



EXTENSION
College of Agriculture,
Biotechnology & Natural Resources



PEER
REVIEWED

Special Publication 22-16

Statewide Needs Assessment for Nevada's Supplemental Nutrition Assistance Program- Education (SNAP-Ed) Final Report (Phase 1)

Prepared by University of Nevada, Reno Extension:

Najat Elgeberi, Ph.D., Evaluation Specialist

Brian Luckey, M.S., SNAP-Ed Evaluation Coordinator

Macy Helm, SNAP-Ed Principal Investigator

The University of Nevada, Reno is committed to providing a place of work and learning free of discrimination on the basis of a person's age, disability, whether actual or perceived by others (including service-connected disabilities), gender (including pregnancy-related conditions), military status or military obligations, sexual orientation, gender identity or expression, genetic information, national origin, race, color, or religion. Where discrimination is found to have occurred, the University will act to stop the discrimination, to prevent its recurrence, to remedy its effects, and to discipline those responsible.

This material was funded, in part, by USDA's Supplemental Nutrition Assistance Program – SNAP, an equal opportunity provider.

Copyright © 2022, University of Nevada, Reno Extension All rights reserved. No part of this publication may be reproduced, modified, published, transmitted, used, displayed, stored in a retrieval system, or transmitted in any form or by any means electronic, mechanical, photocopy, recording or otherwise without the prior written permission of the publisher and authoring agency.

A partnership of Nevada counties; University of Nevada, Reno; and the U.S. Department of Agriculture

Suggested Citation

Elgeberi, N., Luckey, B., & Helm, M.M. (September, 2022). Statewide needs assessment for Nevada's supplemental nutrition assistance program - education (SNAP-Ed). *University of Nevada, Reno Extension*.

Contents

Overview	5
Introduction	5
Purpose and Scope of the Needs Assessment	5
Steering Committee	6
Objectives of Phase I	6
Methodology	7
Key Findings of Phases I	7
Recommendations for Phase II	12
Limitations	14
Objective 1: Socio-Demographic Characteristics of SNAP-eligible Population in Nevada.....	14
1.1. Population in Nevada.....	14
1.2. Demographic Makeup of Nevada Population.....	16
1.3. SNAP-eligible Population in Nevada	18
1.4. Characteristics of SNAP-eligible Population	19
1.5. Characteristics of SNAP-eligible Participants Versus Non-participants	20
1.5.1. Age	20
1.5.2. Children in the household.....	20
1.5.3. Race.....	21
1.5.4. Health insurance	21
1.6. Students Eligible for Free or Reduced Lunch	26
Objective 2: Dietary Intake of the SNAP-eligible Population in Nevada.....	27
2.1. Situation in Nevada.....	27
2.2. High School Students' Nutrition.....	27
2.2.1. Consumption of fruits or 100% fruit juice.....	27
2.2.2. Consumption of vegetables	29
2.2.3. Consumption of milk.....	30
2.2.4. Consumption of soda or pop	31
2.2.5. Consumption of breakfast	33
2.3. Kindergartners and Nutrition.....	34
2.3.1. Consumption of non-diet soda	34
2.3.2. Consumption of diet soda.....	34
2.3.3. Juice consumption	35

2.4. Breastfeeding in Nevada	35
2.4.1. Infancy eating habits from 1 month to 12 months.....	36
Objective 3: The Prevalence of Physical Activity and Sedentary Behavior Among the SNAP-eligible Population in Nevada.....	37
3.1. Physical Activity.....	37
3.1.1. Adults	37
3.1.2 High school students.....	38
3.1.3. Middle school students.....	38
3.1.4. Kindergartners	39
3.2. Sedentary Behavior	39
3.2.1. Middle and high school students.....	39
3.2.2. Kindergartners	39
3.3. Participation in Physical Education High School and Middle School Students	40
3.4. Walking and Biking Scores	41
Objective 4: Obesity Rate Among the SNAP-eligible Population in Nevada.....	44
Objective 5: Prevalence of Diabetes Among the SNAP-eligible Population in Nevada	49
Objective 6: Prevalence of Food Insecurity Among the SNAP-eligible Population in Nevada	53
Objective 7: Prevalence of Food Waste Among the SNAP-eligible Population in Nevada	56
Objective 8: Existing Programs and Services for the SNAP-eligible Population in Nevada	58
8.1. SNAP-Ed Interventions.....	58
8.2. Exercise Opportunities.....	58
8.3. Farmers Markets	59
8.4. Food Banks.....	60
8.5. Senior Services	61
8.6. School-Age Services	62
8.7. Early Childhood Services	62
Objective 9: Policies That Affect Health Behaviors or Status of the SNAP-eligible Population in Nevada	63
Objective 10: Barriers to Access Healthy Foods and Physical Activity Among the SNAP-eligible Population in Nevada	65
References	67
Appendix A.....	71
Appendix B.....	72
Appendix C.....	76
Appendix D.....	81

Appendix E 82
Appendix F 83
Appendix G..... 84

Overview

Introduction

The Supplemental Nutrition Assistance Program (SNAP) is the most significant nationwide program that contributed over the past 50 years to alleviating and reducing food insecurity and hunger in the United States (Nestle, 2019; National Research Council, 2013). The Supplemental Nutrition Assistance Program – Education (SNAP-Ed) is a federally funded grant program that supports evidence-based nutrition education and obesity prevention interventions and projects for persons eligible for SNAP benefits. SNAP-Ed promotes healthy eating and physical activity participation among SNAP-eligible individuals. Main interventions included in SNAP-Ed work plans are direct education, multilevel interventions, and community and public health approaches to improve the access to and appeal of healthy eating and physical activity. As part of their effort to improve their services to the SNAP-Ed population, Nevada Department of Health and Human Services Division of Welfare and Supportive Services (NDHHS-DWSS) requested a state-wide needs assessment of SNAP-eligible Nevadans be conducted. All interventions carried out under SNAP-Ed work plans, both locally and on a state level, have been informed by the results of previous needs assessments. This process is carried out periodically to ensure that all implementing agencies meet the unique needs of local communities, in addition to addressing statewide priorities informed by Nevada’s Nutrition Assistance Consortium and articulated by the NDHHS-DWSS. Nevada is one of the states that keeps changing in population characteristics and count over the years. This change comes from the unique transient status of the state that keeps attracting individuals from different backgrounds and economic statuses. To keep up with this change, it is necessary to keep track of the changing population's needs to meet them consistently. For this purpose, the NDHHS-DWSS commissioned University of Nevada, Reno Extension to carry out the first phase of a statewide needs assessment that included secondary data collection for existing SNAP-eligible population data. This report represents the results of the first phase of the needs assessment that started in December 2021 and ended in February 2022.

Purpose and Scope of the Needs Assessment

This needs assessment describes the most pressing nutrition and physical activity needs of the SNAP-eligible population in Nevada and studies their characteristics and other

environmental factors that shape their nutrition and physical activity behaviors. This examination seeks to identify the opportunities for policy, systems and environmental (PSE) intervention/approaches. It is assumed that the assessment findings will be used to strengthen Nevada's SNAP-Ed state plan by modifying programs and approaches or developing new programs as/if indicated by key findings.

Steering Committee

A steering committee of subject-matter experts was formed to support the quality and integrity of the assessment process. The main support that the committee provided in the first phase was forming the primary objectives of the needs assessment, providing the knowledge on where to find relevant secondary data, and validating the accuracy of the data collected. The committee members were very familiar with the SNAP-Ed target audiences and had the experience and/or education to provide subject-matter expertise related to nutrition and physical activity behaviors. The individuals were also willing to dedicate the necessary time to provide input at different points during the needs assessment process. The steering committee members, all from University of Nevada, Reno Extension, included:

Anne Lindsay, Ph.D., professor

Aurora Calvillo Buffington, Ph.D., assistant professor

Macy Helm, B.A., B.S., SNAP-Ed principal investigator

Najat Elgeberi, Ph.D., evaluation specialist

Objectives of Phase I

The main objectives¹ identified for this needs assessment were Objective 1. Characterizes the socio-demographic characteristics of the SNAP-eligible population in Nevada, Nevada's SNAP participants, and those residing in low-income communities; herein referred to as SNAP-Ed target audiences. Objective 2. Describes the dietary intake of the SNAP-eligible population in Nevada, including the consumption of fruits, vegetables and breakfast, and sweetened and unsweetened beverages (juice, milk and soda). Objective 3. Describes the prevalence of physical activity and sedentary behavior among the SNAP-eligible population in Nevada. Objective 4. Describes the obesity rate among the SNAP-eligible population in Nevada across the different

¹ Objectives were identified by Anne Lindsay, Aurora Buffington, Shannon Horrillo and Jeantyl Norze

age categories and the relationship between income and obesity. [Objective 5](#). Describes the prevalence of diabetes among the SNAP-eligible population in Nevada. [Objective 6](#). Describes the prevalence of food insecurity among the SNAP-eligible population in Nevada. [Objective 7](#). Describes the prevalence of food waste among the SNAP-eligible population in Nevada. [Objective 8](#). Provides an overview of the existing programs and services for the SNAP-eligible population in Nevada. [Objective 9](#). Presents the existing policies that affect health behaviors or status of the SNAP-eligible population in Nevada. [Objective 10](#). Describes the barriers to access healthy foods and physical activity among the SNAP-eligible population in Nevada.

Methodology

Existing secondary data from different resources were gathered, summarized and interpreted to address these objectives. Both quantitative and qualitative data were used to address the different objectives. In addition, an [interactive dashboard](#) was developed to assist in the geographic identification of SNAP-Ed target audiences and illustrate the selected indicators used to describe the key findings below.

Key Findings of Phase I

- Nevada’s population has been in constant growth over the past decade. Despite this growth, some counties have declined in their population from 2020 to 2021, including White Pine, Pershing, Eureka, Lincoln, Mineral and Carson City. Rural counties of Nevada are less racially and ethnically diverse than urban areas. They have less income inequality than all three urban areas of Nevada (Carson City, Clark and Washoe counties) except for Mineral County. Poverty rates are high in urban areas, and the percentage of the urban population in poverty represents 91% of the entire population in poverty in Nevada. Among different age groups, poverty rates were highest among children ages 0 to 17 years old (33%). Despite a decline in the poverty rate from 2009 to 2019 in rural areas, the poverty rates still remain high in both rural and urban counties.
- In Nevada, SNAP-eligible populations are individuals at or below 200% of the federal poverty level. As of September 2021, the number of SNAP participants was 441,968 across Nevada. In 2019, 29% (N=275,400) of the eligible individuals to receive SNAP benefits did not enroll in the program. There were 949,489 people eligible for SNAP in Nevada in 2019. Of those, 91.6% live in urban Nevada, while the rest live in sparsely populated areas across the state, far from goods, resources and services (Centers for Disease Control and Prevention, 2021a).

- Over 275,400 individuals eligible for SNAP benefits did not participate in SNAP, and 34% of those were adults 18 years and older. The percentage of youth under 18 who did not participate in the program was relatively small and mainly located in Mineral, Humboldt and Nye counties (23.9%, 25% and 20.3%, respectively). Around 75% of the SNAP-eligible population who did not participate in the program did not have children. Eligible non-Hispanic White individuals had the highest rates of non participation, mainly located in White Pine (93%), Pershing (92.8%) and Carson City (80.6%). They are followed by eligible Hispanic individuals in Humboldt (38%), Clark (33.9%) and Washoe (31.9%) counties. Around 18% of the SNAP-eligible population who did not participate were uninsured, mainly concentrated in Elko, Washoe and Clark counties (Centers for Disease Control and Prevention, 2021a).
- Regarding the dietary intake of the SNAP-eligible population, in 2019, only 5.4% of adults reported consuming two or more fruits and three or more vegetables daily. Income affects fruit and vegetable consumption significantly in Nevada. For high schoolers, in 2019, around 8.1% of students reported consuming no fruits or 100% fruit juice, and 12.7% reported not consuming any vegetables. The highest percentages of non consumption of vegetables was in Washoe, Elko, White Pine and Eureka. Opposite to the pattern for fruit consumption, vegetable non consumption among high schoolers is more frequent among ninth graders (Centers for Disease Control and Prevention, 2021a).
- Milk non consumption was higher among Black high school students, followed by Asian students (44% and 37%, respectively), while the highest milk consumption was among the Native Hawaiian/Pacific Islanders students (33%). Urban counties also had the highest percentage of milk non consumption during a week among high schoolers (Centers for Disease Control and Prevention, 2021a).
- Around half of Asian high schoolers reported non consumption of soda, opposite American Indian/Alaskan Native high schoolers, who reported the highest soda consumption. Urban regions (except for Carson City) had the lowest consumption of soda products among high schoolers. American Indian/Alaskan Native and Native Hawaiian/Pacific Islander high schoolers reported the highest percentages of not consuming breakfast during one week. Rural regions had the highest percentage of breakfast non consumption compared to urban regions for high school students (Centers for Disease Control and Prevention, 2021a).

- Despite the decrease in non diet soda consumption among kindergartners from the academic year 2019-2020 to 2020-2021, almost one-quarter of the kindergartners still consumed non diet soda a few times a day. On the other hand, the juice consumption increased dramatically during the same period in all counties for kindergartners (Centers for Disease Control and Prevention, 2021a).
- Breastfeeding rates are an indicator of healthy nutrition. The rate for Nevada infants who were exclusively breastfed through 6 months (as recommended by the CDC) was only 2.2% higher than the national average (Centers for Disease Control and Prevention, 2021b).
- In 2020, 25.4% of Nevada adults reported doing no physical activity or exercise other than their regular job for one month. Among those, 33% were Hispanic adults. Females were more inactive than males. Statistics also showed that lower income levels tracked with higher rates of inactivity. At middle and high school levels, male students practice sports more than female students, and White students were the most active, followed by the American Indian/Alaska Native students. Asian students had the lowest percentage of physical activity participation. For kindergartners, only 63.1% played for 60 minutes on five to seven days a week in 2020-2021.
- Almost 60% of high schoolers and middle schoolers in Nevada were engaged in sedentary behavior in 2019. On a school day, more than 50% of kindergartners spent an average of three to five hours watching TV during the academic year 2020-2021.
- More than half of middle and high school students in Nevada attend physical education classes at least once a week.
- In 2017, Nevada adopted a Complete Streets Policy, designed to consider all new roadways for safe, multipurpose use to encourage safe physical activity. Despite that, only one Nevada community – Fallon – had a Walk Score in the “very walkable” range.
- The percentage of Nevada adults ages 18-65 with obesity in 2020 exceeded 28.7%, while Nevadans aged 45-65 had the highest rates of obesity (36.3%). High body mass indexes (BMI) are more prevalent among Black and Hispanic Nevadans. Males are more affected by obesity than females (30.4% versus 27%). On a county level, in 2021, obesity was the least prevalent in Esmeralda, Humboldt, Washoe and the most prevalent in Pershing, Mineral and Nye. Despite the decrease in obesity among high schoolers by 12%, rates of overweight students in this same population increased by 17% in 2019 compared to 2017. Finally, kindergartners who reside in rural counties are more likely to be obese and overweight than their peers in urban counties such

as Washoe and Clark (Censin et al., 2019; Hall et al., 2004; Finkelstein et al., 2009; Flores-Dorantes et al., 2020; Rosenthal et al., 2017; SCO, 2022).

- In 2021, Nevada residents diagnosed with diabetes represented 11.1% of the total population. Of those, 17.5 % had a household income of less than \$25,000 per year. Race and ethnicity are additional factors associated with diabetes in the U.S. Diabetes is more prevalent among Black individuals (14.1%), followed by White individuals (11.5%), then Hispanic individuals (9.9%). In 2020, the percentage of men diagnosed with diabetes in Nevada was higher than women (12.4% and 9.7%, respectively). Rates are highest among Nevadans aged 65 years and above. Lifestyle behavior changes can contribute to the management and prevention of diabetes, including physical activity, dietary changes, and medication adherence and compliance (American Diabetes Association, 2022; United Health Foundation, 2022).
- Nevada is one of the most food-insecure states nationwide, especially after the COVID-19 pandemic. Around 12.8% of households are food insecure, ranking Nevada 39th least secure in the nation. Although the numbers show an increase in low food security in every county in Nevada, the urban areas were more impacted than the rural communities, both among adults and children. The number of children in very low food secure households in Clark County was the fourth-highest among U.S. counties in 2020 (N = 51,010) and the fifth-highest in 2021 (N = 44,460). The rural counties with the three highest food insecurity rates are Nye, Mineral and Esmeralda. (Coleman-Jensen et al., 2014; Hake et al., 2021).
- From 2015 to 2018, between 95,254 and 516,971 tons of food were wasted in Nevada. Food waste was highest among the food wholesale and retail industry and lowest among health care facilities. Local food banks and pantries work with local stores and restaurants to redistribute unused food to people and households experiencing food insecurity. Although no available data link the SNAP-eligible population to food waste in Nevada, the research has proven that people with low income and low nutrition literacy tend to consume less healthy food options because they are afraid to waste healthy foods that are relatively expensive (Connell et al.,2019). Since wasted food equates to wasted money, wasted food among low-income households is more sensed than waste in higher-income homes (Connell et al.,2019).
- Several programs and services for the SNAP-eligible population across Nevada include 1) SNAP-Ed interventions offered to audiences across the lifespan; 2) the Expanded Food and Nutrition Education Program (EFNEP) offered to low-income families and fifth and sixth

graders in Clark County; 3) 37 markets available, with 16 of them listed as accepting SNAP benefits (at the time of publication), however, Esmeralda, Pershing and Storey counties do not currently have operational markets; 4) two food banks in Nevada serving over 250 food pantry locations that provide prepared and packaged food to eligible individuals through partnering with local agencies; 5) the State of Nevada Aging and Disability Services' network of resource centers that provide services to older adults in all Nevada counties to provide resource and service navigation, caregiver support and veteran services; 6) local senior centers providing various services for people 60 and older, including meal services and deliveries, transportation, physical and social activities, and assistance in accessing resources when needed; 7) the Nevada Afterschool Network website that provides a site map of after-school participating programs throughout the state, with most in Clark and Washoe counties, but additional programs located along Interstate Highway 80 in northern Nevada; 8) Women, Infant, and Children (WIC) benefits available to lower-income expectant mothers or those caring for children under 5 years old (Buffington et al., 2020).

- As of 2020, Nevada's standards for child care regulations at schools were limited. These regulations include overall consumption of fruits and vegetables, availability of sugar-sweetened beverages, access to physical activity for preschoolers, and access to screen time. The only other available policies for physical activity and nutrition are those related to streets and the existence of a state-level Food Policy Council. Regarding Nevada legislation related to healthy behavior, several legislations were enacted from 2003 to 2017. Despite this, the actual implementation of health policies is still inactive. A strong emphasis should be drawn on supporting community sites to actively implement these policies (Center for Disease Control Nutrition, Physical Activity, and Obesity – Legislation, 2018).
- Several reasons prevent the SNAP-eligible population in Nevada from accessing healthy foods and physical activity, including 1) the remoteness of some counties (Esmeralda, Mineral and Nye counties) combined with their very low population densities result in the lack of enrollment in the SNAP Program and nutrition education services; 2) the remoteness makes it challenging to collect accurate data about the real situation to do sound planning about health and nutrition interventions; 3) the impact of the COVID-19 global pandemic intensified food insecurity and increased demand for food distribution, and reduced significantly the direct education efforts of many SNAP-Ed implementing agencies; 4) school closures limited access to healthy school

meals, indoor exercise facilities and opportunities in school gardens; 5) limited internet service is available in frontier counties, impacting online nutrition education; 6) the walkability scores² in most rural counties are low; and 7) the stigma associated with participation in the SNAP Program (Buffington et al., 2020; Cook & Wolf, 2021; Camhi et al., 2019; Centers for Disease Control and Prevention, 2018) .

Recommendations for Phase II

The second phase of the needs assessment includes primary data collection from SNAP-Ed beneficiaries and SNAP-Ed community partners. The following points need to be considered when planning for the next phase of field data collection. Investigating the following points through qualitative assessment will help the SNAP-Ed state and implementing agencies determine programmatic priorities related to curriculum development and/or selection; policy, systems and environmental approaches; and implementation sites.

- Engage with SNAP-eligible Nevadans who live with a disability to determine what tailored SNAP-Ed programming would best reach this population.
- Engage with SNAP-eligible Nevadans who speak English as a second language to determine what tailored SNAP-Ed programming would best reach this population.
- Investigate the impact of population decline in White Pine, Pershing, Eureka, Lincoln, Mineral and Carson City on access to nutrition education and physical activity services, and how the sparsity of those counties affects the delivery of services.
- Investigate if children's nutritional needs are met at schools and households, and what types of information parents or caretakers need to maintain their children's health, even when experiencing poverty, since poverty rates were highest among children ages 0 to 17 years.
- Investigate the nutrition, and physical activity-related needs of the different racial and ethnic communities, especially in the counties that have more diverse populations, such as Clark, Washoe and Carson City. Classifying needs based on primary language and age groups is also important to determine the best programming to offer to each population.
- Investigate the reasons behind the lack of consumption of fruits and vegetables and if this behavior is related to financial restrictions, literacy levels or reduced access from transportation barriers.

² A walk score is a number between 0 and 100 that shows just how walkable that apartment, home or neighborhood is in relation to area amenities.

- Investigate the different nutrition education interventions that happen in the different grade levels to understand what is missing from school curricula and what needs to be promoted through SNAP-Ed.
- Investigate the cultural and behavioral factors that affect high school, middle school and kindergarten students' behavior towards consuming certain food products and ignoring others (e.g., milk, breakfast, soda, fruits, juice and vegetables).
- Investigate the school barriers to promoting physical activity and the policies implemented or ignored by schools that might impact physical activity opportunities. Also, understand the factors that may contribute to more males engaging in sports than females, and the factors that may contribute to varying levels of physical activity participation among individuals with diverse racial and ethnic backgrounds.
- Investigate reasons for sedentary behavior among children aged 0 to 18, the policies or practices that contribute to these behaviors, and the opportunities to increase physical activity participation.
- Since many schools provide physical education classes, it is important to know why some students are not engaged in those classes and what can improve engagement and appeal of physical activity.
- Investigate the prevalence of obesity among the SNAP-Ed population and what policy, systems and environmental approaches can contribute to targeting obesity prevention.
- Investigate the prevalence of diabetes among the SNAP-Ed population and how SNAP-Ed-funded obesity prevention initiatives can contribute to diabetes prevention, education, promotion and support.
- Investigate food insecurity in the three highest food-insecure counties, Nye, Mineral and Esmeralda in addition to Clark County, and determine what resources may be needed to address these high rates.
- Investigate food waste among the SNAP-Ed population and identify interventions that may reduce the frequency of waste (e.g., food preservation education, food preparation).
- Identify the services available to the SNAP-Ed population that may be hard to identify and design campaigns that may improve visibility to the SNAP-eligible population.
- Investigate barriers that might prevent the SNAP-Ed population from participating in the SNAP-Ed Program and how multi level interventions can address these barriers.

Limitations

Some of the limitations encountered during the development of this report include:

1. Limited data available for the SNAP-Ed population, especially the data related to dietary intake of adults, physical activity participation, diabetes prevalence, obesity prevalence, food waste and food insecurity
2. Limited data available for those living with a disability or those who speak English as a second language
3. Limited county-level data
4. Small sample sizes in some counties that resulted in combining data for more than one county under regions to avoid the disclosure of identity, especially for school-level dietary and beverage intake data

Objective 1: Socio-Demographic Characteristics of SNAP-eligible Population in Nevada

1.1. Population in Nevada

According to the U.S. Census Bureau, Nevada’s statewide population estimate for 2021 approaches 2.2 million (2021a). Population density per square mile is 28.3, making Nevada 42nd most densely populated among the 50 states. Nevada was the second-fastest-growing state in the U.S. in 2019 (U.S. Census Bureau, 2021b) and is composed of 17 counties – 14 of them rural or frontier, while the rest urban. The rural counties make up 86.9% of the land mass of Nevada but are home to only 9.1% of the state population. Table 1-1 shows the fast growth in Nevada’s population in the past 10 years, especially in urban areas (i.e., Carson City, Clark County, Washoe County). The growth in the state is driven mostly by people moving here from other countries and other states due to the favorable financial conditions (e.g., low tax burden). The counties with the highest population in 2021 were Clark, followed by Washoe (Figure 1-1).

Table 1-1: Population in Nevada by County – 2021

County	Population 2010	Population 2020	Population 2021	Population change 2010-2021	Population per square mile 2021
Carson City	55,274	58,639	54,941	-333	396.8
Churchill	24,877	25,516	26,780	1,903	5.3
Clark	1,951,269	2,265,461	2,358,347	407,078	295.9
Douglas	46,997	49,488	50,169	3,172	70.3
Elko	18,297	20,564	53,589	35,292	3.2

Esmeralda	783	729	955	172	0.3
Eureka	1,987	1,855	1,763	-224	0.5
Humboldt	16,528	17,285	16,519	-9	1.8
Lander	5,775	5,734	5,957	182	1.1
Lincoln	5,345	4,499	4,530	-815	0.5
Lyon	51,980	59,235	56,582	4,602	29.6
Mineral	4,772	4,554	4,508	-264	1.2
Nye	43,946	51,591	47,028	3,082	2.7
Pershing	6,753	6,650	4,723	-2,030	0.9
Storey	4,010	4,104	4,578	568	17.4
Washoe	421,407	486,492	472,810	51,403	76.8
White Pine	10,030	9,080	9,547	-483	1.1
Nevada total	2,700,551	3,104,614	3,173,326	472,775	28.9

(Table 1.2, Griswold et al., 2021)

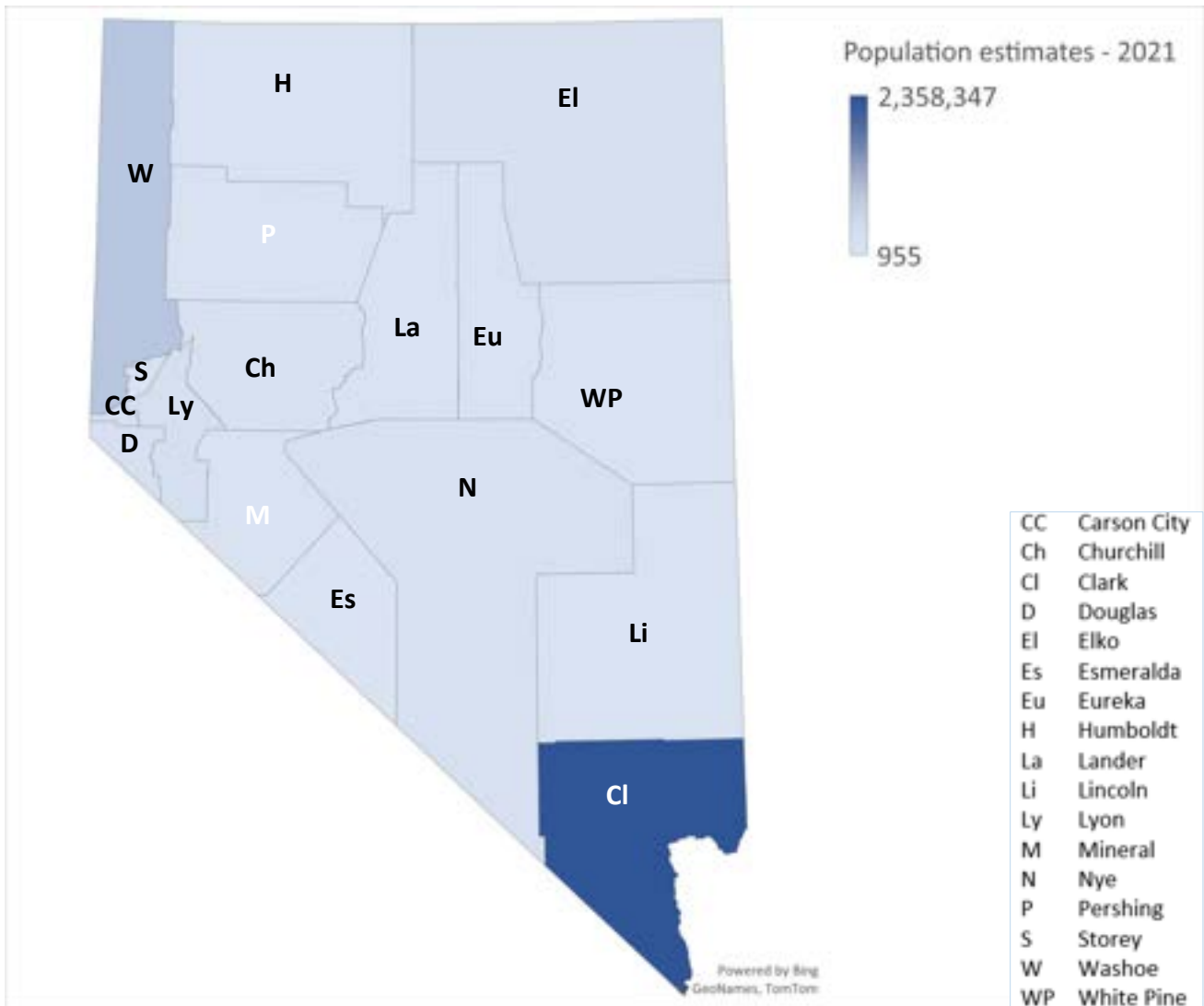


Figure 1-1: Nevada Population Estimates – 2021

1.2. Demographic Makeup of Nevada Population

Urban Nevada is more racially and ethnically diverse than rural Nevada. Table 1-2 shows the percentage of the Nevada population by race and ethnicity. Racial and ethnic populations differ greatly between rural and urban Nevada. Rural Nevada had higher percentages of Native American (4%) and White (75.5%) populations. Urban Nevada had higher percentages of Black (9.7%), Asian Pacific Islander (10.9%) and Hispanic origin (32.1%) populations.

Table 1-2: Percent of Population by Selected Racial and Ethnic Categories in Nevada by Region – 2021

Region	Percent of population				
	White	Black	Native American	Asian/Pacific Islander	Hispanic origin
Rural	75.5%	1.1%	4.0%	2.1%	17.3%
Urban	46.5%	9.7%	0.8%	10.9%	32.1%
Nevada total	49.1%	8.9%	1.1%	10.1%	30.7%

(Table 1.10, Griswold et al., 2021)

Urban and rural Nevada also differ in income inequality and poverty. Figure 1-2 shows that all three urban areas of Nevada (Carson City, Clark and Washoe counties) are in the highest category of income inequality. Of the rural counties in Nevada, only Mineral County is in the highest category. According to Table 1-3, 384,900 people were in poverty in 2019 in Nevada. The percentage of the population in poverty that lives in urban areas represents 91.7% of the overall population that lives in poverty in Nevada. According to Table 1-3, there was an increase in poverty rates for rural and urban areas from 2009 to 2019 (0.1%, and 1.6%, respectively). The rise in poverty rates implies more challenges in food security that affect health and economic stability.

Table 1-3: Population in Poverty in Nevada by Region – 2019

Region	Population in poverty					
	2009		2019		Change 2009-2019	
	Number	Percent	Number	Percent	Number	Percent
Rural	28,646	10.8%	32,077	10.9%	3,431	0.1%
Urban	295,092	11.3%	352,823	12.9%	57,731	1.6%
Nevada total	323,738	12.4%	384,900	12.7%	61,162	0.3%

(Table 2.6, Griswold et al., 2021)

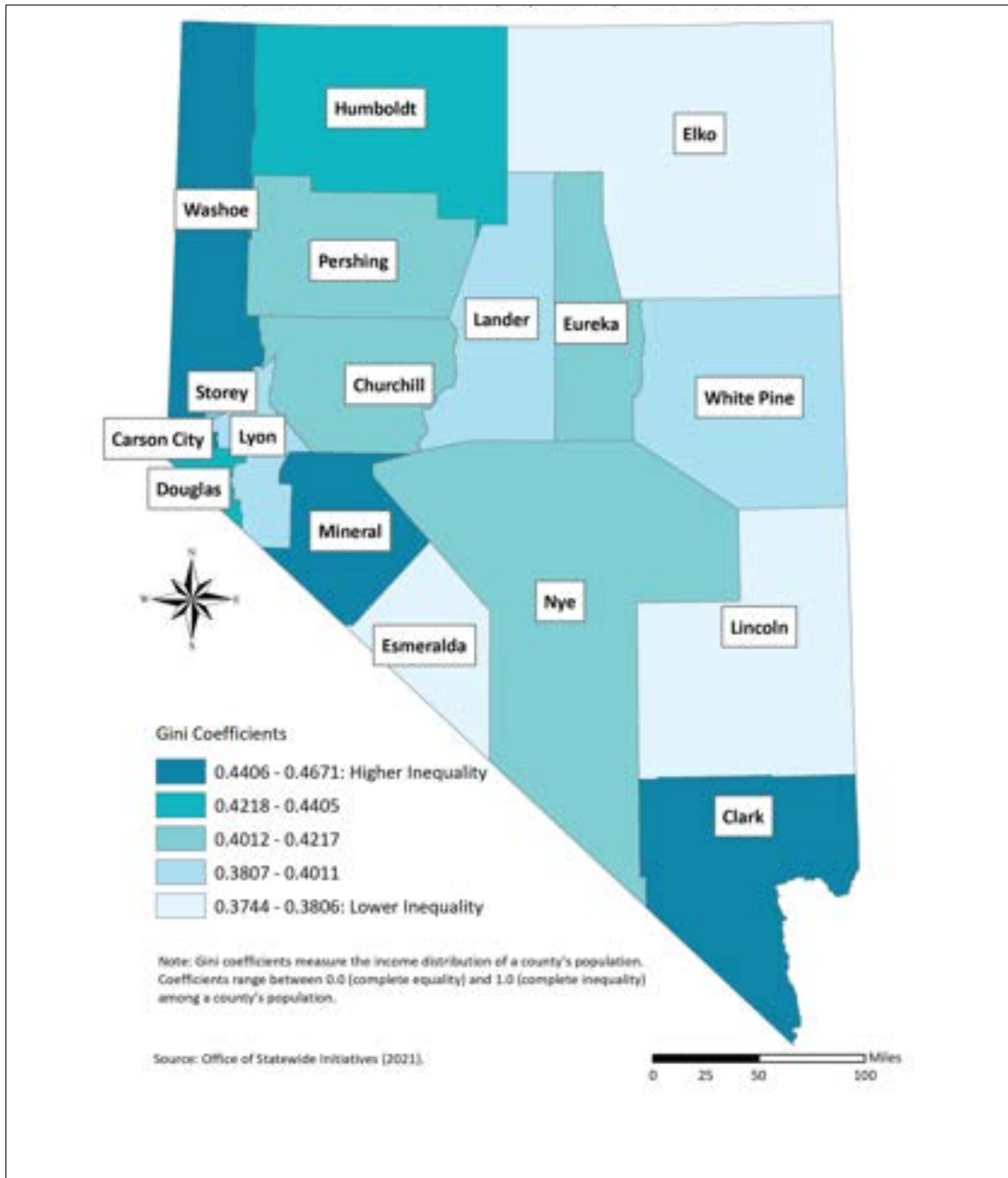


Figure 1-2: Income Inequality by County in Nevada – 2018 (Map 2.1, Griswold et al., 2021)

Children aged 17 years and younger in poverty represent almost one-third (31.1%) of the overall poverty population in Nevada and 23.3% in the general population (Table 1-4, Griswold et al., 2021). Almost 120,000 children in Nevada were in poverty in 2019; 91.8% were in urban Nevada. Child poverty is a concern in both rural and urban Nevada. On average, children raised in poverty have worse adult health outcomes, lower earnings and higher incarceration rates (Gupta et al., 2007; Oshio et al., 2010).

Table 1-4: Children Aged 17 and Younger in Poverty – 2009-2019

Region	Children age 17 and younger in poverty					
	2009		2019		Change 2009-2019	
	Number	Percent	Number	Percent	Number	Percent
Rural	10,165	15.9%	9,820	16.8%	-345	0.9%
Urban	107,577	17.8%	109,754	17.7%	2,177	-0.1%
Nevada total	117,742	17.6%	119,574	17.6%	1,832	0%

(Table 2.7, Griswold et al., 2021)

1.3. SNAP-eligible Population in Nevada

SNAP-eligible populations are individuals at or below 200% of the Federal Poverty Level (FPL) in Nevada. As of September 2021, the number of SNAP participants was 441,968 across the state. In 2019, one-third (N=4905) of the individuals to receive SNAP benefits did not enroll in the program (U.S. Census Bureau, 2019).

There were 949,489 people eligible for SNAP in Nevada in 2019, about 29% of the total state population (Table 1-5). Almost 867,500 SNAP-eligible people live in urban Nevada, nearly 92% of the states total SNAP-eligible population. Even though a smaller percentage and number of the SNAP-eligible population live in rural Nevada (8.5% or N=82,052), many live in very sparsely populated areas in Nevada, far from goods and services.

Table 1-5: SNAP Eligibility by County 2019

County	Number of populations at or below 200% federal poverty level	Percent of the population at or below 200% federal poverty level
Carson City	18,178	23.7%
Clark	717,042	33.3%
Churchill	7,866	30.3%
Douglas	10,078	20.0%
Elko	12,121	30.1%
Esmeralda	411	39.4%
Eureka	322	16.7%
Humboldt	5,007	27.9%
Lander	1,620	26.7%
Lincoln	1,106	20.2%
Lyon	17635	30.4%
Mineral	1971	34.1%
Nye	17,232	34.2%
Pershing	1,395	30.2%
Storey	188	22.0%
Washoe	132,217	26.7%
White Pine	2,550	26.1%
Rural Counties	82,052	8.4%
Urban Counties	867,437	91.6%

(U.S. Census Bureau, 2019b)

Of the SNAP-eligible population, 456,958 participated in the SNAP Program in 2020 (Table 1-6). Almost 93% of SNAP participants were from urban Nevada counties. In 2020, 32,831 people in rural Nevada counties participated in SNAP, less than half of those eligible from the data in Table 1-5.

Table 1-6: Supplemental Nutrition Assistance Program (SNAP) Participation in Nevada by County – 2010-2020

Region	Supplemental Nutrition Assistance Program (SNAP) Participation					
	2010		2020		Change 2010-2020	
	Number	Percent	Number	Percent	Number	Percent
Rural	27,336	10.0%	32,831	11.1%	5,495	1.1%
Urban	295,873	12.2%	424,127	14.8%	128,254	2.6%
Nevada total	323,209	12.0%	456,958	14.5%	133,749	2.5%

(Table 2.8, Griswold et al., 2021)

1.4. Characteristics of SNAP-eligible Population

Figures 1-3 & 1-4 show the breakdown of SNAP households by various factors. Single mother families, families with a member with a disability, Black families, and Hispanic families were disproportionately represented in the SNAP population when compared to the general population. Additionally, over 275,400 individuals eligible for SNAP benefits did not participate in SNAP in 2019, suggesting that access to benefits or perception of benefits may be barriers in Nevada. (See Table 1-7, Appendix A.)

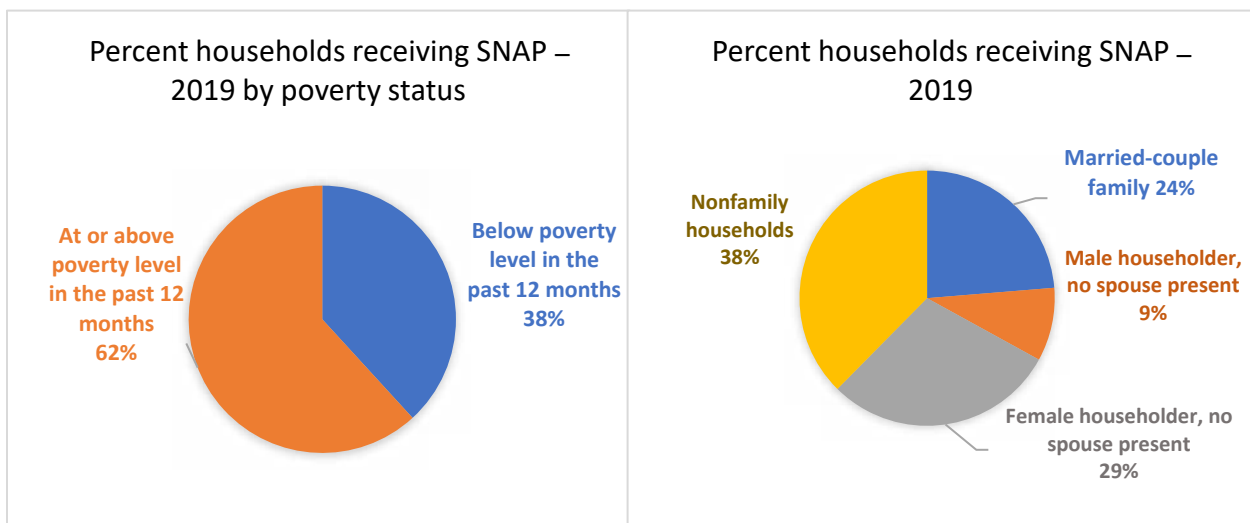


Figure 1-3: Characteristics for SNAP-eligible Households in Nevada – 2019 (U. S. Census Bureau, 2019a)

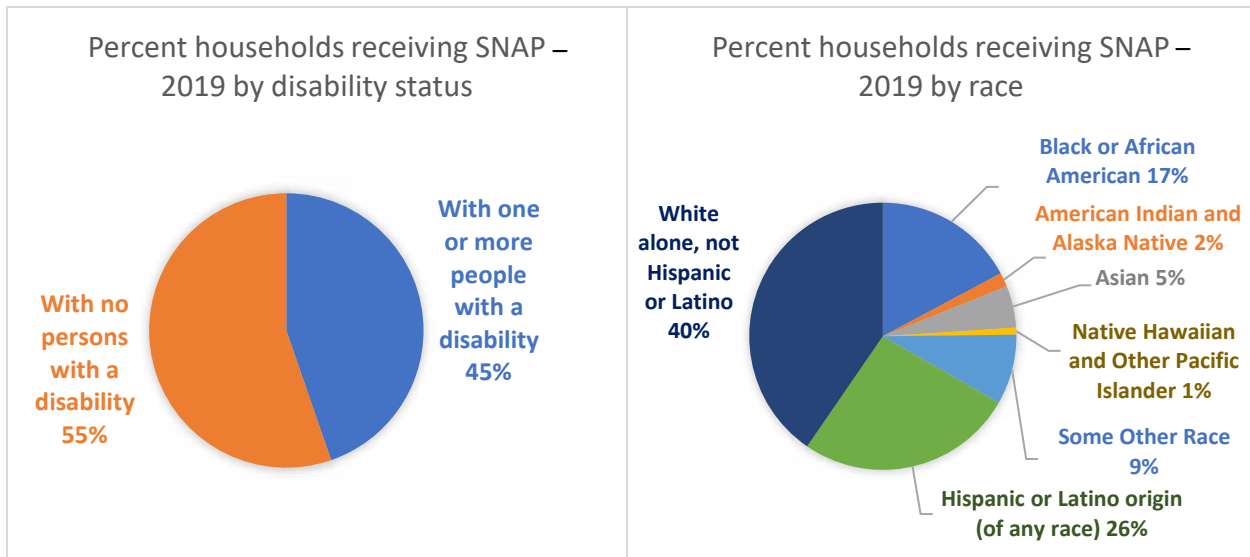


Figure 1-4: Characteristics for SNAP-Eligible Households in Nevada – 2019 (U. S. Census Bureau, 2019a)

1.5. Characteristics of SNAP-eligible Participants Versus Non participants

Figures 1-5 and 1-7 and Tables 1-8 and 1-0 present different characteristics of the SNAP-eligible population (participants and non participants) in 2019. The following characteristics were analyzed to see the patterns between the two groups.

1.5.1. Age

It is worth mentioning that most of the SNAP-eligible population who did not participate in the program are 18 years and older (an average of 34%). The percentage of eligible youth under 18 who did not participate in the program was relatively small. The highest rate of non participating youth was in Humboldt (25%), followed by Mineral (23.9%), then Nye (20.3%). These statistics might be due to the remoteness of those counties and the lack of transportation for caretakers to go and sign up for SNAP benefits, or due to lack of awareness about the program.

1.5.2. Children in the household

Data from Figure 1-6 shows that around 75% of the SNAP-eligible population who did not participate in the program do not have children. This high percentage may be because adults who live alone, even if they participate in the program, do not receive much money, which discourages them from applying. This may be even more true when considering that filling out the application to enroll in the program is considered a hassle.

1.5.3. Race

SNAP-eligible Non-Hispanic White individuals have the highest rates of non participation in the SNAP Program. The highest percentages are located in White Pine (93%), Pershing (92.8%) and Carson City (80.6%). The stigma from participating in the program or the lack of knowledge about the program might contribute to the lack of participation of the non-Hispanic White population. The second highest group with non participation is the Hispanic community, especially in Humboldt (38%), Clark (33.9%) and Washoe (31.9%) counties. Language barriers may contribute to the reduced rate of enrollment in this population. Although SNAP-Ed cannot assist in enrolling individuals in SNAP benefits, these findings emphasize the importance of translating existing educational curricula and materials to Spanish, with appropriate cultural and linguistic nuance, to encourage more involvement in the SNAP-Ed Program's educational activities and policy, systems and environmental approaches. (See Table 1-8 for more details.)

1.5.4. Health insurance

On average, around 18% of the SNAP-eligible population who did not participate in SNAP were uninsured. Counties with the highest percentages of uninsured individuals were Elko (23.4%), Washoe (19.9%) and Clark (19.3%). A lack of health insurance means reduced access to medical services, which can have serious implications if the SNAP non participants have chronic diseases such as diabetes. It is important to increase the access to and appeal of healthy eating and physical activity for this subset of the SNAP-eligible population to prevent further health deterioration. (See Table 1-9 for more details.)

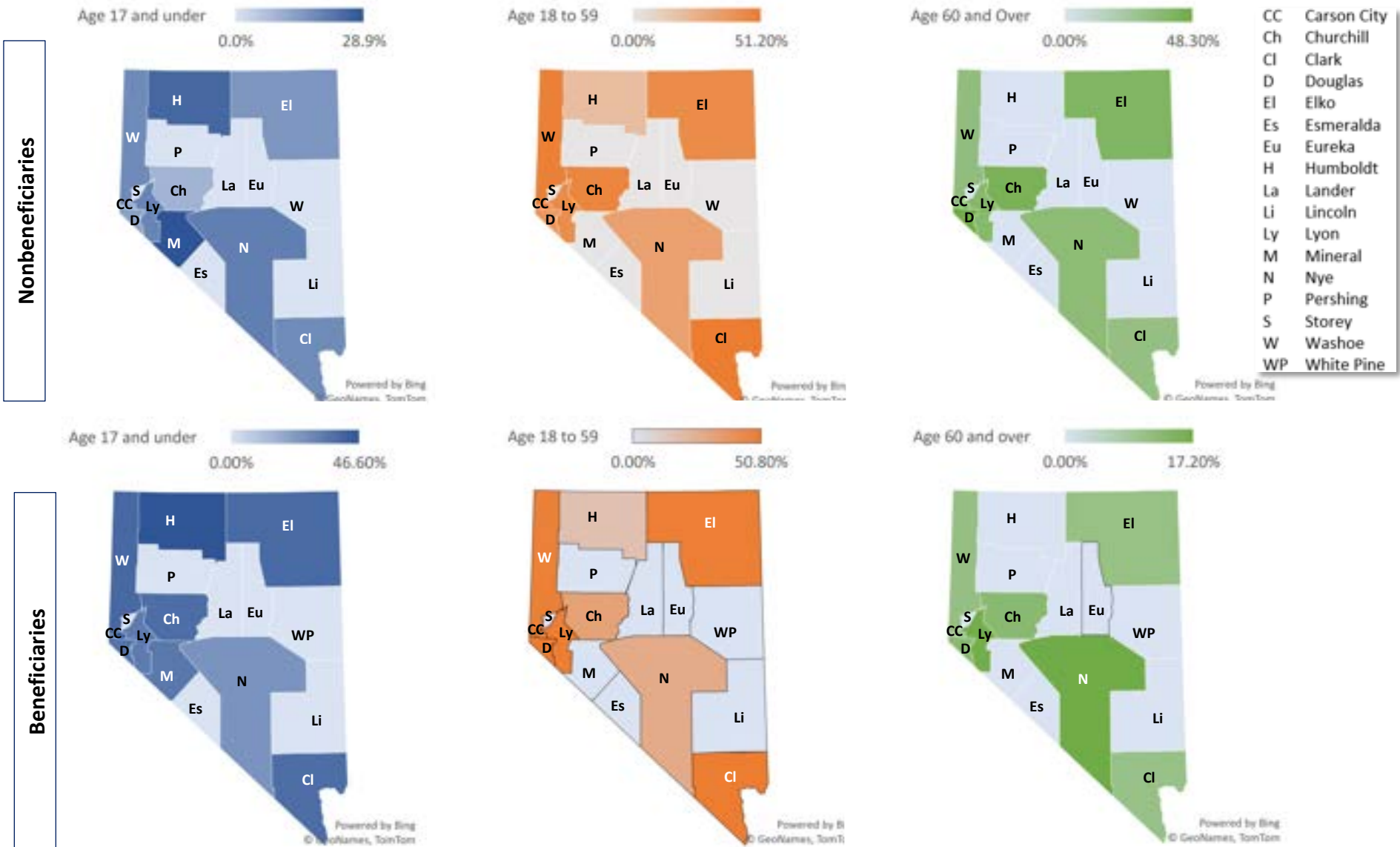


Figure 1-5: Percentage of SNAP-Eligible Population Who Did Not Receive Benefits Versus the Population That Received Benefits by Age Categories. [Supplemental Nutrition Assistance Program \(SNAP\) Eligibility & Access \(census.gov\)](https://www.census.gov/data/tables/2018/subjective/supplemental-nutrition-assistance-program-snap-eligibility-access.html)

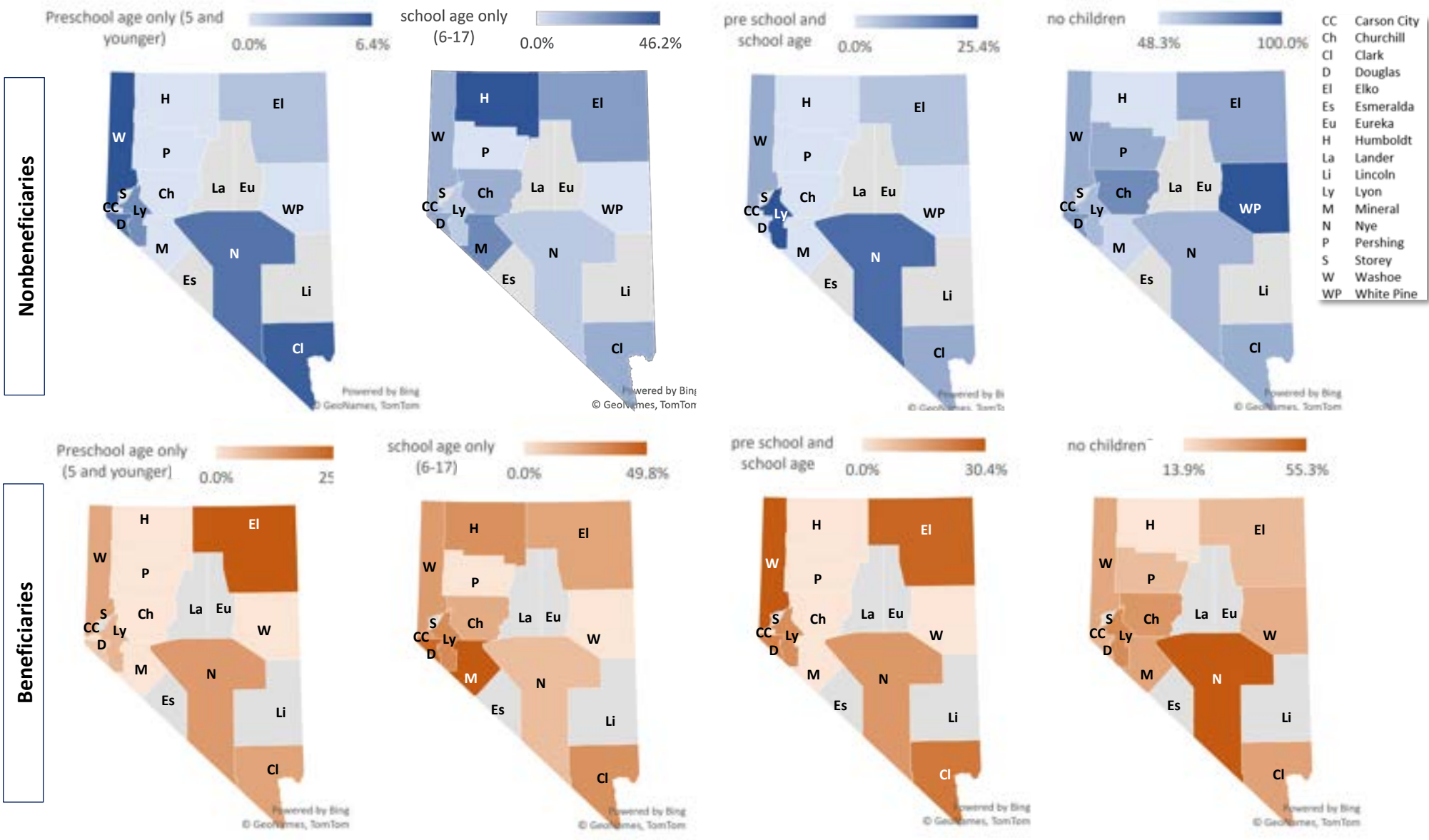


Figure 1-6: Percentage of SNAP-Eligible Population Who Did Not Receive Benefits Versus the Ones Who Received Benefits (Having children at different age categories) [Supplemental Nutrition Assistance Program \(SNAP\) Eligibility & Access \(census.gov\)](https://www.census.gov/data/tables/2018/subject/snap/snap-eligibility-access.html)

% of SNAP eligible population who did not receive benefits									
County	Non-Hispanic White	Hispanic	Non-Hispanic American Indian/Alaskan native	Not Disclosed	Non-Hispanic Black	Non-Hispanic Asian	Non-Hispanic, two or more races	Non-Hispanic Native Hawaiian or Pacific Islanders	Non-Hispanic, other race
Carson City	80.60%	13.60%	1.40%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Churchill	62.50%	18.40%	7.40%	11.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Clark	39.70%	33.90%	0.60%	0.0%	11.2%	10.3%	3.3%	0.6%	0.5%
Douglas	72.40%	16.60%	3.60%	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Elko	60.30%	16.90%	20.30%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Humboldt	37.40%	38.00%	24.60%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lyon	79.80%	10.20%	3.20%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral	32.40%	0.00%	29.60%	38.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Nye	73.60%	23.30%	0.00%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Pershing	92.80%	0.00%	0.00%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Washoe	52.00%	31.90%	2.30%	0.3%	1.9%	8.4%	3.2%	0.0%	0.0%
White Pine	93.00%	0.00%	0.00%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% of SNAP eligible population who received benefits									
Carson City	56.0%	36.1%	1.5%	6.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Churchill	83.0%	3.4%	7.3%	6.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Clark	23.1%	41.6%	0.7%	0.0%	23.5%	4.9%	4.5%	1.1%	0.3%
Douglas	51.2%	35.1%	7.3%	6.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Elko	65.2%	21.4%	11.3%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Humboldt	52.5%	35.3%	12.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lyon	68.7%	20.7%	7.1%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Mineral	38.5%	0.0%	19.7%	41.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Nye	78.5%	13.9%	0.0%	7.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Pershing	30.7%	0.0%	0.0%	69.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Washoe	44.2%	41.8%	2.4%	2.0%	2.8%	3.5%	3.3%	0.0%	0.0%
White Pine	79.7%	0.0%	0.0%	20.3%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 1-7: Heat Map for Percentage of SNAP-eligible Population Who Did Not Receive Benefits Versus the Ones Who Received Benefits by Race, [Supplemental Nutrition Assistance Program \(SNAP\) Eligibility & Access \(census.gov\)](https://www.census.gov/programs-surveys/snaps/eligibility-access)

Note: Esmeralda, Eureka, Lander, Lincoln and Storey counties have no available data.

County	% of SNAP eligible population who did not receive benefits				% of SNAP eligible population who received benefits			
	Public Insurance	Private Insurance	Uninsured	Not Disclosed	Public Insurance	Private Insurance	Uninsured	Not Disclosed
Carson City	29.70%	52.40%	17.90%	0.00%	28.90%	56.50%	5.80%	0.00%
Churchill	36.60%	45.70%	17.80%	0.00%	23.80%	69.10%	7.10%	0.00%
Clark	29.40%	51.30%	19.30%	0.00%	23.00%	66.50%	10.50%	0.00%
Douglas	16.90%	65.50%	17.60%	0.00%	18.60%	71.10%	10.30%	0.00%
Elko	15.20%	61.40%	23.40%	0.00%	32.50%	51.30%	16.20%	0.00%
Humboldt	0.00%	38.00%	0.00%	62.00%	0.00%	72.80%	0.00%	27.20%
Lyon	32.90%	56.60%	10.50%	0.00%	27.60%	64.80%	7.60%	0.00%
Mineral	0.00%	61.10%	0.00%	38.90%	0.00%	81.40%	0.00%	18.60%
Nye	7.10%	76.90%	15.90%	0.00%	9.80%	82.00%	8.20%	0.00%
Pershing	0.00%	65.60%	0.00%	34.40%	0.00%	68.20%	0.00%	31.80%
Washoe	30.00%	50.10%	19.90%	0.00%	22.70%	64.30%	13.00%	0.00%
White Pine	0.00%	76.00%	0.00%	24.00%	0.00%	71.60%	0.00%	28.40%

Table 1-8: Heat Map for Percentage Of SNAP-eligible Population Who Did Not Receive Benefits Versus the Ones Who Received Benefits by Health Insurance, [Supplemental Nutrition Assistance Program \(SNAP\) Eligibility & Access \(census.gov\)](https://www.census.gov/data/tables/2018/subject/tables/snapsnapeligibility.html)

Note: Esmeralda, Eureka, Lander, Lincoln and Storey counties have no available data.

1.6. Students Eligible for Free or Reduced Lunch

Free and reduced-price meal (FRM) data serve as a proxy for determining students' SNAP eligibility. According to Table 1-9, in the 2020-2021 school year, 61% of the public-school population (294,752 students) qualified for FRM. Over 86% of those students are in public schools in urban Nevada – a higher proportion than in the general population (81.6%). A lower proportion of students in rural Nevada schools are eligible for FRM (6.9%) compared to 8.2% of students in Nevada who attend rural Nevada schools.

Table 1-9: Nevada Schools: Number of Students Qualifying for Free and Reduced Lunch by County – 2020-2021

County/region	Total students	Students qualifying for FRM	% Students qualifying for FRM
Churchill	3,236	2,756	85.2%
Douglas	5,358	1,642	30.7%
Elko	9,544	3,906	40.9%
Esmeralda	105	101	96.5%
Humboldt	3,259	1,441	44.2%
Lander	981	350	35.7%
Lincoln	888	387	43.6%
Lyon	7,777	3,507	45.09%
Mineral	574	426	74.2%
Nye	5,209	4,584	88.0%
Pershing	645	356	55.2%
Storey	443	138	31.2%
White Pine	1,146	599	52.3%
Rural region	39,810	20,193	50.7%
Carson City	7792	3,381	43.4%
Clark	321,692	222,675	71.2%
Washoe	64,575	28,912	44.8%
Urban region	394,059	254,968	64.7%
Charter schools	48,872	19,538	40.8%
Bureau of Indian Education schools	150	53	35.6%
Nevada total	482,891	294,752	61.0%

(Nevada Department of Agriculture, 2021)

Objective 2: Dietary Intake of the SNAP-eligible Population in Nevada

2.1. Situation in Nevada

In 2019, only 5.4% of adults reported consuming two or more fruits and three or more vegetables daily. This percentage is lower than the national average (8%). According to data collected by the 2019 Behavioral Risk Factor Surveillance System, there are differences in fruit and vegetable consumption by income level in Nevada. Table 2-1 shows that increased income is associated with higher consumption of fruits and vegetables one or more times per day. Table 2-1 suggests that access to fruit and vegetables may be limited by household income.

Table 2-1: Nevada Fruit and Vegetable Consumption by Household Income – 2019

Nevada household income	Fruit consumption		Vegetable consumption	
	Less than one time per day	One or more times per day	Less than one time per day	One or more times per day
Less than \$15,000	48.7%	51.3%	31.1%	69.0%
\$15,000-\$24,999	41.3%	58.7%	32.0%	68.1%
\$25,000-\$34,999	50.9%	49.1%	33.6%	66.4%
\$35,000-\$49,999	43.0%	57.0%	18.9%	81.1%
\$50,000 +	41.0%	59.0%	18.3%	81.8%

(Centers for Disease Control and Prevention, 2021a)

2.2. High School Students' Nutrition

2.2.1. Consumption of fruits or 100% fruit juice

Data from 2019 Youth Risk Behavior Survey shows that 8.1% of high school students reported consuming no fruits or 100% fruit juice in one week. Although this percentage is low, it is still a concern that some students experience an entire week without having any fruits, which are a primary source of nutrients necessary for healthy growth. American Indian/Alaska Native and Black respondents reported the highest frequency of not consuming fruit or 100% fruit juice. This requires serious attention from nutrition programs and policy, systems and environmental approaches to target locations where these communities are located to increase the appeal of healthy eating and fruit consumption. Also, it is highly recommended to tailor nutrition education and policy, systems and environmental approaches that are culturally and linguistically relevant and appropriate for all ethnic and racial communities (Glanz et al., 2008; McElrone et al., 2021; Williams et al., 2016).

There were no significant differences in the number of students who did not consume fruits or 100% fruit juice among urban and rural counties in Nevada. However, some rural counties (Lyon, Mineral, Storey, Lincoln and Nye) were slightly higher in non consumption of fruits

and 100% fruit juice than urban counties, suggesting that remoteness combined with poverty might have an impact on frequency of fruit consumption. Figure 2-2 shows that students in higher grades (11th and 12th) tend to have less consumption of fruits or 100% juice. This behavior is worth studying further to understand the reasons behind it and how nutrition education, promotion and policy, systems and environmental approaches may be used to mitigate the lower frequency. (See Table 1, Appendix B.)

Figure 2-1: Times Per Day Consumed Fruit or 100% Juice in the Last Seven Days by Race (YRBS)

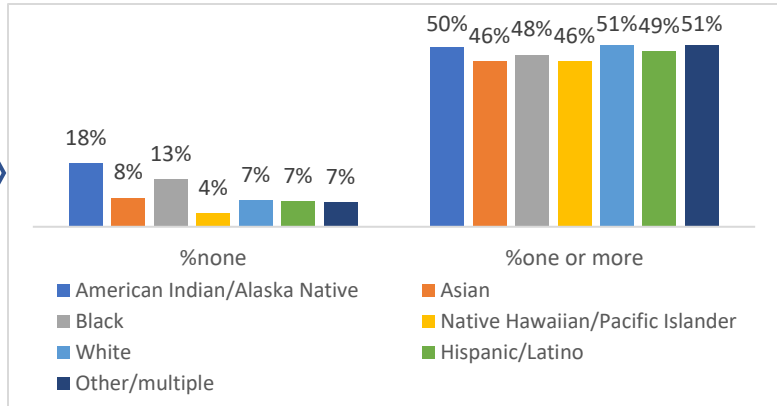
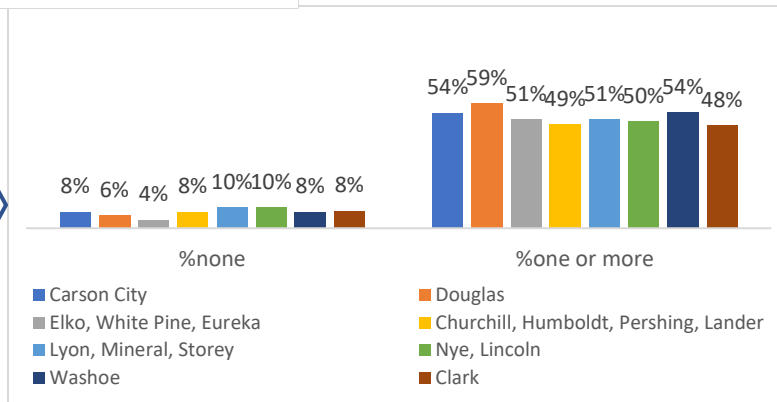


Figure 2-2: Times Per Day Consumed Fruit or 100% Juice in the Last Seven Days by Grade. (YRBS)



Figure 2-3: Times Per Day Consumed Fruit or 100% Juice in the Last Seven Days by Region (YRBS)



2.2.2. Consumption of vegetables

Data from the 2019 Youth Risk Behavior Survey shows that 12.7% of high school students in Nevada did not consume any vegetables in a week. American Indians/Alaska Natives and Black students were among the groups with the highest percentages of non consumption of vegetables (21% and 22%, respectively).

Figure 2-4: Times Per Day Consumed Vegetables in the Last Seven Days by Race (YRBS)

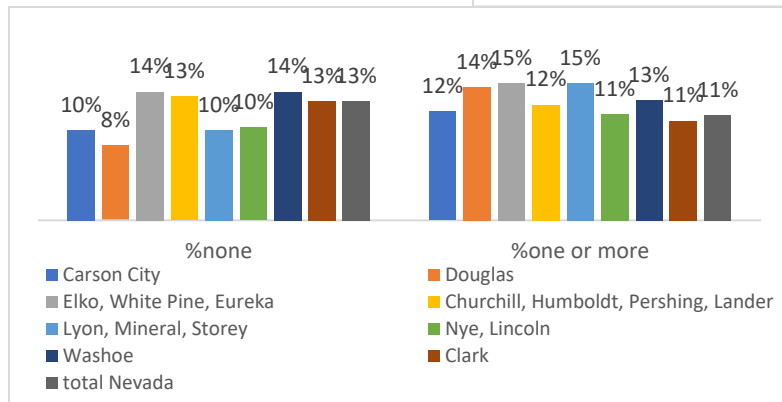
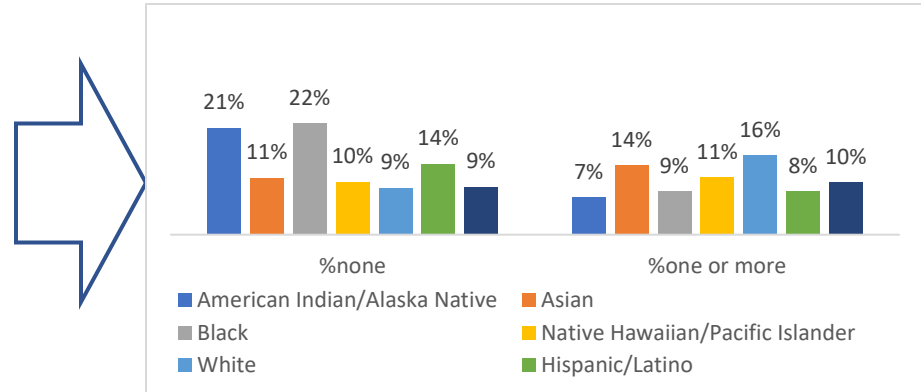
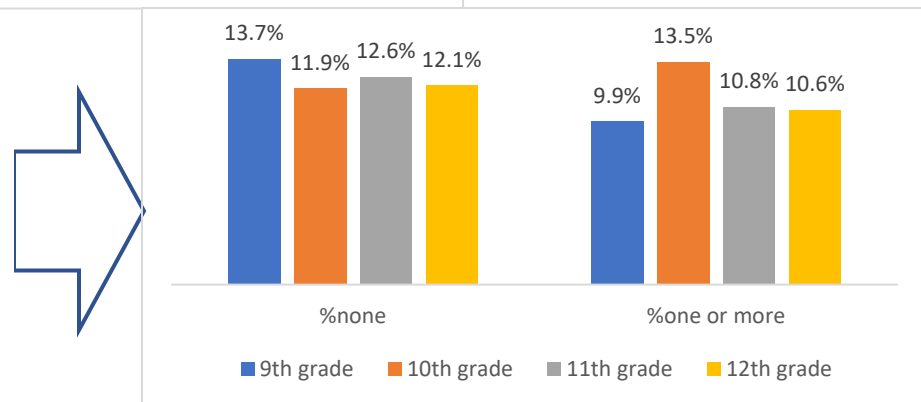


Figure 2-5: Times Per Day Consumed Vegetables in the Last Seven Days by Region (YRBS)



Regions with the highest percentages of non consumption of vegetables included Washoe and the region including Elko, White Pine and Eureka. Overall, rural counties had less consumption of vegetables. This may be due to the remoteness of those counties or barriers to

access (e.g., stores, transportation). It might also be that high schoolers in those areas need more nutrition education that emphasizes the interrelatedness of vegetable consumption and their health. Opposite to the pattern for fruit consumption, vegetable non consumption is more prominent in respondents from the ninth grade. Students in the ninth grade had the highest percentage of all grades in not consuming vegetables. It is worth searching for the causes of the increased vegetable consumption from ninth to 10th grade through qualitative assessment, and seeing if it is attributed to a particular nutrition curriculum or program implemented in schools or in the community.

2.2.3. Consumption of milk

Milk is one of the main food groups in MyPlate and provides nutrients that are particularly important for youth growth and development. Figure 2-3 shows that the racial group with the highest percentage of non consumption of milk was Black students, followed by Asian students (44% and 37%, respectively). The Asian population has higher prevalence of lactose intolerance (Hegar & Widodo, 2015), which likely contributes to the higher rates of non consumption. The racial group with the highest milk consumption was the Native Hawaiian/Pacific Islander students (33%).

It is essential to study the reasons behind the lack of milk consumption, especially among Black students. It could be because of lactose intolerance. Swagerty et. al., (2002) found that about 80% of the Black population is lactose intolerant. Education about culturally appropriate alternative foods that offer the same nutrient benefits of milk should be provided to those populations with higher prevalence of lactose intolerance.

Urban regions had the highest percentages of high schoolers who did not consume milk for a week. High schoolers in rural regions are more likely to drink milk than in urban areas. The lack of milk consumption is more prevalent among higher grades (11th and 12th). Future assessments should further explore the different rates of milk consumption between urban and rural students, as well as differences among the grades. These reasonings can assist SNAP-Ed in identifying appropriate nutrition education or policy, systems and environmental approaches to support the inclusion of milk, fortified dairy alternatives, or calcium and vitamin D rich foods in the diet.

Figure 2-7: Times Per Day Consumed Milk in the Last Seven Days by Race (YRBS)

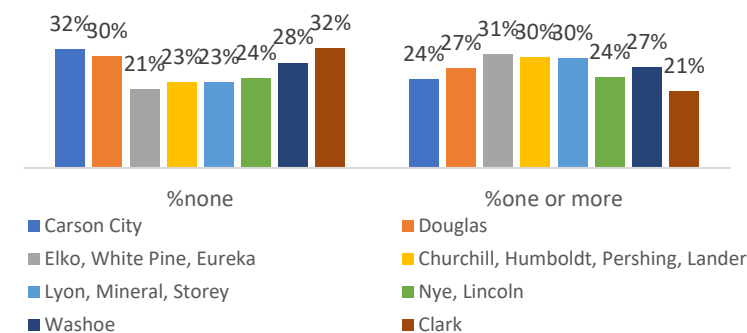
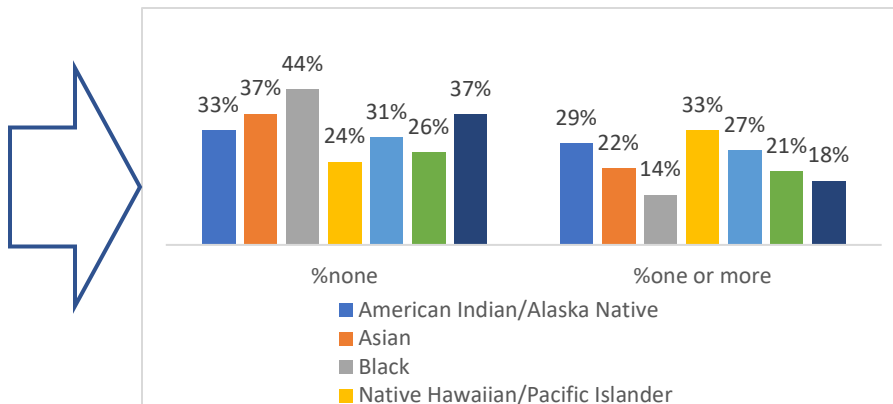
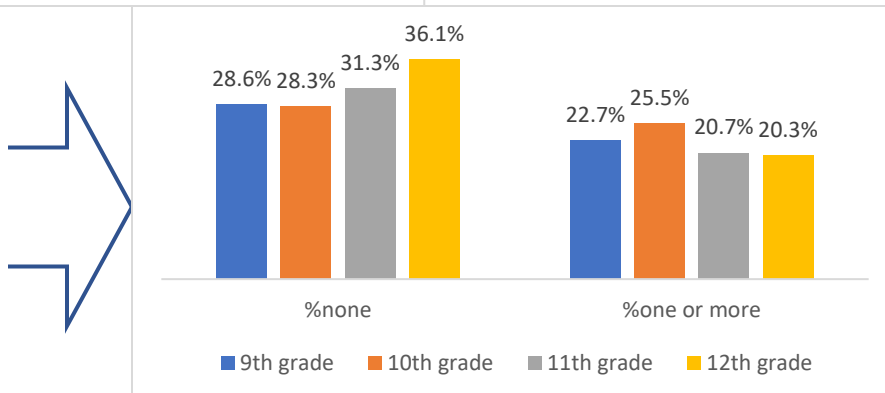


Figure 2-8: Times Per Day Consumed Milk in the Last Seven Days by Region (YRBS)

Figure 2-9: Times Per Day Consumed Milk in the Last Seven Days by Grade (YRBS)



2.2.4. Consumption of soda or pop

Consuming soda can contribute to the development or exacerbation of some chronic conditions. Asian students reported the highest response of not consuming soda (48%). American Indian/Alaskan Native students reported the highest consumption of soda (29%). This percentage is worth further study to know the reasons behind this behavior; it could be related to lack of available nutrition education or limited access to affordable healthier beverage options.

Urban regions (except for Carson City) were among the regions with the lowest consumption of soda. In contrast, most rural regions had a high consumption pattern for soda,

indicating that more improved access to non soda beverages through education and policy, systems and environmental approaches should be implemented in rural areas.

Students in higher grades had more consumption of soda products than students in lower grades. This trend is worth studying to better understand the behavioral and/or situational underpinning. (See Figure 2-12 for more detail.)

Figure 2-10: Times Per Day Consumed Soda or Pop in the Last Seven Days by Race (YRBS)

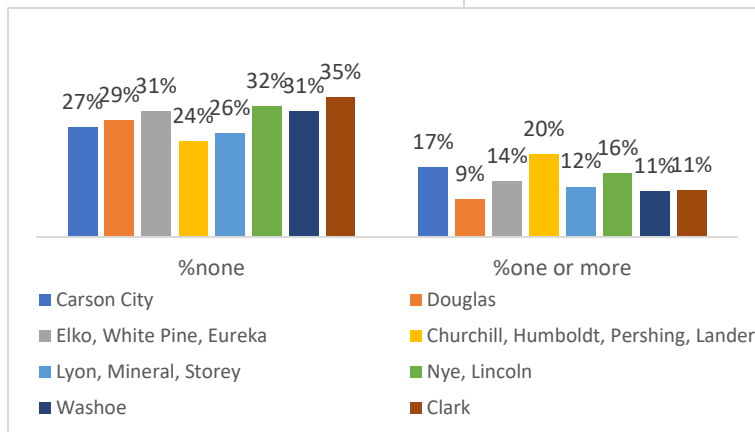
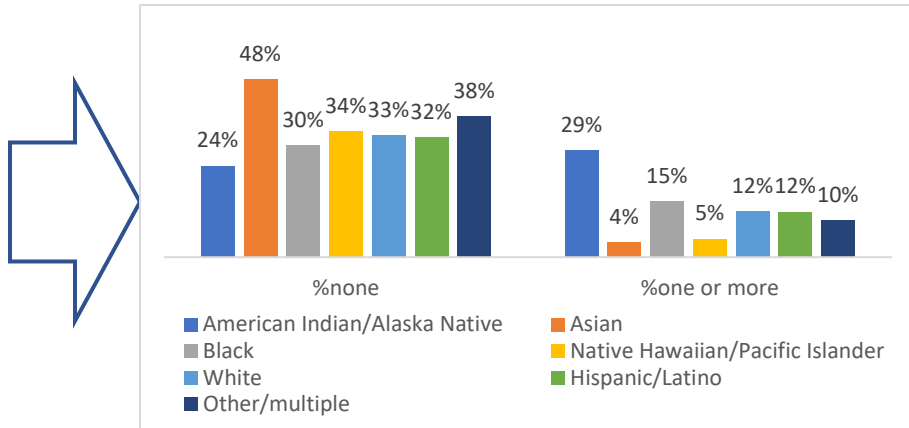
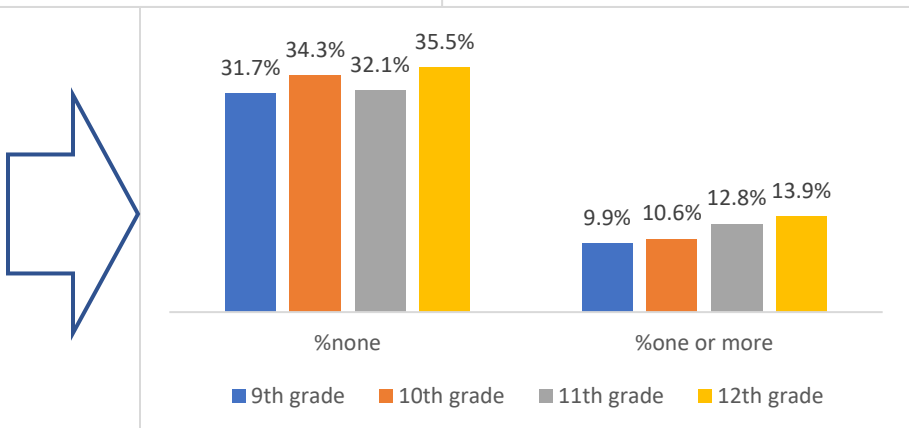


Figure 2-11: Times Per Day Consumed Soda or Pop in the Last Seven Days by Region (YRBS)

Figure 2-12: Times Per Day Consumed Soda or Pop in the Last Seven Days by Grade (YRBS)



2.2.5. Consumption of breakfast

Breakfast is an important energy source for students and is highly correlated to academic performance throughout the day (Adolphus et al., 2013). Skipping breakfast can have serious implications on the health habits of high schoolers; it can lead to the consumption of more junk foods and sweets that cause hyperactivity and a lack of concentration due to the drop in the energy curve (Ofori-Asenso et al., 2019). The respondents with the highest percentages of not consuming breakfast during one week were American Indian/Alaskan Native and Native Hawaiian/Pacific Islander students. It is worth researching the reasons behind this behavior and the reasons preventing them from having breakfast (cultural, socioeconomic, environmental or other).

Figure 2-13: Times Per Day Consumed Breakfast in the Last Seven Days by Race (YRBS)

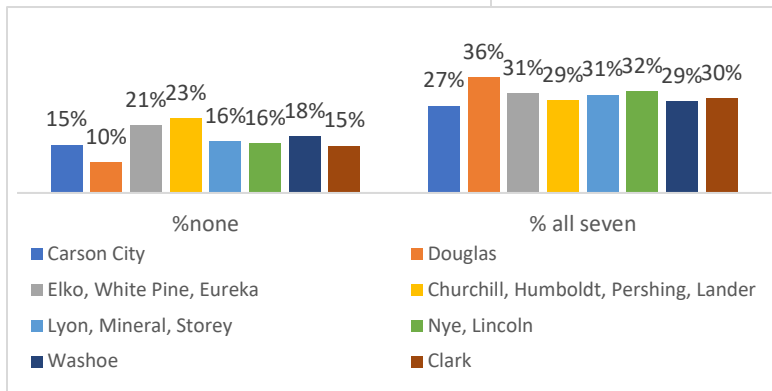
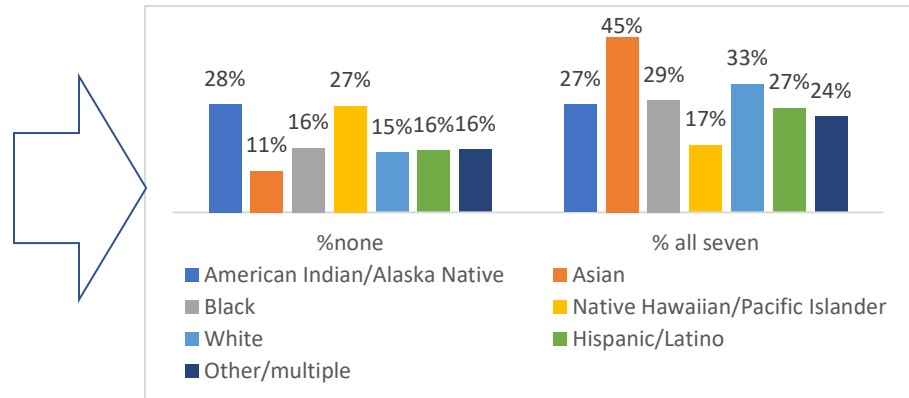
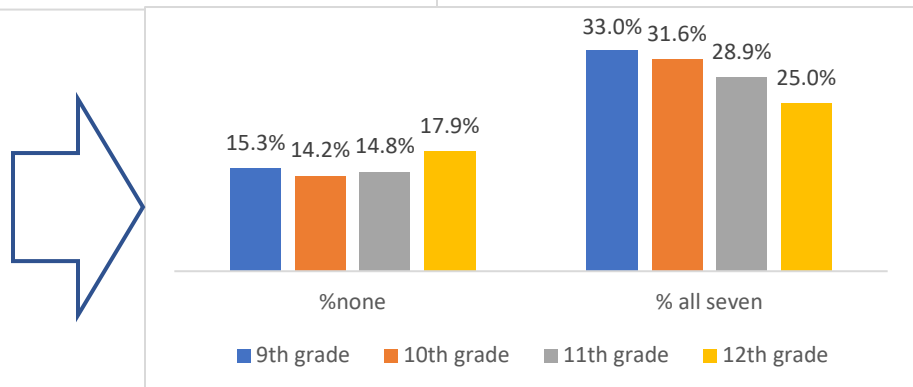


Figure 2-14: Times Per Day Consumed Breakfast in the Last Seven Days by Region (YRBS)

Figure 2-15: Times Per Day Consumed Breakfast in the Last Seven Days by Grade (YRBS)



Rural regions have a higher percentage of students who did not consume breakfast, compared to the urban areas. By grade level, the 12th graders reported the highest frequency of not consuming breakfast. (See Figure 2-15.)

2.3. Kindergartners and Nutrition

2.3.1. Consumption of non diet soda

Despite the decrease in non diet soda consumption among kindergartners from the academic year 2019-2020 to 2020-2021, almost one-quarter of the students still consumed soda a few times per week. This percentage is concerning, knowing that high rates of obesity occur at a very young age and can cause other complications. Qualitative assessments will be used in the second phase to better understand these patterns of consumption. It is essential to educate caregivers and teachers about the implications of offering sugar-sweetened beverages to children at this young age and how this behavior can impact children’s health negatively. Interventions to reduce soda availability and promote water consumption at schools are also essential to reduce soda consumption.

Table 2-2: Percentage of Kindergarten Students’ Non Diet Soda Consumption by Region of Nevada – School Years 2019-2020, 2020-2021

County/region	Number of times per week the kindergartner drinks non diet soda							
	None		A few times		Once a day		More than once a day	
	19-20	20-21	19-20	20-21	19-20	20-21	19-20	20-21
Clark County	69.2%	71.6%	23.3%	20.4%	5.5%	4.0%	2.0%	4.0%
Washoe County	69.4%	73.1%	25.1%	20.1%	4.1%	3.6%	1.5%	3.1%
Rural counties	68.6%	68.3%	25.0%	25.3%	4.7%	4.9%	1.6%	1.5%
Nevada total	69.2%	71.6%	23.8%	20.9%	5.1%	4.0%	1.9%	3.5%

(Nevada Institute for Children’s Research and Policy, 2021, 2020)

2.3.2. Consumption of diet soda

Diet soda consumption is less prevalent at this age, but should still be minimally offered by teachers and caregivers, as it’s not necessarily a healthier option than regular soda.

Table 2-3: Percentage of Kindergarten Students’ Diet Soda Consumption by Region of Nevada – School Years 2019-2020, 2020-2021

County/region	Number of times per week the kindergartner drinks diet soda							
	None		A few times		Once a day		More than once a day	
	19-20	20-21	19-20	20-21	19-20	20-21	19-20	20-21
Clark County	89.0%	87.8%	8.3%	9.1%	2.3%	1.9%	0.5%	1.2%
Washoe County	88.9%	89.4%	9.5%	8.2%	1.3%	1.9%	0.4%	0.6%

Rural Counties	87.5%	89.7%	10.2%	7.6%	2.0%	2.2%	0.2%	0.6%
Nevada total	88.8%	88.3%	8.7%	8.8%	2.1%	1.9%	0.5%	1.0%

(Nevada Institute for Children’s Research and Policy, 2021, 2020)

2.3.3. Juice consumption

Juice consumption increased dramatically from the academic year 2019-2020 to 2020-2021 in all counties. It is important to teach caregivers how to distinguish between the different types of juices, and which contain high levels of added sugar. This can make a significant difference in the behavior of kindergartners (hyper activity and lack of concentration) (Yu et al., 2016). Implementing some interventions at schools that encourage increased consumption of water or 100% fruit juice and decrease availability of added-sugar beverages is important to decrease the consumption of sugary beverages.

Table 2-4: Percentage of Kindergarten Students’ Juice Consumption by Region of Nevada – School Years 2019-2020, 2020-2021

County/region	Number of times per week the kindergartner drinks juice							
	None		A few times		Once a day		More than once a day	
	19-20	20-21	19-20	20-21	19-20	20-21	19-20	20-21
Clark County	89.0%	18.7%	39.3%	45.1%	29.2%	22.4%	17.8%	13.7%
Washoe County	88.9%	19.4%	46.5%	46.6%	23.7%	24.3%	12.2%	9.7%
Rural Counties	87.5%	15.7%	45.8%	46.0%	25.0%	23.6%	15.2%	14.7%
Nevada total	88.8%	18.5%	41.2%	45.5%	27.8%	22.9%	16.6%	13.1%

(Nevada Institute for Children’s Research and Policy, 2021, 2020)

2.4. Breastfeeding in Nevada

Breastfeeding rates indicate healthy nutrition because of the lifelong benefits to infants and mothers (Centers for Disease Control and Prevention, 2021b). Table 2-5 shows breastfeeding rates in Nevada in 2018 compared to the national rates. Nevada rates were similar to national rates in most measured categories. However, the rate for Nevada infants who were exclusively breastfed through 6 months (the recommended time by the CDC) was 2.2% higher than the national average. Even though Nevada was slightly above of the national average in this category, improvement is needed to reach the recommendations of the World Health Organization for breastfeeding infants exclusively till the age of 6 months (WHO, 2022).

Table 2-5: Breastfeeding in Nevada Compared to U.S. – 2018

	Nevada	U.S.
% of infants who were ever breastfed	83.4%	83.9%
% of infants who were breastfed at 6 months	55.8%	56.7%
% of infants who were breastfed at 12 months	37.3%	35.0%
% of infants who were exclusively breastfed through 3 months	45.5%	46.3%
% of infants who were exclusively breastfed through 6 months	28.0%	25.8%
% of breastfed infants who were supplemented with infant formula within two days of life	21.8%	19.4%
% of breastfed infants who were supplemented with infant formula before 3 months	29.8%	31.3%
% of breastfed infants who were supplemented with infant formula before 6 months	35.2%	35.8%

(Centers for Disease Control and Prevention, 2021c)

2.4.1. Infancy eating habits from 1 month to 12 months

Table 2-6 shows the dietary intake trends for infants at different points after birth. From one month to three months after birth, more babies were breastfed. After six months, formula integration in the diet increased. Formula consumption continued to increase with age, and breastfeeding frequency decreased. Consuming breast milk in the first 12 months of an infant’s life is crucial to obesity prevention and the development of the immune system (Oddy, 2002). The numbers in the table might imply the need for more education for parents on the importance of breastfeeding for their kids' future. A collaboration between SNAP-Ed and WIC might be needed, especially where WIC clinics are remote but SNAP-Ed programming is available.

Table 2-6: Percentage of Kindergarten Students’ Infancy Eating Habits at 1, 3, 6, and 12 Months by Region of Nevada – School Years 2019-2020, 2020-2021

	Infancy eating habits at 1 month in Nevada regions							
	Nevada total		Clark County		Washoe County		Rural counties	
	19-20	20-21	19-20	20-21	19-20	20-21	19-20	20-21
Breast only	51.4%	53.1%	48.3%	49.7%	62.1%	64.1%	55.6%	58.8%
Breast and formula/other	25.8%	26.0%	27.4%	28.2%	21.2%	18.6%	23.0%	22.4%
Formula/other	19.9%	18.3%	21.4%	19.5%	13.7%	15.2%	19.4%	14.9%
Multiple	1.4%	0.4%	1.4%	0.0%	1.2%	0.9%	1.1%	2.1%
Not sure	1.5%	2.3%	1.5%	2.6%	1.8%	1.1%	0.9%	1.8%
	Infancy eating habits at 3 Months in Nevada regions							
Breast only	39.3%	42.6%	36.7%	39.8%	49.8%	52.1%	40.9%	46.0%
Breast and formula/other	25.9%	25.8%	26.7%	27.1%	23.6%	22.1%	24.1%	22.8%
Formula/other	32.2%	29.2%	33.9%	30.8%	23.7%	23.3%	33.1%	28.0%
Multiple	1.3%	0.5%	1.4%	0.1%	1.1%	1.3%	1.0%	1.4%
Not sure	1.4%	2.0%	1.3%	2.2%	1.8%	1.1%	0.9%	1.7%

Infancy eating habits at 6 months in Nevada regions								
Breast only	25.8%	28.8%	24.2%	27.4%	32.6%	34.0%	26.3%	29.8%
Breast and formula/other	21.5%	23.3%	20.9%	22.1%	24.5%	22.2%	21.1%	21.1%
Formula/other	49.4%	45.0%	51.5%	40.4%	39.0%	43.9%	50.1%	50.1%
Multiple	2.0%	0.8%	2.0%	2.4%	2.1%	2.2%	1.4%	1.4%
Not sure	1.4%	2.2%	1.4%	1.1%	1.8%	1.9%	1.1%	1.1%
Infancy eating habits at 12 Months in Nevada regions								
Breast only	17.6%	17.9%	16.6%	16.7%	22.3%	21.8%	17.8%	18.8%
Breast and formula/other	17.0%	19.5%	16.8%	19.4%	20.4%	22.6%	13.6%	15.0%
Formula/other	62.1%	59.3%	63.4%	60.6%	53.2%	53.3%	66.0%	60.8%
Multiple	1.4%	0.5%	1.5%	0.1%	1.8%	1.2%	0.7%	2.3%
Not sure	1.8%	2.8%	1.7%	3.2%	2.4%	1.1%	1.9%	3.0%

(Nevada Institute for Children’s Research and Policy, 2021, 2020)

Objective 3: Prevalence of Physical Activity and Sedentary Behavior Among the SNAP-eligible Population in Nevada

3.1. Physical Activity

3.1.1. Adults

In 2020, 25.4% of all Nevada adults reported doing no physical activity or exercise other than their regular job during a month. Among those, 33% of the inactive people were Hispanic. Females were more inactive than males (27.9% versus 22.9%) (United Health Care Foundation, 2022). Statistics also showed that lower incomes were associated with increased rates of inactivity. This relationship may be explained by the necessity of multiple jobs for individuals with lower incomes, which takes away from the time allocated for physical activity (Kari et al., 2015). Besides showing the income trends in relation to physical activity, Table 3-1 also indicates that almost three-quarters of Nevadans have participated in physical activity during a one-month period. In addition, more than one-third of Nevadans participated in muscle strengthening exercises two or more times/week. Despite the previous statistics, people in lower-income thresholds have less physical activity involvement compared to the ones in higher-income thresholds. The previous statistics imply that more physical activity should be promoted to low-income households while understanding the barriers these individuals may have with respect to time and access. Promotion of physical activity can be through increasing the appeal of participation and implementing policy, systems and environmental approaches that improve access.

Table 3-1: Nevada Physical Activity by Household Income – 2019

Category	Participated in 150 minutes or more of aerobic physical activity/week		Participated in physical activities in the past month		Met aerobic and muscle strengthening exercise guidelines		Participated in muscle strengthening exercises two or more times/week	
	#	%	#	%	#	%	#	%
Nevada total	1,399	48.8%	2,064	74.2%	581	20.0%	931	34.3%
Annual income								
Less than \$15,000	63	34.9%	118	65.2%	23	13.8%	40	24.5%
\$15,000 - \$24,999	132	38.4%	210	64.4%	161	74.3%	85	28.1%
\$25,000 - \$34,999	114	53.2%	161	74.3%	46	20.0%	70	29.8%
\$35,000 - \$49,999	164	49.3%	240	74.0%	59	18.0%	103	33.1%
\$50,000 +	709	55.5%	996	82.7%	319	25.2%	475	40.6%

(Centers for Disease Control and Prevention, 2021a)

3.1.2 High school students

Although youth are expected to have more time and motivation to engage in physical activities, the Youth Risk Behavior Survey data for high schoolers (2019) shows that male students participate in physical activity more than female students. This is most likely because male students engage in more school sports such as basketball and football than females. (See Appendix C, Table 1.) White students reported the highest engagement in physical activity five times or more in a week and for playing the entire week (47.4% and 25.5%, respectively), followed by American Indian/Alaska Native students (39.6% and 20.5%, respectively). Asian students indicated the lowest participation in physical activity and for playing the entire week (26.1% and 14%, respectively).

3.1.3. Middle school students

Middle schoolers did not differ much from high schoolers in terms of physical activity across sex and race. The Youth Risk Behavior Survey data (2019) shows that male students participate in physical activity more than female students. (See Appendix C, Table 2.) Regarding race, American Indian/Alaska Native and White students reported the highest engagement in physical activity for at least five days during the week (53.1% and 50.5%, respectively). The respondents with the least participation in physical activity were Hispanic students, (37%). Children from urban regions had lower participation in physical activity than children from rural and frontier areas.

3.1.4. Kindergartners

Statistics from 2019-2020 to 2020-2021 show a decline in the percentage of kindergartners who had 60 minutes of physical activity for one to seven days per week. Only 63.1% of kindergartners engaged in physical activity for 60 minutes from five to seven days a week in 2020-2021. A lack of physical activity is associated with obesity. Almost 32% of kindergartners were obese or overweight in the same year. These numbers require thorough attention from schools and physical activity programs to increase the time dedicated to physical activity for kindergartners. Reducing obesity and overweight prevalence among children means healthier adults. (See Appendix C Table 3 for more details.)

3.2. Sedentary Behavior

3.2.1. Middle and high school students

Almost 60% of high schoolers and middle schoolers in Nevada were sedentary in 2019 (watched TV, played video or computer games, or used a computer for three or more hours per day). The percentage of sedentary behavior was higher among females than males for middle schoolers (61% and 58.1%, respectively) and for high schoolers (60.7% and 58.5%, respectively). Asian students had the highest rates of sedentary behavior among middle schoolers and high schoolers. The percentage of students with sedentary behavior in urban areas (Clark, Carson City and Washoe) was higher than in rural areas. Middle school rates were especially high in Carson City and Washoe, and high school rates were especially high in Clark County (See Appendix C Table 4 for more details.)

3.2.2. Kindergartners

On a school day, more than 50% of kindergartners spent an average of three to five hours watching TV during the academic year 2020-2021. This percentage almost doubled from the previous year (28.8%). The percentages of kindergartners with sedentary behavior are higher in urban areas (Clark and Washoe) than in rural areas. On a weekend day, the percentage of kindergartners spending from three to five hours watching TV is higher than on a school day (58.8% on a weekend compared to 50.7% on a school day). Sedentary behavior might be one factor that promotes high rates of obesity and overweight among kindergartners. The numbers illuminate an opportunity for direct education and policy, systems and environmental interventions to reduce screen time for this population. (See Appendix C, Table 5 for more details.)

3.3. Participation in Physical Education High School and Middle School Students

Encouraging an active lifestyle is one of the important functions of physical education classes. Data from Table 3-2 show that more than half of middle and high school students in Nevada attend physical education classes at least once a week. Encouraging more physical activity may help increase the number of students in physical education classes in middle school and high school. Interventions may promote physical activity by monitoring the spaces dedicated for physical activity and evaluating their usability, or advocating for more physical activity time at schools. The table also suggests encouraging more females to be involved in physical education is needed. Regarding race, Hispanic middle schoolers and White high schoolers had the lowest percentages of physical education participation among those surveyed. On a county level, Douglas (for middle schoolers), Nye and Lincoln (for high schoolers) had the lowest participation.

Table 3-2: High School (HS) and Middle School (MS) Students’ Physical Education (PE) Class Participation by Gender, Race and Region of Nevada – 2019

Category	Times attended PE class per week			
	One or more days		Every school day	
<u>Sex</u>	MS	HS	MS	HS
Female	53.6%	51.0%	36.8%	17.2%
Male	59.8%	60.8%	41.2%	24.4%
<u>Race/ethnicity</u>				
American Indian/Alaska Native	61.0%	56.0%	37.3%	31.8%
Asian	58.8%	46.6%	45.7%	14.7%
Black	60.6%	65.7%	42.2%	20.9%
Native Hawaiian/Pacific Islander	60.2%	63.0%	53.6%	28.9%
White	58.7%	52.6%	39.0%	22.3%
Hispanic/Latino	54.6%	57.4%	37.2%	20.7%
Other/multiple	51.6%	57.8%	35.8%	18.6%
<u>County/region</u>				
1: Carson City	66.6%	52.1%	25.9%	15.0%
2: Douglas	46.5%	57.6%	8.9%	9.7%
3: Elko, White Pine, Eureka	63.7%	60.0%	28.5%	11.5%
4: Churchill, Humboldt, Pershing, Lander	59.1%	65.4%	27.5%	29.8%
5: Lyon, Mineral, Storey	53.1%	51.8%	31.0%	46.5%
6: Nye, Lincoln	57.2%	50.2%	31.8%	27.5%
7: Washoe	61.9%	57.6%	28.4%	29.0%
8: Clark	55.6%	55.7%	42.4%	19.0%
Nevada total	56.7%	56.0%	39.0%	20.9%

(Diedrick et al., 2020a)

3.4. Walking and Biking Scores

Even though Nevada’s adult obesity rate continues to be lower than the national average (Table 4-1), several rural Nevada counties had higher 10-year average obesity rates as of 2018. In 2019, 28.3% of respondents to the high school Youth Risk Behavior Survey were overweight or obese (Figures 4-4 and 4-5), and 31.7% of parents responding to the Kindergarten Health Survey in 2020 reported their kindergarten students as obese or overweight. The trends suggest that the lack of policies encouraging more physical activity and improving access to and appeal of healthy food options in Nevada public schools may contribute to increased rates of obesity.

In 2017, Nevada adopted a Complete Streets Policy to design all new roadways for safe, multipurpose use. Figure 3-1 and 3-2 show Nevada communities' walk and bike scores in 2021. Only one Nevada community – Fallon with a score of 80 – has a Walk Score in the “very walkable” range (scores between 70 and 89). All other Nevada communities are in the “somewhat walkable” (between 50 and 69) or “car-dependent” (49 or lower) categories. Fallon’s bike score of 66 is the highest in the state, but still falls in the “bikeable” category (scores between 50 and 69). Bike scores 49 or lower are “somewhat bikeable.” No communities in Nevada are rated as a “walker’s/biker’s paradise” (90 to 100) or “very bikeable” (bike score of 70 to 89).

Walking Scores Nevada



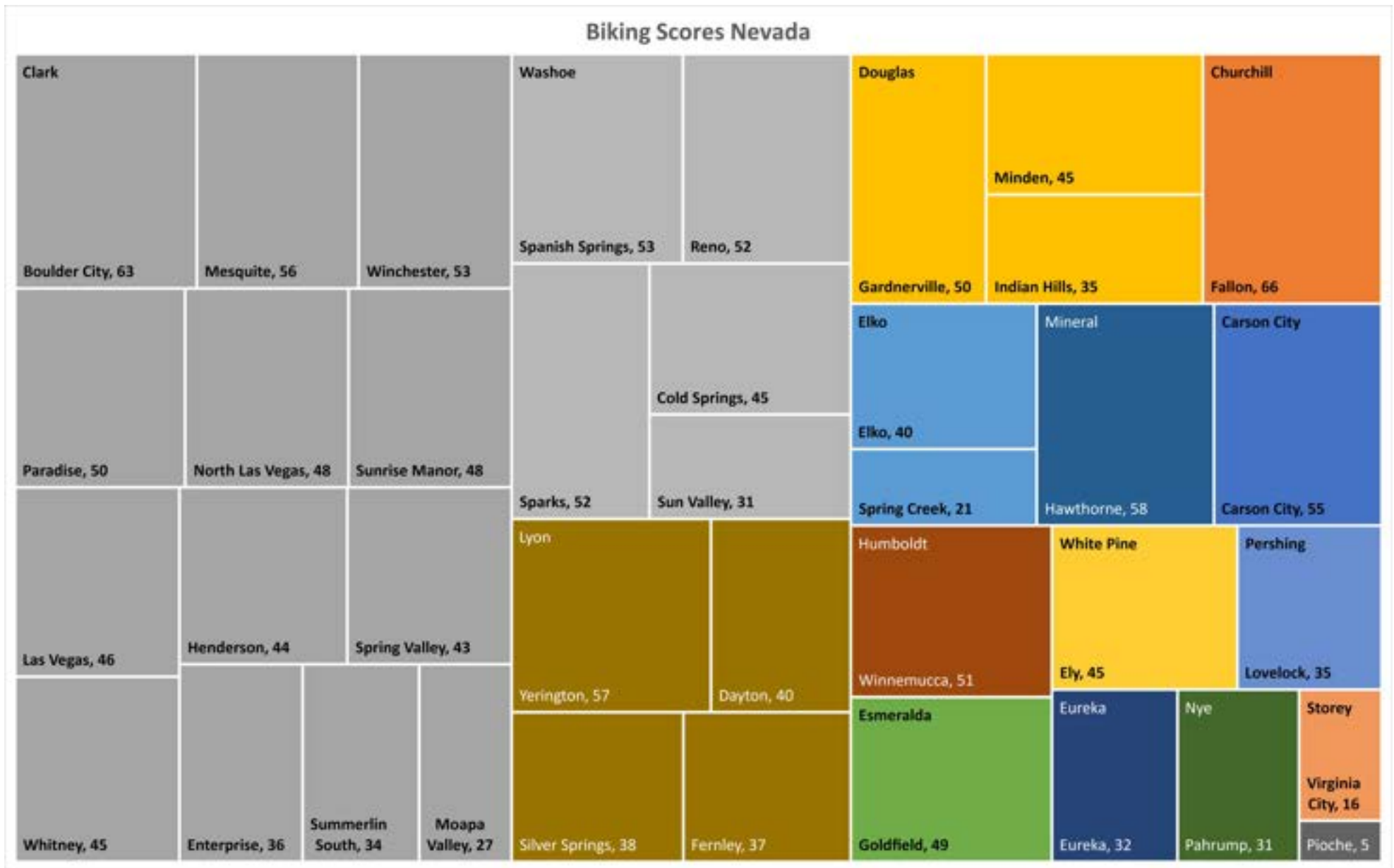


Figure 3-2 Bike Score® for Nevada Communities – 2022 (Data source: Cubit Planning, Inc., 202)

Table 3-3 presents additional walk and bike scores from 2019 to 2021 in Nevada’s four largest communities. The three-year trend shows little to no increase in walk scores in all communities except for Reno, and some bike score increases for Henderson and North Las Vegas from 2019 to 2020, but only slight increases for Las Vegas and Reno. According to the available data, the Complete Streets Policy has had minimal effect on Nevada’s four largest communities. The majority of Nevada’s communities remain car-dependent – an implication both for encouraging activity among people in Nevada and for the availability of services.

Table 3-3: Walk Score® and Bike Score® for the Four Largest Communities in Nevada – 2019-2021

Community	Walk Score®			Bike Score®		
	2019	2020	2021	2019	2020	2021
Henderson	29.6	29.6	29	36.9	43.5	43.5
Las Vegas	41.1	41.1	40.6	43.9	46.5	46.5
North Las Vegas	33.2	33.2	33.1	41.9	48.5	48.5
Reno	37.6	37.6	38.1	46.6	52	52

(American Fitness Index, 2022)

Objective 4: Obesity Rate Among the SNAP-eligible Population in Nevada

Obesity is one of the leading causes of many diseases in the U.S. (Censin et al., 2019; Hall et al., 2004; Rosenthal et al., 2017), such as heart disease, Type 2 diabetes, and certain cancers. It is defined as a BMI of 30 or higher (Finkelstein et al., 2009). According to the State of Childhood Obesity, the percentage of Nevada adults ages 18-65 who had obesity in 2020 exceeded 28.7%. This percentage represents a 2% decrease compared to the previous year but is still high compared to years before 2019. This makes the state 39th worst in obesity rates. It is noteworthy that 10.9% of adults who are obese have diabetes in Nevada (State of Childhood Obesity, 2022).

Healthy dietary and physical activity practices contribute to obesity prevention and the prevention of other diet-related chronic conditions. However, estimates in 2019 suggest that less than 5.6% of Nevada adults reported consuming fruit and vegetables daily. Those with a yearly income of less than \$25,000 had less consumption than those with higher incomes (United Health Foundation, 2022). In addition, only about 20% of the adult population completed the recommended 150 minutes of weekly exercise. High BMIs are also associated with low income

levels (Table 4-1) and are more prevalent among Black and Hispanic populations than others (United Health Foundation, 2022).

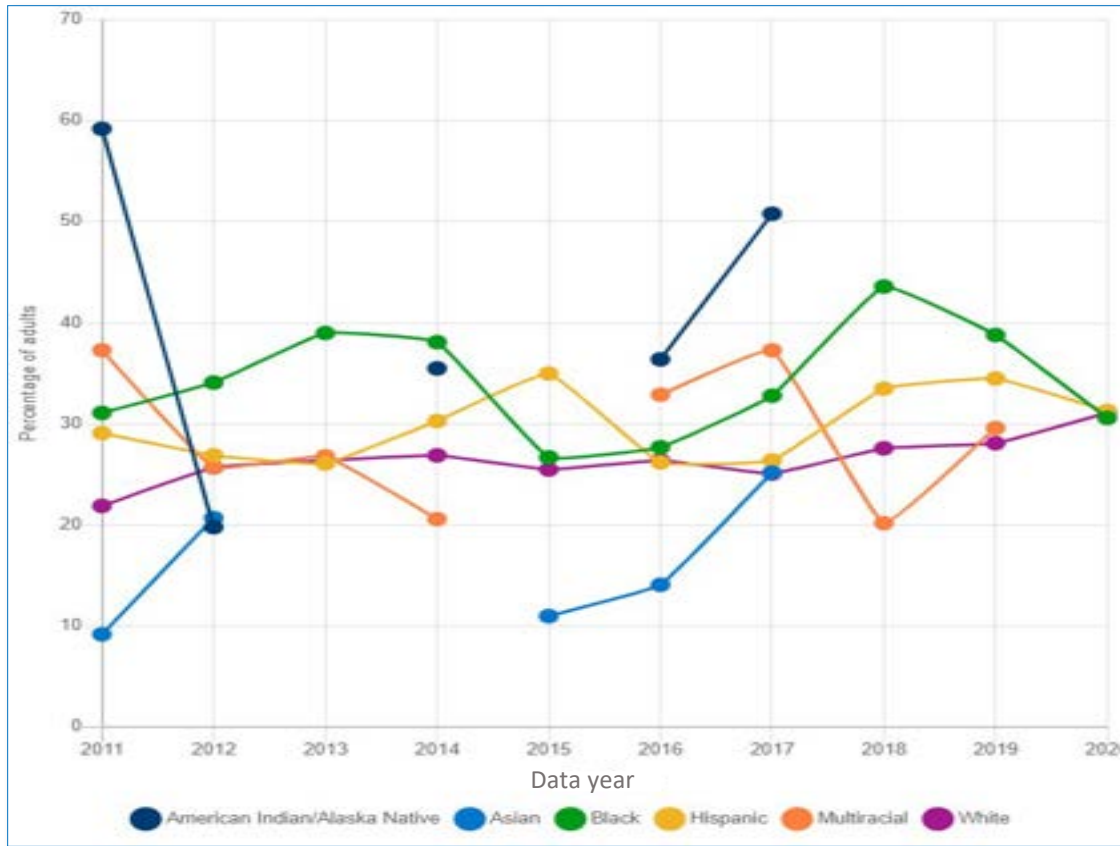


Table 4-1: Nevada Overweight and Obesity by Household Income – 2020

Category	Body Mass Index (BMI) category			
	Obese (BMI 39.0-99.8)		Overweight (BMI 25.0-29.9)	
	#	%	#	%
Nevada total	667	28.7%	808	35.6%
Annual income				
Less than \$15,000	46	36.4%	43	28.9%
\$15,000 - \$24,999	77	26.6%	92	38.4%
\$25,000 - \$34,999	58	40.2%	58	40.2%
\$35,000 - \$49,999	84	29.4%	79	31.2%
\$50,000 +	315	29.3%	414	36.8%

(Centers for Disease Control and Prevention, 2021a)

Obesity affects certain demographic populations more than others. For instance, males are more affected by obesity than females (30.4% versus 27%), and Nevadans aged 45-65 have higher rates of obesity (36.3%). Obesity is also associated with a lack of education. Of Nevada adults, 33.4% of those with less than a high school education live with obesity, compared to

21.2% of those with a college education. Finally, the Hispanic and White populations have a higher rate of obesity in 2020 than the Black population (United Health Foundation, 2022). (See Figure 4-1.)

Figure 4-1: Obesity Trends by Racial Groups in Nevada (United Health Foundation)

There are several environmental factors associated with increased rates of obesity, including reduced walkability of cities (Figure 3-1), the prevalence of fast food, fewer home-cooked meals, more corner stores and liquor stores coupled with fewer grocery stores, unsafe neighborhoods that prohibit exercise and play, lack of parks and other green space, increased portion sizes at restaurants, and lack of information about nutrition (Flores-Dorantes et al., 2020). On a county level, in 2021, obesity was the least prevalent in Esmeralda, Humboldt and Washoe and the most prevalent in Pershing, Mineral and Nye. (See Figure 4-2, and for more details, refer to Appendix D.)

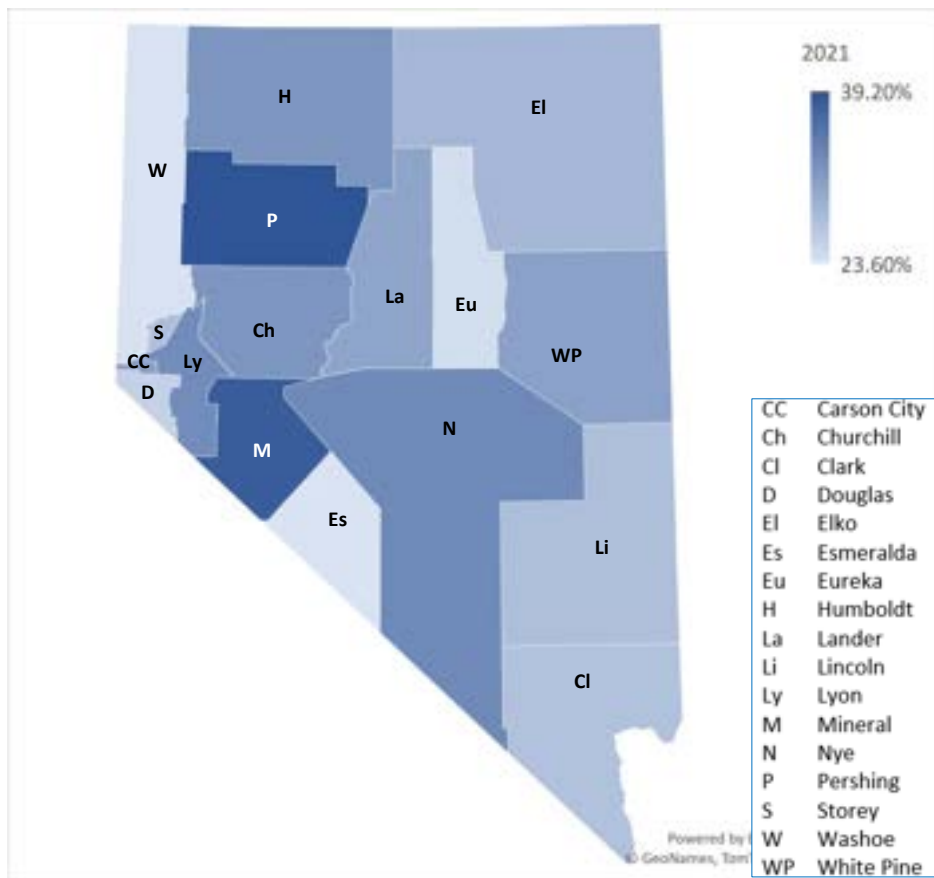


Figure 4-2: Adults Obesity Rates in Nevada by County – 2021

Although no available obesity data exist for the SNAP-eligible population, obesity trends compared to the percentage of eligible SNAP populations across the counties can be analyzed, since obesity is associated with low-income levels. In most counties, higher rates of obesity are associated with a higher SNAP-eligible population (Figure 4-3).

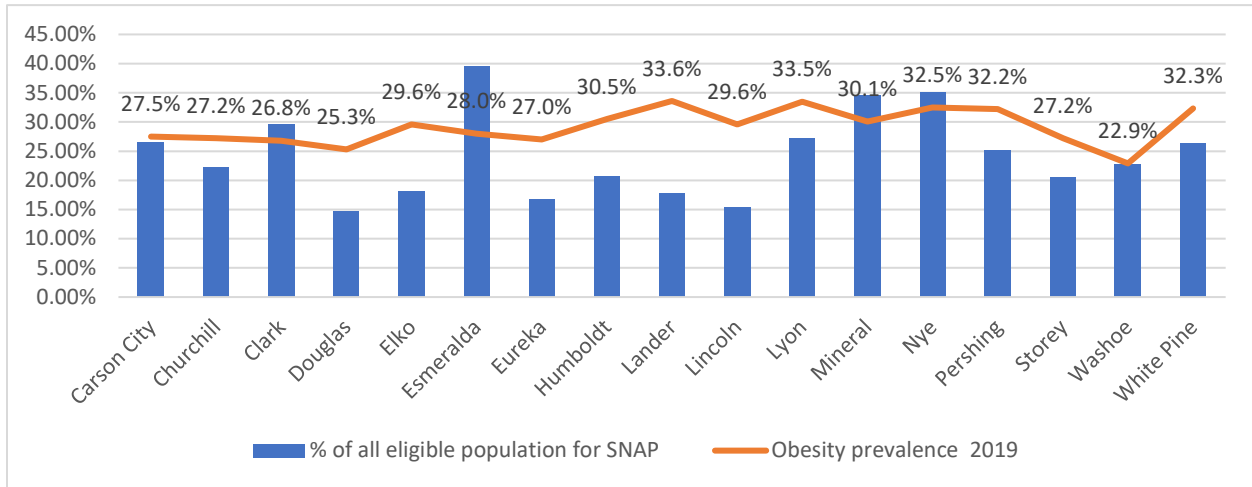


Figure 4-3: Association Between SNAP-eligible Population and Obesity Prevalence – 2019

The Trust for America’s Health annual report stated that despite a 12% decrease in obesity among high school students, rates of overweight classification in this same population increased by 17% in 2019 compared to 2017. Based on Figure 4-4, rates among high school males were higher than females for obesity status, while rates for overweight status were higher in females. Obesity was more prevalent among Hispanic students and those who identify with more than one race, and overweight was more prevalent among Hispanic and Asian students (Figure 4-5).

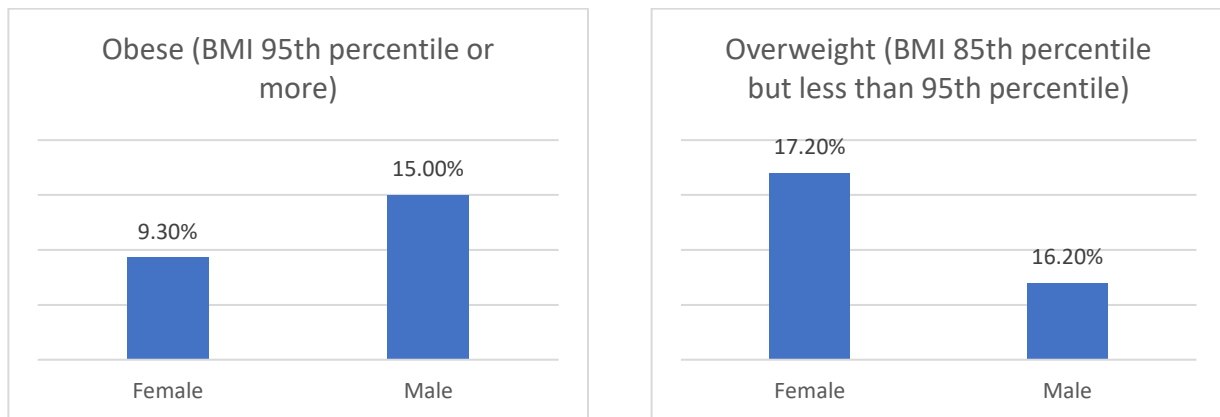


Figure 4-4: High School Students’ Overweight and Obesity by Gender in Nevada – 2019 (United Health Foundation)

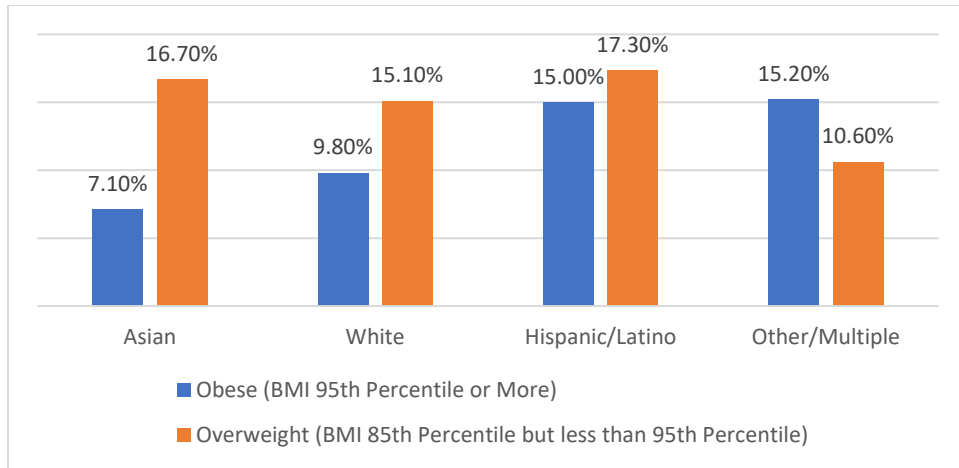


Figure 4-5: High School Students' Overweight and Obesity by Race in Nevada – 2019 (United Health Foundation)

Figure 4-6 shows that kindergartners who reside in rural counties are more likely to have obesity or be overweight than in urban counties such as Washoe and Clark. This implies that increased nutrition education, improved physical activity access and policy, systems and environmental interventions should be implemented in rural areas for kindergartners, their caregivers, and teachers or administrators.

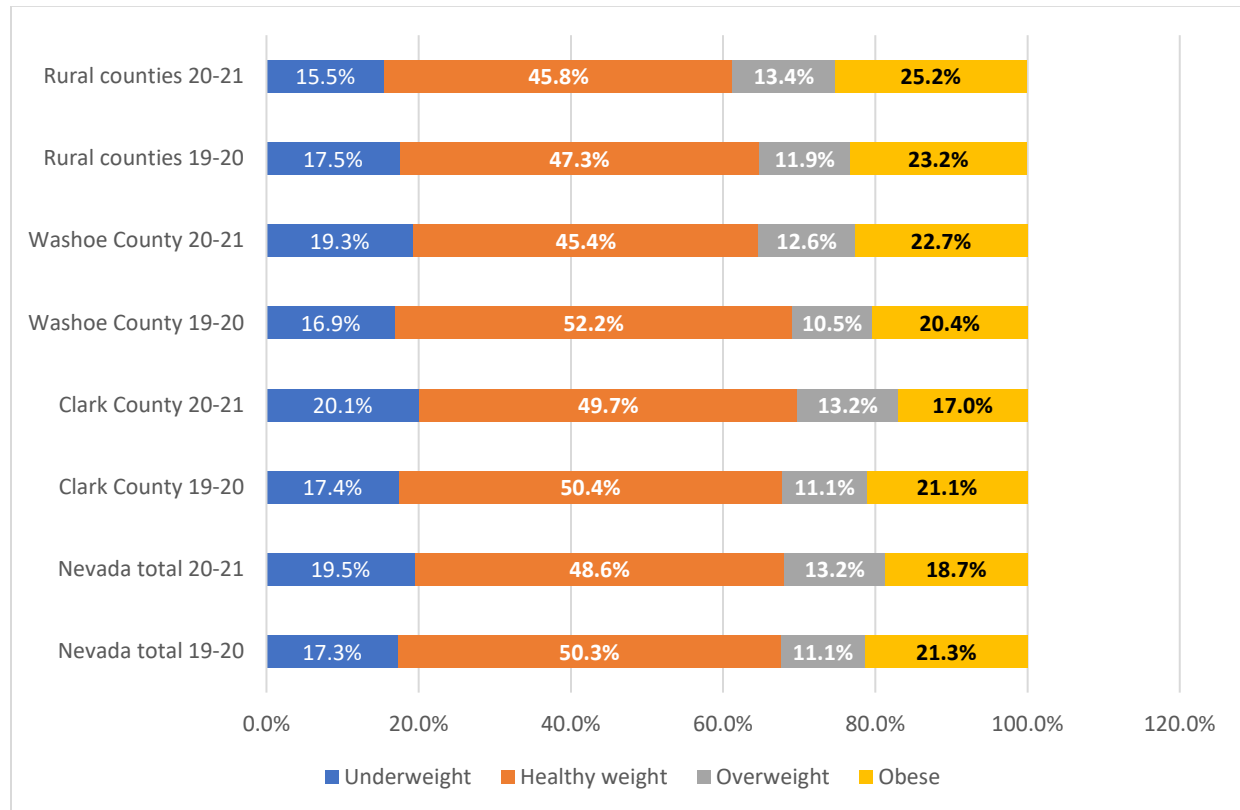


Figure 4-6: Percentage of Kindergarten Students' Weight Status by Region of Nevada—2019-2020, 2020-2021 (Nevada Institute for Children's Research and Policy, 2021, 2020)

Objective 5: Prevalence of Diabetes Among the SNAP-eligible Population in Nevada

In the U.S., diabetes was ranked the eighth leading cause of death in 2020 (Centers for Disease Control and Prevention, 2022). According to the American Diabetes Association, diabetes has been historically associated with the low-income population in the U.S. (American Diabetes Association, 2022). In 2021, Nevada residents diagnosed with diabetes represented 11.1% of the total state population. Of those, 17.5 % had a household income less than \$25,000 per year, 12.9 % made between \$25,000 and \$49,999 per year, 7.6% made between \$50,000 and \$74,999, and 8.2 % made more than \$75,000 per year (United Health Foundation, 2022) (Figure 5-1).

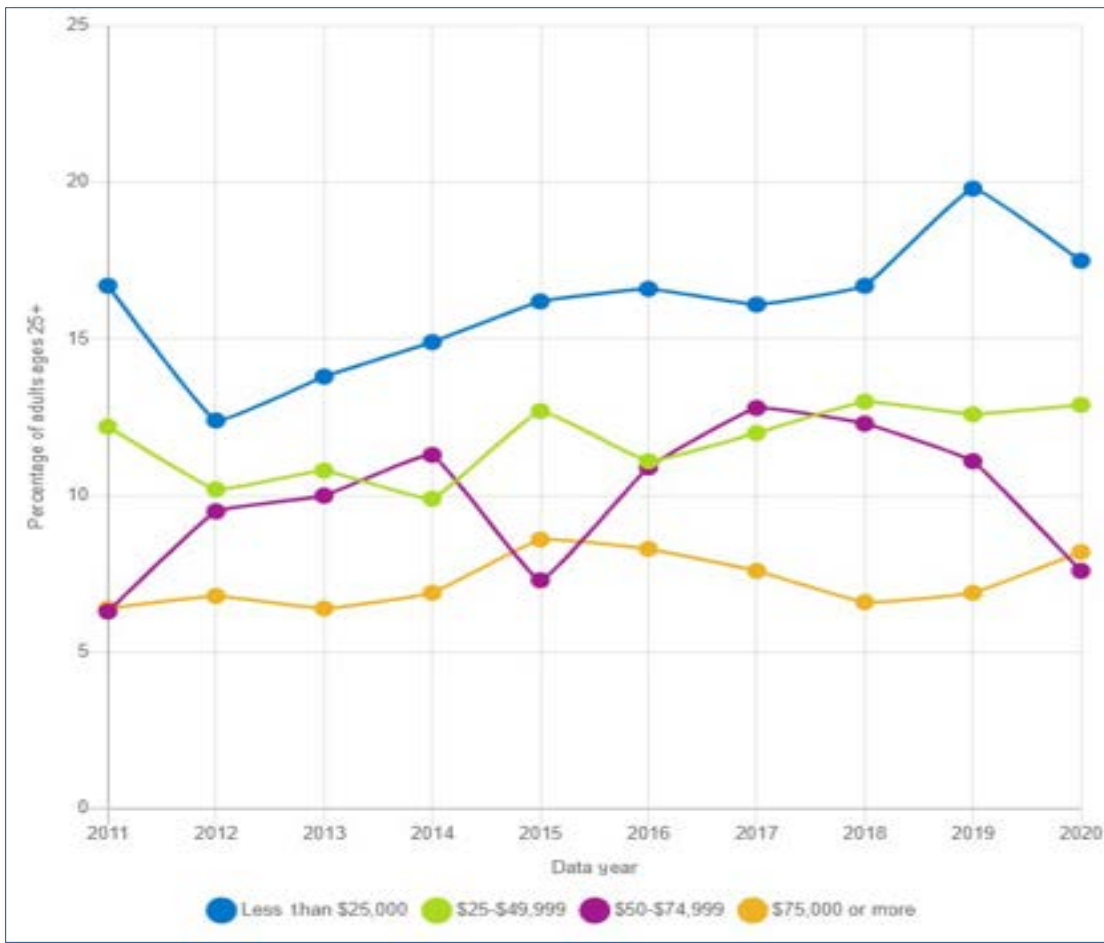


Figure 5-1: Diabetes Trends by Income in Nevada (United Health Foundation, America's Health Rankings)

Figure 5-2 shows the trends in diabetes rates across Nevada counties and the association with the SNAP-eligible population. This association is logical when knowing the SNAP-eligible populations have lower incomes, and being in poverty increases the odds of developing diabetes (Gaskin et al., 2014). When correlating the percentages of the SNAP-eligible populations in each county with the diabetes rates in the same county, a moderate positive correlation was found with an $r(15) = .49, p = .002$ (Figure 5-3).

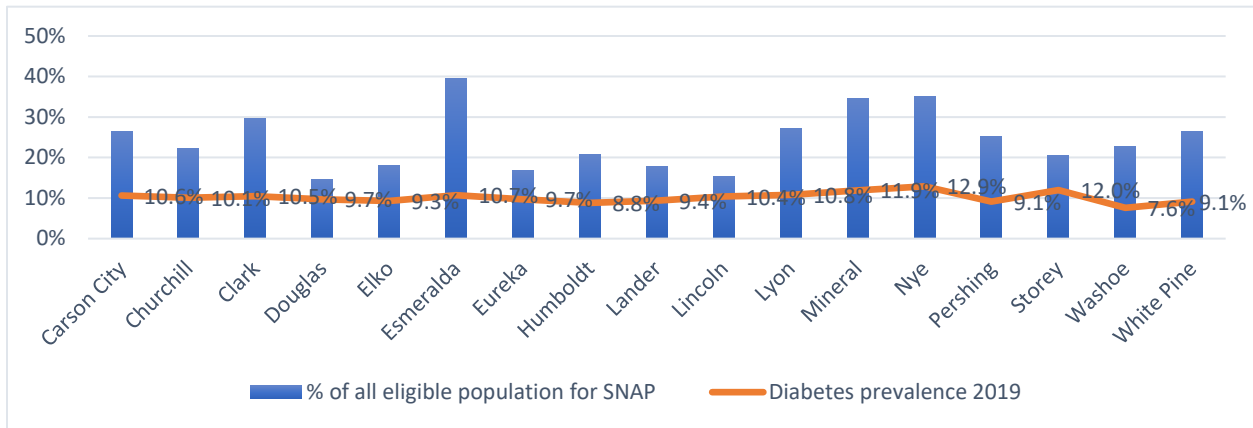


Figure 5-2: Diabetes Trends and SNAP-eligible Population in Nevada – 2019

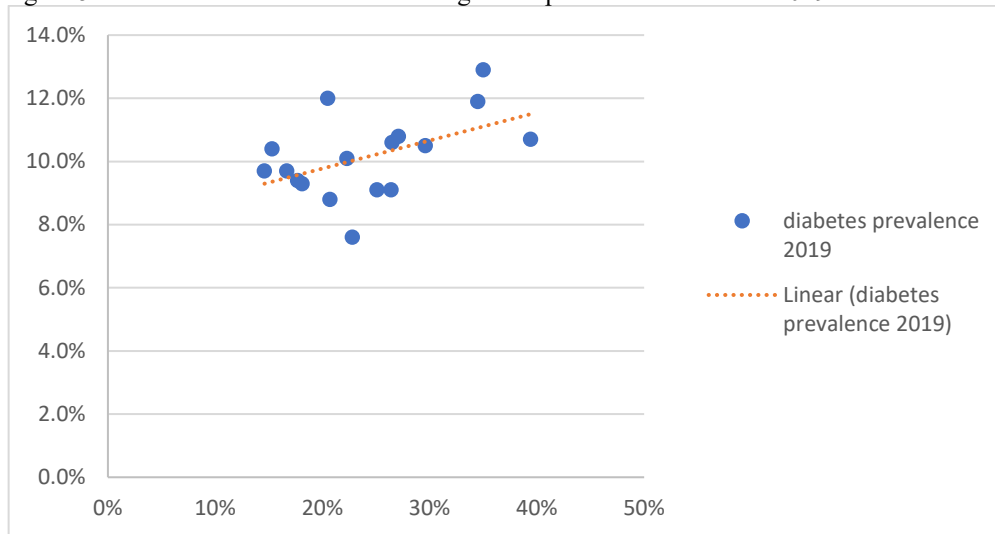


Figure 5-3: Correlation Between Diabetes Rates and SNAP-eligible Population in Nevada – 2019



Figure 5-4: Diabetes Trends by Race in Nevada (United Health Foundation, America’s Health Rankings)

Race is another factor that is associated with diabetes in the U.S. In their study about the prevalence of diabetes by race and ethnicity in the U.S., Cheng et al. (2019) found that diabetes rates were highest among the Hispanic population (22.1%), followed by non-Hispanic Black and non-Hispanic Asian populations (20.4%, 19.1%, respectively). The lowest rate (12.1%) was among the non-Hispanic White population (Cheng et al., 2019). In Nevada, diabetes is more prevalent among the Black population (14.1%), followed by the White population (11.5%), then the Hispanic population (9.9%) (United Health Foundation, 2022) (Figure 5-4).

In 2020, the percentage of men diagnosed with diabetes in Nevada was higher than women (12.4%, and 9.7%, respectively). Men have a higher mortality rate from diabetes than women (United Health Foundation, 2022). Rates are highest among older Nevadans (aged 65 and older).

Diabetes can cause several health problems, including stroke, eyes and feet, and heart diseases (National Institute of Diabetes and Digestive and Kidney Diseases, 2016). Lifestyle behavior changes are essential in managing and preventing diabetes, including physical activity, dietary changes and prescription medication compliance (Smalls et al., 2012).

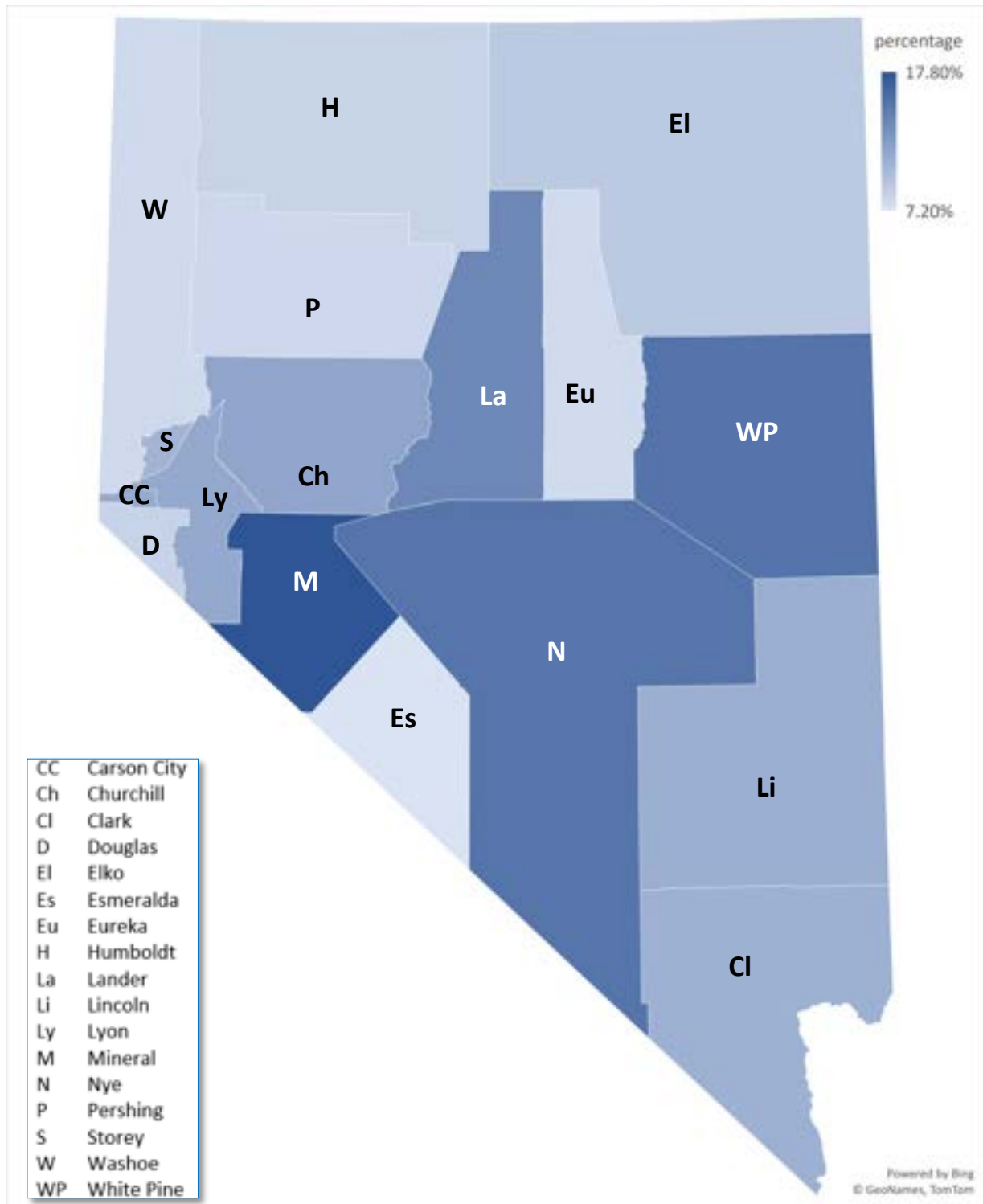


Figure 5-5: Diabetes Prevalence in Nevada by County (USDATA: <https://datausa.io/profile/geo/nye-county-nv>)

Objective 6: Prevalence of Food Insecurity Among the SNAP-eligible Population in Nevada

According to research by Feeding America (Hake et al., 2021), Nevada is one of the most food-insecure states in the nation, especially after the COVID-19 pandemic. Around 12.8% of households are food insecure, ranking Nevada 39th least food insecure nationwide. Food security is measured on four levels by the United States Department of Agriculture: high food security, marginal food security, low food security, and very low food security. Households with low or very low food security are considered food insecure. Very low food security households change eating patterns due to missed meals and reduced food intake (Coleman-Jensen et al., 2014). Figure 6-1 shows Nevada's food insecurity and very low food security. It is clear that the pandemic strongly affected food insecurity in Nevada.

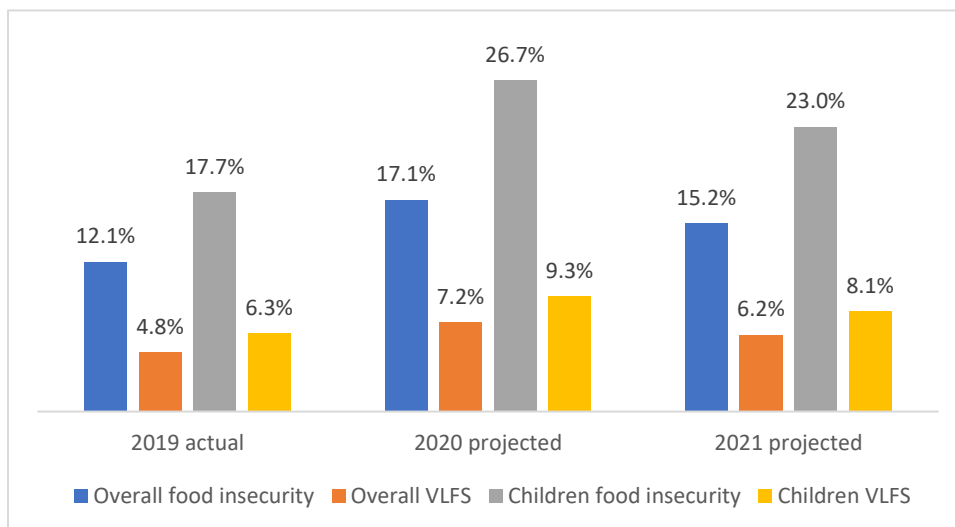


Figure 6-1: Food Insecurity (FI) and Very Low Food Security (VLFS) Percentage

Although the numbers show an increase in low food security in every county in Nevada, the urban areas were more impacted than the rural areas, both among adults and children. The number of children in very low food secure households in Clark County was the fourth highest among U.S. counties in 2020 (51,010) and the fifth highest in 2021 (44,460) (Hake et al., 2021). According to the U.S. Census Bureau, Clark County is the 13th most populous county in the U.S., (see Appendix F for more details on county-level data), which means that many people are at the risk of low food security compared to other U.S. counties.

Table 6-1: Food Insecurity Rate and Poverty Thresholds by Nevada County – 2019

County	Population	Food insecurity rate	Est. # of food insecure individuals	% below 200% poverty	% above 200% poverty
Carson City	54,773	13.8%	7,560	70.6%	29.4%
Churchill	24,259	12.9%	3,130	64.9%	35.1%
Clark	2,182,004	11.8%	257,630	70.7%	29.3%
Douglas	48,132	11.1%	5,350	50.7%	49.3%
Elko	52,297	9.9%	5,170	52.7%	47.3%
Esmeralda	969	13.1%	130	92.2%	7.8%
Eureka	1,859	11.1%	210	41.7%	58.3%
Humboldt	16,828	10.4%	1,750	66.3%	33.7%
Lander	5,643	9.0%	510	74.7%	25.3%
Lincoln	5,180	10.9%	570	51.3%	48.7%
Lyon	54,380	12.8%	6,950	69.3%	30.7%
Mineral	4,460	15.1%	680	75.4%	24.6%
Nye	44,380	16.0%	7,100	73.1%	26.9%
Pershing	6,615	11.5%	760	47.5%	52.5%
Storey	3,988	10.6%	420	47.2%	52.8%
Washoe	456,936	11.0%	50,080	66.4%	33.6%
White Pine	9,679	11.6%	1,120	54.2%	45.8%
Nevada total	3,085,702	12.1%	373,370	66.9%	33.1%

(Gundersen et al., 2021)

Table 6-2 illustrates that the statewide food insecurity rate was trending down before the COVID-19 pandemic. The projections listed in Figure 6-1 show that Nevada's total food insecurity rates have risen to the rates measured in 2009-2013, and that the impact is especially high among children.

Table 6-2: Food Insecurity in Nevada by County – 2009-2019

County	Food insecurity rate (%)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*	2019
Carson City	16.0	16.8	16.1	14.9	15.2	14.5	13.7	13.1	12.4	14.7	13.8
Churchill	13.4	14.3	13.8	13.9	15.0	15.3	14.9	14.1	12.7	12.6	12.9
Clark	16.2	17.5	17.4	15.7	15.0	14.4	13.4	12.8	12.6	12.8	11.8
Douglas	15.1	16.8	14.7	13.6	14.1	12.9	12.5	11.8	11.0	11.4	11.1
Elko	10.8	10.8	9.5	9.3	9.7	9.3	9.2	8.7	8.7	10.0	9.9
Esmeralda	11.8	12.6	13.2	14.9	14.6	14.7	13.3	12.6	11.1	12.7	13.1
Eureka	10.6	14.5	10.7	12.2	14.1	14.0	13.4	12.8	11.5	10.9	11.1
Humboldt	13.1	13.0	10.7	10.5	10.4	9.5	8.9	8.8	7.6	9.9	10.4
Lander	12.7	11.5	10.2	9.2	8.1	9.2	8.4	8.9	7.9	9.8	9.0
Lincoln	16.5	16.7	15.6	16.4	18.5	15.7	14.4	13.0	12.5	12.2	10.9
Lyon	19.5	20.6	17.8	16.3	16.5	14.6	14.7	13.5	12.3	13.1	12.8
Mineral	17.3	20.3	17.6	17.8	18.1	17.8	17.6	15.6	15.1	17.2	15.1
Nye	19.8	21.2	18.7	17.1	16.9	15.6	15.2	14.5	14.1	16.2	16.0
Pershing	15.3	15.7	13.7	14.5	14.6	13.6	13.3	12.3	11.1	12.2	11.5
Storey	15.0	15.4	11.7	11.3	13.0	12.0	11.6	10.6	10.2	11.9	10.6

Washoe	15.9	16.4	16.0	15.0	14.7	13.7	12.7	11.9	11.2	11.2	11.0
White Pine	13.5	14.4	11.7	12.8	13.2	11.9	11.3	11.3	10.8	11.5	11.6
Nevada total	16.1	17.5	17.4	16.8	15.8	14.9	13.7	12.7	12.2	12.8	12.1

(Gundersen, Strayer, et al., 2021) *Due to methodological changes in the 2018 data set, 2018 and 2019 data may not be directly comparable to 2009-2017 data.

Objective 7: Prevalence of Food Waste Among the SNAP-eligible Population in Nevada

According to Feeding America, over 108 billion pounds (54 million tons) of food is wasted in the U.S. each year. Data from the U.S. Environmental Protection Agency, presented in Tables 7-1 and 7-2, estimate that between 95,254 and 516,971 tons of food were wasted in Nevada per year between 2015 and 2018. The high estimate (516,971 tons) is less than 1% of the national estimate. Food waste was highest among the food wholesale and retail industry and lowest among health care facilities. Local food banks and pantries work with local stores and restaurants to redistribute unused food to people and households experiencing food insecurity.

Table 7-1: Food Waste Prevalence in Nevada Industry by County – 2015-2018 (Part 1)

Excess food estimates in tons per year								
County	Correctional facilities ¹		Educational institutions ²		Food manufacturing and processing ¹		Food wholesale and retail ¹	
	Low	High	Low	High	Low	High	Low	High
Carson City	629	1,137	116	601	235	753	69	6,551
Churchill	7	13	34	161	47	152	14	2,140
Clark	1,484	2,680	4,079	10,378	5,101	16,356	3,293	134,981
Douglas	10	18	57	267	63	202	88	3,267
Elko	55	100	129	660	6	20	44	3,971
Esmeralda	--	--	1	3	--	--	2	117
Eureka	--	--	2	11	--	--	1	117
Humboldt	20	217	31	148	18	59	22	996
Lander	--	--	9	42	--	--	2	351
Lincoln	9	16	2	43	--	--	11	468
Lyon	--	--	73	346	14	44	16	2,721
Mineral	--	--	5	21	--	--	0	162
Nye	10	18	47.0	221	3	11	23	2,277
Pershing	120	217	6	28	--	--	1	309
Storey	--	--	4	17	--	--	21	117
Washoe	75	135	1,038	5,408	3,957	12,691	1,004	29,298
White Pine	213	384	13	59	1	4	24	819
Nevada total	2,632	4,935	5,645	18,414	9,446	30,290	4,633	188,662

(Environmental Protection Agency, 2019); ¹2018 data, ²2015 and 2016 data; --: No Data

To address the issue of food waste, the Council on Food and Security and the Food for People Not Landfills Program were established through Senate Bill 178 (SB178), which passed

in the 80th Nevada Legislative Session. The program aims to reduce food insecurity by redirecting edible food that would otherwise be diverted to the landfill to hungry communities (Nevada Department of Health and Human Services, 2020).

Although no available data link the SNAP-eligible population to food waste in Nevada, the research has proven that people with low incomes and low nutrition literacy tend to consume less healthy food options because they are afraid to waste healthy foods that are relatively expensive (Connell et al., 2019). Wasting food in low-income populations and directing toward unhealthy options may be driven by one of the following reasons: 1) limited knowledge of food preservation techniques; 2) selection of unhealthy food items to prepare rather than using produce or other healthy items due to lacking knowledge of preparation methods; 3) limited knowledge of available healthy options and how to obtain them cost-effectively; 4) lack of food storage literacy causing caregivers to consume expired or otherwise unhealthy foods to avoid waste; and 5) lack of time or energy to cook and a reliance on fast foods instead of healthy foods even if the healthy options are given to them (Connell et al., 2019).

Achieving adequate nutrition literacy levels among lower-income and ethnic minority populations may be more challenging due to time and/or educational resources constraints (Gans et al., 2009). Furthermore, lower-income parents must balance between obtaining good nutrition for the family and the high cost, representing an economic constraint (Foley & Pollard, 1998). Since wasted food equates to wasted money, wasted food among low-income households is more sensed than waste in higher-income households (Connell et al., 2019).

Table 7-2: Food Waste Prevalence in Nevada Industry by County – 2018 (Part 2)

Excess food estimates in tons per year						
County	Health care facilities		Hospitality		Restaurants and food services	
	Low	High	Low	High	Low	High
Carson City	27	143	51	269	928	2,701
Churchill	5	25	153	811	300	741
Clark	636	3,412	24,305	128,527	31,617	85,277
Douglas	3	14	431	2,280	959	2,140
Elko	6	31	503	2,659	463	1,717
Esmeralda	--	--	--	--	3	12
Eureka	--	--	3	14	9	25
Humboldt	6	33	123	651	226	684
Lander	1	4	13	68	20	81
Lincoln	2	13	2	12	31	110

Lyon	7	39	89	472	278	1021
Mineral	1	7	1	6	0.2	11
Nye	8	43	289	1528	262	942
Pershing	4	24	0.4	2	107	217
Storey	--	--	3	15	15	56
Washoe	197	1055	3404	17,998	7,221	18,058
White Pine	1	8	61	321	125	394
Nevada total	904	4,850	29,432.4	155,634	42,563.2	114,186

(Environmental Protection Agency, 2019), --: No Data

Objective 8: Existing Programs and Services for the SNAP-eligible Population in Nevada

There are several programs and services for the SNAP-eligible population across Nevada. Their distribution and density vary between urban and rural areas. The following represents a summary of the services and programs that are available.

8.1. SNAP-Ed Interventions

SNAP-Ed interventions occur in every county in Nevada (Buffington et al., 2020). SNAP-Ed programming reaches people in all stages of life, including early childhood, school-aged children, adults and older adults. Outside of SNAP-Ed programming, communities have varied access to exercise and healthy eating options.

In addition to SNAP-Ed programming, the Expanded Food and Nutrition Education Program is implemented in Clark County for low-income families and adolescents. The program provides nutrition education through practical, hands-on and applied methods, but is currently only offered in one county in Nevada.

8.2. Exercise Opportunities

According to Figure 8-1, residents in Esmeralda, Nye and Pershing counties have significantly ($p < .05$) lower access to exercise opportunities. These counties have the first, third, and fourth-highest percentages of the SNAP-eligible population in Nevada.

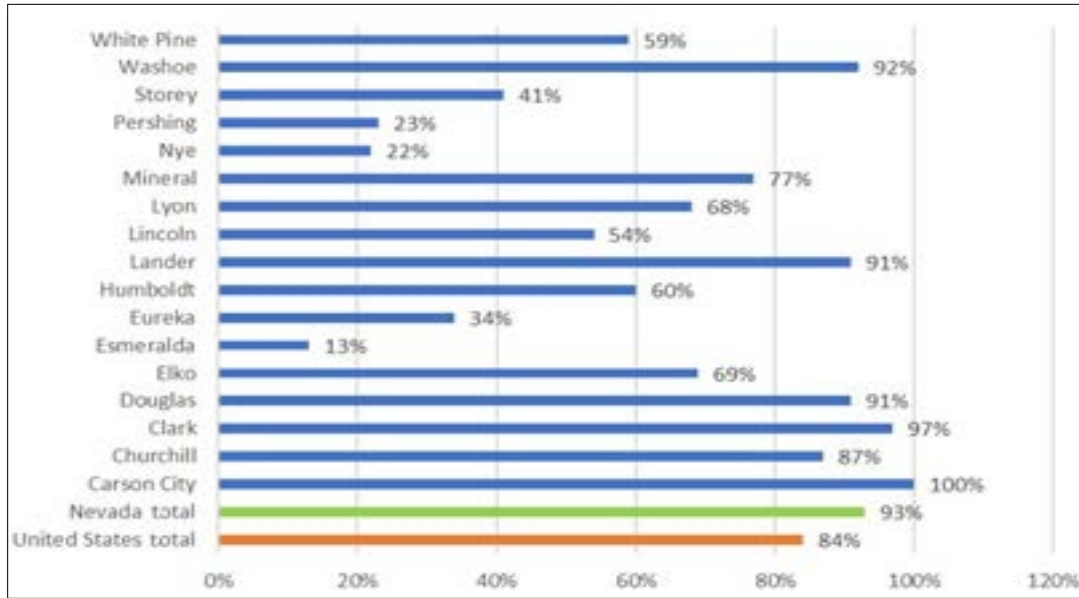


Figure 8-1: Nevada Access to Exercise Opportunities by County – 2021 (University of Wisconsin Population Health Institute & Robert Wood Johnson Foundation, 2021)

8.3. Farmers Markets

Farmers markets are marketed on the idea that products sold at the market are directly from the farms where they originated. Figure 8-2 shows the locations of farmers markets in operation in 2021 in Nevada. Most, except for those in Clark County, operate on a seasonal basis, generally from May through October, and are open weekly. A list of markets' locations can be found in Appendix G. Of the 37 markets available, 16 are listed as accepting SNAP. An additional eight direct-marketing farmers accept SNAP. This information changes quickly, and SNAP acceptance is not currently listed on market websites. It is important to note that marketing materials do not always mention accepted payment methods, and SNAP payment methods are different across the state. Providing details on accepting SNAP would be an important component of encouraging SNAP participants to take advantage of farmers markets.



Figure 8-2: Farmers Markets That Accept SNAP

Several counties in Nevada are not currently served by farmers markets – Esmeralda, Eureka and Pershing. Esmeralda and Pershing have the first- and fourth-highest percentages of SNAP-eligible population in Nevada.

8.4. Food Banks

There are two food banks in Nevada – Three Square (in the south) and the Northern Nevada Food Bank – that partner with local agencies to provide prepared and packaged food to eligible individuals across 250 locations. Every county in Nevada has at least one food pantry location. Both food banks provide lists of all partners on their websites.



Figure 8-3: Nevada Food Pantries — 2021

8.5. Senior Services

The State of Nevada Aging and Disability Services has a network of resource centers that provide services to older adults in all Nevada counties. The centers help with resource and service navigation, caregiver support and veteran services. Clark County is served by two resource centers, The Jewish Family Service Agency and The Nevada Senior Services. The latter center also serves Nye, Esmeralda and Lincoln counties. Lyon County is served by one resource center, The Lyon County Human Services, and the remaining 11 counties and Carson City are served by one center, Access to Healthcare Network.³ In addition, Nevada 2-1-1, available both via telephone and internet (nevada211.org), provides information about services and programs to older adults statewide.

³ <https://www.nevadacareconnection.org/contact-us/>

Senior centers provide various services for people 60 and older, including meal services, transportation, physical and social activities, and help to access resources for those in need. The senior centers listed on the Nevada Aging and Disability Services website list mailing addresses and phone numbers for all listed senior centers⁴, but only 32 of the 68 have links to websites with more information. There is at least one senior center in every county in Nevada except for Esmeralda.

8.6. School-Age Services

The Nevada Afterschool Network website (nevadaafterschool.org) provides a site map of participating programs throughout the state. Most listed programs are in Clark and Washoe counties, with most other programs located along Interstate Highway 80 in northern Nevada. The map allows searches in rural counties and programs that provide financial aid, free meals and accommodations for special needs. More than 425 programs are listed, but it is not a comprehensive list. Most services are free, and some are paid services with affordable costs. The services are offered to children of all ages.

The services provided by after-school programs – usually open before school, some school holidays and the hours right after school – generally include healthy snacks, physical activity and homework help to students in kindergarten through elementary school. After-school programs extend the workday for parents and serve a crucial function for lower-income families.

8.7. Early Childhood Services

Women, Infant, and Children (WIC) benefits are available to lower-income expectant mothers or those caring for children under 5 years old. Services include nutrition education, breastfeeding support, supplemental nutritious foods, and referrals to other health and social services. There are WIC clinics throughout Nevada counties, except for Eureka, which is served through clinics in Ely or Elko. WIC's website (nevadawic.org) contains resources to help people find more information about WIC. It might be beneficial to consider partnering with WIC offices to provide some nutrition education to the WIC population via SNAP-Ed in Eureka.

⁴ <https://adsd.nv.gov/Resources/NevadaSeniorCenters/>

Objective 9: Policies That Affect Health Behaviors or Status of the SNAP-eligible Population in Nevada

In 2015, the Nevada Legislature failed to pass Senate Bill 178, which would have encouraged Nevada school districts to provide a minimum of 75 minutes of physical activity per week to elementary students in grades kindergarten through fifth (Centers for Disease Control and Prevention, 2018). The data show that physical activity among students is low, and obesity rates continue to rise, particularly in rural parts of Nevada. The same bill also required school districts in Clark and Washoe counties (i.e., counties with a population of 100,000 or more) to measure the height and weight of a representative sample of students in the fourth, seventh, and 10th grades.

The U.S. Centers for Disease Control and Prevention have available data on whether or not each state regulation related to the different population groups aligns with national standards. In 2020, Nevada was among the states that did not meet the national standards of child care regulations related to serving fruits and vegetables, standards of physical activity for preschoolers, standards for avoiding sweetened beverages, and time on media (for children less than 2). The only available policies are those related to streets and the existence of a state-level Food Policy Council (in addition to two local councils). In 2018, secondary schools established a healthier environment regarding the nutrition of their students in Nevada. Most (75.7%) offered a self-serve salad bar to students; only 19.1% of schools allowed students to purchase soda or fruit drinks from one or more vending machines or at the school store, canteen or snack bar; 29.5% of the schools did not allow students to purchase sports drinks from one or more vending machines or at the school store, canteen or snack bar.

Regarding Nevada legislation related to healthy behavior, several legislations were enacted from 2003 to 2017 (Center for Disease Control Nutrition, Physical Activity, and Obesity – Legislation, 2018); among those legislations are the following:

1. Legislation promotes Farmers' Markets, Fruits and Vegetables, Access to Healthy Foods, and School Nutrition



Appropriates funding to maintain a school garden for certain Title I schools. This garden would promote the consumption of fresh, healthy fruits and vegetables. For schools to receive funding for the garden program, among other things the school must create and maintain school garden, provide the students with the ability to operate farmer's market and see produce from the school garden.”

2. Legislation tackles Body Mass Index (BMI)



Bill defines obesity as a chronic disease which is particularly why this bill also requires that the Division of Public and Behavioral Health of the Department of Health and Human Services to prepare an annual report obesity. Metrics include height and weight of pupils.”

3. Legislation tackles Access to Recreational Opportunities



Bill requires Boards of Trustees of school districts to grant the use of athletic fields that do not contain lights at each elementary, middle or junior high school within the school district to a nonprofit organization which serves adults and children with disabilities or which provides programs for youth sports, provides that the organization may use the field at any time that is not during school hours, required for school related activities, or undergoing maintenance, requires insurance coverage..”

4. Legislation tackles School Nutrition, Physical Education, and Physical Activity Requirements



Bill urges schools to develop positive policies to ensure proper nutrition and appropriate levels of physical activity during the school day and in after-school programs, and to expand quality programs of physical education.”

5. Legislation tackles Physical Activity and Physical Education Requirements



Bill urges each public school and each school district in the state to: (1) abide by the requirements set forth in the Statewide School Wellness Policy; (2) ensure that the current amount of time allocated for physical education, physical activity and recess is expanded and not reduced; and (3) engage creative measures to provide additional opportunities for physical activity.”

6. Legislation tackles Access to Drinking Water and Nutrition



Establishes rules governing services and facilities for care of children. Centers must offer each child drinking water at times other than during his regular feedings and must comply with parents’ instructions whether the child will be fed breast milk, formula or solid food.”

Although legislations that promote nutrition and physical activities are in place in Nevada, the actual implementation of health policies is lacking. A strong emphasis should be drawn on supporting sites in the implementation of those policies and monitoring their implementation in the field.

Objective 10: Barriers to Access Healthy Foods and Physical Activity Among the SNAP-eligible Population in Nevada

Several reasons prevent the SNAP-eligible population in Nevada from accessing healthy foods and physical activity and enrolling in SNAP programs and benefits.

Three of the highest percentages of SNAP-eligible populations reside in Esmeralda, Mineral and Nye counties. The remoteness of these counties, combined with the very low population densities, create a barrier to appropriate education, health and nutrition services. This results in higher food insecurity rates among the SNAP-eligible populations in those counties (Table 6-3) and impacts their health negatively (increased diabetes and obesity prevalence). (See Objectives 4 and 5.) The previously mentioned frontier counties have a population density of less than six persons per square mile and are far from populated centers in Nevada. Frontier counties include Churchill, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Mineral, Nye, Pershing and White Pine (Griswold et al., 2021).

Besides having poor access to goods, resources and services, people who live in frontier counties are also more challenging to reach in numbers that make statistical analysis of their situations feasible (Buffington et al., 2020). Qualitative or quantitative research of frontier populations is difficult, which further complicates the ability of the SNAP-Ed community to assess the community needs effectively and accurately.

The COVID-19 global pandemic was particularly impactful on food insecurity. Increased demand for food distribution, quarantine and social-distancing measures greatly reduced the direct education efforts of many SNAP-Ed implementing agencies (Cook & Wolf, 2021). School closures limited access to healthy school meals, and most indoor exercise facilities were closed or limited for several months. In addition, with many direct-education efforts going online, limited internet service in frontier counties, and limited experience with technology among older populations, people's ability to receive education and information about where to receive emergency food supplies during the pandemic decreased (Cook & Wolf, 2021).

The social distancing and school closures during the global pandemic also hindered the ability of community organizations to maintain school and community gardens, which could be a potential source of fresh produce for SNAP-eligible populations. In 2017, the Nevada Legislature enacted Senate Bill 167 into law, appropriating funding to Title I schools to build and maintain community gardens (Centers for Disease Control and Prevention, 2018). Because community

gardening requires face-to-face interaction, many community gardens did not operate at full capacity for most of 2020 and 2021. Although this is a temporary setback, it may take time to re-establish community gardens to pre pandemic levels or greater.

The walkability scores in most rural counties are low, as mentioned in Objective 3. This impacts the physical activity significantly in those cities and prevents the population from participating in active transportation. The lack of physical activity might have a serious implication on health. The research found that the total walkability scores are significantly associated with steps. For every 1-unit increase in walk score, the participant's steps per day increased by 51.4 (95% CI: 11.1–91.7, $p=.01$) (Camhi et al., 2019).

Internet connectivity can be low in frontier and rural communities, which prevents people from having adequate online education. After the breakout of the COVID-19 pandemic, many programs that used to provide nutrition education face-to-face shifted their education to online. Some of the counties that have high percentages of individuals within households without internet access of whom were SNAP-eligible include Nye (43.4%), Carson City (33.9%), Clark (34.3%), Mineral (33.3%) and Storey (32.3%). Other counties have an approximate 20% of SNAP-eligible individuals within households without internet access.

Some additional barriers that might prevent SNAP-eligible population from being enrolled in the SNAP Program include: 1) the lengthy application that they have to fill out in order to enroll in the program and benefit from the money going toward food; 2) the remoteness of many counties and locations might prevent people from enrolling in the program due to the lack of transportation; 3) lack of awareness that the programs exist or who is eligible; 4) low monetary support through SNAP for some individuals (e.g., those without families, divorced adults without custody of children) may not justify the application process; 5) missing information and delayed responses in the enrollment process that causes denial of their applications; and 6) perception of stigma related to participating in the program.

References

- Adolphus, K., Lawton, C. L., & Dye, L. (2013). The effects of breakfast on behavior and academic performance in children and adolescents. *Frontiers in human neuroscience*, 7, 425.
- American Fitness Index. (January, 2022). *ACSM American fitness index rankings*. <https://americanfitnessindex.org/rankings/>
- Buffington, A., Webber, K., & Lindsay, A. (2020). *University of Nevada, Reno Extension statewide SNAP-Ed needs assessment, 2020-2021*. University of Nevada, Reno Extension Special Publication 20-14. <https://extension.unr.edu/publication.aspx?PubID=3976>
- Camhi, S. M., Troped, P. J., Garvey, M., Hayman, L. L., Must, A., Lichtenstein, A. H., & Crouter, S. E. (2019). Associations between Walk Score and objective measures of physical activity in urban overweight and obese women. *PloS one*, 14(3), e0214092. <https://doi.org/10.1371/journal.pone.0214092>
- Censin, J. C., Peters, S. A., Bovijn, J., Ferreira, T., Pulit, S. L., Mägi, R., ... & Lindgren, C. M. (2019). Causal relationships between obesity and the leading causes of death in women and men. *PLoS genetics*, 15(10), e1008405.
- Centers for Disease Control and Prevention (2018). *CDC nutrition, physical activity, and obesity – legislation*. <https://chronicdata.cdc.gov/Nutrition-Physical-Activity-and-Obesity/CDC-Nutrition-Physical-Activity-and-Obesity-Legisl/nxst-x9p4>
- Centers for Disease Control and Prevention (2021d). *PLACES: Local data for better health. County data 2021 release*. <https://chronicdata.cdc.gov/500-Cities-Places/PLACES-Local-Data-for-Better-Health-County-Data-20/swc5-untb>
- Centers for Disease Control and Prevention (December, 2021a). *BRFSS prevalence & trends data*. <https://www.cdc.gov/brfss/brfssprevalence/index.html>
- Centers for Disease Control and Prevention (December, 2021c). *Nutrition, physical activity, and obesity: Data, trends and maps*. <https://www.cdc.gov/nccdphp/dnpao/data-trends-maps/index.html>
- Centers for Disease Control and Prevention. (2021b). *CDC's work to support & promote breastfeeding in hospitals, worksites, & communities*. <https://www.cdc.gov/breastfeeding/about-breastfeeding/why-it-matters.html>
- Cheng, Y. J., Kanaya, A. M., Araneta, M. R. G., Saydah, S. H., Kahn, H. S., Gregg, E. W., ... & Imperatore, G. (2019). Prevalence of diabetes by race and ethnicity in the United States, 2011-2016. *Jama*, 322(24), 2389-2398.
- Coleman-Jensen, A., Gregory, C., & Singh, A. (2014). Household food security in the United States in 2013. *USDA-ERS Economic Research Report*, (173).
- Coleman-Jensen, A., Rabbitt, M. P., Hales, L., & Gregory, C. A. (2021). *Food security in the U. S.: Measurement*. Economic Research Service, U. S. Department of Agriculture. <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/measurement/>
- Connell, Finkelstein, S. R., Scott, M. L., & Vallen, B. (2019). Preventing Food Waste and Promoting Healthier Eating among Lower-Income Families in Industrialized Nations. In *Handbook of Famine, Starvation, and Nutrient Deprivation* (pp. 341–357). Springer International Publishing. https://doi.org/10.1007/978-3-319-55387-0_9

- Cook, S., & Wolf, T. (2021). *SNAP-Ed annual report FFY2021*. State of Nevada. <https://www.nvsnap-ed.org>
- Cook, S., & Wolf, T. (2022). *SNAP-Ed annual report FFY2021*. State of Nevada. <https://www.nvsnap-ed.org>
- Cubit Planning, Inc. (January, 2022). *Nevada demographics by Cubit*. https://www.nevada-demographics.com/cities_by_population
- Diedrick, M., Lensch, T., Zhang, F., Peek, J., Clements-Nolle, K., & Yang, W. (2020a). *2019 Nevada high school youth risk behavior survey (YRBS) report*. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. <https://www.unr.edu/public-health/research-activities/nevada-youth-risk-behavior-survey>
- Diedrick, M., Lensch, T., Zhang, F., Peek, J., Clements-Nolle, K., & Yang, W. (2020b). *2019 Nevada middle school youth risk behavior survey (YRBS) report*. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. <https://www.unr.edu/public-health/research-activities/nevada-youth-risk-behavior-survey>
- Feeding America. (2022, March). *How we fight food waste in the US*. <https://www.feedingamerica.org/our-work/our-approach/reduce-food-waste>
- Finkelstein, E. A., Trogon, J. G., Cohen, J. W., & Dietz, W. (2009). Annual Medical Spending Attributable To Obesity: Payer-And Service-Specific Estimates: Amid calls for health reform, real cost savings are more likely to be achieved through reducing obesity and related risk factors. *Health affairs*, 28(Suppl1), w822-w831.
- Flores-Dorantes, M. T., Díaz-López, Y. E., & Gutiérrez-Aguilar, R. (2020). Environment and gene association with obesity and their impact on neurodegenerative and neurodevelopmental diseases. *Frontiers in Neuroscience*, 863.
- Foley, R. M., & Pollard, C. M. (1998). Food cent \$—implementing and evaluating a nutrition education project focusing on value for money. *Australian and New Zealand Journal of Public Health*, 22(4), 494-501.
- Gans, Risica, P. M., Strolla, L. O., Fournier, L., Kirtania, U., Upegui, D., Zhao, J., George, T., & Acharyya, S. (2009). Effectiveness of different methods for delivering tailored nutrition education to low income, ethnically diverse adults. *The International Journal of Behavioral Nutrition and Physical Activity*, 6(1), 24–24. <https://doi.org/10.1186/1479-5868-6-24>
- Gaskin, D. J., Thorpe Jr, R. J., McGinty, E. E., Bower, K., Rohde, C., Young, J. H., ... & Dubay, L. (2014). Disparities in diabetes: the nexus of race, poverty, and place. *American journal of public health*, 104(11), 2147-2155.
- Glanz, K., Rimer, B. K., & Viswanath, K. (Eds.). (2008). *Health behavior and health education: theory, research, and practice*. John Wiley & Sons.
- Griswold, T., Packham, J., Warner, J., & Etchegoyhen, L. (2021). *Nevada rural and frontier health data book* (10th ed.). University of Nevada, Reno School of Medicine. <https://www.elkocountynv.net/boards/Health/2021/DATA%20BOOK%202021%20Final%203-4-21.pdf>
- Gundersen, C., Hake, M., Dewey, A., & Engelhard, E. (2021). *The impact of the coronavirus on food insecurity in 2020 & 2021*. Feeding America. <https://www.feedingamerica.org/research/coronavirus-hunger-research>
- Gundersen, C., Strayer, M., Dewey, A., Hake, M., & Engelhard, E. (2021). *Map the meal gap 2021: An analysis of county and congressional district food insecurity and county food cost in the United States in 2019*. Feeding America.

- https://www.feedingamerica.org/research/map-the-meal-gap/by-county?s_src=WXXX1MTMG&_ga=2.174131170.1941414673.1645221518-1591157516.1645221518
- Gupta, R. P. S., de Wit, M. L., & McKeown, D. (2007). The impact of poverty on the current and future health status of children. *Paediatrics & child health*, 12(8), 667-672.
- Hake, M., Dewey, A., Englehard, E., Strayer, M., Dawes, S., Summerfelt, T., & Gunderson, C. (2021). *The impact of the coronavirus on local food insecurity in 2020 & 2021*. Feeding America. https://www.feedingamerica.org/sites/default/files/2021-03/Local%20Projections%20Brief_3.31.2021.pdf
- Hall, J. E., Henegar, J. R., Dwyer, T. M., Liu, J., Da Silva, A. A., Kuo, J. J., & Tallam, L. (2004). Is obesity a major cause of chronic kidney disease?. *Advances in renal replacement therapy*, 11(1), 41-54.
- Hegar, B., & Widodo, A. (2015). Lactose intolerance in Indonesian children. *Asia Pacific journal of clinical nutrition*, 24(Supplement).
- Kari, J. T., Pehkonen, J., Hirvensalo, M., Yang, X., Hutri-Kähönen, N., Raitakari, O. T., & Tammelin, T. H. (2015). Income and Physical Activity among Adults: Evidence from Self-Reported and Pedometer-Based Physical Activity Measurements. *PloS one*, 10(8), e0135651. <https://doi.org/10.1371/journal.pone.0135651>
- McElrone, M., Colby, S., Franzen-Castle, L., Olfert, M. D., Kattelman, K. K., Fouts, H. N., ... & White, A. A. (2021). A community-based cultural adaptation process: developing a relevant cooking curriculum to address food security for Burundian and Congolese refugee families. *Health promotion practice*, 22(4), 549-558.
- Monnat, S. M. (2012). Disease prevalence and behavioral risk in Nevada.
- National Research Council. (2013). Supplemental nutrition assistance program: examining the evidence to define benefit adequacy.
- Nestle, M. (2019). The Supplemental Nutrition Assistance Program (SNAP): history, politics, and public health implications. *American journal of public health*, 109(12), 1631-1635.
- Nevada Department of Agriculture. (December, 2021). *School nutrition - data reports*. https://agri.nv.gov/Resources/Data_and_Reports/Food_and_Nutrition/SN/SN_Data_Reports/
- Nevada Grown. (2022, January). *Farmers markets*. <https://nevadagrown.com/farmers-markets/>
- Nevada Institute for Children's Research and Policy. (2020). *Health status of children entering kindergarten in Nevada: Results of the 2019-2020 (year 12) Nevada kindergarten health survey*. University of Nevada, Las Vegas. <https://nic.unlv.edu/files/KHS%20Year%202012%20Report%2011.04.20%20Final.pdf>
- Nevada Institute for Children's Research and Policy. (2021). *Health status of children entering kindergarten in Nevada: Results of the 2020-2021 (year 13) Nevada kindergarten health survey*. University of Nevada, Las Vegas. <https://nic.unlv.edu/files/KHS%20Year%202013%20Report%2012.6.21.pdf>
- Oddy, W. H. (2002). The impact of breastmilk on infant and child health. *Breastfeeding Review*, 10(3), 5-18.
- Ofori-Asenso, R., Owen, A. J., & Liew, D. (2019). Skipping breakfast and the risk of cardiovascular disease and death: A systematic review of prospective cohort studies in primary prevention settings. *Journal of cardiovascular development and disease*, 6(3), 30.

- Oshio, T., Sano, S., & Kobayashi, M. (2010). Child poverty as a determinant of life outcomes: Evidence from nationwide surveys in Japan. *Social Indicators Research*, 99(1), 81-99.
- Rosenthal, R. J., Morton, J., Brethauer, S., Mattar, S., De Maria, E., Benz, J. K., ... & Sterrett, D. (2017). Obesity in America. *Surgery for Obesity and Related Diseases*, 13(10), 1643-1650.
- Sagadraca, L. N. (2019). An Evaluation of Factors Associated with the Perceptions of Diabetes in a Filipino American Sample Residing in Clark County, Nevada (Doctoral dissertation, University of Nevada, Las Vegas).
- Solis, J. (2019, February 1). Nevada ranks ninth nationwide in racial economic disparity, study says. *Nevada Current*. <https://www.nevadacurrent.com/blog/poverty-in-nevada-worse-among-households-of-color-study-finds/#:~:text=Nevada's%20poverty%20rate%20of%2012,poverty%20at%20even%20higher%20rates>
- Swagerty Jr, D. L., Walling, A., & Klein, R. M. (2002). Lactose intolerance. *American family physician*, 65(9), 1845.
- United States Census Bureau (2019a). *American community survey: Food stamps/supplemental nutrition assistance program (SNAP)*. <https://data.census.gov/cedsci/table?t=Income%20and%20Poverty%3AOfficial%20Poverty%20Measure&g=0400000US32&tid=ACSST1Y2019.S2201>
- United States Census Bureau (2019b). *American community survey: Poverty status in the last 12 months*. <https://data.census.gov/cedsci/table?t=Poverty&g=8600000US89001,89002,89003,89004,89005,89007,89008,89010,89011,89012&tid=ACSST5Y2019.S1701&hidePreview=true&moe=false>
- United States Census Bureau (December, 2021a). *Data: Historical population density data (1910-2020)*. <https://www.census.gov/data/tables/time-series/dec/density-data-text.html>
- United States Census Bureau (December, 2021b). *State population totals and components of change: 2010-2019*. <https://www.census.gov/data/tables/time-series/demo/popest/2010s-state-total.html>
- University of Wisconsin Population Health Institute & Robert Wood Johnson Foundation. (2021). *County health rankings & roadmaps: Building a culture of health, county by county*. <https://www.countyhealthrankings.org/app/nevada/2021/measure/factors/132/data>
- Walk Score. (January, 2022). *Live where you love (search engine)*. <https://www.walkscore.com/>
- Williams, O., DeSorbo, A., Sawyer, V., Apakama, D., Shaffer, M., Gerin, W., & Noble, J. (2016). Hip hop HEALS: pilot study of a culturally targeted calorie label intervention to improve food purchases of children. *Health Education & Behavior*, 43(1), 68-75.
- Yu, C. J., Du, J. C., Chiou, H. C., Feng, C. C., Chung, M. Y., Yang, W., ... & Chen, M. L. (2016). Sugar-sweetened beverage consumption is adversely associated with childhood attention deficit/hyperactivity disorder. *International journal of environmental research and public health*, 13(7), 678.

Appendix A

Table 1: Nevada Food Stamps/Supplemental Nutrition Assistance Program (SNAP)

Label	Total population		Households receiving SNAP		Households not receiving SNAP	
	Number	Percent	Number	Percent	Number	Percent
All Households	1,143,557	100%	120,299	10.5%	1,023,258	89.5%
<u>Household type</u>						
Married-couple family	506,470	44.3%	28,480	23.7%	477,990	46.7%
Male householder, no spouse present	70,547	6.2%	11,218	9.3%	59,329	5.8%
Female householder, no spouse present	146,738	12.8%	35,391	29.40%	111,347	10.9%
Nonfamily households	419,802	36.7%	45,210	37.6%	374,592	36.6%
<u>Poverty status</u>						
Below poverty level in the past 12 months	144,203	12.6%	45,994	38.2%	98,209	9.6%
At or above poverty level in the past 12 months	999,354	87.4%	74,305	61.8%	925,049	90.4%
<u>Disability status</u>						
One or more people with a disability	288,510	25.2%	53,721	44.7%	234,789	22.9%
No persons with a disability	855,047	74.8%	66,578	55.3%	788,469	77.1%
<u>Race and Hispanic or Latino origin of householder</u>						
Black or African American	112,854	9.9%	22,022	18.3%	90,832	8.9%
American Indian and Alaska Native	14,321	1.3%	2,171	1.8%	12,150	1.2%
Asian	84,808	7.4%	6,539	5.4%	78,269	7.6%
Native Hawaiian and other Pacific Islander	6,616	0.6%	1,117	0.9%	5,499	0.5%
Some other race	87,507	7.7%	10,857	9.0%	76,650	7.5%
Hispanic or Latino origin (of any race)	248,033	21.7%	33,647	28.0%	214,386	21.0%
White alone, not Hispanic or Latino	654,725	57.3%	51,737	43.0%	602,988	58.9%

(U. S. Census Bureau, 2019a)

Appendix B

Table 1: High School Students' Fruit or 100% Fruit Juice Consumption by Grade, Race and Region of Nevada – 2019

Category	Times per day consumed fruit or 100% juice in the last seven days							
	None		One or more		Two or more		Three or more	
Grade level	#	%	#	%	#	%	#	%
9th grade	78	6.8%	628	49.1%	292	22.6%	167	13.1%
10th grade	86	7.1%	689	53.1%	310	24.0%	180	13.4%
11th grade	119	9.5%	628	50.0%	281	21.9%	154	11.3%
12th grade	79	8.5%	453	44.8%	210	20.6%	109	10.0%
<u>Race/ethnicity</u>								
American Indian/Alaska Native	12	17.7%	36	50.1%	19	24.5%	12	16.0%
Asian	19	8.1%	120	46.3%	59	23.5%	29	11.6%
Black	27	13.2%	113	48.1%	44	18.9%	29	13.8%
Native Hawaiian/Pacific Islander	5	3.7%	42	46.3%	23	26.5%	15	14.7%
White	130	7.4%	958	50.8%	426	24.3%	216	10.8%
Hispanic/Latino	131	7.1%	955	49.1%	447	21.4%	270	12.5%
Other/Multiple	25	6.9%	143	50.7%	66	22.3%	34	12.0%
<u>County/region</u>								
Carson City	20	7.6%	135	54.0%	71	27.4%	37	13.8%
Douglas	16	6.1%	137	58.5%	66	29.7%	33	15.8%
Elko, White Pine, Eureka	14	4.0%	177	51.0%	85	25.1%	52	13.8%
Churchill, Humboldt, Pershing, Lander	28	7.6%	183	48.7%	87	21.3%	58	14.7%
Lyon, Mineral, Storey	32	9.8%	151	50.9%	62	21.2%	37	12.6%
Nye, Lincoln	32	9.8%	192	49.9%	74	19.2%	42	10.1%
Washoe	78	7.7%	515	54.3%	247	26.0%	142	14.4%
Clark	150	8.1%	935	48.1%	414	21.5%	218	11.4%
Nevada total	365	7.9%	2425	49.4%	1106	22.4%	619	12.0%

(Diedrick et al., 2020a)

Table 2: High School Students' Vegetable Consumption by Grade, Race and Region of Nevada – 2019

Category	Times per day consumed vegetables in the last seven days							
	None		One or more		Two or more		Three or more	
Grade level	#	%	#	%	#	%	#	%
9th grade	158	13.7%	135	9.9%	94	7.2%	69	5.2%
10th grade	151	11.9%	173	13.5%	119	8.7%	71	5.4%
11th grade	159	12.6%	141	10.8%	105	7.4%	68	5.0%
12th grade	113	12.1%	117	10.6%	62	5.6%	59	4.6%
<u>Race/ethnicity</u>								
American Indian/Alaska Native	19	20.8%	6	7.3%	11	12.6%	7	11.5%
Asian	29	11.1%	36	13.5%	24	9.8%	11	4.8%
Black	46	21.7%	17	8.5%	10	3.7%	11	3.8%
Native Hawaiian/Pacific Islander	10	10.3%	13	11.2%	4	3.7%	10	8.9%

White	169	9.1%	291	15.5%	174	9.7%	96	4.7%
Hispanic/Latino	264	13.8%	158	8.4%	123	5.8%	113	5.4%
Other/Multiple	29	9.3%	34	10.2%	26	7.6%	13	5.0%
<u>County/region</u>								
Carson City	28	9.6%	30	11.6%	20	6.5%	18	6.8%
Douglas	16	8.0%	39	14.2%	23	10.1%	11	4.4%
Elko, White Pine, Eureka	45	13.7%	43	14.6%	31	9.0%	12	3.5%
Churchill, Humboldt, Pershing, Lander	54	13.2%	44	12.3%	25	6.9%	23	5.2%
Lyon, Mineral, Storey	30	9.6%	47	14.6%	16	5.8%	15	4.9%
Nye, Lincoln	40	9.9%	43	11.3%	34	8.1%	25	5.8%
Washoe	139	13.7%	115	12.8%	100	10.9%	71	6.6%
Clark	237	12.7%	207	10.6%	132	6.5%	97	4.8%
Nevada total	589	12.7%	568	11.2%	381	7.3%	272	5.1%

(Diedrick et al., 2020a)

Table 3: High School Students' Milk Consumption by Grade, Race and Region of Nevada – 2019

Category	Glasses of milk per day consumed in the last seven days							
	None		One or more		Two or more		Three or more	
<u>Grade level</u>	#	%	#	%	#	%	#	%
9th grade	344	28.6%	299	22.7%	146	11.9%	66	5.3%
10th grade	363	28.3%	344	25.5%	193	14.7%	86	6.8%
11th grade	360	31.3%	280	20.7%	156	10.6%	75	4.8%
12th grade	332	36.1%	212	20.3%	103	8.5%	41	3.2%
<u>Race/ethnicity</u>								
American Indian/Alaska Native	30	32.5%	25	29.0%	11	13.5%	7	9.8%
Asian	92	37.3%	53	21.7%	26	10.4%	12	6.0%
Black	98	44.3%	29	14.2%	18	8.4%	10	4.6%
Native Hawaiian/Pacific Islander	25	23.6%	22	32.7%	7	11.8%	4	4.8%
White	527	30.6%	533	27.0%	298	14.7%	135	6.4%
Hispanic/Latino	490	26.2%	414	21.0%	211	10.3%	88	4.2%
Other/multiple	100	37.2%	51	18.2%	25	9.6%	9	3.8%
<u>Region</u>								
Carson City	76	31.8%	67	23.8%	41	14.8%	20	8.4%
Douglas	85	30.0%	61	26.8%	30	11.9%	10	4.2%
Elko, White Pine, Eureka	74	21.1%	94	30.5%	41	14.1%	27	9.1%
Churchill, Humboldt, Pershing, Lander	88	23.0%	112	29.8%	64	17.4%	30	8.4%
Lyon, Mineral, Storey	73	23.0%	88	29.6%	45	15.3%	20	6.3%
Nye, Lincoln	99	24.1%	88	24.4%	46	13.1%	19	5.6%
Washoe	282	28.3%	247	27.0%	146	16.4%	60	6.6%
Clark	630	32.2%	386	20.7%	189	10.2%	84	4.5%
Total Nevada	1407	30.9%	1143	22.4%	602	11.5%	270	5.1%

(Diedrick et al., 2020a)

Table 4: High School Students’ Soda or Pop Consumption by Grade, Race and Region of Nevada – 2019

Category	Times per day consumed soda or pop (not diet) in the last seven days							
	None		One or more		Two or more		Three or more	
Grade level	#	%	#	%	#	%	#	%
9th grade	383	31.7%	138	9.9%	74	5.0%	42	3.3%
10th grade	431	34.3%	150	10.6%	68	4.9%	39	2.5%
11th grade	386	32.1%	161	12.8%	91	7.1%	44	3.0%
12th grade	316	35.5%	150	13.9%	80	7.4%	42	4.2%
Race/ethnicity								
American Indian/Alaska Native	22	24.4%	25	28.6%	15	13.3%	10	8.3%
Asian	111	47.5%	13	3.9%	8	2.3%	5	1.1%
Black	64	29.9%	30	14.9%	20	5.8%	13	6.3%
Native Hawaiian/Pacific Islander	28	33.6%	9	4.9%	7	6.4%	6	2.2%
White	567	32.6%	252	12.2%	125	3.5%	58	2.3%
Hispanic/Latino	601	32.1%	230	12.1%	123	6.4%	66	3.7%
Other/multiple	98	37.6%	33	9.9%	14	3.5%	8	1.8%
County/region								
1: Carson City	71	27.1%	41	17.2%	21	8.0%	12	4.9%
2: Douglas	74	28.9%	25	9.4%	12	4.5%	4	1.2%
3: Elko, White Pine, Eureka	108	31.2%	52	13.7%	15	6.1%	14	3.7%
4: Churchill, Humboldt, Pershing, Lander	90	23.7%	73	20.4%	44	11.4%	22	5.3%
5: Lyon, Mineral, Storey	80	25.7%	41	12.4%	27	8.3%	12	3.9%
6: Nye, Lincoln	127	32.3%	59	15.7%	27	7.4%	19	5.1%
7: Washoe	294	31.1%	111	11.2%	60	5.9%	36	3.6%
8: Clark	680	34.6%	207	11.4%	101	5.9%	51	3.0%
Nevada total	1524	33.3%	609	11.8%	317	6.1%	170	3.2%

(Diedrick et al., 2020a)

Table 5: High School Students’ Breakfast Consumption by Grade, Race and Region of Nevada – 2019

Category	Times ate breakfast during the past seven days			
	None		All seven	
Grade level	#	%	#	%
9th grade	219	15.3%	402	33.0%
10th grade	199	14.2%	418	31.6%
11th grade	197	14.8%	359	28.9%
12th grade	181	17.9%	215	25.0%
Race/Ethnicity				
American Indian/Alaska Native	20	27.5%	24	27.4%
Asian	29	10.5%	111	44.5%
Black	39	16.4%	65	28.5%
Native Hawaiian/Pacific Islander	20	27.1%	18	17.2%
White	287	15.2%	594	32.7%
Hispanic/Latino	335	15.7%	493	26.6%
Other/Multiple	47	16.0%	67	24.4%

<u>County/region</u>				
Carson City	41	15.1%	72	27.4%
Douglas	31	9.7%	74	36.3%
Elko, White Pine, Eureka	74	21.3%	95	31.4%
Churchill, Humboldt, Pershing, Lander	85	23.4%	112	29.2%
Lyon, Mineral, Storey	50	16.1%	91	30.8%
Nye, Lincoln	64	15.5%	117	31.8%
Washoe	180	17.8%	262	28.7%
Clark	281	14.8%	577	29.7%
Nevada total	806	15.6%	1400	29.7%

(Diedrick et al., 2020a)

Appendix C

Table 1: High School Students' Physical Activity by Gender, Race and Region of Nevada – 2019

Category	Days participated in at least 60 minutes of physical activity on any day during the seven days before the survey					
	None		Five or more		All seven	
Gender	#	%	#	%	#	%
Female	416	16.9%	904	30.7%	409	13.6%
Male	284	19.2%	1123	45.8%	636	27.2%
<u>Race/ethnicity</u>						
American Indian/Alaska Native	14	20.4%	42	39.6%	21	20.5%
Asian	48	20.5%	74	26.1%	39	14.0%
Black	44	18.8%	73	31.1%	45	18.8%
Native Hawaiian/Pacific Islander	14	23.9%	36	33.6%	21	18.6%
White	199	13.5%	953	47.4%	480	25.5%
Hispanic/Latino	329	18.8%	706	35.7%	351	18.3%
Other/Multiple	32	12.0%	115	35.1%	70	20.0%
<u>County/region</u>						
1: Carson City	25	13.1%	108	39.2%	58	21.1%
2: Douglas	17	6.4%	115	49.7%	63	29.0%
3: Elko, White Pine, Eureka	28	6.7%	175	54.0%	87	27.4%
4: Churchill, Humboldt, Pershing, Lander	45	12.3%	214	56.4%	129	35.6%
5: Lyon, Mineral, Storey	41	14.4%	160	52.0%	78	25.8%
6: Nye, Lincoln	46	10.6%	211	56.6%	99	27.1%
7: Washoe	156	15.0%	405	45.6%	184	20.4%
8: Clark	349	18.2%	647	35.1%	352	19.5%
Nevada total	707	16.9%	2035	38.4%	1050	20.5%

(Diedrick et al., 2020a)

Table 2: Middle School Students' Physical Activity by Gender, Race and Region of Nevada – 2019

Category	Days participated in at least 60 minutes of physical activity on any day during the seven days before the survey					
	None		Five or more		All seven	
Gender	#	%	#	%	#	%
Female	535	20.0%	1132	37.5%	535	17.7%
Male	443	18.6%	1203	47.4%	689	26.0%
<u>Race/ethnicity</u>						
American Indian/Alaska Native	30	20.8%	76	47.0%	43	27.9%
Asian	37	22.9%	78	40.4%	43	21.5%
Black	68	25.8%	100	41.5%	58	25.0%
Native Hawaiian/Pacific Islander	18	21.5%	47	53.1%	26	25.4%
White	261	13.7%	967	50.5%	515	26.0%
Hispanic/Latino	478	21.7%	837	37.0%	415	18.0%
Other/multiple	43	13.8%	163	45.1%	87	23.2%

<u>Region</u>						
1: Carson City	50	20.8%	123	47.2%	58	22.4%
2: Douglas	33	12.4%	111	52.7%	65	29.1%
3: Elko, White Pine, Eureka	54	13.8%	184	55.3%	101	29.6%
4: Churchill, Humboldt, Pershing, Lander	69	19.9%	183	52.5%	109	31.3%
5: Lyon, Mineral, Storey	60	17.2%	162	49.1%	92	28.3%
6: Nye, Lincoln	87	20.6%	203	49.3%	108	27.2%
7: Washoe	246	17.4%	594	46.0%	298	23.3%
8: Clark	387	20.0%	783	40.8%	396	20.9%
Nevada total	986	19.4%	2343	42.5%	1227	21.9%

(Diedrick et al., 2020b)

Table 3: Percentage of Kindergarten Students' Physical Activity by Region of Nevada – School Years 2019-2020, 2020-2021

Amount of days per week that child has at least 60 minutes of physical activity	County/region of Nevada							
	Nevada total		Clark County		Washoe County		Rural counties	
	19-20	20-21	19-20	20-21	19-20	20-21	19-20	20-21
None	1.2%	1.6%	1.5%	2.0%	0.7%	0.9%	0.5%	0.3%
1 day	1.8%	1.7%	2.1%	2.1%	1.0%	0.7%	0.8%	0.9%
2 days	6.1%	7.5%	7.0%	8.9%	3.7%	4.1%	4.1%	4.1%
3 days	11.8%	14.7%	13.4%	17.1%	8.0%	10.3%	7.4%	7.3%
4 days	12.5%	11.5%	13.4%	12.3%	10.8%	9.7%	9.4%	8.6%
5 days	18.8%	18.5%	19.5%	19.3%	17.5%	17.4%	16.6%	15.6%
6 days	8.7%	7.2%	8.1%	6.3%	10.1%	8.9%	10.4%	9.5%
7 days	39.0%	37.4%	35.0%	32.1%	48.1%	48.0%	50.7%	53.8%

(Nevada Institute for Children's Research and Policy, 2021, 2020)

Table 4: Percentage of Middle School and High School Students' Sedentary Behavior by Gender, Race, and Region of Nevada – 2019

Category	Percentage of students who watched TV, played video or computer games or used a computer for three or more hours per day			
	Middle school		High school	
<u>Gender</u>	#	%	#	%
Female	1,600	61.0%	1,444	60.7%
Male	1,328	58.1%	1,222	58.5%
<u>Race/ethnicity</u>				
American Indian/Alaska Native	94	56.3%	36	36.9%
Asian	118	67.9%	173	72.5%
Black	141	57.8%	125	58.6%
Native Hawaiian/Pacific Islander	59	66.8%	51	54.8%

White	983	53.3%	984	56.3%
Hispanic/Latino	1,280	63.1%	1052	59.4%
Other/multiple	186	58.9%	203	70.8%
<u>County/region</u>				
Carson City	148	56.6%	148	58.9%
Douglas	100	49.8%	139	57.0%
Elko, White Pine, Eureka	178	53.5%	174	51.5%
Churchill, Humboldt, Pershing, Lander	196	54.9%	175	47.6%
Lyon, Mineral, Storey	167	56.0%	166	51.2%
Nye, Lincoln	210	52.1%	181	46.8%
Washoe	791	60.6%	504	53.6%
Clark	1,155	60.2%	1189	61.8%
Nevada total	2,945	59.6%	2676	59.6%

(Diedrick et al., 2020a, 2020b)

Table 5: Percentage of Kindergarten Students' Sedentary Activity by Region of Nevada – School Years 2019-2020, 2020-2021

Hours of TV or electronics on an average...	County/region of Nevada							
	Nevada total		Clark County		Washoe County		Rural counties	
	19-20	20-21	19-20	20-21	19-20	20-21	19-20	20-21
School day								
None	1.0%	0.7%	1.2%	0.7%	0.5%	1.1%	1.0%	0.4%
Less than one hour	9.3%	5.3%	9.0%	4.7%	8.7%	6.7%	12.1%	6.9%
1 hour	26.5%	14.2%	26.5%	11.2%	26.2%	21.1%	26.6%	22.2%
2 hours	34.3%	29.0%	34.3%	26.5%	35.5%	35.2%	32.8%	35.1%
3 hours	18.6%	7.1%	18.8%	1.0%	18.2%	24.1%	17.7%	17.8%
4 hours	5.6%	15.0%	5.5%	18.0%	6.2%	7.4%	5.7%	8.7%
5 hours or more	4.6%	28.6%	4.7%	37.9%	4.7%	4.4%	4.1%	8.9%
Weekend day								
None	0.6%	1.2%	0.5%	1.4%	0.8%	0.7%	1.0%	0.6%
Less than one hour	3.9%	5.0%	3.5%	5.4%	6.2%	4.4%	3.8%	3.3%
1 hour	12.6%	8.7%	11.8%	7.7%	15.4%	11.7%	14.0%	10.1%
2 hours	29.8%	26.4%	27.9%	24.5%	35.7%	32.4%	32.7%	28.5%
3 hours	26.3%	25.5%	26.9%	24.3%	24.3%	29.0%	25.4%	27.3%
4 hours	16.2%	16.1%	17.8%	15.7%	11.3%	15.6%	13.7%	19.2%
5 hours or more	10.6%	17.2%	11.7%	21.0%	6.3%	6.2%	9.4%	11.0%

(Nevada Institute for Children's Research and Policy, 2021, 2020)

Table 6: Walk Score® and Bike Score® for Nevada Communities – 2022

County	Community	2020 population	Walk Score ®	Bike Score ®
	Carson City	58,639	36	55
Churchill	Fallon*	9,327	80	66
Clark	Boulder City	14,885	55	63

Clark	Enterprise	221,831	25	36
Clark	Henderson	257,729	30	44
Clark	Laughlin	8,658	44	NA
Clark	Las Vegas*	641,903	42	46
Clark	Mesquite	20,471	61	56
Clark	Moapa Valley	6,289	0	27
Clark	North Las Vegas	262,527	34	48
Clark	Paradise	191,238	50	50
Clark	Spring Valley	215,597	44	43
Clark	Summerlin South	30,744	22	34
Clark	Sunrise Manor	205,618	36	48
Clark	Whitney	49,061	28	45
Clark	Winchester	36,403	54	53
Douglas	Gardnerville	6,211	69	50
Douglas	Gardnerville Ranchos	11,318	25	NA
Douglas	Indian Hills	5,962	7	35
Douglas	Minden*	3,442	44	45
Elko	Elko*	20,564	36	40
Elko	Spring Creek	14,967	0	21
Esmeralda	Goldfield*	225	22	49
Eureka	Eureka*	414	35	32
Humboldt	Winnemucca*	8,431	68	51
Lander	Battle Mountain*	3,705	43	NA
Lincoln	Pioche*	933	21	5
Lyon	Dayton	15,153	36	40
Lyon	Fernley	22,895	15	37
Lyon	Silver Springs	5,629	23	38
Lyon	Yerington*	3,121	62	57
Mineral	Hawthorne*	3,118	53	58
Nye	Pahrump	44,738	5	31
Nye	Tonopah*	2,179	56	NA
Pershing	Lovelock*	1,805	48	35
Storey	Virginia City*	787	57	16
Washoe	Cold Springs	10,153	16	45
Washoe	Reno*	264,165	40	52
Washoe	Sparks	108,445	41	52
Washoe	Sun Valley	21,178	19	31
Washoe	Spanish Springs	17,314	26	53
White Pine	Ely*	3,924	55	45

(Walk Score, 2022; Cubit Planning, Inc., 2022) *Each Nevada county seat is included. All other Nevada communities above population 5,000 are included.

Appendix D

Table 1: Obesity Prevalence in Nevada by County – 2012-2021

County	Percent of adult population who are obese									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Carson City	24.1	24.6	26	27.7	28.3	31	32.5	27.5	28.3	30.9
Churchill	28.8	25.5	25.3	27.3	32.4	31.9	29.7	27.2	32.4	32.1
Clark	25.8	27.8	27.7	26.6	25.5	27.1	28.5	26.8	25.5	27.3
Douglas	22.4	21.4	22.8	25.5	25	25.7	22.4	25.3	25	25.5
Elko	31.9	30.3	30.4	29.3	29.1	28.1	27.8	29.6	29.1	28.4
Esmeralda	26.6	25.5	26.7	28.6	27.5	24.3	18.1	28	27.5	23.6
Eureka	26.3	27.2	26.7	26.8	23.2	24.4	19.9	27	23.2	24.2
Humboldt	24.7	25.7	26	30.4	33.3	32	28.1	30.5	33.3	32.1
Lander	28.5	30.4	31.6	33.9	34.9	30	19.6	33.6	34.9	30.4
Lincoln	25.2	25.9	27.2	30	29.7	28	22.1	29.6	29.7	27.6
Lyon	29.9	29.8	35	34.7	34.9	33.6	30.4	33.5	34.9	33
Mineral	26.4	28	29.9	31	30	38.5	25.4	30.1	30	38.3
Nye	29.1	31.5	34.2	33.8	33.5	34	30.4	32.5	33.5	33.4
Pershing	32.4	31.1	30.9	32	34.8	38	21.1	32.2	34.8	39.2
Storey	25.9	26.9	26.4	27.6	24.6	27.5	22.2	27.2	24.6	27.5
Washoe	22.2	21.8	21.4	22.8	23.3	23.5	23.7	22.9	23.3	23.7
White Pine	25.1	28.7	30.4	32.5	32.8	30.9	25.2	32.3	32.8	30.8

(Source, DataUSA., 2021)

Appendix E

Table 1: Diabetes Crude Prevalence in Nevada by County – 2019

County/region	Total population	Percentage with diabetes	Population with diabetes
Carson City	55,916	11.0%	6,151
Churchill	24,909	9.9%	2,466
Clark	2,266,715	11.0%	249,339
Douglas	48,905	11.4%	5,575
Elko	52,778	9.3%	4,908
Esmeralda	873	16.0%	140
Eureka	2,029	11.3%	229
Humboldt	16,831	10.9%	1,835
Lander	5,532	11.6%	642
Lincoln	5,183	10.3%	534
Lyon	57,510	11.9%	6,844
Mineral	4,505	14.8%	667
Nye	46,523	14.3%	6,653
Pershing	6,725	10.9%	733
Storey	4,123	12.1%	500
Washoe	471,519	9.2%	43,380
White Pine	9,580	11.2%	1,073
Rural counties	286,006	11.5%	32,799
Urban counties	2,794,150	10.7%	298,870
Nevada total	3,080,156	10.7%	331,669

(Centers for Disease Control and Prevention, 2021d)

Appendix F

Table 1: Very Low Food Security (VLFS) Change 2019-2021 by Nevada County

County	Population	2019 VLFS estimate		2021 VLFS projection		2019-2021 projected change	
		#	%	#	%	#	%
Carson City	54,773	3,220	5.9%	3,620	6.6%	400	0.7%
Churchill	24,259	1,310	5.4%	1,390	5.7%	80	0.3%
Clark	2,182,004	98,040	4.5%	144,030	6.6%	45,990	2.1%
Douglas	48,132	2,390	5.0%	2,730	5.7%	340	0.7%
Elko	52,297	2,280	4.4%	2,490	4.8%	210	0.4%
Esmeralda	969	50	5.2%	60	6.2%	10	1.0%
Eureka	1,859	90	4.8%	100	5.4%	10	0.5%
Humboldt	16,828	770	4.6%	850	5.1%	80	0.5%
Lander	5,643	240	4.3%	260	4.6%	20	0.4%
Lincoln	5,180	260	5.0%	280	5.4%	20	0.4%
Lyon	54,380	3,110	5.7%	3,470	6.4%	360	0.7%
Mineral	4,460	280	6.3%	300	6.7%	20	0.4%
Nye	44,380	3,180	7.2%	3,560	8.0%	380	0.9%
Pershing	6,615	320	4.8%	330	5.0%	10	0.2%
Storey	3,988	220	5.5%	250	6.3%	30	0.8%
Washoe	456,936	19,970	4.4%	23,510	5.1%	3,540	0.8%
White Pine	9,679	500	5.2%	530	5.5%	30	0.3%

(Gundersen et al., 2021)

Table 2: Child Very Low Food Security (VLFS) Change 2019-2021 by Nevada County

County	Child population	2019 child VLFS estimate		2021 child VLFS projection		2019-2021 projected change	
		#	%	#	%	#	%
Carson City	11,219	870	7.8%	970	8.6%	100	0.9%
Churchill	5,536	420	7.6%	440	7.9%	20	0.4%
Clark	510,453	30,730	6.0%	44,460	8.7%	13,730	2.7%
Douglas	8,171	600	7.3%	680	8.3%	70	1.0%
Elko	14,332	930	6.5%	1,000	7.0%	70	0.5%
Esmeralda	161	10	6.2%	10	6.2%	0	0.0%
Eureka	428	40	9.3%	40	9.3%	0	0.0%
Humboldt	4,561	290	6.4%	320	7.0%	30	0.7%
Lander	1,521	80	5.3%	90	5.9%	10	0.7%
Lincoln	935	70	7.5%	70	7.5%	0	0.0%
Lyon	11,766	980	8.3%	1,070	9.1%	100	0.8%
Mineral	827	80	9.7%	90	10.9%	0	1.2%
Nye	7,596	750	9.9%	840	11.1%	80	1.2%
Pershing	1,110	80	7.2%	80	7.2%	0	0.0%
Storey	715	70	9.8%	80	11.2%	10	1.4%
Washoe	99,722	6,060	6.1%	7,030	7.0%	980	1.0%
White Pine	1,989	170	8.5%	170	8.5%	10	0.0%

(Gundersen, Hake et al., 2021)

Appendix G

Table 1: Farmers Markets in Nevada by County – 2022

County	Market name	Address	Time of year	Accepts SNAP?
Carson City	Carson Farmers Market	412 N. Stewart St., Carson City 89703	Early June-late September	Yes
Churchill	Fallon Farmers Market at The Grid	1170 Taylor Place, Fallon 89406	Early June-early October	No
Churchill	Green Goddess Farmers Market – Fallon	151 E Park St., Fallon 89406	Early May-early September	No
Clark	Downtown 3rd Farmers Market – Intuitive Forager	920 S. Commerce St., Las Vegas 89101	Year-round	Yes
Clark	fresh52 Farmers Market Arts District	1025 S. First St., Las Vegas 89101	Year-round	No
Clark	fresh52 Farmers Market Bruce Trent Park	8851 Vegas Dr., Las Vegas 89128	Year-round	No
Clark	fresh52 Farmers Market Desert Diamond Baseball Complex – Mountain’s Edge	8101 Mountain’s Edge Parkway, Las Vegas 89134	Year-round	No
Clark	fresh52 Farmers Market Inspirada at Solista Park	2000 Via Firenze, Henderson 89044	Year-round	No
Clark	fresh52 Farmers Market Sansone Park Place	9480 S. Eastern, Las Vegas 89123	Year-round	No
Clark	fresh52 Farmers Market Sun City Anthem	2450 Hampton Rd., Henderson 89052	Year-round	No
Clark	fresh52 Farmers Market The Village at Lake Las Vegas	30 Costa Di Lago, Henderson 89011	Year-round	No
Clark	Las Vegas Farmers Market - Downtown Summerlin	1980 Festival Plaza Drive, Las Vegas 89135	Year-round	Yes
Clark	Las Vegas Farmers Market – The District Green Valley Ranch	2240 Village Walk Drive, Henderson 89052	Year-round	Yes
Clark	Prevail Marketplace – Boulder City	1100 Adams Boulevard, Boulder City 89005	Year-round	No
Clark	Prevail Marketplace – Cornerstone Park	1600 Wigwam Parkway, Henderson 89074	August-June	Yes
Clark	Prevail Marketplace – Dollar Loan Center	200 S. Green Valley Parkway, Henderson	Fall-Spring	No
Clark	Prevail Marketplace – Water Street	240 S. Water St., Henderson 89015	Year-round	Yes
Clark	Vegas Roots Veggie Buck Truck	101 E. Bonneville Ave., Las Vegas 89101	Year-round	Yes
Douglas	Minden Farmers Market	Esmeralda Ave, Minden 89423	Mid May-late September	No
Douglas	Sierra Chef Farmers Market	1447 Courthouse Alley, Gardnerville 89410	Mid May-mid September	No
Elko	Elko Family Farmers Market	1405 Idaho St., Elko 89801	Mid June-late October	No
Elko	Lamoille Farmers Market	Lamoille School House, Lamoille, 89828	June-October	No

Elko	Wells Farmers Market	Western Heritage Park, Sixth Street & Lake Avenue, Wells, 89835	Early June-mid October	No
Esmeralda	None			
Eureka	None			
Humboldt	Winnemucca Farmers Market	185 W. Winnemucca Blvd., Winnemucca 89445	Early June-late August	No
Lander	None			
Lincoln	Caliente Farmers Market	360 Lincoln St., Caliente 89008	July-September	Yes
Lyon	Dayton Farmers Market	60 Second Ave., Dayton 89403	Early June-late September	Yes
Lyon	Fernley Poolside Farmers Market	300 Cottonwood Lane, Fernley 89408	Early June-late September	Yes
Lyon	Yerington Early Bird Farmers Market	45 N. Main St., Yerington 89447	Mid June-mid October	No
Mineral	None			
Nye	Pahrump Farmers Market	900 E. Highway 372, Pahrump 89048	Year-round	No
Pershing	None			
Storey	None			
Washoe	Incline Village Farmers Market	845 Alder Ave., Incline Village, 89451	Late May-early September	No
Washoe	Park Farm - Sunday Farm Stand	3295 Mayberry Drive, Reno 89509	early June-late October	Yes
Washoe	Riverside Summer Farmers Market	925 Riverside Drive, Reno 89503	Early June-late September	Yes
Washoe	Riverside Winter Farmers Market	925 Riverside Drive, Reno 89503	Early October-late May	Yes
Washoe	Sparks Methodist Church Market on Pyramid Way	1231 Pyramid Way, Sparks 89431	Early June-late September	Yes (UNR booth)
Washoe	Tamarack Junction Farmers Market	13101 S. Virginia St., Reno 89511	Early June-late September	Yes
Washoe	The Village Market on California Avenue	1119 California St., Reno 89501	Early June-early October	Yes
White Pine	Snake Valley Farmers Market	315 Saval Ave., Baker 89311	Early June-late October	No

(Nevada Grown, 2022)

Table 2: Nevada Community-Based Services – 2020-2021

Nevada Supplemental Nutrition Assistance Program Education (SNAP-Ed) services – 2020			
County/region	Program	Provider	Funding source
Carson City	Healthy Aging Programs	University of Nevada, Reno (UNR) Extension	SNAP-Ed

Carson City	Healthy Kids, Healthy Schools	UNR Extension	SNAP-Ed, Chefs for Kids
Carson City	Re-Think Your Drink	UNR College of Agriculture, Biotechnology & Natural Resources (CABNR), Department of Nutrition & Dietetics	SNAP-Ed
Churchill	Healthy Aging Programs	UNR Extension and partners	SNAP-Ed
Churchill	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Clark	Choose Health: Food, Fun, and Fitness	UNR Extension	Expanded Food and Nutrition Education Program (EFNEP)
Clark	Child Care Provider Training	UNR Extension	UNR Extension
Clark	Eating Smart, Being Active	UNR Extension	Clark County, EFNEP
Clark	Preschool Garden Program	UNR Extension	Clark County
Clark	FoodSpan Food System Education	UNR Extension	Clark County
Clark	Healthy Aging Programs	UNR Extension and partners	SNAP-Ed
Clark	Healthy Food Systems	UNR Extension	SNAP-Ed
Clark	Healthy Kids, Early Start	UNR Extension	SNAP-Ed
Clark	Healthy Kids, Healthy Schools	UNR Extension	SNAP-Ed, Chefs for Kids
Clark	Healthy Steps to Freedom	UNR Extension	Clark County
Clark	Little Books Little Cooks	UNR Extension	UNR Extension
Clark	Youth Horticulture Education Program	UNR Extension	Clark County
Clark	Baby First Services	HELP of Southern Nevada	SNAP-Ed
Clark	Healthy Habits SmartShop	HELP of Southern Nevada	SNAP-Ed
Clark	Safe Routes to Schools and Walk and Roll Program	Southern Nevada Health District (SNHD)	SNAP-Ed
Clark	Slam Dunk Health Challenge	SNHD	SNAP-Ed
Clark	School Wellness Social Media Campaign	SNHD	SNAP-Ed
Clark	4-H School Nutrition Advocacy Clubs	UNR Extension 4-H	USDA Children, Youth, and Families At Risk (CYFAR) grant
Clark	Cooking Matters	Lutheran Social Services of NV & NyECC	SNAP-Ed
Douglas	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Elko	Healthy Eating Active Living: Mapping	UNR Extension	UNR Extension

Elko	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Esmeralda	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Eureka	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Humboldt	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Lander	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Lincoln	Healthy Kids, Early Start	UNR Extension	SNAP-Ed
Lincoln	Healthy Kids, Healthy Schools	UNR Extension	SNAP-Ed, Chefs for Kids
Lincoln	Little Books Little Cooks	UNR Extension	UNR Extension
Lincoln	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Lyon	Healthy Aging Programs	UNR Extension partners	SNAP-Ed
Lyon	Healthy Kids, Healthy Schools	UNR Extension	SNAP-Ed, Chefs for Kids
Lyon	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Lyon (tribal focused)	Community Nutrition Education Program for Children (includes physical activity)	Yerington Paiute Tribe	SNAP-Ed
Lyon (tribal focused)	Community Nutrition Education Program for Adults at Food Bank	Yerington Paiute Tribe	SNAP-Ed
Lyon	School Gardens Programs	Healthy Communities Coalition of Lyon and Storey Counties (HCC) & NyECC	SNAP-Ed
Lyon	Healthy School Lunch Program	HCC	SNAP-Ed
Lyon	Community Gardens and Farmers Markets Policy Systems and Environmental	HCC	SNAP-Ed
Mineral	Healthy Aging Programs	UNR Extension partners	SNAP-Ed
Mineral	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Nye	Healthy Kids, Early Start	UNR Extension partners	SNAP-Ed
Nye	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Nye	Community Wellness Collaborative	Nye Communities Coalition (NyECC)	SNAP-Ed
Nye	Cooking Matters	Lutheran Social Services of NV & NyECC	SNAP-Ed
Nye	School Gardens Programs	Healthy Communities Coalition of Lyon and Storey Counties (HCC) & NyECC	SNAP-Ed
Nye	Grocery Store Tours	NyECC	SNAP-Ed

Nye	Cooking Classes for middle school students	NyECC	SNAP-Ed
Pershing	Healthy Kids, Healthy Schools	UNR Extension and partners	SNAP-Ed, Chefs for Kids
Pershing	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Storey	Healthy Aging Programs	UNR Extension	SNAP-Ed
Storey	Healthy Kids, Healthy Schools	UNR Extension	SNAP-Ed, Chefs for Kids
Storey	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Washoe	Food Safety Project	UNR Extension	UNR Extension
Washoe	Grow Yourself Healthy	UNR Extension	SNAP-Ed
Washoe	Healthy Aging Programs	UNR Extension partners	SNAP-Ed
Washoe	Healthy Food Systems	UNR Extension	SNAP-Ed
Washoe	Healthy Kids, Healthy Schools	UNR Extension	SNAP-Ed, Chefs for Kids
Washoe	Little Books Little Cooks	UNR Extension	UNR Extension
Washoe	Coordinated Approach To Child Health (CATCH)	UNR Extension	SNAP-Ed
Washoe	Wolf Pack Coaches Challenge	Washoe County Health District (WCSD)	SNAP-Ed
Washoe	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Washoe	Parks Utilization Project	WCHD	SNAP-Ed
Washoe	Smart Shopper for adults	Food Bank of Northern Nevada (FBNN)	SNAP-Ed
Washoe	Healthy Pantry Initiative	FBNN	SNAP-Ed
Washoe	Seniors Eating Well	FBNN	SNAP-Ed
White Pine	Healthy Aging Programs	UNR Extension	SNAP-Ed
White Pine	Re-Think Your Drink	UNR CABNR, Department of Nutrition & Dietetics	SNAP-Ed
Reservations	Healthy Aging Programs	UNR Extension	SNAP-Ed
Statewide	Radon Education Program	UNR Extension	Environmental Protection Agency/Nevada Division of Public and Behavioral Health
Statewide	Childhood Obesity Awareness Month Social Media Campaign	Office of Food Security Obesity Prevention and Control Program	SNAP-Ed
Statewide	Early Childhood Obesity Prevention Resource Promotional Campaign	Office of Food Security Obesity Prevention and Control Program	SNAP-Ed