mirroring national trends.

The increased rates of sexually transmitted infections coupled with the low rates of teenage pregnancy may indicate a reduction in the perceived importance of condom use. With the increase in alternative forms of birth control, condom use as a form of birth control may be decreasing, which allows for spread of sexually transmitted infections. Having fewer sexual partners, wearing condoms, and obtaining regular screening and treatment reduces the risk for sexually transmitted infections. In addition to physical health, sexual health also

includes mental and social well-being in relation to sex and sexuality. The data describing sexual assault and physical dating violence are presented in the Crime & Violent-Related Behaviors Section.

Sexual Health Sources

Fig 130-Fig 132 Same Source

Fig 130: Rate of Reported Cases of Chlamydia, Washoe County, Nevada, & the United States, 2007-2016

Fig 131: Rate of Reported Cases of Gonorrhea, Washoe County, Nevada, & the United States, 2007-2016

Fig 132: Rate of Reported Cases of Primary & Secondary Syphilis, Washoe County, Nevada, & the United States, 2007-2016

Washoe County 2007-2015: Washoe County Health District. (2016). 2015 Annual Communicable Disease Summary. Reno, NV.

Washoe County 2016: Washoe County Health District, Epidemiology Program. Data provided upon request. Reno, NV.

Nevada 2007-2015: Nevada Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. (2007-2015). STD Fast Facts. Carson City, NV.

United States 2007-2015: Centers for Disease Control and Prevention. 2015 Sexually Transmitted Diseases Surveillance-Table 1. Sexually Transmitted Diseases-Reported Cases and Rates of Reported Cases per 100,000 Populations, United States, 1941-2015. Accessed <https://www.cdc.gov/std/stats15/tables/1.htm>

Nevada and United States 2016: Centers for Disease Control and Prevention. 2016 Sexually Transmitted Diseases Surveillance. Accessed <https://www.cdc.gov/std/stats16/toc.htm>

Fig 133: Rate of Reported Newly Diagnosed HIV Infection, Washoe County, Nevada, & the United States, 2007-2016

Washoe County 2007-2015: Washoe County Health District. (2016). 2015 Annual Communicable Disease Summary. Reno, NV.

Washoe County 2016: Washoe County Health District, Epidemiology Program. Data provided upon request. Reno, NV.

Nevada: Nevada Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. (All years 2007-2015). HIV/AIDS Fast Facts. Carson City, NV.

United States 2007-2009: Centers for Disease Control and Prevention. (2011). HIV Surveillance Reports, 2009; Vol. 21. Retrieved <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/>.

United States 2010-2015: Centers for Disease Control and Prevention. (2016). HIV Surveillance Reports, 2015; Vol. 27. Retrieved <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/>.

Table 126-Table 129 Same Source

Table 126: Percent of High School Students who had ever had Sexual Intercourse, 2013 & 2015

Table 127: Percent of High School Students who are Currently Sexually Active*, 2013 & 2015

Table 128: Percent of High School Students who used a Condom*, 2013 & 2015

Table 129: Percent of High School Students who did not use any Method to Prevent Pregnancy*, 2013 & 2015

Washoe County 2013: Frankenberger, D., Clements-Nolle, K., Zhang, F., Larson, S., & Yang, W. University of Nevada, Reno. (2014). 2013 Nevada Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Washoe County 2015: Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, Nevada.

Nevada 2013: Office of Public Health Informatics and Epidemiology. Division of Public and Behavioral Health. (2014). 2013 Nevada Youth Risk Behavior Survey. Carson City, Nevada.

Nevada 2015: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. (2016). 2015 Nevada High School Youth Risk Behavior Survey (YRBS). Reno, Nevada.

United States 2013: Centers for Disease Control and Prevention. (2014). Youth Risk Behavior Surveillance-United States, 2013. MMWR, 63(4) 1-168.

United States 2015: Centers for Disease Control and Prevention. (2016). Youth Risk Behavior Surveillance-United States, 2015. MMWR, 65(6) 1-174.

Table 130: Teen Birth Rate* among Women 15-19 years, 2012-2016

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Martin JA, Hamilton BE, Osterman MJK, et al. (2017). Births: Final data for 2015. National Vital Statistics Report; 66 (1). Hyattsville, MD: National Center for Health Statistics.

Fig 134: Teen Birth Rate among Women 15-19 Years by Race & Ethnicity, Washoe County, 2012-2016

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Maternal & Child Health

The health and wellbeing of mothers and their children reflect not only the current health status of the nation, but the health of future generations. Studies have found health at birth is largely influenced by socioeconomic status and not simply genetic traits. Having poor health at birth is associated with a broad range of adverse health effects across the lifespan including, reduction in the child's ability to learn, lower rates of high school graduation, higher rates of hospitalizations, and higher childhood mortality.¹²² Although teen birth rates are an indicator associated with maternal and child health, teen birth rate data are provided within the Sexual Health Section.

Indicator	Trend	Most Recent Year	HP 2020 Objective
Adverse Childhood Experiences (ACEs)	~	various	NA
KIDS COUNT rankings	Decreasing	Nevada 47 th out of 50 (2017)	NA
Children in single-parent households	Decreasing	31.9% (2016)	NA
Birth rates	STABLE	67.5 per 1,000 females 20-44 years (2016)	NA
Abortion rates	Decreasing	7.1 per 1,000 females 15-44 years (2014)	NA
Prenatal care within first trimester	Decreasing	65.8% (among women 15-44 years; 2016)	77.9% (among all pregnant women)
Preterm births	STABLE	9.3% (among women 15-44 years; 2016)	11.4% (among all pregnant women)
Low birth weight births	STABLE	7.6% (among women 15-44 years; 2016)	7.8% (among all pregnant women)
Women, Infants, Children (WIC) Enrollment	Decreasing	n = 15,957 (2016)	NA
Breastfed at 6 months-WIC client data	Increasing	22.9% (2016)	60.6%
Ever breastfed-WIC client data	Increasing	39.8% (2016)	81.9%
Infant & Child Mortality			
Infant mortality rate (<1 year)	Decreasing	5.7 per 1,000 live births (2015)	6.0 per 1,000 live births
Top 3 causes of death among infants < 1 year	~	various	NA
Child mortality rate (1-4 years)	Increasing	18.5 per 100,000 (2015)	26.5 per 100,000
Top 3 causes of death among children 1-4 years	~	various	NA
Child mortality rate (5-14 years)	Increasing	18.2 per 100,000 (2015)	NA
Top 3 causes of death among children 5-14 years	~	various	NA
~not able to assess for trend; NA= identical HP 2020 objective not available			

Adverse Childhood Experiences (ACE)

The Health Maintenance Organization (HMO) Kaiser Permanente conducted the initial Adverse Childhood Experiences (ACE) Study from 1995 to 1997. The study utilized confidential surveys regarding childhood experiences from 9,500 HMO members as well as survey respondent's current health behaviors and

¹²² Johnson R.C & Schoeni R.F. (2007). The Influence of Early-Life Events on Human Capital, Health Status, and Labor Market Outcomes over the Life Course. Institute for Social Research, Population Studies Center Report 07-616.

health status. The ACE Study found a graded dose-response relationship between the number of ACEs experienced and poor health outcomes. An Adverse Childhood Experience, or ACE, is an event which contributes to stress including psychological, physical, or sexual abuse; violence against mother; or living with household members who abused substances, were mentally ill or suicidal, or ever imprisoned.¹²³ As the number of cumulative ACEs increases, so does the risk for infant death, alcoholism/alcohol abuse, chronic obstructive pulmonary disease, depression, liver disease, poor work performance, financial stress, risk for intimate partner violence, sexually transmitted diseases, smoking, attempted suicide, unintended pregnancies, and poor academic achievement, among others.¹²⁴

Nevada ACEs

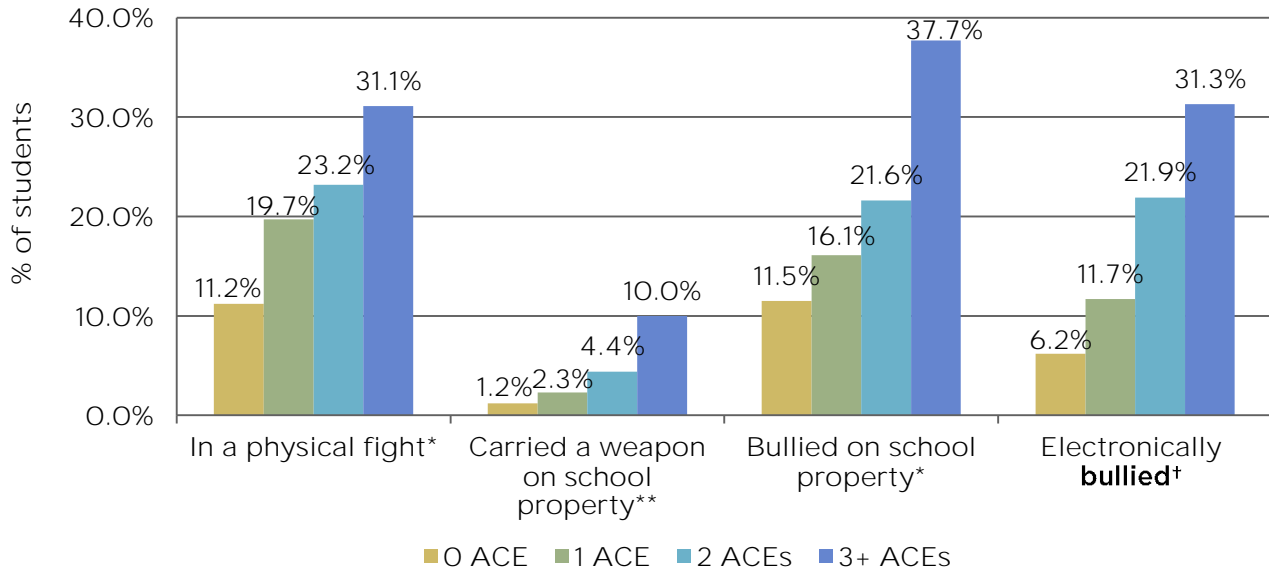
The 2015 Nevada High School YRBS included five state-added ACE questions to assess lifetime prevalence of physical abuse by an adult, forced sex, household domestic violence, household mental illness, and household substance abuse. An analysis of 2015 Nevada High School YRBS respondents found a statistically significant ($p < 0.05$) graded relationship between 73% of risk factors measured by the YRBS as the number of ACEs increased. Statewide, female students, students who qualified for free or reduced lunch, students with parents/other adults in their family serving in the military, students who identified as lesbian, gay, or bisexual, and students who did not receive mostly As or Bs in school had a statistically significant ($p < 0.001$) higher number of ACEs.¹²⁵ The following figures depict the graded relationship between the numbers of cumulative ACEs and select risk factors as measured by the 2015 Nevada High School YRBS.

¹²³ Felitti, V.J., Anda, R.F., Nordenberg, D., Williamson, D.F., Spitz, A.M., Edwards, V., Koss, M.P., & Marks, J.S. (1998). Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*; 14(4):245-258.

¹²⁴ Centers for Disease Control and Prevention. About the CDC-Kaiser ACE Study. Accessed <https://www.cdc.gov/violenceprevention/acestudy/about.html>

¹²⁵ Gay, C., Gao, P., Lensch, T., Zhang, F., Larson, S., Clements-Nolle, K., & Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Adverse Childhood Experiences (ACEs) Analysis.

Fig 135: Prevalence of ACEs & Violence & Victimization among High School Students, Nevada, 2015

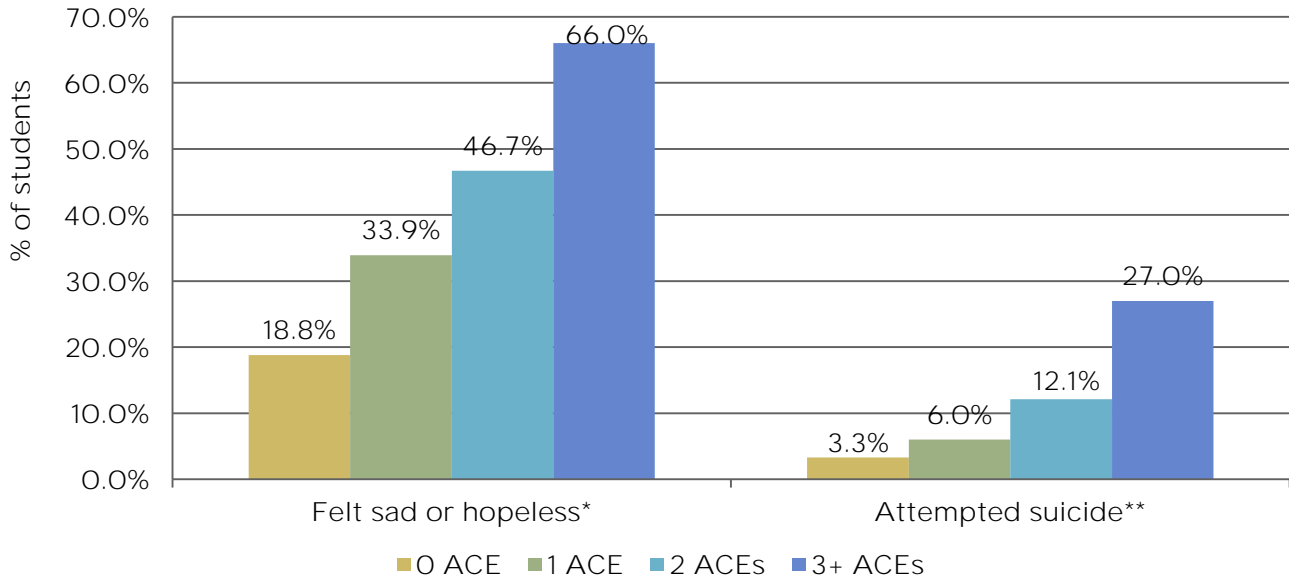


*One or more times during the 12 month before the survey

**Such as a gun, knife, or club on at least 1 day during the 30 days before the survey

†Includes being bullied through email, chat rooms, instant messaging, websites, or texting during the 12 months before the survey

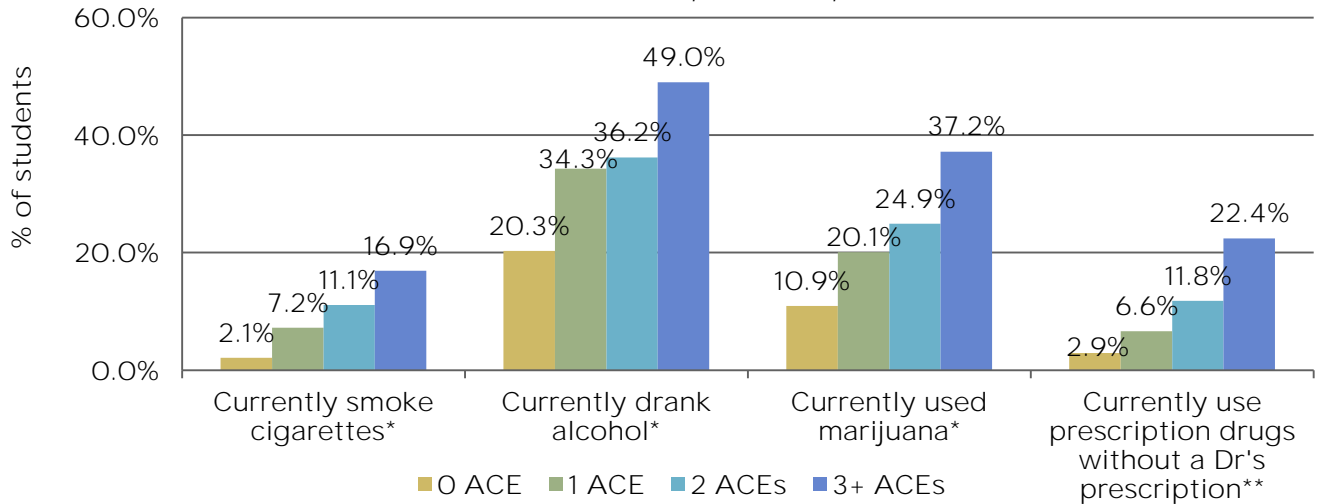
Fig 136: Prevalence of ACEs & Emotional Health among High School Students, Nevada, 2015



*Almost every day for 2 or more weeks in a row so they stopped doing some usual activities during the 12 months before the survey

**One or more times during the 12 months before the survey

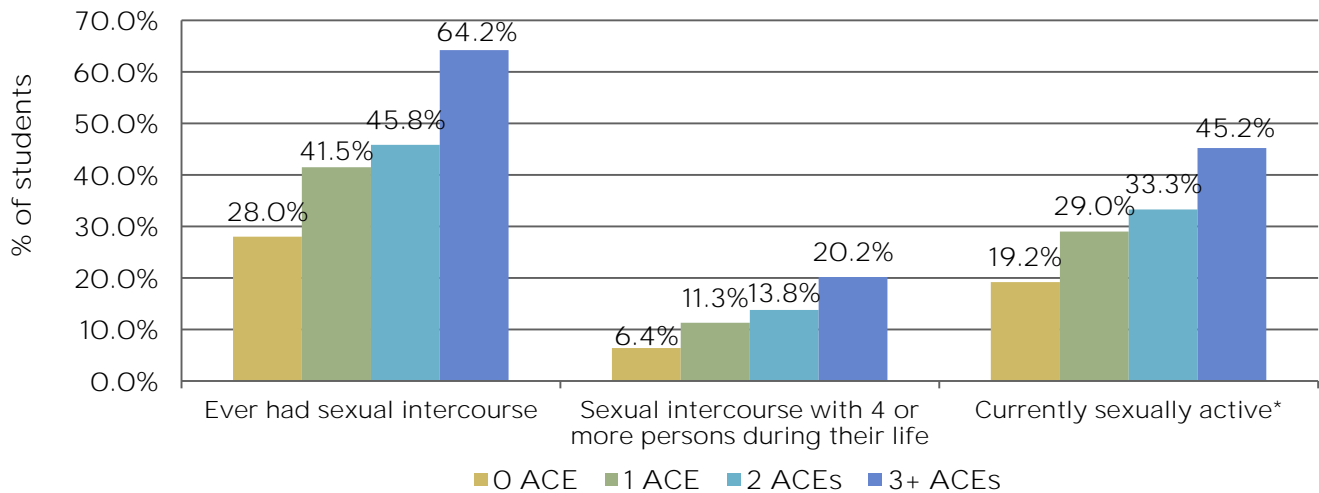
Fig 137: Prevalence of ACEs & Substance Use among High School Students, Nevada, 2015



*on at least 1 days during the 30 days before the survey

**such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax, one or more times during the 30 days before the survey

Fig 138: Prevalence of ACEs & Sexual Health among High School Students, Nevada, 2015



*Sexual intercourse with at least 1 person during the 3 months before the survey

Washoe County ACEs

Although county-level analyses were not yet available regarding the relationship between cumulative number of ACEs among 2015 High School YRBS respondents in Washoe County and associated risk factors, the prevalence of ACEs among Washoe County high school respondents were available and are as follows.¹²⁶

¹²⁶ Lensch, T., Gay, C., Zhang, F., Clements-Nolle, K., & Yang, W. University of Nevada, Reno. (n.d.). 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Washoe County Analysis. Reno, NV.

1.13 MATERNAL & CHILD HEALTH

- 9.1% high school students in Washoe County reported they had ever physically forced to have sexual intercourse.
- 17.7% of high school students in Washoe County reported they had ever been hit, beaten, kicked, or physically hurt in anyway by an adult.
- 16.6% of high school students in Washoe County reported they had ever seen adults in their home slap, hit, kick, punch, or beat each other up.
- Nearly one in three (32.8%) high school students in Washoe County reported they ever lived with someone who was depressed, mentally ill, or suicidal.
- One in three (33.8%) high school students in Washoe County reported they had ever lived with someone who was a problem drinker, alcoholic, or abused street or prescription drugs.

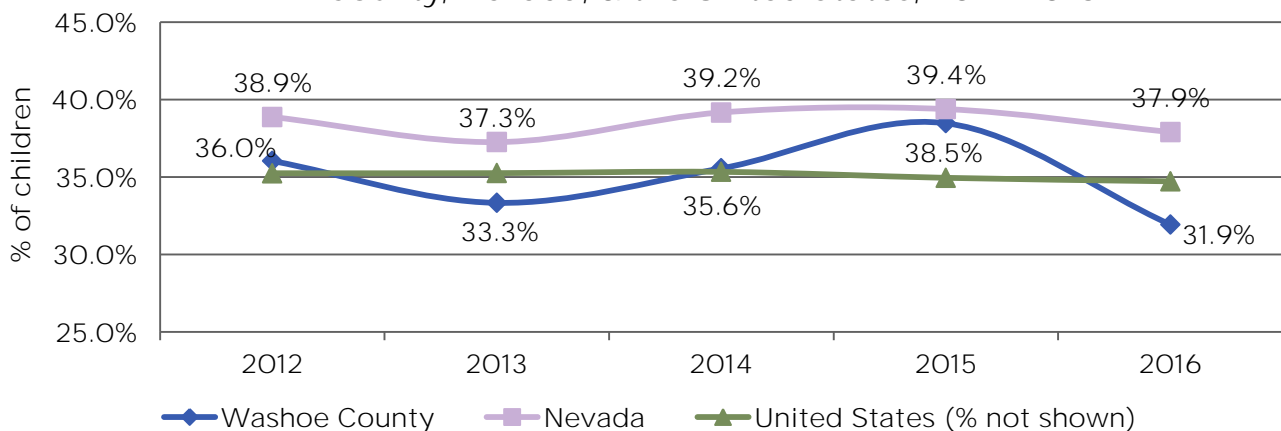
Household and family environment impacts and often predicts health outcomes decades in advance; increasing stability and protective factors among all families, but especially those children who may be high-risk, is instrumental to improving the health and quality of life for future generations.

KIDS COUNT Rankings

The Annie E. Casey Foundation works with all 50 states to increase child advocacy by promoting effective policy and tracking the well-being of children across the nation. Each year since 1990, the Foundation has released the KIDS COUNT data book that highlights state-by-state data and statistics to measure child health. Since 2010, Nevada’s rank decreased from 36th to the bottom 40s each year since 2011 and was ranked 47th in 2017. The 2017 KIDS COUNT report measured 16 indicators to determine each state’s rank for economic well-being (ranked 40th), education (ranked 49th), health (ranked 45th), family and community (ranked 45th) as it relates to child health.¹²⁷

Single-parent Households

Fig 139: Percent of Children Living with One Parent, Washoe County, Nevada, & the United States, 2012-2016



¹²⁷ The Annie E. Casey Foundation. 2017 KIDS COUNT Data Book, State trends in Child Well-Being.

1.13 MATERNAL & CHILD HEALTH

- The percent of children living with one parent in Washoe County decreased from 2012 (36.0%) to 2016 (31.9%).
- In 2016, the percentage of children living with one parent in Washoe County (31.9%) was lower than Nevada (37.9%), and the United States (34.7%).

Birth Rates

An estimated 50% of all pregnancies in the United States are unplanned, therefore one in every two children conceived are potentially at risk for various complications later in life due to the parents not being prepared mentally, physical, social, or financially to care for and raise a child.^{128,129}

A key prevention strategy to reducing poor birth outcomes is to assess the health of the parents prior to conception. The American College of Obstetricians and Gynecologists recommends preconception maternal health screenings include physical screenings, risk screenings, vaccinations, and counseling. Physical screenings may include assessing maternal health factors such as obesity, substance use, and genetic carrier traits which could lead to birth defects, genetic disorders, and other health complications. Additional screening includes HIV and other sexually transmitted infections (STIs) to prevent passing those diseases onto the fetus.¹³⁰ Half of pregnant women in the United States are overweight or obese which can lead to complications including, but not limited to, gestational diabetes, hypertension, and postpartum weight retention. Maternal obesity can result in birth complications including shorter gestation or premature birth, stillbirth, congenital abnormalities, and childhood obesity.¹³¹

Table 131: Birth Rate among Women 20-44 years, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	67.9	68.0	68.5	69.3	67.5
Nevada	68.1	67.4	69.0	69.3	69.1

Rate per 1,000 females aged 20-44 years

- The rate of live births among women 20-44 years in Washoe County have remained relatively stable from 2012 (67.9 per 1,000 females 20-44 years) to 2016 (67.5 per 1,000 females 20-44 years).
- The rate of live births among women 20-44 years in Washoe County was slightly lower than the birth rate among women 20-44 years in Nevada in 2012, 2014, and 2016.

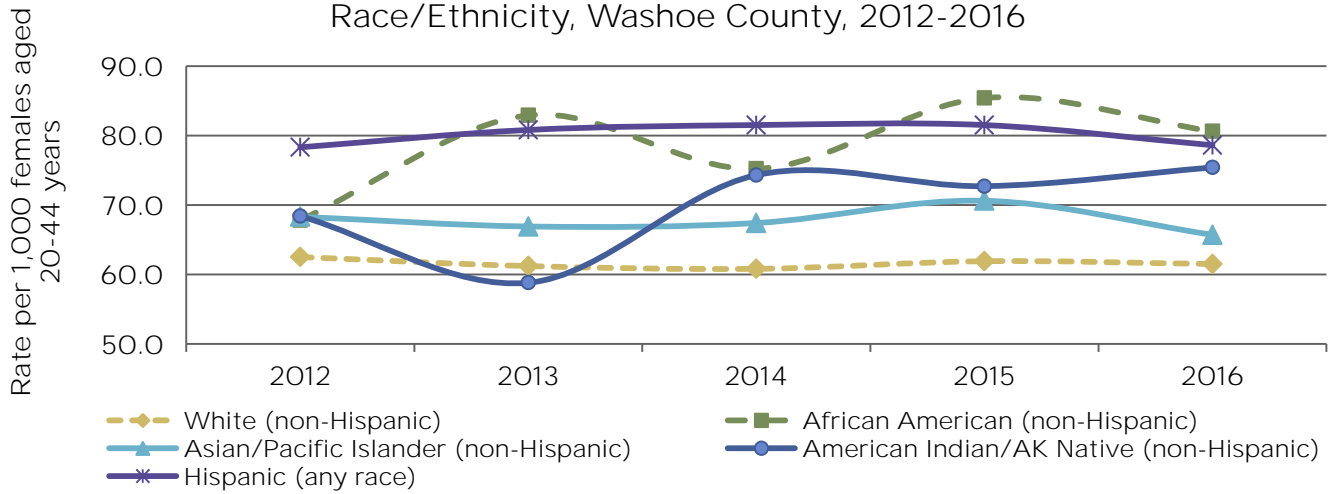
¹²⁸ Finer L.B. & Zolna M.R. (2014). Shifts in Intended and Unintended Pregnancies in the United States, 2001-2008. *American Journal of Public Health*. 104:S43-48.

¹²⁹ Robbins, C.L., Zapta, L.B., & Farr, S.L. et al. (2014). Core State Preconception Health Indicators-Pregnancy Risk Assessment Monitoring System and Behavioral Risk Factor Surveillance System, 2009. *MMWR*; 63(No 3). Centers for Disease Control and Prevention (CDC), Division of Reproductive Health. Atlanta, GA.

¹³⁰ Centers for Disease Control and Prevention. Recommendations to improve preconception health and health care—United States. *MMWR Recommendations and Reports*. 2006;55(RR-06):1–23.

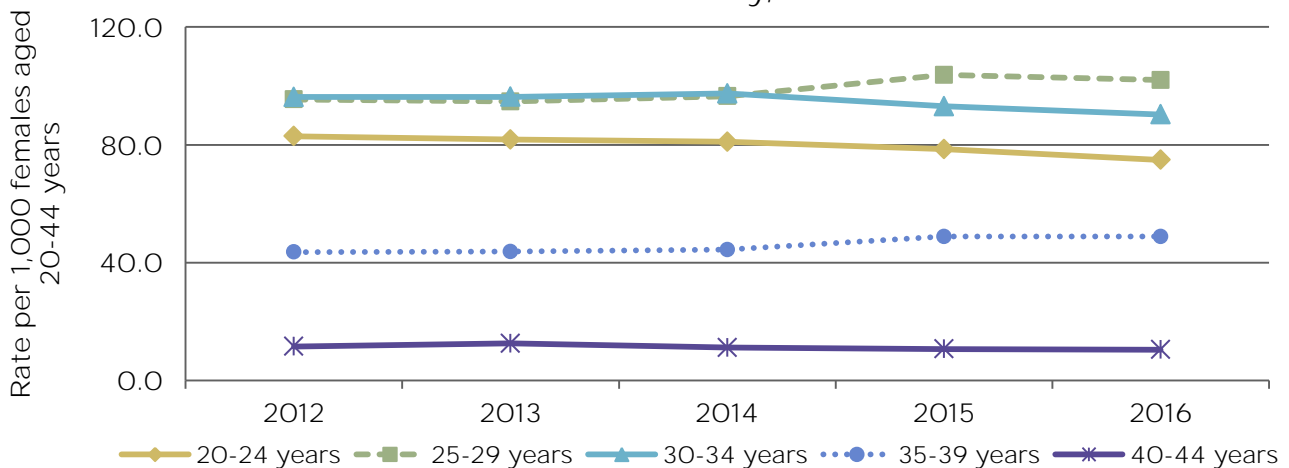
¹³¹ American College of Obstetricians and Gynecologists. (2013). Committee opinion: Obesity in Pregnancy. Opinion No 549. Washington, DC.

Fig 140: Birth Rate among Women 20-44 Years by Race/Ethnicity, Washoe County, 2012-2016



- Birth rates in Washoe County have been among the highest for women of Hispanic origin (any race) from 2012 (78.3 per 1,000) to 2016 (78.6 per 1,000).
- Birth rates among African American women in Washoe County increased from 2012 (67.8 per 1,000) to 2016 (80.6 per 1,000).
- Birth rates among American Indian/Alaska Native women increased from 2012 (68.4 per 1,000) to 2016 (75.4 per 1,000).
- Birth rates among Asian/Pacific Islander women in Washoe County remained stable from 2012 (68.3 per 1,000) to 2015 (70.6 per 1,000), however, decreased in 2016 (65.7 per 1,000).
- Birth rates among women identified as white (non-Hispanic) have remained relatively stable from 2012 (62.5 per 1,000) to 2016 (61.5 per 1,000) and were among the lowest of all races and ethnicities from 2012 to 2016 in Washoe County.

Fig 141: Birth Rate among Women 20-44 Years by Age Group, Washoe County, 2012-2016



- Birth rates in Washoe County have been steadily highest among women aged 25-29 years and have increased from 2012 (95.4 per 1,000) to 2016 (102.0 per 1,000).
- Birth rates among women aged 30-34 years have been second highest, however have decreased from 2012 (96.2 per 1,000) to 2016 (90.3 per 1,000).

1.13 MATERNAL & CHILD HEALTH

- Birth rates among women aged 20-24 years have been third highest and have decreased from 2012 (82.9 per 1,000) to 2016 (74.9 per 1,000).
- Birth rates among women aged 35-39 years have been fourth highest and have increased from 2012 (43.6 per 1,000) to 2015 (48.9 per 1,000).
- Birth rates among women aged 40-44 years have remained relatively stable from 2012 (11.6 per 1,000) to 2016 (10.5 per 1,000) and were among the lowest of all age groups from 2012 to 2016 in Washoe County.

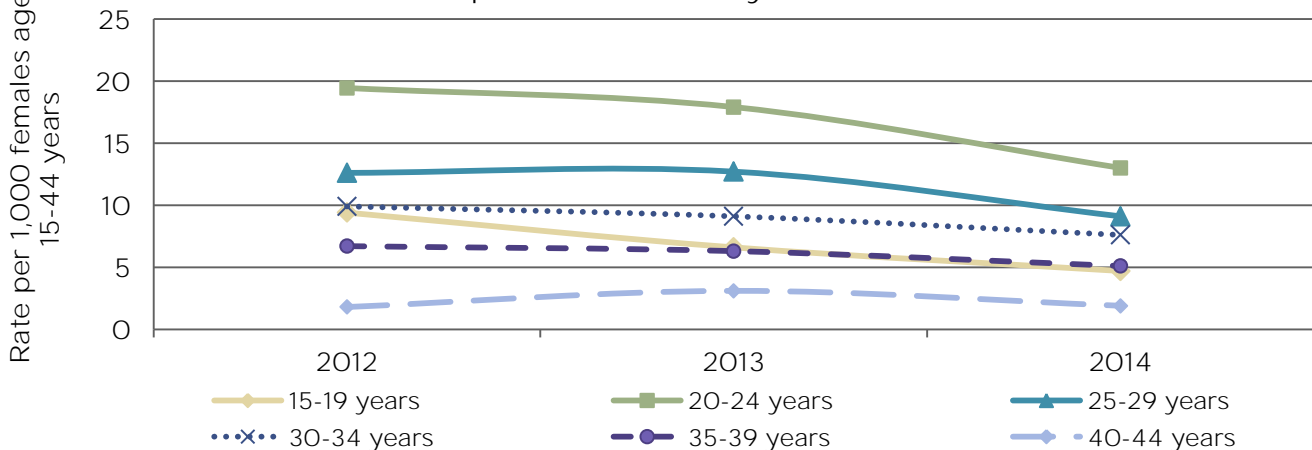
Table 132: Rate of Abortions among Women 15-44 years, 2012-2014

Location	2012	2013	2014
Washoe County	10.2	9.6	7.1
Nevada	12.3	10.4	14.1
United States	13.2	12.5	~

Rate per 1,000 females aged 15-44 years; ~ data not available

- The rate of abortion in Washoe County among women aged 15-44 years decreased from 2012 (10.2 per 1,000) to 2014 (7.1 per 1,000).
- The rate of abortion among women aged 15-44 years (per 1,000 females) in Washoe County was lower than Nevada from 2012 through 2014 and the United States in 2012 and 2013.

Fig 142: Abortion Rate among Women 15-44 Years by Age Group, Washoe County, 2012-2014



- The rate of abortion in Washoe County was highest among women aged 20-24 years, however decreased from 2012 (19.4 per 1,000) to 2014 (13.0 per 1,000).
- The rate of abortion in Washoe County was second highest among women aged 25-29 years and decreased from 2012 (12.6 per 1,000) to 2014 (9.1 per 1,000).
- The rate of abortion in Washoe County was third highest among women aged 30-34 years and decreased from 2012 (9.9 per 1,000) to 2014 (7.6 per 1,000).
- The rate of abortion among women aged 40-44 years remained relatively stable from 2012 (1.8 per 1,000) to 2014 (1.9 per 1,000) and was the lowest among the age groups between 15 and 44 years in Washoe County.

Prenatal Care

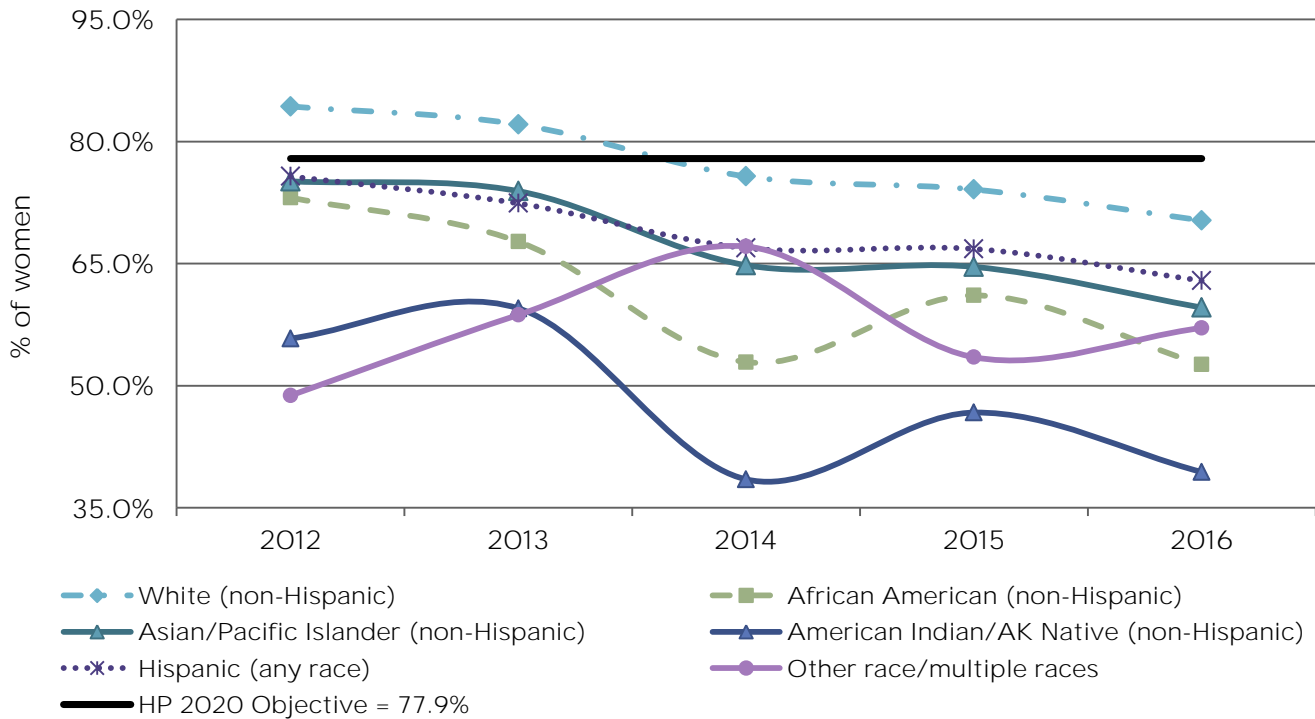
Prenatal care differs from preconception care in that preconception care is conducted prior to conception, while prenatal care occurs once a woman becomes pregnant. There are numerous benefits of receiving early prenatal care, including reduced risk of premature birth, low birth weight, and infant mortality.¹³²

Location	2012	2013	2014	2015	2016
Washoe County	79.7%	77.3%	70.4%	69.8%	65.8%
Nevada	65.4%	66.1%	68.7%	69.6%	68.4%

Among women aged 15-44 years

- The percent of women in Washoe County aged 15-44 years that received prenatal care during their first trimester of pregnancy has decreased from 2012 (79.7%) to 2016 (65.8%).
- For the first time since 2012, the percentage of women in Washoe County that received prenatal care during their first trimester of pregnancy was lower in 2016 (65.8%) than Nevada (68.4%).

Fig 143: Percent of Women that Received Prenatal Care within 1st Trimester among Women 15-44 years, Washoe County, 2012-2016



- The percentage of women in Washoe County that received prenatal care in their first trimester of pregnancy was highest among women identified as white (non-Hispanic), however decreased from 2012 (84.3%) to 2016 (70.3%).
- The percentage of women in Washoe County that received prenatal care in their first trimester of pregnancy was second highest among women identified as Hispanic and decreased from 2012 (75.7%) to 2016 (62.9%).

¹³² Alexander, G.R. & Kotelchuck, M. (2001). Assessing the Role and Effectiveness of Prenatal Care. Public Health Reports. 116; 306-316.

1.13 MATERNAL & CHILD HEALTH

- The percentage of women in Washoe County that received prenatal care in their first trimester of pregnancy was third highest among women identified as Asian/Pacific Islander and decreased from 2012 (75.1%) to 2016 (59.6%).
- The percentage of women in Washoe County that received prenatal care in their first trimester of pregnancy was lowest among women identified as American Indian/Alaska Native and decreased from 2012 (55.8%) to 2016 (39.4%).

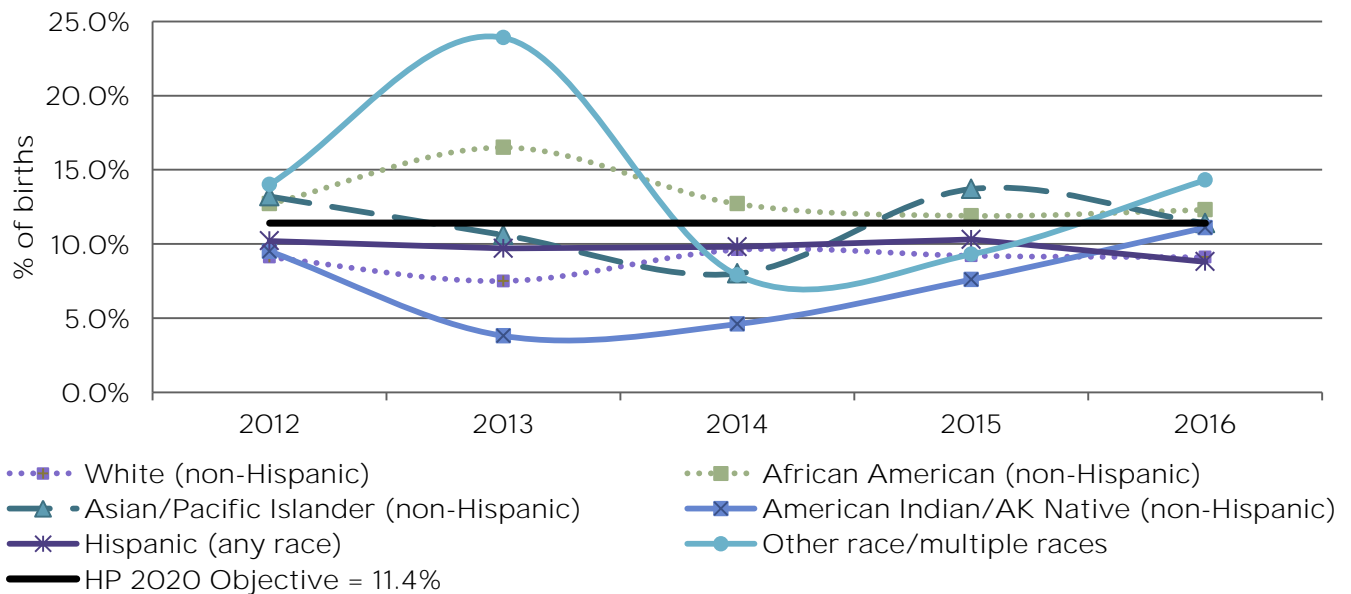
Table 134: Percent of Live Births that were Preterm*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	9.9%	8.8%	9.5%	10.0%	9.3%
Nevada	10.2%	9.7%	10.0%	9.9%	10.3%
United States	9.8%	9.6%	9.6%	9.6%	~

*Preterm less than 37 weeks gestation; ~ data unavailable

- The percentage of live births that were preterm (less than 37 weeks gestation) in Washoe County remained relatively stable from 2012 (9.9%) to 2016 (9.3%).
- In 2016, the percentage of live births that were preterm in Washoe County (9.3%) was lower than Nevada (10.3%).

Fig 144: Percent of Live Births that Were Preterm* among Women 15-44 Years by Race/Ethnicity, Washoe County, 2012-2016



- From 2012 through 2016, the percent of births that were preterm among American Indian/Alaska Native, white (non-Hispanic), and Hispanic (any race) women in Washoe County have met the Healthy People 2020 objective of 11.4%.

Low Birth Weight

Infants born weighing less than 5.5 pounds or 2,500 grams are categorized as low birth weight. Low birth weight infants have an increased risk for several short and long-term consequences including respiratory distress, heart problems, anemia, chronic lung disorders, infections, and infant mortality.¹³³ Being born low birth weight is also linked with developmental delay, lower high school graduation rates, an increased risk of hypertension, diabetes, stroke, heart attack, and heart disease by the age of 50.^{134,135}

Table 135: Percent of Live Births that were Low Birth Weight*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	7.3%	7.4%	7.7%	8.2%	7.6%
Nevada	7.9%	7.9%	8.3%	8.5%	8.4%
United States	8.0%	8.0%	8.0%	8.1%	~

*Low birth weight less than 2,500 grams; ~ data unavailable

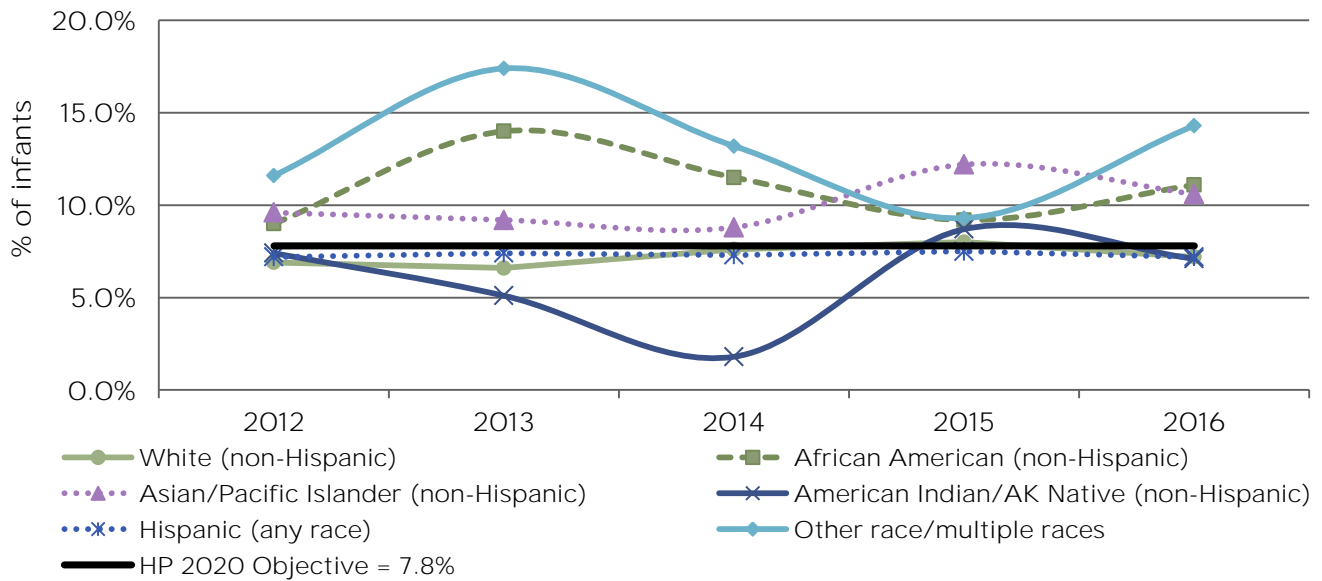
- The percentage of infants born low birth weight in Washoe County has remained relatively stable from 2012 (7.3%) to 2016 (7.6%).
- The percentage of infants born low birth weight in Washoe County has remained lower than Nevada from 2012 through 2016.

¹³³ U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. (2015). Child Health USA 2014.. Rockville, MD.

¹³⁴ Boardman, J.D., Powers, D.A, Padilla, Y.C., & Hummer, R.A. (2002). Low Birth Weight, Social Factors, and Developmental Outcomes Among Children in the United States. *Demography*. 39(2); 353-368.

¹³⁵ Johnson R.C. & Schoeni, R.F. (2011). Early-Life Origins of Adult Disease: National Longitudinal Population-Based Study of the United States. *American Journal of Public Health*.101.2317-2324.

Fig 145: Percent of Infants Born Low Birth Weight* among Women 15-44 Years by Race/Ethnicity, Washoe County, 2012-2016



*Low birth weight less than 2,500 grams

- The percentage of infants born low birth weight was highest among women identified as an “other/multiple race” from 2012 (11.6%) to 2016 (14.3%).
- The percentage of infants born low birth weight has been lowest among women identified as American Indian/Alaska Native from 2012 (7.4%) to 2016 (7.1%).

Women, Infants & Children (WIC)

Women, Infants and Children (WIC), is a federally funded grant program available in all 50 states, plus Washington D.C., 34 Indian Tribal Organizations, and all five U.S. territories. The WIC program has been shown to increase pregnancy duration, resulting in fewer premature births, decrease infant mortality, increase likelihood of receiving prenatal care, improve diet and related outcomes, and increase breastfeeding duration.¹³⁶

The WIC program’s target population is low-income, nutritionally at-risk pregnant women (through pregnancy up to six weeks after birth), breastfeeding women (up to infant’s first birthday), non-breastfeeding women (up to six months after birth of an infant), infants (up to 1 year) and children up to their fifth birthday. During Fiscal Year 2016, 7.6 million women, infants, and children participated in WIC programs nationwide.¹³⁷

WIC provides supplemental nutritious foods, nutrition education and counseling, and screening and referrals to other health, welfare and social services. To be eligible to participate in WIC, one must be in one of

¹³⁶ Khanani, I., Elam, J., Hearn, R., Jones, C., & Maeru, N. (2010). The Impact of Prenatal WIC Participation on Infant Mortality and Racial Disparities. *American Journal of Public Health*. S1:100(S1); S204-S209.

¹³⁷ United States Department of Agriculture, Food and Nutrition Service. WIC Program Annual State Level Data: FY 2009-2016. Accessed <https://www.fns.usda.gov/pd/wic-program>

1.13 MATERNAL & CHILD HEALTH

the target population stages, have a gross income below 185% of the Federal Poverty income guidelines, and must meet nutritional risk requirements. Participants receive checks or vouchers to purchase specific foods to supplement their diets and women also may receive educational classes related to nutrition, including breastfeeding promotion and support.¹³⁸

Table 136: Number & Percent of Washoe County WIC Participants by Category, Washoe County, 2007-2016

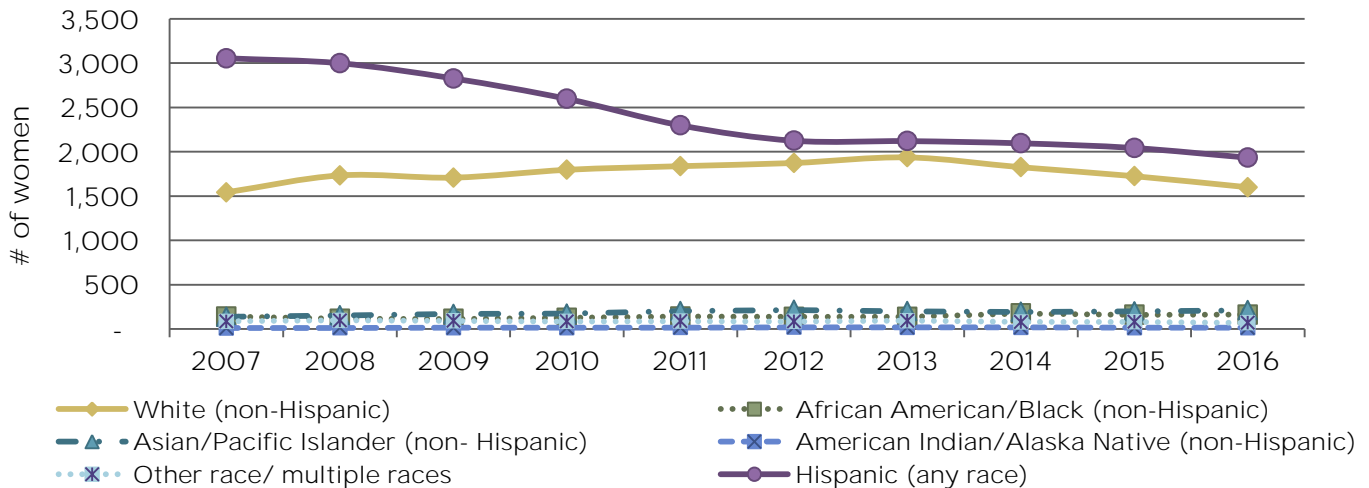
Year	Total Number	% Women	% Infants	% Children
2007	15,566	31.9%	20.6%	47.5%
2008	16,543	30.9%	18.5%	50.6%
2009	16,923	29.1%	16.8%	54.1%
2010	16,885	28.4%	16.7%	54.9%
2011	16,348	28.0%	15.9%	56.1%
2012	15,891	28.0%	15.4%	56.6%
2013	15,699	28.7%	15.6%	55.7%
2014	15,434	28.4%	15.6%	56.0%
2015	14,835	28.4%	15.3%	56.3%
2016	13,941	28.6%	15.8%	55.6%

Does not include Inter-Tribal Council of Nevada (ITCN) WIC participants.

Participants were counted once per year, based on the last date of visit to the clinic regardless if they visited the clinic once or multiple times in a year.

- The total number of clients served by WIC Programs in Washoe County decreased from 2007 (17,573) to 2016 (15,957), after hitting a high in 2009 (18,932).
- The proportion of WIC clients that are women decreased from 2007 (28.3%) to 2016 (25.0%).
- The proportion of WIC clients that are infants decreased from 2007 (18.2%) to 2016 (13.8%).
- The proportion of WIC clients that are children increased from 2007 (42.1%) to 2016 (48.6%).

Fig 146: Number of Women Enrolled in WIC by Race/Ethnicity, Washoe County, 2007-2016



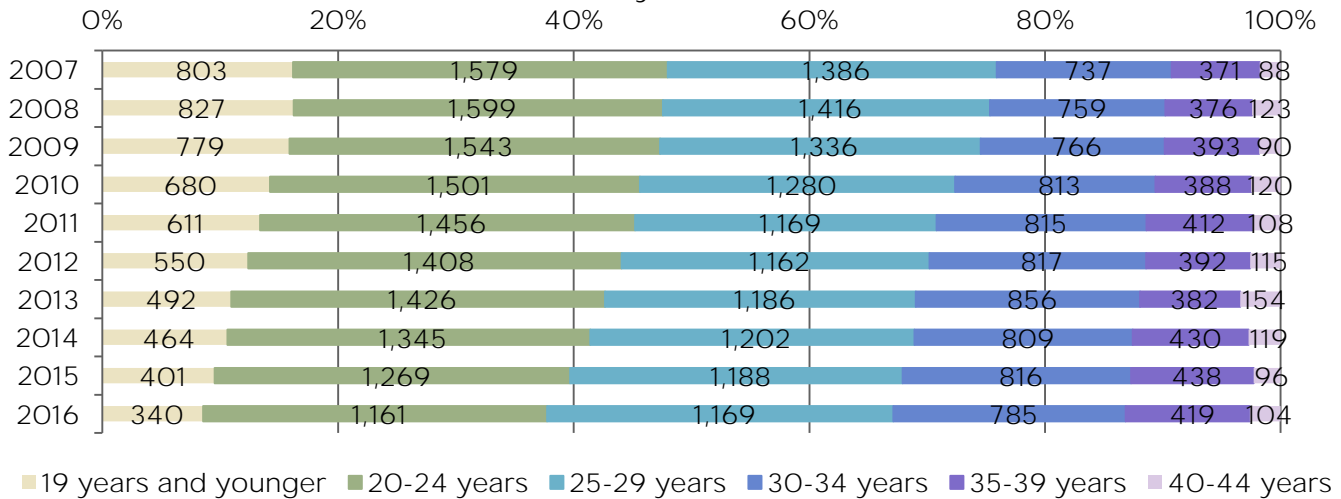
- Women enrolled in Washoe County WIC programs have primarily been Hispanic, although the number decreased from 2007 (3,055) through 2016 (1,933).

¹³⁸ United States Department of Agriculture, Food and Nutrition Service. WIC Program Annual State Level Data: FY 2009-2016. Accessed <https://www.fns.usda.gov/pd/wic-program>

1.13 MATERNAL & CHILD HEALTH

- The number of women enrolled in WIC in Washoe County identified as white, non-Hispanic increased from 2007 (1,542) to 2013 (1,936) and have since decreased from 2013 to 2016 (1,599).
- The number of African American, Asian/Pacific Islander, American Indian/Alaska Native and women of an “other/multiple races” remained between 350-500 when combined and have been relatively stable from 2007 through 2016.

Fig 147: Number of Women in WIC by Age Group, Washoe County, 2007-2016



- The number of women enrolled in WIC in Washoe County aged 19 years and younger, 20-24 years, and 25-29 years decreased from 2007 to 2016.
- The number of women enrolled in WIC in Washoe County aged 30-34 years, 35-39 years and 40-54 years increased from 2007 to 2016.

Breastfeeding

Research reviews have found the benefits of breastfeeding include reduced neonatal mortality, reduced infection-related infant deaths, decreased diarrhea, and respiratory infections early on in life and can potentially reduce chronic disease onset later in life, including hypertension, diabetes, and cardiovascular diseases.^{139,140} The World Health Organization, American Academy of Pediatrics, and the Surgeon General all recommend exclusive breastfeeding for infants from birth through the first 6 months of life.

Table 137: Percent of Infants Breastfed among Washoe County WIC Participants, 2012-2016

Breastfed	2012	2013	2014	2015	2016
Breastfed at least 6 Months*	18.6%	19.7%	22.0%	22.7%	22.9%
Ever Breastfed	33.8%	31.1%	32.0%	36.6%	39.8%

* Only includes participants aged 6 to 23 months old

¹³⁹ Kelishadi, R. & Farajian, S. (2014). The Protective Effects of Breastfeeding on Chronic Non-Communicable Diseases in Adulthood: A Review of Evidence. *Advanced Biomedical Research*. 3(13).

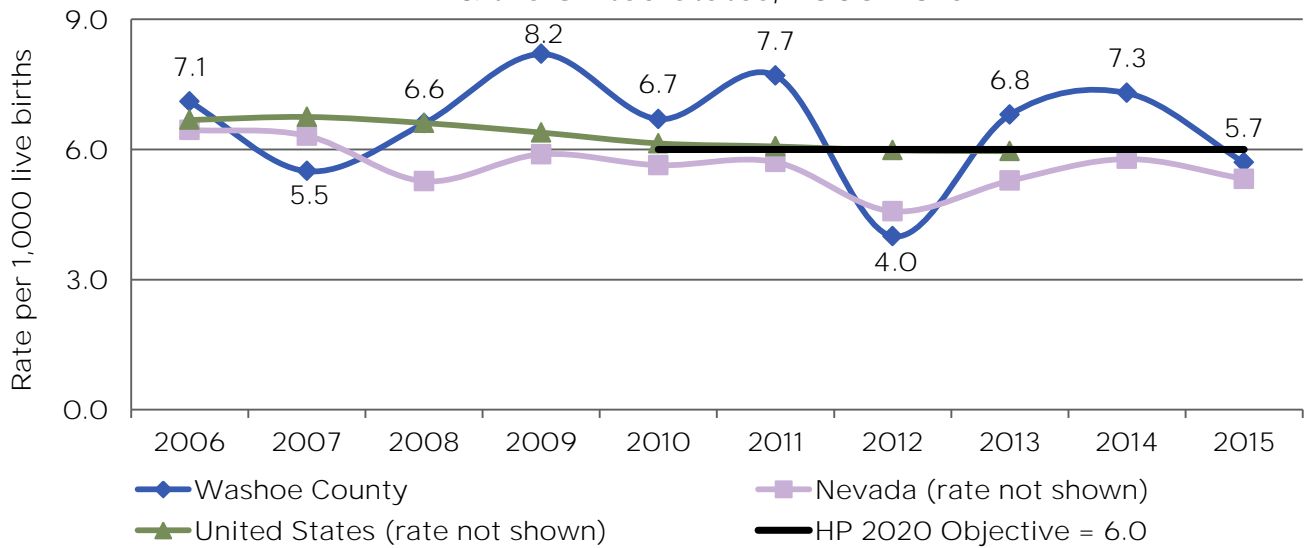
¹⁴⁰ Kahn, J., Vesel, L., Bahl, R. & Martines, J.C. (2015). Timing of Breastfeeding Initiation and Exclusivity of Breastfeeding During the First Month of Life: Effects on Neonatal Mortality and Morbidity: A Systematic Review and Meta-analysis. *Maternal and Child Health Journal*. 19(3), 468-479.

1.13 MATERNAL & CHILD HEALTH

- The percentage of infants enrolled in WIC that were breastfed at least until 6 months of age increased from 2012 (18.6%) to 2016 (22.9%).
- The percentage of infants enrolled in WIC that were ever breastfed increased from 2012 (33.8%) to 2016 (39.8%).

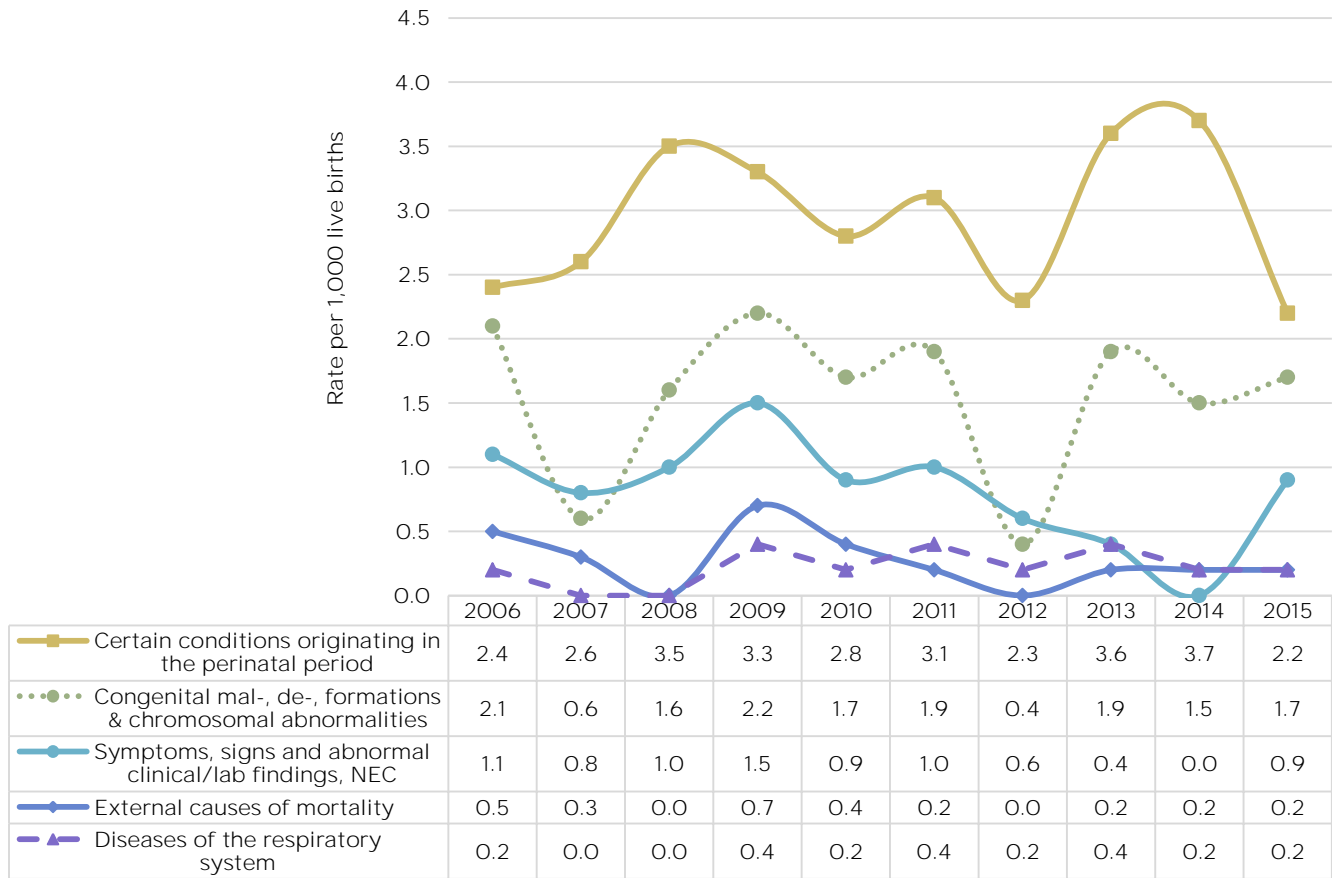
Infant & Child Mortality

Fig 148: Infant (<1 Year) Mortality Rate, Washoe County, Nevada, & the United States, 2006-2015



- Although the infant mortality rate fluctuated from 2006-2015, the mortality rate among infants in Washoe County decreased from 2006 (7.1 per 1,000 live births) to 2015 (5.7 per 1,000 live births).
- In 2015, the infant mortality rate in Washoe County (5.7 per 1,000 live births) was higher than Nevada (5.3 per 1,000 live births); however, the rate was lower than Healthy People 2020 objective (6.0 per 1,000 live births).

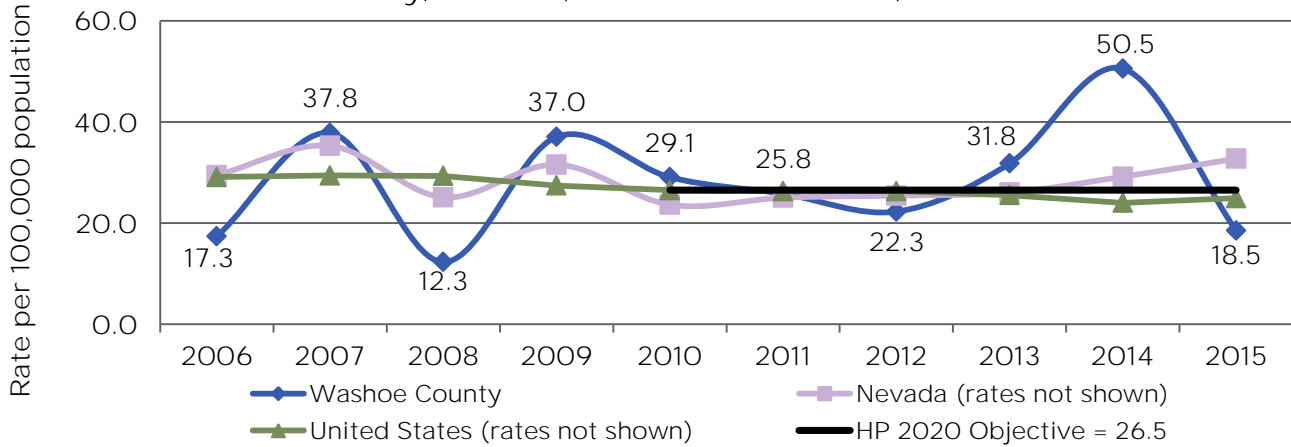
Fig 149: Top 5 Causes of Death among Infants (<1 Year) by Cause, Washoe County, 2006-2015



- The number one cause of death among infants aged less than 1 year in Washoe County from 2006 through 2015 has been due to certain condition originating in the perinatal period, followed by congenital malformations, congenital deformations, and chromosomal abnormalities.

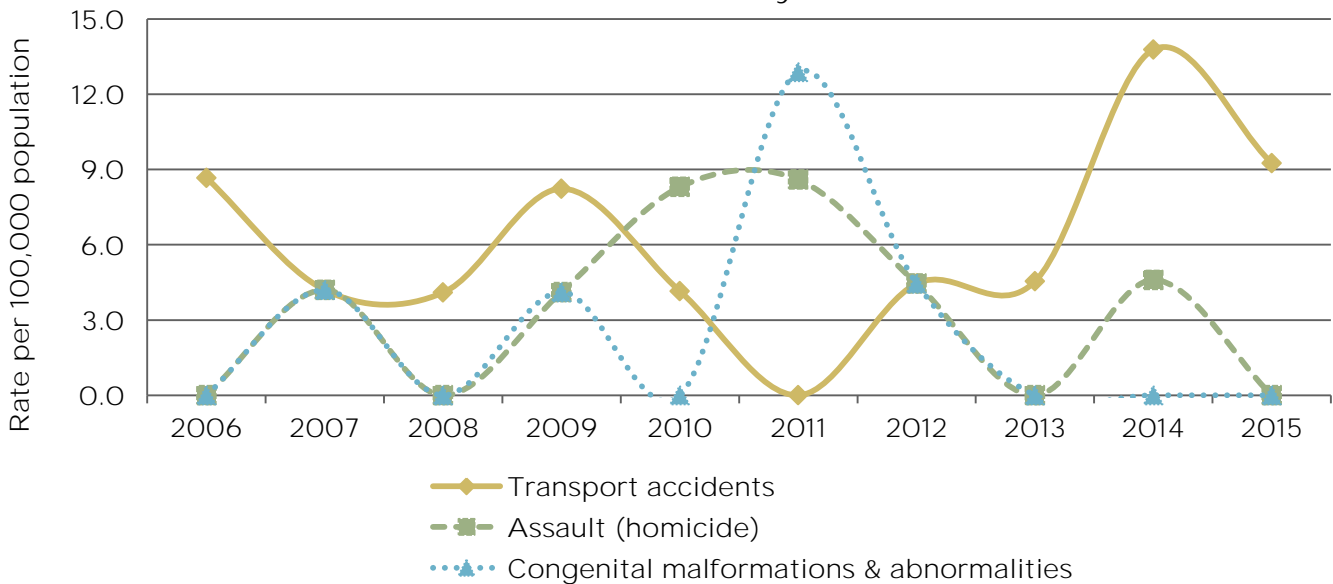
1.13 MATERNAL & CHILD HEALTH

Fig 150: Mortality Rate among Children 1-4 Years, Washoe County, Nevada, & the United States, 2006-2015



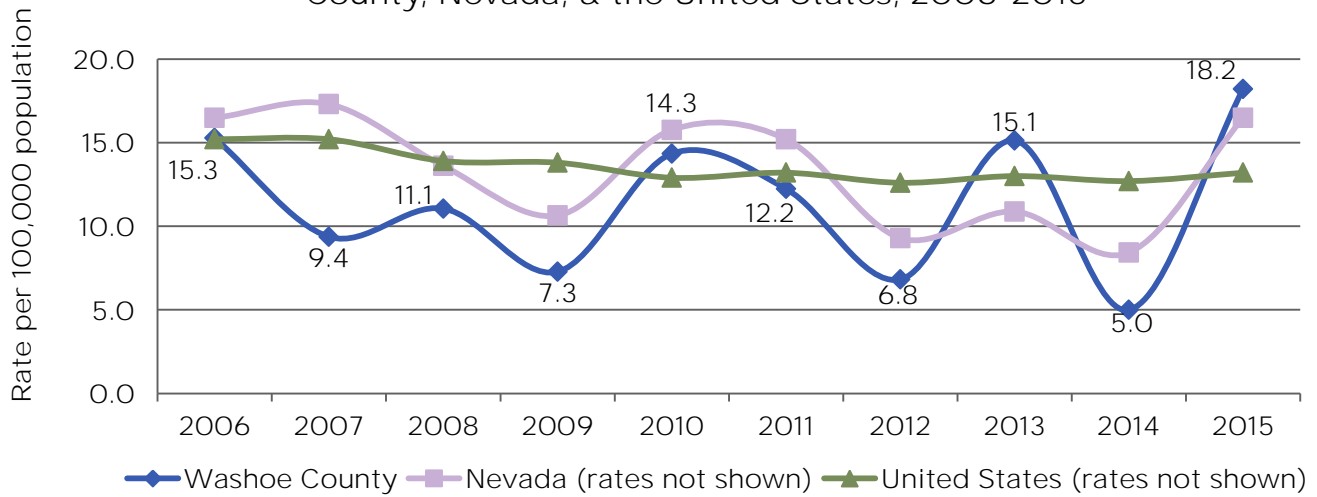
- The rate of death among children aged 1-4 years in Washoe County increased from 2006 (17.3 per 100,000 population) to 2015 (18.5 per 100,000 population).
- There has been a wide fluctuation in the child mortality rate in Washoe county from 2006 to 2015, ranging from a low in 2008 (12.3 per 100,000) to a high in 2014 (50.5 per 100,000 population).
- Although from 2006 through 2015 there have been years when the child (1-4 years) mortality rate in Washoe County has been higher than Nevada, as of 2015 the Washoe County rate (18.5 per 100,000 population) was markedly lower than Nevada (32.7 per 100,000 population) and the United States (24.9 per 100,000).

Fig 151: Top 3 Causes of Death among Children 1-4 years by Cause, Washoe County, 2006-2015



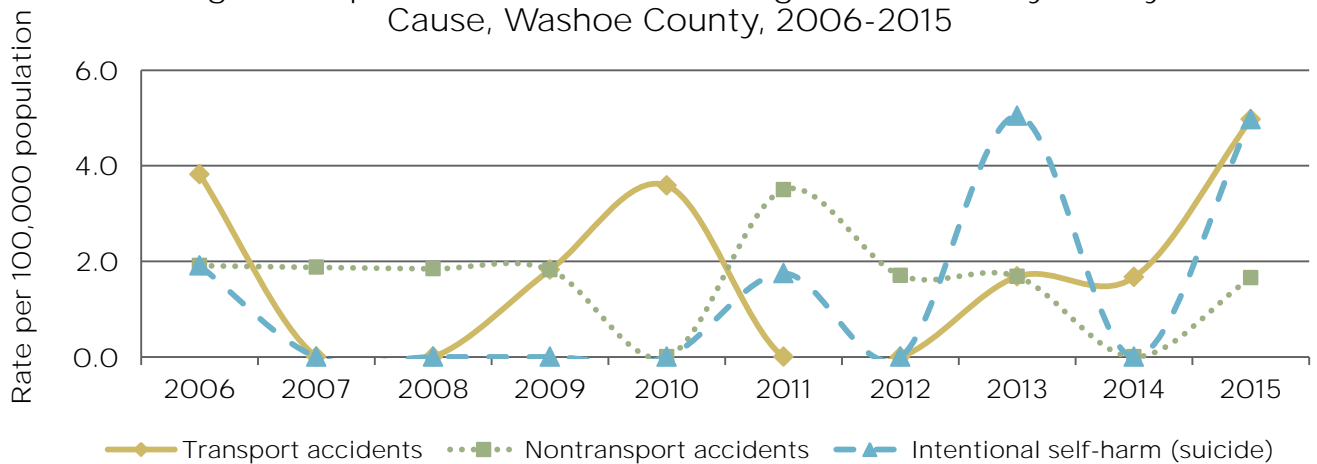
- Overall from 2006 through 2015 (combined) the number one cause of death among children aged 1-4 years, was transport accidents which increased from 2006 (8.7 per 100,000 population) to 2015 (9.3 per 100,000 population).
- Assault (homicide) was the number two cause of death among children (1-4 years) in Washoe County from 2006 through 2015 (combined), followed by congenital malformations and abnormalities.

Fig 152: Mortality Rate among Children 5-14 Years, Washoe County, Nevada, & the United States, 2006-2015



- The mortality rate among children aged 5-14 years in Washoe County increased from 2006 (15.3 per 100,000) to 2015 (18.2 per 100,000).
- In 2015 the child mortality rate among those aged 5-14 years in Washoe County (18.2 per 100,000) was higher than Nevada (16.5 per 100,000), and the United States (13.2 per 100,000).

Fig 153: Top 3 Causes of Death among Children 5-14 years by Cause, Washoe County, 2006-2015



- From 2006 through 2015 (combined) the number one cause of death among children aged 5-14 years, was transport accidents which increased from 2006 (3.8 per 100,000 population) to 2015 (5.0 per 100,000 population).
- Nontransport accidents were the second highest cause of death among children (5-14 years) in Washoe County from 2006 through 2015 (combined), followed by intentional self-harm (suicide), and malignant neoplasms, or cancers (not shown).

Summary of Maternal & Child Health

Adverse childhood experiences (ACEs) analyses have not historically been available at the county-level, therefore the 2015 data will serve as a baseline measure. Reducing the number of ACEs among all children is an important overall goal. According to the Anne E. Casey Foundation 2017 KIDS COUNT data, Nevada was ranked 47th out of 50 states in 2017, with opportunities for improvement across various indicators related to child well-being.

Nationally birth rates among women under 30 have reached an all-time low¹⁴¹; however, the birth rates in Washoe County have remained relatively stable from 2012 through 2016. The percentage of women that receive prenatal care in the first trimester decreased from 2012 to 2016 and was lowest among American Indian/Alaska Native women in Washoe County. In 2016, approximately 9.3% of births were preterm (less than 37 weeks gestation) and 7.6% of births were low birth weight, these rates have remained relatively stable from 2012 through 2016. WIC enrollment in Washoe County has experienced a decline over the past decade (2007-2016). Although below healthy People 2020 target objectives, the proportion of infants reported by WIC programs to have ever been breastfed and breastfed at 6 months has increased from 2012 to 2016. In 2015, mortality rates among infants (<1 year) and children 1-4 years were lower in Washoe County than Nevada, the United States, and Healthy People 2020 objectives; however the mortality rate among children aged 5 to 14 years hit a new high of 18.2 per 100,000 population in 2015. Transport (motor vehicle) accidents were the top cause of death among children ages 1 to 14 years in Washoe County from 2006 through 2015.

Family planning and education are instrumental to help increase the number of women who are better prepared to start a family at a time that is appropriate for them. This increases the chance of enrolling in prenatal care within the first trimester, and establishing a connection with a provider who should closely monitor the growth and health of both the mother and the fetus. These factors all help to reduce the likelihood of preterm births and low birth weight infants, which in turn decreases infant death rates. By fostering a healthy and safe environment for the mother, the baby and the rest of the family, children will have a better chance for success and living a healthy life as they develop.

Maternal Child Health Sources

Fig 135-Fig 138 Same Source

Fig 135: Prevalence of ACEs & Violence & Victimization among High School Students, Nevada, 2015

Fig 136: Prevalence of ACEs & Emotional Health among High School Students, Nevada, 2015

Fig 137: Prevalence of ACEs & Substance Use among High School Students, Nevada, 2015

Fig 138: Prevalence of ACEs & Sexual Health among High School Students, Nevada, 2015

¹⁴¹ Hamilton, B.E., Martin, J.A., Osterman, M.J.K., Driscoll, A.K., & Rossen, L.M. (2017). Vital Statistics Rapid Release, Births: Provisional Data for 2016. National Center for Health Statistics, National Vital Statistics System No. 002. Hyattsville, MD.

1.13 MATERNAL & CHILD HEALTH

Gay, C., Gao, P., Lensch, T., Zhang, F., Larson, S., Clements-Nolle, K., & Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Adverse Childhood Experiences (ACEs) Analysis.

Fig 139: Percent of Children Living with One Parent, Washoe County, Nevada, & the United States, 2012-2016

U.S. Census, American Community Survey -1 year estimates-TABLE C23008 - AGE OF OWN CHILDREN UNDER 18 YEARS IN FAMILIES AND SUBFAMILIES BY LIVING ARRANGEMENTS BY EMPLOYMENT STATUS OF PARENTS

Table 131; Fig 140-Fig 141 Same Source

Table 131: Birth Rate among Women 20-44 years, 2012-2016

Fig 140: Birth Rate among Women 20-44 Years by Race/ Ethnicity, Washoe County, 2012-2016

Fig 141: Birth Rate among Women 20-44 Years by Age Group, Washoe County, 2012-2016

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Table 132: Rate of Abortions among Women 15-44 years, 2012-2014

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Jatlaoui TC, Ewing A, Mandel MG, et al. Abortion Surveillance — United States, 2013. MMWR Surveillance Summary 2016; 65(No. SS-12):1–44.

Fig 142; Table 133; Fig 143 Same Source

Fig 142: Abortion Rate among Women 15-44 Years by Age Group, Washoe County, 2012-2014

Table 133: Percent of Women who Received Prenatal Care within 1st Trimester, 2012-2016

Fig 143: Percent of Women that Received Prenatal Care within 1st Trimester among Women 15-44 years, Washoe County, 2012-2016

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Table 134: Percent of Live Births that were Preterm*, 2012-2016

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Martin JA, Hamilton BE, Osterman MJK, et al. (2017). Births: Final data for 2015. National Vital Statistics Report; 66 (1). Hyattsville, MD: National Center for Health Statistics.

Fig 144: Percent of Live Births that Were Preterm* among Women 15-44 Years by Race/ Ethnicity, Washoe County, 2012-2016

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Table 135: Percent of Live Births that were Low Birth Weight*, 2012-2016

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Martin JA, Hamilton BE, Osterman MJK, et al. (2017). Births: Final data for 2015. National Vital Statistics Report; 66 (1). Hyattsville, MD: National Center for Health Statistics.

Fig 145; Table 136; Fig 146-Fig 147; Table 137 Same Source

Fig 145: Percent of Infants Born Low Birth Weight* among Women 15-44 Years by Race/ Ethnicity, Washoe County, 2012-2016

Table 136: Number & Percent of Washoe County WIC Participants by Category, Washoe County, 2007-2016

Fig 146: Number of Women Enrolled in WIC by Race/Ethnicity, Washoe County, 2007-2016

Fig 147: Number of Women in WIC by Age Group, Washoe County, 2007-2016

Table 137: Percent of Infants Breastfed among Washoe County WIC Participants, 2012-2016

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Fig 148: Infant (<1 Year) Mortality Rate, Washoe County, Nevada, & the United States, 2006-2015

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV

United States: Centers for Disease Control and Prevention. Health, United States, 2015-Child and Adolescent Health. Accessed <https://www.cdc.gov/nchs/hus/child.htm#deaths>

Fig 149: Top 5 Causes of Death among Infants (<1 Year) by Cause, Washoe County, 2006-2015

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV

Fig 150: Mortality Rate among Children 1-4 Years, Washoe County, Nevada, & the United States, 2006-2015

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV

United States: US data Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2015 on CDC WONDER Online Database, released December, 2016. Data are from the Multiple Cause of Death Files, 1999-2015, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html>

Fig 151: Top 3 Causes of Death among Children 1-4 years by Cause, Washoe County, 2006-2015

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Fig 152: Mortality Rate among Children 5-14 Years, Washoe County, Nevada, & the United States, 2006-2015

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV

United States: US data Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2015 on CDC WONDER Online Database, released December, 2016. Data are from the Multiple Cause of Death Files, 1999-2015, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html>

Fig 153: Top 3 Causes of Death among Children 5-14 years by Cause, Washoe County, 2006-2015

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Immunizations & Screenings

Receiving recommended immunizations and obtaining timely cancer screenings are two preventive mechanisms that reduce disease prevalence and severity. A century ago, people in the United States were primarily dying due to infectious diseases; this is no longer true, due largely in part to antibiotics and widespread vaccination.¹⁴² Having each birth cohort (group of children born during a certain period of time) receiving the proper vaccinations at the proper time is estimated to save 33,000 lives, as well as prevent 14 million cases of disease. In doing so, vaccines are a cost effective prevention measure, estimated to reduce direct health care costs by \$9.9 billion and indirect costs by \$33.4 billion. This cost saving is attributed to the reduction in loss of life and additional cases of disease.¹⁴³

Cancer has been the second leading cause of death in the United States since 1938.¹⁴⁴ Based on data from 2010-2012, nearly 40% of men and women will be diagnosed with cancer at some point during their lifetimes.¹⁴⁵ Medical technological advancements have improved the ability to screen effectively for many types of cancer. These screenings are important for the early detection of potentially life-threatening health conditions. Health costs are reduced, treatments are more successful, and full recovery for certain cancers is more likely when the cancer is caught in an early stage of disease.¹⁴⁶

Indicator	Trend	Most Recent Year	HP 2020 Objective
Immunizations			
Children 19-35 months that received recommended vaccination series	Increasing	79.8% (2016)	80.0%
Young adults <26 years that received all doses of human papillomavirus (HPV) vaccine	Increasing	11.7% (Females-2016) 0.9% (Males -2016)	NA
Children 3 to 18 years that received influenza immunization	Increasing	22.0% (2015-2016)	70.0%
Adults 18-64 years that received annual flu shot	Increasing	31.1% 2016	70.0%
Seniors 65+ years that received annual flu shot	Increasing	52.0% (2016)	70.0%
Seniors 65+ years that ever received pneumonia vaccination	Decreasing	74.8% (2016)	90.0%
Screenings			
Adults 18+ years that had cholesterol checked within past 5 years	~	77.3% (2015)	82.1%
Adults 18+ years that had test for high blood sugar or diabetes within past 3 years	Increasing	56.9% (2015)	NA

¹⁴² Centers for Disease Control and Prevention. Achievements in public health, 1900–1999: Control of infectious diseases. MMWR. 1999 Jul 30;48(29):621-9.

¹⁴³ U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Healthy People 2020. Washington, DC. Accessed <http://www.healthypeople.gov/2020/topics-objectives/topic/immunization-and-infectious-diseases>

¹⁴⁴ Centers for Disease Control and Prevention, National Vital Statistic System. Leading Causes of Death, 1990-1998. Accessed https://www.cdc.gov/nchs/nvss/mortality_historical_data.htm

¹⁴⁵ National Cancer Institute. Cancer Statistics. Accessed <https://www.cancer.gov/about-cancer/understanding/statistics>

¹⁴⁶ World Health Organization. Cancer, Early diagnosis. Accessed <http://www.who.int/cancer/prevention/diagnosis-screening/en/>

1.14 IMMUNIZATIONS & SCREENINGS

Indicator	Trend	Most Recent Year	HP 2020 Objective
Adults 50+ years that received blood stool test within past 2 years	STABLE	11.5% (2015)	NA
Adults 50+ years that received sigmoidoscopy or colonoscopy within past 3 years	Increasing	70.0% (2016)	NA
Adults 50-75 years that met the USPSTF colorectal screening recommendations	~	69.3% (2016)	70.5% (among adults 50 to 75 years)
Females 21-65 years that received pap screening with past 3 years	Decreasing	76.7% (2016)	93.0%
Females 50+ years that received mammogram within past 2 years	Decreasing	69.4% (2016)	73.7% (among females 50 to 74 years)
Males 40+ years that received a prostate-specific antigen (PSA) test within past 2 years	Decreasing	41.2% (2016)	NA
Cancer stage at diagnosis	~	various	NA

~ not able to assess for trend; NA = identical HP 2020 objective not available

Immunizations

Recommended Vaccination Series (4:3:1:3:3:1:4)*

Immunity against viruses and bacteria is passed to a newborn infant through antibodies from the mother. During the first year of life, infant immunity declines making the infant susceptible to infections, some which cause permanent damage or result in death. Obtaining the recommended vaccination series at the appropriate ages significantly reduces and in most cases, completely prevents infants from getting these diseases. When the majority of a community is vaccinated, they create what is known as “herd immunity” or “community immunity”. Community immunity helps to protect those who are too young to obtain vaccinations or are unable to receive vaccinations due to medical reasons, by limiting the number of individuals with an active infectious disease.¹⁴⁷

Table 138: Percent of Children 19-35 Months that Received Recommended Vaccination Series*, 2009-2016

Location	2009	2010	2011	2012	2013	2014	2015	2016
Washoe County	61.4%	66.4%	70.4%	72.6%	74.5%	75.9%	78.3%	79.8%
Nevada	52.7%	59.5%	63.5%	64.5%	66.1%	68.8%	72.6%	72.4%

*4 doses of DTaP (diphtheria, tetanus, pertussis); 3 doses of polio; 1 dose of MMR (measles, mumps, rubella); 3 doses of Hib; 3 doses of Hepatitis B; 1 dose of varicella; 4 doses of pneumococcal

Note: 2016 data as of 4/2017; 2015 data as of 2/2017

- Immunization rates for the 4:3:1:3:3:1:4 vaccination series (see note), among children 19-35 months in Washoe County increased from 2009 (61.4%) to 2016 (79.8%).
- From 2009 through 2016, the immunization rates among children aged 19-35 months in Washoe County were higher than Nevada.

¹⁴⁷ Centers for Disease Control and Prevention. Why are Childhood Vaccines so Important?. Accessed <https://www.cdc.gov/vaccines/vac-gen/howvpd.htm>

1.14 IMMUNIZATIONS & SCREENINGS

Human Papillomavirus Vaccination

Human papillomavirus (HPV) is a group of 150+ viruses that are transmitted through intimate skin-to-skin contact and is most often spread through sexual intercourse. HPV is so common that nearly all men and women become infected over the course of their lifetime. Usually HPV resolves without treatment; however in some cases, can cause warts or cancer.¹⁴⁸

Table 139: Percent of Young Adults aged 26 years that Received 3 HPV Doses by Sex, Washoe County, 2012-2016

Sex	2012	2013	2014	2015	2016
Females	3.1%	3.4%	4.5%	8.6%	11.7%
Males	0.2%	0.1%	0.2%	0.6%	0.9%

- The percentage of females aged 26 years in Washoe County that received all 3 doses of HPV vaccine increased from 2012 (3.1%) to 2016 (11.7%).
- The percentage of females aged 26 years that received all 3 doses of HPV vaccine has been higher than the percentage of males in Washoe County from 2012 through 2016.

Influenza Immunization

Influenza is a highly contagious respiratory infection that causes illness for up to two weeks ranging from mild to severe, and in some cases may result in hospitalization or death. Children under the age of 5, adults 65 years and older, pregnant women, and immunocompromised individuals are considered high-risk for serious influenza complications. Obtaining a seasonal flu shot is recommended for all persons 6 months and older, with focus on persons considered to be high-risk, and persons who work with vulnerable high-risk populations.^{149,150}

Table 140: Percent of Children 3 to 18 years that Received Influenza Immunization, 2010-2011 through 2015-2016

Location	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Washoe County	18%	22%	25%	25%	23%	22%
Nevada	15%	16%	18%	19%	19%	18%

- The percentage of children aged 3 to 18 years in Washoe County that received annual influenza immunization increased slightly from 18% in 2010-2011 to 22% in 2015-2016, however did not increase above a high of 25% (2012-2013 and 2013-2014).
- Overall, the annual influenza immunization rate among children in Washoe County increased, however immunization rates remained below the Healthy People 2020 objective of 70.0%.
- The percentage of children aged 3 to 18 years that received annual influenza immunization was higher in Washoe County compared to Nevada overall from the 2010-2011 flu season through 2015-2016 season.

¹⁴⁸ Centers for Disease Control and Prevention. Human papillomavirus (HPV). Accessed <https://www.cdc.gov/hpv/parents/whatishpv.html>

¹⁴⁹ Centers for Disease Control and Prevention. Key Facts about Seasonal Flu Vaccine. Accessed <https://www.cdc.gov/flu/protect/keyfacts.htm>

¹⁵⁰ Centers for Disease Control and Prevention. People at High Risk of Developing Flu-Related Complications. Accessed https://www.cdc.gov/flu/about/disease/high_risk.htm

1.14 IMMUNIZATIONS & SCREENINGS

Table 141: Percent of Adults 18 to 64 years that Received Annual Flu Shot*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	22.0%	31.3%	33.5%	39.0%	31.1%
Nevada	23.1%	25.8%	28.3%	26.9%	26.9%

*flu shot within past 12 months

- The percentage of adults aged 18 to 64 years in Washoe County that received an annual flu shot increased from 2012 (22.0%) to a high in 2015 (39.0%); however, decreased in 2016 (31.1%). The Healthy People 2020 objective for annual flu shot among adults 65 + years is 70.0%.
- The percentage of adults aged 18 to 64 years that received an annual flu shot increased faster in Washoe County compared to Nevada overall from 2012 through 2016.

Table 142: Percent of Adults 65+ years that Received Annual Flu Shot*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	52.0%	51.7%	53.8%	56.1%	52.0%
Nevada	50.0%	51.6%	52.9%	54.3%	54.1%
United States	60.1%	61.3%	60.8%	62.8%	52.2%

*flu shot within past 12 months

- The percentage of adults aged 65+ years in Washoe County that received an annual flu shot remained the same from 2012 (52.0%) to 2016 (52.0%).
- Despite a decline in 2016, the annual influenza immunization rate among adults 65+ years in Washoe County increased overall, however was lower than the Healthy People 2020 objective (70.0%).
- From 2012 to 2016, the percentage of adults aged 65+ years in Washoe County that received an annual flu shot was higher than Nevada and lower than the United States.

Pneumococcal Vaccination

Streptococcus pneumoniae is the bacteria which causes pneumococcus, or pneumococcal illnesses.

There are more than 90 serotypes of *Streptococcus pneumoniae*. Pneumococcal illnesses include ear infections, sinus infections, meningitis, blood stream infections (bacteremia) and are the most common cause of infection of the lungs, or pneumonia. Pneumococcal diseases are more common among children under the age of two, with increased risk of serious complications occurring among adults 65 years or older and those who have compromised immune systems. Pneumococcal vaccines (Pneumovax 23 and Prevnar 13) protect against many types of pneumococcal bacteria. Vaccination is recommended for children at ages 12 to 15 months, 2, 4, and 6 years, adults over 65 years of age, those with compromised immune systems, and cigarette smokers.¹⁵¹

Table 143: Percent of Adults 65+ years that ever Received Pneumococcal Vaccination, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	78.7%	75.0%	76.1%	76.9%	74.8%
Nevada	64.1%	66.8%	70.9%	70.1%	65.9%
United States	68.8%	69.5%	70.3%	72.7%	62.1%

¹⁵¹ Centers for Disease Control and Prevention. Pneumococcal Vaccination: What Everyone Should Know. Accessed <https://www.cdc.gov/vaccines/vpd/pneumo/public/index.html>

1.14 IMMUNIZATIONS & SCREENINGS

- The percentage of adults aged 65+ years in Washoe County that have ever received a vaccination for pneumonia decreased from 2012 (78.7%) to 2016 (74.8%). The Healthy People 2020 objective for pneumococcal vaccination among adults 65+ years is 90%.
- The percentage of adults aged 65+ years in Washoe County that have ever received a vaccination for pneumonia has been higher than Nevada, and the United States each year from 2012 to 2016.

Screenings

Cholesterol Screening

Lipid disorders such as high blood cholesterol and high triglyceride levels increase the risk for coronary heart disease, a leading cause of death in the United States. The National Cholesterol Education Program recommends lipoprotein profile (lipid screening) for adults over age 20 every 5 years, while the United States Preventive Services Task Force (USPSTF) recommends screening and treatment for lipid disorders among adults aged 40 to 75 years.¹⁵²

Table 144: Percent of Adults 18+ years that have had Cholesterol Checked within the past 5 years, 2013 & 2015

Location	2013	2015
Washoe County	74.1%	77.3%
Nevada	74.0%	74.7%
United States	76.4%	77.7%

- The percentage of adults aged 18+ years in Washoe County that have had cholesterol checked within the past 5 years increased from 2013 (74.1%) to 2015 (77.3%).
- In 2015, the percentage of adults aged 18+ years in Washoe County that have had cholesterol checked within the past 5 years (77.3%) was higher than Nevada (74.7%), however was slightly lower than the United States (77.7%).

Diabetes/High Blood Sugar Screening

The USPSTF recommends adults aged 40 to 70 years who are overweight or obese be screened for abnormal blood glucose as part of cardiovascular risk assessment.¹⁵³

Table 145: Percent of Adults that have had a test for Blood Sugar or Diabetes within the past 3 years, 2013-2016

Location	2013	2014	2015	2016
Washoe County	53.0%	53.5%	~	56.9%
Nevada	54.6%	55.4%	~	56.1%
~ data not available				

- The percentage of adults in Washoe County that had a test for blood sugar or diabetes within the past 3 years increased between 2013 (53.0%) and 2016 (56.9%).

¹⁵² Gillespie, C.D., Keenan, N.L., Miner, J.B., & Hog, Y. Screening for Lipid Disorders Among Adults-National Health and Nutrition Examination Survey, United States, 2005-2008. MMWR; 61(02); 26-31.

¹⁵³ United States Preventive Services Task Force. (2017). Final Recommendation Summary Abnormal Blood Glucose and Type 2 Diabetes Mellitus: screening. Accessed <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/screening-for-abnormal-blood-glucose-and-type-2-diabetes?ds=1&s=diabetes>.

1.14 IMMUNIZATIONS & SCREENINGS

- In 2016, the percentage of adults in Washoe County that had a test for blood sugar or diabetes within the past 3 years (56.9%) was relatively similar to Nevada (56.1%).

Cancer Screenings

The number of new cases of cancer and many deaths due to cancer can be reduced with timely cancer screenings or tests. Tests for cervical and colorectal cancers detect precancerous lesions that can be treated prior to becoming cancerous. Regular and timely screenings for cervical, colorectal, prostate, lung, skin, and breast cancers are designed to catch the disease in an early stage. When caught in early stages some types of cancers may be halted or even fully reversed with treatment. If left undiagnosed and untreated, cancer is able to spread to other areas of the body often resulting in a more complex, expensive, and difficult recovery.¹⁵⁴ Cancer screening guidelines are typically based on age, however screenings may be recommended earlier for certain individuals with a family history or other increased risks for specific types of cancers.

Screening for Colorectal Cancer

The USPSTF recommends screening for colorectal cancer starting at age 50 through age 75. Recommendations include receiving an annual fecal immunochemical test (FIT), which identifies blood in stool [Table 146] and obtaining a direct visualization screening or obtaining a sigmoidoscopy or colonoscopy, every 10 years [Table 147].¹⁵⁵ If an irregular test result occurs, a healthcare provider may recommend alternative intervals for screening or additional follow up procedures.

Table 146: Percent of Adults 50+ years that have had a Blood Stool test within the past 2 years, 2012-2015

Location	2012	2013	2014	2015
Washoe County	11.6%	8.3%	13.0%	11.5%
Nevada	19.0%	16.2%	16.9%	13.3%
United States	14.2%	~	12.8%	~

~ data not available

- The percentage of adults aged 50+ years in Washoe County that have had a blood stool test within the past 2 years remained relatively similar between 2012 (11.6%) to 2015 (11.5%), however the percentage fluctuated to a low of 8.3% in 2013 and a high of 13.0% in 2014.
- In 2015, the percentage of adults aged 50+ years in Washoe County that have had a blood stool test within the past 2 years (11.5%) was lower than Nevada (13.3%).

Table 147: Percent of Adults 50+ years that have ever had a Sigmoidoscopy or Colonoscopy, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	65.2%	67.4%	69.4%	73.5%	70.0%
Nevada	60.5%	60.5%	62.9%	63.9%	64.6%

- The percentage of adults aged 50+ years in Washoe County that have ever had a sigmoidoscopy or colonoscopy has increased from 2012 (65.2%) to 2016 (70.0%).

¹⁵⁴ Centers for Disease Control and Prevention. How to Prevent Cancer or Find It Early. Accessed <https://www.cdc.gov/cancer/dcpc/prevention/index.htm>

¹⁵⁵ United States Preventive Services Task Force. (2017). Final Recommendations Statement Colorectal Cancer: Screening. Accessed <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/colorectal-cancer-screening2>

1.14 IMMUNIZATIONS & SCREENINGS

- In 2016, the percentage of adults aged 50+ years in Washoe County that have ever had a sigmoidoscopy or colonoscopy (70.0%) was higher than Nevada (64.6%).

Table 148: Percent of Adults aged 50-75 who Fully met the USPSTF Colorectal Screening Recommendations, 2016

Location	2016
Washoe County	69.3%
Nevada	62.2%
United States	67.7%

- In 2016, the percentage of adults 50-75 years who met the USPSTF screening recommendations for colorectal cancer was higher (69.3%) than Nevada (62.2%) and the United States (67.7%) however, was still below the Healthy People 2020 objective of 70.5%.

Screening for Cervical Cancer

The USPSTF recommends women be screened for cervical cancer starting at age 21 through age 65. Recommendations include receiving a cervical cytology (pap test) every 3 years or, for women 30 to 65 years, an alternative of every 5 years using high-risk human papillomavirus testing.¹⁵⁶ If an irregular test result occurs, a healthcare provider may recommend alternative intervals for screening or additional follow up procedures.

Table 149: Percent of Females 21-65 years that have had a Pap test within the past 3 years, 2012, 2014, & 2016

Location	2012	2014	2016
Washoe County	78.2%	74.3%	76.7%
Nevada	74.8%	75.3%	74.8%
United States	~	82.6%	80.2%
~ data not available			

- The percentage of females aged 21+ years in Washoe County that have had a pap test within the past 3 years decreased from 2012 (78.2%) to 2016 (76.7%). The Health People 2020 objective for pap test within the past 3 years among females 21-65 years is 93.0%.
- In 2016, the percentage of females aged 21+ years in Washoe County that had a pap test within the past 3 years (76.7%) was higher than Nevada (74.8%), however lower than the United States (80.2%).

Screening for Breast Cancer

The USPSTF recommends mammography screening for breast cancer every 2 years in women age 50 to 74 years. When a woman has a higher than average risk for breast cancer (parent, sibling or child with breast cancer), they may benefit from starting to screen at age 40.¹⁵⁷ If an irregular test result occurs, a healthcare provider may recommend alternative intervals for screening or additional follow up procedures. The American Cancer Society recommends women aged 40 to 44 should have the choice to obtain screening if they select to do so. Women 45 to 54 years of age should obtain an annual screen and those 55 years and older can switch to

¹⁵⁶ United States Preventive Services Task Force. (2017). Draft Recommendations Statement Cervical Cancer: Screening. Accessed <https://www.uspreventiveservicestaskforce.org/Page/Document/draft-recommendation-statement/cervical-cancer-screening2>

¹⁵⁷ United States Preventive Services Task Force. (2017). Final Recommendation Statement Breast Cancer: Screening. Accessed <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/breast-cancer-screening1>

1.14 IMMUNIZATIONS & SCREENINGS

every other year.¹⁵⁸ Other professional organizations provide recommendations which vary from those described above. The differences in mammography recommendations may be contributing to the decline in screening rates. The USPSTF recommendations align with the Behavioral Risk Factor Surveillance Survey (BRFSS) data question [Table 150].

Table 150: Percent of Females 50+ years that have had a Mammogram within the past 2 years, 2012, 2014, & 2016

Location	2012	2014	2016
Washoe County	73.5%	69.5%	69.4%
Nevada	73.1%	70.9%	73.3%
United States	77.0%	75.6%	78.4%

- The percent of females aged 50+ years in Washoe County that have had a mammogram within the past 2 years decreased from 2012 (73.5%) to 2016 (69.4%) and is below the Healthy People 2020 objective of 73.7%.
- In 2016, the percentage of females aged 50+ years in Washoe County that had a mammogram within the past 2 years (69.4%) was lower than Nevada (73.3%) and the United States (78.4%).

Screening for Prostate Cancer

The USPSTF current draft for prostate cancer screening recommends clinicians inform patients ages 55 to 69 years of age the potential benefits and harms of prostate-specific antigen (PSA) screening for prostate cancer. The USPSTF recommendation aligns with the American Urological Association recommendations, noting that the screening interval should be every 2 years or more.¹⁵⁹ This differs from the American Cancer Society recommendations which are, men with an average risk of prostate cancer should obtain PSA screenings every 2 years beginning at age 50, and for men with more than one relative with prostate cancer at an early age, screening should be initiated at 40 years.¹⁶⁰

Table 151: Percent of Men 40+ years that have had a PSA test within the past 2 years, 2012, 2014, & 2016

Location	2012	2014	2016
Washoe County	47.7%	43.5%	41.2%
Nevada	48.7%	41.0%	39.5%
United States	45.2%	42.8%	36.5%

- The percent of males aged 40+ years in Washoe County that have had a PSA test within the past 2 years decreased from 2012 (47.7%) to 2016 (41.2%).
- In 2016, the percentage of males aged 40+ years in Washoe County that had a PSA test within the past 2 years (41.2%) was higher than Nevada (39.5%), and the United States (36.5%).

¹⁵⁸ American Cancer Society. Breast Cancer Screening Guidelines. Accessed

<https://www.cancer.org/content/cancer/en/research/infographics-gallery/breast-cancer-screening-guideline.html>

¹⁵⁹ United States Preventive Services Task Force. (2017). Draft Recommendation Statement: Prostate Cancer: Screening. Accessed

<https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementDraft/prostate-cancer-screening>

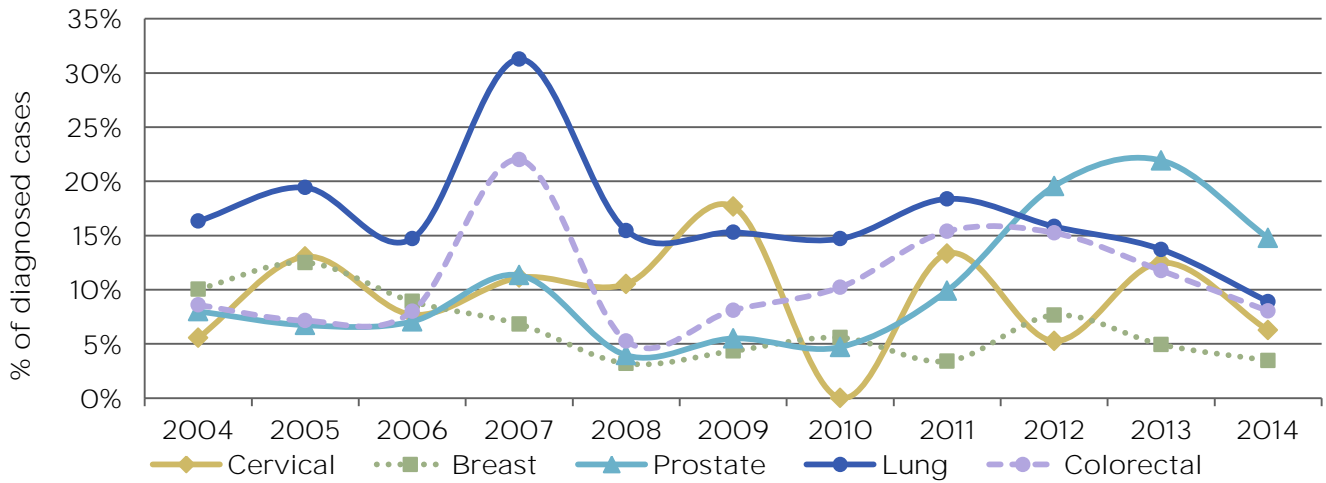
¹⁶⁰ American Cancer Society. American Cancer Society Recommendations for Prostate Cancer Early Detection. Accessed

<https://www.cancer.org/cancer/prostate-cancer/early-detection/acs-recommendations.html>

Cancer Stage at Diagnosis

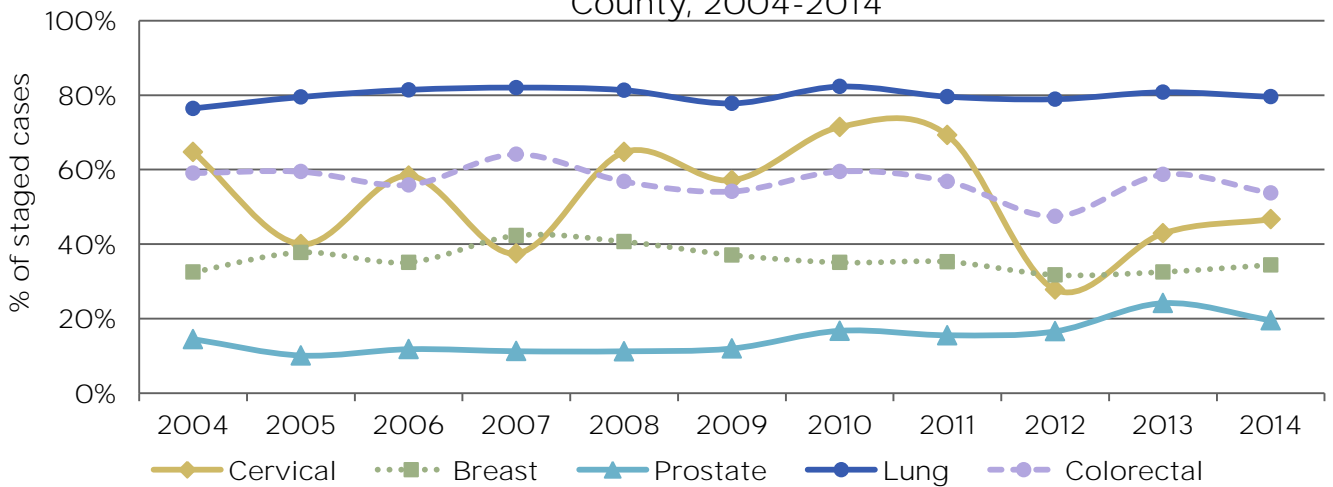
Ideally, screening rates would increase and more cases of cancer would be found in the earlier stages of disease progression. The stage of disease is determined for the majority of cancer cases, but not all cases are staged at time of diagnosis. Figure 149 illustrates cases of cancer that were NOT staged at time of diagnoses, while Figure 150 shows among cases that were staged at time of diagnosis the proportion that were diagnosed in a late stage of disease. Utilize Figure 154 in conjunction with Figure 155.

Fig 154: Percent of Diagnosed Cancer Cases that were Unstaged at time of Diagnosis, Washoe County, 2004-2014



- From 2004 through 2014, the majority of diagnosed cancer cases in Washoe County were staged at time of diagnosis. Lung cancer was most often not staged at time of diagnosis, while breast cancer was most often staged at time of diagnosis over the 10-year period.

Fig 155: Percentage Cancer Cases Staged at Time of Diagnosis Found in the Late Stage of Disease* by Cancer Type, Washoe County, 2004-2014



*Not all cases of diagnosed cancer were staged at time of diagnosis.

Note: Various cancers have different staging mechanisms depending on the type of cancer. Late stage was defined as malignant cancer where the cancer has spread beyond the organ of origin.

1.14 IMMUNIZATIONS & SCREENINGS

- From 2004 through 2014, over seven in ten cases of lung cancer that were staged at time of diagnosis, were diagnosed as late stage of disease.
- Over half of the cases of colorectal cancer diagnosed and staged, were found in late stage of disease.
- Prostate cancer cases staged at time of diagnoses were most frequently caught in an early stage of disease, as less than 20% of cases were in an advanced stage of disease at time of diagnosis.

Summary of Immunizations & Screenings

The percentage of children receiving the recommended vaccination series in Washoe County has increased from 2010 through 2016, as have the percentage of females (26 years old) that received all three doses of the HPV vaccine. Annual influenza immunization among children has not increased as much as adults 18 to 64 years in Washoe County. The reported percentage of seniors 65 years and older in Washoe County that received their annual influenza immunization has remained stable from 2012 to 2016, while the percentage that have ever received a pneumonia vaccination has decreased over the same time period.

Cholesterol screenings among adults increased from 2013 to 2015, and diabetes (high blood sugar) screenings slightly increased from 2013 to 2016. However, the percentage of adults who obtained blood stool tests, pap tests, mammograms, and PSA tests have remained stable or declined over the past few years.

Washoe County vaccination rates have improved over the course of the past decade, however remain below Healthy People 2020 target objectives. Additionally, while the percentage of adults who report obtaining preventive screenings has improved from 10 years ago, more recent data indicate there may be a plateau in uptake of those recommended preventive services. As the population ages, impacts to relaxed adherence to cancer screenings may result in an influx of late stage cancer diagnoses, resulting in high-cost and extensive treatments. Continued efforts to provide education on the benefits of timely vaccinations and screening, in combination with increased access to primary care providers and low-cost clinics, will be key to maximizing the impact of these preventive measures.

Immunization & Screenings Sources

Table 138-Table 140 Same Source

Table 138: Percent of Children 19-35 Months that Received Recommended Vaccination Series*, 2009-2016

Table 139: Percent of Young Adults aged 26 years that Received 3 HPV Doses by Sex, Washoe County, 2012-2016

Table 140: Percent of Children 3 to 18 years that Received Influenza Immunization, 2010-2011 through 2015-2016

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. WebIZ data as of 3/2017. Provided upon request. Carson City, NV.

Table 141-Table 151 Same Source

Table 141: Percent of Adults 18 to 64 years that Received Annual Flu Shot*, 2012-2016

Table 142: Percent of Adults 65+ years that Received Annual Flu Shot*, 2012-2016

Table 143: Percent of Adults 65+ years that ever Received Pneumococcal Vaccination, 2012-2016

Table 144: Percent of Adults 18+ years that have had Cholesterol Checked within the past 5 years, 2013 & 2015

Table 145: Percent of Adults that have had a test for Blood Sugar or Diabetes within the past 3 years, 2013-2016

Table 146: Percent of Adults 50+ years that have had a Blood Stool test within the past 2 years, 2012-2015

Table 147: Percent of Adults 50+ years that have ever had a Sigmoidoscopy or Colonoscopy, 2012-2016

1.14 IMMUNIZATIONS & SCREENINGS

Table 148: Percent of Adults aged 50-75 who Fully met the USPSTF Colorectal Screening Recommendations, 2016

Table 149: Percent of Females 21-65 years that have had a Pap test within the past 3 years, 2012, 2014, & 2016

Table 150: Percent of Females 50+ years that have had a Mammogram within the past 2 years, 2012, 2014, & 2016

Table 151: Percent of Men 40+ years that have had a PSA test within the past 2 years, 2012, 2014, & 2016

Washoe County & Nevada: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. 2012-2016 Nevada BRFSS Data. Data provided upon request. Carson City, NV.

United States BRFSS data: Centers for Disease Control and Prevention. BRFSS Prevalence and Trends Data query tool, Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

Fig 154-Fig 155 Same Source

Fig 154: Percent of Diagnosed Cancer Cases that were Unstaged at time of Diagnosis, Washoe County, 2004-2014

Fig 155: Percentage Cancer Cases Staged at Time of Diagnosis Found in the Late Stage of Disease* by Cancer Type, Washoe County, 2004-2014

Nevada Division of Public and Behavioral Health, Nevada Cancer Registry. Data provided upon request. Carson City, NV.

Communicable Diseases

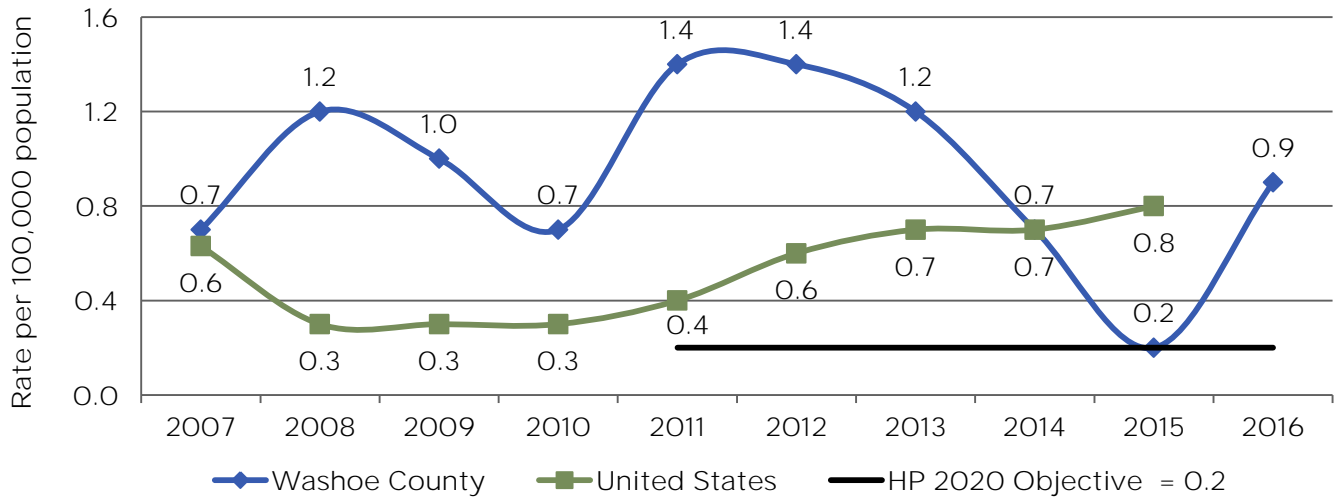
Communicable (infectious) diseases affect people regardless of gender, age, race or ethnicity, or income. These diseases can cause acute illness, develop into chronic conditions and in some cases result in death. Communicable diseases are closely monitored by hospitals, infection prevention teams, laboratories, and governmental health agencies in order to stop or mitigate potential disease outbreaks. The communicable disease indicators presented in this section include blood borne, airborne, select vaccine-preventable diseases, and foodborne illnesses. Data for sexually transmitted infections are presented in the Sexual Health section, while data for water borne infectious diseases are presented in the Environmental Health section.

Indicator	Trend	Most Recent Year	HP 2020 Objective
Acute Hepatitis C	~	0.9 per 100,000 (2016)	0.2 per 100,000
Tuberculosis	Decreasing	1.3 per 100,000 (2016)	1.0 per 100,000
Pertussis	~	0.45 per 100,000 (2016)	NA
Select vaccine-preventable diseases: diphtheria, measles, mumps, polio, rubella, and tetanus	STABLE	various	NA
Invasive pneumococcal disease	Increasing	13.8 per 100,000 (2016)	NA
Rotavirus	Decreasing	3.6 per 100,000 (2016)	NA
Influenza	Increasing	669.9 per 100,000 (2016)	NA
Foodborne illness complaints	Decreasing	35.3 per 100,000 (2016)	NA
Campylobacteriosis	Decreasing	10.5 per 100,000 (2016)	8.5 per 100,000
<i>Escherichia coli</i> STEC O157	Increasing	0.7 per 100,000 (2016)	0.6 per 100,000
Salmonellosis	Decreasing	6.9 per 100,000 (2016)	11.4 per 100,000
~not able to assess for trend; NA = identical HP 2020 objective not available			

Viral Hepatitis C

Hepatitis C virus (HCV) is the most common chronic blood borne infection in the United States. As of 2016 an estimated 2.7 to 3.2 million people were living with a chronic HCV infection. Risk factors for HCV include having had a blood transfusion or a solid organ transplant prior to July 1992, intravenous drug use, children born to mothers who were positive for HCV, and chronic hemodialysis patients. An acute HCV infection may resolve without treatment in about 15% to 25% of patients, however for those who remain undiagnosed and untreated, an acute HCV infection can become chronic.¹⁶¹ There is no vaccine for HCV, however effective treatment regimens became available late 2013.

Fig 156: Rate of Acute Hepatitis C, Washoe County & the United States, 2007-2016



Note: From May 1, 2002 through December 31, 2012 WCHD conducted enhanced HCV surveillance. As of 2013, HCV surveillance in Washoe County was limited to laboratory test registry and WCHD chart review was discontinued.

- In 2016 the acute HCV incidence rate in Washoe County was 0.9 per 100,000 population, which was above the Healthy People 2020 objective 0.2 per 100,000 population.

Tuberculosis

Tuberculosis (TB) is caused by the bacterium, *Mycobacterium tuberculosis*. An estimated one-third of the world’s population is infected with TB, and in 2015 was responsible for 1.8 million deaths (worldwide). TB in the United States is not nearly as common as it once was, as the case rate per 100,000 population has dropped from 18.1 in 1970, to 10.3 in 1990, and 1.3 in 2016.^{162,163}

¹⁶¹ Centers for Disease Control and Prevention. Viral Hepatitis-Hepatitis C Information. Accessed <https://www.cdc.gov/hepatitis/hcv>

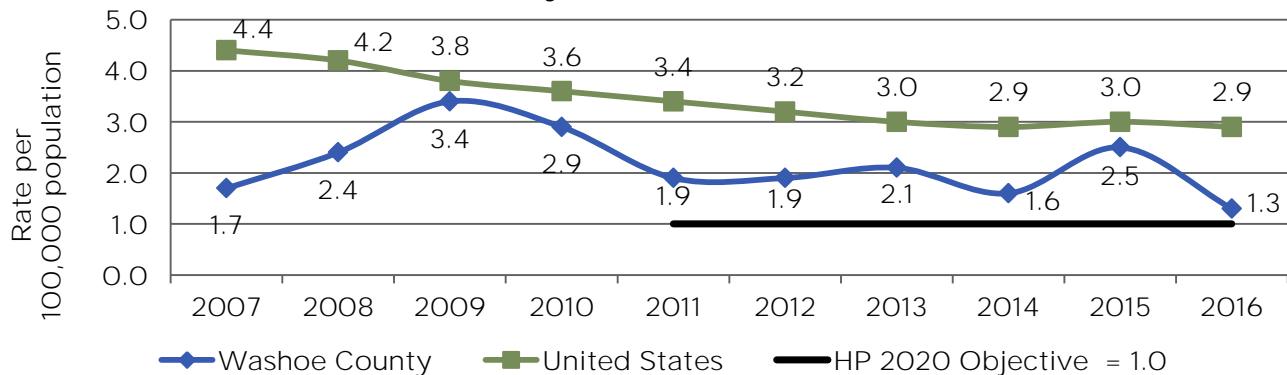
¹⁶² Centers for Disease Control and Prevention. TB Incidence in the United States, 1953-2015. Accessed <https://www.cdc.gov/tb/statistics/tbcases.htm>

¹⁶³ Schmidt, K.M, Wanasaula, Z., Pratt, R., Price, S.F. & Langer, A.J., Tuberculosis-United States, 2016. MMWR Morbidity and Mortality Weekly Report 2017;66:289-294

1.15 COMMUNICABLE DISEASES

Tuberculosis usually affects the lungs, but can impact the kidney, spine, and brain and if not treated properly, can be fatal. TB spreads by an infected person coughing, sneezing, speaking or singing, and non-infected people can inhale the respiratory droplets and become infected. Some people develop active TB within weeks of becoming exposed, some may take years to develop the disease, and others may never develop the active form of TB. Symptoms of TB include a severe cough which lasts more than three weeks, chest pain, coughing up blood or sputum (mucous), weakness, fatigue, weight loss, lack of appetite, chills, fever, and/or night sweats.¹⁶⁴

Fig 157: Rates of Reported Cases of Tuberculosis, Washoe County & the United States, 2007-2016



- The rate of reported cases of tuberculosis in Washoe County decreased from 2007 (1.7 per 100,000) to 2016 (1.3 per 100,000).
- From 2007 through 2016 the rates of reported cases of tuberculosis in Washoe County were lower than the national rates, however have remained above the Healthy People 2020 objective (1.0 per 100,000).

Pertussis

Pertussis, more commonly known as whooping cough, is a very contagious respiratory disease caused by the bacterium *Bordetella pertussis*. Whooping cough infection begins with a mild cough and fever, after a few weeks the cough can become severe and last for weeks or months. The violent coughing can cause apnea (stopped breathing), vomiting, and exhaustion and is characterized by the “whoop” sound of the cough.¹⁶⁵

Pertussis can cause serious respiratory complications in infants and young children, especially those who are unvaccinated or partially vaccinated, including pneumonia, convulsions, slowed or stopped breathing, and possibly death. Fully vaccinated people have been known to be susceptible to infection, however the infection is usually less severe in vaccinated individuals. Being up-to-date on vaccination status is the most effective way to

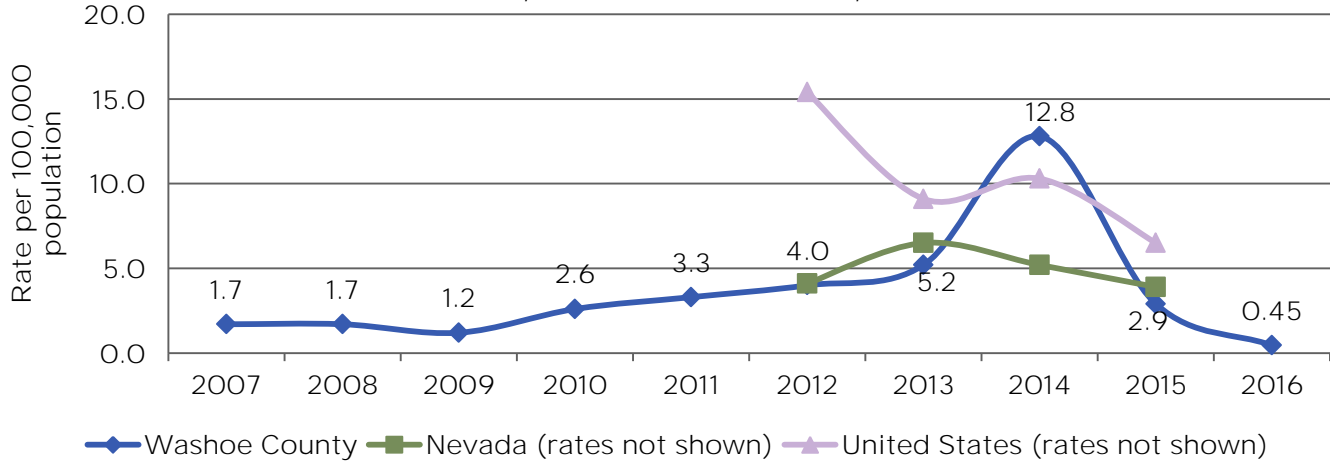
¹⁶⁴ Centers for Disease Control and Prevention. Tuberculosis (TB). Accessed <https://www.cdc.gov/tb/topic/basics/signsandsymptoms.htm>

¹⁶⁵ Centers for Disease Control and Prevention. Pertussis (Whooping Cough)-Signs and Symptoms. Accessed <https://www.cdc.gov/pertussis/about/signs-symptoms.html>

1.15 COMMUNICABLE DISEASES

prevent whooping cough, booster shots are recommended every 10 years for adults, and any woman who is expecting to become pregnant should obtain a booster shot if she is overdue.¹⁶⁶

Fig 158: Rate of Reported Cases of Pertussis, Washoe County, Nevada, & the United States, 2007-2016



- From 2007 to 2016 the rate of reported cases of pertussis in Washoe County have remained relatively stable.
- A spike in reported cases of pertussis occurred in 2014 (12.8 per 100,000) in Washoe County due to outbreaks/clusters, however the rates have since decreased.

Select Vaccine-Preventable Diseases

Table 152 provides the case count for select vaccine-preventable diseases in Washoe County from 2007 through 2016. The vaccinations for diphtheria, measles, mumps, rubella, poliomyelitis (polio), tetanus, and smallpox, are highly effective and are largely responsible for the decline of these illnesses.¹⁶⁷

Table 152: Laboratory-Confirmed Cases of Select Vaccine-Preventable Diseases, Washoe County, 2007-2016

Disease Type	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Diphtheria	0	0	0	0	0	0	0	0	0	0
Measles	0	0	0	0	0	0	0	0	0	0
Mumps	1	0	0	2	1	1	3	4	2	3
Rubella	0	0	0	0	0	0	0	0	0	0
Polio	0	0	0	0	0	0	0	0	0	0
Tetanus	0	0	1	0	0	0	0	0	0	0

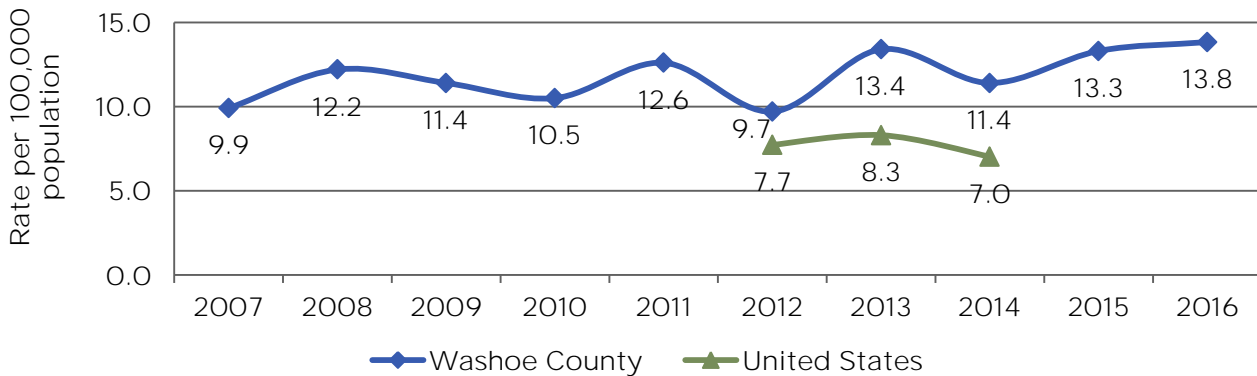
¹⁶⁶ Centers for Disease Control and Prevention. Pertussis (Whooping Cough)-Prevention. Accessed <https://www.cdc.gov/pertussis/about/prevention/index.html>

¹⁶⁷ Centers for Disease Control and Prevention. (1999). Achievements in public health, 1900-1999: Control of infectious diseases. MMWR, 48(29), 621-629.

Invasive Pneumococcal Disease

Streptococcus pneumoniae (pneumococcus) causes ear and sinus infections, bacteremia (blood stream infection), severe pneumonia, and meningitis. Populations at an increased risk for pneumococcal disease include young children, adults over age 65, adults with certain chronic illnesses or compromised immune systems, persons with cochlear implants, and those who smoke cigarettes. Symptoms and complications range and are dependent on the part of the body that is infected.¹⁶⁸

Fig 159: Rate of Reported Cases of Invasive Pneumococcal Disease, Washoe County & the United States, 2007-2016

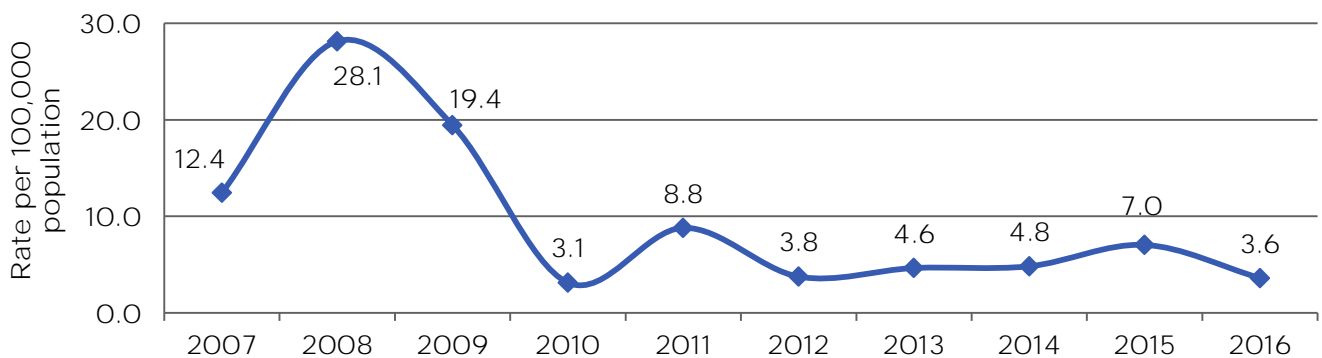


- The rate of reported cases of invasive pneumococcal disease in Washoe County increased from 2007 (9.9 per 100,000) to 2016 (13.8 per 100,000).
- From 2012 through 2014 there were comparable data available for the United States and Washoe County rates of invasive pneumococcal disease were higher than national rates.

Rotavirus

Rotavirus causes severe diarrhea, vomiting, fever, and abdominal pain and is most common among infants and young children. Rotavirus spreads through the oral-fecal route and can be spread by contaminated hands or objects such as toys, food, or water.

Fig 160: Rate of Reported Rotavirus Cases, Washoe County, 2007-2016



¹⁶⁸ Centers for Disease Control and Prevention. Pneumococcal Disease. Accessed <https://www.cdc.gov/pneumococcal/about/index.html>

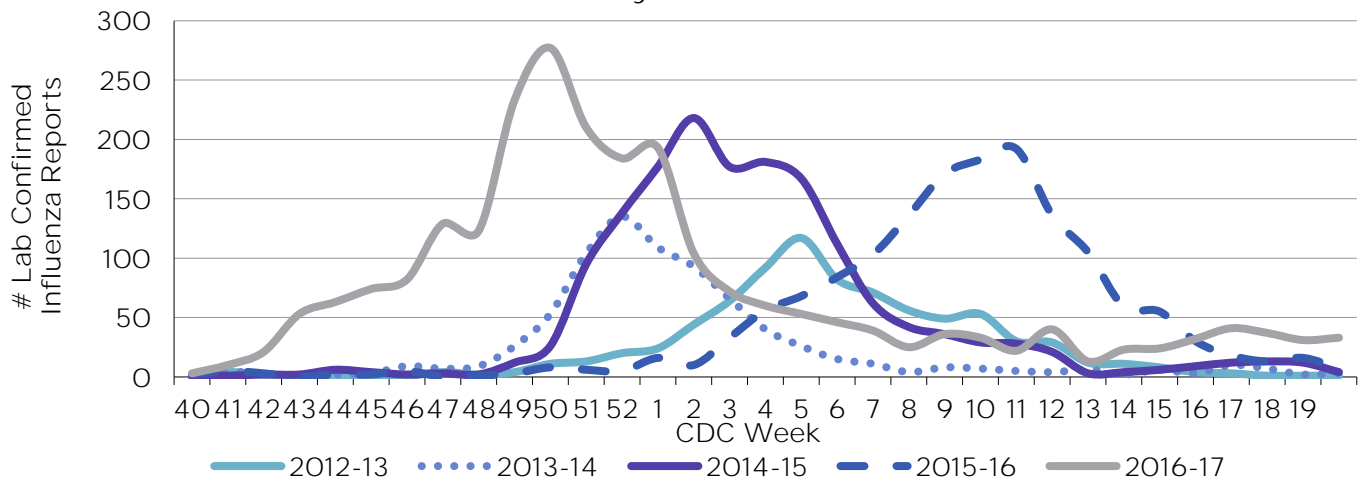
1.15 COMMUNICABLE DISEASES

- The rate of reported rotavirus cases in Washoe County peaked in 2008 at 28.1 per 100,000, however the rate of reported cases was 3.6 per 100,000 population in 2016.
- The significant reduction in incidence was associated with significant increase in vaccination against rotavirus since 2008.

Influenza

Influenza (flu) is a respiratory disease caused by a variety of influenza viruses. The onset of the flu can be rapid and symptoms include fever, cough, sore throat, runny/stuffy nose, body aches, headaches, and fatigue. Vomiting and diarrhea occur more in children than adults. Flu symptoms usually last for a few days to less than two weeks however, serious complications of influenza include hospitalizations or death. Elderly adults, children, and persons with certain health conditions are at high risk for serious complications.¹⁶⁹ Although not shown in Figure 161 the 2016 number of lab confirmed cases in Washoe County was 669.9 per 100,000 population.

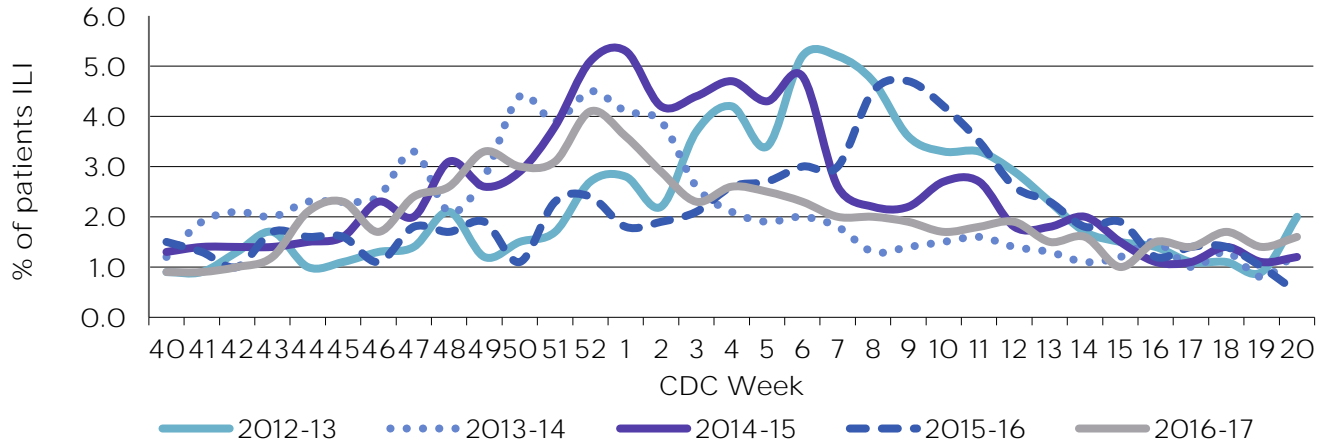
Fig 161: Number of Laboratory Confirmed Influenza Reports, Washoe County, 2012-2017 Influenza Seasons



¹⁶⁹ Centers for Disease Control and Prevention. Influenza (flu). Accessed <https://www.cdc.gov/flu/index.htm>

1.15 COMMUNICABLE DISEASES

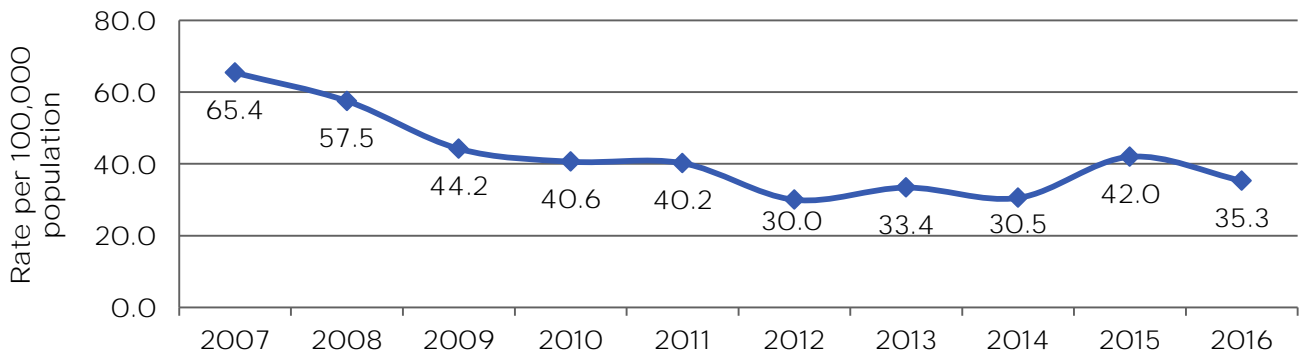
Fig 162: Percent of Patients Visits with Influenza-like Illness as Reported by Sentinel Providers, Washoe County, 2012-2017
Influenza Seasons



Foodborne Illness Complaints

Foodborne illnesses include a range of acute syndromes resulting from the ingestion of contaminated foods. The Washoe County Environmental Health Services Food Safety Program receives complaints related to foodborne illness and conducts investigation to identify the source and halt any potential foodborne illness outbreaks. The rates in Figure 163 reflect the number of complaints per 100,000, however do not reflect confirmed cases or confirmed sources of infection.

Fig 163: Rate of Reported Foodborne Illness Complaints, Washoe County, 2007-2016

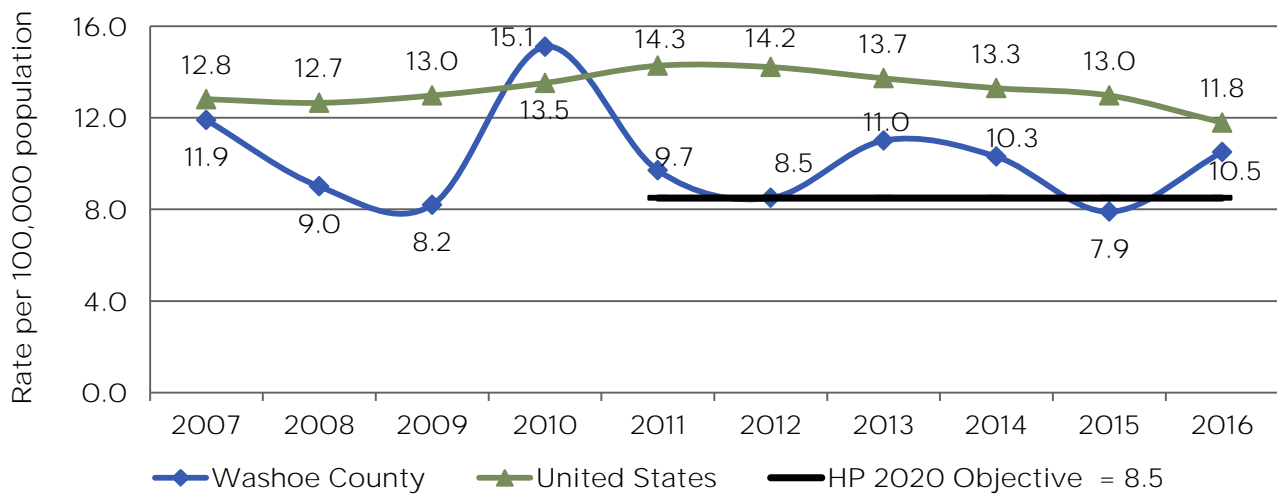


- The rate of reported foodborne illness complaints in Washoe County decreased from 2007 (65.4 per 100,000) to 2016 (35.3 per 100,000).

Campylobacteriosis

Campylobacteriosis is caused by the bacteria (genus) *Campylobacter* and is the most common bacterial diarrheal illness, with an estimated 1.3 million cases in the United States each year. Most cases of campylobacteriosis are caused by eating raw or uncooked poultry meats, or result from cross-contamination of other foods from these items. Symptoms include diarrhea, cramping, abdominal pain, and fever within two to five days of exposure. Illness typically lasts one week, however in immunocompromised individuals *Campylobacter* may spread to the bloodstream and cause a life-threatening infection.¹⁷⁰

Fig 164: Rate of Reported Cases of Campylobacteriosis, Washoe County & the United States*, 2007-2016



*United States data based on surveillance from 10 sites

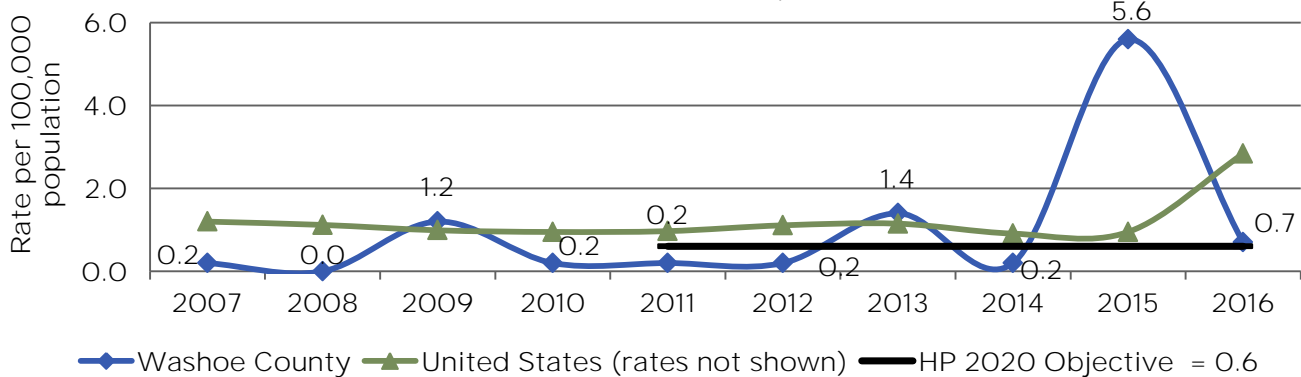
- The rate of reported cases of campylobacteriosis in Washoe County decreased slightly from 2007 (11.9 per 100,000) to 2016 (10.5 per 100,000).
- Rates of reported cases of campylobacteriosis in Washoe County have been lower than national rates from 2007 through 2016, with the exception of 2010 (15.1 per 100,000) when reporting criteria changed to include probable cases.

¹⁷⁰ Centers for Disease Control and Prevention. Food Safety-Campylobacter. Accessed <https://www.cdc.gov/foodsafety/diseases/campylobacter/>

***Escherichia coli* O157:H7**

Escherichia coli (*E. coli*) include a very broad and diverse range of bacteria, and while some are harmless, some have been known to cause death. Types of *E. coli* that can cause disease include ones which produce a toxin known as Shiga toxin *E. coli* or STEC. Most reported outbreaks of *E. coli* are due to STEC O157. Symptoms include stomach cramps, diarrhea (usually bloody), and hemolytic uremic syndrome (HUS). HUS is a condition where red blood cells are destroyed prematurely and clog up the body’s filtration system (kidneys), which can then result in kidney failure. The major source of infection in humans is due to ingestion of undercooked contaminated beef, unpasteurized raw milk, or coming into contact with the feces of an infected human.¹⁷¹

Fig 165: Rate of Reported Cases of STEC O157, Washoe County & the United States*, 2007-2016



*United States data based on surveillance from 10 sites

- The 2015 spike in STEC O157 in Washoe County was due to a foodborne outbreak and resulted in double the national average for that year.
- The 2016 rate of reported STEC O157 cases in Washoe County (0.7 per 100,000) was below the national rate (2.84 per 100,000) and higher than the Healthy People 2020 objective (0.6 per 100,000).

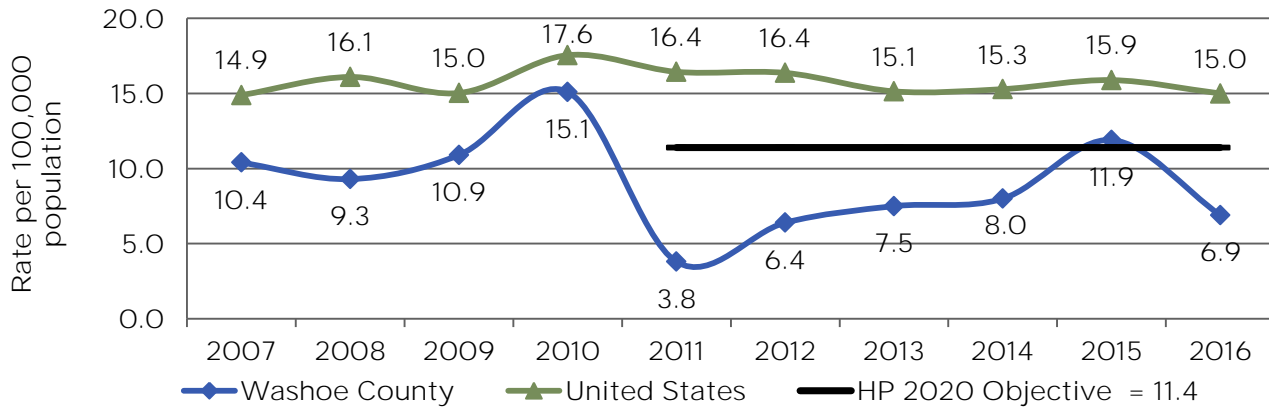
Salmonellosis

Salmonellosis is an infection due caused by the bacterium, *Salmonella*, and is one of the most common types of food-borne infection. Symptoms include diarrhea, fever and abdominal cramps 12 to 72 hours after infection. These symptoms last about a week and most people recover without needing treatment. *Salmonella* lives in the intestinal tracts of humans, and animals, including birds and reptiles. Food contamination usually occurs through fecal contact, however proper food handling reduces risk of cross contamination, and cooking meats thoroughly typically kills *Salmonella*.¹⁷²

¹⁷¹ Centers for Disease Control and Prevention. *E.coli* (Escherichia coli)-General Information. Accessed <https://www.cdc.gov/ecoli/general/index.html>

¹⁷² Centers for Disease Control and Prevention. *Salmonella*. Accessed <https://www.cdc.gov/salmonella/index.html>

Fig 166: Rate of Reported Cases of Salmonellosis, Washoe County & the United States*, 2007-2016



*United States data based on surveillance from 10 sites

- The rate of reported cases of Salmonellosis in Washoe County decreased from 2007 (10.4 per 100,000) to 2016 (6.9 per 100,000).
- The 2016 rate of reported cases of Salmonellosis in Washoe County (6.9 per 100,000) was below the national rate (15.0 per 100,000) and the Healthy People 2020 objective (11.4 per 100,000).

Summary of Communicable Diseases

There are a few communicable diseases presented in this section which have noted peaks, or outbreaks, in recent years. These include pertussis in 2014, slight increase in the number of cases of mumps in 2013, 2014 and 2016, and an outbreak of STEC O157 in 2015. The 2016 rates of reported cases for HCV, tuberculosis, and STEC O157 were above the Healthy People 2020 objectives, while rates for campylobacteriosis and salmonellosis were below the Healthy People 2020 objectives. Regular hand washing and obtaining appropriate vaccinations are two major steps which can be taken to reduce the number of cases of many communicable diseases.

For detailed documents related to communicable diseases in Washoe County refer to:

Washoe County Health District Annual Communicable Disease Summary Reports

www.tinyURL.com/WashoeCDAnnualSummary

Antimicrobial Resistance Surveillance www.tinyURL.com/WashoeAntibiogram

Influenza Surveillance www.tinyURL.com/WashoeFlu

Communicable disease newsletters www.tinyURL.com/WashoeEpiNews

Communicable Disease Sources

Fig 156: Rate of Acute Hepatitis C, Washoe County & the United States, 2007-2016

Washoe County: Washoe County Health District, Communicable Disease and Epidemiology Program. Data provided upon request. Reno, NV.

United States 2007-2009: "Table 4.1 Reported cases of acute, hepatitis C, by state—United States, 2006-2010". Accessed <https://www.cdc.gov/hepatitis/statistics/2010surveillance/table4.1.htm>

United States 2010-2014: "Table 4.1 Reported cases of acute, hepatitis C, by state—United States, 2006-2010". Accessed <https://www.cdc.gov/hepatitis/statistics/2010surveillance/table4.1.htm>

United States: "Table 4.1 Reported cases of acute, hepatitis C, nationally and by state and jurisdiction—United States, 2011-2015". Accessed <https://www.cdc.gov/hepatitis/statistics/2015surveillance/index.htm#tabs-6-1>

1.15 COMMUNICABLE DISEASES

Fig 157: Rates of Reported Cases of Tuberculosis, Washoe County & the United States, 2007-2016

Washoe County: Washoe County Health District, Communicable Disease and Epidemiology Program. Data provided upon request. Reno, NV.

United States 2007-2015: "TB Incidence in the United States, 1953-2015." Accessed <https://www.cdc.gov/tb/statistics/tbcases.htm>

United States 2016: Schmidt, KM., Wanasaula, Z., Pratt, SF, & Langer, AJ. Tuberculosis-United States, 2016. MMWR Morbidity and Mortality Weekly Report 2017; 66:289-294.

Fig 158: Rate of Reported Cases of Pertussis, Washoe County, Nevada, & the United States, 2007-2016

Washoe County: Washoe County Health District, Communicable Disease and Epidemiology Program. Data provided upon request. Reno, NV.

Nevada and United States: "2015 Final Pertussis Surveillance Report". Accessed <https://www.cdc.gov/pertussis/downloads/pertuss-surv-report-2015.pdf>

Table 152: Laboratory-Confirmed Cases of Select Vaccine-Preventable Diseases, Washoe County, 2007-2016

Washoe County Health District, Communicable Disease and Epidemiology Program. Data provided upon request. Reno, NV.

Fig 159: Rate of Reported Cases of Invasive Pneumococcal Disease, Washoe County & the United States, 2007-2016

Washoe County: Washoe County Health District, Communicable Disease and Epidemiology Program. Data provided upon request. Reno, NV.

United States: Centers for Disease Control and Prevention. (2016). Summary of Notifiable Infectious Diseases and Conditions—United States, 2014. MMWR, 63(54), 69.

Fig 160-Fig 163 Same Source

Fig 160: Rate of Reported Rotavirus Cases, Washoe County, 2007-2016

Fig 161: Number of Laboratory Confirmed Influenza Reports, Washoe County, 2012-2017 Influenza Seasons

Fig 162: Percent of Patients Visits with Influenza-like Illness as Reported by Sentinel Providers, Washoe County, 2012-2017 Influenza Seasons

Fig 163: Rate of Reported Foodborne Illness Complaints, Washoe County, 2007-2016

Washoe County Health District, Communicable Disease and Epidemiology Program. Data provided upon request. Reno, NV.

Fig 164-Fig 166 Same Source

Fig 164: Rate of Reported Cases of Campylobacteriosis, Washoe County & the United States*, 2007-2016

Fig 165: Rate of Reported Cases of STEC 0157, Washoe County & the United States*, 2007-2016

Fig 166: Rate of Reported Cases of Salmonellosis, Washoe County & the United States*, 2007-2016

Washoe County: Washoe County Health District, Communicable Disease and Epidemiology Program. Data provided upon request. Reno, NV.

United States 2007-2015: CDC, FoodNet "Table 2b. Incidence of infection by pathogen all sites, 2004-2015". Accessed <https://www.cdc.gov/foodnet/reports/data/infections.html>

United States 2016: Marder, EP, Cieslak, PR, Cronquist, AB et al. Incidence and Trends of Infections with Pathogens Transmitted Commonly Through Food and the Effect of Increasing Use of Culture-Independent Diagnostic Tests on Surveillance-Foodborne Diseases Active Surveillance Network, 10 US Sites, 2013-2016. MMWR Morbidity and Mortality Weekly Report 2017; 66:397-403.

Chronic Diseases

Chronic diseases, such as heart disease, diabetes, arthritis, and obesity, are largely preventable however account for seven out of ten deaths in the United States every year. One in two adults in the United States has a chronic disease, while one in three adults have two or more. The key risk factors for most chronic diseases are tobacco use, poor nutrition and lack of physical activity resulting in obesity, and excessive alcohol use.¹⁷³ In 2010, 86% of healthcare dollars were spent on patients with one or more chronic conditions. The average annual healthcare spending for someone without any chronic conditions in 2010 was \$1,177 compared to \$4,731 for persons with two chronic conditions, and an average of \$15,954 spent on those with five or more chronic conditions. The majority of Medicare (80.0%) enrollees and persons enrolled in both Medicaid and Medicare (78.0%) have multiple chronic conditions.¹⁷⁴

By improving nutrition, increasing physical activity, reducing alcohol consumption and eliminating the use of tobacco products, the United States could significantly reduce total healthcare costs and people would experience an increase in length and quality of life.

Indicator	Trend	Most Recent Year
Arthritis prevalence	Increasing	25.6% (2016)
Asthma prevalence	Increasing	8.5% (2016)
Breast cancer incidence	Increasing	133.5 per 100,000 females (2014)
Cervical cancer incidence	Decreasing	7.4 per 100,000 females (2014)
Prostate cancer incidence	Increasing	91.8 per 100,000 males (2014)
Colorectal cancer incidence	Decreasing	37.2 per 100,000 population (2014)
Lung cancer incidence	Decreasing	54.2 per 100,000 population (2014)
High cholesterol prevalence	Increasing	40.3% (2015)
High blood pressure prevalence	Increasing	32.4% (2015)
Angina or coronary heart disease prevalence	Increasing	4.1% (2016)
Heart attack prevalence	Increasing	4.1% (2016)
Stroke prevalence	Increasing	2.7% (2016)
COPD prevalence	STABLE	5.4% (2016)
Diabetes prevalence	Increasing	10.4% (2016)

Arthritis

Nationwide one in four adults are impacted by arthritis which is considered a leading cause of disability and is one of the most common chronic conditions. Arthritis includes more than 100 types of diseases and conditions that are characterized as inflammation of one or more joints or connective tissues surrounding joints. Some forms of arthritis, such as Lupus or fibromyalgia, may be more widespread impacting the immune system

¹⁷³ Centers for Disease Control and Prevention. Chronic Disease Prevention and Health Promotion. Accessed <https://www.cdc.gov/chronicdisease/about/infographic.htm>

¹⁷⁴ Gerteis, J. Izrael, D., Deitz, D., LeRoy, L. Ricciardi, R., Miller, T., & Basu, J. (2014). Multiple Chronic Conditions Chartbook. AHRQ Publications NO, Q14-0038. Rockville, MD.

1.16 CHRONIC DISEASES

or other internal organs. Symptoms of arthritis typically include pain, aching, stiffness, swelling, redness, and reduced range of motion. Risk factors include age, gender, genetic inheritance, being overweight or obese, joint injuries, infections, and occupations involving repetitive movements or prolonged stress on a joint.¹⁷⁵

Table 153: Percent of Adults who have been told they have Arthritis*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	24.0%	21.2%	24.0%	21.7%	25.6%
Nevada	24.0%	20.9%	23.0%	21.5%	23.7%
United States	25.7%	25.3%	26.0%	25.3%	25.2%

*told they have rheumatoid arthritis, gout, lupus, or fibromyalgia by a doctor, nurse, or other health professional

- The percentage of adults in Washoe County who reported they have been told they have arthritis increased from 2012 (24.0%) to 2016 (25.6%).
- In 2016, the percentage of adults in Washoe County who reported being told they have arthritis was higher (25.6%) than Nevada (23.7%) and slightly higher than the United States (25.2%).

Asthma

Asthma impacts the lungs and is among the most common conditions among children, however adults are also impacted. Asthma is a respiratory disease that causes wheezing, shortness of breath, tightness in the chest, and coughing. Different people may be triggered by a variety of environmental contaminant such as pollution, smoke, dust mites, pet allergens, or mold. When an asthma attack occurs the lungs swell, causing the airways to shrink and may involve all of the previously mentioned symptoms.¹⁷⁶

Table 154: Percent of Adults who currently have Asthma, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	7.8%	7.7%	8.2%	9.5%	8.5%
Nevada	7.4%	7.6%	8.0%	8.1%	7.9%
United States	8.9%	9.0%	8.9%	9.2%	8.9%

- The percentage of adults in Washoe County who reported they currently have asthma increased from 2012 (7.8%) to 2016 (8.5%).
- In 2016, the percentage of adults in Washoe County who reported they currently have asthma, was higher (8.5%) than Nevada (7.9%), however slightly lower than the United States (8.9%).

Cancer

Cancer is a disease where the cells of the body grow out of control, which when left undiagnosed and untreated can spread and impact other organs.¹⁷⁷ The causes of cancer differ from type to type, however there are behavioral factors which increase the risk of many cancers. These include being obese, using tobacco

¹⁷⁵ Centers for Disease Control and Prevention. Arthritis. Accessed <https://www.cdc.gov/arthritis/basics/index.html>

¹⁷⁶ Centers for Disease Control and Prevention. Learn how to Control Asthma. Accessed <https://www.cdc.gov/asthma/faqs.htm>

¹⁷⁷ Centers for Disease Control and Prevention. Cancer Prevention and Control, Statistics for Different Kinds of Cancer. Accessed <https://www.cdc.gov/cancer/dcpc/data/types.htm>

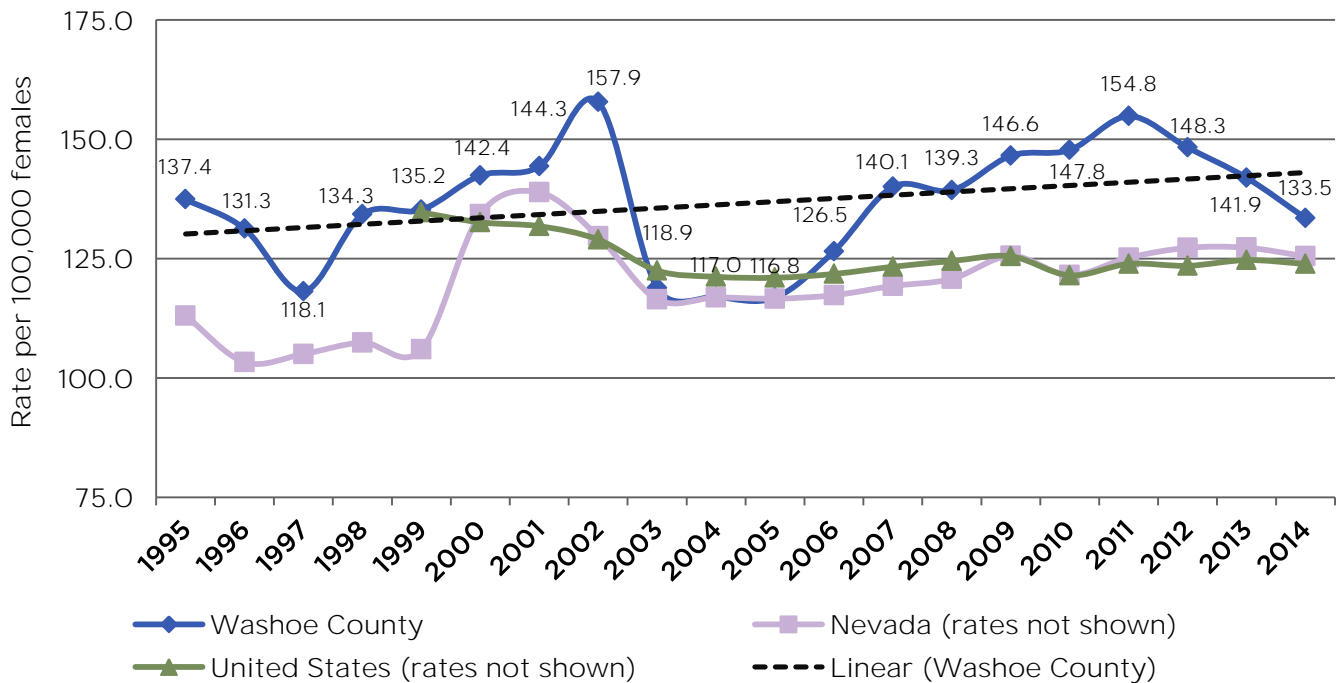
1.16 CHRONIC DISEASES

products, and excessive alcohol consumption. In 2014, breast, prostate, and lung cancers were the leading types of cancers diagnosed nationwide and in Washoe County.^{178,179}

Breast Cancer

Although men and women can both get breast cancer, it is much more common among women. Risk factors for breast cancer include aging, genetic mutations (BRCA1 and BRCA2), first pregnancy after age 30 or never having a full-term pregnancy, having dense breast tissue, taking oral contraceptives, starting menstruation before age 12, starting menopause after age 55, drinking alcohol, physical inactivity, being overweight or obese, or having a family history of breast cancer.¹⁸⁰

Fig 167: Rate of Newly Diagnosed Breast Cancer Cases among Females, Washoe County, Nevada, & the United States, 1995-2014



- The rate of newly diagnosed cases of breast cancer in Washoe County has decreased from 1995 (137.4 per 100,000 females) to 2014 (133.5 per 100,000 females), however overall trends during this time period indicate there has been an increase, despite annual fluctuations (black dotted line).
- In 2014, the rate of newly diagnosed cases of breast cancer in Washoe County was higher (133.5) than Nevada (125.5) and the United States (123.9). Washoe County rates have also been higher than state and national rates since 2006.

¹⁷⁸ Centers for Disease Control and Prevention. Cancer Prevention and Control, Statistics for Different Kinds of Cancer. Accessed <https://www.cdc.gov/cancer/dpcp/data/types.htm>

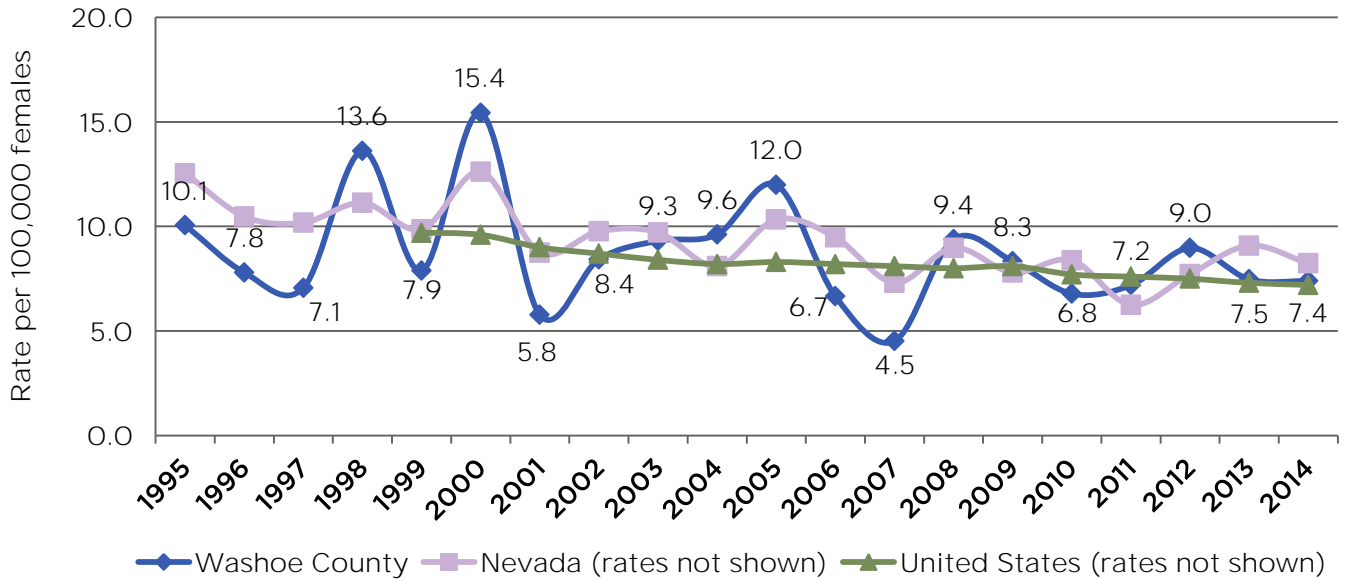
¹⁷⁹ Nevada Department of Health and Human Services, Nevada Central Cancer Registry. Data provided upon request. Carson City, NV.

¹⁸⁰ Centers for Disease Control and prevention. What are the Risk Factors for Breast Cancer. Accessed https://www.cdc.gov/cancer/breast/basic_info/risk_factors.htm

Cervical Cancer

Over the past four decades the number of cervical cancer cases and deaths has declined largely due to women getting regular Pap tests. Pap tests detect precancerous or cancerous cells on the cervix before they become invasive cancer. Human papilloma virus (HPV) is sexually transmitted and the main cause of cervical cancer.¹⁸¹

Fig 168: Rate of Newly Diagnosed Cervical Cancer Cases among Females, Washoe County, Nevada, & the United States, 1995-2014



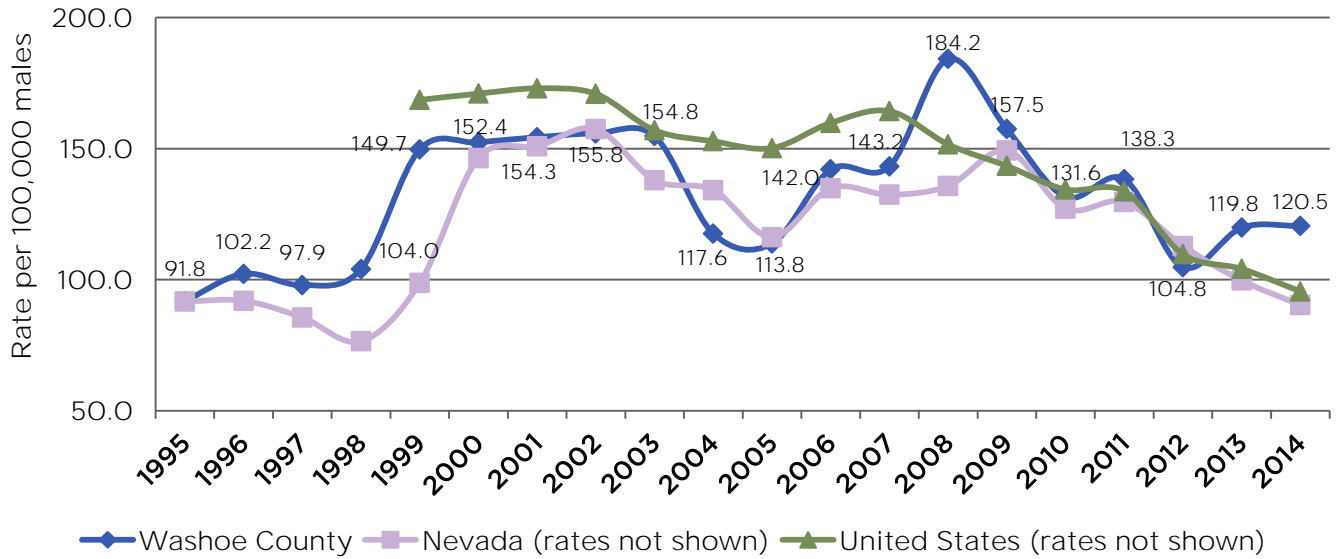
- The rate of newly diagnosed cases of cervical cancer in Washoe County has decreased from 1995 (10.1 per 100,000 females) to 2014 (7.4 per 100,000 females).
- In 2014, the rate of newly diagnosed cases of cervical cancer in Washoe County was lower (7.4) than Nevada (8.2), however slightly higher than the United States (7.2).

¹⁸¹ Centers for Disease Control and Prevention. Gynecological Cancers, Basic Information about Cervical Cancer. Accessed https://www.cdc.gov/cancer/cervical/basic_info/index.htm

Prostate Cancer

Risk factors for prostate cancer include age, family history and race, as it is more common among African American men. However, researchers are still working to determine the causes of prostate cancer and whether it can be prevented.¹⁸²

Fig 169: Rate of Newly Diagnosed Prostate Cancer Cases among Males, Washoe County, Nevada, & the United States, 1995-2014



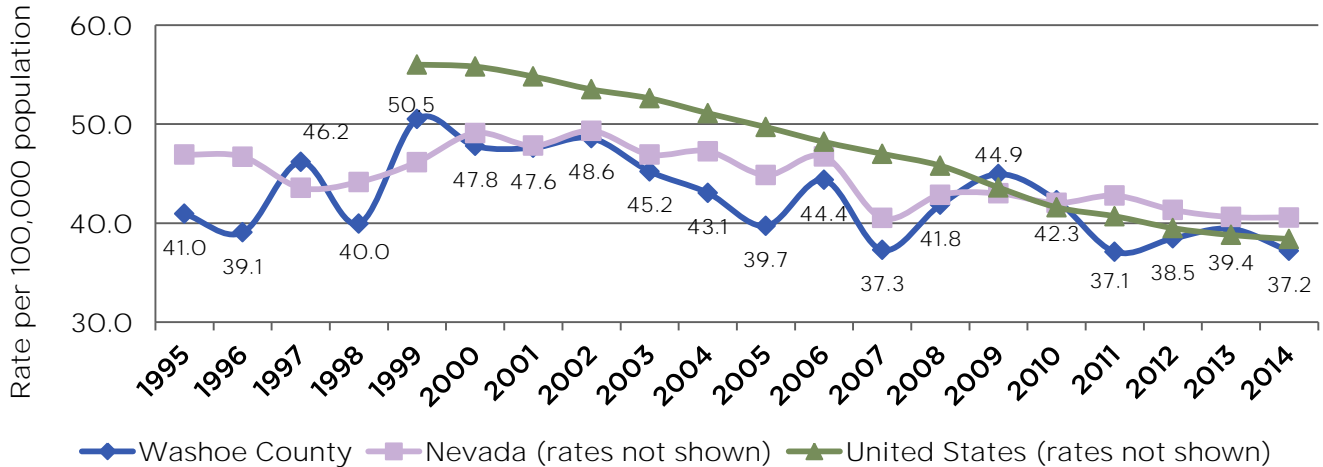
- The rate of newly diagnosed cases of prostate cancer in Washoe County has increased from 1995 (91.8 per 100,000 males) to 2014 (120.5 per 100,000 males).
- In 2014, the rate of newly diagnosed cases of prostate cancer in Washoe County was higher (120.5) than Nevada (90.3), and the United States (95.5).

¹⁸² Centers for Disease Control and Prevention. Prostate Cancer, What are the Risk Factors?. Accessed https://www.cdc.gov/cancer/prostate/basic_info/risk_factors.htm

Colorectal Cancer

Age contributes to an increased risk for colon and rectal cancers. Other risk factors include family history of colorectal cancer or colorectal polyps, Crohn’s disease, ulcerative colitis, lack of physical activity, low fruit and vegetable consumption, diet low in fiber and high in fat, being overweight or obese, alcohol consumption and tobacco use.¹⁸³

Fig 170: Rate of Newly Diagnosed Colorectal Cancer Cases, Washoe County, Nevada, & the United States, 1995-2014



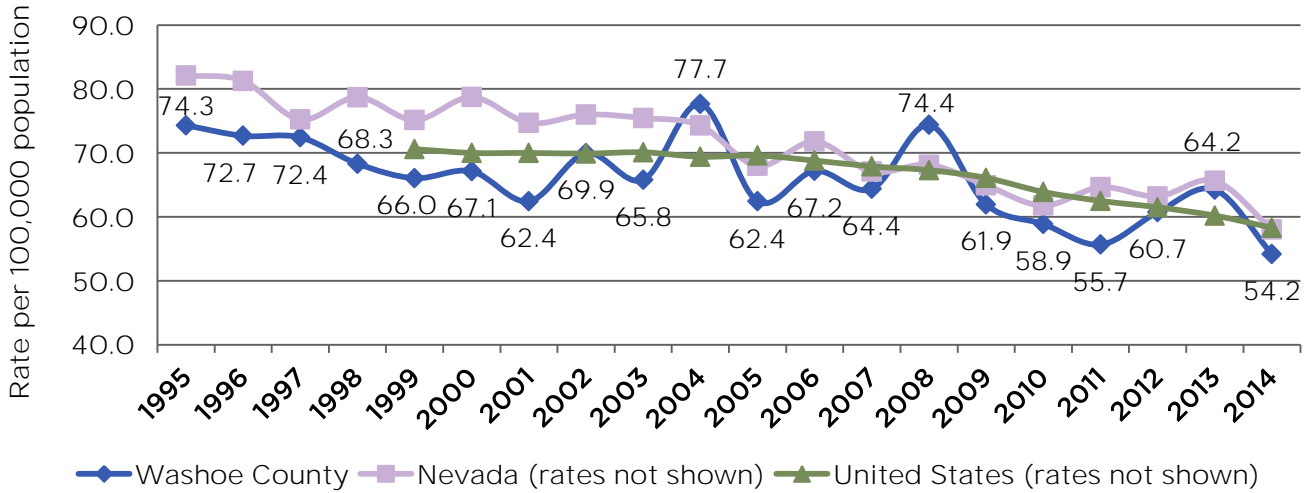
- The rate of newly diagnosed cases of colorectal cancer in Washoe County has decreased from 1995 (41.0 per 100,000 population) to 2014 (37.2 per 100,000 population).
- In 2014, the rate of newly diagnosed cases of colorectal cancer in Washoe County was lower (37.2) than Nevada (40.6), and the United States (38.4).

¹⁸³ Centers for Disease Control and Prevention. Colorectal (colon) Cancer, What are the Risk Factors for Colorectal Cancer?. Accessed https://www.cdc.gov/cancer/colorectal/basic_info/risk_factors.htm

Lung Cancer

Cigarette smoking is the number one risk factor for lung cancer linked to 80% to 90% of all cases. However, as smoking rates have decreased, so have the rates of lung cancer. Lung cancer can also be caused by exposure to second hand smoke, asbestos, or radon in the home or at work. A family history of lung cancer is also a risk factor.¹⁸⁴

Fig 171: Rate of Newly Diagnosed Lung Cancer Cases, Washoe County, Nevada, & the United States, 1995-2014



- The rate of newly diagnosed cases of lung cancer in Washoe County has decreased from 1995 (74.3 per 100,000 population) to 2014 (54.2 per 100,000 population).
- In 2014, the rate of newly diagnosed cases of lung cancer in Washoe County was lower (54.2) than Nevada (58.0), and the United States (58.3).

Cardiovascular Diseases

Cardiovascular disease impacts the heart and blood vessels and includes various conditions such as heart attacks, heart failure, heart arrhythmias, and strokes.

In 2015, heart disease was the number one cause of death nationwide and in Washoe County.^{185,186} The key risk factors for heart disease include high blood pressure, high LDL cholesterol, and smoking. In 2010, it was estimated that nearly half of Americans had at least one of these risk factors.¹⁸⁷ Additional risk factors for heart

¹⁸⁴ Centers for Disease Control and Prevention. Lung Cancer. Accessed <https://www.cdc.gov/cancer/lung/>

¹⁸⁵ United States: Xu, J., Murphy, S.L., Kochanek, K.D. & Arias, E. (2016). Mortality in the United States, 2015. National Center for Health Statistics Data Brief, no 267. Hyattsville, MD.

¹⁸⁶ Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

¹⁸⁷ Centers for Disease Control and Prevention.(2011). Million Hearts™: strategies to reduce the prevalence of leading cardiovascular disease risk factors. United States, 2011. Morbidity and Mortality Weekly Report;60(36):1248–51

1.16 CHRONIC DISEASES

diseases include diabetes, being overweight or obese, having a poor diet, lack of physical activity, and excessive alcohol use.¹⁸⁸

In 2015, stroke was the fourth leading cause of death in Washoe County and Nevada, and was ranked as the fifth leading cause of death nationally.^{189,190} A stroke occurs when the blood supply to a part of the brain is blocked (ischemic stroke) or when a blood vessel in the brain bursts (hemorrhagic stroke). Without a regular supply of oxygen, brain death occurs, and if emergency care is not obtained quickly, permanent brain damage, long-term disability, or death may occur. Stroke symptoms include numbness or weakness in the face, arms, or legs particularly on one side of the body, sudden confusion, trouble speaking, or difficulty understanding speech, trouble walking, dizziness, loss of balance, or a sudden severe headache with no known cause.¹⁹¹ Risk factors for stroke include high blood pressure, high cholesterol, heart disease, diabetes, sickle cell disease, unhealthy diet, obesity, excessive alcohol, and tobacco use. Having a family history of stroke and some genetic disorders may also increase risk for stroke.¹⁹²

Table 155: Percent of Adults who have been told they have High Cholesterol*, 2013 & 2015

Location	2013	2015
Washoe County	36.7%	40.3%
Nevada	38.6%	36.7%
United States	38.4%	36.3%

* told by a doctor, nurse, or other health professional

- The percentage of adults in Washoe County reporting they have high cholesterol increased between 2013 (36.7%) and 2015 (40.3%).
- In 2015, the percentage of adults in Washoe County reporting they have high cholesterol was higher (40.3%) than both Nevada (36.7%) and the United States (36.3%).

Table 156: Percent of Adults who have been told they have High Blood Pressure*, 2013 & 2015

Location	2013	2015
Washoe County	28.0%	32.4%
Nevada	30.6%	28.3%
United States	31.4%	30.9%

* told by a doctor, nurse, or other health professional

- The percent of adults in Washoe County reporting they have high blood pressure increased between 2013 (28.0%) and 2015 (32.4%).
- In 2015, the percentage of adults in Washoe County reporting they have high blood pressure was higher (32.4%) than both Nevada (28.3%) and the United States (30.9%).

¹⁸⁸ Centers for Disease Control and Prevention. Heart Disease Fact Sheet. Accessed https://www.cdc.gov/dhbsp/data_statistics/fact_sheets/fs_heart_disease.htm

¹⁸⁹ Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

¹⁹⁰ United States: Xu, J., Murphy, S.L., Kochanek, K.D. & Arias, E. (2016). Mortality in the United States, 2015. National Center for Health Statistics Data Brief, no 267. Hyattsville, MD.

¹⁹¹ Centers for Disease Control and Prevention. Stroke Signs and Symptoms. Accessed https://www.cdc.gov/stroke/signs_symptoms.htm

¹⁹² Centers for Disease Control and Prevention. Stroke Risk. Accessed <https://www.cdc.gov/stroke/behavior.htm>

Table 157: Percent of Adults who have been told they had Angina or Coronary Heart Disease*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	2.8%	3.7%	3.1%	3.3%	4.1%
Nevada	4.3%	3.4%	4.7%	3.9%	4.4%
United States	4.3%	4.1%	4.2%	3.9%	4.3%

* told by a doctor, nurse, or other health professional

- The percentage of adults in Washoe County reporting they have had angina or coronary heart disease increased from 2012 (2.8%) to 2016 (4.1%).
- In 2016, the percentage of adults in Washoe County reporting they have had angina or coronary heart disease was slightly lower (4.1%) than Nevada (4.4%) and the United States (4.3%).

Table 158: Percent of Adults who have been told they had a Heart Attack*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	3.4%	5.0%	3.4%	4.9%	4.1%
Nevada	4.6%	4.4%	4.8%	4.2%	4.9%
United States	4.5%	4.3%	4.4%	4.2%	4.3%

* told by a doctor, nurse, or other health professional

- The percent of adults in Washoe County reporting they have had a heart attack increased from 2012 (3.4%) to 2016 (4.1%).
- In 2016, the percentage of adults in Washoe County reporting they have had a heart attack was slightly lower (4.1%) than Nevada (4.9%) and the United States (4.3%).

Table 159: Percent of Adults who have been told they had a Stroke*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	1.4%	2.4%	2.6%	2.1%	2.7%
Nevada	3.1%	2.9%	3.2%	2.4%	3.3%
United States	2.9%	2.8%	3.0%	3.0%	3.2%

* told by a doctor, nurse, or other health professional

- The percent of adults in Washoe reporting they have had a stroke increased from 2012 (1.4%) to 2016 (2.7%).
- In 2016, the percentage of adults in Washoe County reporting they have had a stroke was lower (2.7%) than Nevada (3.3%) and the United States (3.2%).

Chronic Obstructive Pulmonary Disease (COPD)

Chronic obstructive pulmonary disease (COPD) refers to a group of diseases which cause airflow blockage and breathing-related problems, including emphysema, chronic bronchitis, and in certain circumstances, asthma. In 2015, chronic lower respiratory disease, primarily COPD, was the third leading cause

1.16 CHRONIC DISEASES

of death nationally and in Washoe County.^{193,194} Tobacco smoke is the primary risk factor for developing COPD however, exposure to air pollutants, genetic factors and respiratory infections can also contribute to COPD.¹⁹⁵

Table 160: Percent of Adults who have been told they have Chronic Obstructive Pulmonary Disease (COPD)*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	5.9%	5.4%	6.4%	5.7%	5.4%
Nevada	7.5%	6.7%	6.9%	6.6%	6.9%
United States	6.2%	6.5%	6.5%	6.2%	6.5%

* told by a doctor, nurse, or other health professional

- The percentage of adults in Washoe County reporting they have COPD remained relatively stable from 2012 (5.9%) to 2016 (5.4%).
- In 2016, the percentage of adults in Washoe County reporting they have COPD by a healthcare professional, was lower (5.4%) than Nevada (6.9%) and the United States (6.5%).

Type 2 Diabetes

Diabetes is a disease in which blood glucose levels are higher than normal. Most food consumed is turned into glucose (sugar) and stored by our bodies to be used for energy. Insulin, produced by the pancreas, assists glucose in entering into the cells for storage. When a person has diabetes, the pancreas either does not produce enough insulin or the body is unable to use insulin efficiently, which leads to high levels of glucose in the blood stream. Diabetes can also cause heart disease, blindness, kidney failure, and lower-extremity amputations.¹⁹⁶

There are two types of diabetes, Type 1 and Type 2. Type 1 is not associated with being overweight or obese but instead results from an immune malfunction where the immune system incorrectly identifies and attacks insulin-producing cells in the pancreases. Type 2 is not an autoimmune disease, but instead develops as a result from consuming high sugar foods, thus increasing demand for insulin production, and over time, the system loses the ability to respond to insulin. Risk factors for Type 2 diabetes include being overweight or obese, lack of physical activity, have high blood pressure, history of heart disease or stroke, being over the age of 45, or

¹⁹³ United States: Xu, J., Murphy, S.L., Kochanek, K.D. & Arias, E. (2016). Mortality in the United States, 2015. National Center for Health Statistics Data Brief, no 267. Hyattsville, MD.

¹⁹⁴ Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

¹⁹⁵ Centers for Disease Control and Prevention. Chronic Obstructive Pulmonary Disease (COPD). Accessed <https://www.cdc.gov/copd/index.html>

¹⁹⁶ Centers for Disease Control and Prevention. Basics About Diabetes. Accessed <https://www.cdc.gov/diabetes/basics/diabetes.html>

have a family history of diabetes.¹⁹⁷ In 2015, Type 2 diabetes was ranked the tenth leading cause of death in Washoe County and Nevada, however nationally was the seventh leading cause of death.^{198,199}

Table 161: Percent of Adults who have been told they have Diabetes*, 2012-2016

Location	2012	2013	2014	2015	2016
Washoe County	6.6%	7.8%	6.4%	7.9%	10.4%
Nevada	8.9%	9.6%	9.6%	9.7%	11.9%
United States	9.7%	9.7%	10.0%	9.9%	10.8%

* told by a doctor, nurse, or other health professional

- The percentage of adults in Washoe County reporting they have diabetes increased from 2012 (6.6%) to 2016 (10.4%).
- In 2016, the percentage of adults in Washoe County reporting they have diabetes was lower (10.4%) than Nevada (11.9%) and slightly lower than the United States (10.8%).

Summary of Chronic Diseases

The best treatment to reduce the occurrence of chronic disease is prevention. People can significantly reduce their risk for the top chronic conditions by eating a healthy diet composed of fruits and vegetables, reducing consumption of animal fats, maintaining a healthy weight, and engaging in regular adequate physical activity. Additional forms of prevention include not using tobacco products and limiting excessive alcohol consumption.

Unfortunately the risk for all chronic diseases increases with age, and as the Baby Boomer generation reaches their 60’s and 70’s, the prevalence of chronic disease is expected to continue to rise. Additionally, people are often diagnosed with more than one chronic conditions, which can complicate treatment regimens and often adds a financial burden to patients with multiple specialty doctors and various medications. By receiving appropriate screenings for pre-markers for chronic conditions such as high blood pressure, high cholesterol, and pre-cancerous lesions, conditions may be diagnosed in earlier stages. When conditions are caught early, they are more likely to be treated effectively and sometimes even reversed without surgical or pharmaceutical interventions, thus decreasing the burden of high-cost long-term treatments and procedures.

For detailed documents related to chronic diseases in Washoe County refer to:

Washoe County Health District Chronic Disease Report Card <https://www.washoecounty.us/health/programs-and-services/chronic-disease-prevention/media-and-reports.php>

¹⁹⁷ National Institute of Diabetes and Digestive and Kidney Diseases. Risk Factors for Type 2 Diabetes. Accessed <https://www.niddk.nih.gov/health-information/diabetes/overview/risk-factors-type-2-diabetes>

¹⁹⁸ Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

¹⁹⁹ United States: Xu, J., Murphy, S.L., Kochanek, K.D. & Arias, E. (2016). Mortality in the United States, 2015. National Center for Health Statistics Data Brief, no 267. Hyattsville, MD.

Chronic Diseases Sources**Table 153-Table 154 Same Source**

Table 153: Percent of Adults who have been told they have Arthritis*, 2012-2016

Table 154: Percent of Adults who currently have Asthma, 2012-2016

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. 2012-2016 Nevada BRFSS Data. Data provided upon request. Carson City, NV.

United States BRFSS data: Centers for Disease Control and Prevention. BRFSS Prevalence and Trends Data query tool, Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

Fig 167-Fig 171 Same Source

Fig 167: Rate of Newly Diagnosed Breast Cancer Cases among Females, Washoe County, Nevada, & the United States, 1995-2014

Fig 168: Rate of Newly Diagnosed Cervical Cancer Cases among Females, Washoe County, Nevada, & the United States, 1995-2014

Fig 169: Rate of Newly Diagnosed Prostate Cancer Cases among Males, Washoe County, Nevada, & the United States, 1995-2014

Fig 170: Rate of Newly Diagnosed Colorectal Cancer Cases, Washoe County, Nevada, & the United States, 1995-2014

Fig 171: Rate of Newly Diagnosed Lung Cancer Cases, Washoe County, Nevada, & the United States, 1995-2014

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention and National Cancer Institute. (2017). U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2014 Incidence and Mortality Web-based Report. Atlanta, GA.

Table 155-Table 161 Same Source

Table 155: Percent of Adults who have been told they have High Cholesterol*, 2013 & 2015

Table 156: Percent of Adults who have been told they have High Blood Pressure*, 2013 & 2015

Table 157: Percent of Adults who have been told they had Angina or Coronary Heart Disease*, 2012-2016

Table 158: Percent of Adults who have been told they had a Heart Attack*, 2012-2016

Table 159: Percent of Adults who have been told they had a Stroke*, 2012-2016

Table 160: Percent of Adults who have been told they have Chronic Obstructive Pulmonary Disease (COPD)*, 2012-2016

Table 161: Percent of Adults who have been told they have Diabetes*, 2012-2016

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. 2012-2016 Nevada BRFSS Data. Data provided upon request. Carson City, NV.

United States BRFSS data: Centers for Disease Control and Prevention. BRFSS Prevalence and Trends Data query tool, Accessed <https://www.cdc.gov/brfss/brfssprevalence/index.html>

Mortality

In 2015, the United States was ranked 31st by the World Health Organization in life expectancy at birth. The nation with the longest life expectancy was Japan, with a life expectancy at birth of 83.7 years. Life expectancy in the United States decreased from 78.9 years in 2014 to 78.8 years in 2015²⁰⁰, the first decline in life expectancy since 1993. In 2015, the death rates across the nation increased for eight of the 10 leading causes of death and only decreased for one, indicating more people died from the leading causes of death in 2015 compared to 2014. Rates of death among various racial and ethnic groups were also not equal in 2015, with highest rates of death among black males (1,070.0 per 100,000). The lowest rate was among Hispanic females (438.3 per 100,000).²⁰¹ The disparities in health behaviors, health access, and health outcomes which lead to the disparities in mortality, exist both nationwide and in Washoe County.

Indicator	Trend	Most Recent Year	HP 2020 Objective
Overall Mortality			
All-cause mortality rates	Increasing	1,062.3 per 100,000 (2015)	NA
Cause of death by rank	~	various	NA
Cause of death by sex	~	various	NA
Cause of death by age group	~	various	NA
Cause of death by race/ethnicity	~	various	NA
Cancer-Specific Mortality			
Lung cancer mortality	Decreasing	42.9 per 100,000 (2015)	45.5 per 100,000 population
Breast cancer mortality	Increasing	26.5 per 100,000 females (2015)	20.7 per 100,000 females
Cervical cancer mortality	Decreasing	1.7 per 100,000 females (2015)	NA
Colorectal cancer mortality	Decreasing	14.9 per 100,000 (2015)	14.5 per 100,000 population
Prostate cancer mortality	Decreasing	19.7 per 100,000 males (2015)	21.8 per 100,000 males
Leukemia mortality	Increasing	6.7 per 100,000 (2015)	NA
Melanoma mortality	~	3.1 per 100,000 (2015)	2.4 per 100,000 population
~not able to assess for trend; NA= identical HP 2020 objective not available			

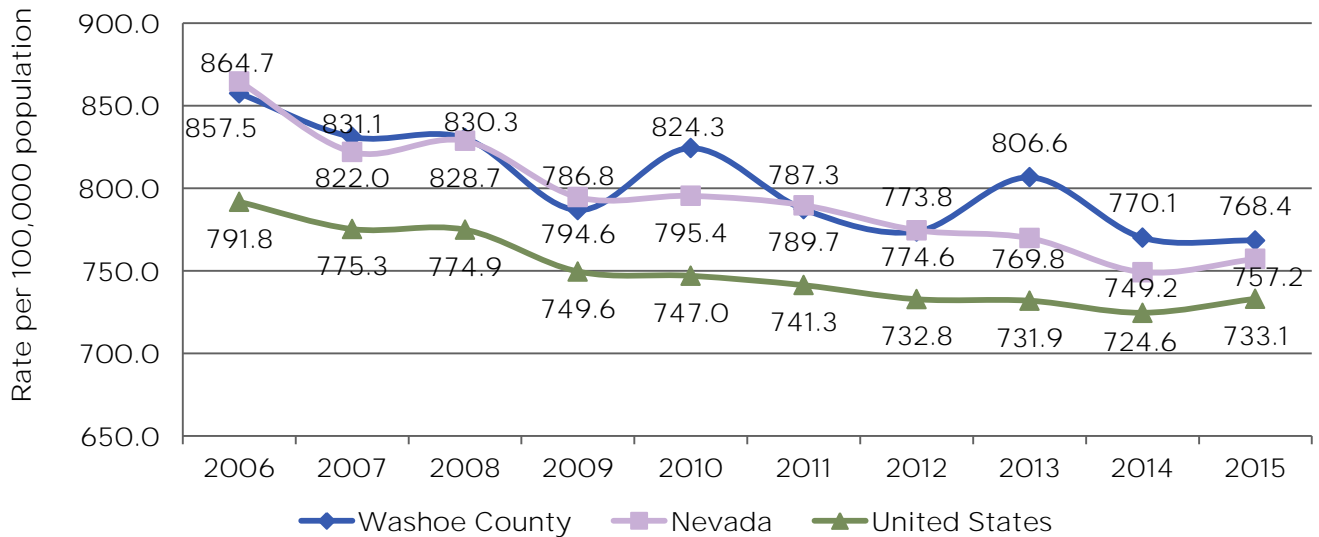
²⁰⁰ Xu, J., Murphy, S.L., Kochanek, K.D. & Arias, E. (2016). Mortality in the United States, 2015. National Center for Health Statistics Data Brief, no 267. Hyattsville, MD.

²⁰¹ IBID 200

1.17 MORTALITY

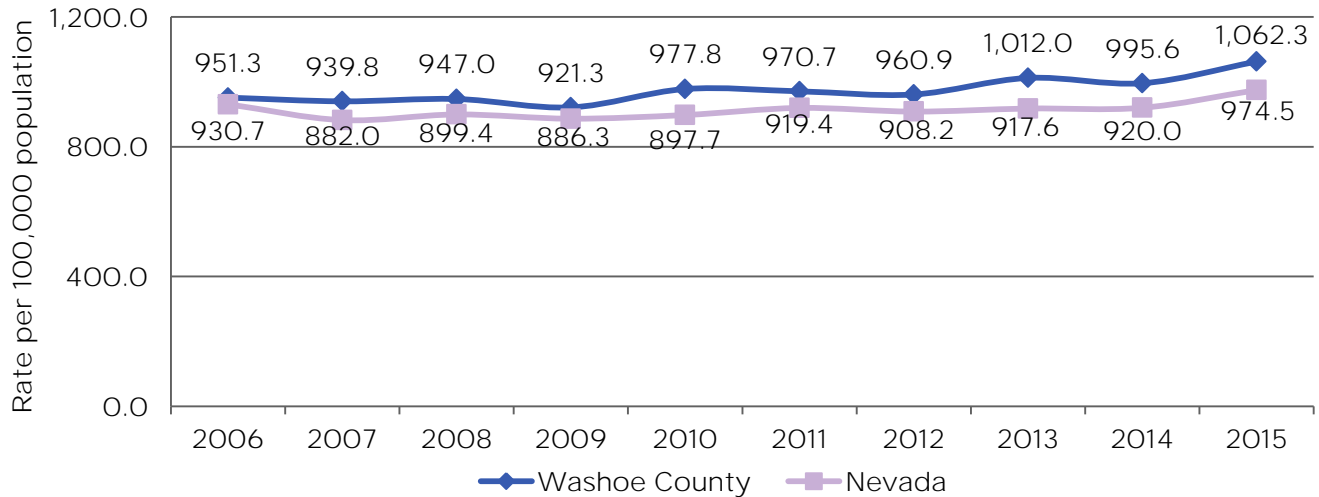
All-Cause Mortality

Fig 172: Age-Adjusted Mortality Rate for Underlying Causes of Death, all ages, Washoe County, Nevada, & the United States, 2006-2015



- The overall (all-cause) age-adjusted mortality rate among all residents of Washoe County decreased from 2006 (857.5 per 100,000) to 2015 (768.4 per 100,000).
- The overall age-adjusted mortality rate among Washoe County residents has been higher than the rate for the United States from 2006 through 2015.

Fig 173: Age-Adjusted Mortality Rate for all Causes of Death among those 15+ years, Washoe County & Nevada, 2006-2015



- The overall (all-cause) age-adjusted mortality rate among residents aged 15 years and older in Washoe County increased from 2006 (951.3 per 100,000) to 2015 (1,062.3 per 100,000).
- The overall mortality rate among Washoe County residents aged 15 years and older has been higher than the rate of residents aged 15 years and older for Nevada from 2006 through 2015.

Table 162: Top Causes of Death, by Rank, 2015

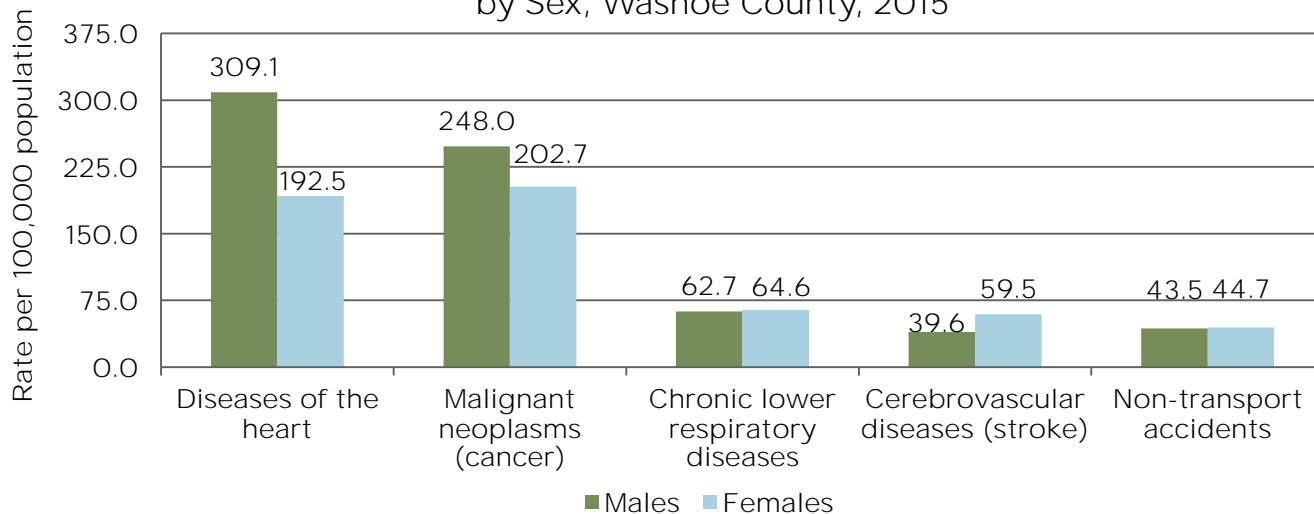
Cause of Death	Washoe County	Nevada	United States
Diseases of the heart	1	1	1
Malignant neoplasms (cancer)	2	2	2
Chronic lower respiratory diseases	3	3	3
Cerebrovascular diseases (stroke)	4	4	5
Non-transport accidents	5	5	~
Alzheimer's disease	6	6	6
Intentional self-harm (suicide)	7	8	10
Chronic liver disease and cirrhosis	8	9	NR
Septicemia	9	NR	NR
Diabetes mellitus	10	10	7

NR= Not among top 10 causes of death for 2015

~United States data combined non-transport and transport accidents into single category, Washoe County and Nevada data do not include transport accidents

Cause of Death by Sex

Fig 174: Age-Adjusted Rate of Death for Top 5 Causes of Death by Sex, Washoe County, 2015



- The 2015 rate of death for the top two causes of death, diseases of the heart and cancer, were higher among males in Washoe County compared to females.
- The 2015 rate of death for the third, fourth, and fifth causes of death, chronic lower respiratory disease, strokes, and non-transport accidents respectively was slightly higher among females compared to males in Washoe County.

Cause of Death by Age Group

The following tables [Table 163-Table 170] illustrate the shift in cause of death as a population ages, with a higher rate of assault, suicide, and accidents contributing to death among those aged less than 44 years transitioning to a higher rate of diseases of the heart and malignant neoplasms (cancer) as age increases.

Table 163: Causes of Death among those Aged 15-24 Years, Washoe County, 2015

Rank	Cause of Death	Count	Rate
1	Assault (homicide)	9	15.4
2	Transport accidents	8	13.7
3	Non-transport accidents	5	8.5
3	Intentional self-harm (suicide)	5	8.5
4	Malignant neoplasms	3	5.1
5	Diabetes mellitus	2	3.4

- The top two causes of death among Washoe County residents aged 15-24 years were assault (homicide) and transport accidents.

Table 164: Causes of Death among those Aged 25-34 Years, Washoe County, 2015

Rank	Cause of Death	Count	Rate
1	Non-transport accidents	15	23.6
1	Intentional self-harm (suicide)	15	23.6
2	Transport accidents	9	14.2
3	Diseases of the heart	6	9.5
3	Malignant neoplasms	6	9.5
4	Chronic liver disease and cirrhosis	4	6.3
5	Diabetes mellitus	2	3.2
5	Pneumonitis due to solids and liquids	2	3.2
5	Assault (homicide)	2	3.2

- The top causes of death (tied) among Washoe County residents aged 25-34 years were non-transport accidents and intentional self-harm (suicide).

Table 165: Causes of Death among those Aged 35-44 Years, Washoe County, 2015

Rank	Cause of Death	Count	Rate
1	Non-transport accidents	19	34.8
2	Intentional self-harm (suicide)	17	31.2
3	Diseases of the heart	13	23.8
4	Malignant neoplasms	12	22.0
5	Transport accidents	11	20.2

- Similar to those aged 25-34 years, the top two causes of death among Washoe County residents aged 35-44 years were non-transport accidents and intentional self-harm (suicide).

Table 166: Causes of Death among those Aged 45-54 Years, Washoe County, 2015

Rank	Cause of Death	Count	Rate
1	Diseases of the heart	60	104.5
2	Malignant neoplasms	44	76.7
3	Non-transport accidents	30	52.3
4	Chronic liver disease and cirrhosis	26	45.3
5	Intentional self-harm (suicide)	21	36.6

- The top two causes of death among Washoe County residents aged 45-54 years were diseases of the heart and malignant neoplasms (cancer).

1.17 MORTALITY

Table 167: Causes of Death among those Aged 55-64 Years, Washoe County, 2015

Rank	Cause of Death	Count	Rate
1	Malignant neoplasms	153	269.3
2	Diseases of the heart	146	257.0
3	Chronic lower respiratory diseases	34	59.8
4	Non-transport accidents	27	47.5
5	Chronic liver disease and cirrhosis	23	40.5

- The top two causes of death among Washoe County residents aged 55-64 years were malignant neoplasms (cancer) and diseases of the heart.

Table 168: Causes of Death among those Aged 65-74 Years, Washoe County, 2015

Rank	Cause of Death	Count	Rate
1	Malignant neoplasms	258	638.0
2	Diseases of the heart	222	549.0
3	Chronic lower respiratory diseases	52	128.6
4	Cerebrovascular diseases (stroke)	28	69.2
5	Diabetes mellitus	18	44.5

- The top two causes of death among Washoe County residents aged 65-74 years were malignant neoplasms (cancer) and diseases of the heart.

Table 169: Causes of Death among those Aged 75-84 Years, Washoe County, 2015

Rank	Cause of Death	Count	Rate
1	Diseases of the heart	195	1,191.9
2	Malignant neoplasms	188	1,149.1
3	Chronic lower respiratory diseases	69	421.7
4	Cerebrovascular diseases (stroke)	47	287.3
5	Alzheimer's disease	32	195.6

- The top two causes of death among Washoe County residents aged 75-84 years were diseases of the heart and malignant neoplasms (cancer).

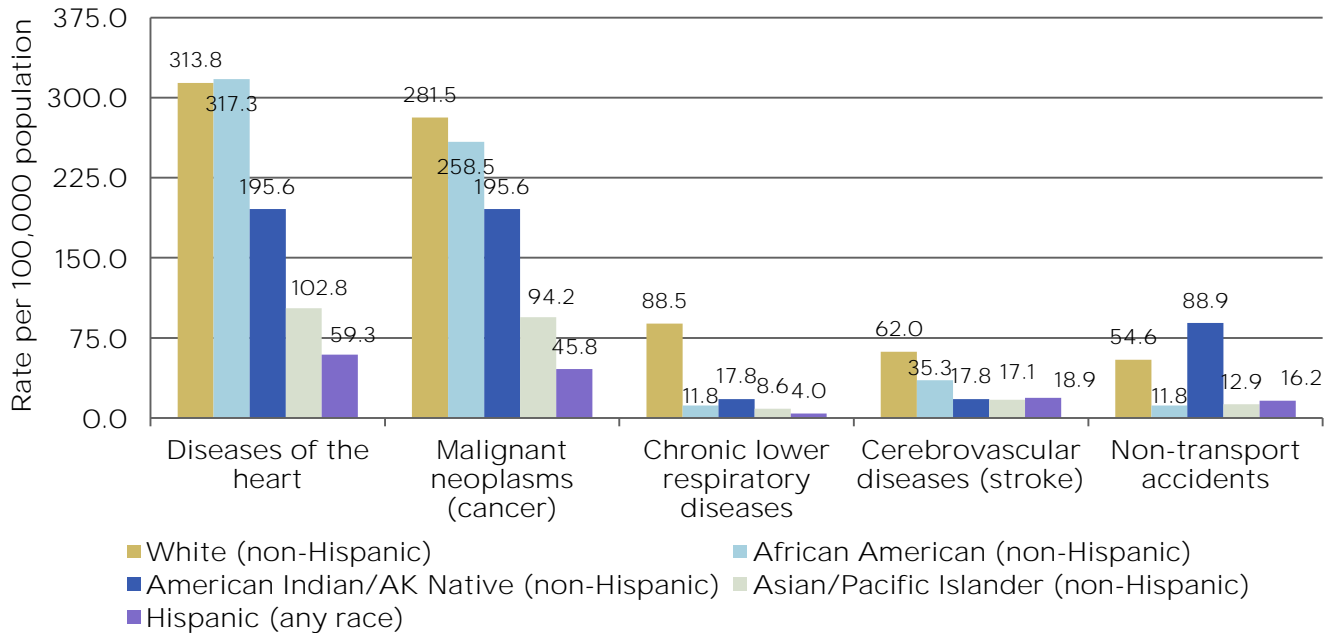
Table 170: Causes of Death among those Aged 85+ Years, Washoe County, 2015

Rank	Cause of Death	Count	Rate
1	Diseases of the heart	245	4,056.1
2	Malignant neoplasms	133	2,201.9
3	Alzheimer's disease	84	1,390.7
4	Cerebrovascular diseases (stroke)	74	1,225.1
5	Chronic lower respiratory diseases	67	1,109.2

- The top two causes of death among Washoe County residents aged 85+ years were diseases of the heart and malignant neoplasms (cancer).

Cause of Death by Race & Ethnicity

Fig 175: Age-Adjusted Rate of Death for Top 5 Causes of Death by Race/Ethnicity, Washoe County, 2015



- The rate of death for the number one cause of death, diseases of the heart, was highest among non-Hispanic African Americans (317.3 per 100,000) compared to the lowest rate of death which was among Hispanics (59.3 per 100,000).
- The rate of death for the number two ranked cause of death, cancer, was highest among white, non-Hispanics (281.5 per 100,000) compared to the lowest rate of death which was among Hispanics (45.8 per 100,000).
- The rate of death for the number three ranked cause of death, chronic lower respiratory diseases, was highest among white, non-Hispanics (88.5 per 100,000) compared to the lowest rate of death which was among Hispanics (4.0 per 100,000).
- The rate of death for the number four ranked cause of death, stroke, was highest among white, non-Hispanics (62.0 per 100,000) compared to the lowest rate of death which was among non-Hispanic Asian/Pacific Islanders (17.1 per 100,000).
- The rate of death for the number five ranked cause of death, non-transport accidents, was highest among non-Hispanic American Indian/Alaska Natives (88.9 per 100,000) compared to the lowest rate of death which was among non-Hispanic African Americans (11.8 per 100,000).

Table 171: Rank & Cause of Death by Race/Ethnicity, Washoe County, 2015

Rank	Hispanic	African American	American Indian/Alaska Native	Asian	White
1	Diseases of the heart	Diseases of the heart	Diseases of the heart	Diseases of the heart	Diseases of the heart
2	Malignant neoplasms (cancer)	Malignant neoplasms (cancer)	Malignant neoplasms (cancer)	Malignant neoplasms (cancer)	Malignant neoplasms (cancer)
3	Chronic liver disease and cirrhosis	Cerebrovascular disease (stroke); Transport accidents (tie)	Non-transport accidents; Chronic liver disease and cirrhosis (tie)	Intentional self-harm (suicide)	Chronic lower respiratory diseases
4	Cerebrovascular disease (stroke)	~	~	~	Cerebrovascular diseases (stroke)
5	Non-transport accidents	~	~	~	Non-transport accidents

~ suppressed due to counts smaller than 5

- The top two causes of death for all races and ethnicities in Washoe County during 2015 were diseases of the heart and malignant neoplasms (cancer).
- The third highest cause of death was different among all racial and ethnic groups in Washoe County. Among Hispanics the third highest ranked cause of death was chronic liver disease and cirrhosis. Among African Americans it was tied between cerebrovascular diseases (stroke) and transport accidents. Among American Indians/Alaska Natives it was tied between non-transport accidents and chronic liver disease and cirrhosis. Among Asians the third highest ranked causes of death was intentional self-harm (suicide). Among whites, the third highest ranked cause of death was chronic lower respiratory diseases.
- The fourth (cerebrovascular disease-stroke) and fifth (non-transport accidents) ranked causes of death were the same for Hispanic and white residents.

Cancer-Specific Mortality

Malignant neoplasms (cancer) are the second leading cause of death and are responsible for one in every four deaths in the United States. Cancer is a disease where the cells of the body grow out of control, which when left undiagnosed and untreated can spread and impact other organs.²⁰² The causes of cancer differ from type to type, however there are behavioral factors which increase the risk of many cancers. These include being obese, using tobacco products, and excessive alcohol consumption. In 2014, lung and bronchial cancers were the leading cause of cancer-specific deaths in the United States, followed by colon and rectal cancers, breast cancer (females), and prostate cancer (males).²⁰³

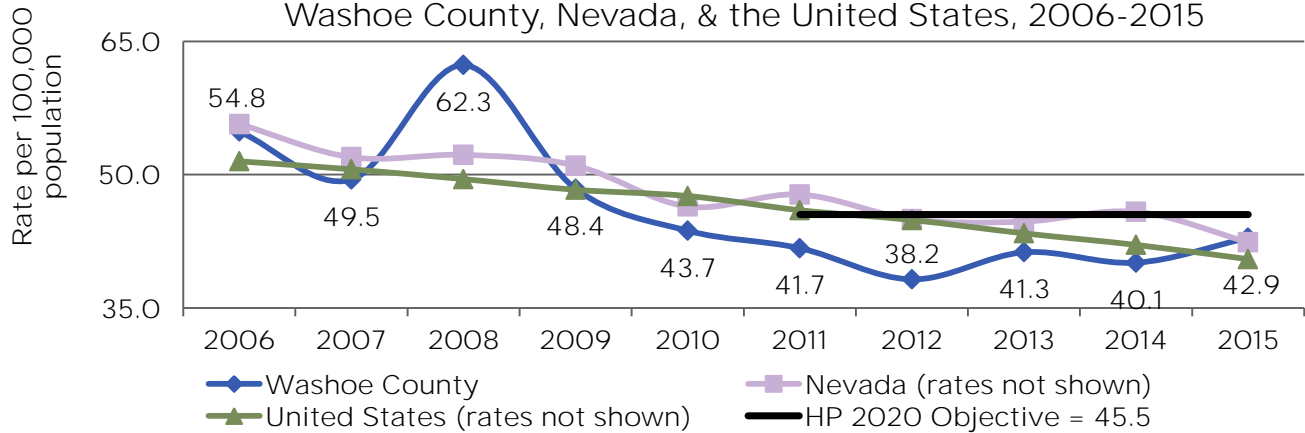
²⁰² Centers for Disease Control and Prevention. Cancer Prevention and Control, Statistics for Different Kinds of Cancer. Accessed <https://www.cdc.gov/cancer/dccp/data/types.htm>

²⁰³ Centers for Disease Control and Prevention. United States Cancer Statistics (USCS). 2014 Top Ten Cancers. Accessed <https://nccd.cdc.gov/uscs/toptencancers.aspx>

Lung Cancer

Lung cancer is the leading cancer-related cause of death. In 2011, it accounted for 27% of all cancer deaths in the United States. Cigarette smoking is the number one risk factor for lung cancer linked to 80% to 90% of all cases. However, as smoking rates have decreased, so have the rates of lung cancer. Lung cancer can also be caused by exposure to second hand smoke, asbestos, or radon in the home or at work. An additional risk factor includes having a family history of lung cancer.²⁰⁴

Fig 176: Age-Adjusted Rate of Death Due to Lung Cancer, Washoe County, Nevada, & the United States, 2006-2015



- The mortality rate due to lung cancer in Washoe County decreased from 2006 (54.8 per 100,000 population) to 2015 (42.9 per 100,000 population) and was below the Healthy People 2020 Objective (45.5 per 100,000).
- In 2015 the mortality rate due to lung cancer in Washoe County was relatively similar to (42.9 per 100,000 population) Nevada (42.4 per 100,000 population).
- As of 2015, the mortality rate due to lung cancer in Washoe County (42.9 per 100,000 population) was higher than the United States (40.5 per 100,000 population).

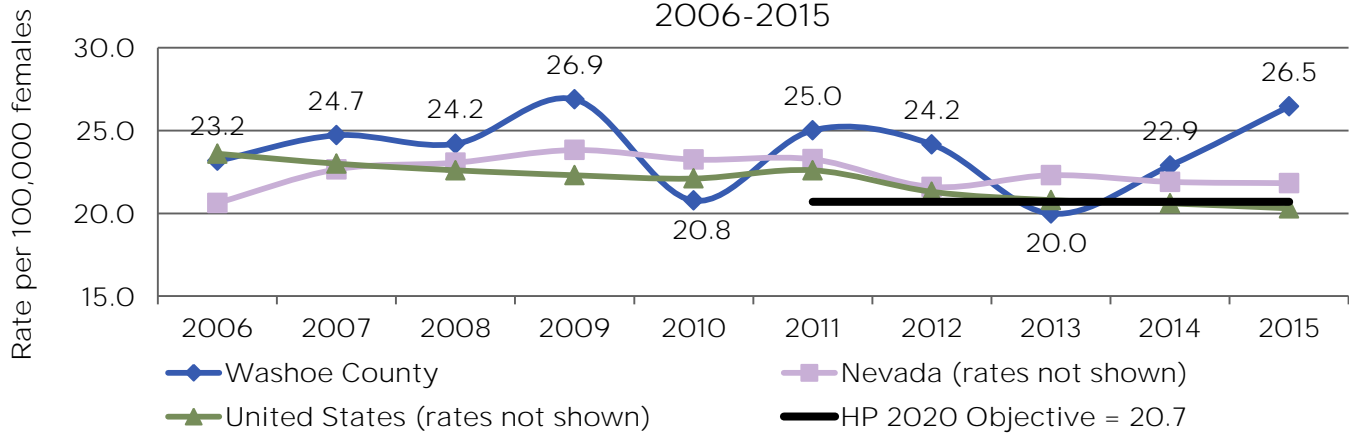
Breast Cancer

Breast cancer is the highest cancer-specific death rate among women. Although men and women can both get breast cancer, it is much more common among women. Risk factors for breast cancer include aging, genetic mutations (BRCA1 and BRCA2), first pregnancy after age 30 or never having a full-term pregnancy, having dense breast tissue, taking oral contraceptives, starting menstruation before age 12, starting menopause after age 55, drinking alcohol, physical inactivity, being overweight/obese, or having a family history of breast cancer.²⁰⁵

²⁰⁴ Centers for Disease Control and Prevention. Lung Cancer. Accessed <https://www.cdc.gov/cancer/lung/>

²⁰⁵ Centers for Disease Control and prevention. What are the Risk Factors for Breast Cancer. Accessed https://www.cdc.gov/cancer/breast/basic_info/risk_factors.htm

Fig 177: Age-adjusted Rate of Death Due to Breast Cancer among Females, Washoe County, Nevada, & the United States, 2006-2015

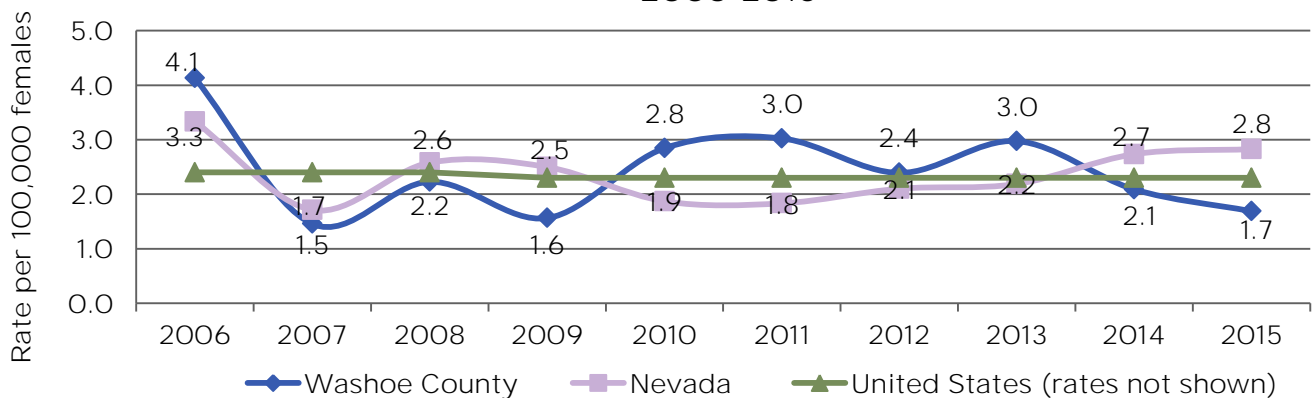


- The mortality rate due to breast cancer among females in Washoe County increased from 2006 (23.2 per 100,000 females) to 2015 (26.5 per 100,000 females) and was above the Healthy People 2020 objective (20.7 per 100,000 females).
- In 2015 the mortality rate due to breast cancer among females in Washoe County was higher (26.5 per 100,000 females) than Nevada (21.8 per 100,000 females) and the United States (20.3 per 100,000 females).

Cervical Cancer

Cervical cancer used to be the leading cause of cancer-specific deaths among women. However, over the past four decades the number of cervical cancer cases and deaths has declined largely due to women getting regular pap tests. Pap tests find precancerous or cancerous cells on the cervix before they become invasive cancer. Human papilloma virus (HPV), is sexually transmitted, and is the main cause of cervical cancer.²⁰⁶

Fig 178: Age-adjusted Rate of Death Due to Cervical Cancer among Females, Washoe County, Nevada, & the United States, 2006-2015



- The mortality rate due to cervical cancer among females in Washoe County decreased from 2006 (4.1 per 100,000 females) to 2015 (1.7 per 100,000 females).

²⁰⁶ Centers for Disease Control and Prevention. Gynecological Cancers, Basic Information about Cervical Cancer. Accessed https://www.cdc.gov/cancer/cervical/basic_info/index.htm

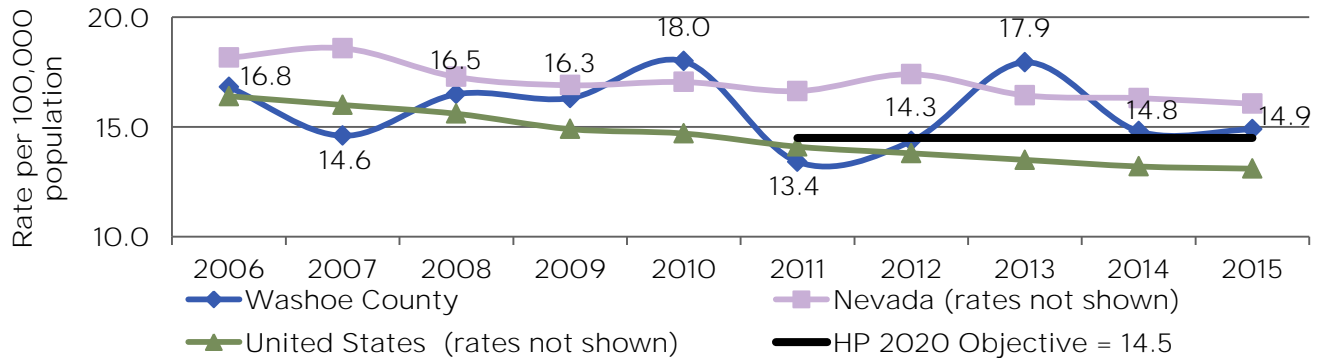
1.17 MORTALITY

- In 2015 the mortality rate due to cervical cancer among females in Washoe County was lower (1.7 per 100,000 females) than Nevada (2.8 per 100,000 females) and the United States (2.3 per 100,000 females).

Colorectal Cancer

Among cancers impacting both men and women, colorectal cancer is the second highest cause of cancer-specific deaths in the United States. Age is a contributing factor to increased risk for colon and rectal cancers. Other risk factors include family history of colorectal cancer or colorectal polyps, Crohn's disease, ulcerative colitis, lack of physical activity, low fruit and vegetable consumption, diet low in fiber and high in fat, being overweight or obese, alcohol consumption and tobacco use.²⁰⁷

Fig 179: Age-adjusted Rate of Death Due to Colorectal Cancer, Washoe County, Nevada, & the United States, 2006-2015



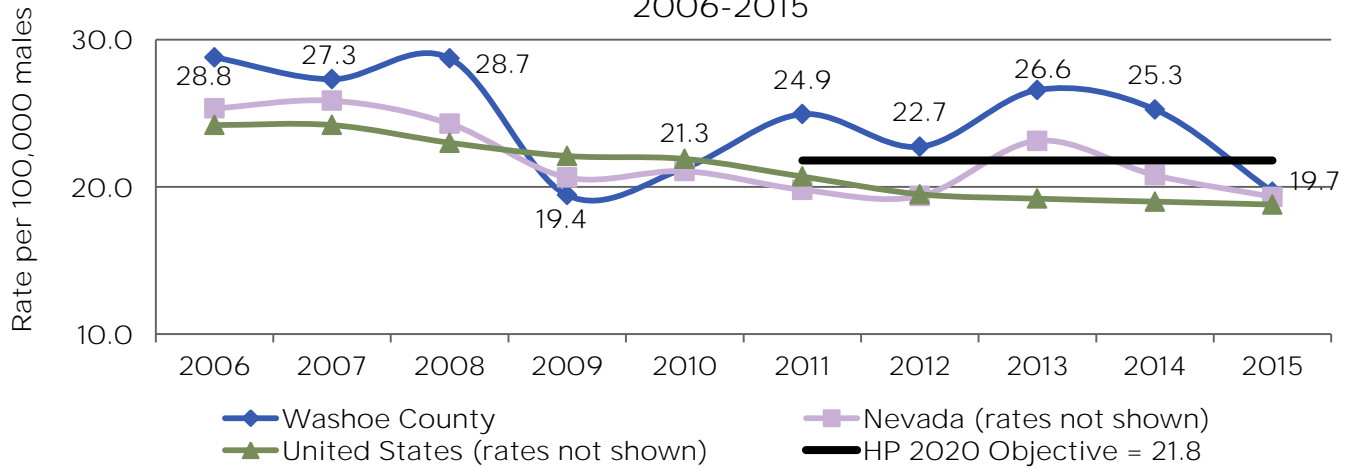
- The mortality rate due to colorectal cancer in Washoe County decreased from 2006 (16.8 per 100,000 population) to 2015 (14.9 per 100,000 population) and was slightly above the Healthy People 2020 objective (14.5 per 100,000 population).
- In 2015 the mortality rate due to colorectal cancer in Washoe County was lower (14.9 per 100,000 population) than Nevada (16.1 per 100,000 population).
- In 2015 the mortality rate due to colorectal cancer in Washoe County was higher (14.9 per 100,000 population) than the United States (13.1 per 100,000 population).

²⁰⁷ Centers for Disease Control and Prevention. Colorectal (colon) Cancer, What are the Risk Factors for Colorectal Cancer?. Accessed https://www.cdc.gov/cancer/colorectal/basic_info/risk_factors.htm

Prostate Cancer

Prostate cancer is responsible for one of the highest cancer-specific death rates, and among male-specific cancers is second only to non-melanoma skin cancer. Many men die of prostate cancer without ever having experienced any symptoms. Risk factors include age, family history and race, as it is more common among African American men. However, researchers are still working to determine the causes of prostate cancer and whether it can be prevented.²⁰⁸

Fig 180: Age-adjusted Rate of Death Due to Prostate Cancer among Males, Washoe County, Nevada, & the United States, 2006-2015



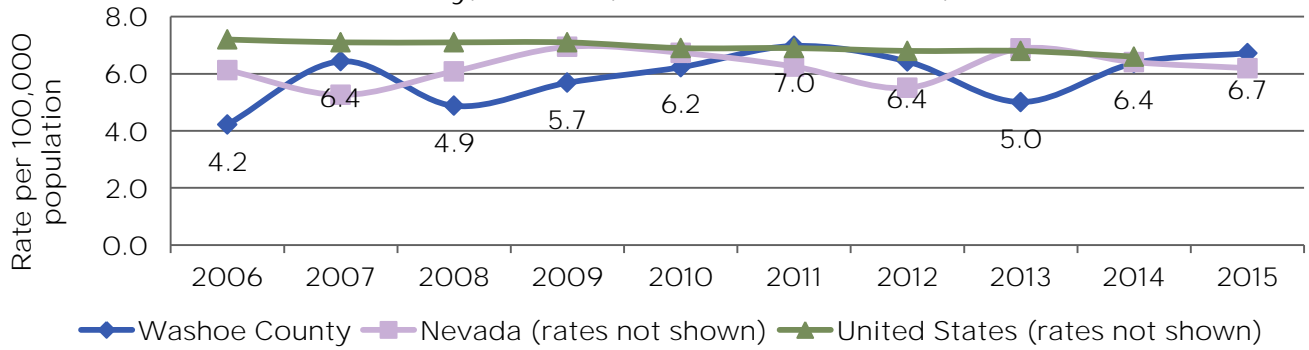
- The mortality rate due to prostate cancer in Washoe County decreased from 2006 (28.8 per 100,000 males) to 2015 (19.7 per 100,000 males) and below the Healthy People 2020 objective (21.8 per 100,000 males).
- In 2015 the mortality rate due to prostate cancer in Washoe County was relatively similar to (19.7 per 100,000 males) Nevada (19.3 per 100,000 males) and the United States (18.8 per 100,000 males).

²⁰⁸ Centers for Disease Control and Prevention. Prostate Cancer, What are the Risk Factors?. Accessed https://www.cdc.gov/cancer/prostate/basic_info/risk_factors.htm

Leukemia

Leukemia is the cancer of the bone marrow and blood and is the most common type of cancer among children and adolescents. However, as with all cancer, risk increases with age. Therefore, most cases occur among adults. Researchers have not determined all the causes of leukemia, however there are several factors which have been linked including repeated benzene exposure, large doses of ionizing radiation, tobacco smoke, family history, or genetic mutations.²⁰⁹

Fig 181: Age-Adjusted Rate of Death Due to Leukemia, Washoe County, Nevada, & the United States, 2006-2015



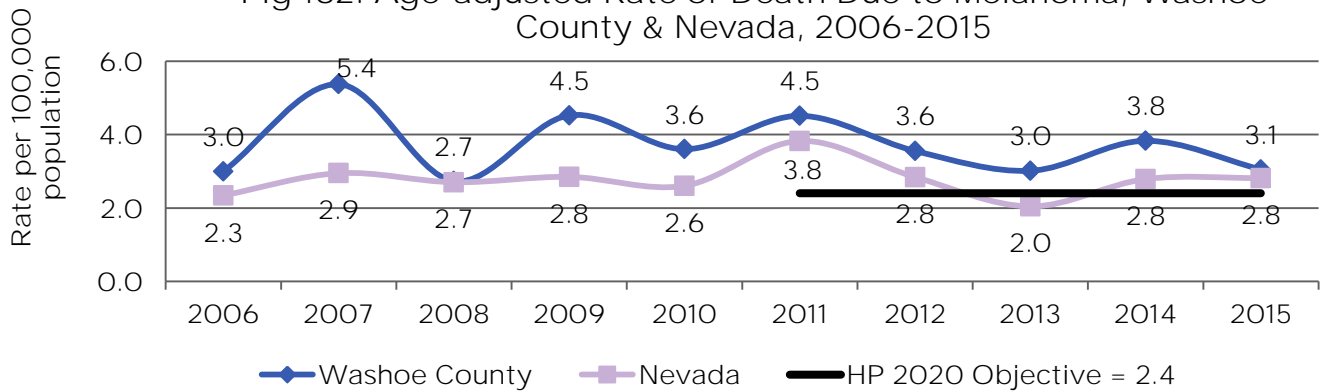
- The mortality rate due to leukemia in Washoe County increased from 2006 (4.2 per 100,000 population) to 2015 (6.7 per 100,000 population).
- In 2015 the mortality rate due to leukemia in Washoe County was relatively similar to (6.7 per 100,000 population) Nevada (6.2 per 100,000 population).

²⁰⁹ Centers for Disease Control and Prevention. Leukemia. Accessed <https://www.cdc.gov/cancer/leukemia/index.htm#statistics>

Melanoma

Skin cancer, is the most common type of cancer diagnosed in the United States. Melanoma is the third most common type of skin cancer, is more dangerous and leads to more deaths, although the rate of death is lower than several other types of cancer. Most cases of skin cancer are caused by overexposure to ultraviolet (UV) light, the radiation from sun, tanning beds, and sunlamps. Factors which increase the risk of developing skin cancer include naturally light skin color, exposure to sun, history of sunburn, indoor tanning, having blue or green eyes, blond or red hair, and having certain types and high numbers of moles.²¹⁰

Fig 182: Age-adjusted Rate of Death Due to Melanoma, Washoe County & Nevada, 2006-2015



- The mortality rate due to melanoma in Washoe County remained relatively similar from 2006 (3.0 per 100,000 population) to 2015 (3.1 per 100,000 population) and was above the Healthy People 2020 objective (2.4 per 100,000 population).
- From 2006 through 2015 the rate of death due to melanoma in Washoe County has remained higher than Nevada, with the exception of 2008 when the melanoma mortality rates were the same (2.7 per 100,000 population).
- In 2015 the mortality rate due to melanoma in Washoe County was higher (3.1 per 100,000 population) than Nevada (2.8 per 100,000 population).

Summary of Mortality

In 2015, the age-adjusted mortality rate among residents in Washoe County fell to a low of 768.4 per 100,000 population. The top two causes of death were due to disease of the heart and malignant neoplasms (cancer). This is the same for Nevada and the United States. Diseases of the heart and malignant neoplasms (cancer) were also the top two causes of death for all age groups 45 years and older as well as all racial and ethnic groups. The causes of death for those aged 15-24 years were assault (homicide) and transport accidents, for those aged 25-34 years and those aged 35-44 years the top two causes of death were non-transport accidents and intentional self-harm (suicide).

²¹⁰ Centers for Disease Control and Prevention. Skin Cancer, What are the Risk factors for Skin Cancer?. Accessed https://www.cdc.gov/cancer/skin/basic_info/risk_factors.htm

The risk factors which lead up to diseases of the heart include overweight and obesity, poor diet, high cholesterol, excessive alcohol use, physical inactivity, smoking, high blood pressure, and diabetes. According to the Centers for Disease Control and Prevention nearly half of Americans have at least three of these risk factors.^{211, 212}

Several of these same risk factors also increase the risk of cancer such as excessive alcohol intake, poor diet, obesity, physical inactivity, smoking and tobacco intake. Other cancer-related risk factors are radiation, including exposure to sunlight and UV-rays, environmental toxins, and in some cases viruses such as human papilloma virus (HPV), hepatitis B and C viruses (HBV, HCV) among others.^{213,214}

Mortality Sources

Fig 172: Age-Adjusted Mortality Rate for Underlying Causes of Death, all ages, Washoe County, Nevada, & the United States, 2006-2015

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2015 on CDC WONDER Online Database, released December, 2016. Data are from the Multiple Cause of Death Files, 1999-2015, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html>

Fig 173: Age-Adjusted Mortality Rate for all Causes of Death among those 15+ years, Washoe County & Nevada, 2006-2015

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Table 162: Top Causes of Death, by Rank, 2015

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Xu, J., Murphy, S.L., Kochanek, K.D. & Arias, E. (2016). Mortality in the United States, 2015. National Center for Health Statistics Data Brief, no 267. Hyattsville, MD.

Fig 174; Table 163-Table 170; Fig 175; Table 171 Same Source

Fig 174: Age-Adjusted Rate of Death for Top 5 Causes of Death by Sex, Washoe County, 2015

Table 163: Causes of Death among those Aged 15-24 Years, Washoe County, 2015

Table 164: Causes of Death among those Aged 25-34 Years, Washoe County, 2015

Table 165: Causes of Death among those Aged 35-44 Years, Washoe County, 2015

Table 166: Causes of Death among those Aged 45-54 Years, Washoe County, 2015

Table 167: Causes of Death among those Aged 55-64 Years, Washoe County, 2015

Table 168: Causes of Death among those Aged 65-74 Years, Washoe County, 2015

Table 169: Causes of Death among those Aged 75-84 Years, Washoe County, 2015

Table 170: Causes of Death among those Aged 85+ Years, Washoe County, 2015

Fig 175: Age-Adjusted Rate of Death for Top 5 Causes of Death by Race/Ethnicity, Washoe County, 2015

Table 171: Rank & Cause of Death by Race/Ethnicity, Washoe County, 2015

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

²¹¹ Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion, Division for heart Disease and Stroke Prevention. Heart Disease Facts. Accessed <https://www.cdc.gov/heartdisease/facts.htm>

²¹² U.S. Department of Health and Human Services. National Institutes of Health, National Heart, Lung, and Blood Institute. What Causes Heart Disease?. Accessed <https://www.nhlbi.nih.gov/health/health-topics/topics/hdw/causes>

²¹³ American Cancer Society. Cancer A-Z. Accessed <https://www.cancer.org/cancer/cancer-causes.html>

²¹⁴ U.S. Department of Health and Human Services. National Institutes of Health, National cancer Institute. Risk Factors for Cancer. Accessed <https://www.cancer.gov/about-cancer/causes-prevention/risk>

Fig 176-Fig 180 Same Source

Fig 176: Age-Adjusted Rate of Death Due to Lung Cancer, Washoe County, Nevada, & the United States, 2006-2015

Fig 177: Age-adjusted Rate of Death Due to Breast Cancer among Females, Washoe County, Nevada, & the United States, 2006-2015

Fig 178: Age-adjusted Rate of Death Due to Cervical Cancer among Females, Washoe County, Nevada, & the United States, 2006-2015

Fig 179: Age-adjusted Rate of Death Due to Colorectal Cancer, Washoe County, Nevada, & the United States, 2006-2015

Fig 180: Age-adjusted Rate of Death Due to Prostate Cancer among Males, Washoe County, Nevada, & the United States, 2006-2015

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2015 on CDC WONDER Online Database, released December, 2016. Data are from the Multiple Cause of Death Files, 1999-2015, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/ucd-icd10.html>

Fig 181: Age-Adjusted Rate of Death Due to Leukemia, Washoe County, Nevada, & the United States, 2006-2015

Nevada and Washoe County: Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

United States: Centers for Disease Control and Prevention. United States Cancer Statistics (USCS), Top Ten Cancers. Accessed <https://nccd.cdc.gov/uscs/toptencancers.aspx>

Fig 182: Age-adjusted Rate of Death Due to Melanoma, Washoe County & Nevada, 2006-2015

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Community Needs Index

The Community Needs Index (CNI) is a standardized tool used to measure and compare socioeconomic factors and health outcomes at the ZIP code level within a community. To rank the health needs of a community this tool assigns a CNI score from 1 (lowest need) to 5 (highest need). Truven Health Analytics calculates CNI scores on an annual basis by examining five socioeconomic health indicators: income, culture/language, education level, housing status and medical insurance coverage. Researchers have found when analyzing national CNI data, residents in communities with the highest CNI scores were shown to be twice as likely to be hospitalized for preventable conditions when compared to communities with the lowest CNI scores.¹ This emphasizes the importance of accounting for socioeconomic factors when trying to understand health disparities across ZIP codes.

For the purpose of this assessment, the five ZIP codes with the highest CNI scores over the past four years (2013-2016) were selected for a deep dive [Table 172]. Hospitalization and mortality rates for select conditions for the highest five CNI ZIP codes were compared to Washoe County overall.

Indicator
CNI scores by ZIP code
Select Demographics
Number and percent of total population
Age group and median age
Race and ethnicity
Median household income
Unemployment rates
Educational attainment
Select Hospitalization Rates
Asthma
COPD
Hypertension
Stroke
Select Mortality Rates
Heart disease
Cancer
Accidents
Infant mortality

¹ Roth, R. & Barsi, E.. (2005). The "Community Need Index": A New Tool Pinpoints Health Care Disparities in Communities throughout the Nation. Health Progress. Accessed <http://www.chausa.org/docs/default-source/health-progress/the-community-need-index-pdf.pdf?sfvrsn=0>

2.0 COMMUNITY NEEDS INDEX

CNI Scores by ZIP Code

Table 172 indicates the CNI scores for 2013, 2014, 2015, and 2016, as reported by Truven Health Analytics, an organization which annually provides a CNI score at the ZIP code level nationwide. The cumulative CNI score is the sum of scores for the past four years (2013-2016). All Washoe County ZIP codes are presented in order from highest cumulative CNI score (highest need) to lowest cumulative CNI score (lowest need).

Table 172: CNI Scores for ZIP Codes in Washoe County, 2013-2016

Zip	2013 CNI Score	2014 CNI Score	2015 CNI Score	2016 CNI Score	Cumulative Score
89512	5.0	5.0	5.0	5.0	20.0
89502	5.0	4.8	4.8	4.8	19.4
89431	4.8	4.8	4.8	4.6	19.0
89433	4.2	4.0	4.4	4.4	17.0
89501	4.4	4.2	4.2	4.2	17.0
89424	3.6	4.0	4.4	4.2	16.2
89442	3.8	4.0	4.4	4.0	16.2
89503	3.8	3.8	4.0	4.0	15.6
89405	4.0	4.0	3.8	3.6	15.4
89412	4.2	3.8	3.8	3.6	15.4
89506	3.6	3.6	3.8	3.8	14.8
89434	3.6	3.8	3.6	3.6	14.6
89509	3.8	3.4	3.8	3.6	14.6
89451	3.0	2.6	3.4	3.4	12.4
89523	3.2	3.0	3.0	3.0	12.2
89521	3.0	2.6	2.6	2.6	10.8
89508	2.2	2.4	2.8	3.2	10.6
89510	2.6	2.8	2.6	2.6	10.6
89511	2.8	2.2	2.4	2.2	9.6
89436	2.2	2.2	2.4	2.4	9.2
89441	2.2	2.4	2.2	2.2	9.0
89704	2.4	2.4	1.8	1.8	8.4
89519	2.4	1.8	1.8	2.0	8.0
89439	~	~	3.0	2.2	5.2
89402	~	~	~	2.4	2.4
Washoe County Average	3.5	3.4	3.5	3.3	12.9
~ data unavailable					

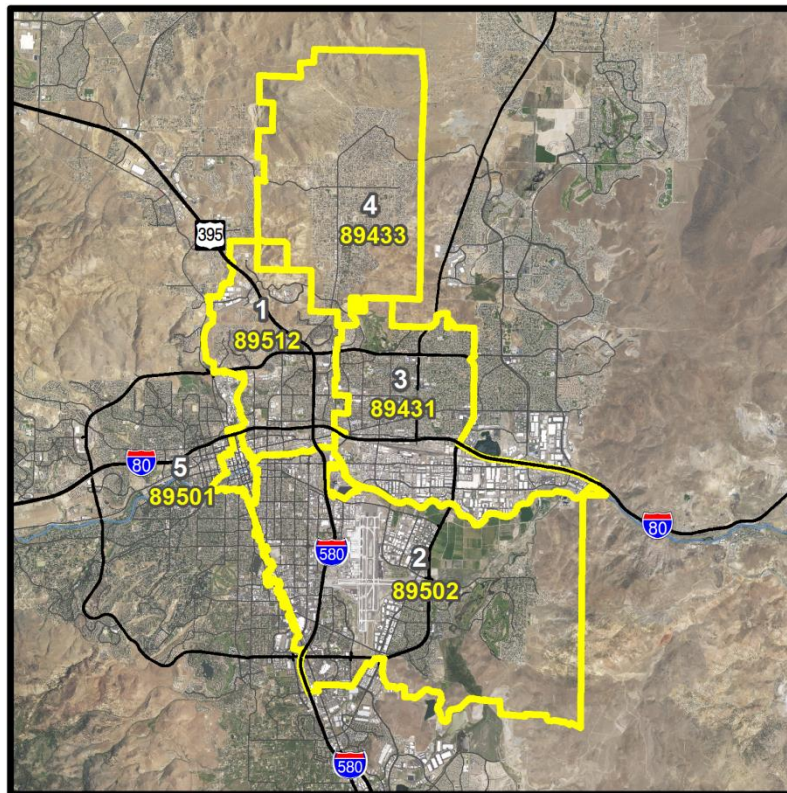
Top 5 ZIP Codes

The five ZIP codes in Washoe County with the highest CNI scores over the past four years (2013-2016) in order of need from highest to lowest, were 89512, 89502, 89431, 89433, and 89501². Together, these five ZIP codes account for nearly one-third (30.3%) of Washoe County’s population and incorporate much of the downtown and inner-city regions of Reno-Sparks metropolitan areas [Image 8].

Table 173: Number & Percent of Washoe County Population Residing in Top 5 CNI ZIP codes, 2011-2015 Aggregate Data

ZIP Code	Number of People	Percent of Washoe County Population
89512	25,561	5.9%
89502	44,777	10.3%
89431	37,800	8.7%
89433	20,232	4.7%
89501	3,551	0.8%
Washoe County	131,921	30.3%

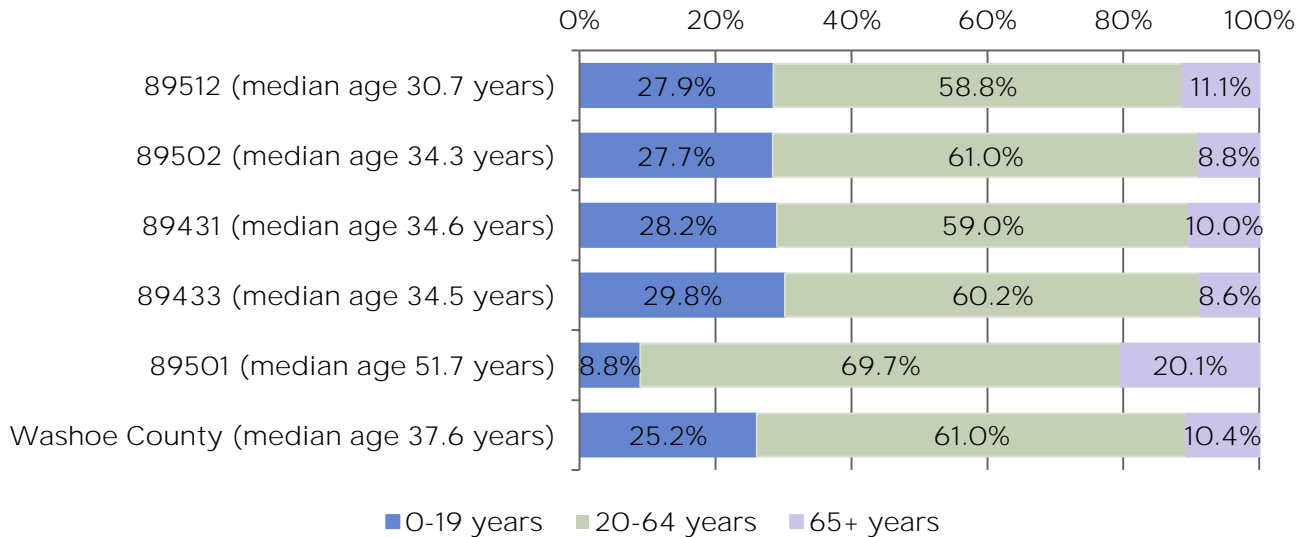
Image 8: Top 5 CNI ZIP Codes, Washoe County, 2016



² 89501 & 89433 were tied for cumulative 4-year score; however, 89433 CNI scores have increased, while 89501 CNI scores decreased and as of the most recent year, 2016, the 89433 score was higher.

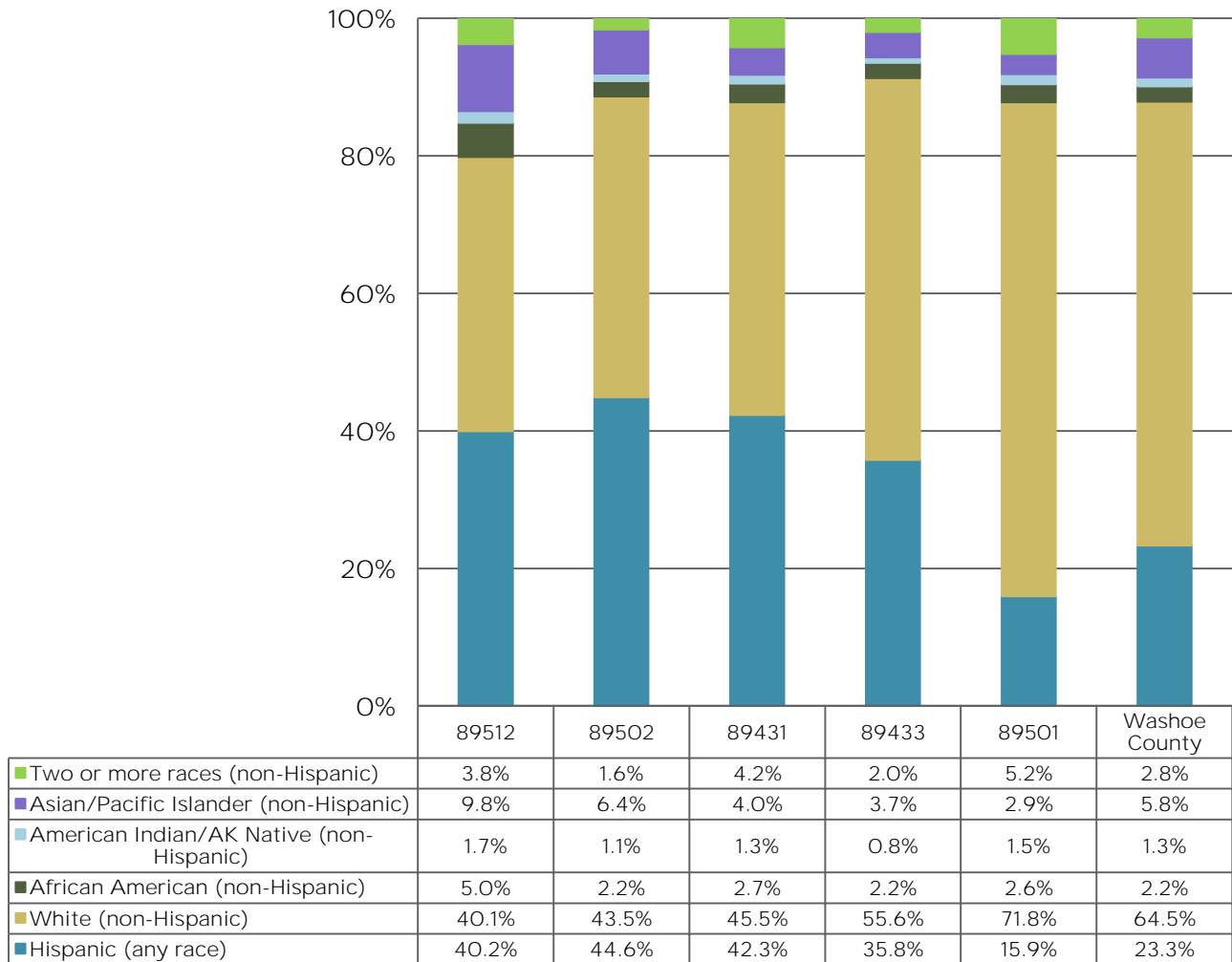
2.0 COMMUNITY NEEDS INDEX

Fig 183: Percent of Population by Age Group, Top 5 CNI ZIP Codes Compared to Washoe County, 2011-2015 Aggregate Data



- With the exception of 89501, the top 5 CNI ZIP code residents were slightly younger, had a higher proportion of population aged 0-19 years and proportionately fewer residents aged 65 years or older compared to Washoe County overall.
- 89501 is unique in that the median age of residents (51.7 years) is nearly 15 years older than Washoe County residents (37.6 years), much lower proportion of residents within 89501 were in the 0-19 age group and nearly twice the proportion of residents were 65 years and older, relative to Washoe County overall.

Fig 184: Percent of Population by Race/Ethnicity, Top 5 CNI ZIP Codes Compared to Washoe County, 2011-2015 Aggregate Data



- There is a higher proportion of minority populations in the 5 top CNI ZIP codes, except for 89501, compared to Washoe County overall.
- With the exception of 89501, over one in three residents in the top 5 CNI ZIP codes were Hispanic (any race), while Washoe County overall was around one in four (23.3%).

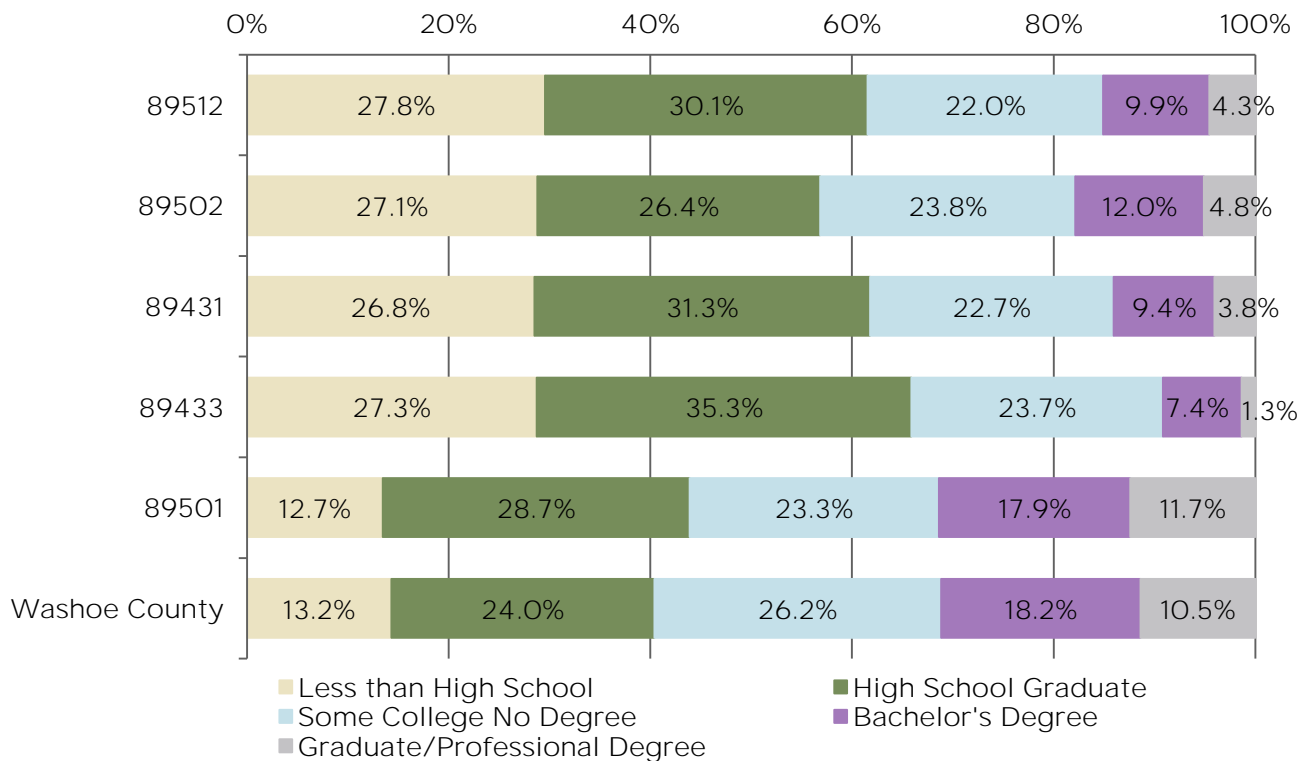
2.0 COMMUNITY NEEDS INDEX

Table 174: Median Household Income & Percent Unemployed, Top 5 CNI ZIP Codes Compared to Washoe County, 2011-2015 Aggregate Data

Location	Median Household Income	% Unemployed
89512	\$30,574	12.1%
89502	\$34,095	9.6%
89431	\$38,830	13.7%
89433	\$42,479	10.8%
89501	\$20,808	21.0%
Washoe County	\$52,870	9.1%

- The median household income for the top 5 CNI ZIP codes ranged from a low in 89501 (\$20,808) to a high in 89433 (\$42,479) compared to Washoe County (\$52,870).
- The unemployment rate for the top 5 CNI ZIP codes was also higher, ranging from a low in 89502 (9.6%) to a high in 89501 (21.0%), compared to Washoe County (9.1%).

Fig 185: Educational Attainment among Adults 25+ years, Top 5 CNI ZIP Codes Compared to Washoe County, 2011-2015 Aggregate Data



Note: Does not account for all levels of educational attainment therefore totals do not add up to 100%

- Apart from 89501, the percentage of residents with less than a high school degree in each of the other four top CNI ZIP codes was twice as high ranging from 89431 (26.8%) to 89512 (27.8%), compared to Washoe County (13.2%).
- The percentage of residents that graduated from high school and did not obtain a college degree was higher in each of the top 5 CNI ZIP codes compared to Washoe County (24.0%).
- The percentage of residents that obtained a bachelor's degree was lower in all 5 top CNI ZIP codes, ranging from a low in 89433 (7.4%) to a high in 89501 (17.9%), compared to Washoe County (18.2%).

- Again, with the exception of 89501, the percentage of residents in each of the remaining top CNI ZIP codes that obtained a graduate or professional degree was lower compared to Washoe County residents overall (10.5%), ranging from a low in 89433 (1.3%) to 89502 (4.8%).

Hospitalization Rates for Select Conditions

Table 175: Rate of Hospitalizations for Top 5 CNI ZIP codes Compared to Washoe County, 2015

Location	Asthma	COPD	Hypertension	Stroke
89512	77.0	166.4	420.9	23.3
89502	208.4	613.9	1,292.6	70.4
89431	92.4	188.8	453.7	32.6
89433	90.9	170.2	476.4	30.1
89501	120.1	248.0	604.4	31.7
Washoe County	70.2	130.5	409.6	25.4

*rate per 10,000 population

- In 2015, the rate of hospitalization for asthma was higher in all of the top 5 CNI ZIP codes than Washoe County, with the highest rate in 89502 (208.4 per 10,000 population), nearly three times the rate for Washoe County (70.2 per 10,000 population).
- The 2015 hospitalization rates for COPD were higher for all of the top 5 CNI ZIP codes compared to the overall rate for Washoe County. The highest rate, also in 89502 (613.9 per 10,000), was nearly five times the rate for Washoe County (130.5 per 10,000 population).
- The 2015 rates of hospitalizations due to hypertension were also higher in all 5 of the top CNI ZIP codes compared to Washoe County overall. The highest rate of hospitalizations due to hypertension was in 89502 (1,292.6 per 10,000 population), a rate three times higher than Washoe County overall (409.6 per 10,000 population).
- The rate of hospitalization due to stroke was lowest of all select indicators, however all top 5 CNI ZIP codes, except for 89512, had higher rates than Washoe County overall in 2015. The highest rate of hospitalization due to stroke was again in 89502 (70.4 per 10,000 population), a rate nearly three times higher than Washoe County (25.4 per 10,000 population).

Mortality Rates for Select Causes of Death

Table 176: Crude Mortality Rate for Top 5 CNI ZIP Codes Compared to Washoe County, 2015

Location	Heart Disease	Cancer	COPD	Unintentional Accidents	Infant death rate (<1 year)	Overall Mortality Rate
89512	21.1	18.4	11.7	3.9	20.3	82.9
89502	22.1	16.7	13.8	6.9	2.7	88.9
89431	20.1	22.2	13.2	6.6	6.5	97.9
89501	180.2	138.0	112.6	36.6	0.0	613.9
89433	16.8	15.8	9.9	5.4	3.3	74.6
Washoe County	20.3	18.1	10.7	4.9	5.7	86.5

*Crude mortality-rate per 10,000 population (all ages); Infant death rate is per 1,000 live births

Note: Since the above mortality rates are not age-adjusted, the rates are a reflection of the population age of residents in these ZIP codes, rather than a reflection of true rates of death.

- In 2015, the overall crude mortality rate (not adjusted for age), was higher in 89502, 89431, and 89501 compared to Washoe County's (86.5 per 10,000) overall mortality rate.

2.0 COMMUNITY NEEDS INDEX

- In 2015, the mortality rate for heart disease ranged from a low in 89433 (16.8 per 10,000 population) to a high in 89501 (180.2 per 10,000 population).
- The mortality rate for cancer (all types combined) was highest in 89501 (138.0 per 10,000 population), while cancer mortality rates in 89502 (16.7) and 89433 (15.8) were slightly lower relative to Washoe County.
- The mortality rate due to COPD in 2015 was higher in 89501, 89502, 89431, and 89512 compared to Washoe County overall (10.7 per 10,000 population).
- In 2015, the mortality rate due to unintentional accidents was highest among residents in 89501 (36.6 per 10,000). Mortality rates due to unintentional accidents were also higher in 89502 (6.9), 89431 (6.6), and 89433 (5.4) compared to the Washoe County rate (5.4 per 10,000 population).
- The infant (< 1 year) death rate was highest among 89512 (20.3 per 1,000 live births), however the infant death rate in 89431 (6.5) was also higher than the infant death rate for Washoe County (5.7 per 1,000 live births).

Primary Survey Data Related to Community Needs

Primary data were collected via an online community survey from over 1,400 survey participants. The survey included 44 questions and analyses for questions related to perceived community needs are provided within this section. Results and findings from the online community survey are not intended to be applied to or descriptive of all Washoe County residents and only represent the survey respondents themselves. Overall, the online community survey respondents were slightly younger, proportionally less Hispanic, and had higher educational attainment relative to the general Washoe County population. For complete survey methodology and participant demographics refer to the Contents, Methodology, & Community Survey Demographics section.

Table 177 illustrates community survey respondents' top five highest scoring health topics by ZIP code, relative to the overall rankings of all survey respondents. Survey participants were asked to rate 11 health topics in terms of perceived importance. Environmental health, social determinants, and health access (access to health services) were among the highest scoring health topics across all five of the top CNI ZIP codes.

Table 177: Top 5 Ranked Health Topics by Residents of Top 5 CNI ZIP Codes						
Rank	89512	89502	89431	89501	89433	All Respondents
1	Safety & Security	Health Access	Environmental Health	Environmental Health	Health Access	Health Access
2	Environmental Health	Social Determinants	Health Access	Health Access	Social Determinants	Environmental Health
3	Social Determinants	Environmental Health	Mental Health	Social Determinants	Environmental Health	Social Determinants
4	Health Access	Safety & Security	Social Determinants	Preventive Health	Safety & Security	Safety & Security
5	Injury Prevention	Mental Health	Safety & Security	Mental Health	Community Services	Mental Health

Note: Health access (increased primary and specialty providers, affordable insurance and more providers who accept insurance).

Environmental health (clean air, water, illegal dumping, food safety and mosquito abatement).

Social determinants (education system, employment, wages, hunger, poverty, affordable housing and homelessness).

Safety and security (property damage, violent crimes, sexual assault, domestic violence and overall safe neighborhoods).

Mental health (stress reduction, bullying, suicide, serious mental illnesses, and mental and behavioral health services and programs).
Preventive health (physical activity, nutrition, overweight/obesity, immunizations, oral health, cancer screenings, and chronic disease management).

Injury prevention (motor vehicle and pedestrian accidents, reckless driving, falls among elderly populations, accidental poisonings and drownings).

Community services (teen youth centers, community centers, services for immigrants, senior centers, affordable child care).

Community Needs Index Summary

The five ZIP codes in Washoe County with the highest CNI scores have remained the same from 2013 to 2016 and combined, these ZIP codes account for nearly one-third (30.3%) of Washoe County's population. The five high CNI ZIP codes are demographically similar with the exception of 89501, the smallest ZIP code encompassing downtown Reno. The other four high needs ZIP codes (89512, 89502, 89431, and 89433) had a higher proportion of minority populations, primarily Hispanic, relative to the county overall. Again, with the exception of 89501, the other four high needs ZIP codes were slightly younger in terms of median age, relative to Washoe County. The median age among residents in 89501 was 51.7 years, which is nearly 15 years older than the County overall (37.6 years). Median household income in the five high CNI ZIP codes were \$10,000 to \$32,000 below the Washoe County median income, and the rates of unemployment were higher as well. Educational attainment was also lower in the five highest CNI ZIP codes relative to Washoe County overall. Hospitalization rates for asthma, COPD, and hypertension were higher in all five ZIP codes and hospitalization rates for stroke were higher in four of five ZIP codes compared to Washoe County. The 2015 overall crude (not adjusted for age) mortality rates for three top five CNI ZIP codes (89502, 89431, and 89501) were also higher than Washoe County.

Community Needs Index scores are a helpful mechanism for evaluating a wide range of indicators pertaining to socioeconomic status, and help provide a visual cue of where high needs neighborhoods are located. The community survey responses illustrate how perceived needs vary among neighborhoods. CNI scores should be interpreted in conjunction with the existing gaps and assets of each neighborhood in order to provide the most effective models for improving the health and wellbeing of each neighborhood and community as a whole.

Community Needs Index Sources

Table 172: CNI Scores for ZIP Codes in Washoe County, 2013-2016

2013-2014: Truven Health Analytics. Data provided upon request. Reno, NV.

2015- 2016: Truven Health Analytics, Dignity Health. Community Needs Index. Accessed <http://cni.chw-interactive.org/>

Table 173: Number & Percent of Washoe County Population Residing in Top 5 CNI ZIP codes, 2011-2015 Aggregate Data

U.S .Census Bureau, 2011-2015 American Community Survey 5-Year Estimates. Table DP05.

Image 8: Top 5 CNI ZIP Codes, Washoe County, 2016

Washoe County GIS. Data provided upon request. Reno, NV.

Fig 183: Percent of Population by Age Group, Top 5 CNI ZIP Codes Compared to Washoe County, 2011-2015 Aggregate Data

U.S .Census Bureau, 2011-2015 American Community Survey 5-Year Estimates. Table S0101.

Fig 184: Percent of Population by Race/Ethnicity, Top 5 CNI ZIP Codes Compared to Washoe County, 2011-2015 Aggregate Data

U.S .Census Bureau, 2011-2015 American Community Survey 5-Year Estimates. Table DP05.

Table 174: Median Household Income & Percent Unemployed, Top 5 CNI ZIP Codes Compared to Washoe County, 2011-2015 Aggregate Data

U.S .Census Bureau, 2011-2015 American Community Survey 5-Year Estimates. Table DP03.

Fig 185: Educational Attainment among Adults 25+ years, Top 5 CNI ZIP Codes Compared to Washoe County, 2011-2015 Aggregate Data

U.S .Census Bureau, 2011-2015 American Community Survey 5-Year Estimates. Table S1501.

Table 175-Table 176 Same Source

Table 175: Rate of Hospitalizations for Top 5 CNI ZIP codes Compared to Washoe County, 2015

Table 176: Crude Mortality Rate for Top 5 CNI ZIP Codes Compared to Washoe County, 2015

Nevada Department of Health and Human Services, Office of Public Health Informatics and Epidemiology. Data provided upon request. Carson City, NV.

Table 177: Top 5 Ranked Health Topics by Residents of Top 5 CNI ZIP Codes

Online Community Survey

Community Strengths & Challenges

The previous Washoe County CHNA (2015-2018) included an asset list as a mechanism for community strengths and assets, while this assessment does not. Asset lists are helpful, however persons seeking assistance for a specific need are not likely to utilize this document as a resource, instead there are several local entities that provide a comprehensive list of referral options and community connections. This includes Nevada 211 (dial 2-1-1) or contacting United Way of Northern Nevada and the Sierra (775-322-8668).

There are three major resources used in this section to highlight community strengths and challenges. Results from the online community survey, results from an agency survey, and feedback from a Community Workshop. Each resource provides a different perspective from the community to help create a robust assessment of community strengths and assets, as well as gaps and challenges.

The online community survey was widely distributed through supporting partner organizations, resulting in over 1,400 survey respondents and the results indicate which organizations residents perceive to be a resource for seven specific health issues. The online community survey responses show people may benefit from more education on what services are provided by each agency. Additionally the results indicate some organizations may benefit from improved marketing and education regarding the services they provide. A non-referral question from the online community survey was also included and the question asked respondents what resource they rely on for information in the event of a disaster or emergency. While the results are not generalizable, they reflect how some community members perceive the available services of the community.

The invitation to the Community Workshop and an electronic agency survey was sent to 250 individuals representing 96 different organizations across Washoe County. The invitation to participate in the Community Workshop and the link to the agency survey was distributed to the January 2015 Truckee Meadows Healthy Communities Conference attendees, current Community Health Improvement Plan workgroup members, government entities, City Council members, County Commissioners, UNR and TMCC leadership and faculty, and nonprofit organizations. The intent was to solicit participation from a diverse range of organizations and councils.

Attendees at the Community Workshop were provided an update on the purpose, contents and preliminary results of the CHNA, and were asked to vote on focus areas related to 12 major health topics. The electronic agency survey asked respondents to identify the types of services the organization provides to clients and types of populations served by age and subgroup. Additional questions included communicating with and collaborating on current initiatives with other organizations in the region.

The information within this section is not intended to promote one agency over another.

Online Community Survey Results

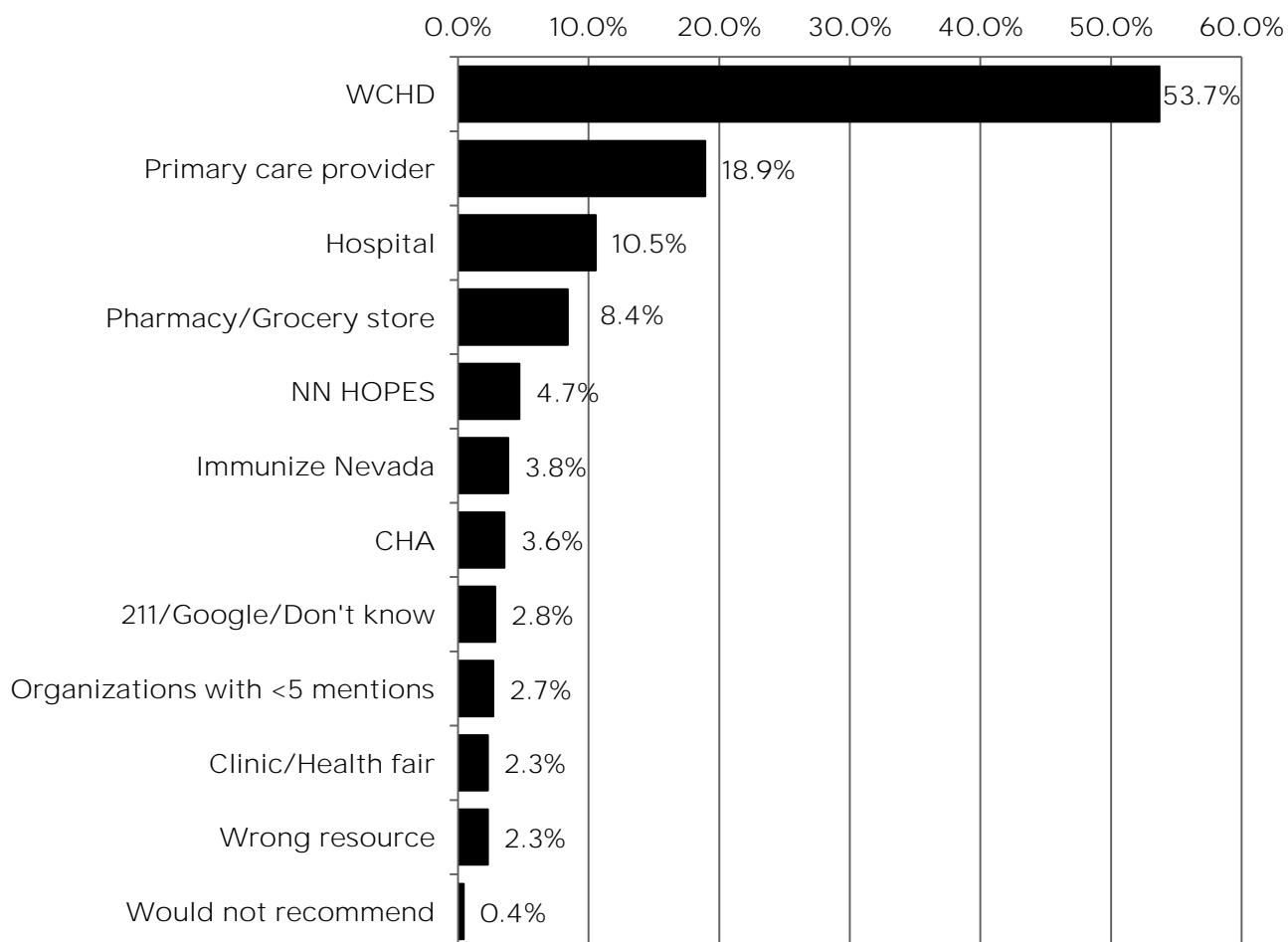
Primary data were collected via an online community survey from over 1,400 survey participants in Washoe County. The survey included 44 questions and analyses for those questions related to community resources and assets are provided within this section. Results and findings from the online community survey are not intended to be applied to or descriptive of all Washoe County residents and only represent the survey respondents themselves. Overall, the online community survey respondents were slightly younger, proportionally less Hispanic, and had higher educational attainment relative to the general Washoe County population. For complete survey methodology and participant demographics refer to the Contents, Methodology, & Community Survey Demographics section.

The online community survey included a question stating, **“If a friend or family member needed access to care for a health-related issue, where would you refer them for each of the following?”**. The health-related issues included referral for those seeking immunizations, sexual health services, health insurance, experiencing domestic abuse, mental health services, experiencing substance use or addiction, and nutrition counseling. Results for each health-related issue are presented in Figure 186 through Figure 193.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Immunizations: Approximately 49% (n=702) of survey respondents provided an answer to the immunization referral question.

Fig 186: Referral for Immunizations (n=702)



Note: Respondents often listed more than one referral location and each answer was counted under the respective category, therefore the combined percentage in the figure is greater than 100%.

Locations Providing Vaccinations

Combined, two in three (64.7%) of the referrals were to a specific agency that directly provides vaccinations.

This included the following:

- Over half (53.7%) of the referral were to the Washoe County Health District. Other specific organizations included Northern Nevada HOPES (4.7%), Community Health Alliance/CHA (3.6%), organizations with fewer than 5 mentions (2.7%) included UNR student clinic, Kids to Seniors Korner, Tribal Health Center, and the UNR (non-student) health center combined. Most of these locations are specific to insurance type, age, or pre-enrollment in other programs to qualify for vaccination at the location.

Approximately 8.4% of referrals were to a pharmacy or a specific grocery store.

Another 2.3% of referrals mentioned a general health clinic, health fair, or free-clinics.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Primary Care Providers & Hospitals

- Nearly one in four (18.9%) of referral were for a primary care provider, general practitioner, or doctor.
- One in ten (10.5%) listed a hospital. The most frequently identified hospital was Renown, however Saint Mary's, Northern Nevada Medical, and the VA were mentioned as well.

211/Google/Do Not Know & Wrong Resource

- Among the 702 respondents, 2.8% indicated they would call Nevada-211, Google/Use the internet, or stated they did not know where to refer someone for immunizations.
- 2.3% listed a wrong resource. The wrong resource responses included organizations that do not provide vaccinations, however most of these agencies could refer someone to an appropriate resource.

Immunize Nevada

- Approximately 3.8% of referrals were to Immunize Nevada. Immunize Nevada is a widely recognized coalition working to improve vaccination rates across Nevada. While the organization does not directly provide vaccines to the public, they organize many free and low-cost vaccine clinics in partnerships with a wide variety of other organizations across Nevada, provide a vast amount of information for the public and providers and also conducts trainings, outreach, and is overall an in-depth resource.

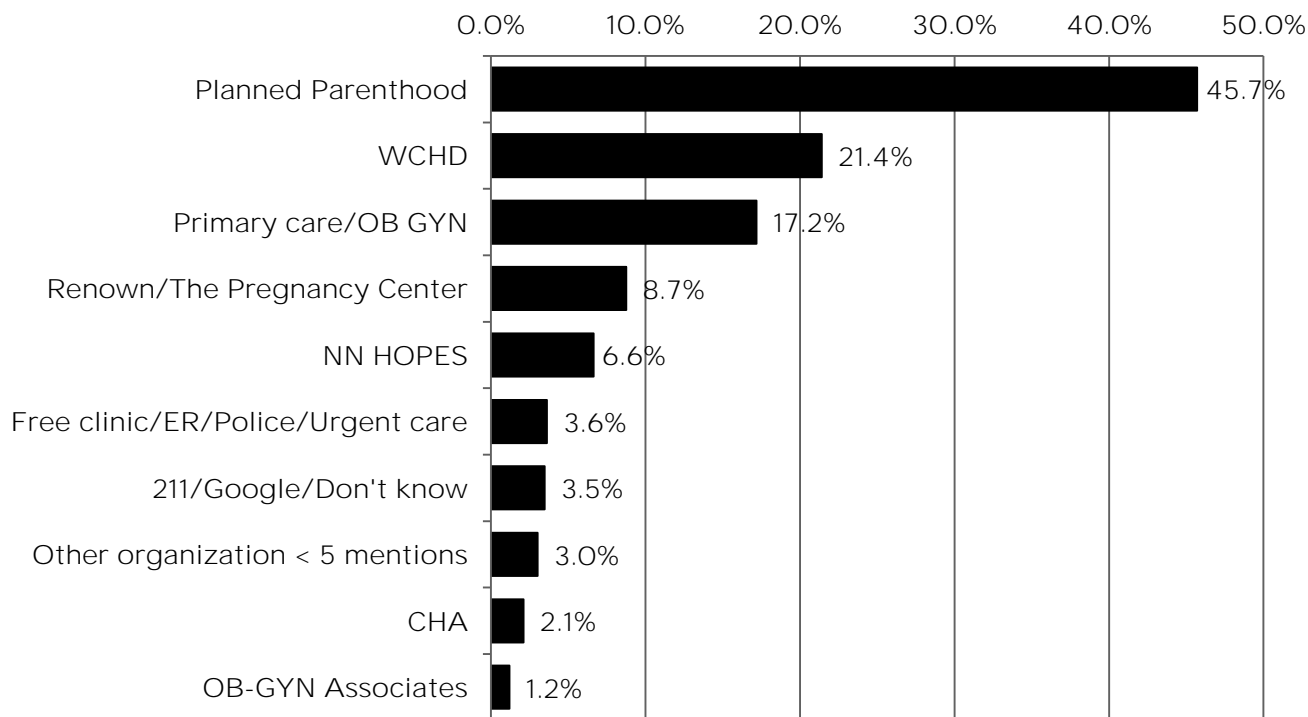
Would Not Recommend

- There were survey respondents (0.4%) who stated they would not recommend vaccination or to friends or family seeking access to immunizations. This illustrates the ongoing need for education related to the benefit and purpose of receiving appropriate vaccinations.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Sexual Health Services: Approximately 46% (n=663) of survey participants provided an answer to the sexual health services referral question. Examples provided included birth control, sexually transmitted diseases and prenatal care.

Fig 187: Referral for Sexual Health Services-i.e. birth control, STD screening, prenatal care (n=663)



Note: Respondents often listed more than one referral location and each answer was counted under the respective category, therefore the combined percentage in the figure is greater than 100%.

Sexual Health or Family Planning Agencies

- The majority of agencies listed (88.8%) were an organization that provides testing and counseling for sexually transmitted diseases (STDs) as well as birth control options, however not all locations provide prenatal care services. These agencies included Planned Parenthood (45.7%), Washoe County Health District/WCHD (21.4%), Renown/The Pregnancy Center (8.7%), Northern Nevada HOPES/NN HOPES (6.6%), other organizations with fewer than 5 mentions (3.0%), Community Health Alliance/CHA (2.1%) and OB-GYN Associates (1.2%).
- Another 17.2% of referrals stated “doctor” or the term “OB-GYN”, the term “depends on insurance” was also included in this category.
- The terms “Free Clinic”/ER/Police/Urgent Care were listed by 3.6% of respondents, likely as a response to a sexual assault incident or in the event of needing emergency contraception.

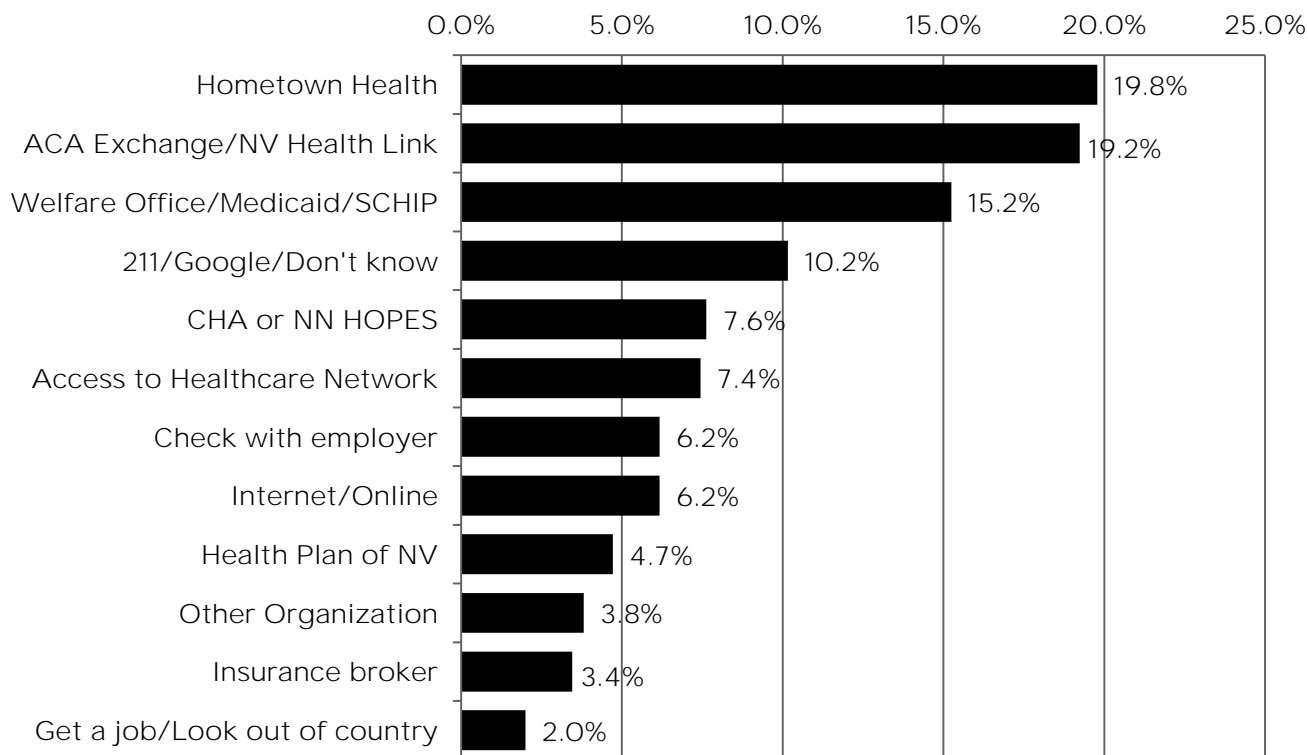
211/Google/Don't know

- Approximately 3.5% of respondents stated they would call 211, Google, or did not know where to refer someone for sexual health services.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Obtain Health Insurance: Approximately 38% (n=551) of survey participants provided an answer to the obtain health insurance referral question.

Fig 188: Referral to Obtain Health Insurance (n=551)



Note: Respondents often listed more than one referral location and each answer was counted under the respective category, therefore the combined percentage in the figure is greater than 100%.

Recommended Specific Health Insurance Provider

Nearly half (47.2%) recommended a specific type of health insurance provider. This included the following:

- Nearly one in five (19.8%) recommended the insurance plan Hometown Health. Hometown Health is offered through Renown to the public for purchase, as well as by several major employers throughout the county. This category also included Senior Care Plus, a Medicare Advantage organization and prescription drug plan for those with a Medicare contract; Hometown Health is the parent company for Senior Care Plus.
- Another 15.2% stated they would refer a friend to family member to Medicaid or to go to a Welfare Office to sign up for Medicaid.
- While Access to Healthcare Network (AHN) is *not an insurance plan*, 7.4% of respondents would refer friends or family to this organization. AHN is a non-profit organization offering members access to a discounted provider network and to participating healthcare providers. Members pay an income-based membership fee for healthcare access. Members are primarily those whose income places them above the threshold for Medicaid, however are still unable to afford to purchase health insurance through alternative means.
- Health Plan of Nevada (4.7%) offers insurance for purchase through the ACA exchange and those not on the ACA Exchange.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Source for Access or Seek More Information

Approximately 42.8% of respondents would refer a friend or family member to a resource to seek further information, including the following:

- About one in five would refer to the Affordable Care Act (ACA) Marketplace Exchange.
- One in 10 (10.2%) indicated they would call Nevada 211, Google, or they didn't know. "Google it" or "Google" was reported separate from those who stated "Internet/Online" (6.2%). Since the ACA Exchange is primarily accessed online it was unclear if respondents who listed "Internet/Online" were referring to the ACA Exchange or if this term was interchangeable with Google.
- 3.8% listed some other organization. Many of these were clinics with a sliding-fee scale for services or social service-type resources where assistance with health insurance enrollment may or may not be available. None of these locations offers health insurance directly.
- Another 3.4% listed an insurance broker as a resource to find an appropriate health insurance plan.

Community Health Centers

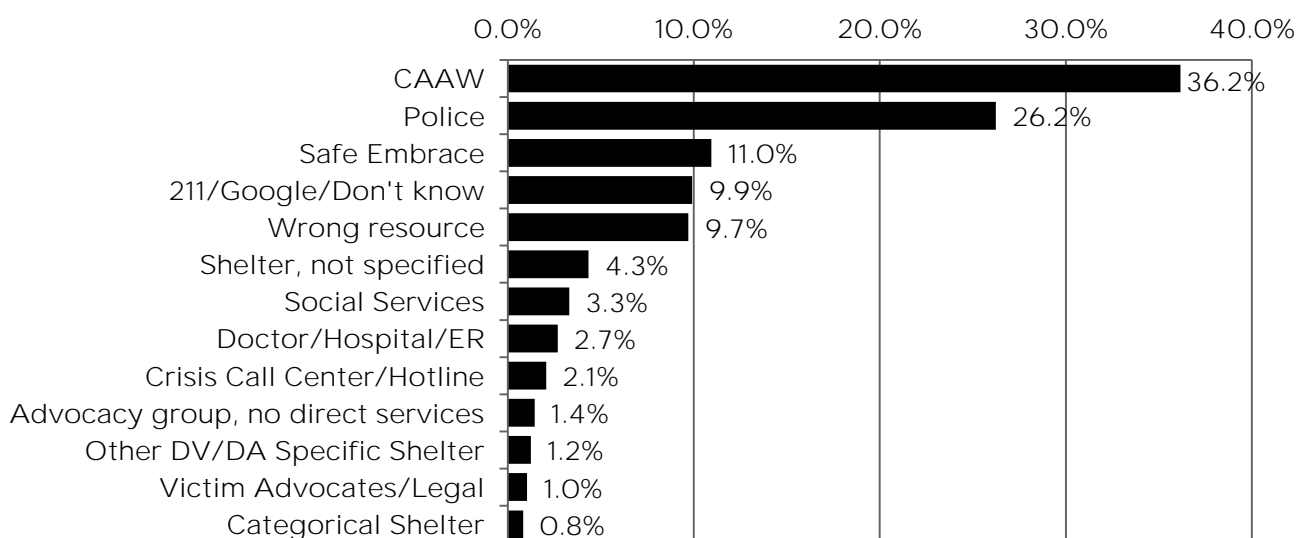
- Combined 7.6% stated they would refer friends or family to either Community Health Alliance (n =21) or Northern Nevada HOPES (n=21). Both offer sliding-fee scale and have staff to assist with enrollment in health insurance plans.

Employer-based

- 6.2% of respondents stated they would tell a friend or family to check with their employer or HR. This was not viewed as helpful since most employees are generally made aware of benefit options available to them or are mandated to enroll with a health insurance provider upon hire.
- Another 2.0% claimed they would tell friends or family to "get a job", or "to look outside of the United States". This indicates a general frustration with this service or that the perception is people must be employed to have access to health insurance.

Domestic Abuse: Only 34% (n=484) of survey participants provided an answer to the domestic abuse referral question.

Fig 189: Referral for Domestic Abuse (n=484)



Note: Respondents often listed more than one referral location and each answer was counted under the respective category, therefore the combined percentage in the figure is greater than 100%.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Shelters Specific to Domestic Abuse/Violence

- Over one in three (36.2%) of the 484 respondents indicated they would refer to the Committee to Aid Abuse Women (CAAW). CAAW was established in 1977, however as of September 2017 (after the close of the online community survey), changed their name to Domestic Violence Resource Center (DVRC). The DVRC provides comprehensive, free services for persons experiencing family violence.
- Another 11.0% listed Safe Embrace, a women's shelter specific to domestic abuse in the Washoe County area. Safe Embrace also offers free services including shelter, transitional living, counseling and advocacy options. Additionally, 1.2% listed Tahoe SAFE Alliance, an agency in North Lake Tahoe that offers an array of services specific to persons experiencing violence.
- 4.3% listed "shelter", but did not specify a name or location. Approximately 0.8% (n=4) respondents listed a categorical shelter; these agencies offer an array of services specific to pregnant women, women with children, or women who are intravenous drug users, however these locations and shelters are not specific to domestic violence, have very long wait lists, and many participants are court-ordered primarily for substance use issues.

Legal Intervention

- The second most common referral was for the police or 911 (26.2%). The issue with relying on police authority or a 911 response is that is primarily effective only for the physical abuse phase and does not remove the victim from the situation. Additionally, the perpetrator may lash out at the victim(s) the following episode for having contacted police on previous occasions.

Referral Agency

- Doctor/Hospital/ER (2.7%) may only be available for those with health insurance or those who are seeking direct medical care for physical injuries, crisis call centers/hotlines (2.1%) can provide verbal referrals and advice, however do not physically offer services or shelter, similar to advocacy groups (1.4%).
- Another 1.0% of the 484 respondents listed victim advocates/defense attorney or lawyer. Again, these may help with connecting a person to resources, but do not provide shelter or other direct services aside from counseling.

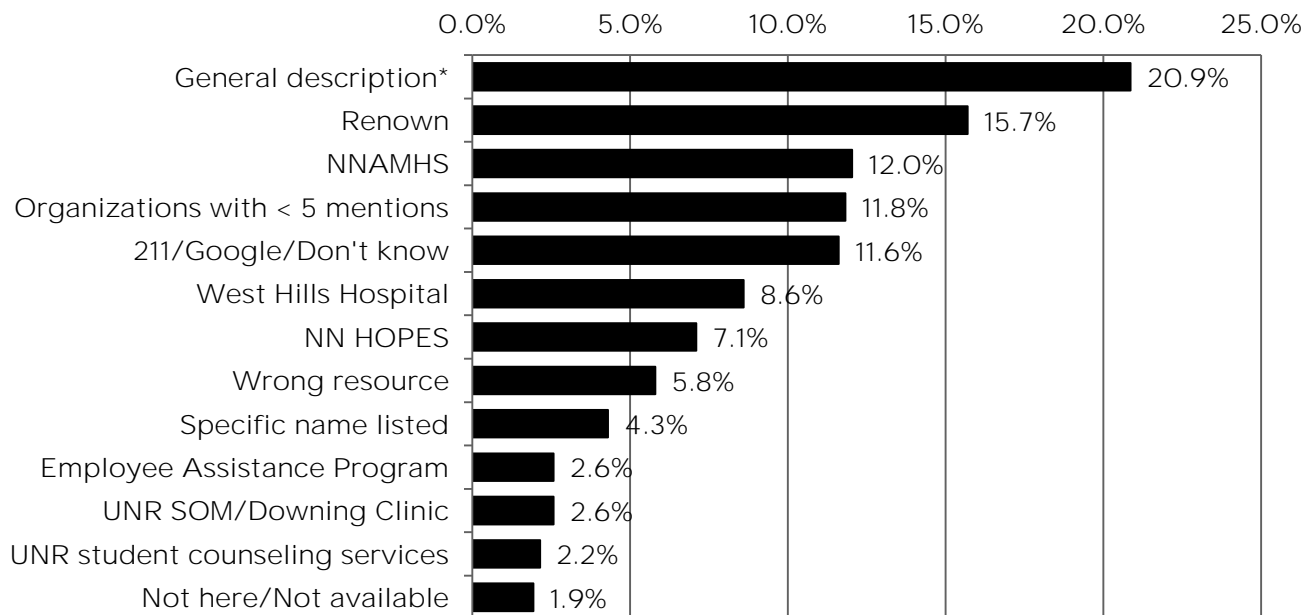
211/Google/Do Not Know & Wrong Resource

- Combined, nearly one in five respondents stated they would have to call Nevada-211, Google/Use the internet, stated they did not know (9.9%) or listed a wrong resource (9.7%). The 211/Google/Do not know responses show people would need to go to another resource to find an appropriate agency. The wrong resource responses included organizations that do not provide resources for domestic violence, however most answers were agencies that could refer someone to an appropriate resource.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Mental Health: Only 32% (n=465) of survey participants provided an answer to the mental health referral question. The examples listed under the mental health question included stress reduction, counseling, psychiatrist. There were included to prompt respondents to list only mental health resources and not substance use resources. Substance use is often associated with “behavioral health”, an umbrella term which includes both mental health and substance use. Referrals for substance use, although often intertwined, were asked in a separate fill-in-the-blank box.

Fig 190: Referral for Mental Health Services-i.e. stress reduction, counseling, psychiatrist (n=465)



Note: Respondents often listed more than one referral location and each answer was counted under the respective category, therefore the combined percentage in the figure is greater than 100%.

*General description included generic terms such as “primary care provider”, “doctor”, “mental health clinic”, “counselor”, “insurance provider list” and “psychiatrist” these reflected the examples provided.

Specific Mental Health Organizations & Providers

Combined, two in three (64.3%) of the 465 respondents listed a specific agency or a provider name that directly provides some aspect of mental health screening and treatment. This included the following:

- Renown (15.7%), Northern Nevada Adult Mental Health Services (NNAMHS) (12.0%), West Hills Hospital (8.6%), Northern Nevada HOPES (7.1%).
- Organizations with fewer than 5 mentions (11.8%) included Zephyr Wellness, Great Basin Behavioral Health, Life quest, Alliance, Healing Minds, Midtown Mindfulness, Mobile Crisis Unit through the school district, Mojave Mental Health, West Care, the Reno-Sparks Tribal Health Center, True North, Senior Bridges Program, Washoe County Social Services, the VA, Saint Mary’s, Quest Counseling, Willow Springs, WestCare and Sierra Counseling and Neurotherapy.
- UNR School of Medicine/Downing Clinic (2.6%), available to the public, generally uninsured and underinsured and the UNR student counseling services (2.2%), available to UNR students only.

3.0 COMMUNITY STRENGTHS & CHALLENGES

- Another 4.3% of respondents listed the name of a provider, although unverified, these were assumed to be names of providers currently offering some form of behavioral health services, and were endorsed by those respondents.

211/Google/Do Not Know & Wrong Resource

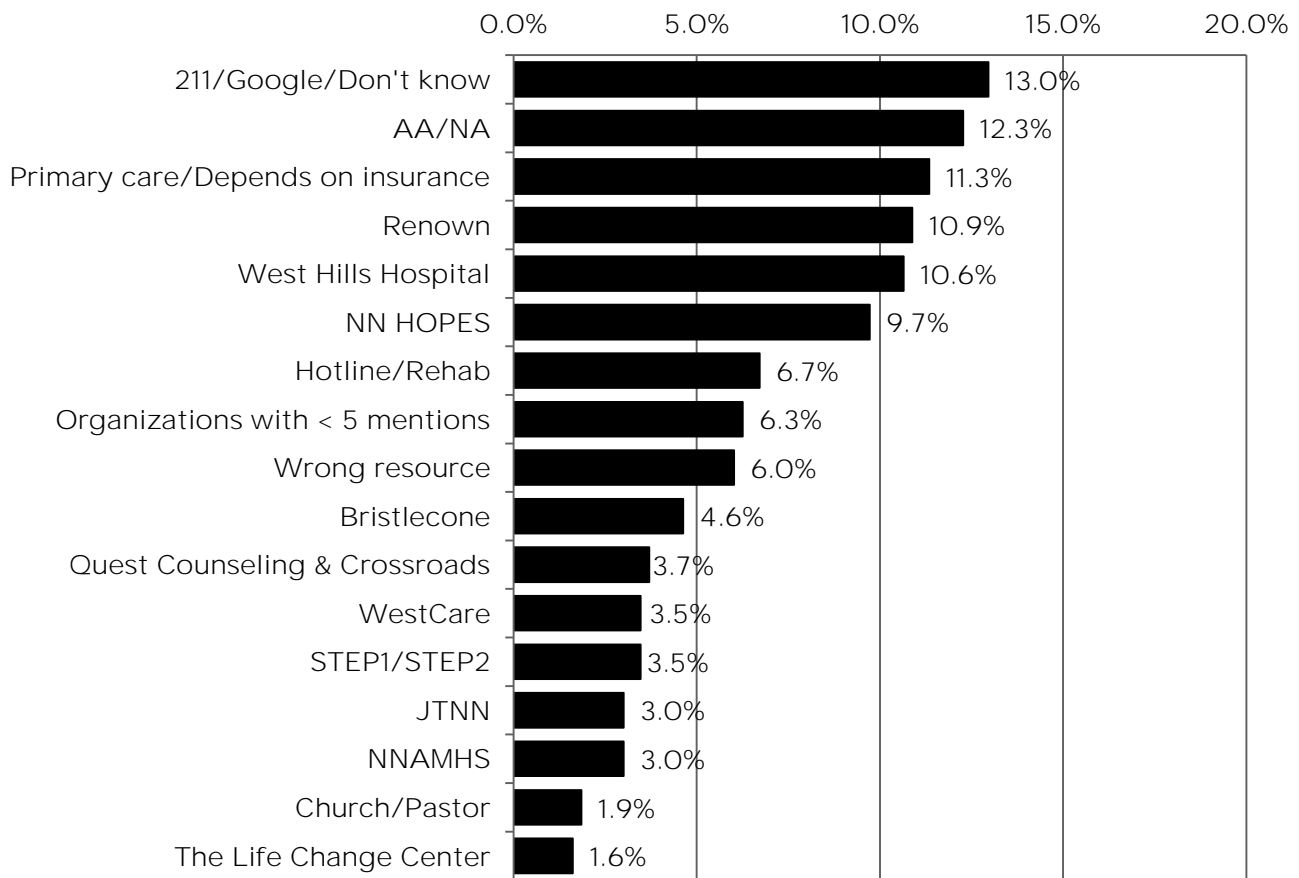
- Over one in ten (11.6%) did not know or would call Nevada 211, Google or have to use the internet to find an appropriate resource. Another 5.8% listed a wrong resource often listing an agency which could provide a referral, but does not provide any direct mental or behavioral health services.

Not here/Not available

- The least often listed resource, “Not here/Not available” was cited by 1.9% (n=9) respondents, however was indicative of negative personal experiences trying to seek mental health care. Often these answers cited lack of providers willing to accept new patients, or wait lists longer than 4 or 5 months.

Substance Use or Addiction: Only 30% (n=432) of survey participants provided an answer to the substance use or addiction referral question.

Fig 191: Referral for Substance Use or Addiction (n=432)



Note: Respondents often listed more than one referral location and each answer was counted under the respective category, therefore the combined percentage in the figure is greater than 100%.

3.0 COMMUNITY STRENGTHS & CHALLENGES

General Referrals

- Combined, 30.3% listed a generic referral type. This included Alcoholic Anonymous (AA) or Narcotics anonymous (NA) (12.3%), a primary care provider or depends on the person's insurance provider (11.3%), and those who stated call a hotline or go to rehab (6.7%).

Locations with Inpatient Options

- Combined just over one in five (21.8%) respondents listed an organization with inpatient options, this included West Hills hospital (10.6%), Bristlecone (4.6%), WestCare a short-term detox center (3.5%), and Northern Nevada Adult Mental Health Services/NNAMHS (3.0%). These locations are known for providing some form of mental and behavioral health services, however those seeking treatment in these locations may be faced with long waiting lists.
- Combined 15.0% of the 432 respondents listed an organization which may not have inpatient options, however many of these organizations serve specific populations, a person is usually court-ordered to attend services, or the organization treats only those with specific substance addiction, such as opioids. The 15.0% includes, organization with fewer than 5 mentions each (6.3%), Quest Counseling (outpatient adolescents) and Crossroads (usually court-ordered) with equal number of mentions and combined (3.7%), STEP 1, Inc. (men only, priority intravenous drug users)/STEP2 (pregnant women only) combined (3.5%), and The Life Change Center which is specific for those with opioid addiction (1.6%)

Other Mentions

- Renown Behavioral Health program was mentioned by 10.9% of the 432 respondents. Renown's Behavioral Health program provides specialized care for mental health and substance abuse offering counseling and medication treatment.
- Northern Nevada HOPES/NN HOPES was mentioned by 9.7% of respondents. NN HOPES is home to the only syringe exchange program in northern Nevada, Change Point, which offers harm reduction supplies, counseling, as well as HIV and hepatitis C (HCV) testing. Additionally NN HOPES offers behavioral health counseling including substance use counseling and treatment plans, however there are no inpatient beds.
- Join Together Northern Nevada/JTNN was mentioned by 3.0% of respondents. JTNN is a coalition offering several programs to prevent substance use, they provide resources including trainings, educational outreach and referrals, but JTNN does not directly treat patients.
- Church or pastor was listed by 1.9% of respondents.

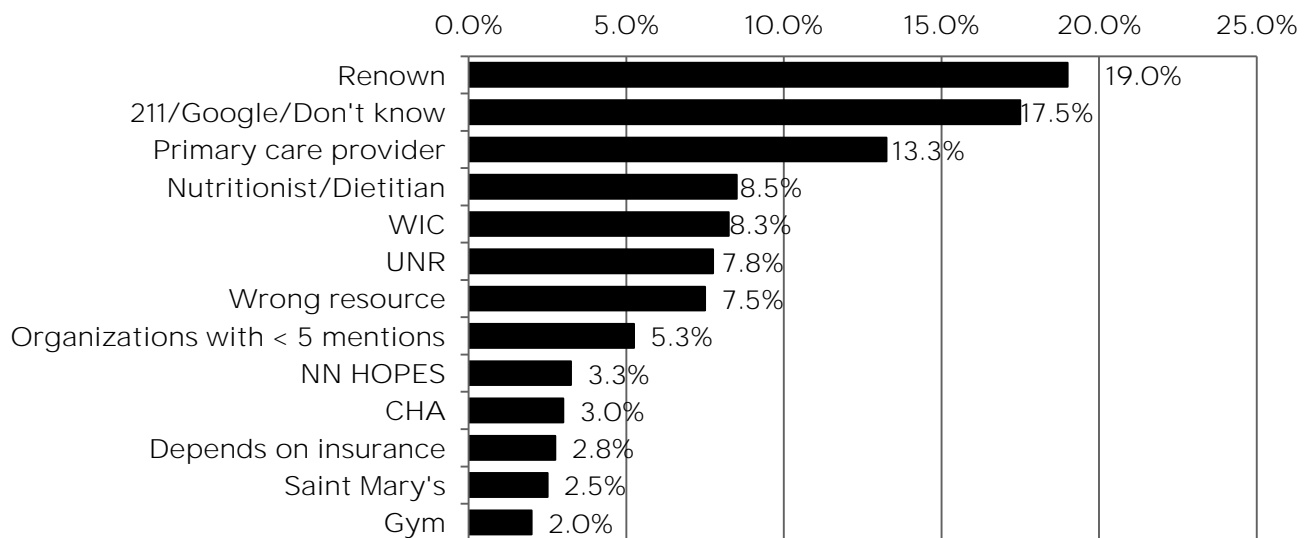
211/Google/Do Not Know & Wrong Resource

- Combined nearly one in five (19.0%) respondents stated they would call Nevada 211, Google, or did not know where to go (13.0%) or they listed an organization that does not provide substance use treatment/counseling (6.0%), however many of those listed would be able to refer to an appropriate resource.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Nutrition counseling: Only 28% (n=400) of survey participants provided an answer to the nutrition counseling referral question.

Fig 192: Referral to Obtain Nutrition Counseling (n=400)



Note: Respondents often listed more than one referral location and each answer was counted under the respective category, therefore the combined percentage in the figure is greater than 100%.

Hospitals/Clinics

- Combined, just over one in three (35.5%) of the 400 respondents would refer a friend or family to one of the local health systems to obtain nutrition counseling. This includes Renown (19.0%), UNR School of Medicine Clinic (7.8%), Northern Nevada HOPES/NN HOPES (3.3%), Community Health Alliance/CHA (3.0%), and Saint Mary's (2.5%).

Specific Provider

- Combined, one in five (21.8%) of the 400 respondents would refer to a primary care provider (13.3%) or to a nutritionist or dietitian (8.5%).
- Approximately 5.3% would refer to a different organization, many of these were wellness clinics that offer a range of services.
- Another 2.8% stated it depends on the insurance type or a person should check their insurance provider list to find an appropriate counselor within the insurance network.

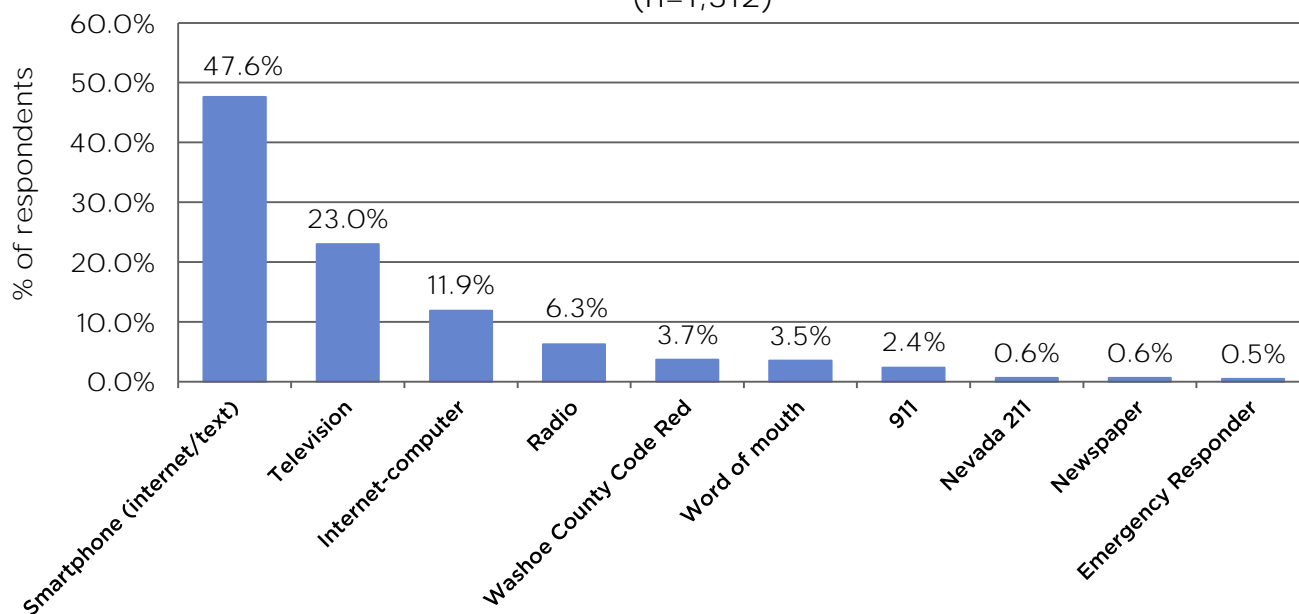
211/Google/Do Not Know, Wrong Resource, & Gyms

- Combined one in four (25.0%) respondents indicated they would have to call Nevada 211, Google, or did not know where to go (17.5%) or they listed an organization that does not provide nutritional counseling (7.5%), however many of those listed would be able to refer to an appropriate resource.
- Additionally 2.0% of respondents indicated they would refer someone to the gym. It was unclear if these referrals related to nutritionists or personal trainers who work at the gym or if this was a response for the person to engage in more physical activity.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Question: “What is your main source of information in a disaster or emergency, such as a fire, earthquake, or flood? Select one.”

Fig 193: Main Source of Information in Emergency Event
(n=1,312)



- Nearly half (47.6%) of the 1,312 survey respondents indicated they rely on their smartphones for obtaining information during an emergency, while another 23.0% indicated the main source of information is the television.
- Calling 911, as identified by 2.4% of respondents, is **NOT advised** during an emergency unless there is an immediate threat to life. Emergency dispatchers experience a spike in 911 calls during widespread emergencies and it is imperative the 911 phone lines be limited to true life-threatening emergencies.
- Washoe County Code Red (3.7%) is a more appropriate resource. Code Red sends a recorded message for emergency notifications in order to receive notifications sign up here <https://public.coderedweb.com/cne/en-US/169EBBD0A3AE>.

Community Workshop Results

The invitation to the Community Workshop was sent to 250 individuals representing 96 different organizations across Washoe County. Over 80 participants, representing 45 agencies were in attendance at the Community Workshop. Each workshop participant was provided five stickers to place under any of the 47 focus areas. Guidance for “voting” included considering 1) which focus areas organizations could have a sustainable impact on and 2) would success in those focus areas improve health outcomes among residents of Washoe County. This opportunity for community-lead prioritization of focus areas identifies a more narrow the scope of health needs to be addressed during the next planning cycle. Table 178 shows the Community Workshop focus area vote results.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Table 178: Summary of Community Workshop Results, Health Topic Total Votes*, & Focus Area Votes

Health Topic	Total Votes	Focus Areas	Examples	# of Votes
Social Determinants	132	Housing	lack of affordable housing, homelessness	52
		Educational attainment		27
		Poverty/Household composition	number of people per household, poverty rates overall and among children and seniors	5
		Food Insecurity/Hunger	food policy, WIC, SNAP, and free or reduce meal enrollment	20
		Community services	youth centers, senior centers, services for people with disabilities,	10
		Income/Financial stability		9
		Employment/Unemployment/Underemployment		9
Mental Health	70	Diagnosable mental illnesses	screening, treatment	36
		Depression	diagnosed and undiagnosed	22
		Suicide rates	attempted, completed, follow-up with patients	12
Access to Health	66	Health care workforce	number of providers, ratio of providers to population	38
		Preventive care services	insurance coverage, adults with a primary care provider, dental visits, physical/annual check ups	24
		Number of health care clinics	bed capacity, health provider shortage areas, telehealth	4
Substance Use	55	Prescription drug use	sedatives, painkillers, stimulants	21
		Alcohol use	heavy drinking, binge drinking, age at first drink	10
		Opiate use	legally prescribed and illegal use of opiates	10
		Marijuana use	recreational, medical	9
		Illicit drug use	methamphetamine, inhalants, cocaine, ecstasy, psychedelics	4
		Tobacco use	e-cigarettes, vaping, cigarettes, chewing tobacco	1
General Health & Wellness	42	Built environment/infrastructure	access to parks, recreation, walking paths, promoting active transport	14
		Nutrition		13
		Weight status	overweight and obesity	9
		Physical activity		6
Chronic Diseases	23	Diabetes		11
		Cardiovascular diseases	stroke	8
		Cancer	prevention, screenings, & treatment	2
		COPD		2
		Asthma		0
Safety & Security	20	Domestic violence	intimate partner violence, child abuse, elderly abuse	18
		Bullying/School violence	weapons in schools, threats, physical fighting	1
		Electronic crimes	cyber-bullying, identify theft, sex trafficking	1
		Property crimes		0
		Violent/gang-related crimes		0
Maternal & Child Health	17	Healthy pregnancy	early initiation of prenatal care, low-birth weights, preterm births	10
		Postpartum	maternal and infant check-ups, breastfeeding, infant mortality	4
		Teen pregnancy rates	pregnancy and births among teens 15-19 years	3
Infectious Disease	9	Immunizations/Vaccine-preventable diseases	influenza, MMR, varicella, pertussis, tuberculosis, HPV	5
		Antibiotic resistance	pan-resistant diseases, healthcare associated infections, sepsis, antibiograms	4
Sexual Health	6	Safe sex behaviors	sexual education, condom use, birth control	3
		Sexually transmitted diseases	HIV, chlamydia, syphilis, gonorrhea	1
		Sexual identity/Cultural safety	LGBTQ rights, safe sexual spaces	2
Environmental Health	4	Air quality		2
		Water quality and safety		2
Injury Prevention	0	Poisonings	children, seniors, cross-reaction with medications	0
		Falls		0
		Traffic safety	pedestrian, bicycle, motor vehicle accidents	0
		Other unintentional injuries	drowning, workplace safety	0

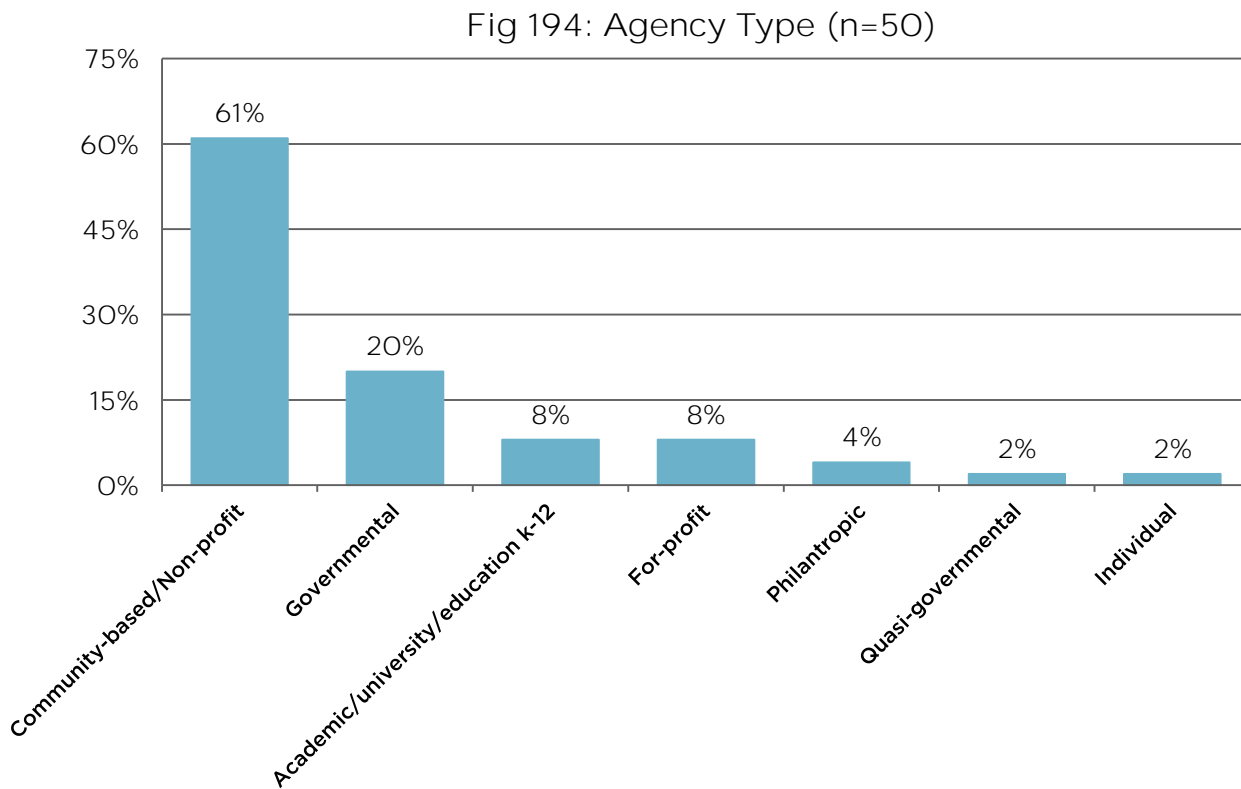
*Note: Total votes are largely influenced by the number of focus areas within each health topic

3.0 COMMUNITY STRENGTHS & CHALLENGES

Agency Survey Results

The electronic agency survey was sent to 250 individuals representing 96 different organizations across Washoe County. Seventy people representing 50 agencies responded to the agency survey. In some instances, an agency had multiple respondents on their behalf and the selected responses were different from one another, however each answer selection was only counted once. Some questions were also measured at the agency level and the denominator was 50, while other questions were measured at the individual level, with a denominator of 70. Denominators are identified in parentheses in the title of each figure.

Question: “What type of organization are you representing? Select all that apply.”

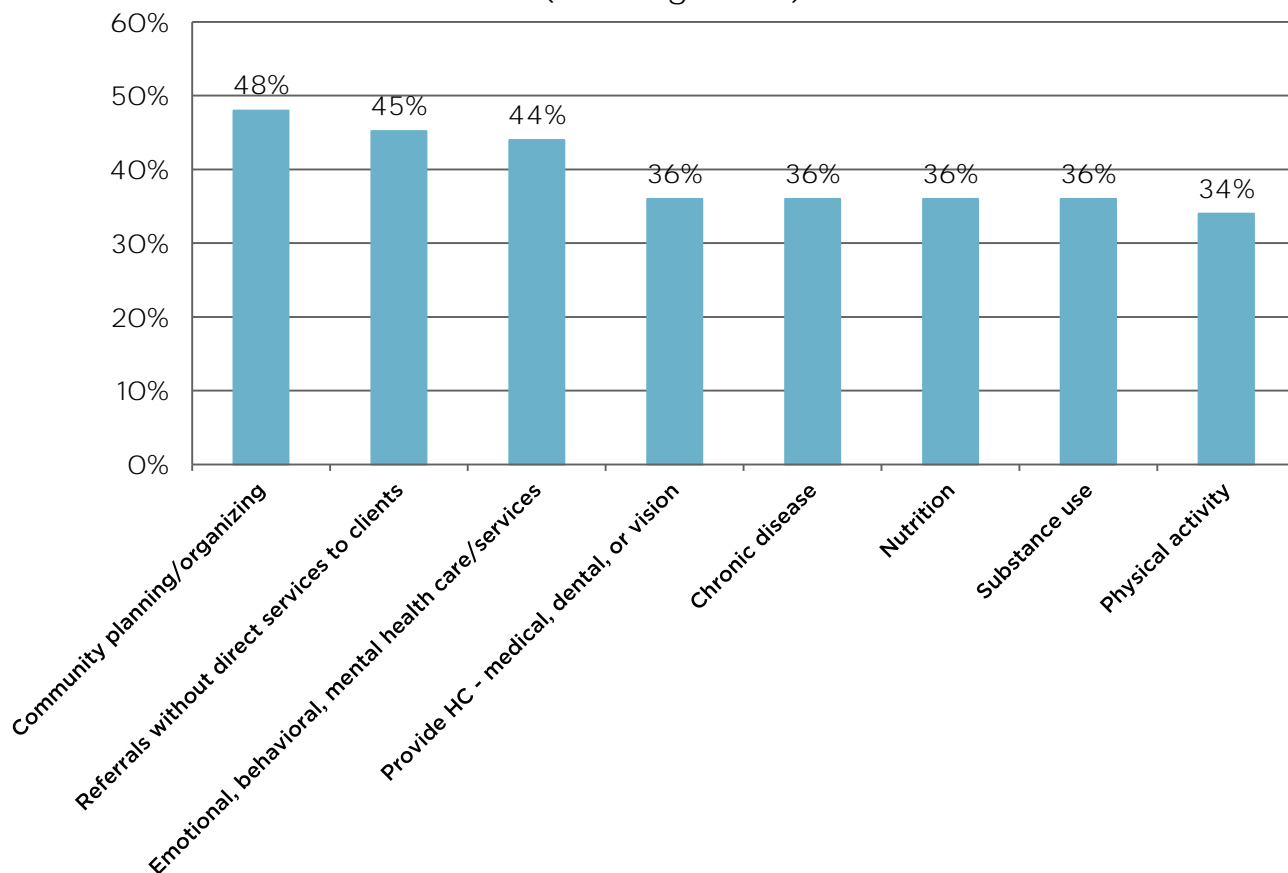


- The majority of agencies were community-based and/or non-profit agencies (61%) and one in five (20%) agencies were a governmental entity.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Question: “Which of the following areas is the organization currently addressing? Select all that apply.”

Fig 195: Top 8 Areas Agencies Currently Addressing (n=50 agencies)



- Nearly half of the agencies are involved in community organizing or community planning (48%), while 45% provide referrals without direct services to clients, the third most frequently identified area being addressed is emotional, behavioral, or mental health care services (44%).
- Approximately 36% of agencies each indicated they currently provide medical, dental or vision healthcare services, chronic diseases, nutrition or substance use. While 34% of agencies indicated they address physical activity.

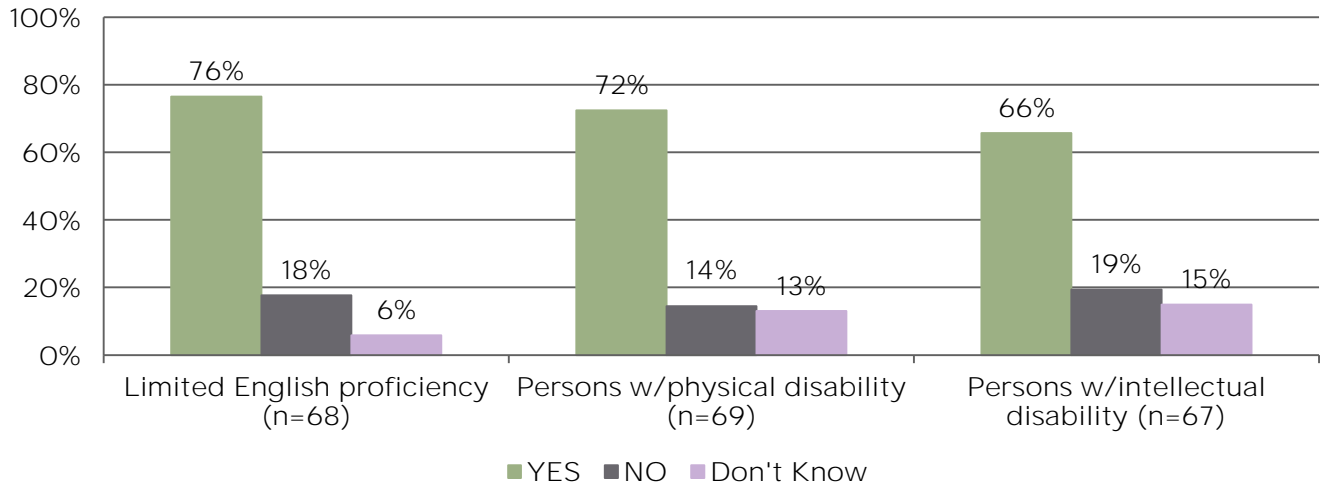
Although not pictured in Figure 195, additional topics being addressed included:

- Food assistance (28%)
- Housing/homelessness (24%)
- Job acquisition/skills training/employment (24%)
- Immunizations (22%)
- Education (20%)
- Sexual health (18%)
- Transportation (18%)
- Public safety (14%)
- Financial aid/stability (12%)
- Public utilities (6%)
- Arts (4%)
- Spiritual counsel/guidance (4%)
- Medical resources (4%)
- Legal aid counsel (2%)
- Community clean up/environmental health (2%)

3.0 COMMUNITY STRENGTHS & CHALLENGES

Question: “Indicate if your organization has existing policies, procedures, or trainings on how to work and communicate with the following groups.” 1) Persons who speak languages other than English, 2) Persons with physical disabilities, and 3) Persons with intellectual or developmental disabilities.

Fig 198: Policies, Procedures, or Trainings to Work & Communicate with the Following Groups



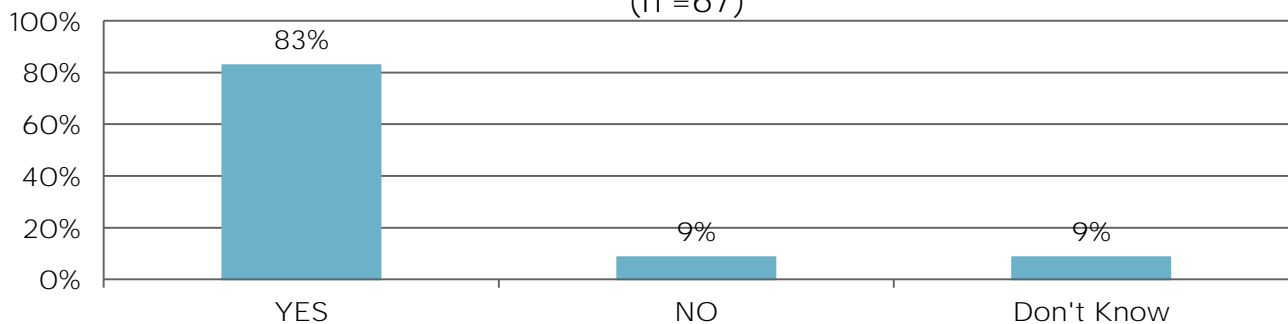
- The majority of people who responded to the agency survey indicated their agency had policies, procedures, or trainings to work and communicate with people who had limited English proficiency (76%), persons with physical disabilities (72%) and persons with intellectual disabilities (66%).

Outreach & Collaboration

The majority (83%) of agency respondents indicated they felt there were opportunities to inform other entities about the organization’s current initiatives and they were able to learn what others were doing as well [Figure 199]. Among the agencies surveyed, 99% indicated they have collaborated on a project, funded, or provided in-kind support to other local organizations in the past 12 months. This demonstrates interconnectedness among organizations across the region, among those agencies with representatives who completed the agency survey.

Question: “Do you feel there are external meetings or events where there is the opportunity to inform others about what the organization is currently working on and learn what others are doing?”

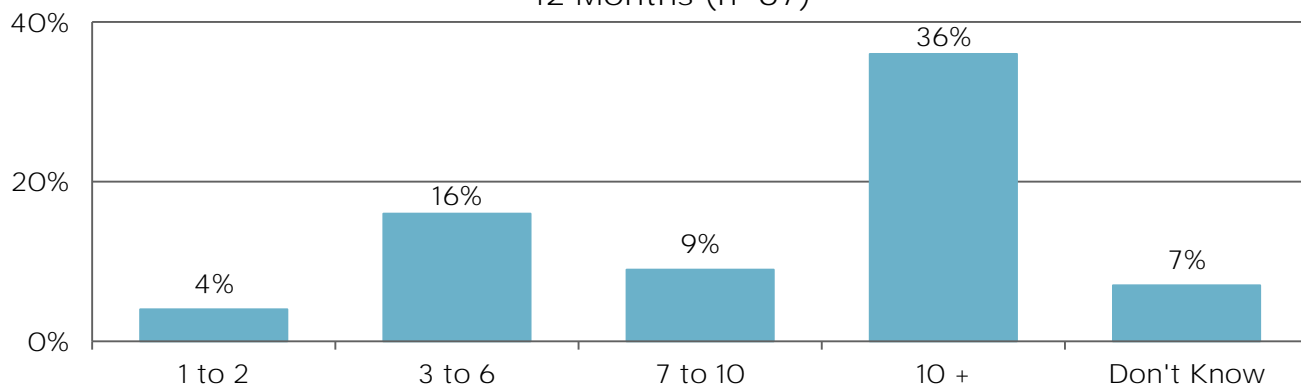
Fig 199: Opportunity to Inform & Learn from Other Agencies (n = 67)



3.0 COMMUNITY STRENGTHS & CHALLENGES

Question: Indicate the number of local organizations your agency has collaborated on a project, funded, or provided in-kind support to other local organizations in the past 12 months.

Fig 200: Number of Local Organizations Collaborated with Past 12 Months (n=67)



- About one in three indicated their agency had partnered with more than 10 (36%) other local organizations.

Community Strengths & Challenges Summary

According to responses to the community survey, it is important to continue to improve outreach and marketing to describe the types of services different organizations provide. A limitation of the data is that over half of the total survey respondents (1,438) skipped the referral questions, however the lack of input may be an indication of need for education on local resources [Table 179].

The question which asked community survey respondents to identify the source of information they rely on the most in the event of an emergency or disaster show that the internet and television continue to be the predominant forms of communication. It is important to design webpages and messaging that is compatible with cells phones, as sometimes websites may look and work well on a computer, but then fail in the mobile environment. Keeping up with evolving technology in the era of social media is and will continue to remain a challenge.

Changing the names of organizations may be necessary or even unavoidable, however great lengths should be undertaken to make those changes known throughout the community. One scenario is demonstrated by the numerous community survey respondents who identified Community Health Alliance (CHA) by the previous name, HAWC. This will likely be a challenge for Domestic Violence Resource Center (formerly CAAW). Recognizing the importance of names and branding, emphasizing any changes and conducting a Google search to identify inaccuracies will help to reduce future client confusion.

3.0 COMMUNITY STRENGTHS & CHALLENGES

Table 179: Summary of Community Online Survey Referral Responses

Health Referral Topic	% total (n=1,438) that provided a referral	Strengths	Challenges	% 211/ Google/ Don't know	% Wrong Referral
Vaccination/ Immunizations	49%	64.7% referrals to agency that administers vaccinations	Agencies identified prioritize low-income populations; assumes people have access to a medical provider	2.8%	2.3%
Sexual health services	46%	88.8% listed sexual health or family planning agencies	One category was more geared towards birth control and sexually transmitted disease (STD) testing, while the other category included more locations that provide prenatal and OB-GYN services in addition to birth control and STD testing	3.5%	None
Health insurance	38%	47.2% recommended a specific type of health insurance provider; 15.2% would refer to Medicaid	42.8% of respondents would refer a friend of family member to a resource to seek further information; Respondents clearly frustrated with the issue	10.2%	None
Domestic abuse	34%	48.4% listed a shelter for victims of domestic abuse	Number one agency listed, CAAW, now known as the Domestic Violence Resource Center-name changes confusing for the general public; high proportion of respondents (26.2%) would call the police or utilize 911	9.9%	9.7%
Mental health	32%	64.3% identified a facility that does offer mental health services	shortage of mental health providers and many facilities have long waiting lists	11.6%	5.8%
Substance use/Addiction	30%	21.8% respondents listed an organization with inpatient options	30.3% listed generic service- Alcoholics or Narcotics Anonymous; shortage of substance use treatment options	32.0%	6.0%

An additional strength of local agencies is that many serve all clients regardless of age, or other categorical demographics, however many organization may benefit from having staff specialized to work with and communicate with different subgroups. The subgroups of concern include adults over 50 years of age, as Baby Boomers continue to age growth is expected at a higher rate than the general population, this is compounded by the increased utilization and complexity of health services as a person ages. Persons who speak languages other than English, most notably Hispanic populations, again a subgroup estimated to experience population growth at a higher rate than the overall population. Although decreasing in recent years, increased awareness and outreach to low-income populations is essential, as they disproportionately experience poor health outcomes.

According to agency survey data, local agency strengths include the ability to refer to other agencies. As 45% of agencies that participated in the agency survey stated they provide referrals, additionally many of the “wrong resource” agencies identified across all referral types through the online community survey were agencies that could refer someone to an appropriate location. It is important for agencies to implement an evaluation process in order to asses if referrals are appropriate or effective. For example, providing contact information for a specific person or connecting a client right there via phone, is often more productive than

3.0 COMMUNITY STRENGTHS & CHALLENGES

handing out a brochure or verbally rattling off alternative agencies when making a referral. Agencies may also consider formalizing a referral relationship through a memorandum of understanding or determining regular intervals to verify the services are available and if the referral relationship is still appropriate.

Another strength of local agencies is interconnectedness. Among the 50 agencies that responded to the agency survey, 99% stated they had collaborated with another local entity within the past 12 months and nearly one in three stated they collaborated with 10 or more other agencies. Expanding into new partnerships is key for stretching resources and can be helpful to ensure duplicative projects are minimized. Additionally the region will benefit from continued collaborative endeavors.

Community Strengths & Challenges Sources

Online Community Survey

Fig 186: Referral for Immunizations (n=702)

Fig 187: Referral for Sexual Health Services-i.e. birth control, STD screening, prenatal care (n=663)

Fig 188: Referral to Obtain Health Insurance (n=551)

Fig 189: Referral for Domestic Abuse (n=484)

Fig 190: Referral for Mental Health Services-i.e. stress reduction, counseling, psychiatrist (n=465)

Fig 191: Referral for Substance Use or Addiction (n=432)

Fig 192: Referral to Obtain Nutrition Counseling (n=400)

Fig 193: Main Source of Information in Emergency Event (n=1,312)

Community Workshop

Table 178: Summary of Community Workshop Results, Health Topic Total Votes*, & Focus Area Votes

Agency Survey

Fig 194: Agency Type (n=50)

Fig 195: Top 8 Areas Agencies Currently Addressing (n=50 agencies)

Fig 196: Age Groups Agency Serves (n=50)

Fig 197: Subgroup Agency Serves (n=50)

Fig 198: Policies, Procedures, or Trainings to Work & Communicate with the Following Groups

Fig 199: Opportunity to Inform & Learn from Other Agencies (n =67)

Fig 200: Number of Local Organizations Collaborated with Past 12 Months (n=67)

Online Community Survey

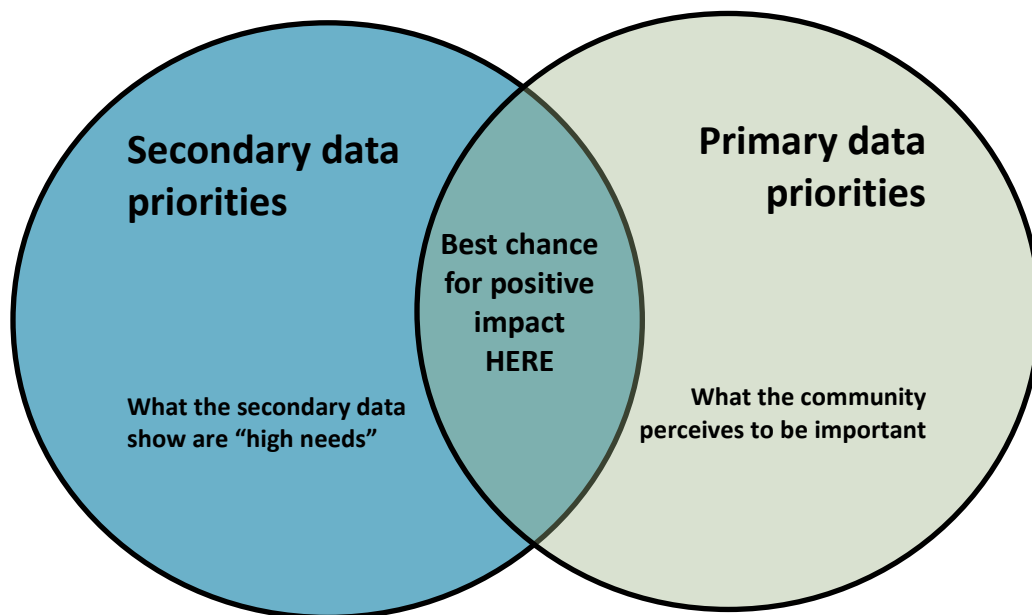
Table 179: Summary of Community Online Survey Referral Responses

Scoring, Ranking & Prioritization

This section describes the methodology for determining health needs in Washoe County. Prioritization of needs provides a means for understanding and organizing the large amount of secondary data (county, state and national level statistics/numbers) and primary data (online community survey) contained within the assessment. Although the health topics rank differently when looking at only primary or only secondary data, the overall rank, which includes both, identifies which areas of need community members may be more inclined to support and ultimately where efforts will have the best capacity to influence.

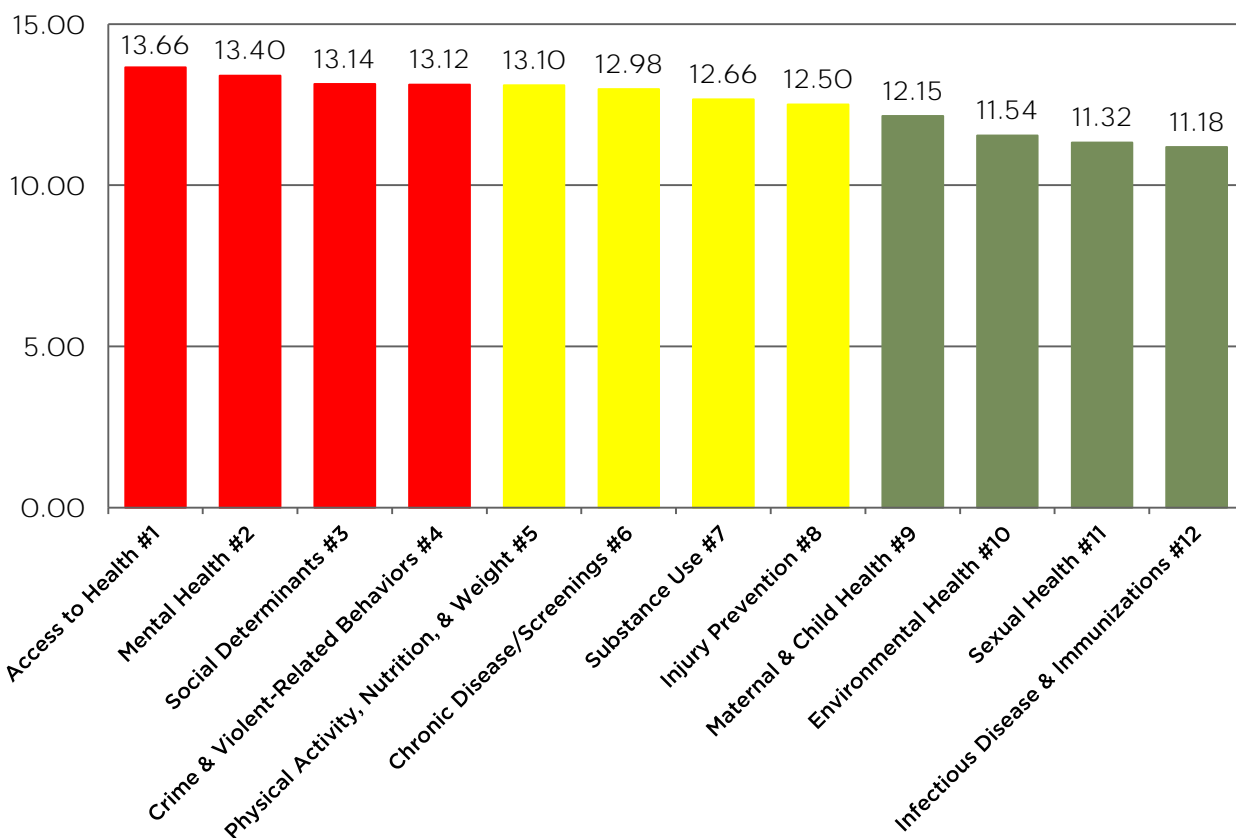
It is important to consider both the secondary data indicators and the primary data input (community's perception of important health topics) for prioritization. Future programs and initiatives based on only the secondary data rankings may not be endorsed by the community and could result in an ineffective expenditure of resources. Alternatively, creating programming based solely on the primary data, would ignore reliable and accurate data provided through the secondary data sources.

Image 9: Identifying Opportunities for Positive Impacts



An objective approach was developed to score, rank, and prioritize the health topics. Five criteria, magnitude, severity, trend, benchmark, and community perception, were utilized to score the health topics. The overall score and rank combines secondary and primary data for 12 major health topics, the results are shown in Figure 201.

Fig 201: Overall Health Topic Score & Rank



Although ranks appear to be straightforward, there are considerations for interpretation. The range of scores is relatively small, with only a 2.48 point spread between the highest and the lowest rank and as little as 0.02 separating multiple categories. Additionally, health behaviors and health outcomes are influenced by dynamic and complex factors not captured within a single health topic. Mental health (#2), for example, coincides with substance use (#7). Substance use serves as a coping mechanism among many people with mental illness, which can in turn exacerbate mental health issues and both factors may be influenced by having access to healthcare (#1). Any approach to address health needs should be aware of and recognize the relationships between human nature, behavioral changes, and the systemic factors that influence health outcomes.

4.0 SCORING, RANKING, & PRIORITIZATION

Methodology for Scoring & Ranking Health Topics

Scores were calculated for each of the 250+ secondary data indicators using the criteria in Table 180.

1. **Magnitude:** The percent, rate, or number of measured population impacted by each indicator.
2. **Severity:** Severity or duration of indicator; acute, short-term or long-term/permanent impact.
3. **Trend:** Improvement, no improvement, or worsening over time.
4. **Benchmark:** Washoe County percentage or rate relative to Nevada, United States, or Healthy People 2020 objective.
5. **Community Perception:** Perceived importance as determined by the score resulting from the online community survey respondents.

Criteria	Score	Definition
Magnitude [weight 1.0]	0	0-.9% of population impacted
	1	.91-3.0% of population impacted
	2	3.1-7.0% of population impacted
	3	7.1% + of population impacted
Severity [weight .75]	0	Not serious/short-term issue (0-2 weeks)
	1	Moderately serious/medium length of impact 2 weeks-1 year
	2	Very serious/1+ years of impact
Trend [weight .75]	0	Improvement over the past 5-10 years
	1	No clear trend up or down
	2	Getting worse over time
Benchmark [weight .5]	0	Better than Nevada or National level by more than 3%
	1	Same as Nevada or National level; within 1-2%
	2	Worse than Nevada or National level by 3-5%
	3	Worse than Nevada or National level by 6% or higher
Community Perception [weight 2.0]		The calculated average score resulting from the health topic prioritization survey question, [multiplied by 2]

Comparing Across All Forums

Comparing rankings across the different sources of primary and secondary data is challenging due to the nature and variety of data collection and input. For example, a few health topics were not included in the overall ranking due to a lack of reliable secondary data. Additionally, some health topics were grouped differently across the variety of input mechanisms depending on the type of audience and form of input. Table 181 summarizes the health topic rankings across the different data sources.

4.0 SCORING, RANKING, & PRIORITIZATION

Table 181: Health Topic Ranking by Mechanism

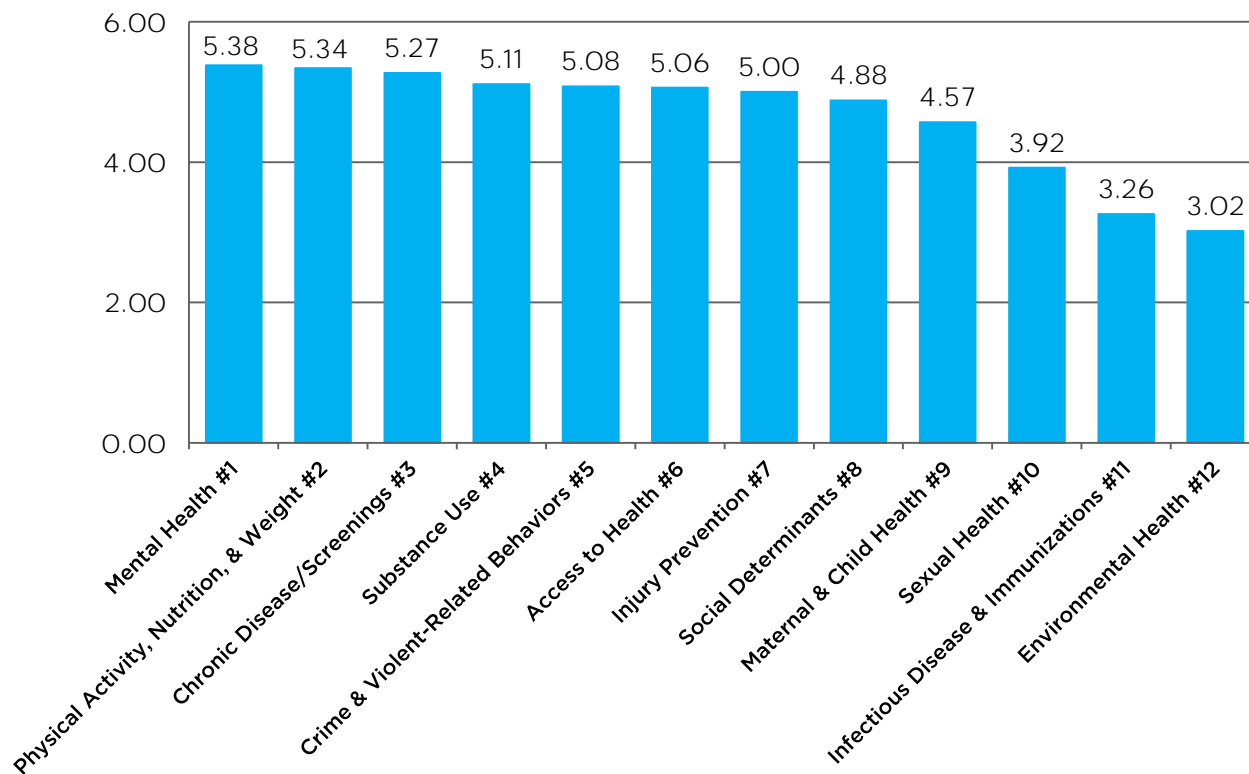
Health Topic	Overall Rank	Secondary Data Rank	Primary Data Rank (Online Community Survey)
Access to Health	1	6	1
Mental Health	2	1	5
Social Determinants	3	8	3
Crime & Violent-Related Behaviors	4	5	4
Physical Activity, Nutrition, & Weight	5	2	6 (Listed as Preventive Health Behaviors)
Chronic Disease/Screenings	6	3	6 (Listed as Preventive Health Behaviors)
Substance Use	7	4	7 (tied)
Injury Prevention	8	7	7 (tied)
Maternal & Child Health	9	9	GE (Grouped with Sexual Health)
Sexual Health	10	10	10
Environmental Health	11	12	2
Infectious Disease & Immunizations	12	11	6
Community Services	NR	NR	9
Built Environment	NR	NR	11

NR=Not ranked due to lack of data ; GE=Grouped elsewhere, not ranked independently

Score & Rank According to Secondary Data Only

The secondary data score and rank [Figure 202] were calculated by the combined scores from Criteria #1 through Criteria #4.

Fig 202: Secondary Data Score & Rank



4.0 SCORING, RANKING, & PRIORITIZATION

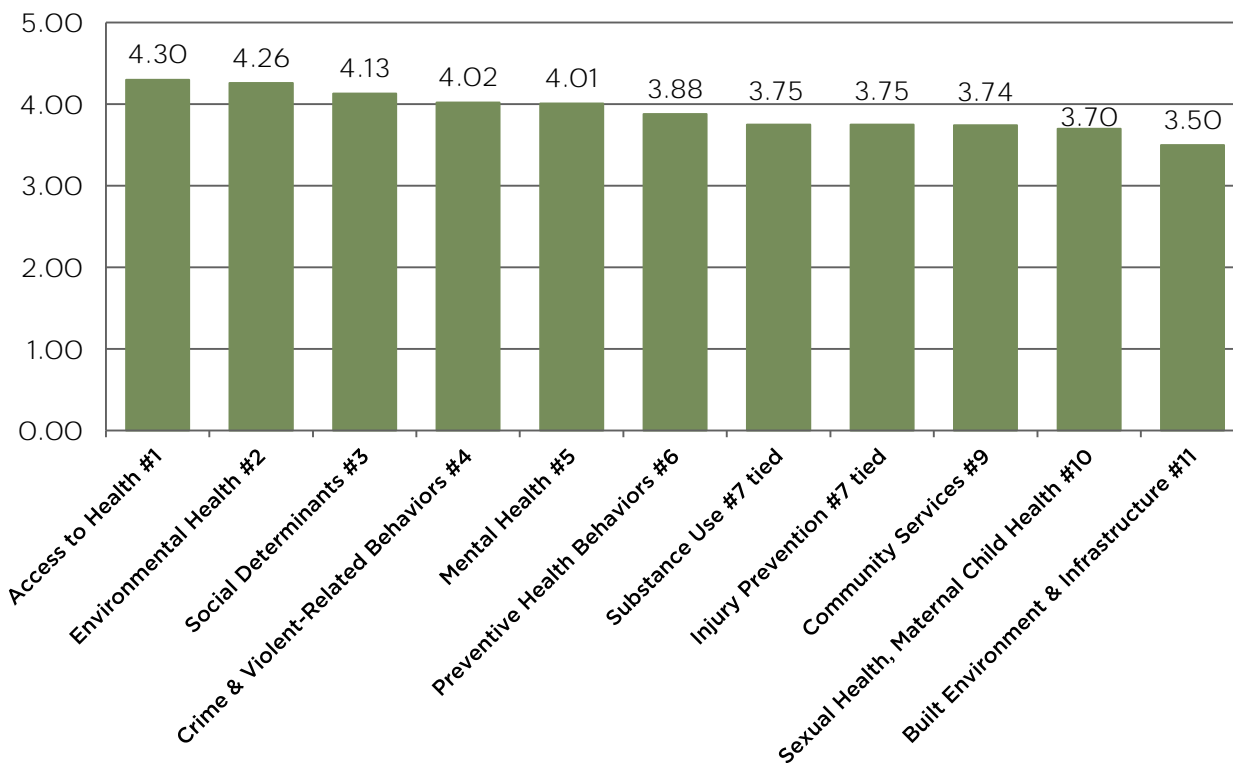
Score & Rank According to Primary Data Only

Criteria #5, the Community Perception Score, was calculated from the online community survey question that asked respondents to rate 11 major health topics on a scale from “1-Not a priority” to “5-Essential”. Three to six examples associated with each of the 11 health topics were provided so survey respondents would have a general concept and shared understanding of the terms “preventive health behaviors” or “access to health services”. For example, Access to Health Services was one of the 11 health topics and examples were “more primary care doctors”, “affordable health insurance”, “more specialty providers”, and “providers who accept your insurance” [Image 9]. It was not feasible to ask survey respondents to indicate a priority level for all examples provided for each health topic.

Image 10: Example of Online Community Survey Scoring of Health Topics-Access to Health Services

Access to Health Services	1-Not a priority	2-Low Priority	3-Medium priority	4-High priority	5-Essential
<i>More primary care doctors</i> <i>Affordable health insurance</i> <i>More specialty providers</i> <i>Providers who accept your insurance</i>					

Fig 203: Online Community Survey Health Topic Score & Rank



Scoring, Ranking, & Prioritization Summary

It is important to note, the prioritization method developed for the 2018-2020 Washoe County Community Health Needs Assessment has limitations. While it provides an objective way to measure needs, the scores and ranks could differ based on any number of changes. These changes include the grouping of health topics, the online community survey development and administration, and the individual indicators (secondary data) that were included in the assessment. The ranking helps to summarize the health topics in an organized manner by simplifying the large amount of data included in the assessment. It is important to recognize the limitations of the methods employed to score and rank this data and most importantly to acknowledge that health behaviors and outcomes are influenced by a dynamic, complex range of factors.

Conclusion

It is challenging to determine when a community has reached the status of “healthy”. A metric to consider might be the Healthy People objectives; however, Washoe County falls short of achieving the majority of those measures. Additionally, there are tools such as Robert Wood Johnson Foundation’s County Health Rankings for in-state comparisons and other websites that compare peer counties across state lines, which allow for quantifiable success relative to the nation. However, the United States remains among one of the least healthy developed countries as measured by life expectancy and premature mortality.³

Focusing on continued outreach, support, and partnership at the individual and agency- levels will enhance opportunities for innovative approaches to improving health outcomes. Achieving a healthy community is not a one-time success, it involves ongoing and cross-sector collaboration, as there will always be areas to improve upon to directly or indirectly affect the health of the community.

Moving forward, the CHNA will serve as guiding document for the goals and objectives of the Community Health Improvement Plan and Renown Health’s Community Benefits plan. These two documents will outline the next steps taken over the coming three years to address the community health needs identified and will rely heavily on a collaborative approach to make a collective, broad impact on the health of our community.

³ United Health Foundation. (2017). America’s Health Rankings Annual Report 2017. Accessed <https://assets.americashealthrankings.org/app/uploads/2017annualreport.pdf>

The following links contain secondary data presented in the assessment. The advantage of the assessment is the secondary data were obtained directly from the source and are the most recent data available. These following websites are more user friendly and allow for an interactive interface. Additionally, many of these also allow for the creation of maps.

Community Resources

<https://www.washeschools.net/Page/6128>
<https://www.truckeemeadowstomorrow.org/>

Mapping Health Indicators

<https://med.unr.edu/statewide/instant-atlas>
<https://www.cdc.gov/500cities/>
<https://www.communitycommons.org/>
<http://www.countyhealthrankings.org/>
<http://www.measureofamerica.org/maps/>
<http://localdata.assetsandopportunity.org/map>

Health Rankings Websites

<https://wwwn.cdc.gov/communityhealth>
<http://www.countyhealthrankings.org/>
<http://www.americashealthrankings.org/>
<http://www.stateoftheusa.org/>
<http://www.healthindicators.gov/>
<http://datacenter.kidscount.org/>

Behavioral Risk Factor Surveillance Survey (BRFSS) data

https://nccd.cdc.gov/s_broker/WEATSQL.exe/weat/index.hsqli
<https://www.cdc.gov/brfss/brfssprevalence/index.html>
<https://chronicdata.cdc.gov/health-area/behavioral-risk-factors>
<https://www.cdc.gov/cdi/>

Health topic specific mapping tools

Vaccinations <https://www.cdc.gov/vaccines/vaxview/>

Opioids

<http://urbanobservatory.maps.arcgis.com/apps/Cascade/index.html?appid=f86499d99e4340b68229eacafb02b29f>

Food Access <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>