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

Final Report

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Section 1: Overview

Overview

Introduction

The Supplemental Nutrition Assistance Program (SNAP) has served as the nation's first and most significant defense against food insecurity and hunger for over fifty years. The Supplemental Nutrition Assistance Program - Education (SNAP-Ed) supports SNAP by working to "…improve the likelihood that persons eligible for SNAP will make healthy food and lifestyle choices that prevent obesity" (https://snaped.fns.usda.gov/). In order to effectively do so, states and territories are required to present data driven needs assessments of nutrition, physical activity and obesity prevention needs of the target population and barriers to accessing healthy foods and physical activity as described in SNAP-Ed Plan Guidance documents each year.

The activities and programs included in Nevada's SNAP-Ed Plans have continually been guided by needs assessments, including those conducted at a local, county, and state-level. This has helped to ensure that programs are meeting the unique needs of local communities, as well as addressing statewide priorities as informed by Nevada's Nutrition Assistance Consortium and articulated by the Nevada Division of Welfare and Supportive Services (DWSS) in the annual "Call for Proposals" for Nevada's SNAP-Ed plans.

It was determined that a statewide needs assessment would benefit Nevada's SNAP-Ed efforts given the changes that have occurred in our state since the last statewide needs assessment, and the emphasis on policy, systems and environmental (PSE) approaches and obesity prevention. Food and Nutrition Service of U.S.D.A. approved Nevada's plan to proceed with a statewide assessment in FY 2017 which concluded in FY 2019.

Purpose and Scope of the Needs Assessment

The overall goals of the *Statewide Needs Assessment for Nevada's Supplemental Nutrition Assistance Program- Education (SNAP-Ed)* were to describe the most pressing nutrition and physical activity needs of SNAP participants in Nevada, and to examine relevant community characteristics and other environmental factors that shape nutrition and physical activity behaviors for the purpose of identifying opportunities for PSE intervention/approaches. It is assumed that the findings of the assessment will be used to strengthen Nevada's SNAP-Ed plans by modifying programs and approaches, or developing new programs as/if indicated by key findings.

Steering Committee

To help ensure the quality and integrity of the assessment process, a statewide steering committee was formed. This steering committee included eight persons who were: 1) very familiar with the SNAP-Ed target audiences, 2) had the experience and/or education to provide subject-matter expertise related to nutrition and physical activity behaviors, and 3) had the time and interest to provide input at different points during the needs assessment process. With input from DWSS, invitations were extended to leaders and experts throughout Nevada who met these criteria. Once the committee was formed, their feedback was continuous, extremely valuable, and helped shaped key details during this dynamic process. The Steering Committee members were as follows (please note that titles and affiliations may have changed in the duration of the assessment):

Jill R. Berntson
Deputy Administrator
Aging and Disability Services Division

Nicole Bungum, M.S., C.H.E.S.
Southern Nevada Health District
Office of Chronic Disease Prevention and Health Promotion

John Packham, Ph.D.
Director of Health Policy Research
Office of Statewide Initiatives
University of Nevada Reno School of Medicine

Julia Peek, M.H.A.
Deputy Administrator
Division of Public and Behavioral Health

Catrina Peters, M.S., R.D.
School Nutrition Manager
Food and Nutrition Division
Nevada Department of Agriculture

Barbara Scott, M.P.H., R.D., L.D.
Associate Professor
University of Nevada School of Medicine

Jodi Tyson, M.P.H.
Director of Government Affairs
Three Square

Mary Wilson, M.S., R.D., L.D.
Professor Emeritus
University of Nevada Cooperative Extension

The steering committee was consulted seven times while the needs assessment was underway. In Phase I, their expertise and knowledge was used to help ensure that the health indicators and relevant reports included in the analysis were complete; and to review a copy of the draft and final reports. Their knowledge of existing data enhanced the breadth and depth of the Phase I report. In Phase II, the steering committee was asked to compare the list of proposed key informants to the desired characteristics and to identify if gaps existed. As a result, additional informants were included. They were also invited to help refine the interview instrument by participating in a pretest. Finally, in Phase III, the steering committee was invited to review the objectives and related definitions of variables to be measured via the SNAP household survey. Their input was helpful in refining the definitions which ultimately shaped the survey instrument.

Key Findings of Phases I, II and III

The assessment was completed in three phases. The corresponding objectives (five in all); a brief description of approaches and methods; and a summary of key findings for each phase are described below. A complete report of the findings from each phase of the needs assessment is also appended to this document. (Please note that reports from Phases I and II have previously been submitted to DWSS but are attached here for the convenience.) Readers are encouraged to read the full reports for Phases I, II and III for important details.

Phase I

The objectives of Phase I (completed in March 2017) were as follows:

1. Characterize Nevada's SNAP participants, those eligible for SNAP, and individuals residing in low-income communities; herein referred to as SNAP-Ed target audiences.
2. Characterize low-income communities.

To address these objectives, existing data (related to objectives 1 and 2 above) were gathered, summarized and interpreted (Part I). In addition, an interactive map was developed to assist in the geographic identification of SNAP-Ed target audiences and illustrate the selected indicators used to describe low- income communities (Part II). Please note that the data included in the Phase I report were not up-dated since that Phase of the needs assessment was completed in 2017.

Phase 1, Part I: The examination of existing data revealed many relevant and significant characteristics of Nevada's populace. To begin with, Nevada's population has grown steadily over the past few decades, and although it has begun to slow down, it is estimated to continue to see notable growth among those 60 years and older as well as those who identify as Hispanic.

Overall poverty rates in Nevada were relatively similar to the nation, with estimated poverty rates ranging from 7.8% in Storey County to 18.3% in Pershing County during 2015. Among different age groups, the rate of poverty was highest among children ages 0 to 17 years and ranged from 12.0% in Eureka County to 33.6% in Mineral County.

The Nevada SNAP Participant program data illustrated differences among SNAP participants' demographics relative to the state's population overall. In 2015, approximately 437,706 persons were enrolled in Nevada's SNAP with a higher proportion being female, African American, or Hispanic compared to the Nevada general population. Nevada SNAP participants have become slightly more racially and ethnically diverse from 2011 through 2015. In 2015, approximately 45.5% of Nevada SNAP participants were children aged 0 to 18 years, which is similar to the distribution of SNAP participants nationwide.

Nevada's SNAP participation rates have historically been low and in 2014, the USDA Nevada ranked 49 out of 51 (included District of Columbia) states, with an estimated 65% of those eligible for SNAP in Nevada being enrolled in SNAP.

The United States Department of Agriculture's (USDA) Economic Research Service estimated 14.2% of households in Nevada were food insecure compared to the national rate of 13.7% (three-year average estimates 2013-2015). A report conducted by the Nevada Department of Health and Human Services estimated food insecurity among children using 2013 and 2015 Youth Risk Behavioral Survey (YRBS) data and found 16.6% of middle school students and 15.3% of high school students were food insecure in Nevada.

The 2014 Hunger in America studies highlight findings from surveys conducted at food banks across the nation. Nevada's two food banks provided their agency-specific results from this study; the data show the clients served by Nevada's food banks are fairly similar to the populations served through food banks nationwide in terms of age, race/ethnicity, and household members. Over one-third of Nevada's foodbank clients reported they receive SNAP benefits, but only a quarter of the clients stated SNAP benefits lasted four or more weeks. Most clients who were not enrolled in SNAP indicated they did not think they were eligible for SNAP.

The nutritional habits among Nevada's children reported in the Nevada Kindergarten Health Survey and YRBS data illustrate very little change in beverage consumption such as milk, diet or non-diet soda, and juice over the past few years. Nevada's beverage consumption among high school students mirrors national level data over the same time period, although slightly more high school students in Nevada reported that they did not drink any soda during the previous week as compared to the national rates. The Nevada Department of Health and Human Services released a Nevada Food Security report in 2016, which showed a higher rate of daily soda consumption among adults categorized as SNAP eligible (27.3%), compared to those adults categorized as SNAP ineligible (15.5%).

Fruit and vegetable consumption data for Nevada high school students and adults also show few changes from 2013 to 2015. Fruit and vegetable consumption among Nevada's population is relatively similar to the nation overall.

According to data from the 2011 Nevada Behavioral Risk Factor Surveillance Survey (BRFSS), 45.4% of adults “always” or “most of the time” read nutrition labels while grocery shopping to help with food choices. Aggregate 2014-2015 data from the Nevada Food Security report show a higher rate of adults categorized as SNAP eligible (43.6%) used calorie information available in restaurants to help decide what to order, compared to those adults categorized as SNAP ineligible (11.4%).

Similar to fruit and vegetable consumption, rates of physical activity and sedentary behaviors reported through the Nevada Kindergarten Health Surveys and YRBS also indicated few changes from year to year and, when available for comparison, few differences relative to the rest of the nation. The 2015-2016 Nevada Kindergarten Health Survey data indicate nearly half of kindergarteners spent two or more hours watching television on an average school day. The 2015 Nevada YRBS data indicated 38.3% of high school students reported playing video or computer games for three or more hours each day during an average school day.

Consequently, the reported or measured weight status (underweight, healthy weight, overweight or obese) of Nevada residents has not changed much over the past five years among kindergarteners, fourth, seventh, or tenth graders, aggregated high school students (grades 9-12), or among adults.

Chronic diseases such as asthma, diabetes, coronary heart disease, and precursors or risk factors for chronic diseases such as high blood pressure or high cholesterol are all very close to the national rates. Additional poor health outcomes such as heart attack, stroke, and disability rates are very similar to national rates as well.

In 2014, the top 10 causes of death in Nevada mirrored the top 10 causes of death in the nation, apart from diabetes as well as chronic liver disease and cirrhosis. Diabetes was nationally ranked 7th and was ranked 11th in Nevada. Chronic liver disease and cirrhosis was nationally ranked 12th and was ranked 9th in Nevada.

Phase I, Part II: A low-income community, for the purpose of this needs assessment, was defined as a census tract where at least 50% of the households were living at less than 185% of the Federal Poverty Level (FPL). According to American Community Survey 5-year estimates (2010-2014), 551,656 people were residing in a low-income community, accounting for

approximately 20% of Nevada's total population. Combined, approximately 94% of the low-income communities were located within Clark (78%) or Washoe (16%) County, which closely mirrors the state's overall population distribution.

While nearly all of the urban located low-income communities had access to transportation and parks, less than half had access to recreational facilities, and fewer than a quarter of the low-income communities had access to a farmer's market. Only 7, or 5%, of low-income communities were located in rural counties, however only one of the rural low-income communities had access to a farmer's market, only one had access to transit, one had access to a park, and none of the rural low-income communities had access to recreation as defined by this assessment.

In 2016, the SNAP retail ratio of limited food to full-service SNAP-EBT retailers in Nevada was 3:1, meaning for every full-service grocery store that accepted SNAP-EBT benefits, there were three limited- choice stores which accepted SNAP-EBT benefits. Additionally, the majority of census tracts in Nevada did not have a full-service SNAP retailer (grocery store or supermarket) within the census tract. Only 19% of low-income communities in Nevada had a full-service SNAP retailer, compared to 26% of non- low income communities. There were proportionally fewer full-service SNAP retailers in low-income communities compared to communities which were not designated as low income across the state.

Eight of the 17 counties in Nevada did not contain any census tracts which were designated as low- income. Most of the counties without a designated low-income community are rural or frontier.

Counties designated as rural or frontier usually only have one major populated area, with vast distances separating smaller isolated populations. There are existing challenges for residents in any rural or frontier county across Nevada, including having limited access to several of the indicators measured within the scope of this assessment (transit, farmer's markets, parks and recreation), as well as amenities not measured, which can also impact health and health behaviors.

The interactive map (located here: http://arcg.is/2dbxFr2) is to be used as a visual reference and informative source of aggregate information related to the socioeconomic and built

environment at the census tract level. The map should be utilized in conjunction with knowledge of other emergency food assistance programs, policies, and efforts ongoing in a community, in order to develop more effective programs to address SNAP-Ed target audiences.

Phase II

The objectives of Phase II (completed in March, 2017) were as follows:

1. Describe relevant public policies, programs and practices that impact related nutrition and physical activity behaviors with emphasis on persons residing in low-income households and low-income communities.
2. Describe the perceptions of key informants regarding a) the needs of SNAP households and others residing in low-income households as they pertain to the goals of SNAP-Ed; and b) opportunities at the policy, system and environmental level to facilitate healthful nutrition and physical activity behaviors with an emphasis on low-income communities.

To address these objectives, interviews were conducted with key informants from across the state of Nevada who have knowledge of the SNAP-Ed audience (n=35).

To ensure a diverse and informed sample of key informants who would have insights about the SNAP-Ed audience, the following characteristics were used to guide the sample selection: 1) Content expertise in areas that relate closely to the purpose and function of SNAP-Ed (e.g., nutrition, public health, public policy, physical activity/fitness, education, and community development), 2) Representation from urban, rural and frontier communities, 3) Inclusion of various levels of influence (i.e., individuals working directly with the SNAP-Ed audience and those in managerial/policy making roles), and 4) Possession of knowledge of specific populations that are under-represented. Starting with a list of 369 potential key informants, consultation with D. Dougherty of the DWSS was sought to reduce the master list to a feasible sample size. Ultimately invitations were extended to 44. Of those, interviews were conducted with 35 who agreed to serve as informants.

Key informants reported that healthy eating, healthful shopping, and food resource management are all closely related. Healthy eating requires healthful shopping and shopping healthfully with limited resources requires some knowledge about effective food resource management. In addition, they indicated that education on cooking at home should be a priority. The importance of coordinating with other organizations was also communicated by the informants. Specifically,

key informants reported that it would be beneficial to partner with organizations that already work with “hard to reach” populations such as older adults and those who are disabled.

They reported that environmental barriers exist that make it difficult for Nevadans to live a healthy lifestyle. Informants mentioned lack of transportation, unsafe neighborhoods, and lack of access as a barrier to eating a healthy diet and being active. When asked which population or group in Nevada is in greatest need for education on nutrition and physical activity the most common answer from the informants was those with limited resources or low socioeconomic status. The final emerging theme from the interviews was, “*Let’s make the healthy choice the easy choice- we can do it!*” Although they informants communicated that barriers exist that make it difficult for Nevadans to live a healthy lifestyle, they came across as enthusiastic and positive regarding ideas to make it easier for those with low-income to make healthier choices.

Phase III

The objective of Phase III was as follows:
Measure the opinions of SNAP participants regarding nutrition, food security and physical activity needs; barriers to making behavior changes; and preferences for information and assistance including approaches, locations, and topics.

To address this objective, a statewide survey of SNAP households was conducted (n=1,014) for the purpose of: a) evaluating the relative level of concern regarding achieving household food security, a healthful diet, and a physically active lifestyle; b) assessing the perceived barriers related to achieving household food security, a healthful diet, and a physically active lifestyle; c) identifying preferences for nutrition education and physical activity promotion; and d) examining the relationships among select demographic/household characteristics, and the perspectives of adults enrolled in SNAP.

To ensure that the survey included a representative sample of SNAP households, a random, stratified sampling design was employed (50% from Clark County; 35% from Washoe County; 15% from all other counties). In addition, results were weighted based on sex, age, race/ethnicity and county. In addition, participants had the option of taking the survey online or by telephone. Both modes were conducted in English and Spanish. The findings revealed important information regarding the opinions and experiences of SNAP Participants.

Participants overwhelmingly (92%) agreed that choosing healthy foods and drinks was important; three quarters of participants reported that the foods and drinks they consumed were generally moderately healthy and almost 20% reported that they were very healthy. The most common barriers to a healthy diet were: cost (52%), convenience (35%), and the belief that healthy foods and drinks spoil too quickly (32%). When barriers to a healthy diet were compared to sociodemographic variables, lower education, lower household size and no children in the home had a significantly higher proportion of perceived barriers to a healthy diet. In addition, there was a significantly higher mean number of barriers for those reporting a disability.

Of all households surveyed, 74% were classified as food insecure. When examining food security by sociodemographic factors, those reporting the most food insecurity were: White, widowed marital status, education than a less than high school, less than 25 years old, reported gross income of greater than $1000 a month, and living in a household without children. Those reporting a disability were also more likely to report food insecurity compared to those without a disability. Very low food security was linked to a higher emergency food service use compared to those of low or high/marginal food security.

The most common threat to food accessibility was grocery shopping without a personal vehicle (34%), followed by shopping for groceries less than 3-4 times a month (31%).
Widowed marital status, income of zero dollars per month and no children in the home had the highest proportion of shopping at a convenience store, no personal vehicle, no reliable transportation, no full service grocery store nearby, shopping less than three times per month, no working stove and no working refrigerator. Those reporting a disability also had higher amount of threats to food accessibility compared to those not reporting a disability.

A total of 312 participants indicated they were on a special diet for health-related reasons. The largest proportion of persons who reported being on a special diet included women (66%), persons between the ages of 25-39 (36%), White participants (46%), individuals who have never been married (52%), individuals who completed high school (47%), persons whose reported a gross monthly income of $0 (79%), 1-person households (57%), households without children (67%), and individuals who reported having a physical, mental, or emotional disability (66%). Approximately 77% agreed/strongly agreed that the special dietary foods were too expensive and 87% agreed/strongly agreed that it was difficult for them to get to a store that carried the special dietary foods and drinks.

The most common nutritional educational topics participants indicated interest in were: ways to make groceries last all month (72%), ways to prepare healthy meals quickly (71%), preparing meals on a budget (67%), and safe food preparation and handling (50%). Females had a higher interest in all educational topics compared to males. Similarly, Hispanic ethnicity and households with children also had high interest in educational topics.

Approximately 81% of respondents either agreed or strongly agreed that it was important to them to exercise and be physically active. Additionally, just over 61% of respondents reported that they were moderately active and about 17% reported that they were very active. Almost 21% of participants indicated that they were not active. Of those who perceived themselves inactive, the most common barriers were: social norms (45%), cost (45%), schedule (39%), weather (37%), limited ability (34.4%) and safety (29%). Individuals whose education equated to less than high school were more likely to report a significantly greater number of barriers to physical activity than individuals who finished high school or those with college/post grad experience. Additionally, those who reported a disability reported a significantly greater number of barriers compared to those without a disability. For educational interests, the most common topics supported by respondents included ways to improve overall fitness (60%), ways to exercise at home without equipment (59%), and how to exercise without hurting yourself (51%). The most preferred format to receive information about nutrition and/or physical activity was mail (64%) followed by the internet or a website (41%). The least preferred format was by telephone (22%). The most preferred location to receive information related to nutrition and physical activity was a welfare or SNAP office (55%) followed by a medical or dental office/clinic (48%) and a grocery store (47%). The least preferred location to receive information was at Church or a faith organization (31%).

When inquiring about disability, a greater proportion of males (53%) than females (45%) reported having a physical, emotional, or mental condition that impacted their life daily. The greatest proportion of individuals who reported a disability were those between the ages of 55-69 (57.9%), individuals aged 70+ (57%) and individuals between the ages of 40-54 (55%). A greater proportion of White participants (55%) reported having a disability compared to African American and/or “other/multiple” participants (43%) and Hispanic participants (27%). Washoe residents reported the greatest proportion of individuals with a disability (51%) followed by all other counties (other than Clark) (47%) and Clark County residents (44%). A majority of

individuals with a disability agreed that their condition made it difficult to shop for food (51%) and prevented them from exercising and being physically active (59%).

The majority of individuals characterized as vulnerable reported that they were generally in good or excellent health (53%). Sixty-three percent of vulnerable individuals reported that they were moderately active and almost 23% reported that they were not active. Almost 75% of participants defined as vulnerable could be characterized as low or very low food security. Grocery shopping without a personal vehicle and shopping for groceries less than 3 times a month constituted the top two commonly reported threats to food access.

Nevada Nutrition Assistance Consortium Summit

Following completion of Phases I and II, D. Dougherty, SNAP-Ed Nutrition Specialist with the Nevada Division of Welfare and Supportive Services (DWSS) conducted a meeting of stakeholders at the *Nevada Nutrition Assistance Consortium Summit, Statewide SNAP-Ed Needs Assessment Review and Analysis; Nevada State Nutrition Action Collaborative Plan Development* meeting, on April 27, 2017. In attendance were approximately 50 stakeholders from throughout the state of Nevada including representatives from SNAP-Ed implementing agencies; administrators at the county and state level; and other interested parties. The meeting agenda included a description of the scope and purpose of the needs assessment (D. Dougherty); an overview of the needs assessment process (J. Benedict); findings from Phase I including a demonstration of the interactive maps (H. Kerwin); findings from Phase II (M. Schwartz); and a description of methods planned for Phase III (J. Benedict). This was followed by a facilitated discussion led by A. Naja-Riese, Branch Chief Program Integrity of the U.S.D.A. Western Region Office. The results of this discussion were used to shape the 2018 “Call for Proposals” for Nevada’s SNAP-Ed plans.

Recurring Themes

The following section highlights themes that emerged throughout the needs assessment process. Please note that this section was not prepared as an exhaustive or “prescriptive” list, nor to imply priorities. Rather its purpose is to call attention to topics/issues that were reflected in each of the three phases. Readers are encouraged to read the full reports for Parts I, II and III for important details about specific topics and audiences.

Food insecurity

According to the USDA, food security is defined as, “Access by all people at all times to enough food for an active, healthy life” and food insecurity is defined as “…the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.”

The findings from this needs assessment revealed that a significant number of SNAP participants are experiencing food insecurity. As described in the Phase III report, approximately 74% of SNAP survey participants’ reported that their households are food insecure, including 38% who reported very low food security. It is likely that some individuals from these households are experiencing hunger. This rate is much higher than the overall state rate of food insecurity (14.2% of households) and the most recent national estimate (11.8% of households) according to the USDA Economic Research Service reports.

Other data and indicators gathered during Phase I of this assessment also point to this significant issue including a report that 16.6% of middle school and 15.3% of high school students were food insecure and that 27% of SNAP eligible adults reported going hungry at least once in the past 30 days because there was not enough food in their home.

There are multiple programs in place to help mitigate risks associated with food insecurity. Participation in many of these programs is summarized in the Phase I report. In addition, key informants in Phase II reported that education on utilization of food assistance resources was important and that SNAP-Ed audiences would benefit from knowing of the food assistance resources that are available to them and how to use them most strategically. It is also noteworthy that SNAP participants themselves reported a high level of interest in learning more about topics that may help to reduce their risk of food insecurity such as food resource management (e.g., ways to make food last all month and preparing meals on a budget).

Food insecurity can have a lasting and very detrimental impact on health and well-being. Food insecurity is particularly detrimental for children as it may impact their physical, emotional and intellectual development. In addition, food insecurity isn’t experienced equally across all SNAP households as noted in Phase III. Lastly, the condition of food insecurity presents a significant

impediment to addressing other health behaviors since its impact on every day experiences can be so profound.

Chronic Disease

Chronic diseases such as heart disease, diabetes, stroke and cardiovascular disease are among the top ten causes of death and responsible for the majority of health expenditures. For many, the risks associated with chronic disease are modifiable through a healthful diet and regular physical activity. The findings of this needs assessment confirm that Nevada, similar to other states, has high rates of preventable chronic disease rates. For example, from Phase I, results indicate that asthma, diabetes, coronary heart disease, and precursors for risk factors for chronic diseases such as high blood pressure and high blood cholesterol, are all close to national rates. Also reported in Part I, results from surveillance efforts point to behaviors that may contribute to chronic disease risk. For example, according to one study, one-third of SNAP eligible adults did not consume fruit daily, and one-fourth did not consume vegetables daily. Similarly, more than one-third did not engage in exercise outside of their regular job. Data on children also point to behaviors that may increase health risks (e.g., sedentary behavior, limited intake of fruits and vegetables, consumption of sugar-sweetened beverages).

In Phase II, key informants communicated the importance of educating SNAP-Ed audiences on the connections among nutrition, physical activity and health. They also commented on the potential benefit of providing education about the relative risk for specific chronic diseases and conditions among select racial/ethnic group.

The impact of chronic disease on SNAP participants was also reflected in Part III. As noted in that report, approximately two-thirds of participants indicated they or someone in their household was on a special diet, potentially indicating presence of a chronic disease. The nature of these special diets was quite varied and ranged from a modified texture to a low-sodium diet. However, it is noteworthy that the most common “special diet” was for diabetes. In addition, most of those on a special diet indicated that the foods were “too expensive” and that it was difficult to get to a store that stocked the items needed for their diet. The high rates of food security among SNAP participants coupled with the added expense and difficulty associated with obtaining foods and beverages that may be required for special diet, ultimately can

exacerbate poor health as a result of an inability to comply with recommendations by health care providers.

Lastly, it is important to note that chronic disease not only results in additional health care expenditures, but can also have an adverse impact on physical, psychological and social function – thus reducing one's quality of life and productivity.

Vulnerable Populations

Vulnerable populations may be at a disproportionate risk for experiencing limited healthcare access and poor health outcomes. As a consequence, different resources may be needed to achieve a healthy lifestyle. American Community Survey defines a vulnerable population as areas with low median household income, high disability status, population over 65, and limited access to transportation. As described in Phase I report, findings of the American Community Survey indicate that about four out of ten individuals nationally were categorized as vulnerable. In Phase III of this assessment, a person was considered "vulnerable" if they met one of the following conditions: 1) age 70 years old or older, 2) self-reported physical, mental, or emotional condition, 3) residing in a household with children, or 4) reporting a health-related dietary needs. The resulting prevalence aligned with national data; about four out of ten individuals were identified as vulnerable. The findings from this needs assessment confirm that those identifying as vulnerable in Nevada may be at a disproportionate risk for adverse health outcomes, illustrated by disparities in many aspects. For example, the vulnerable population was more likely to report food insecurity; almost three-quarters of participants defined as vulnerable could be characterized as low or very low food secure. Additionally, about half of vulnerable participants indicated that their condition made it difficult for them to shop for food and about four out of ten indicated their condition made it difficult for them to prepare food. More than half agreed that their condition prevented from being physically active.

These findings illustrate that the vulnerable population in Nevada has unique and greater needs for resources, including education on nutrition and physical activity. Key informants from Phase II confirmed these findings by specifying those with a disability and older adults have increased needs.

Barriers

The SNAP-Ed Guidance stresses the importance of implementing Policy, Systems, and Environmental changes (PSE) in order to address barriers to healthy living that SNAP-Ed audiences may experience in the communities in which they live, learn, work, shop, and play. The Needs Assessment findings revealed specific barriers in regards to nutrition and physical activity.

The data presented in Phase I indicated a majority (>75%) of low-income communities did not have access to a farmer's market. In addition, the majority of low-income census tracts in Nevada did not have a full-service SNAP grocery store or supermarket within the census tract. Key informants from Phase II agreed that environmental barriers (such as lack of transportation to stores and unsafe neighborhoods) existed in regards to access to healthy foods. Survey responses from SNAP participants in Phase III were not entirely consistent with the findings of Phase I and II. Nearly all survey participants reported access to a working stove and to a working refrigerator, and most participants strongly agreed or agreed that they had access to reliable and/or affordable transportation to get to a grocery store. Additionally, most participants agreed that there was a full-service grocery store near their home.

Lack of effective food resource management (e.g., ways to make food last all month and preparing meals on a budget) can present a barrier to healthy eating. In Phase II, key informants described food resource management as an important topic for the SNAP population including how to make food last the entire month, getting the most nutrient dense food for your budget, and stretching food budget to purchase healthy foods. In Phase III, survey participants reported that the cost of healthy food and drinks was rated as the most significant barrier they encountered relative to eating a healthy diet. Most of the participants indicated that they would like to receive more information on how to prepare healthy foods on budget. Information from both the key informants (Phase II) and SNAP participants (Phase III) reflected the benefit of education on how to prepare healthy meals in little time.

The findings from the assessment also suggest that barriers to being physically active exist in Nevada communities. The data presented in Phase I indicated that of those living in low income communities, less than half had access to a recreational facility. Other data indicated that approximately two-thirds of kindergarteners in Nevada watched two hours or television each

day. In Phase II key informants discussed additional barriers, such as lack of childcare and unsafe neighborhoods. Key informants also indicated that individuals residing in rural areas of the state lack resources such as a gym. Despite the finding that a majority of SNAP participants in Phase III described their level of physical activity as very active or moderately active, about half agreed that it was hard to find affordable ways to be physically active. Additionally, many participants indicated there were not safe areas to exercise near their home. These findings align with key informants perceptions from Phase II, suggesting that many participants find cost and safety to be a barrier to physical activity.

The findings from the assessment suggest that opportunities exist for PSE changes to address the barriers that the SNAP-Ed faces. This will ensure that the healthy choice becomes the easy and preferred choice.

Community Strengths and Assets

This needs assessment would not be complete if the strengths and assets of the SNAP-Ed eligible communities and those who serve this population were not included. Space here doesn't permit an exhaustive list or in-depth presentation of these strengths and assets – because there are so many. Rather we will call attention to a few that relate directly to SNAP-Ed and its purpose, and apologize in advance for our over-sights.

- There are numerous examples of leadership in Nevada at the local, county and state level that have resulted in positive changes in our communities, and will undoubtedly lead to many more. These leaders work tirelessly to guide others towards a future that improves the health, reduces health disparities, and enhances the quality of life for all Nevada citizens. For some, this is reflected in their decisions about how resources are invested. One example of an important investment is the large number and variety of surveillance efforts underway as described in the Phase I report. The resulting information may be used to establish priorities and measure progress. Without this information, important characteristics of our communities would remain unknown.

- The state is rich with persons, government agencies, and private organizations that are committed to improving the nutritional health and reducing obesity risk among those served by SNAP-Ed. Evidence of their innovation, generosity, and perseverance emerged in several ways in this needs assessment including, but not limited to the

investment of time and effort of those who served on the steering committee and those who were key informants. Their contributions reflected an in-depth understanding and awareness of their communities and the residents of Nevada. Their fortitude and optimism about our future is reflected in a theme from Phase II, “Let’s make the healthy choice the easy choice- we can do it!”.

- The families, households, and communities served by Nevada’s SNAP face a variety of unique and significant challenges. Despite these challenges, there was overwhelming agreement among SNAP participants surveyed in Phase III that choosing healthy foods and drinks, and exercising and being physically active was important to them. In addition, many expressed interest in learning more about how to accomplish this. Many of these adults were living in households with children. Their interest and motivation in health should not be underestimated, but rather used as a catalyst for change including those that may involve PSE approaches within their own communities.

Closing

The approaches used to complete this statewide needs assessment made use of existing data about nutrition, food and health to maximize efficiency; assembled geographic data that were used to describe specific characteristics of Nevada’s communities; sought expert opinion from key informants; and generated quantitative data directly from households that is generalizable to Nevada’s SNAP population. The combination of qualitative and quantitative data is a strength of this assessment, as is the employment of different methods and sources regarding the needs of the SNAP-Ed eligible communities. The needs assessment is not without limitations. The process was guided by a pre-determined set of objectives. It is possible that important topics weren’t addressed. In addition, some data represent personal opinion (key informants) and self-report (SNAP household survey). Although this isn’t unusual for a needs assessment, the limitations of this type of data should be acknowledged.

The overall goals of the Statewide Needs Assessment for Nevada’s Supplemental Nutrition Assistance Program- Education (SNAP-Ed) were to describe the most pressing nutrition and physical activity needs of SNAP participants in Nevada, and to examine relevant community characteristics and other environmental factors that shape nutrition and physical activity behaviors for the purpose of identifying opportunities for PSE intervention/approaches. The findings of Phases I, II and III provide information to accomplish these goals. It would be difficult

to objectively review the findings and draw conclusions about what one need is the greatest, what community would benefit most from SNAP-Ed efforts, or what approach or method would have the greatest impact on all SNAP-Ed eligible audiences. The nuances of the results should ideally be viewed from multiple perspectives. We are confident that findings herein will be useful to DWSS and others in developing a cohesive, comprehensive approach for Nevada's SNAP-Ed plan that is sustainable and impactful.

Acknowledgements

Completion of the *Statewide Needs Assessment for Nevada's Supplemental Nutrition Assistance Program- Education (SNAP-Ed)* was the result of the individual and collective effort of many persons and multiple agencies. The generous provision of time, effort, expertise, and support was offered in the spirit of collaboration and commitment to improving the health and quality of life for some of Nevada's most vulnerable persons. On behalf of the team that led this needs assessment, we offer our sincere gratitude for their contributions. Without their involvement, this assessment would not have been possible.

Unfortunately, space does not permit the inclusion of an exhaustive list of individual names. Rather, we would like to acknowledge:

Nevada's Division of Welfare and Supportive Services for funding the statewide needs assessment, and for the guidance throughout the process on methods and approaches. As a result of the innovation and strategic planning of this agency, Nevada's SNAP-Ed plan will continue to positively impact Nevada's communities and households.

Members of the Steering Committee who made time in their full schedules to respond to questions during each phase of the needs assessment. Thank you for helping to ensure our methods were appropriate. Your wisdom and experience are priceless!

The key informants that shared their opinions and perceptions of the nutrition and physical activity education needs, as well as barriers to making behavior changes among SNAP households and others residing in low-income households. Your perspectives brought richness and clarity to many issues that are important to consider in working toward a healthier Nevada.

Attendees of the *Nevada Nutrition Assistance Consortium Summit Statewide SNAP-Ed Needs Assessment Review and Analysis* conducted on April, 2017. Thank you for reviewing the findings of Phase I and Phase II of this needs assessment and helping to shape Nevada's SNAP-Ed Plan. Your commitment to SNAP-Ed is inspirational.

The 1,014 SNAP participants who completed the household survey either by phone or online. By sharing your opinions, you have helped to ensure that the programs offered by Nevada's SNAP-Ed implementing agencies are relevant and effective. Thank you for trusting us to accurately portray your opinions and experiences.

The faculty, staff and students of Center for Surveys, Analyses and Statistics whose effort and expertise brought the needs assessment to a successful close with the completion of the Phase III, the SNAP household survey. Thank you for working tirelessly to ensure the integrity of survey methods and analysis.

The staff at the Western Region Office of Food and Nutrition Service of U.S. Department of Agriculture for your support of this needs assessment, for attending the Summit in 2017, and for your effective leadership in improving the quality of SNAP-Ed Plans that ultimately serve to improve health and reduce health disparities.

Section 2: Phase I Results

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

Phase I Results

Prepared by:
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In partial fulfillment of Work Order 302
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Board of Regents on May 31, 2016.

University of Nevada, Reno

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Statewide Needs Assessment for Nevada's SNAP-Ed Program
Introduction

By Jamie Benedict, Ph.D., R.D., L.D.
University of Nevada, Reno

The Supplemental Nutrition Assistance Program (SNAP) has served as the nation's first and most significant defense against food insecurity and hunger for over fifty years. The Supplemental Nutrition Assistance Program Education Program (SNAP-Ed) supports SNAP's role in addressing food insecurity. Per the FY 2018 SNAP-Ed Federal Guidance, the goal of SNAP-Ed is, "to improve the likelihood that persons eligible for SNAP will make healthy food choices within a limited budget and choose physically active lifestyles consistent with the Dietary Guidelines for Americans and the USDA food guidance" (Food and Nutrition Service, p. 12). Thus, SNAP-Ed complements SNAP's efforts to improve nutrition and prevent or reduce diet-related chronic disease and obesity among SNAP recipients. In order to effectively do so, participating states are required to present "…valid and data driven needs assessment of nutrition, physical activity and obesity prevention needs of the target population and their barriers to accessing healthy foods and physical activity" (FNS, p. 7).

The activities and programs included in Nevada's SNAP-Ed Plans have been guided by needs assessments, including those conducted at a local, county, and state-level. This has helped to ensure that programs are meeting the unique needs of local communities, as well as addressing statewide priorities as informed by Nevada's Nutrition Assistance Consortium and articulated by the Nevada Division of Welfare and Supportive Services in the annual "Call for Proposals" for Nevada's SNAP-Ed plans.

In FY 2016, it was determined that a statewide needs assessment would benefit Nevada's SNAP-Ed efforts given the changes that have occurred in our state since the last statewide needs assessment (e.g., Great Recession) and FNS' emphasis on policy, systems and environmental (PSE) approaches, and obesity prevention. FNS approved Nevada's plan to proceed with a statewide assessment in FY 2017 which will conclude in FY 2018. The following is a brief description of the goals, objectives and approaches employed for this statewide assessment.

Assessment Goals and Objectives

The overall goals of Nevada's SNAP-Ed Statewide Needs Assessment are 1) to describe the most pressing nutrition and physical activity needs of SNAP participants in Nevada, and 2) to examine relevant community characteristics and other environmental factors that shape nutrition and physical activity behaviors for the purpose of identifying opportunities for PSE intervention/approaches. It is assumed that the findings of the assessment will be used to strengthen Nevada's SNAP-Ed Plan by modifying programs and approaches, or developing new programs as/if indicated by key findings.

The Nevada SNAP-Ed needs assessment objectives are as follows:

1. Characterize Nevada's SNAP participants, those eligible for SNAP, and individuals residing in low-income communities; herein referred to as SNAP-Ed target audiences.
2. Characterize low-income communities.
3. Describe relevant public policies, programs and practices that impact of related nutrition and physical activity behaviors with emphasis on persons residing in low-income households and low-income communities.
4. Describe the perceptions of key informants regarding 1) the needs of SNAP households and others residing in low-income households as they pertain to the goals of SNAP-Ed; and 2) opportunities at the policy, system and environmental level to facilitate healthful nutrition and physical activity behaviors with an emphasis on low-income communities.
5. Measure the opinions of SNAP participants regarding nutrition, food security and physical activity needs; barriers to making behavior changes; and preferences for information and assistance including approaches, locations, and topics.

Approaches

The approaches and materials used for this statewide assessment will result in both qualitative and quantitative data. In general, the assessment will be completed in three phases. Please note that some are completed and others are in-progress.

Phase I: Staff will gather, summarize and interpret existing data related to Objectives 1 and 2 (completed).

Phase II: Staff will obtain information from key informants related to Objectives 3 and 4 (completed).

Phase III: Staff will conduct a telephone survey of SNAP households in Nevada for the purpose of addressing Objective 5 (in-progress)

The specific methods and tools used for Phases I and II are more fully described in the corresponding reports. It is important to point out that the phases are meant to be complementary.

Steering Committee

To help ensure the quality and integrity of the assessment process, a statewide steering committee was formed. This steering committee includes eight persons who are 1) very familiar with the SNAP-Ed target audiences, 2) have the experience and/or education to provide subject-matter expertise related to nutrition and physical activity behaviors, and 3) have the time and interest to provide input at different points during the needs assessment process. Feed-back from the steering committee has been continuous and has shaped key details during this dynamic process. The Steering Committee members are as follows:

Jill R. Berntson
Deputy Administrator
Aging and Disability Services Division

Nicole Bungum, M.S., C.H.E.S.
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Office of Chronic Disease Prevention and Health Promotion

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Nutrition Specialist - Professor
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A final, cumulative report will be prepared by the Assessment Team at the University of Nevada, Reno and submitted to Nevada's SNAP-Ed Coordinator, D. Dougherty. It is anticipated that the final report will be utilized by the Nevada Division of Welfare and Supportive Services to prioritize needs and develop short and long-term goals for Nevada's SNAP-Ed future plans.

Statewide Needs Assessment for Nevada's SNAP-Ed Program

Phase I: Part I

Prepared by Heather Kerwin, M.P.H.
Edited by Jamie Benedict, Ph.D., R.D., L.D.
University of Nevada, Reno

This portion of the Statewide Needs Assessment was guided by the following objective: "Characterize Nevada's SNAP participants, those eligible for SNAP, and individuals residing in low-income communities; herein referred to as SNAP-Ed target audiences." The secondary data indicators presented in this section aim to describe persons who are eligible for SNAP, as well as SNAP-Ed target audiences, relative to the population of Nevada as a whole. After a thorough exploration of relevant existing data, an initial list of approximately 100 health indicators were provided to the Nevada SNAP-Ed Assessment Steering Committee members. We wish to thank the steering committee members for providing or referencing additional reports or indicators for inclusion. The report that follows represents a culmination of this effort. Tables and figures presented included here utilize data from one or more surveys or reports. Brief technical notes are provided for publications such as the Kindergarten Health Surveys, Youth Risk Behavior Survey, Behavioral Risk Factor Surveillance Survey, Food Security in Nevada, and the Hunger in America reports. For a full description of survey or report methodology, readers can refer to the original documents via the hyperlinks provided in the Reference section located at the end of this report. This report is organized into the following sections:

Phase I: Part I Executive Summary

Nevada's population has grown steadily over the past few decades, and although it has begun to slow down, it is estimated to continue to see notable growth among those 60 years and older as well as those who identify as Hispanic.

Overall poverty rates in Nevada were relatively similar to the nation, with estimated poverty rates ranging from 7.8% in Storey County to 18.3% in Pershing County during 2015. Among different age groups, the rate of poverty was highest among children ages 0 to 17 years and ranged from 12.0% in Eureka County to 33.6% in Mineral County.

The Nevada SNAP Participant program data illustrated differences among SNAP participants demographics relative to the state's population overall. In 2015, approximately 437,706 persons were enrolled in Nevada's SNAP with a higher proportion being female, African American, or Hispanic compared to the Nevada general population. Nevada SNAP participants have become slightly more racially and ethnically diverse from 2011 through 2015. In 2015, approximately 45.5% of Nevada SNAP participants were children aged 0 to 18 years, which is similar to the ages of SNAP participants nationwide.

Nevada's SNAP participation rates have historically been low and in 2014, the USDA Nevada ranked 49 out of 51 (included District of Columbia) states, with an estimated 65% of those eligible for SNAP in Nevada being enrolled in SNAP.

The United States Department of Agriculture's (USDA) Economic Research Service estimated 14.2% of households in Nevada were food insecure compared to the national rate of 13.7% (three-year average estimates 2013-2015). A report conducted by the Nevada Department of Health and Human Services estimated food insecurity among children using 2013 and 2015 Youth Risk Behavioral Survey (YRBS) data and found 16.6% of middle school students and 15.3% of high school students were food insecure in Nevada.

The 2014 Hunger in America studies highlight findings from surveys conducted at food banks across the nation. Nevada's two food banks provided their agency-specific results from this study; the data show

the clients served by Nevada's food banks are fairly similar to the populations served through food banks nationwide in terms of age, race/ethnicity, and household members. Over one-third of Nevada's foodbank clients reported they receive SNAP benefits, but only a quarter of the clients stated SNAP benefits lasted four or more weeks. Most clients who were not enrolled in SNAP indicated they did not think they were eligible for SNAP.

The nutritional habits among Nevada's children reported in the Nevada Kindergarten Health Survey and YRBS data illustrate very little change in beverage consumption such as milk, diet or non-diet soda, and juice over the past few years. Nevada's beverage consumption among high school students mirrors national level data over the same time period, although slightly more high school students in Nevada reported that they did not drink any soda as compared to the national rates (past week). The Nevada Department of Health and Human Services released a Nevada Food Security report in 2016, which showed a higher rate of daily soda consumption among adults categorized as SNAP eligible (27.3%), compared to those adults categorized as SNAP ineligible (15.5%).

Fruit and vegetable consumption data for Nevada high school students and adults also show few changes from 2013 to 2015. Fruit and vegetable consumption among Nevada's population is relatively similar to the nation overall.

According to data from the 2011 Nevada Behavioral Risk Factor Surveillance Survey (BRFSS), 45.4% of adults "always" or "most of the time" read nutrition labels while grocery shopping to help with food choices. Aggregate 2014-2015 data from the Nevada Food Security report show a higher rate of adults categorized as SNAP eligible (43.6%) used calorie information available in restaurants to help decide what to order, compared to those adults categorized as SNAP ineligible (11.4%).

Similar to fruit and vegetable consumption, rates of physical activity and sedentary behaviors reported through the Nevada Kindergarten Health Surveys and YRBS also indicated few changes from year to year and, when available for comparison, few differences relative to the rest of the nation. The 2015-2016 Nevada Kindergarten Health Survey data indicate nearly half of kindergarteners spent two or more hours watching television on an average school day. The 2015 Nevada YRBS data indicated 38.3% of high school students reported playing video or computer games for three or more hours each day during an average school day.

Consequently, the reported or measured weight status (underweight, healthy weight, overweight or obese) of Nevada residents has not changed much over the past five years among kindergarteners, fourth, seventh, or tenth graders, aggregated high school students (grades 9-12), or among adults.

Chronic diseases such as asthma, diabetes, coronary heart disease, and pre-cursors or risk factors for chronic diseases such as high blood pressure or high cholesterol are all very close to the national rates. Additional poor health outcomes such as heart attack, stroke, and disability rates are very similar to national rates as well.

In 2014, the top 10 causes of death in Nevada mirrored the top 10 causes of death in the nation, apart from diabetes as well as chronic liver disease and cirrhosis. Diabetes was nationally ranked 7th and was ranked 11th in Nevada. Chronic liver disease and cirrhosis was nationally ranked 12th and was ranked 9th in Nevada.

There are several local and statewide assessments, community health improvement plans, and other health-related initiatives which are currently underway throughout Nevada. Several of these assessment and subsequent plans, programs, and resulting policies aim to address nutrition, physical activity and obesity as these have been identified as top priorities among Nevada residents.

Select Characteristics of Nevada's Population

Population estimates from the Nevada State Demographer Office (Table 1) illustrate the population growth experienced in Nevada over the past decade, 2006 to 2016, with notable increases among the population aged 45 years and older, as well as those of Black of African American (non-Hispanic), Asian/Pacific Islander (non-Hispanic), and Hispanic descent. Overall population growth was estimated at 17.0% from 2006 to 2016.

Table 1: Nevada Population, Estimated Growth by Sex, Age, and Race/Ethnicity, 2006 and 2016					
Groups	**2006**		**2016**		**10 Year Change**
Sex	**Number**	**Percent**	**Number**	**Percent**	**Percent**
Male	1,250,739	50.3%	1,453,636	50.0%	16.2%
Female	1,235,895	49.7%	1,454,676	50.0%	17.7%
Age Group					
0-4 years	189,043	7.6%	180,922	6.2%	-4.3%
5-9 years	173,866	7.0%	201,431	6.9%	15.9%
10-14 years	169,127	6.8%	204,108	7.0%	20.7%
15-19 years	167,351	6.7%	191,169	6.6%	14.2%
20-24 years	160,994	6.5%	193,188	6.6%	20.0%
25-29 years	181,876	7.3%	204,596	7.0%	12.5%
30-34 years	178,383	7.2%	191,603	6.6%	7.4%
35-39 years	181,962	7.3%	205,953	7.1%	13.2%
40-44 years	183,127	7.4%	189,619	6.5%	3.5%
45-49 years	175,024	7.0%	195,105	6.7%	11.5%
50-54 years	167,678	6.7%	193,714	6.7%	15.5%
55-59 years	146,423	5.9%	178,508	6.1%	21.9%
60-64 years	129,297	5.2%	169,535	5.8%	31.1%
65-69 years	98,666	4.0%	141,308	4.9%	43.2%
70-74 years	72,807	2.9%	111,725	3.8%	53.5%
75-79 years	51,203	2.1%	73,324	2.5%	43.2%
80-84 years	34,339	1.4%	44,189	1.5%	28.7%
85+ years	25,467	1.0%	38,314	1.3%	50.4%
Race/Ethnicity					
White, non-Hispanic	1,460,973	58.8%	1,522,416	52.3%	4.2%
Black/African American, non-Hispanic	189,782	7.6%	246,104	8.5%	29.7%
American Indian/Eskimo/Aleut, non-Hispanic	30,804	1.2%	34,087	1.2%	10.7%
Asian/Pacific Islander, non-Hispanic	196,078	7.9%	271,286	9.3%	38.4%
Hispanic, any race	608,998	24.5%	834,419	28.7%	37.0%
Total Population	**2,486,634**	**100.0%**	**2,908,312**	**100.0%**	**17.0%**

Nevada has experienced population growth at a rapid rate, although growth slowed during the recession. The Nevada Demographer Office projected population estimates show continued population growth, although at a much slower rate than the previous decade (Table 2). Much of the population growth is expected among those in the age groups of 60 years and older and similar to the previous

decade, the Hispanic population is projected to be the fastest growing sub-population (Table 2). Proportionally, the population composition relative to gender and age are not projected to change much, however Nevada's population is projected to continue to become more diverse in terms of race and ethnicity with the proportion of the population classified as Hispanic estimated to increase by approximately 21.7% from 2016 to 2026 (Table 2).

Table 2: Nevada Population, Estimated Growth by Sex, Age, and Race/Ethnicity, 2016 and 2026					
Groups	**2016**		**2026**		**10 Year Change**
Sex	**Number**	**Percent**	**Number**	**Percent**	**Percent**
Male	1,453,636	50.0%	1,569,569	49.6%	8.0%
Female	1,454,676	50.0%	1,594,365	50.4%	9.6%
Age Group					
0-4 years	180,922	6.2%	199,219	6.3%	10.1%
5-9 years	201,431	6.9%	195,683	6.2%	-2.9%
10-14 years	204,108	7.0%	190,193	6.0%	-6.8%
15-19 years	191,169	6.6%	210,268	6.6%	10.0%
20-24 years	193,188	6.6%	219,371	6.9%	13.6%
25-29 years	204,596	7.0%	207,750	6.6%	1.5%
30-34 years	191,603	6.6%	211,831	6.7%	10.6%
35-39 years	205,953	7.1%	212,213	6.7%	3.0%
40-44 years	189,619	6.5%	200,899	6.3%	5.9%
45-49 years	195,105	6.7%	206,900	6.5%	6.0%
50-54 years	193,714	6.7%	195,113	6.2%	0.7%
55-59 years	178,508	6.1%	194,241	6.1%	8.8%
60-64 years	169,535	5.8%	189,053	6.0%	11.5%
65-69 years	141,308	4.9%	166,241	5.3%	17.6%
70-74 years	111,725	3.8%	140,479	4.4%	25.7%
75-79 years	73,324	2.5%	102,666	3.2%	40.0%
80-84 years	44,189	1.5%	67,531	2.1%	52.8%
85+ years	38,314	1.3%	54,310	1.7%	41.7%
Race/Ethnicity					
White, non-Hispanic	1,522,416	52.3%	1,512,734	47.8%	-0.6%
Black/African American, non-Hispanic	246,104	8.5%	285,048	9.0%	15.8%
American Indian/Eskimo/Aleut, non-Hispanic	34,087	1.2%	35,907	1.1%	5.3%
Asian/Pacific Islander, non-Hispanic	271,286	9.3%	314,785	9.9%	16.0%
Hispanic, any race	834,419	28.7%	1,015,487	32.1%	21.7%
Total Population	**2,908,312**	**100.0%**	**3,163,961**	**100.0%**	**8.8%**

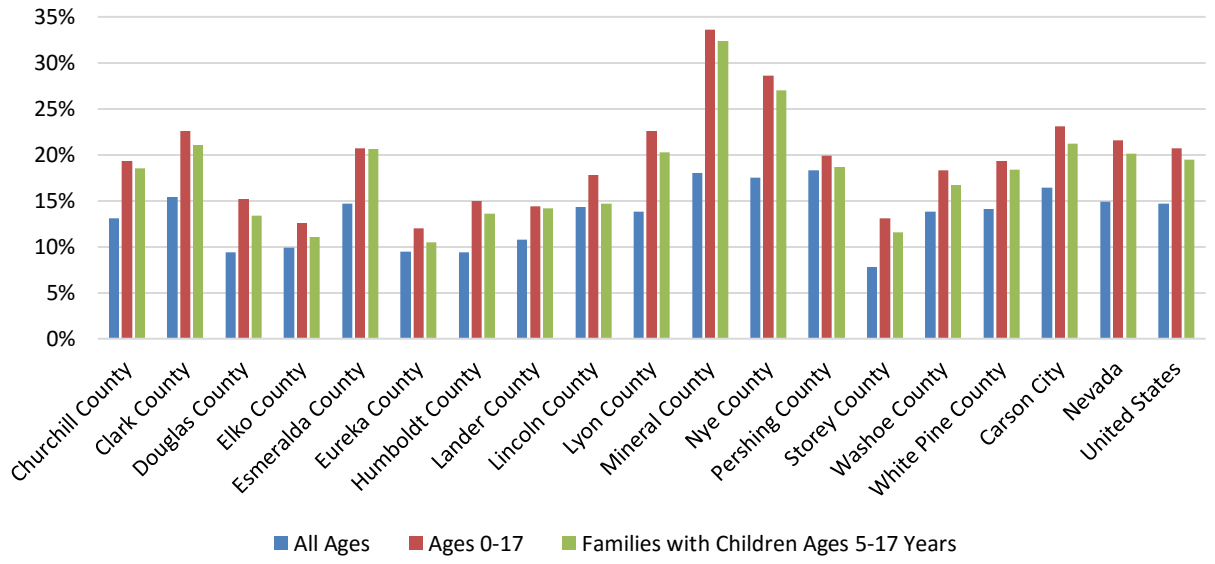
Poverty

According to 2015 data from the U.S. Census Bureau Small Area Income and Poverty Estimates (SAIPE), the rate of poverty among persons of all ages were similar in Nevada (14.9%) and the United States (14.7%). County rates ranged from 7.8% in Storey County to 18.3% in Pershing County. Poverty was highest among children aged 0 to 17 years, with little difference between Nevada (21.6%) and the

United States (20.7%). The rate of poverty among children aged 0 to 17 years at the county level varied from 12.0% in Eureka County to 33.6% in Mineral County. Among families with children aged 5 to 17 years of age, similar rates of poverty in both Nevada (20.1%) and the United States (19.5%), while county rates ranged from 10.5% in Eureka County to 32.4% in Mineral County (Table 3, Figure 1).

Table 3: Percent in Poverty by Select Groups, United States & Nevada by County, 2015			
Location	**All Ages**	**Ages 0-17**	**Families with Children Ages 5-17 Years**
Carson City	16.4%	23.1%	21.2%
Churchill County	13.1%	19.3%	18.5%
Clark County	15.4%	22.6%	21.1%
Douglas County	9.4%	15.2%	13.4%
Elko County	9.9%	12.6%	11.1%
Esmeralda County	14.7%	20.7%	20.6%
Eureka County	9.5%	12.0%	10.5%
Humboldt County	9.4%	15.0%	13.6%
Lander County	10.8%	14.4%	14.2%
Lincoln County	14.3%	17.8%	14.7%
Lyon County	13.8%	22.6%	20.3%
Mineral County	18.0%	33.6%	32.4%
Nye County	17.5%	28.6%	27.0%
Pershing County	18.3%	19.9%	18.7%
Storey County	7.8%	13.1%	11.6%
Washoe County	13.8%	18.3%	16.7%
White Pine County	14.1%	19.3%	18.4%
Nevada	14.9%	21.6%	20.1%
United States	14.7%	20.7%	19.5%

Fig. 1 Percent in Poverty by Select Groups, the United States and Nevada by County, 2015



Nutrition Assistance Program Participants

Nevada SNAP Participants

The Nevada Division of Welfare and Supportive Services data show as of 2015, 437,706 persons were enrolled in SNAP and approximately 53% of those SNAP enrollees have been female from 2011 through 2015 (Table 4). The majority of SNAP participants include households with children, the composition of participants relative to age has remained the same over the past five years, with the exception of the population aged 50 to 69 years, which has grown slightly. Nevada SNAP participants have more often identified themselves as white, non-Hispanic. However, the proportion of this population has been decreasing from 39.3% in 2011 to 36.1% in 2015 (Table 4).

Table 4: Nevada SNAP Participants by Gender, Age, Race and Ethnicity, 2011-2015

Gender	**2011**	**2012**	**2013**	**2014**	**2015**
Female	53.6%	53.5%	53.7%	53.7%	53.8%
Male	46.4%	46.5%	46.3%	46.3%	46.2%
Age Group					
0-5 years	19.7%	18.9%	17.8%	17.0%	16.6%
6-12 years	18.1%	18.2%	18.4%	18.3%	18.2%
13-18 years	10.9%	10.9%	10.7%	10.7%	10.7%
19-20 years	2.7%	2.6%	2.4%	2.5%	2.4%
21-29 years	11.3%	11.5%	11.7%	12.1%	12.5%
30-39 years	10.8%	10.8%	11.0%	11.4%	11.7%
40-49 years	10.0%	9.8%	9.5%	9.4%	9.2%
50-59 years	8.2%	8.6%	9.0%	9.3%	9.3%
60-64 years	2.7%	2.8%	3.0%	3.2%	3.4%
65-69 years	1.9%	2.1%	2.3%	2.3%	2.3%
70-79 years	2.5%	2.6%	2.8%	2.7%	2.7%
80-89 years	1.0%	1.0%	1.1%	1.0%	1.0%
90+ years	0.1%	0.1%	0.1%	0.1%	0.1%
Select Groups					
Children (0 to 17 years)	47.2%	46.5%	45.5%	44.5%	44.0%
Adults (18+ years)	52.8%	53.5%	54.5%	55.5%	56.0%
Race/Ethnicity					
Asian, non-Hispanic	3.0%	3.0%	3.2%	3.2%	3.2%
African American, non-Hispanic	20.3%	20.6%	21.1%	21.6%	22.4%
Native American/AK Native, non-Hispanic	1.2%	1.2%	1.1%	1.1%	1.1%
Pacific Islander/Native Hawaiian, non-Hispanic	0.0%	0.0%	0.0%	0.0%	0.0%
White, non-Hispanic	39.3%	38.3%	37.9%	37.1%	36.1%
2 or more races	3.8%	4.1%	4.7%	5.2%	5.8%
Hispanic, any race	31.7%	31.9%	31.0%	30.7%	30.1%
Unknown	0.8%	0.9%	0.9%	1.0%	1.2%

According to FY 2015 data from the United States Department of Agriculture (USDA), the distribution of Nevada's SNAP participants were similar to the SNAP participants in the United States relative to the various subgroups shown in Figure 2. According to 2014 data from the United States Census Bureau's American Community Survey, Nevada SNAP participants are more racially diverse than the overall population in Nevada (Figure 3).

Fig. 2 Percent of Participants by Age, Nevada and the United States, FY 2015

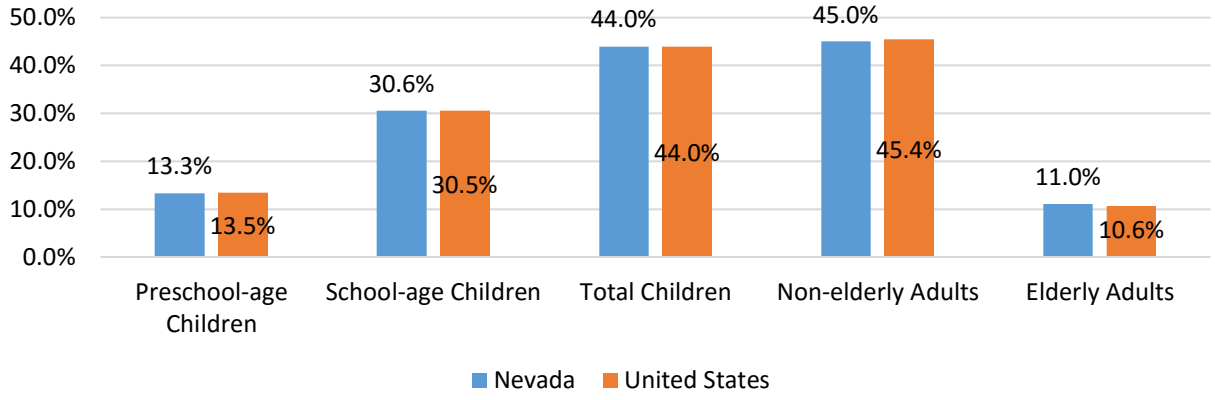
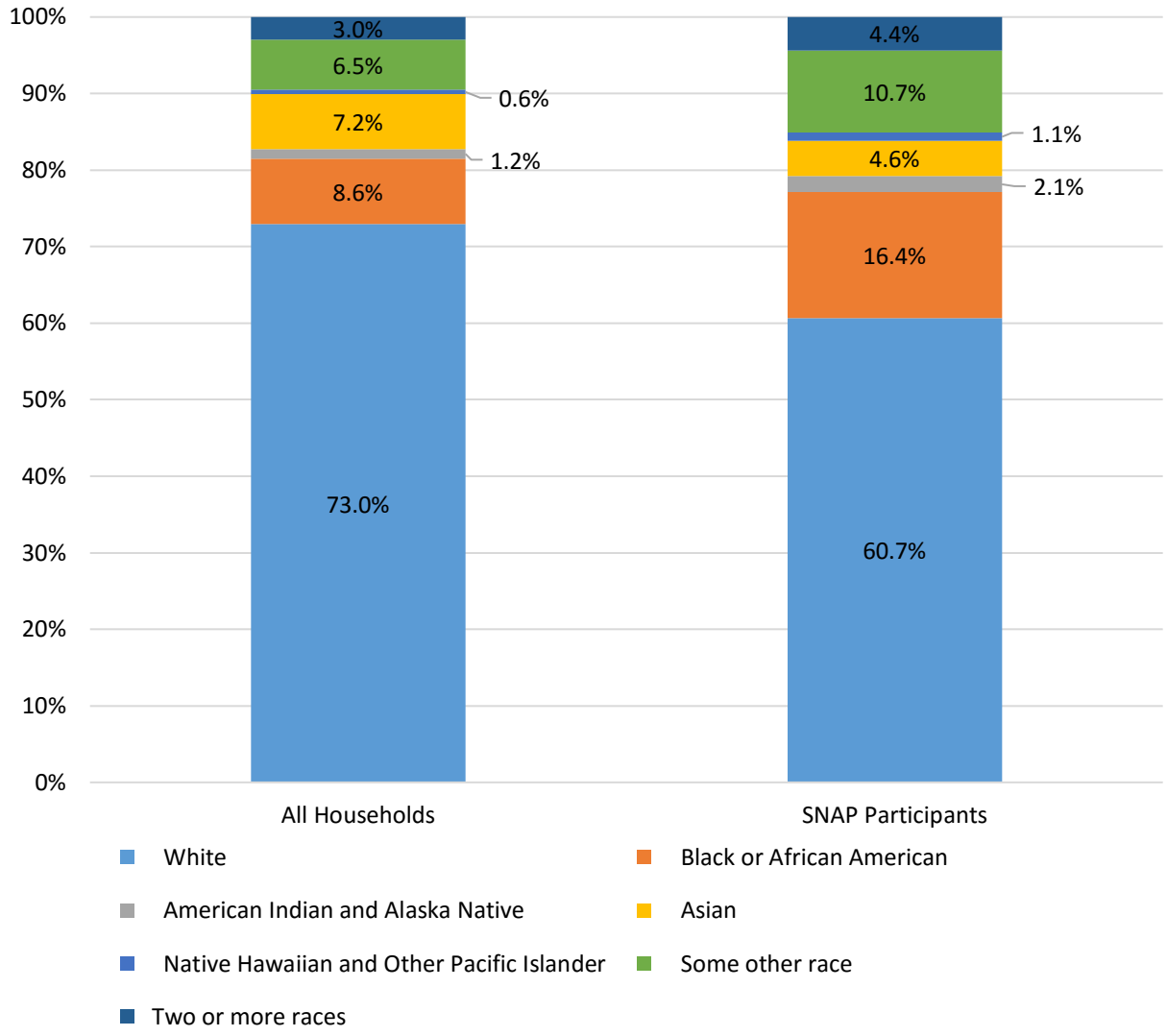


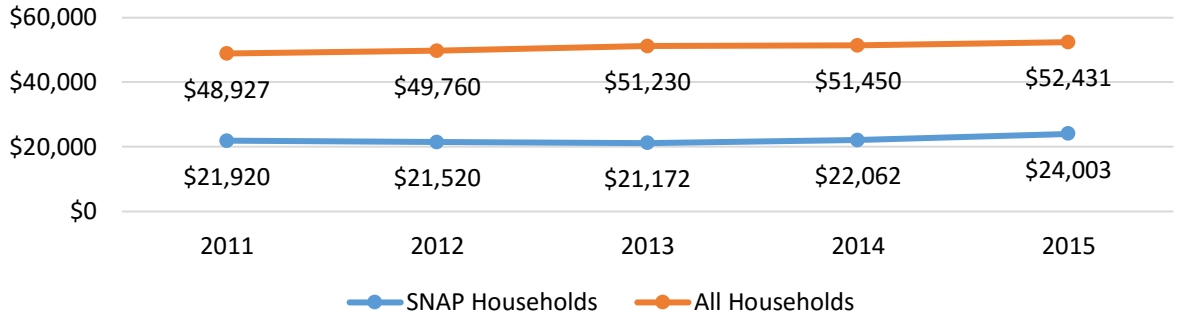
Fig. 3 Race/Ethnicity of All Nevada Households Compared to SNAP Participant Households, 2015



Income Among SNAP Households

According to the United States Census Bureau data from the 2011-2015 American Community Surveys, the median annual income among SNAP households has been approximately $30,000 less than the Nevada household median annual income from 2011 through 2015 (Figure 4). This trend is expected to remain stable because income is a primary factor in qualifying for SNAP.

Fig. 4 Nevada Median Annual Income, Nevada All Households Compared to SNAP Households, 2011-2015



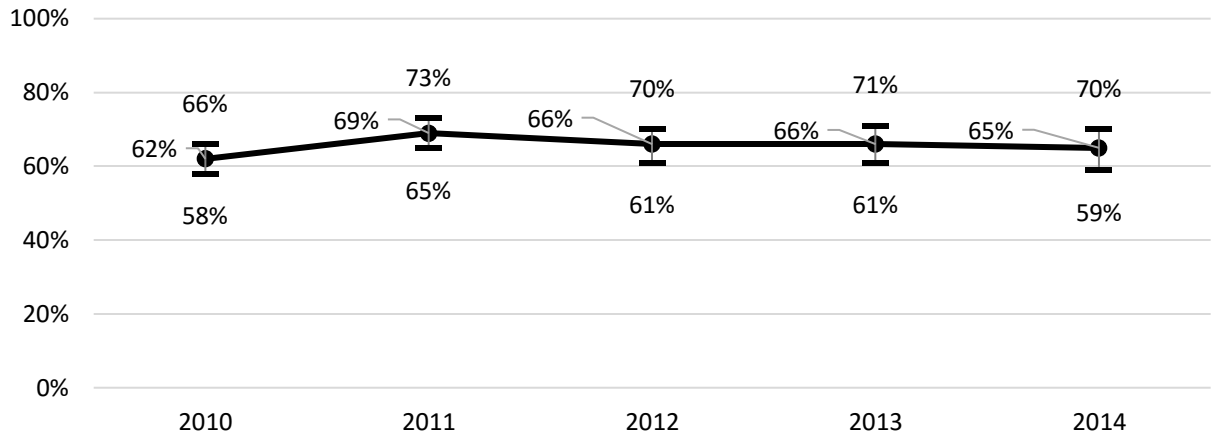
In 2015, approximately 55% of the households in Nevada receiving SNAP benefits within the past 12 months were living below the poverty line, as compared to 50% of households in the United States. This trend has remained stable over the previous five years (2011-2015) in both Nevada and the United States.[1]

SNAP Participation Rate Estimation

The USDA estimates SNAP participation rates by utilizing data from the Current Population Survey, the American Community Survey, and administrative records. The participation rates are an estimate of the number of people who participated in SNAP, divided by an estimate of the number of people who qualify for SNAP. Nevada's estimated annual participation rates SNAP benefits, among persons eligible for enrollment, have varied from 62% to 69% over the past five years (2010-2014) (Figure 5). In 2014, the Nevada SNAP participation rate was ranked 49 out of 51 states, including District of Columbia. The most current estimation for Nevada SNAP participation was approximately 65% in 2014, compared to the eight states with an 100% estimated SNAP participation rate (Oregon, Vermont, Washington, Michigan, Wisconsin, Maine, Delaware, and Illinois). The overall national estimated SNAP participation rate was 83% for the same year.

[1] United States Census Bureau. (2011-2015). *Food Stamps/SNAP Table B22003, 2011-2015 American Community Survey 1-year estimates*. Retrieved from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_B22003&prodType=table

Fig. 5 Nevada Estimated Range and Rate of SNAP Participation, 2010-2014



The Nevada Department of Health and Human Services released a report, Food Security in Nevada 2013-2015, which utilized data from the Nevada Behavioral Risk Factor Surveillance Survey (BRFSS) (Technical Notes pages 50-52) to estimate differences among adults who were categorized as SNAP eligible compared to adults categorized as SNAP ineligible. The report categorized adults at 130% of the Federal Poverty Level (FPL) as SNAP eligible.

According to the report, approximately 27% of adults in Nevada were categorized as SNAP eligible (Table 5). Among adults 18 to 24 years old, 46.6% were categorized as SNAP eligible, which was higher than other age groups. Over half of Hispanics/Latinos (53.9%) were SNAP eligible, which was higher than other racial and ethnic groups. Among individuals with less than a high school education, 62.8% were categorized as SNAP eligible, which was higher than individuals with higher levels of educational attainment. Additionally, individuals with no health insurance (55.6%), Medicaid (82.9%), or Indian Health Services (46.4%) had higher rates of SNAP eligibility, compared to other types of health insurance (Table 5).

Table 5: Percent of Adults Categorized as SNAP Eligible (<130% FPL) Compared to SNAP Ineligible, Nevada 2014-2015 Aggregate BRFSS Data		
Region	**SNAP Eligible (<130% FPL)**	**SNAP Ineligible**
Clark County	27.9%	72.1%
Washoe County	25.1%	74.9%
Balance of State	24.2%	75.8%
Sex		
Male	24.8%	75.2%
Female	29.3%	70.7%
Age Group		
18-24 years	46.6%	53.4%
25-34 years	31.2%	68.8%
35-44 years	31.3%	68.7%
45-54 years	24.6%	75.4%
55-64 years	21.1%	78.9%
65+ years	15.4%	84.6%
Race/Ethnicity		
African American	36.5%	63.5%
White	15.6%	84.4%
Other Race	23.6%	76.4%
Hispanic/Latino	53.9%	46.1%
Education		
Less than H.S.	62.8%	37.2%
H.S. or G.E.D.	32.5%	67.2%
Some Post H.S.	19.0%	81.0%
College Graduate	7.0%	93.0%
Insurance Type		
Private	14.2%	85.8%
Medicare	26.0%	74.0%
Medicaid	82.9%	17.1%
Military	10.0%	90.0%
Indian Health Services~	46.4%~	53.6%~
None	55.6%	44.4%
Nevada	**27.0%**	**73.0%**
~ data do not meet criteria for reliability, quality or confidence due to small counts		

Free and Reduced Price School Meals

The United States Department of Agriculture's Food and Nutrition Service administers the National School Lunch and Breakfast Programs, a federally assisted meal program, that provides low-cost or free meals to children during the school day.[2] Any child is able to purchase meals through the National School Lunch and Breakfast Programs, however children from families with incomes at or below 130% federal poverty level are eligible for free meals, and those children with family incomes between 130%

[2] United States Department of Agriculture, Food and Nutrition Service. National School Lunch Program. Accessed online January, 2017 from https://www.fns.usda.gov/sites/default/files/NSLPFactSheet.pdf

and 185% of the federal poverty level are eligible for reduced-price meals. The 2015-2016 school year school district number of students who were eligible for free or reduced price (FRP) meals ranged from 30.3% of students in Lander County to 65.1% of students in Nye County (Table 6). Statewide the number and proportion of students who were eligible for meals was 59.9% during the 2015-2016 school year, an increase from previous years' rates (Table 7).

Table 6: Number and Percent of Students Eligible for Free and Reduced Price Meals, Nevada by County, 2015-2016

Location	# of Students FRP	% of Students FRP
Carson City	3,952	51.2%
Churchill County	1,744	51.4%
Clark County	207,832	64.4%
Douglas County	2,039	33.6%
Elko County	3,504	36.2%
Esmeralda County	35	43.2%
Humboldt County	1,480	41.1%
Lander County	301	30.3%
Lincoln County	489	48.3%
Lyon County	4,613	54.4%
Mineral County	297	54.9%
Nye County	3,240	65.1%
Pershing County	335	52.0%
Storey County	23	46.9%
Washoe County	31,020	47.7%
White Pine County	449	38.6%
Nevada	261,352	59.9%

Table 7: Percent of Students Eligible for Free and Reduced Price Meals, Nevada by County, 2011-2012 through 2015-2016					
Location	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**
Carson City	48.0%	50.6%	52.0%	50.5%	51.2%
Churchill County	47.0%	47.5%	47.3%	48.8%	51.4%
Clark County	55.2%	56.7%	57.9%	58.4%	64.4%
Douglas County	35.5%	36.3%	33.5%	33.6%	33.6%
Elko County	36.0%	35.6%	35.1%	35.8%	36.2%
Esmeralda County	67.2%	67.9%	51.2%	54.9%	43.2%
Eureka County	25.3%	22.6%	20.4%	23.3%	NA
Humboldt County	37.4%	35.8%	37.2%	37.9%	41.1%
Lander County	27.1%	26.5%	26.5%	29.6%	30.3%
Lincoln County	42.5%	36.0%	37.9%	42.2%	48.3%
Lyon County	47.5%	50.9%	45.9%	49.7%	54.4%
Mineral County	51.8%	51.8%	46.4%	50.9%	54.9%
Nye County	58.1%	61.9%	61.9%	64.7%	65.1%
Pershing County	63.6%	64.6%	64.0%	48.2%	52.0%
Storey County	48.4%	43.9%	48.4%	38.8%	46.9%
Washoe County	44.1%	45.3%	47.2%	47.8%	47.7%
White Pine County	38.2%	36.8%	38.8%	35.3%	38.6%
Nevada	52.2%	53.6%	54.7%	55.3%	59.9%

Food Insecurity and Hunger

Food insecurity is defined as not having enough food at all times to live an active, healthy life for all household members. The USDA Economic Research Service estimated 14.2% of households in Nevada were food insecure (three-year average 2013-2015), a rate that was higher than the national average of 13.7% over the same time period.[3]

Food Insecurity Among Middle and High School Students

The Nevada Department of Health and Human Services released a report, Food Security in Nevada 2013-2015, which utilized data from the 2015 Nevada Youth Risk Factor Surveillance Survey (YRBS) (Technical Notes pages 50-52). The report results indicate there was a difference among students of various racial and ethnic groups, including students who were eligible for free or reduced price meals, compared to those students who were not eligible for FRP, as well as students who earned mostly A's or B's in school compared to those students earning mostly C's, D's, or F's in school. Although not provided in Table 8, the p-values are available in the full version of the report.

[3] Coleman-Jensen, A., Rabbitt, M.P., Gregory, C.A. & Singh, A. *Household Food Security in the United States in 2015*, ERR-215, United States Department of Agriculture, Economic Research Service, September 2016.

Overall, the report found that 16.6% of middle school and 15.3% of high school students were categorized as food insecure (Table 8). Food insecurity was highest among middle and high school students who identified as Native Hawaiian or Pacific Islander, while food insecurity was lowest among students who identified as white. Washoe and Clark counties had the highest percentage of students who were categorized as food insecure compared to other regions of the state. A higher percentage of students eligible for free or reduced price meals were categorized as food insecure across the state. Fewer students reporting they earned mostly A's or B's in school were categorized as food insecure as compared to those students reporting earning lower grades (Table 8).

Table 8: Percent of Middle and High School Students in Nevada Categorized as Food Insecure, by Select Characteristics, 2015 YRBS Data		
Race/Ethnicity*	**Middle School**	**High School**
African American	20.2%	13.8%
American Indian/Alaska Native	22.2%	23.2%
Asian	25.9%	16.0%
Native Hawaiian/Pacific Islander	26.9%	25.3%
White	11.6%	11.5%
Hispanic/Latino	18.3%	18.0%
Other/Multiple races	14.3%	17.7%
Region		
Carson City & Douglas	13.9%	12.9%
Elko, White Pine, & Eureka	13.8%	11.7%
Churchill, Humboldt, Pershing, & Lander	12.8%	11.6%
Lyon, Mineral, & Storey	13.1%	13.8%
Nye & Lincoln	13.7%	12.8%
Washoe	16.0%	17.0%
Clark	17.2%	15.3%
Free/Reduced Lunch*		
YES	19.0%	19.0%
NO	14.5%	12.6%
Mostly A's or B's in school *		
YES	13.4%	11.5%
NO	22.7%	22.9%
Overall	**16.6%**	**15.3%**
* denotes statistical significance among groups due to a p-value of less than 0.05 (data provided in full report)		

Food Insecurity Among Adults

Nevada's 2015 BRFSS data indicate the majority of adults (95.1%), reported they "never" or "rarely" were hungry due to lack of food in their home during the previous 30 days.

Table 9: Lack of Food at the End of the Month Among Adults in Nevada, 2015 BRFSS Data		
Indicator	**% Never or Rarely**	**% Most of the Time or Always**
How often did you go hungry because there was not enough food in your home? †	95.1%	0.9%
† During the past 30 days		

According to the Food Security in Nevada 2013-2015 report (Technical Notes pages 50-52), 27% of SNAP eligible adults (categorized as 130% FPL) reported going hungry at least once in the past 30 days because there was not enough food in their home (Table 10).

Table 10: Percent of Adults Categorized as SNAP Eligible (<130% FPL) Who Went Hungry, Nevada 2014-2015 Aggregate BRFSS Data	
Region	**% Who Went Hungry**
Clark County	28.2%
Washoe County	22.7%
Balance of State	27.2%
Sex	
Male	26.1%
Female	27.8%
Age Group	
18-44 years	28.0%
45+ years	25.7%
Race/Ethnicity	
White	20.5%
Other Race	48.5%
Hispanic/Latino	23.2%
Education	
Less than H.S.	34.4%
H.S. or higher	22.8%
Children in Household	
None	34.0%
One Child	32.8%
Two Children	15.8%
Three or More Children	20.4%
Marital Status	
Married	19.2%
Divorced, Widowed	23.8%
Never Married	49.0%
Unmarried Couple	~
Nevada	**27.0%**
~ data do not meet criteria for reliability, quality or confidence due to small counts	

Senior Meals

Nevada's Senior Nutrition Programs provide meals in congregate settings [4] as well as home delivered meals through funding from the Older Americans Act Title III. Table 11 contains data from the Social Assistance Management System and shows the client count from July 1 to July 30 of each year (2013 - 2016), as well as the proportion of clients served who were living below the federal poverty level or identified as a minority. The number of clients receiving home delivered meals monthly increased from July 2013 (n=3,276) to July 2016 (n=4,830). The proportion of clients who receive home delivered meals living below federal poverty level remained relatively stable, however the proportion of clients receiving home delivered meals who were minorities increased from July 2013 (21.9%) to July 2016 (29.0%). The number of clients provided with congregate meals varied however in July of 2016 the number of clients served that month was 6,900. Around one-third of clients who were served in a congregate meal setting were below the poverty level, this trend has remained relatively stable from July 2013 to July 2016. The proportion of clients served in a congregate meal setting who were minorities increased from July 2015 (16.8%) to July 2016 (19.2%).

Table 11: Proportion of Clients Below Poverty and Minority Senior Nutrition Programs by Program Type, Nevada, July 1 to July 30, 2013- 2016

Month-Year	Home delivered meals			Congregate meals		
	# of Clients Served	% Below Poverty	% Minority	# of Clients Served	% Below Poverty	% Minority
July - 2013	3,276	42.6%	21.9%	6,971	31.4%	17.8%
July - 2014	3,815	42.6%	25.6%	6,602	32.2%	17.5%
July - 2015	4,031	44.1%	25.0%	7,000	31.5%	16.8%
July - 2016	4,830	41.0%	29.0%	6,920	30.1%	19.2%

2014 Hunger in America Studies

The Hunger in America (HIA) studies are conducted every four years and provide insight into the demographic and health needs of people who are served through Feeding America (Technical Notes pages 50-52). Feeding America is a national food assistance network, consisting of 200 food banks in the United States working to distribute food and improve food security across the nation. Nevada has two food banks, the Food Bank of Northern Nevada (FBNN), and Three Square, both agencies are members of Feeding America.

[4] Congregate meals are typically served in senior service centers or other senior community settings

Food Bank of Northern Nevada (FBNN) serves the residents of Carson City, Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, Washoe, and White Pine Counties, as well as some neighboring counties in Northern California including Mono, Lassen, Plumas, and Sierra Counties. FBNN has over 135 community partners including schools, non-profit, and faith-based organizations.

Three Square serves the residents of Southern Nevada, including Lincoln, Nye, Esmeralda, and Clark Counties. Three Square has over 1,300 community partners including schools, non-profit, and faith-based organizations.

Agency and Client Survey Respondents

Eighty-seven percent of FBNN's 140 eligible agencies responded to the Agency Survey. Among the 124 FBNN agencies eligible to be sampled for the Client Survey, 79% were sampled, yielding 433 client survey respondents. The estimated number of clients served by FBNN is 204,200 unique persons each year and about 8,100 households are estimated to be served each week (Table 12).

Seventy-one percent of Three Square's 185 eligible agencies responded to the Agency Survey. Among the 146 Three Square agencies eligible to be sampled for the Client Survey, 73% were sampled, yielding 382 client survey respondents. The estimated number of clients served by Three Square is 299,300 unique persons and about 11,800 households are estimated to be served each week (Table 12).

Table 12: 2014 Hunger in America Study Estimated Number of Clients Served Annually, Households Served Weekly, and Client Survey Respondents

Counts	**FBNN**	**Three Square**
Unduplicated number of clients served annually	204,200	299,300
Unduplicated number of households served weekly	8,100	11,800
Client Survey Respondents	433	382

Client Survey Respondent Demographics

Table 13 provides estimated client demographics for the Food Bank of Northern Nevada, Three Square, and the United States overall. The proportion of clients under the age of 18 years and younger, is higher at Three Square (27%), compared to the FBNN (14%). Nationally, the estimated client population of children 18 years and younger was higher at 29%. The FBNN served a higher proportion of adults ages 60 years and older (24%) compared to Three Square (16%), and the U.S. (17%).

Three Square served a diverse population in terms of race and ethnicity, with 31% of the client population identifying as white, compared to FBNN at 42% (Table 13).Three Square and FBNN clients were a more racially and ethnically diverse population relative to the general population in Nevada.

Client household size also varied between the two Nevada food banks, as FBNN served a higher proportion of households with more than six members (13%) compared to Three Square (4%). Approximately one third of Three Square's clients were single person households (30%) or households containing two to three members (35%).

Client household type was similar among both food banks with the majority (89%) reporting they lived in a non-temporary house or apartment. A higher proportion of Nevada's food bank client population reported they reside in a temporary housing situation (11%), such as a shelter, hotel, motel, or on the street, compared to the nation overall (7%). An estimated 14% of FBNN client and 16% of Three Square client respondents indicated they had experienced a foreclosure or eviction in the past five years (Table 13).

Table 13: 2014 Hunger in America Study Client Survey Respondent Demographics, by Age, Race/Ethnicity, Household Size, and Housing Type

Age	**FBNN**	**Three Square**	**United States**
0-5 years	3%	5%	8%
6-17 years	11%	22%	20%
18-29 years	10%	10%	14%
30-49 years	31%	28%	26%
50-59 years	22%	20%	15%
60-64 years	8%	6%	5%
65+ years	16%	10%	11%
Age by Group			
Children (<18 years)	14%	27%	29%
Seniors (60+ years)	24%	16%	17%
Race/Ethnicity			
African American	2%	24%	26%
White	42%	31%	43%
Hispanic/Latino	40%	31%	20%
Other race	15%	14%	2%
Household Size			
1 member	29%	31%	28%
2 to 3 members	43%	35%	37%
4 to 6 members	15%	30%	29%
6 or more members	13%	4%	5%
Housing Type			
Reside in temporary housing (shelter, hotel/motel, on street)	11%	11%	7%
Reside in non-temporary housing (house/apartment)	89%	89%	93%
Experienced foreclosure or eviction in the past five years	14%	16%	16%

SNAP Participation, Reasons Not Enrolled in SNAP, and Children Participation in Other Food Programs

Table 14 provides a summary of client survey responses to questions related to SNAP enrollment, SNAP benefits, food security and, for those households with children, in which food assistance programs their children were enrolled in.

The client survey respondent reported SNAP participation rates were lower in Nevada food banks, FBNN (38%) and Three Square (43%), compared to the national reported SNAP participation (55%) among clients of food banks. The rates of clients reporting their SNAP benefits lasted four or more weeks was higher in Nevada food banks, FBNN (25%) and Three Square (20%), compared to the national rate (14%).

The most commonly cited reason for not being enrolled in SNAP, was clients did not think they were eligible to receive SNAP benefits, however rates were lower in Nevada's food banks, FBNN (42%) and Three Square (46%), compared to the national rates (52%). Nearly one-third (29%) of FBNN clients reported they had personal reasons for not applying to receive SNAP benefits, this was higher than Three Square (16%) and national rates (15%). Another 23% of FBNN clients cited difficultly applying as a barrier to enrolling to receive SNAP benefits, compared to 18% of Three Square clients, and 8% of food bank clients nationwide (Table 14).

The majority of children in client households participated in the free or reduced-price school lunch program. The participation rates for the free or reduced-price breakfast program was lower among Nevada's food bank client households with children, FBNN (24%) and Three Square (28%), compared to the national participation rate (46%). Nevada's food bank client households with children, reported higher participation rates for the afterschool snack or BackPack weekend food programs, FBNN (10% and 16% respectively) and Three Square (9% and 17% respectively), compared to the national participation rates (8% and 8% respectively) (Table 14).

Table 14: 2014 Hunger in America Client SNAP Participation, Reasons for Not Enrolling in SNAP, Children Participation in Other Food Assistance Programs			
SNAP Participation	**FBNN**	**Three Square**	**United States**
Currently receive SNAP benefits	38%	43%	55%
SNAP benefits last 1 week or less	15%	21%	21%
SNAP benefits last 2 weeks	24%	31%	31%
SNAP benefits last 3 weeks	36%	28%	34%
SNAP benefits last 4 or more weeks	25%	20%	14%
Not currently receiving SNAP and have never applied for SNAP benefits	NA	29%	20%
Client households food insecure in given month	85%	85%	84%
Reasons Not Enrolled in SNAP			
Does not think he or she is eligible	42%	46%	52%
Has never heard of food stamps	NA	6%	6%
Personal reasons	29%	16%	15%
Too difficult to apply	23%	18%	8%
Other	13%	21%	28%
Client Household Participation in Programs for Children			
Free or reduced-price school breakfast	24%	28%	46%
Free or reduced-price school lunch	96%	82%	94%
BackPack weekend food programs	16%	17%	8%
Afterschool snack or meal programs	10%	9%	8%

Spending Trade-offs and Coping Strategies

Table 15 indicates the types of spending trade-offs client households had experienced in the past 12 months, as well as the coping strategies used to afford or obtain food, or make food last.

Over two-thirds of clients reported having to choose to pay for either food or utilities at least once within the past 12 months, this was the most commonly reported spending trade-off, FBNN (69%), Three Square (67%) and nationally (69%). Nearly one-third of the client respondents from both Nevada food banks, FBNN (32%) and Three Square (26%), indicated they had to choose between paying for food or utilities every month, which was slightly lower than the rest of the nation (34%).

A frequently reported spending trade-off was having to choose between paying for food or paying for medicine/medical care at least once in the past 12 months, with rates among FBNN (68%) clients similar to the national rate (66%), both higher than rates reported by Three Square clients (57%). Also, commonly reported was having to choose to pay for food or transportation at least once in the past 12 months, FBNN (63%), Three Square (58%) and nationally (67%), and about one-quarter of clients had to choose between food or transportation every month (Table 15).

The majority of client respondents indicated they had purchased inexpensive, unhealthy food, FBNN (85%), Three Square (76%) and nationally (79%). Over half of clients reported eating food past the expiration date, FBNN (56%), Three Square (55%), and nationally (56%) or having received help from family or friends. Over one-third of Nevada respondents had purchased food in dented or damaged packages, sold or pawned property, or had watered down food or drinks. The least commonly reported coping strategy was growing food in gardens, FBNN (17%), Three Square (7%), both lower than national rates (23%).

Table 15: 2014 Hunger in American Study Client Spending Trade-offs and Coping Strategies*			
Spending Trade-offs	**FBNN**	**Three Square**	**United States**
Choose between paying for food and utilities at least once in the past 12 months	69%	67%	69%
Choose between paying for food and utilities every month	32%	26%	34%
Choose between paying for food and transportation at least once in the past 12 months	63%	58%	67%
Choose between paying for food and transportation every month	24%	27%	34%
Choose between paying for food and paying rent or mortgage at least once within past 12 months	58%	59%	57%
Choose between paying for food and paying rent or mortgage every month	30%	24%	27%
Choose between paying for food and paying for medicine/medical care at least once within past 12 months	68%	57%	66%
Choose between paying for food and paying for medicine/medical care every month	24%	25%	31%
Coping Strategies			
Eaten food past expiration date	56%	55%	56%
Grew food in garden	17%	7%	23%
Purchased food in dented or damaged packages	39%	55%	52%
Purchased, inexpensive, unhealthy food	85%	76%	79%
Received help from family or friends	44%	53%	53%
Sold or pawned property	44%	38%	35%
Watered down food or drinks	36%	38%	40%
*Client survey respondents were allowed to select more than one of the coping strategies			

Client Health

Table 16 provides a summary of three health indicators; diabetes, high blood pressure, and lack of health insurance. Diabetes is a chronic disease, while high blood pressure is considered to be a modifiable risk factor, as well as a chronic condition which can lead to chronic disease. Both diabetes and high blood pressure contribute to the leading causes of death. Lack of health insurance is associated with poorer health outcomes due to inability to afford preventive recommended health screenings and regular check-ups with providers.

The rate of client respondents reporting at least one member of the household had high blood pressure was highest, with FBNN (53%) and national rates (58%) higher than Three Square (42%). Reported rates of diabetes were the second highest reported risk factor, FBNN (32%) and national rates (33%) again higher than Three Square (20%) (Table 16).

The rate of clients reporting no one in the household had health insurance was higher among respondents from FBNN (43%) and Three Square (39%), compared to the national rate (29%). The open enrollment phase of the Affordable Care Act went into effect only months after the client surveys were completed, and overall health insurance rates in Nevada have increased since the 2014 HIA Study.

Table 16: 2014 Hunger in American Study Client Survey Respondent Health			
Health	**FBNN**	**Three Square**	**United States**
One member of household with diabetes	32%	20%	33%
One member of household with high blood pressure	53%	42%	58%
No members of household with health insurance	43%	39%	29%

Desired Products

Table 17 shows the top three food types or products, that clients of the food banks desired, but were currently not receiving from the emergency food source. Over half of survey respondents indicated they desired more protein items like meats, as well as fresh fruit and vegetables. In addition, over one-third of clients from FBNN (42%) and Three Square (30%) listed dairy products such as milk, cheese or yogurt as a desired product they were not currently receiving through the food bank programs.

Table 17: 2014 Hunger in American Study Client Top 3 Desired Products Not Currently Receiving			
Top 3 Desired Products	**FBNN**	**Three Square**	**United States**
Beverages such as water or juice	24%	17%	NA
Dairy products such as milk, cheese or yogurt	42%	30%	40%
Fresh fruit and vegetables	56%	55%	55%
Grains such as bread or pasta	11%	12%	NA
Protein food items like meats	52%	51%	47%
Non-food items like shampoo, soap, or diapers	20%	16%	NA
Other food or products	14%	6%	NA
Nothing	5%	6%	NA

Nutrition and Physical Activity

Making healthful food choices and obtaining adequate exercise are protective factors that help reduce risk for the major causes of premature death. Likewise, having a poor diet, as well as lack of physical activity contribute to obesity and are among the main modifiable risk factors for many of the leading

causes of death, including heart disease, cancer, and cardiovascular disease.[5] These and other chronic conditions and diseases accounted for seven of the top ten causes of death in the United States.[6] The following health behavior indicators provide insight regarding Nevada residents' behaviors related to diet and physical activity, both of which impact weight status.

Nutrition Behaviors

Beverage Consumption

According to Nevada Kindergarten Health Survey data (Technical Notes pages 50-52), the reported rates of kindergarteners who were exclusively breastfed at one month of age has remained stable around 47% from 2012-2013 to 2015-2016 (Table 18). While a similar pattern was found among reported rates of exclusively breastfeeding at three months of age, the rates of exclusively breastfeeding at six months of age slightly decreased from 23.2% in 2012-2013 to 21.5% in 2015-2016 (Table 18).

Table 18: Reported Breastfeeding Among Kindergarteners as Infants in Nevada, at One, Three and Six Months of Age, 2012-2013 through 2015-2016

One Month	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**
Breast Only	47.3%	47.4%	48.3%	47.1%
Breast & Formula	21.4%	21.8%	22.2%	26.9%
Formula Only	29.3%	29.0%	27.9%	23.9%
Other (e.g. food)	0.5%	0.3%	0.4%	0.5%
Not Sure	1.6%	1.4%	1.2%	1.6%
Three Months				
Breast Only	33.6%	34.0%	34.9%	33.6%
Breast & Formula	24.6%	23.4%	24.5%	26.3%
Formula Only	39.6%	40.8%	38.5%	37.8%
Other (e.g. food)	0.8%	0.7%	1.0%	0.7%
Not Sure	1.3%	1.1%	1.1%	1.6%
Six Months				
Breast Only	23.2%	23.7%	21.9%	21.5%
Breast & Formula	22.0%	22.3%	19.9%	20.0%
Formula Only	45.8%	46.0%	46.0%	47.6%
Other (e.g. food)	7.5%	6.7%	10.9%	8.6%
Not Sure	1.5%	1.4%	1.2%	2.3%

[5] Ford, E.S, Zhao, G., Tsai, J., & Li, C. (2011). Low-Risk Lifestyle Behaviors and All-Cause Mortality: Findings From the National Health and Nutrition Examination Survey III Mortality Study. *American Journal of Public Health, 101* (10), 1922-1929. doi: 10.2105/AJPH.2011. 300167

[6] Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, Mortality, 2014. (2015). Table LCWK9. Deaths, percent of total deaths, and death rates for the 15 leading causes of death: United States and each State, 2014. Retrieved September, 2016 from http://www.cdc.gov/nchs/data/dvs/lcwk9_2014.pdf

In 2013, 21.8% of high school students in Nevada reported they did not drink milk in the seven days prior to the survey, while nationally, 19.4% of high school students reported they did not drink milk in the seven days prior to the survey (Table 19). Nevada 2015 YRBS data show approximately 22.7% of high school students did not drink milk, while 31.6% students reported they drank one or more glasses of milk per day during the seven days prior to the survey (Table 19).

The reported frequencies of milk consumption among high school students in Nevada has remained relatively similar from 2013 to 2015. However, the rate of reported milk consumption among high school students in Nevada was slightly lower than high school students across the United States for the same years (Table 19).

Table 19: Milk Consumption Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data				
Percentage of Students Who	**2013**		**2015**	
	US	**NV**	**US**	**NV**
Did not drink milk †	19.4%	21.8%	21.5%	22.7%
Drank one or more glasses per day of milk †	40.3%	33.8%	37.5%	31.6%
Drank two or more glasses per day of milk †	25.9%	19.8%	22.4%	19.4%
Drank three or more glasses per day of milk †	12.5%	9.1%	10.2%	8.6%
† During the 7 days before the survey				

According to data from the Nevada Kindergarten Health Surveys, the majority of kindergarteners were reported to not drink non-diet soda. This rate increased each year from 55.0% in 2011-2012, to 61.6% in 2015-2016 (Table 20). Approximately one-third of kindergarteners were reported to drink non-diet soda a few times per week in 2015-2016. This rate slightly decreased from 34.2% in 2011-2012 to 29.7% in 2015-2016 (Table 20).

Table 20: Non-diet Soda Consumption Among Kindergarteners in Nevada, 2011-2012 through 2015-2016					
Consumption of non-diet soda per week	**2011-2012**	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**
None	55.0%	55.8%	59.9%	60.8%	61.6%
A few times	34.2%	33.9%	30.8%	29.9%	29.7%
Once a day	6.7%	6.7%	6.6%	6.8%	5.9%
More than once a day	4.1%	3.6%	2.7%	2.5%	2.8%

The majority of kindergarteners in Nevada were reported to not drink diet soda at all, this slightly increased from 82.0% in 2011-2012, to 86.7% in 2015-2016 (Table 21). Additionally, the rate of kindergarteners reported to drink diet soda a few times per week, has slightly decreased from 14.7% in 2011-2012 to 11.0% in 2015-2016 (Table 21).

Table 21: Diet Soda Consumption Among Kindergarteners in Nevada, 2011-2012 through 2014-2015					
Consumption of diet soda per week	**2011-2012**	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**
None	82.0%	83.0%	85.5%	87.5%	86.7%
A few times	14.7%	14.3%	11.6%	10.1%	11.0%
Once a day	2.6%	2.3%	2.3%	2.0%	2.0%
More than once a day	0.7%	0.5%	0.6%	0.4%	0.3%

The reported rate of kindergarteners who never drink juice, or drink juice a few times a week has slightly increased from 8.8% in 2013-2014 to 10.5% in 2015-2016 (Table 22). The rate of kindergarteners reported to drink juice once a day has remained relatively stable over the same time period, however there has been a decrease in the rate of kindergarteners reported to drink juice more than once a day from 23.3% in 2013-2014 to 17.2% in 2015-2016 (Table 22).

Table 22: Juice Consumption Among Kindergarteners in Nevada, 2013-2014 and 2015-2016			
Consumption of juice per week	**2013-2014**	**2014-2015**	**2015-2016**
None	8.8%	10.0%	10.5%
A few times	40.4%	43.8%	44.1%
Once a day	27.6%	26.3%	28.2%
More than once a day	23.3%	19.9%	17.2%

In 2013, 28.5% of Nevada high school students reported they did not drink soda in the seven days prior to the survey, compared to the 22.3% of high school students nationally (Table 23). The Nevada 2015 YRBS results indicate 29.4% of high school students reported they did not drink soda in the seven days prior to the survey, while 28.3% reported drinking soda one or more times per day (Table 23). The reported rate of soda consumption among high school students has slightly decreased in Nevada from 2013 to 2015.

Table 23: Soda Consumption Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data				
Percentage of Students Who	**2013**		**2015**	
	US	**NV**	**US**	**NV**
Did not drink a can, bottle, or glass of soda or pop †	22.3%	28.5%	26.6%	29.4%
Drank a can, bottle, or glass of soda or pop one or more times per day †	27.0%	16.3%	20.4%	14.5%
Drank a can, bottle, or glass of soda or pop two or more times per day †	19.4%	10.0%	13.0%	8.8%
Drank a can, bottle, or glass of soda or pop three or more times per day †	11.2%	5.4%	7.1%	5.0%
† Not including diet soda or diet pop, during the 7 days before the survey				

The Nevada 2012 BRFSS data showed that approximately 22.7% of adults in Nevada drink soda that contains sugar on any given day, while 17.9% adults reported drinking a sweetened drink including Kool-Aid, cranberry cocktail or lemonade daily (Table 24).

Table 24: Beverage Consumption Among Adults in Nevada, 2012 BRFSS Data	
Indicator	**% Yes**
Individuals who drink regular soda or pop that contains sugar on any given day.	22.7%
Daily consumption of sweetened drinks †	17.9%
† Such as Kool-Aid, cranberry juice cocktail and lemonade, includes drinks made at home and added sugar to	

Data from the Food Security in Nevada 2013-2015 report (Technical Notes pages 50-52) show 27.3% of adults categorized as SNAP eligible (< 130% FPL) reported drinking soda once per day in the 30 days prior to the survey, compared to only 15.5% of adults categorized as SNAP ineligible (Table 25). Similarly, 27.9% of adults categorized as SNAP eligible (<130% FPL) reported consuming the equivalent of one sugar sweetened fruit drink per day in the 30 days prior to the survey, compared to 11.4% of adults categorized as SNAP ineligible (Table 25).

Table 25: Beverage Consumption Among SNAP Eligible and SNAP Ineligible Adults, Nevada 2014-2015 Aggregate BRFSS Data		
Indicator	**SNAP Eligible**	**SNAP Ineligible**
Consumed soda at least once per day †	27.3%	15.5%
Consumed an equivalent of one sugar sweetened fruit drink per day †	27.9%	11.4%
† in the past 30 days before the survey		

Fruit Consumption

According to the 2015 Nevada Youth Risk Behavior Survey (YRBS), the majority of high school students in Nevada reported eating fruit or drinking fruit juice at least once a day (58.4%) during the seven days prior to the survey, while 5% of students reported not eating fruit or drinking fruit juices (Table 26). This trend has remained relatively stable from 2013 to 2015 and was similar to United States rates for the same years (Table 26).

Table 26: Fruit Consumption Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data				
Percentage of Students Who	**2013**		**2015**	
	US	**NV**	**US**	**NV**
Did not eat fruit or drink 100% fruit juices †	5.0%	5.6%	5.2%	5.0%
Ate fruit or drank 100% fruit juices one or more times per day †	62.6%	57.9%	63.3%	58.4%
Ate fruit or drank 100% fruit juices two or more times per day †	33.2%	29.7%	31.5%	28.3%
Ate fruit or drank 100% fruit juices three or more times per day †	21.9%	17.9%	20.0%	17.3%
† During the 7 days before the survey				

Data from the Food Security in Nevada 2013-2015 report (Technical Notes pages 50-52) illustrate little difference in reported rates of fruit consumption among food insecure and food secure high school students. The percent of high school students reporting having eaten fruit or drinking fruit juice one or more times a day among those categorized as food insecure (15.0%) was similar to the percent of students categorized as food insecure overall (15.3%).

According to 2015 BRFSS data, fruit consumption (1+times a day) was slightly higher among adults in Nevada (63.1%) compared to adults nationwide (60.3%). The reported fruit consumption among Nevada adults remained stable from 2013 (64.4%) to 2015 (63.1%) (Table 27). The consumption of fruit one or more times a day among adults whose household income was below 185% FPL in 2015 was 65.4%, slightly higher than the rate for all adults in Nevada (63.1%) during the same year (Table 27).

Table 27: Fruit Consumption Among Adults, United States and Nevada, 2013 and 2015 and Nevada Among those Below 185% FPL, BRFSS Data

Indicator	2013		2015		<185% FPL (range) †
	US	NV	US	NV	NV
Consumed fruit one or more times per day	60.8%	64.4%	60.3%	63.1%	65.4% (59.6-71.1)

† Among individuals below 185% of the Federal Poverty Level, 2015 data only

Data from the Food Security in Nevada 2013-2015 report (Table 28) show fruit consumption (1+ serving per day) was higher among adults categorized as SNAP eligible (67.3%) (< 130% FPL) compared to SNAP ineligible adults (62.3%).

Table 28: Fruit Consumption Among SNAP Eligible (<130% FPL) Adults Compared to SNAP Ineligible Adults, Nevada 2014-2015 Aggregate BRFSS Data

Indicator	SNAP Eligible (<130% FPL)	SNAP Ineligible
Consume at least one serving of fruit per day	67.3%	62.3%

Vegetable Consumption

The majority (56.9%) of high school students in Nevada reported eating vegetables at least once a day during the seven days before the YRBS survey, while 6.7% of students reported not eating vegetables (Table 29). The reported rates of vegetable consumption (3+ times per day) among high school students in Nevada in 2013 was 12.1%, which was slightly lower than the reported rates of vegetable consumption among high school students across the nation, at 15.7%. This trend slightly decreased from 2013 to 2015 in Nevada and nationwide (Table 29).

Table 29: Vegetable Consumption Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data				
Percentage of Students Who	**2013**		**2015**	
	US	**NV**	**US**	**NV**
Did not eat vegetables †	6.6%	6.5%	6.7%	6.7%
Ate vegetables one or more times per day †	61.5%	57.9%	61.0%	56.9%
Ate vegetables two or more times per day †	28.4%	24.2%	28.0%	23.2%
Ate vegetables three or more times per day †	15.7%	12.1%	14.8%	11.5%
† Vegetables including green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey				

Data from the Food Security in Nevada 2013-2015 report illustrates little difference in vegetable consumption among high school students who were categorized as food secure versus those who were categorized as food insecure. Among high school students who reported eating vegetables one or more times a day, approximately 15.0% were food insecure compared to the 15.3% of the overall respondents who were categorized as food secure.

Nevada's 2015 BRFSS results indicate slightly more adults in Nevada (80.8%) consumed vegetables one or more times a day than adults nationwide (77.9%) (Table 30). The reported vegetable consumption among Nevada adults remained relatively stable from 2013 (79.2%) to 2015 (80.8%) (Table 30). The consumption of vegetables one or more times a day among adults whose median household income was below 185% FPL in 2015 was 75.2%, compared to 80.8% of all adults in Nevada during the same year (Table 30).

Table 30: Vegetable Consumption Among Adults, United States and Nevada, 2013 and 2015, and Nevada Among those Below 185% FPL, BRFSS Data					
Indicator	**2013**		**2015**		**<185% FPL (range) †**
	US	**NV**	**US**	**NV**	**NV**
Consumed vegetables one or more times per day	77.1%	79.2%	77.9%	80.8%	75.2% (69.7-80.7)
† Among individuals below 185% of the Federal Poverty Level, 2015 data only					

Data from the Food Security in Nevada 2013-2015 report (Table 31) show 74.5% of adults categorized as SNAP eligible (< 130% FPL) reported eating one serving of vegetables per day, compared to 83.9% of SNAP ineligible adults having reported consuming at least one serving of vegetables per day.

Table 31: Vegetable Consumption Among SNAP Eligible (<130% FPL) Adults Compared to SNAP Ineligible Adults, Nevada 2014-2015 Aggregate BRFSS Data		
Indicator	**SNAP Eligible**	**SNAP Ineligible**
Consumed at least one serving of vegetables per day	74.5%	83.9%

Consumption of Breakfast

According to 2013 YRBS data, a higher percentage high school students in Nevada (17.3%) reported they did not eat breakfast at all during the seven days prior to the survey, compared to national rate (13.7%) (Table 32). According to Nevada 2015 YRBS data, approximately 16.7% of high school students reported they did not eat breakfast during the seven days prior to the survey, while 34.1% reported eating breakfast on all seven days prior to the survey. This trend has remained stable from 2013 to 2015 (Table 32). Slightly more high school students in the United States reported eating breakfast on all seven days prior to the survey compared to Nevada in both 2013 and 2015 (Table 32).

Table 32: Breakfast Consumption Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data

Percentage of Students Who	2013		2015	
	US	NV	US	NV
Did not eat breakfast †	13.7%	17.3%	13.8%	16.7%
Ate breakfast on all 7 days †	38.1%	34.5%	36.3%	34.1%

† During the 7 days before the survey

Nutrition Knowledge

According to Nevada 2011 BRFSS data, 45.4% adults reported they "always" or "most of the time" read nutrition label items while grocery shopping to help with food choices, compared to 34.9% of adults in Nevada who reported they "rarely" or "never read" nutrition label items while grocery shopping (Table 33). Proportionally fewer adults in Nevada reported they read nutrition label items to help choose food when they eat out at 32.0%, compared to the 48.5% who reported they "rarely" or "never read" nutrition label items to help choose food while eating out (Table 33).

Table 33: Nutrition Knowledge Among Adults in Nevada, 2011 BRFSS Data

Indicator	% Always or Most of the time	% Rarely or Not at all
Do you read nutrition label items while grocery shopping to help with food choices?	45.4%	34.9%
Do you read nutrition label items to help you choose food when eating out?	32.0%	48.5%

† Label items such as calories, fat, carbohydrates, or protein

Data from the Food Security in Nevada 2013-2015 report show 43.6% of adults who were categorized as SNAP eligible (< 130% FPL) reported at least "sometimes", "most of the time" or "always" using calorie information in restaurants to help decide what to order, compared to 11.4% adults categorized as SNAP ineligible (Table 34).

Table 34: Nutrition Knowledge Among SNAP Eligible (<130% FPL) Adults Compared to SNAP Ineligible Adults, Nevada 2014-2015 Aggregate BRFSS Data		
Indicator	**SNAP Eligible**	**SNAP Ineligible**
At least sometimes use calorie information available in restaurants to help decide what to order	43.6%	11.4%

Physical Activity

The Nevada Kindergarten Health Surveys indicate physical activity rates among children entering kindergarten have remained stable from 2011-2012 through 2015-2016, with the exception of those reporting their kindergartener had at least 30 minutes of physical activity on 6 to 7 times a week, this decreased from 54.7% to 48.6% over the same time period (Table 35).

Table 35: Physical Activity Among Kindergarteners in Nevada, 2011-2012 through 2015-2016					
Amount of times per week that child has at least 30 minutes of physical activity	**2011-2012**	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**
0-1 times	2.7%	2.5%	2.2%	2.4%	2.4%
2-3 times	15.0%	16.5%	15.4%	17.6%	19.2%
4-5 times	27.6%	27.1%	26.1%	28.6%	29.8%
6-7 times	54.7%	53.9%	56.2%	51.4%	48.6%

Nevada's 2013 and 2015 YRBS data show the rate of high school students reporting they were active for at least 60 minutes on 5 or more days and those who were active for 60 minutes or more on all 7 days prior to the survey has increased from 2013 to 2015 (Table 36). Consequently the rate of students reporting they did not participate in at least 60 minutes of physical activity on any day decreased in Nevada from 2013 (16.4%) to 2015 (13.9%) (Table 36).

Table 36: Physical Activity Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data				
Percentage of Students Who	**2013**		**2015**	
	US	**NV**	**US**	**NV**
Did not participate in at least 60 minutes of physical activity on at least 1 day †	15.2%	16.4%	14.3%	13.9%
Were physically active at least 60 minutes per day on 5 or more days †	47.3%	43.9%	48.6%	49.9%
Were physically active at least 60 minutes per day on all 7 days †	27.1%	23.3%	27.1%	27.6%
Attended physical education classes on 1 or more days ‡	48.0%	52.5%	51.6%	54.4%
Attended physical education classes on all 5 days ‡	29.4%	24.8%	29.8%	27.8%
Played on at least one sports team run by their school or community groups during the 12 months before the survey	54.0%	49.2%	57.6%	50.1%
† During the 7 days before the survey ‡ In an average week when they were in school				

According to 2015 Nevada BRFSS data, approximately 75.3% of adults in Nevada reported they engaged in exercise in the past month other than their regular job (Table 37). Among adults whose median household income was below 185% FPL, 68.9% reported engaging in exercise other than their regular job in the past month, 2014 and 2015 data were aggregate (Table 37).

Table 37: Physical Activity Reported Among Adults in Nevada, 2011-2015 and Among those Below 185% FPL for 2014 and 2015 combined

Indicator	2011	2012	2013	2014	2015	<185% FPL (range) ‡
During the past month, other than your regular job, did you participate in any physical activities or exercise? †	75.7%	78.7%	76.3%	77.5%	75.3%	68.9% (65.4-72.5)

† Exercise including running, calisthenics, golf, gardening, or walking for exercise
‡Among individuals below 185% of the Federal Poverty Level, 2014 and 2015 data combined

Sedentary Behavior

During the 2015-2016 school year, two-thirds (66.3%) of kindergarteners in Nevada were reported to watch one to two hours of television on an average school day (Table 38). The percentage of kindergarteners watching 2 or more hours of television per day has slightly decreased according to the data from Nevada's Kindergarten Health Surveys from 2011-2012 to 2015-2016 (Table 38).

Table 38: Hours of Television Watched Among Kindergarteners in Nevada, 2011-2012 through 2015-2016

Hours of television watched on average school day	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
None	1.7%	1.9%	2.1%	2.1%	2.5%
Less than one	11.6%	12.8%	13.1%	12.5%	14.9%
1 hour	29.1%	29.2%	29.9%	30.0%	33.7%
2 hours	36.0%	36.2%	35.4%	34.6%	32.6%
3 hours	15.7%	14.7%	13.7%	14.8%	12.1%
4 or more hours	5.9%	5.2%	5.7%	5.9%	4.1%

The rate of kindergarteners who were reported to not use videogames at all on an average school day has decreased from 40.3% in 2011-2012 to 28.5% in 2015-2016 (Table 39). The reported rates of kindergarteners reported to use videogames has been increasing slightly across all intervals of usage reported from 2011-2012 through 2015-2016 (Table 39).

Table 39: Hours of Video or Computer Game Usage Among Kindergarteners in Nevada, 2011-2012 through 2015-2016					
Hours of videogame usage on average school day	**2011-2012**	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**
None	40.3%	36.3%	32.9%	30.0%	28.5%
Less than one	29.5%	29.7%	29.8%	27.5%	26.8%
1 hour	20.5%	23.1%	23.9%	26.5%	26.6%
2 hours	7.3%	8.1%	9.7%	10.8%	12.6%
3 hours	1.7%	1.7%	2.6%	3.4%	3.7%
4 or more hours	0.7%	1.0%	1.0%	1.8%	1.7%

The Nevada 2015 YRBS data show high school students who reported watching three or more hours of television on an average school day decreased from 30.2% in 2013 to 22.9% in 2015. However, there was very little change among those reporting to play video games or use a computer for three or more hours a day from 2013 (38.0%) to 2015 (38.3%) (Table 40).

Slightly more high school students in the United States (24.7%) reported watching television three or more hours a day compared to Nevada (22.9%) in 2015 (Table 40). The rates of high school students reporting having played video or computer games, or using a computer for three or more hours a day on an average school day was also higher in the United States compared to Nevada for both 2013 and 2015 (Table 40).

Table 40: Sedentary Behavior Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data				
Percentage of Students Who	**2013**		**2015**	
	US	**NV**	**US**	**NV**
Watched television 3 or more hours per day †	32.5%	30.2%	24.7%	22.9%
Played video or computer games or used a computer 3 or more hours per day †	41.3%	38.0%	41.7%	38.3%
† On an average school day				

Weight Status

Infants Born Low Birth Weight

According to data provided by the Nevada Office of Public Health Informatics and Epidemiology, the rate of infants born in Nevada with low birth weight, defined as weighing less than 2,500 grams, remained relatively stable from 2009 through 2013 (Table 41). These data are collected in hospitals and recorded on birth certificates and then reported to State and National Vital Statistics programs.

Table 41: Percent of Infants Born Low Birth Weight (less than 2,500 grams), Nevada, 2009-2013					
Low Birth Weight Rate (per 1,000 live births)	**2009**	**2010**	**2011**	**2012**	**2013**
	8.1	8.3	8.2	7.9	7.9

Body Mass Index

Body mass index (BMI) is a calculation of a person's weight in kilograms divided by the square of height in meters. The resulting number if often used to classify and screen for overweight and obesity. Although BMI is moderately correlated with body fat, it does not measure body fat directly nor does it determine an individual's health status. BMI is however strongly correlated with a variety of adverse health outcomes that are associated with being overweight or obese. [7]

As a reminder, the Kindergarten Health Survey data are self-reported by parents or guardians of kindergarteners, including the height and weight, which were utilized by the Nevada Institute for Children's Research and Policy to calculate BMI. The Kindergarten Health Survey determined weight status categories using the criteria displayed in Table 42.

Table 42: Weight Status Category Calculations Based on BMI Values for Kindergarten Health Survey

Age	Weight Status Category for Females			
	Underweight	**Healthy Weight**	**Overweight**	**Obese**
4	0 < BMI < 13.725	13.725 <= BMI < 16.808	16.808 <= BMI < 18.028	BMI >= 18.028
4.5	0 < BMI < 13.614	13.614 <= BMI < 16.760	16.760 <= BMI < 18.084	BMI >= 18.084
5	0 < BMI < 13.527	13.527 <= BMI < 16.796	16.796 <= BMI < 18.240	BMI >= 18.240
5.5	0 < BMI < 13.465	13.465 <= BMI < 16.906	16.906 <= BMI < 18.486	BMI >= 18.486
6	0 < BMI < 13.428	13.428 <= BMI < 17.083	17.083 <= BMI < 18.808	BMI >= 18.808
Age	**Weight Status Category for Males**			
	Underweight	**Healthy Weight**	**Overweight**	**Obese**
4	0 < BMI < 14.043	14.043 <= BMI < 16.935	16.935 <= BMI < 17.842	BMI >= 17.842
4.5	0 < BMI < 13.932	13.932 <= BMI < 16.852	16.852 <= BMI < 17.829	BMI >= 17.829
5	0 < BMI < 13.845	13.845 <= BMI < 16.839	16.839 <= BMI < 17.927	BMI >= 17.927
5.5	0 < BMI < 13.781	13.781 <= BMI < 16.891	16.891 <= BMI < 18.118	BMI >= 18.118
6	0 < BMI < 13.739	13.739 <= BMI < 17.003	17.003 <= BMI < 18.389	BMI >= 18.389

The Nevada Kindergarten Health Survey shows approximately 15% of kindergarteners were reported to be underweight from 2011-2012 to 2015-2016 (Table 43). Slightly fewer kindergarteners were reported to be overweight from 11.3% in 2011-2012 to 10.6% in 2015-2016. The rate of kindergarteners reported to be obese increased slightly from 19.5% in 2011-2012 to 21.4% in 2015-2016 (Table 43).

[7] Centers for Disease Control and Prevention. Division of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion. About Adult BMI. Retrieved November, 2016 from https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/.

Table 43: Weight Status Among Kindergarteners in Nevada, 2011-2012 through 2015-2016					
Weight Category	**2011-2012**	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**
Underweight	14.9%	15.4%	14.5%	16.1%	15.5%
Healthy weight	54.3%	54.9%	55.5%	52.4%	52.5%
Overweight	11.3%	11.5%	10.4%	9.8%	10.6%
Obese	19.5%	18.1%	19.6%	21.7%	21.4%

The data for the Body Mass Index of Nevada Student reports are calculated using height and weight measurements collected by school nurses. The Body Mass Index of Nevada Students reports use the Center for Disease Control and Prevention's (CDC) BMI-for-age calculation as shown in Table 44.

Table 44: Weight Status Category Calculations Based on BMI Values for Body Mass Index of Nevada Students Reports	
Percentile Range	**Weight Status Category**
Less than 5th percentile	Underweight
5th to less than 85th percentile	Healthy weight
85th to less than 95th percentile	Overweight
Greater than or equal to 95th percentile	Obese

According to the Body Mass Index of Nevada Students reports, during the 2013-2014 school year, 4.6% of fourth graders, 3.7% of seventh graders and 2.9% of tenth graders were found to be underweight, while 57.8% of fourth graders, 57.9% of seventh graders and 58.8% of tenth graders were of healthy weight status (Table 45). Additionally, over one-third of all students measured, 37.5% of fourth graders, 38.4% of seventh graders and tenth graders, were found to be overweight or obese (Table 45). From school year 2011-2012 through 2013-2014 the weight status of fourth, seventh and tenth graders in Nevada has remained stable (Table 45).

Table 45: Body Mass Index of Nevada Students, 4th, 7th and 10th Graders, 2011-2012 through 2013-2014			
4th graders	**2011-2012**	**2012-2013**	**2013-2014**
Underweight	3.2%	3.7%	4.6%
Healthy weight	58.3%	60.4%	57.8%
Overweight	17.2%	15.1%	16.0%
Obese	21.3%	20.8%	21.5%
7th graders			
Underweight	3.0%	3.0%	3.7%
Healthy weight	57.7%	57.6%	57.9%
Overweight	18.3%	18.4%	18.4%
Obese	21.0%	21.0%	20.0%
10th graders			
Underweight	2.0%	1.6%	2.9%
Healthy weight	59.4%	59.1%	58.8%
Overweight	18.4%	18.1%	18.4%
Obese	20.3%	21.3%	20.0%

YRBS data are self-reported by students, including their weight and height that are used to calculate BMI measurements. According to the Nevada 2015 YRBS, 15.8% of high school students were classified as

overweight, while another 11.4% were classified as obese. These rates remained relatively similar from 2013 to 2015 (Table 46). Nevada's rates of high school students who were overweight and obese were slightly lower than the rates of students who were overweight or obese in the United States in both 2013 and 2015 (Table 46).

Table 46: Weight Status and Perceptions Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data

Percentage of Students Who	2013		2015	
	US	NV	US	NV
Were Overweight †	16.6%	14.9%	16.0%	15.8%
Were Obese ‡	13.7%	11.5%	13.9%	11.4%
Described themselves as slightly or very overweight	31.1%	30.6%	31.5%	32.5%
Were trying to lose weight	47.7%	49.9%	45.6%	48.1%

† >= 85th percentile but <95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth chart
‡ >= 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth chart

Approximately 35% of adults were classified as overweight (BRFSS data) in both the United States and Nevada from 2011 to 2015 (Table 47). The proportion of adults classified as obese in Nevada was slightly lower than the proportion of adults classified as obese in the United States from 2011 through 2015 (Table 47). The proportion of adults classified as obese in Nevada remained stable from 2011 (24.5%) to 2015 (24.4%) (Table 47). According to 2014 and 2015 aggregate BRFSS data 27.9% of adults below 185% FPL were classified as obese (Table 47).

Table 47: Weight Status Among Adults, United States and Nevada, 2011-2015 and Nevada Among those Below 185% FPL, BRFSS Data

Indicator	2011		2012		2013		2014		2015		<185% FPL (range) †
	US	NV	US	NV	US	NV	US	NV	US	NV	NV
Overweight (BMI 25.0 to 29.9)	35.7%	35.7%	35.8%	36.3%	35.4%	38.7%	35.4%	35.9%	35.5%	34.7%	35.5% (31.9-39.1)
Obese (BMI 30.0 to 99.8)	27.8%	24.5%	27.7%	26.2%	29.4%	26.2%	29.6%	27.6%	29.8%	24.4%	27.9 (24.5-31.2)

† Among individuals below 185% of the Federal Poverty Level, 2014 and 2015 data combined

Chronic Disease, Disability, and Mortality

Chronic diseases such as heart disease, diabetes, stroke and cardiovascular disease accounted for seven of the top ten causes of death in the United States in 2014.[8] Not only do chronic diseases account for the vast majority of premature death, but they are also responsible for the majority of health expenditures. Nationally, in 2010, an estimated 86% of all healthcare spending was for patients with one

[8] Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, Mortality, 2014. (2015). Table LCWK9. Deaths, percent of total deaths, and death rates for the 15 leading causes of death: United States and each State, 2014. Retrieved September, 2016 from http://www.cdc.gov/nchs/data/dvs/lcwk9_2014.pdf

or more chronic conditions.[9] The following indicators provide estimates of chronic diseases and chronic disease risk factors, such as high blood pressure or high cholesterol, for Nevada and the United States.

Asthma

According to both United States and Nevada 2015 BRFSS reports, about 13%-14% of adults reported they have ever been told they have asthma (Table 48). The rate of adults reporting they have ever been told they have asthma has remained stable in Nevada from 13.8% in 2011 to 13.6% in 2015 (Table 48). Among adults below 185% FPL, 12.8% reported they had ever been told they had asthma, according to combined data from the 2014 and 2015 Nevada BRFSS (Table 48).

Table 48: Reported Asthma Among Adults, United States and Nevada, 2011-2015 and Nevada Among those Below 185% FPL, BRFSS Data

Indicator	2011		2012		2013		2014		2015		<185% FPL (range) †
	US	NV	US	NV	US	NV	US	NV	US	NV	NV
Ever been told you have had asthma	13.6%	13.8%	13.3%%	11.6%	14.1%%	11.4%	13.8%	12.3%	14.3%	13.6%	12.8% (10.5-15.1)
Currently have asthma	9.1%	8.1%	8.9%	7.4%	9.0%	7.6%	8.9%	8.0%	9.2%	8.1%	9.2% (7.3-11.1)

† Among individuals below 185% of the Federal Poverty Level, 2014 and 2015 data combined

High Blood Pressure and High Cholesterol

Slightly less than one-third (30.9%) of adults in the United States reported they have ever been told they have high blood pressure from 2011 to 2015. This is similar to the proportion of adults in Nevada (28.3%) reporting they have ever been told they have high blood pressure over the same time period (Table 49). According to Nevada 2015 BRFSS, approximately 26.4% of adults whose median household income was lower than 185% FPL reported they had ever been told they had high blood pressure compared to 28.3% of adults in Nevada (Table 49).

In 2015, the rates of adults reporting they had ever been told they have high cholesterol were similar in both the United States (36.3%) and Nevada (36.7%) (Table 49). This rate has remained relatively stable from 2011 through 2013 in both the United States and Nevada (Table 49).

[9] Gerteis J, Izrael D, Deitz D, LeRoy L, Ricciardi R, Miller T, & Basu J. Multiple Chronic Conditions Chartbook. AHRQ Publications No, Q14-0038. Rockville, MD: Agency for Healthcare Research and Quality; 2014. http://www.ahrq.gov/sites/default/files/wysiwyg/professionals/prevention-chronic-care/decision/mcc/mccchartbook.pdf Accessed October 10, 2016.

Table 49: High Blood Pressure and High Cholesterol Reported Among Adults, United States and Nevada, 2011-2015 and Nevada Among those Below 185% FPL, BRFSS Data							
Ever been told by a doctor or healthcare professional you have	**2011**		**2013**		**2015**		**<185% FPL (range) †**
	US	**NV**	**US**	**NV**	**US**	**NV**	**NV**
High blood pressure	30.8%	30.8%	31.4%	30.6%	30.9%	28.3%	26.4% (21.6-31.2)
High cholesterol	38.4%	37.3%	38.4%	38.6%	36.3%	36.7%	42.8% (36.1-49.5)
† Among individuals below 185% of the Federal Poverty Level, 2015 data only							

Heart Attack, Angina or Coronary Heart Disease, and Stroke

Although the proportion of adults in Nevada reporting they have ever been told they have had a heart attack has been slightly higher than the nation overall from 2011 through 2014, the difference has remained at less than a percent (Table 50). The proportion of adults in Nevada reporting they have ever had a heart attack, slightly decreased from 5.2% in 2011 to 4.2% in 2015 (Table 50). The rate of reported heart attack among adults in Nevada whose median household income was less than 185% FPL was 6.0% for 2014 and 2015 BRFSS data combined (Table 50).

Rates of adults in Nevada who report having ever been told they have angina or coronary heart disease have been similar to rates in the United States, ranging from 3.2% to 4.7%, for all years from 2011 through 2015 (Table 50). Aggregate Nevada BRFSS 2014 and 2015 data show 5.0% of adults with a median household income less than 185% FPL reported they had ever been told they had angina or coronary heart disease (Table 50).

Rates of adults in Nevada who report having ever been told they have had a stroke, have been similar to rates in the United States ranging from 2.8% to 3.2% for all years from 2011 through 2015. Aggregate Nevada BRFSS 2014 and 2015 data show 3.9% of adults with a median household income less than 185% FPL, 3.9% reported they had ever been told they had a stroke (Table 50).

Table 50: Select Conditions Reported Among Adults, United States and Nevada, 2011-2015 and Nevada Among those Below 185% FPL, BRFSS Data											
Ever been told by doctor or healthcare provider you have had	**2011**		**2012**		**2013**		**2014**		**2015**		**<185% FPL (range) †**
	US	**NV**	**US**	**NV**	**US**	**NV**	**US**	**NV**	**US**	**NV**	**NV**
A heart attack	4.4%	5.2%	4.5%	4.6%	4.3%	4.4%	4.4%	4.8%	4.2%	4.2%	6.0% (4.4-7.6)
Angina or coronary heart disease	4.1%	3.2%	4.3%	4.3%	4.1%	3.4%	4.2%	4.7%	3.9%	3.9%	5.0% (3.4-6.6)
A stroke	2.9%	3.2%	2.9%	3.1%	2.8%	2.9%	3.0%	3.2%	3.0%	2.4%	3.9% (2.5-5.2)
† Among individuals below 185% of the Federal Poverty Level, 2014 and 2015 data combined											

Diabetes Prevalence

According to BRFSS data, nationwide around 9.5% to 10.0% of adults reported they have ever been told they have diabetes from 2011 through 2015. This is similar to the proportion of adults in Nevada for the same time period (Table 51). Aggregate Nevada BRFSS 2014 and 2015 data show 11.7% of adults whose median income was below 185% FPL reported they had ever been told they have diabetes (Table 51).

Table 51: Diabetes Reported Among Adults, United States and Nevada, 2011-2015 and Nevada Among those Below 185% FPL, BRFSS Data

Ever been told by a doctor or healthcare provider you have	2011		2012		2013		2014		2015		<185% FPL (range) †
	US	NV	US	NV	US	NV	US	NV	US	NV	NV
Diabetes	9.5%	10.3%	9.7%	8.9%	9.7%	9.6%	10.0%	9.6%	9.9%	9.7%	11.7% (9.4-13.9)

† Among individuals below 185% of the Federal Poverty Level, 2014 and 2015 data combined

The CDC national, state and county diabetes prevalence data indicate the proportion of adults living with diabetes has increased from 2004 through 2013 (Table 52). Most recent 2013 data show 9% of adults in Nevada and the United States are estimated to be living with diabetes, while rates among the 17 counties in Nevada range from a low of 5.9% in Douglas County to 8.9% in Clark County (Table 52).

Table 52: Diagnosed Diabetes Prevalence, United States, and Nevada by County, Age-adjusted Percent, 2004-2013

Location	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Carson City	6.3%	4.9%	6.5%	6.3%	6.6%	7.1%	7.6%	7.5%	7.0%	6.8%
Churchill County	6.2%	5.3%	8.2%	7.8%	7.3%	7.3%	7.9%	8.5%	8.2%	8.0%
Clark County	6.8%	6.7%	8.4%	8.8%	8.7%	8.8%	8.5%	8.5%	8.3%	8.9%
Douglas County	5.3%	4.2%	5.8%	5.7%	5.6%	6.3%	6.2%	6.3%	5.6%	5.9%
Elko County	5.7%	4.5%	7.0%	7.1%	7.4%	7.2%	7.8%	8.1%	7.9%	8.2%
Esmeralda County	6.1%	3.7%	7.3%	7.8%	7.8%	7.4%	7.3%	7.2%	7.8%	7.8%
Eureka County	6.0%	4.0%	7.0%	6.6%	6.8%	7.2%	7.4%	7.1%	7.2%	7.3%
Humboldt County	6.0%	4.7%	7.1%	6.9%	6.5%	7.0%	6.7%	6.8%	6.0%	6.6%
Lander County	6.2%	4.6%	7.4%	7.2%	7.3%	7.6%	7.6%	7.2%	7.1%	7.1%
Lincoln County	6.2%	4.8%	7.3%	8.3%	8.3%	8.7%	7.3%	7.0%	6.8%	7.7%
Lyon County	6.2%	5.1%	6.6%	6.3%	6.8%	7.4%	8.0%	8.0%	7.6%	7.4%
Mineral County	6.2%	4.6%	7.7%	8.8%	9.1%	9.9%	9.1%	8.1%	7.8%	8.4%
Nye County	6.6%	5.6%	8.7%	8.3%	8.3%	7.9%	8.0%	7.5%	8.0%	8.8%
Pershing County	6.3%	4.6%	7.5%	7.2%	7.3%	7.7%	8.0%	8.1%	7.6%	7.3%
Storey County	6.1%	4.3%	6.7%	6.7%	7.1%	7.4%	7.1%	6.8%	7.1%	7.8%
Washoe County	5.8%	5.2%	6.2%	6.3%	6.4%	6.4%	6.6%	6.4%	6.5%	6.5%
White Pine County	6.0%	4.2%	7.0%	7.3%	7.7%	7.5%	7.4%	7.8%	7.4%	8.3%
Nevada	6.5%	7.1%	7.6%	8.0%	8.6%	7.9%	8.4%	10.0%	8.5%	9.0%
United States	6.9%	7.3%	7.4%	7.8%	7.9%	8.0%	8.3%	8.9%	8.9%	9.0%

According to the 2016 Nevada Diabetes and Cardiovascular Report, during 2015, more than one in four people with Type 2 diabetes in Nevada had two or more complications, including cardiovascular disease, neuropathy, nephropathy, peripheral artery disease, retinopathy, or hypoglycemia. [10] This rate is higher

[10] IDo, Inc. Improving Diabetes and Obesity Outcomes. Nevada Diabetes and Cardiovascular Disease Report 2016. 10th Edition. Denver, CO: Forte Information Resources, LLC; 2016.

than the rest of the nation for 2015. Additionally, the 2015 data show, 39.6% of adults with diabetes in Nevada had two or more comorbidities. Comorbidities measured include acute myocardial infarction, congestive heart failure, depression, hyperlipidemia, hypertension, obesity, or pneumonia. [11] These data included only those persons with health insurance claims data for any health maintenance organization (HMO), preferred provider organization (PPO), point-of-service plans, or exclusive provider organizations.

Disability

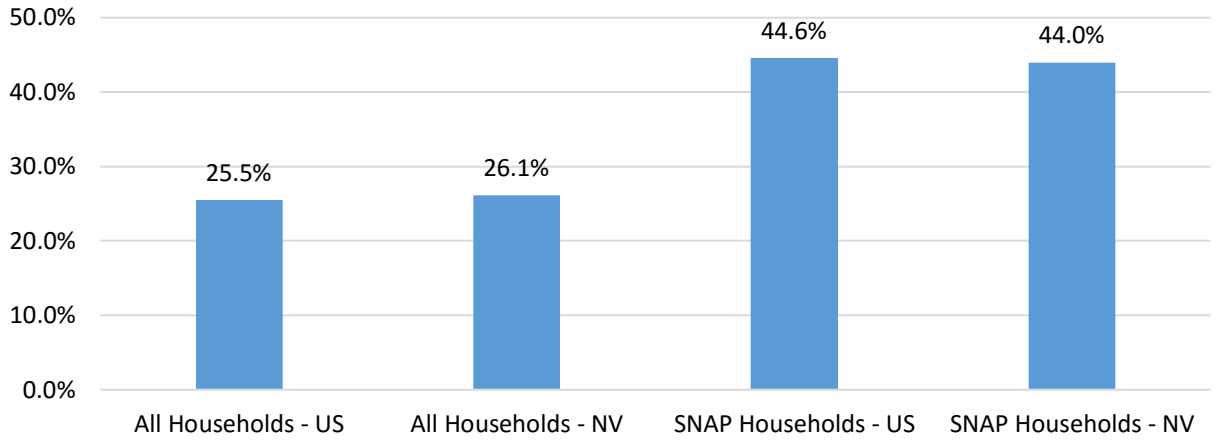
Disabilities are mental or physical conditions that impair a persons' ability to perform certain tasks or interact with their surroundings. This can include being hard of hearing or deaf, blind, unable to speak, having restricted movement, having an impaired cognitive capacity as well as other conditions. Disability may be present at birth or develop later in life.[12]

According to United States Census 2015 American Community Survey data, the rate of disability among households enrolled in SNAP (44.6%) were nearly twice as high as the rate of disability among all households in Nevada (26.1%) (Figure 6). The rates of disability among households enrolled in SNAP in the United States were similar, 44.0%, also nearly twice as high as the disability rate among all households in the United States, 25.5% (Figure 6).

[11] Ibid 10

[12] National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention. (2015, July 22). Disability and Health, Disability Overview. Accessed September 11, 2016 from https://www.cdc.gov/ncbddd/disabilityandhealth/disability.html

Fig. 6 Disability Rates, All Households Compared to SNAP Households, Nevada and the United States, 2015



Differences in disability rates among race and ethnicity for Nevada compared to the United States is provided in Figure 7. The data from American Community Survey 2015 estimates the prevalence of disability is equal to or higher among nearly every racial and ethnic group in Nevada when compared to the U.S. The only racial subpopulation in Nevada with a lower rate of disability were among those who identified as two or more races (Figure 7).

Fig. 7 Disability Rates by Race and Ethnicity, Nevada and the United States, 2015

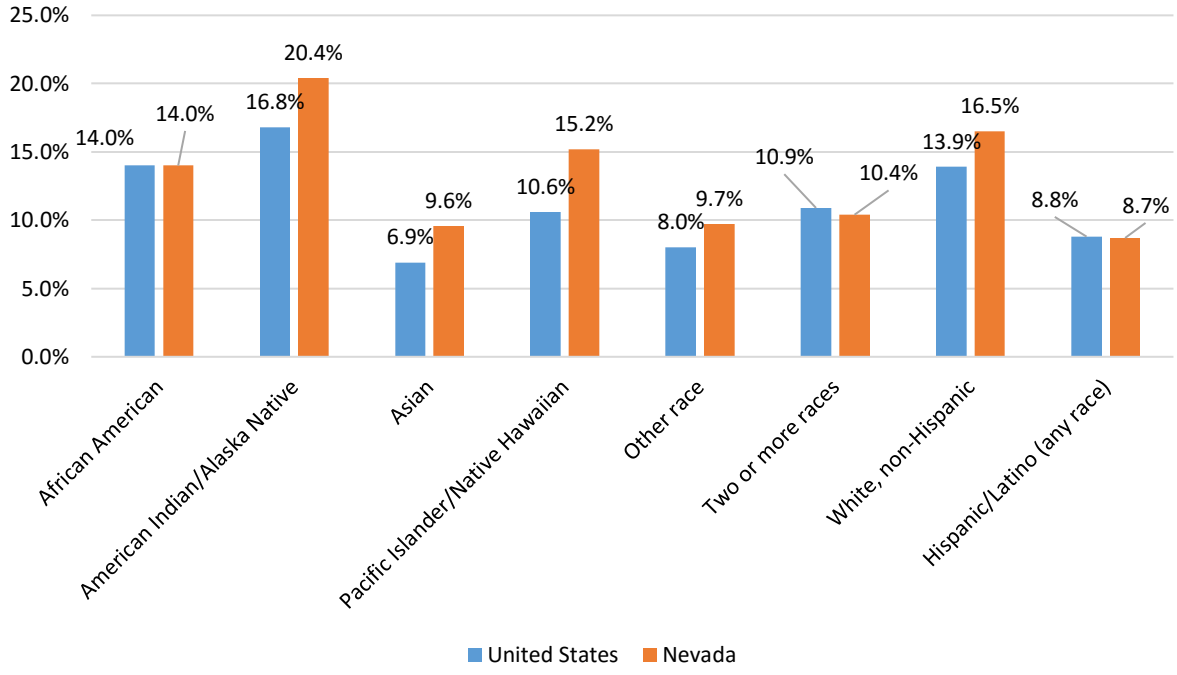
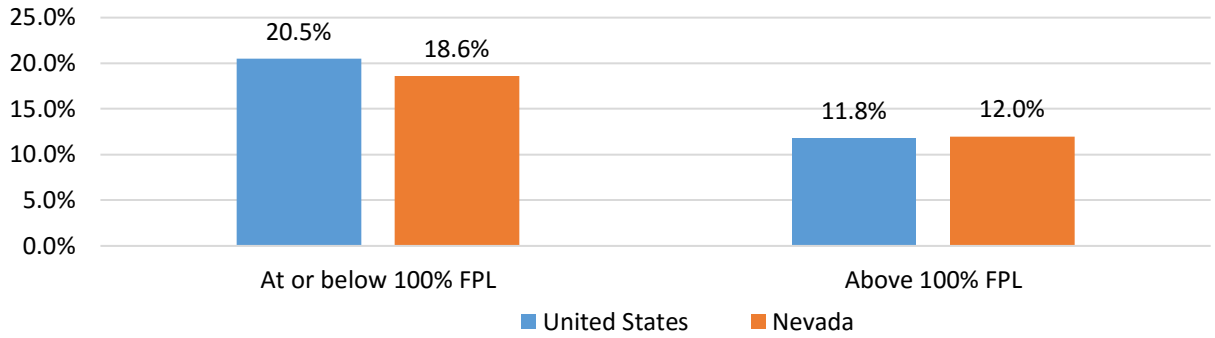


Figure 8 depicts the rate of disability among those who were living at 100% FPL. According to data from the 2015 American Community Survey, rate of disability among persons living at or below 100% FPL was slightly lower in Nevada (18.6%) compared to the United States (20.5%) (Figure 8). The rate of disability was slightly higher among those people living above the FPL in Nevada (12.0%) compared to the population living above the FPL in the United States (11.8%) (Figure 8).

Fig. 8 Rate of Disability by Poverty Status, Nevada and the United States, 2015



Mortality

The top three causes of death in the United States have not changed over the past few decades. The 2014 National Vital Statistics System data for the United States and Nevada are provided in Table 53 and indicate the top five causes of death are ranked the same although rates (per 100,000 population) do vary.

The rate of death due to diseases of the heart were higher in Nevada (202.9 per 100,000 population) than the United States (192.7 per 100,000 population). The rate of death for the third ranked cause of death, chronic lower respiratory diseases were also higher in Nevada (53.6 per 100,000 population) then the United States (46.1 per 100,000 population). The second (malignant neoplasms), fourth (accidents), and fifth (cerebrovascular diseases) ranked causes of death rates were lower in Nevada than the United States during 2014.

Table 53: Top 15 Causes of Death, United States Compared to Nevada, 2014				
Cause of Death	**United States**		**Nevada**	
	Rank	**Rate**	**Rank**	**Rate**
Diseases of the heart	**1**	192.7	**1**	202.9
Malignant neoplasms	**2**	185.6	**2**	176.6
Chronic lower respiratory diseases	**3**	46.1	**3**	53.6
Accidents (unintentional injuries)	**4**	42.7	**4**	41.1
Cerebrovascular diseases	**5**	41.7	**5**	33.4
Alzheimer's disease	**6**	29.3	**7**	21.3
Diabetes mellitus	**7**	24.0	**11**	12.3
Influenza and pneumonia	**8**	17.3	**6**	24.2
Nephritis, nephrotic syndrome and nephrosis	**9**	15.1	**10**	12.9
Intentional self-harm (suicide)	**10**	13.4	**8**	20.2
Septicemia	**11**	12.2	**12**	7.7
Chronic liver disease and cirrhosis	**12**	12.0	**9**	13.8
Essential hypertension and hypertensive renal disease	**13**	9.5	**15**	4.9
Parkinson's disease	**14**	8.2	**14**	5.6
Pneumonitis due to solids and liquids	**15**	5.9	**NR**	NR
All other causes	**NA**	168.0	**NA**	130.8
Rate per 100,000 population				

Results of Other State and Local Health Assessment Efforts

Elders Count Nevada 2013

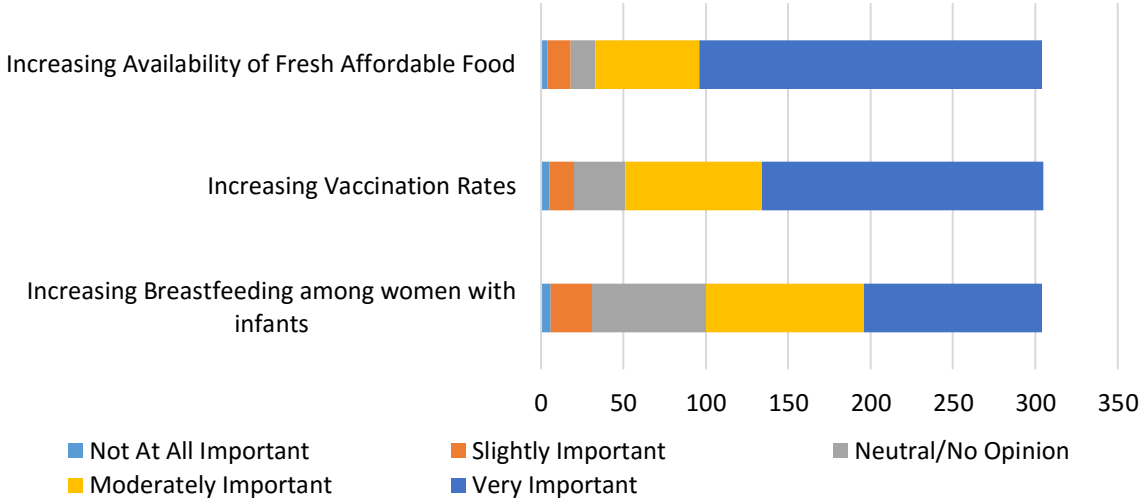
The 2013 Elders Count report provides insight into the overall health of Nevada's elders. Table 54 includes nutrition, physical activity, and chronic disease indicators available within the report. All indicators were from the CDC 2010 and 2011 Nevada BRFSS data for adults aged 65 years and older.

Table 54: Nevada Adults Ages 65 and Older, 2010 and 2011 BRFSS data		
Indicator	**Year**	**Percentage Yes**
Had all permanent teeth removed	2010	17.2%
Visited a dentist, dental hygienist or dental clinic within past year	2010	62.1%
Had five or more fruits and vegetables per day	2011	13.7%
Did physical activity other than current job in past 30 days	2011	68.7%
Met federal guidelines for strength training and aerobic exercise	missing source	17.8%
Had cholesterol checked in lifetime	2011	94.7%
Had cholesterol checked within past five years	2011	92.7%
Advised they have high cholesterol	2011	54.0%
Advised they had hypertension	2011	61.2%
Weight Category		
Underweight	2011	2.7%
Healthy Weight	2011	37.5%
Overweight	2011	41.7%
Obese	2011	18.1%

2015 Nevada State Health Needs Assessment

The 2015 State Health Needs Assessment was conducted to describe the health status of Nevadans and measured over 150 health indicators at the state and county level. In addition to gathering secondary data, an electronic survey was mailed to various email listerves resulting in 300 survey respondents from across Nevada. Among the 300 survey respondents, over 200 indicated increasing the availability of fresh affordable food was "Very Important" (Figure 9).

Fig. 9: Importance of Increasing Community Access and Use, Statewide (N=304)



Additionally, on an open-ended question "What are your top three health issues or concerns?", the number one reported health concern was the combined category of obesity, physical activity and nutrition with 220 out of 305 respondents listing these as one of their top three concerns, Table 55 and Table 56 provide further detail.

Table 55: Participant Responses to 'Top-3 Health Issues or Concerns', Statewide (N=295)	
Definition	**Total Responses**
Obesity, Physical Activity, Nutrition	220
Substance Use and Abuse	200
Issues Related to Access of Healthcare and Health Services	109
Chronic Diseases	95
Mental Health/Behavioral Health	88
Socioeconomic Factors	40
Other Issues not classified	23
Maternal Child Health	20
Lack of Knowledge/Information Issues	16
Dental or Oral Health	15
Special Populations	15
Acute Diseases	11
Built Environmental Factors	11
Safety/Security	9
Sexual Health	7
Environmental Health	6
Total	**885**

Table 56: Detailed Breakdown 'Top-3 Health Issues or Concerns': Obesity, Physical Activity, Nutrition Responses	
Obesity, Physical Activity, Nutrition Response Categories	**Total Responses**
Obesity	120
Nutrition, Lack of Education, Lack of Access to affordable/healthy foods	40
Physical Activity	28
Food Insecurity	23
Adolescent Screen Time/Video games	4
Poor lifestyle choices (lack of physical activity, tobacco use, poor nutrition, lack of exercise)	3
Food Deserts	1
Lack of Farmer's Markets	1
Total	**220**

2015 Community Health Improvement Plan for Southern Nevada Health District

The Mobilizing for Action through Planning and Partnership (MAPP) framework was used to develop the 2015 Community Health Improvement Plan for Southern Nevada Health District. This included participation from community members and stakeholders to help identify priority areas, visions and goal areas. Priority Area 2, is chronic disease and obesity is a listed goal area for this priority. The obesity goal is to promote and enhance interventions to reduce obesity in Southern Nevada by increasing physical activity and promoting healthy diets.

2015-2017 Washoe County Community Health Improvement Plan

Food security, obesity and food access were all highlighted as key factors needing to be addressed to improve health and overall wellbeing in Washoe County. Focus groups and community forums were conducted to inform the Washoe County Community Health Improvement Plan (CHIP) to assess priority areas identified in the county's health needs assessment. Washoe County's CHIP identifies food security as one of the four priority health issues, the CHIP workgroup has developed and implemented action plans addressing food security.

2014 Grants Management Advisory Committee Statewide Community Needs Assessment

Nevada Revised Status (NRS) 439.630(6) requires the Grants Management Advisory Committee to solicit public input regarding community needs during even numbered years. The information collected was used to help direct future funding initiatives for the Fund and Healthy Nevada. The Grants Management Unit of Nevada's Division of Public and Behavioral Health disseminated an online and paper survey and received 2,398 responses to the following question "if you could choose only one service to receive money from the Fund for a Healthy Nevada, what would it be?". Additionally, nine public forums were conducted where at each forum participants were asked to write down the top three needs in their community. Approximately 16.6% survey respondents and 11.8% of forum participants listed food security, as the major service category, making it the third highest ranked category (Table 57).

Table 57: Top Four Service Categories Cited by Survey Respondents and Forum Participants

Rank	Survey Support	Forum Support	Major Service Category
1	31.9%	26.2%	Health/Mental Health
2	23.5%	24.0%	Family Support
3	16.6%	11.8%	Food Security
4	10.9%	10.8%	Support for Persons with Disabilities and their Caregivers

Further analysis of the survey results documented that the four major service categories listed in Table 57 ranked highest regardless of geography, and regardless of whether the respondent identified him/herself as a service provider (Table 58). However, the order that the categories appear on the list did vary by area (Table 58).

Table 58: Top Four Service Categories by Geographic Area (surveys only)								
Major Service Category	**% Statewide**	**Statewide Rank**	**% Clark**	**Clark Rank**	**% Washoe**	**Washoe Rank**	**% Rural**	**Rural Rank**
Health/Mental Health	31.9%	1	31.8%	1	25.6%	2	41.1%	1
Family Support	23.5%	2	18.0%	3	45.9%	1	10.5%	3
Food Security	16.6%	3	22.2%	2	6.1%	4	15.9%	2
Support for Persons with Disabilities and their Caregivers	10.9%	4	10.7%	4	11.8%	3	9.5%	4

Table 59 identifies the specific types of food security –related services requested or mentioned by the survey respondents and forum participants.

Table 59: Food Security Top Services Specified by Respondents	
Most Frequently Requested Services	**Rank**
Food Pantries and Food Banks	1
Nutrition- Access to nutritious foods, nutrition education	2
Children-School breakfast, lunch, summer meals, weekend backpacks, after-school snacks	3
Supplemental Nutrition Assistance Program (SNAP)-Increase benefits, expansion to unserved populations, relaxed eligibility, outreach	4
Home-Delivered Meals for Seniors	5
Women Infants and Children (WIC)-Supplemental food, nutrition education breastfeeding support, health referrals	6

Survey results were also compared with data collected by Nevada 2-1-1 in Calendar Year 2013. As Table 60 indicates, the top three categories in the needs assessment matched three of the top five referral categories tracked by Nevada 2-1-1. Services for Persons with Disabilities and their Caregivers were tracked by Nevada 2-1-1 as part of Individual, Family and Community Support.

Table 60: Nevada 2-1-1 Top Needs/Referrals 2013		
Problem/Need	**Response %**	**Response Count**
Housing and Utilities	28.8%	22,279
Health care/Mental Health	18.8%	14,569
Food and Meals	16.6%	12,854
Legal, Consumer and Public Safety	10.4%	8,091
Individual, Family and Community Support	7.4%	5,707
Other Government/ Economic Services	5.4%	4,161
Transportation	3.8%	2,926
Employment	3.5%	2,723
Clothing, Personal and Household	2.0%	1,539
Education	1.4%	1,115
Information Services	0.7%	515
Volunteers and Donations	0.6%	472
Income Support and Assistance	0.5%	412
Disaster Services	0.1%	88
Total	**100.0%**	**77,451**

2013 Carson Valley Medical Center

Under the Patient Protection and Affordable Care Act (ACA), nonprofit, tax-exempt hospitals are required to conduct a community health needs assessment every three years. The Carson Valley Medical Center's 2013 Community Health Needs Assessment distributed over 1,000 surveys and provided an online version of the survey for additional distribution. Results from the 358 completed surveys, indicate approximately 24.6% respondents listed obesity as one of the top three health needs people in their community face.

2013 Beyond the Hub Native American Food Assessment

This assessment resulted in a pilot project to improve nutrition and overall health among residents of Shoshone and Paiute Reservations across Nevada. Tribal members were primarily concerned with obesity, diabetes, and youth nutrition. The tribal participants identified limited access to fresh fruits and vegetables as an ongoing challenge as many of the reservations were considered to be located in rural or frontier areas of Nevada.

Technical Notes

Nevada Kindergarten Health Survey

The Nevada Kindergarten Health Survey is conducted on an annual basis and includes self-reported data from teachers and parents in Nevada. The survey questionnaires are distributed to kindergarten teachers in all public elementary schools in Nevada, with the exception of the largest school district, Clark County, where a random sample of schools were selected to reduce the burden on staff. The Nevada Kindergarten Health Surveys collect information on the following areas:

- Health Status
- Access to Health Resources
- Weight
- Physical Activity and Sedentary Behaviors
- Beverage Consumption
- Feeding Behaviors as Infants

Nevada Youth Risk Behavioral Survey

The Youth Risk Behavioral Survey (YRBS) is a voluntary survey conducted in middle and high schools every other year to estimate the prevalence of risk and protective factors among adolescents. The YRBS questions are related to various risk and protective factors including:

- Behaviors Related to Violence and Violent Behavior
- Physical Activity, Nutrition, and Obesity
- Substance Use and Abuse
- Sexual Health Behaviors

The Nevada 2013 and 2015 YRBS data provided in this section are limited to high school students only, as the various nutrition consumption questions are not asked in the middle school YRBS module.

Nevada Behavioral Risk Factor Surveillance Survey

The Behavioral Risk Factor Surveillance Survey (BRFSS) is an annual telephone survey conducted in each state and measures behavioral health and related factors among adults ages 18 years and older. The BRFSS collects information on the following health-related topics:

- Physical Activity, Nutrition and Obesity
- Tobacco and Alcohol Use

- Access to Health Resources
- Self-Reported Health Status
- Mental Health Status
- Cancer Screenings
- Chronic Diseases

The BRFSS has mandatory modules (per CDC), asked of all 50 participating states and territories, and optional modules, that states can elect to include. For the purpose of this assessment, only questions related to nutrition, physical activity, obesity, and chronic diseases were included. Some modules are not asked every year, therefore those BRFSS indicators were only available for odd or even years. Nevada BRFSS data from 2011 to 2015 are presented in this assessment, as well as a select group of low-income adults, defined as those with a median household earned income less than 185% the Federal Poverty Level (FPL).

Food Security in Nevada 2013-2015 Report

The Nevada Department of Health and Human Services added questions to the Youth Risk Behavior Survey (YRBS) and Behavioral Risk Factor Surveillance Survey (BRFSS) to assess food insecurity among middle and high school students as well as adult populations across Nevada. A detailed report entitled Food Security in Nevada 2013-2015: A Review of Youth Risk Behavior Survey (YRBS) and Behavioral Risk Factor Surveillance Survey (BRFSS), was released to highlight the findings of the added food security-related questions.

The 2015 Nevada YRBS added the following question, “During the past 30 days, how often did you go hungry because there was not enough food in your home?”. Students who responded “Never” or “Rarely” were categorized as food secure, while those students who responded “Sometimes”, “Most of the time”, or “Always” were categorized as food insecure.

Adult BRFSS respondents were categorized as “SNAP eligible” if the individual was making less than 130% of the Federal Poverty Level (FPL), while those who made 130% FPL or higher were categorized as “SNAP ineligible”. Household size was taken into account to estimate the percent of the FPL earned.

2014 Hunger in America Study

The HIA 2014 study implemented two surveys, an Agency Survey and a Client Survey. The Agency Survey, conducted from October 2012 to January 2013, surveyed the partner agencies of all

participating food banks. Only agencies that responded to the Agency Survey and listed at least one eligible food program could be selected to participate in the Client Survey. Visits to food programs to conduct Client Surveys were carried out by food bank staff and volunteers from April through August 2013. These surveys sought information from clients about their personal circumstances, household demographics, needs, challenges, and use of both government and charitable hunger-relief services.

Data in the Hunger in America (HIA) tables were obtained from three separate reports. United States data were from a publically available 2014 national report, while data for the local food banks are from their independent reports, local reports were provided upon request. All reports were prepared by Urban Institute and Westat for the participating food banks.

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2013 and 2015 YRBS Nevada data: Lensch, T., Baxa, A., Zhang, F., Gay, C., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. Nevada High School Youth Risk Behavior Survey (YRBS) Comparison Report, 2013-2015. Retrieved from http://dhs.unr.edu/Documents/dhs/chs/yrbs/2015-YRBS-Reports/2015-Nevada-HS-YRBS-Comparison-Report-Final.pdf

Table 27: Fruit Consumption Among Adults, United States and Nevada, 2013 and 2015 and Nevada Among those Below 185% FPL, BRFSS Data
United States BRFSS data: CDC BRFSS Prevalence and Trends Data. Queried December 2016 at http://www.cdc.gov/brfss/brfssprevalence/
Nevada BRFSS data: Nevada Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. Carson City, NV, 2016. Data provide upon request.

Table 28: Fruit Consumption Among SNAP Eligible (<130% FPL) Adults Compared to SNAP Ineligible Adults, Nevada 2014-2015 Aggregate BRFSS Data
Department of Health and Human Services, Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. Food Security in Nevada 2013-2015: A Review of Youth Risk Behavior Survey (YRBS) and Behavioral Risk Factor Surveillance Survey (BRFSS). Carson City, NV, 2016.

Table 29: Vegetable Consumption Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data
2013 United States YRBS data: Kann, L., Kinchen, S., Shanklin, S.L., Flint, K.H., Hawkins, J., Harris, W. et al. (2014). Youth Risk Behavior Surveillance-United States 2013. MMWR 2014; 63 (No. 4). Retrieved from http://www.cdc.gov/mmwr/pdf/ss/ss6304.pdf
2015 United States YRBS data: Kann, L., McManus, T., Harris, W., Shanklin, S.L., Flint, K.H., Hawkins, J., et al. (2016). Youth Risk Behavior Surveillance-United States 2015. MMWR 2016; 65 (No. 6). Retrieved from http://www.cdc.gov/healthyyouth/data/yrbs/pdf/2015/ss6506_updated.pdf
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Table 30: Vegetable Consumption Among Adults, United States and Nevada, 2013 and 2015, and Nevada Among those Below 185% FPL, BRFSS Data
United States BRFSS data: CDC BRFSS Prevalence and Trends Data. Queried December 2016 at http://www.cdc.gov/brfss/brfssprevalence/
Nevada BRFSS data: Nevada Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. Carson City, NV, 2016. Data provide upon request.

Table 31: Vegetable Consumption Among SNAP Eligible (<130% FPL) Adults Compared to SNAP Ineligible Adults, Nevada 2014-2015 Aggregate BRFSS Data
Department of Health and Human Services, Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. Food Security in Nevada 2013-2015: A Review of Youth Risk Behavior Survey (YRBS) and Behavioral Risk Factor Surveillance Survey (BRFSS). Carson City, NV, 2016.

Table 32: Breakfast Consumption Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data
2013 United States YRBS data: Kann, L., Kinchen, S., Shanklin, S.L., Flint, K.H., Hawkins, J., Harris, W. et al. (2014). Youth Risk Behavior Surveillance-United States 2013. MMWR 2014; 63 (No. 4). Retrieved from http://www.cdc.gov/mmwr/pdf/ss/ss6304.pdf
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Table 33: Nutrition Knowledge Among Adults in Nevada, 2011 BRFSS Data
2011 Nevada BRFSS. Nevada Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. Carson City, NV, 2016. Data provide upon request.

Table 34: Nutrition Knowledge Among SNAP Eligible (<130% FPL) Adults Compared to SNAP Ineligible Adults , Nevada 2014-2015 Aggregate BRFSS Data

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

Table 35: Physical Activity Among Kindergarteners in Nevada, 2011-2012 through 2015-2016
2011-2012 through 2012-2013 data**:** Haboush, A., Davidson, D., Phebus, T., Lopez, E., & Pitts, C. (2013). Nevada Institute for Children's Research and Policy, UNLV. Health Status of Children Entering Kindergarten in Nevada, Results of the 2012-2013 (Year 5) Nevada Kindergarten Health Survey. Retrieved from http://nic.unlv.edu/files/KHS%20Year%205%20Report_514.13_FinalRevised.pdf
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2014-2015 data: Haboush-Deloye, A., Haddad, P., Trejo, M., Davidson, D.L., & Phebus, T. (2015). Nevada Institute for Children's Research and Policy, UNLV. Health Status of Children Entering Kindergarten in Nevada, Results of the 2014-2015 (Year 7) Nevada Kindergarten Health Survey. Retrieved from http://nic.unlv.edu/files/KHS%20Year%207%20Report_Final_.pdf
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Table 36: Physical Activity Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data
2013 United States YRBS data: Kann, L., Kinchen, S., Shanklin, S.L., Flint, K.H., Hawkins, J., Harris, W. et al. (2014). Youth Risk Behavior Surveillance-United States 2013. MMWR 2014; 63 (No. 4). Retrieved from http://www.cdc.gov/mmwr/pdf/ss/ss6304.pdf
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Table 37: Physical Activity Reported Among Adults in Nevada, 2011-2015 and Among those Below 185% FPL for 2014 and 2015 combined
2011-2015 Nevada BRFSS. Nevada Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. Carson City, NV, 2016. Data provide upon request.

Table 38: Hours of Television Watched Among Kindergarteners in Nevada, 2011-2012 through 2015-2016
2011-2012 and 2012-2013 data**:** Haboush, A., Davidson, D., Phebus, T., Lopez, E., & Pitts, C. (2013). Nevada Institute for Children's Research and Policy, UNLV. Health Status of Children Entering Kindergarten in Nevada, Results of the 2012-2013 (Year 5) Nevada Kindergarten Health Survey. Retrieved from http://nic.unlv.edu/files/KHS%20Year%205%20Report_514.13_FinalRevised.pdf
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Table 39: Hours of Video or Computer Game Usage Among Kindergarteners in Nevada, 2011-2012 through 2015-2016

2011-2012 and 2012-2013 data**:** Haboush, A., Davidson, D., Phebus, T., Lopez, E., & Pitts, C. (2013). Nevada Institute for Children's Research and Policy, UNLV. Health Status of Children Entering Kindergarten in Nevada, Results of the 2012-2013 (Year 5) Nevada Kindergarten Health Survey. Retrieved from http://nic.unlv.edu/files/KHS%20Year%205%20Report_514.13_FinalRevised.pdf

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Table 40: Sedentary Behavior Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data

2013 United States YRBS data: Kann, L., Kinchen, S., Shanklin, S.L., Flint, K.H., Hawkins, J., Harris, W. et al. (2014). Youth Risk Behavior Surveillance-United States 2013. MMWR 2014; 63 (No. 4). Retrieved from http://www.cdc.gov/mmwr/pdf/ss/ss6304.pdf

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Table 41: Percent of Infants Born Low Birth Weight, Less than 2,500 grams, 2009-2013

Nevada Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. Carson City, NV, 2016. Data provide upon request.

Table 42: Weight Status Category Calculations Based on BMI Values for Kindergarten Health Survey

Haboush, A., Davidson, D., Phebus, T., Lopez, E., & Pitts, C. (2013). Nevada Institute for Children's Research and Policy, UNLV. Health Status of Children Entering Kindergarten in Nevada, Results of the 2012-2013 (Year 5) Nevada Kindergarten Health Survey. Retrieved from http://nic.unlv.edu/files/KHS%20Year%205%20Report_514.13_FinalRevised.pdf

Table 43: Weight Status Among Kindergarteners in Nevada, 2011-2012 through 2015-2016

2011-2012 through 2012-2013 data**:** Haboush, A., Davidson, D., Phebus, T., Lopez, E., & Pitts, C. (2013). Nevada Institute for Children's Research and Policy, UNLV. Health Status of Children Entering Kindergarten in Nevada, Results of the 2012-2013 (Year 5) Nevada Kindergarten Health Survey. Retrieved from http://nic.unlv.edu/files/KHS%20Year%205%20Report_514.13_FinalRevised.pdf

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Table 44: Weight Status Category Calculations Based on BMI Values for Body Mass Index of Nevada Students Reports
Office of Public Health Informatics and Epidemiology, Nevada State Health Division, *BMI of Nevada Students: School Year 2011-2012.* Carson City, Nevada. July 2013. Retrieved from http://dpbh.nv.gov/Programs/OPHIE/Docs/Archives/2011-2012_BMI_report_v_1_1_2013-07-30/

Table 45: Body Mass Index of Nevada Students, 4th, 7th and 10th Graders, 2011-2012 through 2013-2014
2011-2012 data: Office of Public Health Informatics and Epidemiology, Nevada State Health Division, *BMI of Nevada Students: School Year 2011-2012.* Carson City, Nevada. July 2013. Retrieved from http://dpbh.nv.gov/Programs/OPHIE/Docs/Archives/2011-2012_BMI_report_v_1_1_2013-07-30/
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Table 46: Weight Status and Perceptions Among Adolescents, United States and Nevada, 2013 and 2015 YRBS Data
2013 United States YRBS data: Kann, L., Kinchen, S., Shanklin, S.L., Flint, K.H., Hawkins, J., Harris, W. et al. (2014). Youth Risk Behavior Surveillance-United States 2013. MMWR 2014; 63 (No. 4). Retrieved from http://www.cdc.gov/mmwr/pdf/ss/ss6304.pdf
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Table 47: Weight Status Among Adults, United States and Nevada, 2011-2015 and Nevada Among those Below 185% FPL, BRFSS Data
United States BRFSS data: CDC BRFSS Prevalence and Trends Data. Queried December 2016 at http://www.cdc.gov/brfss/brfssprevalence/
Nevada BRFSS data: Nevada Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. Carson City, NV, 2016. Data provide upon request.

Table 48: Reported Asthma Among Adults, United States and Nevada, 2011-2015 and Nevada Among those Below 185% FPL, BRFSS Data

United States BRFSS data: CDC BRFSS Prevalence and Trends Data. Queried December 2016 at http://www.cdc.gov/brfss/brfssprevalence/
Nevada BRFSS data: Nevada Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology. Carson City, NV, 2016. Data provide upon request.

Table 49: High Blood Pressure and High Cholesterol Reported Among Adults, United States and Nevada, 2011-2015 and Nevada Among those Below 185% FPL, BRFSS Data
United States BRFSS data source: CDC BRFSS Prevalence and Trends Data. Queried December 2016 at http://www.cdc.gov/brfss/brfssprevalence/
Nevada BRFSS data source: Nevada Office of Public Health informatics and Epidemiology, 2016

Table 50: Select Conditions Reported Among Adults, United States and Nevada, 2011-2015 and Nevada Among those Below 185% FPL, BRFSS Data
United States BRFSS data source: CDC BRFSS Prevalence and Trends Data. Queried December 2016 at http://www.cdc.gov/brfss/brfssprevalence/
Nevada BRFSS data source: Nevada Office of Public Health informatics and Epidemiology, 2016

Table 51: Diabetes Reported Among Adults, United States and Nevada, 2011-2015 and Nevada Among those Below 185% FPL, BRFSS Data
United States BRFSS data source: CDC BRFSS Prevalence and Trends Data. Queried December 2016 at http://www.cdc.gov/brfss/brfssprevalence/
Nevada BRFSS data source: Nevada Office of Public Health informatics and Epidemiology, 2016

Table 52: Diagnosed Diabetes Prevalence, United States, and Nevada by County, Age-adjusted Percent, 2004-2013
Nevada and county data: CDC. National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation. (2016). State and County Diabetes Prevalence Tables. Retrieved from http://www.cdc.gov/diabetes/data/countydata/statecountyindicators.html
United States data: http://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html

Fig. 6 Disability Rates, All Households Compared to SNAP Households, Nevada and th eUnited States, 2014
United States Census Bureau. (2015). *Food Stamps/SNAP Table S2201, 2015 American Community Survey 1-year estimates*. Retrieved from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_S2201&prodType=table.

Fig. 7 Disability Rates by Race and Ethnicity, Nevada and the United States, 2015
United States Census Bureau. (2015). *Disability Characteristics Table S1810, 2015 American Community Survey 1-year estimates*. Retrieved from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_S1810&prodType=table.

Fig. 8 Rate of Disability by Poverty Status, Nevada and the United States, 2015
United States Census Bureau. (2015). *Selected Economic Characteristics for the Civilian Noninstitutionalized Population by Disability Status Table S1811, 2015 American Community Survey 1-year estimates*. Retrieved from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_S1811&prodType=table.

Table 53: Top 15 Causes of Death, United States Compared to Nevada, 2014
Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, Mortality, 2014. (2015). Table LCWK9. Deaths, percent of total deaths, and death rates for the 15 leading causes of death: United States and each State, 2014. Retrieved from http://www.cdc.gov/nchs/data/dvs/lcwk9_2014.pdf

Table 54: Nevada Adults Ages 65 and Older, BRFSS 2010 and 2011 data

Broadus, A.D., Sacks, T.M., & Fadali, E.R. (2013). Elders Count Nevada. University of Nevada, Reno: Sanford Center for Aging. Retrieved from http://dhs.unr.edu/Documents/dhs/sanford/resources-publications/EldersCount2013.pdf

Fig. 9 Importance of Increasing Community Access and Use, Statewide (N=304)
Kerwin, H., Gardner, J., & Ortiz-Gustafson, C. (2015). 2015 Nevada State Health Needs Assessment. Retrieved from http://grant.nv.gov/uploadedFiles/grantnvgov/Content/Grant_Resources/Data_Resources/Part%20I_FV_final%20Nov%202015(1).pdf

Table 55: Participant Responses to 'Top-3 Health Issues or Concerns', Statewide (N=295)
Kerwin, H., Gardner, J., & Ortiz-Gustafson, C. (2015). 2015 Nevada State Health Needs Assessment. Retrieved from http://grant.nv.gov/uploadedFiles/grantnvgov/Content/Grant_Resources/Data_Resources/Part%20I_FV_final%20Nov%202015(1).pdf

Table 56: Detailed Breakdown 'Top-3 Health Issues or Concerns': Obesity, Physical Activity, Nutrition Responses
Kerwin, H., Gardner, J., & Ortiz-Gustafson, C. (2015). 2015 Nevada State Health Needs Assessment. Retrieved from http://grant.nv.gov/uploadedFiles/grantnvgov/Content/Grant_Resources/Data_Resources/Part%20I_FV_final%20Nov%202015(1).pdf

Table 57: Top Four Service Categories Cited by Survey Respondents and Forum Participants
Nevada Division of Health and Human Services. (2014). 2014 Statewide Community Health Needs Assessment. Retrieved from http://dhhs.nv.gov/uploadedFiles/dhhsnvgov/content/Programs/Grants/Reports/2014-Needs-Assessment-Results-GMAC-GMU_052814.pdf

Table 58: Top Four Service Categories by Geographic Area (surveys only)
Nevada Division of Health and Human Services. (2014). 2014 Statewide Community Health Needs Assessment. Retrieved from http://dhhs.nv.gov/uploadedFiles/dhhsnvgov/content/Programs/Grants/Reports/2014-Needs-Assessment-Results-GMAC-GMU_052814.pdf

Table 59: Food Security Top Services Specified by Respondents
Nevada Division of Health and Human Services. (2014). 2014 Statewide Community Health Needs Assessment. Retrieved from http://dhhs.nv.gov/uploadedFiles/dhhsnvgov/content/Programs/Grants/Reports/2014-Needs-Assessment-Results-GMAC-GMU_052814.pdf

Table 60: Nevada 2-1-1 Top Needs/Referrals 2013
Nevada Division of Health and Human Services. (2014). 2014 Statewide Community Health Needs Assessment. Retrieved from http://dhhs.nv.gov/uploadedFiles/dhhsnvgov/content/Programs/Grants/Reports/2014-Needs-Assessment-Results-GMAC-GMU_052814

Statewide Needs Assessment for Nevada's SNAP-Ed Program

Phase I: Part II

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Map development by Damien Kerwin, B.S.

This portion of the Statewide SNAP-Ed Needs Assessment was guided by the following objective: "Characterize low-income communities." The definition of a low-income community selected for this assessment closely mirrors the FY17 SNAP-Ed Plan Guidance which outlines how target audiences for SNAP-Ed may be identified geographically by examining areas and neighborhoods, such as census tracts, where at least 50% of persons have gross incomes that are equal to or less than 185% of the poverty threshold.[13] Included herein are a combination of socioeconomic and built environment indicators for households in low-income communities. An interactive map was developed to assist in the geographic identification of SNAP-Ed target audiences and illustrate the selected indicators used to describe low-income communities. **Users may access the map using this link: http://arcg.is/2dbxFr2.**

Additionally, a summary of each of the 17 counties in Nevada is provided to describe the county compared to the census tracts designated as low-income communities within each county. This report is organized into the following sections:

Phase I: Part II Executive Summary

A low-income community, for the purpose of this Nevada SNAP-Ed Needs Assessment, was defined as a census tract where at least 50% of the households were living at less than 185% of the Federal Poverty Level (FPL). According to American Community Survey 5-year estimates (2010-2014), 551,656

[13] United States Department of Agriculture. (2016). Supplemental Nutrition Assistance Program Education Plan Guidance FY 2017: Nutrition Education & Obesity Prevention Grant Program. Food and Nutrition Service. Retrieved from https://snaped.fns.usda.gov/national-snap-ed/snap-ed-plan-guidance-and-templates

people were residing in a low-income community, accounting for approximately 20% of Nevada's total population. Combined, approximately 94% of the low-income communities were located within Clark (78%) or Washoe (16%) County, which closely mirrors the state's overall population distribution. While nearly all of the urban located low-income communities had access to transportation and parks, less than half had access to recreational facilities, and fewer than a quarter of the low-income communities had access to a farmer's market. Only 7, or 5%, of low-income communities were located in rural counties, however only one of the rural low-income communities had access to a farmer's market, only one had access to transit, one had access to a park, and none of the rural low-income communities had access to recreation as defined by this assessment.

In 2016, the SNAP retail ratio of limited food to full-service SNAP-EBT retailers in Nevada was 3:1, meaning for every full-service grocery store that accepted SNAP-EBT benefits, there were three limited-choice stores which accepted SNAP-EBT benefits. Additionally, the majority of census tracts in Nevada did not have a full-service SNAP retailer (grocery store or supermarket) within the census tract. Only 19% of low-income communities in Nevada had a full-service SNAP retailer, compared to 26% of non-low income communities. There were proportionally fewer full-service SNAP retailers in low-income communities compared to communities which were not designated as low income across the state.

Eight of the 17 counties in Nevada did not contain any census tracts which were designated as low-income. Most of the counties without a designated low-income community are rural or frontier. Counties designated as rural or frontier usually only have one major populated area, with vast distances separating smaller isolated populations. There are existing challenges for residents in any rural or frontier county across Nevada, including having limited access to several of the indicators measured within the scope of this assessment (transit, farmer's markets, parks and recreation), as well as amenities not measured, which can also impact health and health behaviors.

The interactive map is to be used as a visual reference and informative source of aggregate information related to the socioeconomic and built environment at the census tract level. The map should be utilized in conjunction with knowledge of other emergency food assistance programs, policies, and efforts ongoing in a community, in order to develop more effective programs to address SNAP-Ed target audiences.

Presentation of Findings

Social determinants of health include socioeconomic indicators such as education, income, and employment, as these are indicators used to predict health outcomes and ultimately mortality. Several indicators related to the social determinants of health are provided in the mapping tool to help describe low-income communities in Nevada. Socioeconomic indicators such as median household income and unemployment rates are also available for each census tract. Additional social determinants of health were selected to describe each low-income community's accessibility to parks, recreation facilities, public transit and food retailers, all of which are elements of a community's built environment or infrastructure. Environmental factors can impact individual health behaviors related to nutrition (i.e. accessibility of food) and options for engaging in physical activity.

The interactive map was designed to assist the user in visualizing where low-income communities are located within the state and each of the counties, and helps illustrate the drastic differences which exist between neighboring census tracts. This map can be used to determine where in a county, the highest-needs communities are located. Knowing where high-needs communities are, could impact where organizational planning efforts to provide food assistance should be located and could identify alternative or additional locations for targeted outreach. The interactive mapping tool serves to assist in the formulation of data-driven policy, systems, and environmental changes most essential within a community. **Users may access the map using this link: http://arcg.is/2dbxFr2**

Methods

As noted previously, a low-income community was defined as a census tract where at least 50% of the households were living at less than 185% of the Federal Poverty Level (FPL). Due to limitations of data available from the U.S. Census Bureau, the low-income community definition does NOT include households at 185% of the FPL, only those at or below 184.9% FPL. Indicators to describe the socioeconomics of each low-income community were incorporated into the map and include factors such as median household incomes, proportion of households living below 185% FPL, the median housing cost, unaffordable housing, housing vacancy rates, and unemployment rates. Additional indicators were included to describe each low-income community's accessibility to public transportation, farmer's markets, SNAP retailers, parks and recreation facilities.

Definitions of the indicators provided in the interactive map are provided, and when possible, hyperlinks to data sources are provided. All American Community Survey tables queried were 5-year estimates (2010-2014), since the geography of interest (census tracts) was a small area. By using 5-year estimates, the potentially large annual variations within a small geographic area are smoothed and more representative than querying only a single year of data.

Definitions of Mapped Indicators

County
The county the census tract is located in.

Census Tract Population
American Community Survey, 5-year estimates (2010-2014) Table B03002 data were queried from American FactFinder to determine the population estimate for each census tract.

Race/Ethnicity
American Community Survey, 5-year estimates (2010-2014) Table B03002 data were queried from American FactFinder to calculate the race and ethnicity of persons residing in each census tract. The racial and ethnic categories are displayed as a percentage of the total population residing in the census tract:

AA=African American/Black, non-Hispanic
AI/AN= American Indian/Alaska Native, non-Hispanic
AS/PI=Asian and Pacific Islander (combined), non-Hispanic
H= Hispanic, any race
W= Caucasian/White, non-Hispanic
O/2+= Other race/Two or more races, non-Hispanic

Low-income Community
American Community Survey, 5-year estimates (2010-2014) Table C17002 data were queried from American FactFinder to calculate the proportion of households in the census tract that were living below 185% FPL. All census tracts with 50.0% or more of the households living below 185% FPL were designated as a low-income community.

Median Income
American Community Survey, 5-year estimates (2010-2014) Table S1903 data were queried from American FactFinder to calculate the median annual earned household income for each census tract.

Households <185% FPL
American Community Survey, 5-year estimates (2010-2014) Table C17002 data were queried from American FactFinder to calculate the percentage of census tract households living below 185% FPL.

SNAP Retailer
All 2016 eligible SNAP retailers were provided by the Nevada Division of Welfare and Supportive Services.

- The SNAP retailer code for convenience stores and combination grocery stores (i.e. Dollar Tree, 99 Cent Stores, AM-PM, Green Valley Grocery, Jackson's and other similar locations) were categorized as "Limited".
- The SNAP retailer code for Small, medium, large grocery stores, supermarkets and super stores (i.e. Albertsons, Raleys, WalMart, Smart n Final and other similar locations) were categorized as "Full-service".

SNAP Retail (Limited:Full-service)
All stores from these two categories, Limited and Full-service, were mapped to produce a ratio of Limited to Full-service SNAP retailers within each census tract.

SNAP Retail (N=Total Number; Percent Full-service)
The denominator or total number includes all "Limited" stores (convenience stores and combination grocery stores) and "Full-service" stores (small, medium, and large grocery stores, supermarkets and super stores). The total number of SNAP retailers as well as the percentage of SNAP retailers categorized as Full-service are provided for each census tract.

Access to Transit
All city and county public transit stops or bus transit routes in Nevada were included. Access to transportation was defined as having a public transportation stop or bus transit line within, or a quarter-mile from, the boundary of the census tract.

Access to Farmer's Market
All farmer's markets listed in Nevada Grown were included. Access to a farmer's market was defined as having a farmer's market within, or a quarter-mile from, the boundary of the census tract.

Link: http://nevadagrown.com/farmers-market-list/

Access to Parks
All city and county-owned public parks were included. Access to a park was defined as having a park within, or a mile from, the boundary of the census tract.

Access to Recreation
All city and county-owned public access recreation facilities, Boys and Girls Club, and YMCA locations were included. Access to recreation was defined as having a recreation facility within, or a quarter-mile from, the boundary of the census tract.

Median Rent
American Community Survey, 5-year estimates (2010-2014) Table DP04 data were queried from American FactFinder to obtain the median monthly rent within each census tract.

Median Mortgage
American Community Survey, 5-year estimates (2010-2014) Table DP04 were queried from American FactFinder to obtain the median monthly mortgage within each census tract.

Unaffordable Housing
Unaffordable monthly house payment is defined by the U.S. Department of Housing and Urban Development as those households who pay more than 30% of the combined monthly earned income for housing are considered to be cost burdened.[14]

Percentage of Renters
American Community Survey, 5-year estimates (2010-2014) Table DP04 data were queried from American FactFinder to calculate the proportion of the population with an unaffordable monthly rent within each census tract.

Percentage of Owners
American Community Survey, 5-year estimates (2010-2014) Table DP04 data were queried from American FactFinder to calculate the proportion of the population with an unaffordable monthly mortgage rate within each census tract.

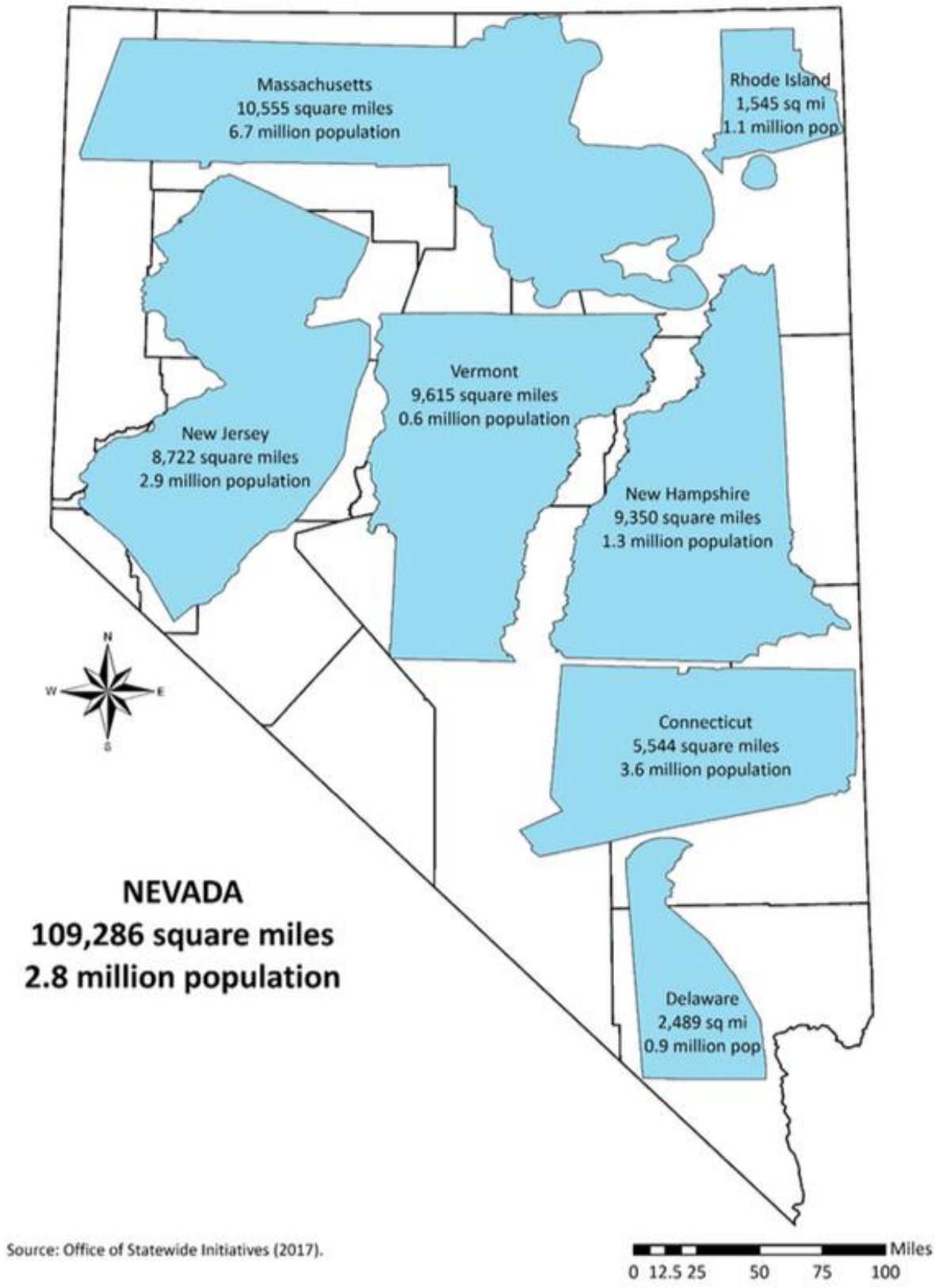
Unemployment
American Community Survey, 5-year estimates (2010-2014) Table S2301 were queried from American FactFinder to obtain the unemployment rates for the population aged 16 years and older (eligible for employment) within each census tract.

Limitations of Defining "Access"

Due to Nevada's variability in population density across the state, the access definitions described above may not be appropriate for rural or frontier counties which are composed of only one or two large census tracts. For example, Lander County is one census tract, and when defining "access to parks", a person residing in Battle Mountain in the northern-most part of the county would be considered to have access to a park, even though the only park in Lander County is 90 miles away in Austin, located in the southern part of the county. Although the point locations were not provided on the map, it is important to consider limitations of these definitions for the rural and frontier counties in Nevada.
The image provided on the following page illustrates the geographic size of Nevada relative to Northeastern states.[15] Nevada is the 7th largest state in the U.S. and the map on the following page (7) provides context to the amount of land relative to the overall population; which in 2017 was an estimated 2.9 million, with 26.5 persons per square mile.[16]

[14] U.S. Department of Housing and Urban Development. (n.d.). Affordable Housing. Accessed September 11, 2016 from http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/
[15] Nevada State Office of Rural Health, Office of Statewide Initiatives. (2017). Nevada Rural and Frontier Health Data Book-Eighth Edition. Reno, NV.
[16] Ibid 3

Map 5: Selected Northeastern States Placed Within the State of Nevada



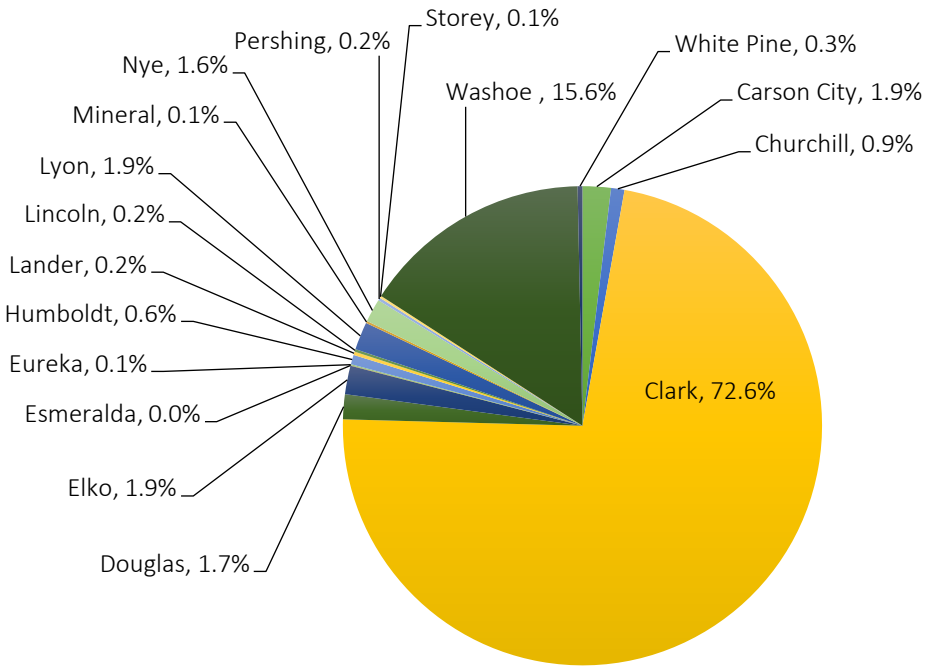
Source: Office of Statewide Initiatives (2017).

Summary of Low-Income Communities by County

The county summaries reduce the vast amount of information provided for the 688 census tracts within the interactive map into a more concise format. Each of the indicators are summarized at the county level and include the county population, population density, and race/ethnicity. The indicators related to the social determinants of health, such as median household income, unemployment rates, and housing costs, in addition to the proportion of SNAP retailers that were considered full-service retailers were also summarized at the county level.

A description of the low-income communities in each county's low-income communities is provided and includes, how many census tracts in the county were considered a low-income community, the total population residing in low-income communities in the county, and how many of those low-income communities had access to transportation, parks, recreation facilities, and farmer's markets. The proportion of full-service SNAP retailers located within low-income communities were also described to help depict accessibility.

Fig. 1 Percent of Nevada Population, by County, 2015



Carson City

In 2015, an estimated 1.9% of Nevada's population resided in Carson City (Figure 1), with a population density of 382.6 people per square mile. According to American Community Survey (ACS) 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (69%) or Hispanic (22%) (Table 1). The median household income in Carson City was $50,108 and 34% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 15% for the same time period, 2010-2014 (Table 2). An estimated 47% of renters and 35% of home owners paid an unaffordable monthly rent/mortgage and 10% of houses were vacant in Carson City (Table 3). Among the 41 SNAP retailers in Carson City, 29% (12) were full-service retailers (Table 4).

Carson City Low-Income Communities

Two of Carson City's 14 census tracts were designated as a low-income community with 7,815 persons, or 14% of Carson City's total population residing in those low-income communities. One of the low-income communities was near the downtown area of Carson City, while the other was east of downtown. Both of the low-income communities had access to transportation and parks, but neither had access to a farmer's market. Only one of the two low-income communities had access to recreation. Among the 11 SNAP retailers in Carson City's low-income communities, 27% (3) were full-service retailers (Table 4).

Churchill County

In 2015, an estimated 0.9% of Nevada's population resided in Churchill County (Figure 1), with a population density of 5.1 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (75%) or Hispanic (13%) (Table 1). The median household income in Churchill County was $46,195 and 33% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 13% for the same time period, 2010-2014 (Table 2). An estimated 44% of renters and 37% of home owners paid an unaffordable monthly rent/mortgage and 12% of houses were vacant in Churchill County (Table 3). Among the 17 SNAP retailers in Churchill County, 18% (3) were full-service retailers (Table 4).

Churchill County Low-Income Communities

One of the seven census tracts in Churchill County were designated as low-income, with 3,850 persons, or 16% of Churchill County's total population residing in those low-income communities. The low-income census tract was near the downtown area of Fallon, the most populous town in Churchill County. The low-income community had access to transit and a farmer's market, but no access to parks or recreation. Among the two SNAP retailers in Churchill County's low-income communities, neither were full-service retailers (Table 4).

Clark County

In 2015, an estimated 72.6% of Nevada's population resided in Clark County (Figure 1), home to Las Vegas, the largest city in Nevada, with a population density of 269.8 people per square mile. Clark County is the most diverse county in terms of race and ethnicity. The ACS 5-year estimates for 2010-2014 indicate the majority of the county's population was white, non-Hispanic (47%) or Hispanic (any race) (30%), 10% African American, and 10% Asian/Pacific Islander (Table 1). The median household income in Clark County was $52,070 and 34% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 12% for the same time period, 2010-2014 (Table 2). An estimated 51% of renters and 40% of home owners paid an unaffordable monthly rent/mortgage and 16% of houses were vacant in Clark County (Table 3). Among the 1,204 SNAP retailers in Clark County, 23% (275) were full-service retailers (Table 4).

Clark County Low-Income Communities

There are 487 census tracts in Clark County, of which, 23% were designated as low-income. A total of 440,087 persons, or 22% of Churchill County's total population resided in those low-income communities. The majority of the low-income communities were located northeast of downtown Las Vegas. In addition, there were one to two low-income communities in each of the following cities in Clark County; Mesquite, on the east bordering Utah; Laughlin to the south bordering Arizona; one low-income community in Henderson and one in Overton, just north of Lake Mead. Among the 113 low-income communities in Clark County, 99% (112) of the low-income communities had access to transportation, 99% (112) of the low-income communities had access to parks, while 36% (41) had access to recreation and only 3.5% (4) of the low-income communities had access to a farmer's market.

Among the 407 SNAP retailers in Clark County's low-income communities, 19% (78) were full-service retailers (Table 4).

Douglas County

In 2015, an estimated 1.7% of Nevada's population resided in Douglas County (Figure 1), with a population density of 69.1 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (82%) or Hispanic (12%) (Table 1). The median household income in Douglas County was $58,940 and 25% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 10% for the same time period, 2010-2014 (Table 2). An estimated 51% of renters and 43% of home owners paid an unaffordable monthly rent/mortgage and 17% of houses were vacant in Douglas County (Table 3). Among the 28 SNAP retailers in Douglas County, 29% (8) were full-service retailers (Table 4).

Douglas County Low-Income Communities

Among the 17 census tracts in Douglas County, the proportion of households living below 185% FPL ranged from 5% to 43%, therefore none of the 17 census tracts met the threshold to be designated as a low-income community.

Elko County

In 2015, an estimated 1.9% of Nevada's population resided in Elko County (Figure 1), with a population density of 3.0 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (68%) or Hispanic (24%) (Table 1). The median household income in Elko County was $72,280 and 22% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 5% for the same time period, 2010-2014 (Table 2). An estimated 37% of renters and 21% of home owners paid an unaffordable monthly rent/mortgage and 12% of houses were vacant in Elko County (Table 3). Among the 34 SNAP retailers in Elko County, 41% (14) were full-service retailers (Table 4).

Elko County Low-Income Communities

One of the 14 census tracts in Elko County was designated as low-income, with approximately 3,133 persons, or 6% of Elko County's total population residing in the low-income community. The low-income community was the census tract in the northern-most region of the county, sharing a border with Idaho

and Utah. The low-income community did not have access to transportation, farmer's markets, parks, or recreation. There were only two SNAP retailers in Elko County's low-income community and one was a full-service retailer (Table 4).

Esmeralda County

In 2015, less than 0.1% of Nevada's population resided in Esmeralda County (Figure 1), with a population density of 0.3 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (80%) or Hispanic (15%) (Table 1). The median household income in Esmeralda County was $31,528 and 53% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 16% for the same time period, 2010-2014 (Table 2). An estimated 44% of renters and 20% of home owners paid an unaffordable monthly rent/mortgage and 50% of houses were vacant in Esmeralda County (Table 3). There was only one SNAP retailer in Esmeralda County and it was a limited-service retailer (Table 4).

Esmeralda County Low-Income Community

Esmeralda County is one census tract, which was designated as a low-income community, with approximately 1,041 persons residing in Esmeralda County. There were no public transit options in the county, nor were there any farmer's markets. While much of the county is rural or frontier by definition, there were no formal recreation centers in Esmeralda County, however there was a park in Goldfield, the county seat. As previously stated, there is only one SNAP retailer in Esmeralda County and it is a limited-service retailer.

Eureka County

In 2015, an estimated 0.1% of Nevada's population resided in Eureka County (Figure 1), with a population density of 0.4 people per square mile. ACS 5-year estimates for 2010-2014 indicate 95% of the county's population was white, non-Hispanic (Table 1). The median household income in Eureka County was $68,403 and 21% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 4% for the same time period, 2010-2014 (Table 2). An estimated 18% of renters and 18% of home owners paid an unaffordable monthly rent/mortgage and 32% of houses were vacant in Eureka County (Table 3). Among the two SNAP retailers in Eureka County, none were full-service retailers (Table 4).

Eureka County Low-Income Communities

All of Eureka County is one census tract, although 21% of the households had a median income less than 185% FPL, this did not meet the threshold to be designated as a low-income community.

Humboldt County

In 2015, an estimated 0.6% of Nevada's population resided in Humboldt County (Figure 1), with a population density of 1.7 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (67%) or Hispanic (25%) (Table 1). The median household income in Humboldt County was $62,632 and 24% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 10% for the same time period, 2010-2014 (Table 2). An estimated 35% of renters and 19% of home owners paid an unaffordable monthly rent/mortgage and 15% of houses were vacant in Humboldt County (Table 3). Among the 12 SNAP retailers in Humboldt County, 42% (5) were full-service retailers (Table 4).

Humboldt Low-Income Communities

Among the four census tracts in Humboldt County, the proportion of households living below 185% FPL ranged from 9% to 29%, therefore none of the four census tracts met the threshold to be designated as a low-income community.

Lander County

In 2015, an estimated 0.2% of Nevada's population resided in Lander County (Figure 1), with a population density of 1.1 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population is white, non-Hispanic (70%) or Hispanic (23%) (Table 1). The median household income in Lander County was $76,558 and 28% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 12% for the same time period, 2010-2014 (Table 2). An estimated 39% of renters and only 1% of home owners paid an unaffordable monthly rent/mortgage; 18% of houses were vacant in Lander County (Table 3). Among the five SNAP retailers in Lander County, 40% (2) were full-service retailers (Table 4).

Lander County Low-Income Communities

All of Lander County is one census tract, and although 28% of the households had a median income less than 185% FPL, this did not meet the threshold to be designated as a low-income community.

Lincoln County

In 2015, an estimated 0.2% of Nevada's population resided in Lincoln County (Figure 1), with a population density of 0.5 people per square mile. ACS 5-year estimates for 2010-2014 indicate 83% of the county's population was white, non-Hispanic (Table 1). The median household income in Lincoln County was $40,550 and 34% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 15% for the same time period, 2010-2014 (Table 2). An estimated 45% of renters and 25% of home owners paid an unaffordable monthly rent/mortgage and 31% of houses were vacant in Lincoln County (Table 3). Among the five SNAP retailers in Lincoln County, 60% (3) were full-service retailers (Table 4).

Lincoln County Low-Income Communities

Among the two census tracts in Lincoln County, the proportion of households living below 185% FPL ranged from 31% to 36%, therefore neither of the two census tracts met the threshold to be designated as a low-income community.

Lyon County

In 2015, an estimated 1.9% of Nevada's population resided in Lyon County (Figure 1), with a population density of 26.7 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (77%) or Hispanic (15%) (Table 1). The median household income in Lyon County was $47,143 and 35% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 16% for the same time period, 2010-2014 (Table 2). An estimated 48% of renters and 41% of home owners paid an unaffordable monthly rent/mortgage and 12% of houses were vacant in Lyon County (Table 3). Among the 41 SNAP retailers in Lyon County, 17% (7) were full-service retailers (Table 4).

Lyon County Low-Income Communities

Two of the ten census tracts in Lyon County were designated as low-income, with approximately 6,333 persons, or 12% of Lyon County's total population residing in those low-income communities. One of the low-income communities was in Silver City, while the other was located in Silver Springs. Neither of the low-income communities had access to transportation, farmer's markets, parks, or recreation as defined by the parameters in this assessment. Among the six SNAP retailers in Lyon County's low-income communities, one was a full-service retailer (Table 4).

Mineral County

In 2015, an estimated 0.1% of Nevada's population resided in Mineral County (Figure 1), with a population density of 1.2 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (61%), American Indian/Alaska Native (15%), or Hispanic (13%) (Table 1). The median household income in Mineral County was $38,664 and 36% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 16% for the same time period, 2010-2014 (Table 2). An estimated 25% of renters and 19% of home owners paid an unaffordable monthly rent/mortgage and 27% of houses were vacant in Mineral County (Table 3). Among the eight SNAP retailers in Mineral County, 25% (2) were full-service retailers (Table 4).

Mineral County Low-Income Communities

One of the two census tracts in Mineral County was designated as low-income, approximately 1,311 persons, or 28% of Mineral County's total population resided in the low-income community. The low-income community is the entire surrounding area outside the town of Hawthorne, which is the county seat and largest town in Mineral County. The low-income community did not have access to transportation, farmer's markets, or recreation, however there were two large parks located within Mineral County, and by definition, the low-income community had access. There was one SNAP retailer in Mineral County's low-income community and the location was not a full-service retailer (Table 4).

Nye County

In 2015, an estimated 1.6% of Nevada's population resided in Nye County (Figure 1), with a population density of 2.5 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of

the county's population was white, non-Hispanic (78%) or Hispanic (14%) (Table 1). The median household income in Nye County was $41,757 and 40% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 15% for the same time period, 2010-2014 (Table 2). An estimated 53% of renters and 44% of home owners paid an unaffordable monthly rent/mortgage and 19% of houses were vacant in Nye County (Table 3). Among the 40 SNAP retailers in Nye County, 20% (8) were full-service retailers (Table 4).

Nye County Low-Income Communities

One of the ten census tracts in Nye County was designated as low-income, approximately 2,156 persons, or 5% of Nye County's total population resided in the low-income community. The low-income community is the southwestern census tract, encompassing the town of Beatty, sharing a border with California. The low-income community had access to transportation, however did not have access to farmer's markets, parks, or recreation facilities. Among the five SNAP retailers in Nye County's low-income community, one was a full-service retailer (Table 4).

Pershing County

In 2015, an estimated 0.2% of Nevada's population resided in Pershing County (Figure 1), with a population density of 1.1 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (67%) or Hispanic (23%) (Table 1). The median household income in Pershing County was $48,165 and 38% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 12% for the same time period, 2010-2014 (Table 2). An estimated 39% of renters and 29% of home owners paid an unaffordable monthly rent/mortgage and 13% of houses were vacant in Pershing County (Table 3). Among the five SNAP retailers in Pershing County, 20% (1) were full-service retailers (Table 4).

Pershing County Low-Income Communities

All of Pershing County is one census tract, although 38% of the households had a median income less than 185% FPL, this did not meet the threshold to be designated as a low-income community.

Storey County

In 2015, an estimated 0.1% of Nevada's population resided in Storey County (Figure 1), with a population density of 15.7 people per square mile. ACS 5-year estimates for 2010-2014 indicate 91% of

the county's population was white, non-Hispanic (Table 1). The median household income in Storey County was $64,835 and 19% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 13% for the same time period, 2010-2014 (Table 2). An estimated 18% of renters and 43% of home owners paid an unaffordable monthly rent/mortgage and 9% of houses were vacant in Storey County (Table 3). Among the three SNAP retailers in Storey County, none were full-service retailers (Table 4).

Storey County Low-Income Communities

Storey County is one census tract, although 19% of the households had a median income less than 185% FPL, this did not meet the threshold to be designated as a low-income community.

Washoe County

In 2015, an estimated 15.6% of Nevada's population resided in Washoe County (Figure 1), with a population density of 69.4 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (65%) or Hispanic (23%) (Table 1). The median household income in Washoe County was $52,910 and 34% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 11% for the same time period, 2010-2014 (Table 2). An estimated 52% of renters and 39% of home owners paid an unaffordable monthly rent/mortgage and 11% of houses were vacant in Washoe County (Table 3). Among the 311 SNAP retailers in Washoe County, 22% (69) were full-service retailers (Table 4).

Washoe County Low-Income Communities

Washoe County contained 23 low-income communities, which accounted for 16% of the total low-income communities in Nevada. Approximately 85,930 persons, or 20% of Washoe County's total population resided in the 23 low-income communities. The majority of low-income communities were located in downtown Reno (the largest city in Washoe County) and east of downtown Reno. The outlying low income community not located in the Reno-Sparks area, encompassed the Pyramid Lake Tribal reservation, north of Reno. Among the 23 low-income communities, 96% (22) had access to transportation, 26% (6) had access to farmer's markets, 91% (21) had access to parks, and 43% (10) of the low-income communities had access to recreation facilities. Among the 131 SNAP retailers in Washoe County's low-income communities, 16% (21) were full-service retailers (Table 4).

White Pine County

In 2015, an estimated 0.3% of Nevada's population resided in White Pine County (Figure 1), with a population density of 1.1 people per square mile. According to ACS 5-year estimates for 2010-2014, the majority of the county's population was white, non-Hispanic (75%) or Hispanic (14%) (Table 1). The median household income in White Pine County was $55,337 and 26% of households were living at less than 185% FPL (Table 2). The unemployment rate among those 16 years and older was estimated to be 11% for the same time period, 2010-2014 (Table 2). An estimated 32% of renters and 14% of home owners paid an unaffordable monthly rent/mortgage and 25% of houses were vacant in White Pine County (Table 3). Among the five SNAP retailers in White Pine County, 40% (2) were full-service retailers (Table 4).

White Pine County Low-Income Communities

Among the three census tracts in White Pine County, the proportion of households living below 185% FPL ranged from 18% to 35%, therefore none of the three census tracts met the threshold to be designated as a low-income community.

County Level Data Tables

Table 1: Nevada Race and Ethnicity by County, American Community Survey 5-Year Estimates 2010-2014						
County	**African American**	**American Indian/ Alaska Native**	**Asian/ Pacific Islander**	**White, Non-Hispanic**	**Other/ Two or More Races**	**Hispanic, any Race**
Carson City	1%	2%	2%	69%	3%	22%
Churchill	2%	4%	4%	75%	2%	13%
Clark	10%	0%	10%	47%	3%	30%
Douglas	0%	2%	1%	82%	3%	12%
Elko	1%	5%	1%	68%	1%	24%
Esmeralda	0%	4%	0%	80%	1%	15%
Eureka	1%	1%	1%	95%	0%	3%
Humboldt	0%	4%	0%	67%	2%	25%
Lander	0%	3%	1%	70%	3%	23%
Lincoln	2%	4%	0%	83%	1%	9%
Lyon	1%	2%	2%	77%	3%	15%
Mineral	2%	15%	4%	61%	5%	13%
Nye	3%	2%	2%	78%	1%	14%
Pershing	4%	4%	0%	67%	2%	23%
Storey	1%	2%	1%	91%	1%	4%
Washoe	2%	1%	6%	65%	3%	23%
White Pine	4%	4%	1%	75%	2%	14%
Nevada	**8%**	**1%**	**8%**	**53%**	**3%**	**27%**

Table 2: Nevada Median Household Income, Households Living at < 185% FPL and Unemployment by County, American Community Survey 5-Year Estimates 2010-2014			
County	**Median Annual Household Income**	**% Households Living <185% FPL**	**% Unemployed**
Carson City	$50,108	34%	15%
Churchill	$46,195	33%	13%
Clark	$52,070	34%	12%
Douglas	$58,940	25%	10%
Elko	$72,280	22%	5%
Esmeralda	$31,528	53%	16%
Eureka	$68,403	21%	4%
Humboldt	$62,632	24%	10%
Lander	$76,558	28%	12%
Lincoln	$40,550	34%	15%
Lyon	$47,143	35%	16%
Mineral	$38,664	36%	16%
Nye	$41,757	40%	15%
Pershing	$48,165	38%	12%
Storey	$64,835	19%	13%
Washoe	$52,910	34%	11%
White Pine	$55,337	26%	11%
Nevada	**$52,205**	**34%**	**12%**

Table 3: Nevada Housing Characteristics by County, American Community Survey 5-Year Estimates 2010-2014					
County	**Unaffordable Housing**		**Median Monthly Housing Cost**		**% of Houses Vacant**
	% of Renters	**% of Owners**	**Renters**	**Owners**	
Carson City	47%	35%	$837	$1,499	10%
Churchill	44%	37%	$838	$1,195	12%
Clark	51%	40%	$1,009	$1,521	16%
Douglas	51%	43%	$1,035	$1,702	17%
Elko	37%	21%	$923	$1,467	12%
Esmeralda	44%	20%	$443	$936	50%
Eureka	18%	18%	$654	$1,145	32%
Humboldt	35%	19%	$781	$1,211	15%
Lander	39%	1%	$708	$1,225	18%
Lincoln	45%	25%	$588	$1,074	31%
Lyon	48%	41%	$922	$1,260	12%
Mineral	25%	19%	$508	$977	27%
Nye	53%	44%	$803	$1,186	19%
Pershing	39%	29%	$625	$1,201	13%
Storey	18%	43%	$699	$1,390	9%
Washoe	52%	39%	$908	$1,630	11%
White Pine	32%	14%	$768	$1,081	25%
Nevada	**51%**	**39%**	**$980**	**$1,514**	**15%**

Table 4: SNAP Retailers by County, Percent and Number of Full-service Retailers in All, Low-Income, and Non Low-Income Census Tracts						
County	**All Census Tracts**		**Low-Income Census Tracts**		**Non Low-Income Census Tracts**	
	Number of SNAP Retailers	**% (n) Full-service**	**N SNAP Retailers**	**% (n) Full-service**	**N SNAP Retailers**	**% (n) Full-service**
Carson City	41	29% (12)	11	27% (3)	30	30% (9)
Churchill	17	18% (3)	2	0% (0)	15	20% (3)
Clark	1,204	23% (275)	407	19% (78)	797	25% (197)
Douglas	28	29% (8)	-	-	28	29% (8)
Elko	34	41% (14)	2	50% (1)	32	41% (13)
Esmeralda	1	0% (0)	1	0% (0)	-	-
Eureka	2	0% (0)	-	-	2	0% (0)
Humboldt	12	42% (5)	-	-	12	42% (5)
Lander	5	40% (2)	-	-	5	40% (2)
Lincoln	5	60% (3)	-	-	5	60% (3)
Lyon	41	17% (7)	6	17% (1)	35	17% (6)
Mineral	8	25% (2)	1	0% (0)	7	29% (2)
Nye	40	20% (8)	5	20% (1)	35	20% (7)
Pershing	5	20% (1)	-	-	5	20% (1)
Storey	3	0% (0)	-	-	3	0% (0)
Washoe	311	22% (69)	131	16% (21)	180	27% (48)
White Pine	5	40% (2)	-	-	5	40% (2)
Nevada	**1,762**	**23% (411)**	**566**	**19% (105)**	**1,196**	**26% (306)**

Other Resources

Phase I-Part II of the SNAP-Ed Program Assessment describes Nevada's low-income communities in relation to socioeconomic factors such as income and cost of housing as well as environmental factors such as access to transportation, parks, recreation, and SNAP approved retailers. In accordance with the SNAP-Ed guidance, low-income communities were categorized at a small geographic level, census tracts. This created a challenge for adequately summarizing all census tracts in Nevada, while including an exhaustive list of factors to consider when planning SNAP-Ed outreach. Information not provided in the interactive map, such as locations of other meal assistance programs and local outreach efforts, are also important when considering options for target audiences of SNAP-Ed. The following organizations provide updated data and access to additional information and resources to consider when planning outreach efforts in any community across Nevada.

The Nevada Department of Agriculture Child Nutrition Program can provide information regarding:

- Schools participating in Breakfast After the Bell
- Summer Food Program (SFSP)
- Residential Child Care Institutions (RCCI)
- Percent of children who qualify for Free or Reduced Lunch per school
- National School Lunch Program Afterschool Snack
- Child and Adult Care Food Program

The Food Bank of Northern Nevada can provide information regarding:

- Mobile Harvest locations and schedule
- Emergency Food Pantry locations
- Kids Café Meal Programs
- Commodity Supplemental Food Program distribution locations and schedule

Three Square can provide information regarding:

- Kids Café Meal Programs
- Meat Up and Eat Up summer meals
- Backpack for Kids
- Emergency Food Pantry locations
- Food Rescue Program locations

Funding Acknowledgement:

This material was funded by USDA's Supplemental Nutrition Assistance Program -- SNAP.
SNAP provides nutrition assistance to people with low-income. To find out more, ask for information from the Nevada Division of Welfare and Supportive Services (800) 992-0900.

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(1) mail: U.S. Department of Agriculture
Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW
Washington, D.C. 20250-9410;

(2) fax: (202) 690-7442; or

(3) email: program.intake@usda.gov.

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Section 3: Phase II Results

Statewide Needs Assessment for Nevada's SNAP-Ed Program

Phase II

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This portion of the Statewide Needs Assessment was guided by the following objective: "Describe the perceptions of key informants regarding 1) the needs of SNAP households and others residing in low-income households as they pertain to the goals of SNAP-Ed; and 2) opportunities at the policy, system and environmental level to facilitate healthful nutrition and physical activity behaviors with an emphasis on low-income communities." The data presented here describes the perceptions of a diverse group of professionals in Nevada.

We want to thank the thirty-five individuals who participated in interviews. In addition, we want to thank the steering committee members for their input throughout this phase of the needs assessment.

This report is organized into the following sections:

Phase II: Executive Summary

The purpose of this portion of the Needs Assessment was to describe key informants' perceptions of the nutrition, food security and physical activity education needs among SNAP participants and others residing in low-income communities; and to discover opportunities at the policy, system and environmental levels to facilitate healthful nutrition and physical activity behaviors with an emphasis on low-income communities.

Interviews were conducted with key informants from across the state of Nevada who have knowledge of the SNAP-Ed audience (n=35).

Key informants reported that healthy eating, healthful shopping, and food resource management are all closely related. In addition they indicated that education on cooking at home should be a priority. The importance of coordinating with other organizations was also communicated by the informants. However, they reported that environmental barriers exist that make it difficult for Nevadans to live a healthy lifestyle. When asked which population or group in Nevada is in greatest need for education on nutrition and physical activity the most common answer from the informants was those with limited resources or low socioeconomic status. The final emerging theme from the interviews was, "Let's make the healthy choice the easy choice- we can do it!" Although they informants communicated that barriers exist that make it difficult for Nevadans to live a healthy lifestyle, they came across as enthusiastic and positive regarding ideas to make it easier for those with low-income to make healthier choices.

This report describes one portion of the multicomponent Statewide Needs Assessment for Nevada's SNAP-Ed. The data from the key informants can be used to inform future Nevada SNAP-Ed Programing.

Methods

Selection of participants

To ensure a diverse and informed sample of key informants who would have insights about the SNAP-Ed audience, the research team identified the following characteristics to guide the sample selection: 1) Content expertise in areas that relate closely to the purpose and function of SNAP-Ed (e.g., nutrition, public health, public policy, physical activity/fitness, education, and community development), 2) Representation from urban, rural and frontier communities, 3) Inclusion of various levels of influence (i.e., individuals working directly with the SNAP-Ed audience and those in managerial/policy making roles), and 4) Possession of knowledge of specific populations that are under-represented.

Based on these characteristics, a list of potential study participants was created (n=369). This process involved identifying employees of related public or private agencies and programs. In addition, suggestions were solicited from organizations such as Nevada's Nutrition Assistance Consortium and the Nevada Division of Welfare and Supportive Services. In order to consolidate the master list to the desired number of key informants (25-35), the researchers used their own personal knowledge in light of the characteristics listed above to prepare their recommendations of key informants (n=39). The list was then vetted with the Nevada SNAP-Ed Coordinator and the steering committee. To strengthen the sample, four changes were made. The first was to include a school administrator. Another was to add informants that have experience with older adults. A third was to include a Nevada Senate and Assembly Health Committee member. The final was to include more individuals who work directly with SNAP households and others residing in low-income households. As a result of these changes, the list expanded from 39 potential key informants to 44.

Interview guide

Telephone interviews were conducted using a semi-structured interview guide that was developed for the purpose of obtaining the key informants' perceptions of the nutrition and physical activity education needs, as well as barriers to making behavior changes among SNAP households and others residing in low-income households. The guide was designed so that the interviews would last no longer than 20-30 minutes. As a means of clarifying the interview questions, the key informants were sent a list of explanations/definitions for: 1) The SNAP-Ed target audience, 2) The goal of SNAP-Ed, 3) Healthy eating, 4) Healthful shopping, 5) Food resource management, 6) Food safety, 7) Physical activity,

and 8) Sedentary behavior. Also included was a visual representation of the five point rating scale for use during the interview. The interview guide and the list of explanations/definitions can be found in the technical notes section of this report.

Data Analysis

All audio recordings of the interviews were transcribed verbatim by a third party. One of the research team members compared four of the recordings to the transcripts and made note of any discrepancies. Only minor discrepancies were noted. A member of the research team then coded and analyzed the transcripts. The coding procedures were consistent with Strauss and Corbin's[1] grounded theory analysis. NVivo computer software was utilized for the initial step in qualitative data analysis.

Intercoder agreement was used to establish reliability of the coding process. A second coder analyzed a sample of the transcripts and the intercoder agreement was computed (72%) and it was determined that more specific categorization was indicated. Therefore, the first coder recoded using more specific categories. A third person then coded another sample of the transcripts, resulting in 83.6% agreement, which is deemed adequate for intercoder reliability.[2] Following the assignment of data into categories, the data was examined at a higher level and reoccurring themes were identified.

Presentation of Findings

Sample characteristics

Of the 44 persons on the initial list, the final sample included 35 key informants. The research team was unable to reach six of the potential participants after multiple attempts and four declined to participate. After reviewing the list of participants, it was noted that representation was limited from those with a high-level of influence among rural areas of the state. Therefore, invitations were sent to four rural county officials. This resulted in one additional participant.

Two of the key informants had a representative from their respective organizations participate in the interview, rather than themselves. Table 1 displays the name, title, and affiliation of all individuals who participated in a telephone interview (and who gave permission to be named here).

Table 1

Phase II Telephone Interview Participants

Name	Title	Affiliation
Alice Gonzalez	Benefit Services Outreach Director	Three Square Food Bank
Amanda Brown	Health Educator	Southern Nevada Health District
Ashley Tate	Childcare Worker	UNR Child and Family Research Center- Early Head Start
Barbara Paulsen	Retired	
Ben Schmauss	Government Relations Director	Nevada Heart Association
Beth Handler	Bureau Chief	Division of Public and Behavioral Health
Cherie Jamason	President and CEO	Food Bank of Northern Nevada
Courtney Nalivka	Clinical and Outpatient Dietitian	Northeastern Nevada Regional Hospital
Dave Flatt	President	Nevada Parent Teacher Association
Diane Hogan	Nutrition Program Professional	Nevada Department of Agriculture
Donnell Barton	Food and Nutrition Division Administrator	Nevada Department of Agriculture
Fatima Leano	Registered Dietitian	Nevada Health Centers WIC- Las Vegas
Greta Stock	Past President	The Society of Health and Physical Educators Nevada
Jan Boyer	Diabetes clinical nurse specialist (educator)	Indian Health Services
Jennifer Pharr	Assistant Professor	UNLV School of Community Health Sciences
Jerrie Tipton	Commissioner	Mineral County
Julia Ratti	Senator	Nevada Legislature
Kathleen Sandoval	Chair	Nevada Food Security Council

Table 1: Phase II Telephone Interview Participants continued

Name	Title	Affiliation
Kelli Goatly-Seals	Health Educator Coordinator	Washoe County Health District
Kenneth Osgood	Vice Chair	Improving Diabetes and Obesity Outcomes Coalition
Kerry Aguirre	Executive Director	Elko Senior Center
Kitty Jung	County Commissioner	Washoe County
Kristi Robusto	Obesity Prevention and Control Coordinator	Nevada Division of Public and Behavioral Health
Lory Hayon	Administrator	Clark County School District
Mary Liveratti	State President- Volunteer	American Association of Retired Persons Nevada State
Michele Cowee	Registered Dietitian	Private Practice
Michelle Walker	Program Manager	WIC – State of Nevada
Mike Sprinkle	State Assemblyman	Nevada Legislature
Mike Wurm	Executive Director	Boys and Girls Club of Truckee Meadows
Sarah Adler	Consultant	Principle Silver State Government Relations
Sarah Sanchez	Managing Director	Carson Valley Community Food Closet
Sherry Taylor	Registered Nurse- Diabetic Coordinator	Fallon Paiute Shoshone Tribe
Soni Monga	Registered Dietitian	Washoe County Health District, WIC
Steven Shane	Pediatrician	Community Health Alliance
Tyree Davis	Dental Director	Nevada Health Centers

Key informants (n=35) had been at their current position for an average of 9.8 years ± 9.1 years. The participants reported living in Nevada for an average of 25.9 years ± 9.1 years. None (0 %) reported never having face-to-face interaction with persons residing in low-income communities; 8 (23%) reported rarely; 9 (26%) sometimes, and 18 (51%) regularly.

Perceptions of Needs

Key informants rated the need for education among Nevada's SNAP-Ed audience on six topics using a scale from one (low level of need) to five (high level of need). Mean topic ratings were as follows: healthy eating = 4.5 ± 0.7, healthful shopping = 4.4 ± 0.7, food resource management = 4.2 ± 0.9, food safety = 3.5 ± 1.1, physical activity = 4.0 ± 0.8, and sedentary behavior = 4.2 ± 0.8. The qualitative data regarding the informants' perception of the needs and opportunities for SNAP households and others residing in low-income households are discussed below within the six resulting themes (not presented in order of importance).

Theme 1. Healthy eating, healthful shopping, and food resource management are all closely related

Responses to questions about the needs of the SNAP-Ed target audience about healthy eating, healthful shopping, food resource management, food safety, physical activity, and sedentary behavior are shown in Table 2. It is noteworthy that the key informants suggested that these topics are very or highly interconnected. Healthy eating requires healthful shopping and shopping healthfully with limited resources requires some knowledge about effective food resource management.

Theme 2. Cooking at home should be a priority

Another emerging theme was the importance of cooking. The key informants reported that education on healthy cooking should be a priority for SNAP-Ed. Cooking was mentioned as an important topic during the discussion about healthy eating, healthful shopping, and food resource management (Table 2). Then, in the portion of the interview discussing urban, rural, and frontier special populations, one key informant reported:

" You know getting back to the idea of cooking is a huge piece of how we're going to make SNAP-Ed successful because food that you cook yourself is much less expensive than foods you purchase but yet, unfortunately, the Millennials, Gen-X, even Baby Boomers, we've been more engaged in work and in

home and so we're not used to cooking and so those community kitchens being available where you can teach cooking are easier to find in urban than in rural and in the frontier as well."

In addition, cooking was mentioned again by key informants in response to questions on specific racial/ethnic groups and older adults (Table 3). In the last section of the interview on PSE interventions, one key informant mentioned cooking classes as a component of a potential mentoring program:

"But having some kind of mentorship program that would help these families get into a routine of doing it. It has to be more than just sending literature and having somebody talking to somebody. It could be cooking classes where people can try the food."

Theme 3. Coordination with other organizations is important

Another emerging theme was the importance of coordination with other organizations. The key informants reported the potential benefit of coordination with other organizations, schools, daycares, and fitness facilities. This idea was first mentioned in the special populations portion of the interview. Key informants reported that it would be beneficial to partner with organizations that already work with "hard to reach" populations such as older adults and those who are disabled (Table 3). One key informants mentioned this idea:

"I think we need to reach out more to people who are isolated but a lot of people are getting out every day especially the folks that I worked with physical disabilities. So if they're coming out for something else and being a part of that. So it could be like partnering with the centers for independent living when they activities or discussion on nutrition and physical activity. Trying to partner to reach those populations."

During discussion about PSE interventions, the importance of coordinating with schools, grocery stores, and other organizations (Table 4) was also mentioned. Key informants reported that partnering with schools and daycares would expand the reach of SNAP-Ed and would help to instill important nutrition and physical activity information among children at a young age. In addition, they reported that coordinating with grocery stores could be beneficial. One mentioned the idea of implementing signage in grocery stores indicating recommended SNAP items. This informant also suggested having recipes near food items in the store. Lastly, the idea of partnering with other community organizations was mentioned:

"There may be certain opportunities with certain senior organizations or programs throughout the state that you may be able to disperse information or nutritional information to seniors. Possibly partnering with AARP in states. The Division for Aging Services at the state level might be another group to partner with to provide that information.."

In regard to physical activity, key informants reported that partnering with facilities to increase opportunities for the SNAP-Ed audience to participate in physical activity could be beneficial (Table 4). One suggested asking for discounted rates for families with low income.

Theme 4. Environmental barriers make it difficult for Nevadans to live a healthy lifestyle

Environmental barriers that make it difficult to live a healthy lifestyle were also cited. In regards to healthy eating, informants mentioned lack of transportation to stores and unsafe neighborhoods as barriers to obtaining healthy food. In addition, one reported lack of access as a barrier to shopping healthfully:

" I think one of the challenges that I have with this approach is its putting all of the responsibility for obesity and being unhealthy on the low-income families living in these neighborhoods when part of the responsibility is environmental and that we develop communities where healthy food is readily available."

During discussion about sedentary behavior, other barriers were mentioned. One informant reported that many kids are left at home with electronics, due to lack of affordable childcare and unsafe neighborhoods (Table 2). Another mentioned lack of affordable and accessible options for physical activity.

Environmental barriers were described during the discussion about unique aspects of urban, rural and frontier communities (Table 3). Key informants said that many urban neighborhoods are unsafe, which prevents people from engaging in physical activity outside. They also said that transportation can be an issue in urban areas, because those with low income may not have a car or may not live near public transportation. One key informant mentioned that many urban neighborhoods may have a store near them with food, but many times these are convenience stores, rather than full service grocery stores. In regards to the rural areas, key informants reported that the communities lack various resources such as a store to buy healthy food or a gym to use for physical activity.

Many expressed the sentiment that direct education is not enough and that there are barriers that exist that keep the SNAP-Ed audience from making healthy choices. However, they offered possible solutions to these barriers that are discussed in last section of the results.

Theme 5. Those with limited resources or low socioeconomic status have the highest needs for education on nutrition and physical activity

At the conclusion of the discussion on special populations, the informants were asked what population or group in Nevada did they perceive had the highest need for education on nutrition and physical activity. Many reported that those with limited resources or low socioeconomic status were in the greatest need. Common answers under this category were "low-income families", "low socioeconomic status", and "those with lower levels of education." Specific racial/ethnic groups were also a common answer. African American, Hispanic, and Native American populations were mentioned specifically. The senior population was also a group that was mentioned by multiple key informants. Finally, informants reported that children and adolescents also have a high need for education on nutrition and physical activity.

Theme 6. Let's make the healthy choice the easy choice- we can do it!

The key informants came across as enthusiastic and positive regarding ideas to make it easier for those with low income to make healthier choices. When asked about choosing healthful foods more often, the key informants mentioned ideas to overcome the barriers related to access and environment discussed in the section above. Some ways to do this were making healthy foods less expensive, making sure local bus routes go to grocery stores, improving jobs and housing, creating a program to provide SNAP-Ed households with produce on a weekly basis, and making sure SNAP-Ed programs are occurring at convenient locations (Table 4). Other key informants stated that outreach to the community should be a priority:

"I think that some of the avenues that we attempt to reach…to get parents to fill out free and reduced applications for meals and we, um, try to reach them through community outreach, whether it would be, like, meeting them at a swap meet or places where that certain demographic would be, um…I think of that and try to reach them in the community rather than having to make them take the time out to come see you."

Other ideas mentioned repeatedly were imposing SNAP purchasing restrictions, offering incentives to participate in education, placing nutrition education signage in stores, and partnering with stores (Table 4).

In the portion of the interview on ways to make it easier for SNAP households and others residing in low-income households to be physically active more often, they reported that transportation, unsafe neighborhoods, and childcare options should be improved (Table 4). The key informants also reported the importance of educating the SNAP-Ed audience on ways to integrate physical activity into daily life:

"Telling people how to integrate it into their lives. Park towards the back so at least you're walking. Simple things. It can't become a burden. It has to be able to be incorporated into their own daily life."

Other common topics mentioned were collaborating with schools and daycares (as discussed above), increasing opportunity for physical activity in the community, and utilizing social media and campaigns (Table 4).

Table 2

Nutrition and physical activity topics described as important by the key informants during semi-structured telephone interviews (n=35)

Topics	Findings	Representative Quotes
Healthy Eating	Choose MyPlate Healthy eating on a budget How to cook healthy meals Variety The link between nutrition and health Portion size How to use nutrition facts panel and ingredient lists Small meals throughout the day	"Choosing a variety of foods, like including fruits and vegetables, and grains, which are part of MyPlate guidelines is really important." "How to stretch your dollars to get things that are healthy to eat. How to maximize your money to be able to buy healthy items."

Table 2: Nutrition and physical activity topics described as important by the key informants during semi-structured telephone interviews (n=35) continued

Topics	Findings	Representative Quotes
Healthful shopping	Stretching food budget to purchase healthy foods	"I don't even know the answer to this, but how on a tight budget do you pick the healthiest foods necessary to meet the requirements? And, at the same time, not let your children walk away feeling hungry."
	How to use the nutrition facts panel and ingredient lists	
	Nutrient density	
	How to cook healthy food that is purchased	"I think one of the challenges that I have with this approach is its putting all of the responsibility for obesity and being unhealthy on the low-income families living in these neighborhoods when part of the responsibility is environmental and that we develop communities where healthy food is readily available."
	Education on dietary recommendations	
	Environmental barriers to accessing healthy food	
	How to apply knowledge in daily life	
	The link between nutrition and health	
Food resource management	How to make food last the entire month	"Strategies to use to spread the food throughout the month so that they're not running low between paychecks throughout the month."
	Food assistance resources (identification/strategic utilization)	
	How to cook and prepare foods in a healthy way	"Utilizing those resources like what to use your SNAP dollars on, what to use your discretionary, what you should use for your WIC, when to go to the food pantry."
	Getting the most nutrient dense foods on a limited budget	
	Access to healthy food in low-income neighborhoods	
Food safety	Food preparation and storage	"...explain to them like canned goods are good for after they expire – kind of give them some education on expiration dates – on how the products are still good and still consumable even though they've expired."
	Washing hands	
	Appropriate use of expiration dates	

Table 2: Nutrition and physical activity topics described as important by the key informants during semi-structured telephone interviews (n=35) continued

Topics	Findings	Representative Quotes
Physical Activity	Easy ways to engage in physical activity throughout the day (without a gym)	"Not necessarily needing to go to the gym but you can just add things to your daily routine that would enhance the physical activity throughout the day."
	How to balance cardiovascular fitness, muscle strength, and flexibility	
	Taking the opportunity to be active- "just do it!"	"I'm going to say that its more about getting up and doing it. I think people hear things about what they should be doing but actually getting them to follow a regime."
	Education on affordable and accessible opportunities	
	Education to parents on the importance of children being physically active	
	Education on how to advocate for more opportunities	
	The link between physical activity and health	
Sedentary Behavior	Screen time limits	"Limiting screen time. TVs, tablets, iPhones, iPads, anything like that."
	Replacing sedentary behavior with physical activity	"Breaking up sedentary behavior. It's inevitable that we're going to be sedentary with different aspects of our lives but how do we minimize it and break it up so it's not 8 hours straight."
	Definition of sedentary behavior and how it is linked to health	
	Lack of accessible and affordable physical activity opportunities	
	Environmental barriers to being physically active (unsafe neighborhoods, lack of affordable childcare)	
	Breaking up sedentary behavior	
	Targeting children	

Table 3

Unique needs for education on nutrition and physical activity for specific populations as described by the key informants during semi-structured telephone interviews (n=35)

Special Population	Findings	Representative Quotes
Urban, Rural, and Frontier	Less access to resources in rural and frontier communities	"I think that the rural and frontier communities have less access to a wide variety of foods as well as foods of high nutritional value compared to those who are in more urban settings or locations."
	Outreach to rural and frontier necessary	
	Environmental barriers in urban areas (unsafe neighborhoods, lack of transportation, food deserts)	"In urban areas, if it's a high crime neighborhood, there is the safety issue and people tend not to go because of concerns for physical safety."
	Different scopes of activity due to the unique environment	"Yes, the scope of activity may be different, because, you know, depending if they live in a place that has sidewalks or parks."
	Educate the parents in addition to children to stimulate behavior change	
	Needs differ by school district	
	Rural and frontier communities get more one on one education	
	Urban communities need education on opportunities that exist	

Table 3: Unique needs for education on nutrition and physical activity for specific populations as described by the key informants during semi-structured telephone interviews (n=35) continued

Special Population	Findings	Representative Quotes
Racial/ethnic groups	Education needs to be tailored to culture, traditions, and customs Education needs to be translated to appropriate languages	"I think that education needs to take into consideration cultural difference to reach those populations. And their kind of family traditions and yeah, I think that it should be targeted or tailored to specific populations."
	Differs by socioeconomic status, not by race/ethnicity Emphasis on Hispanic, African American, and Native American populations Educate based on which medical conditions certain groups are prone to	"I definitely think the education for different ethnic groups in what they might be more prone to. So, African Americans are more prone to heart disease and high blood pressure, so educating them on what foods they can eat for their specific condition. But their needs might be different from the needs of another community."
	Education on healthy cooking methods	“We need more people to be in the health and nutrition field to reflect the populations that need it most. And we don’t have enough.”
	There are not enough racially diverse leaders in nutrition and physical activity	

Table 3: Unique needs for education on nutrition and physical activity for specific populations as described by the key informants during semi-structured telephone interviews (n=35) continued

Special Population	Findings	Representative Quotes
Older Adults	Education must be tailored to physical Impairments The environment and possible isolation need to be considered Fixed-income Raised in a different era, they need re-education Difficult to get them enrolled in assistance programs Education on physical activity opportunities Ideas for healthy convenient meals Lack of technology use Nutrient density Partner with organizations that work with older adults Tailored classes or webinars on issues that older adults face	"They have sensory issues, they can have mechanical swallowing issues, depression, so, you know just trying to maintain that nutrition status on the foods that they can eat." “It could be like partnering with the centers for independent living with activities or discussions on nutrition and physical activity. Trying to partner to reach those populations.”

Table 3: Unique needs for education on nutrition and physical activity for specific populations as described by the key informants during semi-structured telephone interviews (n=35) continued

Special Population	Findings	Representative Quotes
Disabled	Customizing education for their disability	"For the disabled population you frequently have to customize that physical activity to what they're capable of doing and look for accommodation to address their disability."
	Less access and possible isolation	
	Partnering with groups that work with the disabled	
	It is difficult for parents to follow through with education	"...would require their strong integration with organizations that are serving people with disabilities."
	Disabled understand their conditions well and are well educated	
	The caregiver needs to be educated	
	Higher need in general	
Veterans	No difference, they are well supported	"I think we have a very strong veteran support system here. I know that we do where I am employed. So I do not feel like they're isolated."
	Depends on physical limitations or injuries	
	Connect them to the services available to them	"Well, I think there you get into injuries and disabilities. People with mental illnesses or post-traumatic stress disorder may have trouble shopping or managing money."
	Fixed-income	
	Mental health	
	Partner with other organizations already working with veterans	
	Leverage the nutrition habits present in the military	
	It is necessary to consider the different ages of veterans	

Table 4

Ideas for appropriate policy systems and environmental interventions as described by the key informants during semi-structured telephone interviews (n=35)

Topics	Findings	Representative Quotes
Healthy Eating	Improve environment and access Outreach to the community SNAP purchase restrictions Incentives to participate in education Signage in stores, partnering with stores Incentives to buy fruits and vegetables Partner with other organizations and schools	"They can have the education but if they don't have the resources and the self-efficacy and an environment that supports making those healthy choices, um, the education isn't enough. So, I think, um…an environment that allows for them to access food—whether that is, you know, bus routes along…that go by grocery stores, access to healthy foods which isn't always available within walking distance or always available in large quality in a convenient store."
	Educate on healthy eating on a budget Educate employers Education on growing food Increase SNAP benefit rate Mentoring program Social media Translated education information	"For example, I go to Raley's and they have the food ratings for food relating to health and the nutritional content. But yeah, something along that order. Where you would actually have things labeled on the shelf for Snap participants to choose."

Table 4: Ideas for appropriate policy systems and environmental interventions as described by the key informants during semi-structured telephone interviews (n=35) continued

Topics	Findings	Representative Quotes
Physical activity	Enhancing environment (transportation, safe neighborhoods, childcare)	"More opportunity in the community for free activity. Like walking trails, um, or pathways, outdoor fitness courses. Things that don't cost money like a gym membership or something like that."
	Education on integrating physical activity into daily life	
	Partner with schools and daycares	"Collaborating with providers, and other community based organizations that may have some reach in their homes. Like Meals on Wheels, things like that. Where people are actually getting into people's residence."
	Increase access and opportunities for physical activity in the community	
	Social media and campaigns	
	Partner with facilities or organizations	"I think one thing too is to work with local schools. A lot of them lock up after the night but to have a more shared-use sort of thing so kids have more places to be active in their community would be helpful."
	Incentives for participating in physical activity	
	Increase summer jobs and internships for teenagers in the nutrition and physical activity fields	
	Individualized approaches for seniors	
	Provide tools for physical activities (Ideas for activities, DVDs, jump ropes, etc.)	

Comparison of Results to Existing Data

The results from this study are consistent with other data gathered in Nevada as well as nationwide. According to key informants in this study, SNAP households and others residing in low-income communities have a high need for education on nutrition and physical activity. This is consistent with findings from other recent health assessments conducted in Nevada. The 2015 Nevada State Health Needs Assessment involved a survey of stakeholders and community members across the state.[3] One open-ended question included in the survey was, "What do you think are the three largest health concerns in the county you live in?" The participants listed a total of 885 health issues. The responses were sorted into 16 categories for analysis. Of the 300 participants, 220 listed a concern that related to the category of "obesity, physical activity, and nutrition." Obesity-related concerns were listed by more participants than concerns in any other category. Within the "obesity, physical activity, and nutrition" category, 120 participants cited obesity as a concern. In addition, 40 participants listed nutrition, lack or education, lack of access to affordable/healthy as one of their top 3 concerns.[3] Both needs assessments indicate that nutrition and physical activity education should be a priority.

As mentioned previously, the key informants communicated the importance of educating the SNAP-Ed audience on healthy cooking. In 2017, Reicks et al[5] analyzed the effect of cooking interventions on diet, health, and psychosocial outcomes in a systematic review. They reported that most of the studies included in the systematic review revealed improvements in dietary behavior and weight following cooking interventions. In addition, cooking interventions were associated with improvements in cooking confidence and knowledge. A narrative review published in 2016 by Garcia et al[6] reported similar results. These reviews are consistent with the perceptions of our key informants who indicated that healthy cooking education can potentially benefit the SNAP-Ed target audience.

Key informants indicated that barriers exist that prevent SNAP households and others residing in low-income communities from making healthful choices such as a lack of resources and access to full service grocery stores. Other studies have investigated the opinions of experts or stakeholders regarding these barriers. One study by Leung et al[7] conducted in 2013 reported: the high cost of nutrient-rich food, inadequate SNAP benefits to purchase this food, limited access to healthy foods, and environmental factors associated with poverty as barriers to a healthful diet. Some of the environmental factors mentioned were lack of supermarkets in low-income neighborhoods, the absence of nutrient-rich food in convenient stores, and the inability to use SNAP benefits at farmer's markets.[7] These results coincide with results from the key informants regarding the existence of environmental barriers.

Participants in the study by Leung et al[7] were also asked about effective strategies to improve the nutrition of SNAP participants. The participants mentioned the following strategies: providing financial incentives for purchasing healthy food, restricting the purchase of nutrient poor foods using SNAP benefits, changing the frequency of benefit distribution, enhancing nutrition education (such as allowing for more flexible education formats and a wider range of topic coverage), improving the SNAP retailer environment, and increasing coordination of state and federal assistance.[7] These results overlapped with the findings from the key informants in this study. Our informants mentioned the potential use of incentives and purchasing restrictions as a way to facilitate healthful nutrition. In addition, the key informants mentioned coordination with grocery stores and other organizations.

Another study done in 2014 by Blumenthal et al[8] also assessed the opinions of stakeholders in regards to SNAP participants' barriers to eating healthy as well as strategies for improving dietary quality. The high level of marketing in low-income communities of unhealthy foods, the high cost of healthy foods, and lifestyle challenges were frequently mentioned barriers. Lifestyle challenges that they identified as prevalent for low-income individuals were stress and time constraints.[8] The informants in this study also mentioned the high cost of healthy foods as a barrier and the need of education on food resource management. In additions, informants mentioned time lifestyle challenges as a barrier to healthy eating and physical activity. For example, one informant mentioned the issue of working families and inadequate childcare. Stakeholders identified changing the retailer environment as an opportunity when asked about ways to improve nutrition among SNAP participants.[8] An example would be requiring SNAP retailers to stock certain nutrient-dense foods. The results from this study also indicated that the retail environment should be altered. The stakeholders also said that nutrition education should be enhanced and that SNAP-Ed should align nutrition information more with other federal programs and target their efforts to families with small children.[8] As noted above, key informants here mentioned coordination with other programs and frequently mentioned children in regards to what population in blinded is in the highest need for education. The data discussed above reveals the consistency of the findings of this study with other data collected on the subject.

Conclusion

This report described one portion of the multicomponent Statewide Needs Assessment for Nevada's SNAP-Ed. One limitation of this qualitative study was that the small sample was purposively selected with the goal of having a diverse group of key informants. Therefore, the results of this study cannot be generalized. Another limitation was the necessity of conducting the interviews by telephone.

Compared to in-person interviews, one loses visual communication cues.[9] Finally, the interviews only captured the perspectives of the key informants, rather than the SNAP participants themselves.

Interview Guide

Introduction:

Thank you again for taking the time to speak with me today. As noted in the Information Sheet, today I want to ask you some questions about the needs of Nevada's SNAP-Ed audience and opportunities to positively impact the nutritional health of residents in low-income communities. Do you have any questions about anything you have read before we get started?

The interview should take about 30 minutes. During the interview I will have you on speakerphone in a secure university office and will be using an audio-recorder (have the recorder on the table at this time) and taking notes to help stay organized. Please do not take offense if I ask for more information about your answer. I just want to be sure I understand what you mean. There are no "right" or "wrong" answers to these questions – we are interested in your opinions and experiences.

When we start the interview, I am not going to use your name to make sure it is not on the recording. Do you have any questions about the study or anything you have read in the information sheet before we begin? (Answer any questions the participant has before proceeding.) I am turning on the recorder now.

Can you please give your verbal consent to participate in this interview and for it to be audio recorded?

Questions

Part 1: Introduction

I would like to begin by asking a few brief questions about you.

1. First, how long have you been at your current position?

2. How many total years have you lived in Nevada?

3. Which of the following best describes how often you have face-to-face interaction with persons residing in low-income communities in Nevada?

    a. Never

    b. Rarely

    c. Sometimes

    d. Regularly

Part 2: Needs

Thank you, now at this time, would you please take out the document that was emailed to you that is titled, "definitions sheet." Do you have this document?

If answer is "yes",

If you haven't done so, would you please take a minute or two to review it now?

Do you have any questions about what you have read?

If answer is "no":

Is there a way I can send it to you now? Either by email or text? (Allow time for them to open and review definitions)

With these definitions in mind, I would like to ask you about 6 topics that relate to the goal of SNAP-Ed. These 6 topics are defined on your definitions sheet. For each, I'll ask you to rate the need for education on a scale from 1-5 with 1 equal to a "low level" and 5 equal to a "high level" need among Nevada's SNAP-Ed audience based on your knowledge of and experience. If it would be helpful to you, there is a visual representation of the scale on the last page of your definitions sheet.

4. I am going to start with the topic of healthy eating. As noted on your definitions sheet, "healthy eating" is: "consuming each of the five food groups in proportion to MyPlate recommendations and other behaviors consistent with the *Dietary Guidelines*."

4a. On a scale from 1-5 with 1 equal to a "low level" and 5 equal to a "high level," how would you rate the need for education on healthy eating among Nevada's SNAP-Ed audience? You may also answer with 0 if you don't know or have no opinion.

4b. In your opinion, is there a particular healthy eating topic that is more important than others? If yes, explain.

5. Now I am going ask you about healthful shopping. As noted on your definitions sheet, "healthful shopping" is: "Selecting and purchasing foods and beverages that correspond to MyPlate and the *Dietary Guidelines*."

5a. On a scale from 1-5 with 1 equal to a "low level" and 5 equal to a "high level," how would you rate the need for education on healthful shopping among Nevada's SNAP-Ed audience? You may also answer with 0 if you don't know or have no opinion.

5b. In your opinion, is there a particular healthful shopping topic that is more important than others? If yes, explain.

6. Next, I am going to ask you about food resource management. As noted on your definitions sheet, "food resource management" is: "the handling of all foods, and resources that may be used to acquire foods, by an individual or family."

6a. On a scale from 1-5 with 1 equal to a "low level" and 5 equal to a "high level," how would you rate the need for education on food resource management among Nevada's SNAP-Ed audience? You may also answer with 0 if you don't know or have no opinion.

6b. In your opinion, is there a particular food resource management topic that is more important than others? If yes, explain.

7. Now I am going ask you questions about food safety. As noted on your definitions sheet, "food safety" is: "Food handling and preparation practices that reduce risk of foodborne illnesses."

7a. On a scale from 1-5 with 1 equal to a "low level" and 5 equal to a "high level," how would you rate the need for education on food safety among Nevada's SNAP-Ed audience? You may also answer with 0 if you don't know or have no opinion.

7b. In your opinion, is there a particular food safety topic that is more important than others? If yes, explain.

8. Next, I am going to ask you about physical activity. As noted on your definitions sheet, "physical activity" is: "any body movement that works muscles and requires more energy than resting, including cardiovascular fitness, flexibility, and muscle strength."

8a. On a scale from 1-5 with 1 equal to a "low level" and 5 equal to a "high level," how would you rate the need for education on physical activity among Nevada's SNAP-Ed audience? You may also answer with 0 if you don't know or have no opinion.

8b. In your opinion, is there a particular physical activity topic that is more important than others? If yes, explain.

9. Now I am going to ask you about sedentary behavior. As noted on your definitions sheet, "sedentary behavior" is: "too much sitting or lying down at work, at home, in social settings, and during leisure time."

9a. On a scale from 1-5 with 1 equal to a "low level" and 5 equal to a "high level," how would you rate the need for education on sedentary behavior among Nevada's SNAP-Ed audience? You may also answer with 0 if you don't know or have no opinion.

9b. In your opinion, is there a particular sedentary behavior topic that is more important than others? If yes, explain.

Part 3: Special Populations

Thank you for answering those questions. Now, I would like to ask you about the needs of several specific populations in Nevada, since some may be at higher risk for poor nutritional health compared to others. As you answer these questions, please keep the goal of SNAP-Ed in mind (as noted on the definitions sheet). If you have no opinion or knowledge of any specific group of residents, please just let me know and we can skip to the next question.

10. In your opinion, how are the needs for education on nutrition and physical activity different among urban, rural and frontier communities? Can you tell me more about that? (Use probes as needed to differentiate among the urban rural and frontier communities. In the event that needs on both nutrition and physical activity are not mentioned, probe as needed.)

11. In your opinion, how are the needs for education on nutrition and physical activity different among specific racial/ethnic groups? Can you tell me more about that? (Use probes as needed to differentiate among specific racial/ethnic groups. In the event that needs on both nutrition and physical activity are not mentioned, probe as needed.)

12. In your opinion, how are the needs for education on nutrition and physical activity different among older adults? Can you tell me more about that? (In the event that needs on both nutrition and physical activity are not mentioned, probe as needed.)

13. In your opinion, how are the needs for education on nutrition and physical activity different among those who are disabled? For example, hearing or visually impaired, having restricted movement, or having an impaired cognitive capacity. Can you tell me more about that? (Use probes as needed to differentiate among specific disabled groups. In the event that needs on both nutrition and physical activity are not mentioned, probe as needed.)

14. In your opinion, how are the needs for education on nutrition and physical activity different among veterans? Can you tell me more about that? (In the event that needs on both nutrition and physical activity are not mentioned, probe as needed.)

Thank you. Your insights on these specific populations will be very helpful. In preparation for the next set of questions, I would like you to consider for a moment the population or group in Nevada that has the highest level of need for education on nutrition and physical activity.

15. Including but not limited to the groups we just discussed, what Nevada population or group, in your opinion, has the highest level of need for education on nutrition and physical activity? Feel free to take a moment to think about this.

15a. In your opinion, what puts them at a higher risk?

15b. Can you tell me more about that?

Part 4: Policy, Systems, and Environmental Interventions

Thank you again. I appreciate your full schedule and won't keep you on the phone much longer.

As a means of introducing the last set of questions, I want to take a few moments to tell you more about SNAP-Ed in the event that you are not familiar with this effort. For many years, SNAP-Ed programs provided education directly to SNAP-Ed audiences. This was largely accomplished with classes offered through schools and other community organizations. Direct education continues to be a key characteristic of SNAP-Ed. More recently, SNAP-Ed programs have been required to also use public health approaches in combination with education to maximize impact. This new requirement recognizes the potential impact of policies, organizational practices and environmental characteristics on nutrition and physical activity behaviors. Ideally, SNAP-Ed programs improve knowledge through direct education as well as facilitate change in the community that makes it easier for the SNAP-Ed audience to make healthful choices.

With that in mind, I have two questions I would like to ask you about this recent change.

A few minutes ago, you stated that_____ *(Insert response to Question 15)* have the highest need for education on nutrition and physical activity.

16. In your opinion, how could Nevada's SNAP-Ed program make it easier for _____ *(Insert response to Question 15)* to choose healthful foods more often?

17. In your opinion, how could Nevada's SNAP-Ed program make it easier for _____ *(Insert response to Question 15)* to be physically active more often?

Closing

Thank you for taking the time to answer my questions. Is there anything that you would like to add? Before I say goodbye, I have one more question. The findings of these interviews will be incorporated into a report for the Nevada Division of Welfare and Supportive Services.

18. Do we have permission to include your name in our report if it is not associated with your responses to questions?

Okay, I am going to turn off the recording device now. Can you please spell your first and last name for me and tell me your job title and affiliation?

Thank you again for sharing your opinions with me.

List of Explanations/Definitions

SNAP-Ed Target Audience: SNAP participants and low-income individuals who qualify to receive SNAP benefits (i.e. gross income <130% of the poverty line) or other means-tested Federal assistance programs, such as Medicaid or Temporary Assistance for Needy Families. It also includes individuals residing in communities with a significant low income population.[1]

Goal of SNAP-Ed: To improve the likelihood that persons eligible for SNAP will make healthy food choices within a limited budget and choose physically active lifestyles consistent with the current 2015-2020 Dietary Guidelines for Americans and the USDA food guidance.[1]

Healthy Eating: "Consuming each of the five food groups in proportion to MyPlate recommendations and other behaviors consistent with the *Dietary Guidelines*."[2]

> Examples: Making half of your plate fruits and vegetables, varying your veggies, choosing whole fruits- fresh, frozen, or canned in 100 percent fruit juice, making half of your grains whole grains, moving to low-fat or fat-free milk or yogurt, varying your protein routine, reducing sodium consumption, cutting back on foods high in solid fats, cutting back on foods high in added sugars, choosing vegetable oils instead of butter, and oil based sauces and dips instead of ones with butter, cream, or cheese.

Healthful Shopping: "Selecting and purchasing foods and beverages that correspond to MyPlate and the *Dietary Guidelines*."[2]

> Examples: Choosing healthy foods on a budget, reading nutrition facts labels or nutrition ingredient lists, buying 100 percent whole grain products, buying low-fat milk or dairy products, buying foods with lower added solid fats, sugar, and salt/sodium.

Food Resource Management: "The handling of all foods, and resources that may be used to acquire foods, by and individual or family"[2]

> Examples: Not running out of food before month's end, strategic utilization of food assistance resources (ex. SNAP, WIC, food pantry), comparing prices before buying foods, identifying foods on sale or use coupons to save money, shopping with a list, batch cooking (cook once; eat many times), using unit pricing to find the best values, cooking healthy foods on a budget.

Food Safety: "Food handling and preparation practices that reduce risk of foodborne illnesses."

> Examples: Washing their hands, cutting boards, and knives after using them to prepare raw chicken, meat, or fish, preparing raw foods separately from other foods, cooking ground beef or meat loaf until it is no longer pink, using a food thermometer to check if meat and chicken is completely cooked, refrigerating meat and dairy within 2 hours of shopping

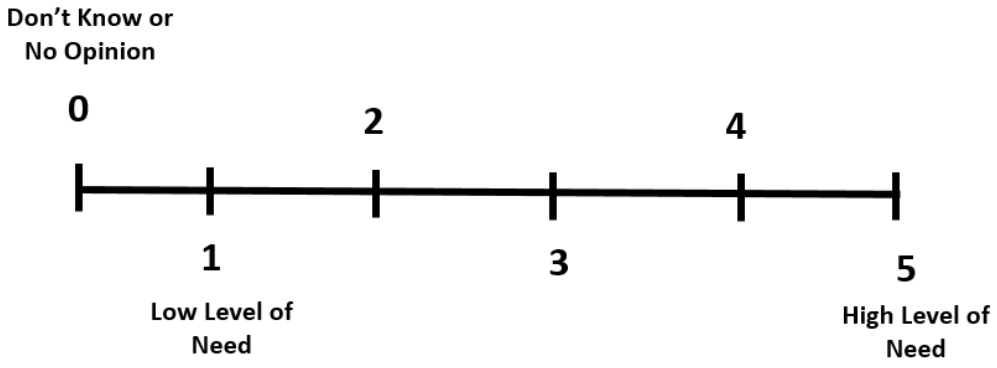
Physical Activity: "Any body movement that works muscles and requires more energy than resting, including cardiovascular fitness, flexibility, and muscle strength."[2]

Examples: Achieving or maintaining cardiovascular fitness, achieving or maintaining flexibility, achieving or maintaining muscle strength.

Sedentary Behavior: "Too much sitting or lying down at work, at home, in social settings, and during leisure time."[2]

Examples: Reducing television viewing, reducing computer and video games, reducing sitting on weekdays while at work, at home, while doing course work, and during leisure time.

Scale for Questions on Need



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Section 4: Phase III Results

STATEWIDE NEEDS ASSESSMENT FOR NEVADA'S SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM-EDUCATION (SNAP-ED)

PHASE III RESULTS

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PREFACE

The overall goals of the SNAP-Ed Statewide Needs Assessment are 1) to describe the most pressing nutrition and physical activity needs of SNAP participants in Nevada, and 2) to examine relevant community characteristics and other environmental factors that shape nutrition and physical activity behaviors for the purpose of identifying opportunities for policy, systems, and environmental intervention/approaches. It is assumed that the findings of the assessment will be used to strengthen Nevada's SNAP-Ed Plan by modifying programs and approaches or developing new programs as/if indicated by key findings. The assessment was completed in three phases. The objectives for each phase are as follows:

Phase I

1. Characterize Nevada's SNAP participants, those eligible for SNAP, and individuals residing in low-income communities; herein referred to as SNAP-Ed target audiences.

2. Characterize low-income communities.

Phase II

3. Describe relevant public policies, programs and practices that impact related nutrition and physical activity behaviors with emphasis on persons residing in low-income households and low-income communities.

4. Describe the perceptions of key informants regarding 1) the needs of SNAP households and others residing in low-income households as they pertain to the goals of SNAP-Ed; and 2) opportunities at the policy, system and environmental level to facilitate healthful nutrition and physical activity behaviors with an emphasis on low-income communities.

Phase III

5. Measure the opinions of SNAP participants regarding nutrition, food security and physical activity needs; barriers to making behavior changes; and preferences for information and assistance including approaches, locations, and topics.

The purpose of this report was guided by objective #5 above. Information about sampling, recruitment and instrument development is described within the report. The data presented herein describes perspectives of SNAP participants (n=1,014) about important elements that influence nutrition and physical activity behaviors including those that may be used to guide PSE interventions/approaches.

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INTRODUCTION

In conjunction with the Department of Nutrition at the University of Nevada, Reno (UNR), the Nevada Center for Surveys, Evaluation, and Statistics (CSES) at UNR conducted a needs assessment among a random sample of Nevada Supplemental Nutrition Assistance Program (SNAP) recipients. The purpose of the survey was to measure the opinions of SNAP participants regarding nutrition, food security and physical activity needs; barriers to making behavioral changes; and preferences for information and assistance including approaches, locations, and topics.

METHODOLOGY

Survey Instrument

The survey instrument was developed by Hailey Fox and Jamie Benedict in conjunction with others in the Department of Nutrition and the Nevada Center for Surveys, Evaluation, and Statistics. The instrument consisted of items measuring general perceived health and behaviors, food shopping, food security, barriers to healthy eating and physical activity, and nutrition and physical activity education (see Appendix A), as a means of addressing the following aims:

1) Evaluate the relative level of concern regarding achieving household food security, a healthful diet, and a physically active lifestyle.
2) To assess the perceived barriers related to achieving household food security, a healthful diet, and a physically active lifestyle.
3) To identify preferences for nutrition education and physical activity promotion.
4) To examine the relationships among select demographic/household characteristics and the perspectives of adults enrolled in SNAP.

Sampling

Individuals receiving SNAP benefits in Nevada during September 2018 were randomly selected for participation. A sample of 3,959 SNAP recipients (Sample A) was drawn from a larger sample of 234,233 Nevada SNAP recipients partitioned by county (Sample B), with 2000 SNAP recipients sampled from Clark County, 1,400 from Washoe County, and 600 SNAP recipients sampled from the remaining counties. Each recipient had an equal chance of being selected. The final sample consisted of 1,014 Nevada SNAP recipients.

Weighting

In order to properly reflect estimates of the population of interest, each respondent was

assigned a weight based on sex, age (grouped), race/ethnicity (grouped), and county (Clark, Washoe, and all others). Weighting allows for estimates to be more indicative of the larger targeted population when some category of the population might be under- or over-represented in the sample (e.g., males to females).

Recruitment

SNAP recipients from Sample A were contacted for participation in four waves with two options for participation. Participants could either complete the survey online, which was hosted by Qualtrics, or complete the survey via phone with the CSES Survey Lab. Participation was gated by a 5-digit PIN assigned and provided to all invitees. The survey was available in both English and Spanish languages. Each wave was comprised of approximately 1,000 SNAP recipients from Sample A. Participation recruitment consisted of an invitation letter, a participation reminder letter sent seven days after the invitation letter, and telephone contact by the CSES Survey Lab if invitees had not completed the survey online within two weeks of the invitation letter mailing. The invitation letter (see Appendix B) contained background information about the survey, information about participant confidentiality, the participant 5-digit PIN, a URL to additional information regarding participation (Frequently Asked Questions: see Appendix C), and instructions for participation (i.e., a URL to the online survey link and information about phone contact from the CSES Survey Lab after two weeks). The reminder letter was a condensed version of the invitation letter (see Appendix D). All invitees who did not complete the survey online within two weeks of being mailed the invitation letter were contact by the CSES Survey Lab at least once via telephone. Recruitment for the first wave began December 13, 2018; recruitment for the second wave began January 3, 2019; and recruitment for the third wave January 17, 2019. Recruitment for the fourth wave began March 4, 2019. Data collection ceased on March 29, 2019. All invitees who completed the survey either online or via telephone received a $10 gift card.

Telephone Response Rates

A total of 591 phone interviews were completed from a list of approximately 3,600 potentially eligible respondents, called in 4 monthly waves. Another 52 partial completes were recorded that resulted in terminations either due to refusal or inability to contact further before the study's conclusion. AAPOR Response Rate formulas were used to calculate varying response rates based around inclusion or exclusion of certain call outcome dispositions. An overall response rate is summarized as the number of completed interviews divided by the number of potentially eligible households or respondents. A "cooperation" rate is summarized as the proportion of all completed interviews multiplied by all eligible households or respondents ever contacted. In averaging these varying rates, the overall response rate was 22%, and the cooperation rate was 62%.

Reporting

The majority of analyses reported were conducted with weighted data. Weighted data were not used to describe the platform that participants used to complete the survey (i.e., phone or online) nor the language that was used to complete the survey (i.e., Spanish or English). In some instances, in order to utilize an adequate sample size, participants who self-identified as African American were grouped with respondents who identified with "other" or "multiple" for race-ethnicity. Additionally, where appropriate, confidence intervals are provided. A confidence interval is a statistic plus or minus a margin of error which provides an estimate or range of estimates that would reflect the true value of the statistic in the population. A 95% confidence interval is a range of values that you can be 95% certain contains the true value found in the population of interest. Finally, analyses whose subtotals or totals do not equate with the total sample size (n = 1,014) indicates missing or refused responses.

EXECUTIVE SUMMARY

Participants overwhelmingly (92%) agreed that choosing healthy foods and drinks was important; three quarters of participants reported that the foods and drinks they consumed were generally moderately healthy and almost 20% reported that they were very healthy. The most common barriers to a healthy diet were: cost (52%), convenience (35%), and the belief that healthy foods and drinks spoil too quickly (32%). When barriers to a healthy diet were compared to sociodemographic variables, lower education, lower household size and no children in the home had a significantly higher proportion of perceived barriers to a healthy diet. In addition, there was a significantly higher mean number of barriers for those reporting a disability.

Of all households surveyed, 74% were classified as food insecure. When examining food security by sociodemographic factors, those reporting the most food insecurity were: White, widowed marital status, education than a less than high school, less than 25 years old, reported gross income of greater than $1000 a month, and living in a household without children. Those reporting a disability were also more likely to report food insecurity compared to those without a disability. Very low food security was linked to a higher emergency food service use compared to those of low or high/marginal food security.

The most common threat to food accessibility was grocery shopping without a personal vehicle (34%), followed by shopping for groceries less than 3-4 times a month (31%).
Widowed marital status, income of zero dollars per month and no children in the home had the highest proportion of shopping at a convenience store, no personal vehicle, no reliable transportation, no full service grocery store nearby, shopping less than three times per month, no working stove and no working refrigerator. Those reporting a disability also had higher amount of threats to food accessibility compared to those not reporting a disability.

A total of 312 participants indicated they were on a special diet for health-related reasons. The largest proportion of persons who reported being on a special diet included women (66%), persons between the ages of 25-39 (36%), White participants (46%), individuals who have never been married (52%), individuals who completed high school (47%), persons whose reported a gross monthly income of $0 (79%), 1-person households (57%), households without children (67%), and individuals who reported having a physical, mental, or emotional disability (66%). Approximately 77% agreed/strongly agreed that the special dietary foods were too expensive and 87% agreed/strongly agreed that it was difficult for them to get to a store that carried the special dietary foods and drinks.

The most common nutritional educational topics participants indicated interest in were: ways to make groceries last all month (72%), ways to prepare healthy meals quickly (71%), preparing meals on a budget (67%), and safe food preparation and handling (50%). Females had a higher

interest in all educational topics compared to males. Similarly, Hispanic ethnicity and households with children also had high interest in educational topics.

Approximately 81% of respondents either agreed or strongly agreed that it was important to them to exercise and be physically active. Additionally, just over 61% of respondents reported that they were moderately active and about 17% reported that they were very active. Almost 21% of participants indicated that they were not active. Of those who perceived themselves inactive, the most common barriers were: social norms (45%), cost (45%), schedule (39%), weather (37%), limited ability (34.4%) and safety (29%). Individuals whose education equated to less than high school were more likely to report a significantly greater number of barriers to physical activity than individuals who finished high school or those with college/post grad experience. Additionally, those who reported a disability reported a significantly greater number of barriers compared to those without a disability. For educational interests, the most common topics supported by respondents included ways to improve overall fitness (60%), ways to exercise at home without equipment (59%), and how to exercise without hurting yourself (51%).

The most preferred format to receive information about nutrition and/or physical activity was mail (64%) followed by the internet or a website (41%). The least preferred format was by telephone (22%). The most preferred location to receive information related to nutrition and physical activity was a welfare or SNAP office (55%) followed by a medical or dental office/clinic (48%) and a grocery store (47%). The least preferred location to receive information was at Church or a faith organization (31%).

When inquiring about disability, a greater proportion of males (53%) than females (45%) reported having a physical, emotional, or mental condition that impacted their life daily. The greatest proportion of individuals who reported a disability were those between the ages of 55-69 (57.9%), individuals aged 70+ (57%) and individuals between the ages of 40-54 (55%). A greater proportion of White participants (55%) reported having a disability compared to African American and/or “other/multiple” participants (43%) and Hispanic participants (27%). Washoe residents reported the greatest proportion of individuals with a disability (51%) followed by all other counties (other than Clark) (47%) and Clark County residents (44%). A majority of individuals with a disability agreed that their condition made it difficult to shop for food (51%) and prevented them from exercising and being physically active (59%).

The majority of individuals characterized as vulnerable reported that they were generally in good or excellent health (53%). Sixty-three percent of vulnerable individuals reported that they were moderately active and almost 23% reported that they were not active. Almost 75% of participants defined as vulnerable could be characterized as low or very low food security. Grocery shopping without a personal vehicle and shopping for groceries less than 3 times a month constituted the top two commonly reported threats to food access.

PART I: CHARACTERISTICS OF THE SURVEY SAMPLE

Table 1. Sociodemographic characteristics of survey participants

	N	%
Sex		
Female	723	65.38
Male	291	34.62
Age		
< 25	49	8.39
25-39	361	38.71
40-54	271	24.76
55-69	245	22.03
70+	88	6.11
Race/Ethnicity		
White	601	41.21
African American	147	26.18
Hispanic	193	24.40
Other/Multiple	73	8.20
Marital Status		
Married	183	17.52
Never married	486	53.37
Divorced/Separated	295	24.91
Widowed	50	4.19
Education		
< High School	224	22.90
High School	509	49.10
Post Grad/College	273	28.00
Income		
$0	704	67.47
$1 - $1000	112	12.27
$1000+	198	20.26
Household Size		
1 person	522	51.11
2-3 people	327	31.14
4+ people	165	17.75
Children in Home *		
No	531	58.30
Yes	357	41.70

* Due to a time lapse in data collection, we could not determine whether or not 126 participants resided in households with children.

Table 2. Regional distribution of survey participants

	N	%
County		
Carson City	36	1.57
Churchill	8	0.31
Clark	448	80.58
Douglas	14	0.53
Elko	19	0.81
Humboldt	10	0.43
Lander	1	0.04
Lincoln	5	0.20
Lyon	34	1.40
Mineral	5	0.15
Nye	52	2.26
Pershing	5	0.20
Storey	1	0.05
Washoe	369	11.19
White Pine	7	0.29
Consolidated		
Clark	448	80.58
Washoe	369	11.19
All Others	197	8.23

Table 3. Survey format, language, and participant self-reported disability

	N	%
Survey Format		
Phone	590	58.2
Online	424	41.8
Survey Language		
English	939	92.6
Spanish	75	7.4
Disability*		
Yes	473	44.2
No	535	55.8

**Disability was determined by asking participants whether they had a physical, mental, or emotional condition that impacted their daily life.*

PART II: RESPONSES RELATED TO NUTRITION, FOOD SECURITY, AND FOOD ACCESS

Nutrition

Participants were asked about the extent to which it was important that they chose healthy foods and drinks. Response options ranged from "strongly disagree" to "strongly agree." Affirmative responses were collapsed into "agree" and negative responses were collapsed into "disagree." Participants were also asked whether they would describe the foods and drinks they consume as "very healthy," "moderately healthy," or "not healthy."

Regarding choosing healthy foods and drinks, respondents overwhelmingly (92%) agreed that choosing healthy foods and drinks was important and very few disagreed (2.7%) (n=1,013). Three-quarters of participants (74.27%) reported that the foods and drinks they consumed were generally moderately healthy and almost 20% reported that they were very healthy. Approximately 7% of participants indicated that the foods and drinks they consume were not healthy. See Table 4.

Table 4. Participant perspectives on nutritious consumption

	N	%
Important to choose healthy foods/drinks		
Agree	912	91.99
Neither agree nor disagree	71	5.33
Disagree	30	2.69
Food and drink consumption		
Very healthy	180	18.77
Moderately healthy	745	74.27
Not healthy	89	6.96

Barriers to a Healthy Diet

Participants were asked a series of questions designed to identify barriers to a healthy diet. Response options ranged from "strongly disagree" to "strongly agree". Participants responded to the following items:

- "*It's hard for me to get to a store that sells healthy food and drinks*" [hard to get to store]
- "*It costs too much for me to each healthy foods and drinks*" [cost]
- "*Healthy foods and drinks taste good*" [taste]
- "*I know what foods and drinks at the grocery store are healthy*" [knowledge]
- "*I buy unhealthy foods more often BECAUSE they are more convenient than healthy foods*" [convenience]
- "*I know how to plan meals that include healthy foods and drinks*" [planning]
- "*It takes too much time to prepare healthy foods and drinks*" [time]
- "*Healthy foods and drinks spoil too quickly"* [spoils too quickly]
- "*People I spend the most time with usually make healthy food and drink choices*" [social norms]

Table 5 provides an overview of responses ranked by frequency for either affirmative or negative responses, depending on the question asked (e.g., "disagree" for planning and "agree" for cost). Responses in the affirmative were collapsed into "agree" and responses in the negative were collapsed into "disagree." Neutral indicates that respondents neither agreed nor disagreed with a statement.

The most common barrier to a healthy diet was cost with 52% of respondents agreeing that healthy foods and drinks cost too much (n=1,011). The next most common barrier was convenience such that almost 35% of respondents agreed that they purchased unhealthy foods and drinks because they were more convenient than healthy foods and drinks. The third most commonly reported barrier was the belief that healthy foods and drinks spoil too quickly with 32% of participants in agreement (n=1,005). The fourth most commonly reported barrier was social norms such that 22% of respondents disagreed that the people they spent the most time with made healthy food and drink selections (n=1,011). Time was also a common barrier with 20% of respondents agreeing that it took too much time prepare healthy foods and drinks (n=1,010). Planning (n=1,013), taste (n=1,013), and knowledge (n=1,011) were selected by less than 10% of the sample as barriers to a healthy diet.

Table 5. Barriers to a healthy diet - ranked

	Agree			Neutral			Disagree		
	N	%	CI (95%)	N	%	CI (95%)	N	%	CI (95%)
Cost	544	52.0	(47.6-56.5)	166	16.8	(13.1-20.5)	301	31.2	(27.0-35.3)
Convenience	353	34.8	(30.7-38.9)	204	20.9	(17.1-24.8)	457	44.3	(39.9-48.7)
Spoils too quickly	321	32.1	(27.9-36.2)	251	25.0	(21.2-28.7)	433	43.0	(38.5-47.4)
Social Norms	512	48.0	(43.6-52.4)	265	29.9	(25.5-34.2)	234	22.2	(18.7-25.6)
Hard to get to store	225	21.4	(17.8-25.1)	166	17.3	(13.5-21.2)	623	61.3	(56.8-65.7)
Time	209	20.0	(16.5-23.6)	204	20.7	(16.7-24.7)	597	59.3	(54.8-63.7)
Planning	870	85.8	(83.0-88.7)	82	8.6	(6.3-10.8)	61	5.6	(3.8-7.5)
Taste	822	80.1	(76.4-83.9)	133	14.1	(10.6-17.7)	58	5.7	(3.8-7.6)
Knowledge	905	86.9	(83.0-90.8	70	8.8	(5.1-12.5)	36	4.3	(2.5-6.1)

Numbers of Barriers to a Healthy Diet

In addition to identifying barriers to a healthy diet by the sample as a whole, we were also interested in seeing whether the number of barriers reported might differ across sociodemographic variables. Table 6 summarizes the mean number of barriers by sociodemographic variables and associated subgroups.

Table 6. Mean number of barriers by sociodemographic group

	N	M	SD
Sex			
Female	723	1.97	1.62
Male	291	2.11	1.77
Age			
< 25	49	1.88	1.41
25-39	360	2.00	1.64
40-54	269	1.95	1.60
55-69	242	2.15	1.74
70+	86	1.98	1.41
Race/Ethnicity			
White	597	2.06	1.64
African American	146	1.97	1.64
Hispanic	191	1.93	1.74
Other/Multiple	72	2.06	1.64
Marital Status			
Married	182	2.00	1.74
Never married	483	2.04	1.74
Divorced/Separated	292	1.89	1.62
Widowed	49	2.55	1.92
Education*			
< High School	224	2.32[a]	1.60
High School	509	1.94[b]	1.86
Post Grad/College	273	1.90[b]	1.59
Income			
$0	697	2.10	1.71
$1 - $1000	112	1.90	1.60
$1000+	197	1.80	1.52
Household Size			
1 person	515	2.17[a]	1.71
2-3 people	327	1.91[b]	1.62
4+ people	1.64	1.72[b]	1.53
Children in Home**			
No	531	2.18[a]	1.72
Yes	357	1.78[b]	1.56

Note: M = mean number of barriers. SD = standard deviation. SD is a measure used to quantify the amount of variation or dispersion from the mean. Values with differing superscripts statistically significantly differ at the $p < .05$ level. *n=1,006; **n=888.

According to significance tests, there was a statistically significant difference between educational groups such that individuals whose education equated to less than high school were more likely to report a significantly greater number of barriers than individuals who finished high school or those with college/post grad experience. Additionally, there was a statistically significant difference between household size categories with individuals residing in 1-person households reporting a significantly greater number of barriers than individuals residing in either 2 to 3-person or 4+ person households. Another significant difference between mean numbers of barriers was found for households with children in the home and households without children in the home with individuals residing in households without children more likely to report a significantly greater number of barriers.

To supplement these findings, we also conducted regression analyses with sex, age, race, marital status, education, household size, and household gross income as independent variables and the mean number of barriers as the dependent (outcome) variable. According to these results, education and household size were significant predictors of the mean number of barriers such that for every 1 unit increase in education level, the mean number of barriers decreased by .23 and for every 1 unit increase in household size, the mean number of barriers decreased by .10.

In addition to the above, we also examined significant differences in the mean number of barriers reported by county and disability (see Table 7). Although the mean number of barriers did not appear to statistically significantly differ by region, there was a significant difference in the mean number of barriers reported by disability (n=1,008) whereby individuals who indicated that they had a mental, physical, or emotional condition that impacted their daily reported a significantly greater number of barriers than individuals who did not report a mental, physical, or emotional disability.

Table 7. Mean number of barriers by county and disability

	N	M	SD
County			
Clark	443	2.00	1.63
Washoe	366	2.01	1.67
All others	197	2.05	1.70
Disability			
Yes	473	2.37[a]	1.64
No	535	1.69[b]	1.56

Note: M = mean number of barriers. SD = standard deviation. SD is a measure used to quantify the amount of variation or dispersion from the mean. Values with differing superscripts statistically significantly differ at the $p < .05$ level.

Food Security

The standardized USDA Household Food Security Survey Module was used to measure food security. The short 6-item module was developed by researchers at the National Center for Health and Statistics in collaboration with Abt Associates Inc. and is used to reliably classify the food security status of households. The specific items are listed below:

1) *"The food that I/we bought just didn't last, and I/we didn't have money to get more."* [not enough money for more food]
2) *"I/we couldn't afford to eat balanced meals"* [can't afford balanced meals]
3) *"In the last 12 months, did you (or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?"* [cut/skip meals]
4) *If yes to #3, "How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months"* [cut/skip meals- how often]
5) *"In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?"* [ate less]
6) *"In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?"* [went hungry]

Response of "often" or "sometimes" to number one and two, and "Yes" to number three, four, and five are coded as affirmative (yes). Reponses of "almost every month" and "some months but not every month" for number four are also coded as affirmative. Affirmative responses to the items in the module are added up to provide a food security score. Households with a score of zero or one are assigned to "high or marginal food security" status. Households with a score ranging from two to four are assigned "low food security" status. Finally, households with a score of five or six are assigned "very low food security" status. Households determined to have "high or marginal food security" are generally described as "food secure", while households determined to have "low food security" and "very low food security" are generally described as "food insecure" (Economic Research Service, 2012).

In addition to the above questions, participants were asked, "*In the last 12 months, has anyone in your household received a meal or food assistance from a food bank, food pantry, or community kitchen?"* [received food assistance]. This is not an item in the USDA's Household Food Security Survey Module, but was included in the Needs Assessment survey instrument, as it is relevant information. The responses to this question and the items in the Food Security Module are displayed below in Table 8. It should be noted, that the items in the Food Security Module are meant to be used to calculate a score that reliably determines foods security status of the household. Of all households surveyed, 26% were classified as food secure and 74% were classified as food insecure.

Table 8. Participant responses to food security questions

	YES		NO	
	N	%	N	%
Not enough money for more food	807	79.55	205	20.45
Can't afford balanced meals	704	67.77	307	32.23
Cut/skip meals	524	49.94	490	50.06
How often did this happen?*	434	83.14	88	16.86
Ate less	541	54.23	468	45.77
Went hungry	599	62.16	411	37.84
Received food assistance**	455	36.18	556	63.82

*n=522 (524 persons who answered "yes" to cut/skip meals +2 missing). ** This question is not part of the standardized USDA food security assessment.

In addition to examining food security status among the entire sample, we also compared status among sociodemographic groups. In order to utilize adequate sample sizes, African American respondents were grouped with "Other/Multiple" race-ethnicity(ies). The age group with the highest reported rate of food insecurity were those less than 25 (79.2%). Approximately 75% of White participants and participants categorized as "Other/Multiple/African American" reported to be food insecure. Additionally, almost 70% of Hispanic participants reported being food insecure. Widowed participants reported the highest rate of food insecurity (80.11%) among the marital status demographic groups. In regards to education, the group of participants with the highest proportion of food insecurity were individuals who didn't finish high school (76.0%). Participants who reported an expected gross income of greater than $1000 had the highest proportion of individuals who reported to be food insecure (77.8%). Approximately 75% of participants who reported living in a household without children were characterized as food insecure compared to 70% of participants living in a household with children. Participants who resided in a household with four or more people had the smallest proportion of food insecurity (67.7%), compared to households with less than four people.

The demographic groups with the highest reported proportion of food secure households were those aged 70+ (31%), Hispanics (30.8%), individuals with a gross monthly income greater than $0 but less than $1,000 (34.5%), and those residing in households consisting of four or more people (30.3%). White participants (42.5%) and those aged 40-54 (42.7%) and less than 25 years old (41.9%) had the greatest proportion of households characterized as having very low food security. See Table 9 for an overview of food security by participant sociodemographic categories.

We also compared food security among participants by region and disability (see Table 10). Washoe County had the highest rate of food insecurity (76.7%). Participants who did not report having a disability had a higher proportion of households categorized as food secure (30.5%) compared to participants who reported having a disability (19.7%).

Table 9. Food security by participant sociodemographic characteristics

	Food Secure		Food Insecure				
	High/Marginal Food Secure		Low Food Secure		Very Low Food Secure		Total N
	N	%	N	%	N	%	
Sex							
Female	191	25.72	238	35.97	294	38.31	723
Male	69	26.30	112	36.71	110	36.99	291
Age							
< 25	9	20.72	20	37.38	20	41.90	49
25-39	94	28.00	127	33.98	140	38.02	361
40-54	60	24.03	83	33.29	128	42.67	271
55-69	59	25.01	89	39.80	97	35.18	245
70+	38	30.85	31	47.86	19	21.28	88
Race/Ethnicity							
White	150	23.76	182	33.79	269	42.46	601
Hispanic	57	30.80	84	40.68	52	28.53	193
Other/Multiple/AA	53	25.07	84	35.99	83	38.95	220
Marital Status							
Married	51	28.54	70	38.90	62	32.56	183
Never married	111	24.52	171	34.54	204	40.94	486
Divorced/Separated	85	28.11	88	34.87	122	37.02	295
Widowed	13	19.89	21	54.60	16	25.51	50
Education*							
< High School	49	23.99	92	43.61	83	32.41	224
High School	135	25.18	178	35.40	196	39.42	509
Post Grad/College	72	28.41	79	32.00	122	39.59	273
Income							
$0	178	25.49	234	34.59	292	39.93	704
$1 - $1000	36	34.48	44	40.86	32	24.66	112
$1000+	46	22.19	72	38.88	80	38.93	198
Household Size							
1 person	129	24.58	171	35.18	222	40.24	522
2-3 people	82	25.65	124	38.07	121	36.28	327
4+ people	49	30.29	55	36.00	61	33.72	165
Children in Home**							
No	129	24.95	185	36.75	217	38.31	531
Yes	106	29.70	122	35.85	129	34.46	357

*n=1,006; **n=888

Table 10. Food security by county and disability

	Food Secure		Food Insecure				
	High/Marginal Food Secure		Low Food Secure		Very Low Food Secure		Total N
	N	%	N	%	N	%	
County							
Clark	115	25.67	167	37.28	166	37.05	448
Washoe	86	23.31	122	33.06	161	43.63	369
All others	59	29.95	61	30.96	77	39.09	197
Disability*							
Yes	92	19.68	138	30.03	243	50.29	473
No	165	30.48	210	41.29	160	28.24	535
Sample (as a whole)	260	25.93	350	36.23	404	37.85	1,014

*n=1,008.

Table 11. Emergency food service use food security status and sociodemographic group

	N	%
Sex		
Female	78	25.72
Male	69	26.30
Age		
< 25	9	20.72
25-39	94	28.00
40-54	60	24.03
55-69	59	25.01
70+	38	30.85
Food Security		
High/marginal	78	7.72
Low	147	14.54
Very low	230	22.75
Children in Home**		
No	129	24.95
Yes	106	29.70

Finally, we examined the frequency of those who used emergency food services (e.g., food pantry) over the last 12 months (n=455) by food security status, age, gender, and whether or not there were children in the home. Approximately 22.8% of very low food secure individuals reported using emergency food services over the last 12 months and 14.5% of low food secure

individuals reported using emergency food service. The greatest age group who reported using emergency food services was people aged 70+ (30.9%). Approximately one-quarter of both men and women reported using emergency food services and a greater proportion of individuals residing in households with children reported using emergency food services (29.7%) than did individuals residing in households without children (25%). See Table 11.

Food Access

Participants were also asked a series of questions related to food accessibility. First, participants were asked who did the primary grocery shopping in the household (n=1,010). The vast majority of participants (84%) reported that they did the grocery shopping themselves. See Table 12 for a summary of responses.

Table 12. Primary grocery shopper

	N	%
Who usually does the grocery shopping?		
Me	859	83.96
Spouse or partner	64	7.62
Other relative	28	1.94
Housemate or roommate	20	2.41
Someone else	42	3.86
Refused/Don't know/Not Sure/Missing	1	0.22
Who usually does the grocery shopping (consolidated)		
Me	856	84.07
Other	154	15.93

Next, participants were asked a succession of questions designed to gauge potential threats to food accessibility. Threats were determined by differential responses based on the questions asked. Below is a list of questions and responses that were considered a threat (n=1,014)[2].

Question	Response(s) Considered a Threat
1. What form of transportation is most often used to get groceries for your household?	Any selection other than "personal vehicle" including taxi/ride-sharing, public transportation, walking, biking, and other.
2. How many times per month does your household shop for groceries?	Any selection less than 3-4 times per week including "never/less than once a month" and "1-2 times per month."
3. Do you have a working stove available where you live?	No

[2] Due to an error in the online survey programming, only a portion of participants who completed the survey online saw questions #6 and #8. This error resulted in a total sample size of 680 for both questions.

4. Do you have a working refrigerator available where you live?	No
5. I have access to reliable and/or affordable transportation to get to the grocery store.	Strongly disagree or disagree
6. There is a full-service grocery store near my home that sells uncooked meats, fresh fruits, vegetables, and baked goods.	Strongly disagree or disagree
7. From what kind of stored does your household get most of their groceries?	A convenience store, corner store, or dollar store (like 7-Eleven, Terribles, or Dollar Tree)
8. I have access to reliable and/or affordable transportation to get to the grocery store.	Strongly disagree or disagree

The most common threat to food accessibility was grocery shopping without a personal vehicle (34%) closely followed by shopping for groceries less than 3-4 times a month (31%) (n=997). Approximately 10% of respondents indicated that they had no reliable or affordable transportation for grocery shopping and almost 6% reported that there was no full-service grocery store nearby. Less than 5% of participants reported (1) not having a working stove (3.8%), (2) utilizing a convenience store for their primary grocery shopping (2.4%), and (3) not having a working refrigerator (1.9%). See Table 13 for a ranking of threats to food accessibility.

Table 13. Threats to good accessibility - Ranked

	N	%
Grocery shopping without personal vehicle	306	34.21
Grocery shopping less than 3-4 times/month	301	30.90
No reliable/affordable transportation	112	10.00
No full-service grocery store nearby	70	5.72
No working stove	41	3.80
Convenience store for primary grocery shopping	32	2.40
No working refrigerator	17	1.89

Threats to accessibility were also assessed by sociodemographic characteristics (see Table 14). A greater proportion of males (38.5%) reported not using a personal vehicle for grocery shopping than females (26.8%). Among the four age groups, the greatest proportion of individuals who did not use a personal vehicle for grocery shopping included persons between the ages of 55-69 (37.6%) followed by persons 70 years of age or older (33%) and persons between 40-54 years of age (31.4%). Participants identifying as “Other/Multiple” and/or African American were the most likely to report a lack of personal vehicle use for grocery shopping (41.4%). Regarding marital status, the greatest proportion of participants who did not use a personal vehicle for grocery shopping included widowed persons (40%) and those who have never been married (36%). Individuals who did not finish high school also had the greatest proportion of individuals not using a personal vehicle for grocery shopping (35.7%) as did individuals who reported $0 for their gross monthly income (34.8%) and those without children

in the home (39.7%). A greater proportion of individuals with a disability reported not using a personal vehicle for shopping (34%) than individuals without a disability (26.7%). Finally, participants residing in Clark County comprised the greatest proportion of individuals not using a personal vehicle (35.5%) followed by Washoe County residents (31%) and residents of all other counties (16.8%).

The greatest proportion of individuals who primarily shopped for groceries at a convenience store (within their respective sociodemographic categories) were widowed individuals (8.0%), 4+ person households (30.3%), and individuals between the ages of 55-69 (5.3%). The smallest proportion of individuals who primarily shopped for groceries at a convenience store included those younger than 25 years old (0%) and those residing in a household with children in the home (0.6%). Although, on average, approximately 30% of the sample reported shopping for groceries less than 3 times per month, there were some notable differences. Persons aged 25-39 had the lowest proportion of individuals who shopped less than 3 times a month (24.8%) compared to individuals between 55-69 years old (37.3%). Similarly, Hispanics had the lowest proportion of individuals who shopped for groceries less than 3 times a month (22.9%) compared to "Other/Multiple" or African American individuals (38.7%). Married individuals and those who reported a gross monthly income of $1,000+ comprised the lowest proportion of individuals who shopped for groceries less than 3 times per month (24%) (within their respective categories) with other marital and income subgroups approximating 31%. Around 22% of individuals in households with children in the home reported shopping for groceries less than 3 times a month compared to 37.3% of households without children in the home. For household size, 18.3% of individuals residing in a household of 4 or more persons reported grocery shopping less than 3 times a month compared to 37.2% for 1-person households. Finally, 35.3% of individuals with a mental, physical, or emotional disability reported shopping less than 3 times a month while 25.8% of individuals without a disability reported the same.

There were also wide proportionality disparities within sociodemographic categories regarding a lack of access to reliable or affordable transportation. Overall, those who were aged 40-54 (21.7%), identified as "other/multiple" race/ethnicities or African American (19.9%), were widowed (24.3%), didn't finish high school (21.2%), resided in a household without children in the home (20%), reported a gross monthly income of $0 (18.7%), reported a disability (21%), and resided in a 1-person household (20.5%) comprised the greatest proportion of individuals in their respective subgroups of not having access to reliable or affordable transportation for grocery shopping. There was less disparity within sociodemographic groups for access to full-service grocery stores (having a full-service grocery store nearby) though it is worth mentioning that, by far, the greatest proportion of individuals reporting a lack of access to a full-service grocery store were widowed persons (21.6%).

Finally, widowed individuals (8%) and males (6.9%) had the greatest proportion of individuals without a working stove, and persons between the ages of 40-54 had the greatest proportion of individuals without a working refrigerator (4%). See Tables 14 and 15.

Table 14. Threats to food accessibility by sociodemographic group

	Shop at convenience Store		No personal vehicle		No reliable/affordable transportation		No full-service grocery store nearby	
	N	%	N	%	N	%	N	%
Sex								
Female	19	2.63	194	26.83	81	16.88	48	10.00
Male	13	4.47	112	38.49	31	15.50	22	11.00
Age								
< 25	0	0	11	22.45	3	10.00	3	10.00
25-39	7	1.94	89	24.65	26	12.09	17	7.91
40-54	8	2.95	85	31.37	39	21.67	21	11.67
55-69	13	5.31	92	37.55	32	17.49	18	9.84
70+	4	4.55	29	32.95	12	16.22	11	14.86
Race/Ethnicity								
White	24	3.99	174	28.95	70	16.83	44	10.60
Hispanic	4	2.07	41	21.24	9	9.18	9	9.18
Other/Multiple/AA	4	1.82	91	41.36	33	19.88	17	10.18
Marital Status								
Married	5	2.73	34	18.58	15	12.93	17	14.66
Never married	12	2.47	175	36.01	58	18.30	29	9.18
Divorced/Separated	11	3.73	77	26.10	30	14.29	16	7.58
Widowed	4	8.00	20	40.00	9	24.32	8	21.62
Education								
< High School	8	3.57	80	35.71	28	21.21	16	12.12
High School	14	2.75	151	29.67	53	15.01	35	9.86
Post Grad/College	10	3.66	73	26.74	1	0.53	19	10.05
Income								
$0	27	3.84	245	34.80	94	18.69	55	10.98
$1 - $1000	3	2.68	35	31.25	4	6.06	5	7.58
$1000+	2	1.01	26	13.13	14	12.39	10	8.85
Household Size								
1 person	129	24.58	214	41.00	77	20.53	45	12.03
2-3 people	82	25.65	71	21.71	22	10.78	18	8.82
4+ people	49	30.29	21	12.73	13	12.87	7	6.86
Children in Home								
No	26	4.90	211	39.74	78	20.05	45	11.60
Yes	2	0.56	74	20.73	21	10.19	14	6.76

Table 14. Continued.

	Shop less than 3x/month		No working stove		No working refrigerator	
	N	%	N	%	N	%
Sex						
Female	211	29.68	21	2.90	9	1.24
Male	90	31.47	20	6.87	8	2.75
Age						
< 25	18	36.73	0	0.00	0	0.00
25-39	89	24.79	13	3.60	4	1.11
40-54	74	28.14	12	4.43	11	4.06
55-69	90	37.34	14	5.71	2	0.82
70+	30	35.29	2	2.27	0	0.00
Race/Ethnicity						
White	174	29.44	22	3.66	9	1.50
Hispanic	44	22.92	8	4.15	2	1.04
Other/Multiple/AA	83	38.70	11	5.00	6	2.73
Marital Status						
Married	45	24.86	4	2.19	2	1.09
Never married	150	31.25	24	4.94	9	1.85
Divorced/Separated	91	31.16	9	3.05	5	1.69
Widowed	15	34.09	4	8.00	1	2.00
Education						
< High School	66	30.00	10	4.46	5	2.23
High School	152	30.46	21	4.13	5	0.98
Post Grad/College	81	29.89	10	3.66	7	2.56
Income						
$0	218	31.69	37	5.26	14	1.99
$1 - $1000	35	31.53	4	3.57	2	1.79
$1000+	48	24.24	0	0.00	1	0.51
Household Size						
1 person	189	37.20	34	6.51	13	2.49
2-3 people	82	25.23	6	1.83	1	0.31
4+ people	30	18.29	1	0.61	3	1.82
Children in Home						
No	193	37.26	30	5.65	11	2.07
Yes	78	21.97	4	1.12	3	0.84

Table 15. Threats to food accessibility by participant disability and region

	Shop at convenience Store		No personal vehicle		No reliable/affordable transportation		No full-service grocery store nearby	
	N	%	N	%	N	%	N	%
Disability								
Yes	21	4.44	161	34.04	76	21.11	45	12.47
No	11	2.06	143	26.73	35	11.11	24	7.62
County								
Clark	9	2.01	159	35.49	50	17.18	26	8.93
Washoe	16	4.34	114	30.89	46	18.47	31	12.45
All others	7	3.55	33	16.75	16	11.43	13	9.29

Table 15. Continued.

	Shop less than 3x/month		No working stove		No working refrigerator	
	N	%	N	%	N	%
Disability						
Yes	164	35.34	25	5.29	10	2.11
No	136	25.81	15	2.80	7	1.31
County						
Clark	123	28.02	15	3.35	8	1.79
Washoe	112	30.60	25	6.78	6	1.63
All others	66	34.38	1	0.51	3	1.52

Dietary Restrictions

In addition to food access, participants were also asked about special diets and the cost and accessibility of foods required for special diets. First, participants were asked if anyone in the household was on a special diet for health-related reasons. Table 17 summarizes "yes" responses by sociodemographic characteristics[3]. A total of 312 participants indicated being on a special diet. However, due to missing data, n=309 for educational group, n=275 for households with and without children, and n=310 for disability. Within each sociodemographic category, the largest proportion of persons who reported being on a special diet included women (66%), persons between the ages of 25-39 (35.6%), White participants (45.6%), individuals who have never been married (51.5%), individuals who completed high school (46.6%), persons whose reported

[3] Please note that in order to utilize adequate sample sizes, African American respondents were grouped with "Other/Multiple" race-ethnicity(ies).

a gross monthly income of $0 (79.2%), 1-person households (56.6%), households without children (66.8%), and individuals who reported having a physical, mental, or emotional disability (66.1%). The smallest proportion of individuals within each sociodemographic category who indicated that they were on a special diet included: males (34%), persons less than 25 years of age (6.25%), Hispanic participants (24.5%), widowed participants (4.2%), participants who did not complete high school (20.4%), individuals reporting a gross monthly income greater than $0 but less than $1,000 (7.2%), 2-3 person households (30.4%), households with children (33.2%), and persons without an emotional, physical, or mental disability (33.9%).

Additionally, of the total sample of participants who indicated that they were on a special diet, approximately 77.3% agreed/strongly agreed that the special dietary foods were too expensive and 86.9% agreed/strongly agreed that it was difficult for them to get to a store that carried the special dietary foods and drinks. See Table 16 for a summary of responses regarding cost and accessibility of special diets.

Table 16. Cost and accessibility of special diets

	Agree		Neutral		Disagree	
	N	%	N	%	N	%
Foods are too expensive	237	77.28	41	13.30	34	9.42
Difficult to get to appropriate store	905	86.9	70	8.8	36	4.3

Table 17. Dietary restrictions by sociodemographic group

	N	%
Sex		
Female	218	66.01
Male	94	33.99
Age		
< 25	12	6.25
25-39	96	35.56
40-54	83	24.60
55-69	91	25.57
70+	30	8.03
Race/Ethnicity		
White	197	45.63
Hispanic	49	24.45
Other/Multiple	66	29.92
Marital Status		
Married	64	18.75
Never married	141	51.51
Divorced/Separated	94	25.58

Table 17. Continued

	N	%
Widowed	13	4.16
Education		
< High School	60	20.37
High School	150	46.63
Post Grad/College	99	33.00
Income		
$0	239	79.20
$1 - $1000	28	7.17
$1000+	45	13.63
Household Size		
1 person	172	56.57
2-3 people	99	30.38
4+ people	41	13.05
Children in Home		
No	184	66.84
Yes	91	33.16
Disability		
Yes	206	66.11
No	104	33.89

Nutritional Education

Regarding nutrition, participants were asked to express their interest in 4 educational topics related to nutrition. The topics included learning (1) how to prepare healthy meals on a budget (n=1,012), (2) about safe food preparation and handling (n=1,011), (3) about ways to make groceries last all month (n=1,011), and (4) about ways to prepare healthy meals in little time (n=1,011). Response options included "yes" and "no." Table 18 summarizes the frequency of "yes" responses for each topic. Participants also had the option of selecting "other" and writing in their topic. Responses to this item can be found in Appendix E, pages 144 and 145. The most common topics supported by all respondents included ways to make food last all month, ways to prepare healthy meals quickly, and preparing meals on a budget, respectively.

Table 18. Nutrition education topic interest

Topic	N	%
Preparing meals on a budget	659	67.31
Safe food preparation and handling	464	49.85
Ways to make food last all month	705	71.92
Ways to prepare healthy meals quickly	689	70.82

We also examined the frequency of "yes" responses per topic by age, gender, race/ethnicity, county, and whether or not there were children in the home. Table 20 summarizes these responses. Across each sociodemographic category, a majority of respondents (< 50%) expressed interest in each topic with the exception of food preparation and handling safety which received slightly less majority endorsement overall.

We also investigated the magnitude of interest for those who perceived that they had an unhealthy diet and those who were food insecure (low or very low). There was not much of a difference between preferences for low and very low food secure individuals, or those who perceived their diet as unhealthy. The majority of individuals in all three categories expressed interest in most topics except for food preparation and handling safety such that only a majority of those who were low in food security (but not very low) were interested in the topic. Additionally, food preparation and handling appeared to garner the least amount of interest overall. See Tables 18 and 19 for a summary of responses. Also, see Table 27 on page 42 for an overview of preferred methods for receiving nutritional information.

Table 19. Nutrition education topic interest by food insecurity and unhealthy diet

	Prep meals on budget		Food prep safety		Make food last		Quick healthy meals	
	N	%	N	%	N	%	N	%
Food Security								
Low	241	68.86	182	52.15	245	70.20	245	70.00
Very low	264	65.51	165	40.94	309	76.67	279	69.23
Unhealthy diet	64	71.91	35	39.33	73	82.02	69	77.53

Table 20. Nutrition education topic interest by sociodemographic group

	Prep meals on budget		Food prep safety		Make food last		Quick healthy meals	
	N	%	N	%	N	%	N	%
Sex								
Female	490	67.87	348	48.20	516	71.47	511	70.78
Male	169	58.28	116	40.00	189	65.17	178	61.38
Age								
< 25	37	75.51	25	51.02	33	67.35	39	79.59
25-39	255	70.64	177	49.03	265	73.41	264	73.13
40-54	183	67.78	124	45.93	200	74.07	190	70.37
55-69	138	56.56	101	41.39	162	66.39	149	61.07
70+	46	52.27	37	42.05	45	51.14	47	53.41
Race/Ethnicity								
White	353	58.83	215	35.83	392	65.33	372	62.00
Hispanic	147	76.56	123	64.06	152	79.17	154	80.21
Other/Multiple/AA	159	72.27	126	57.27	161	73.18	163	74.09
County								
Clark	309	69.13	227	50.90	327	73.32	322	72.04
Washoe	229	62.23	168	45.65	252	68.48	238	64.85
All others	121	61.42	69	35.03	126	63.96	129	65.48
Children in Home								
No	323	60.94	224	42.26	357	67.36	339	64.08
Yes	253	71.07	183	51.55	256	72.11	259	72.75

PART III: PHYSICAL ACTIVITY

Being Physically Active

In assessing physical activity, participants were first asked the extent to which they agreed or disagreed that it was important to them to exercise and be physically active (n=1,012). Responses ranged from "strongly disagree" to "strongly agree." Approximately 81% of respondents (n=802) either agreed or strongly agreed that it was important to them to exercise and be physically. Almost 15% neither agreed nor disagreed (n=158) and just over 4% (n=52) disagreed or strongly disagreed. Next, participants were asked to describe their level of physical activity frequency. Response options included "very active," "moderately active," and "not active." Just over 61% of respondents (n=615) reported that they were moderately active and about 17% (n=168) reported that they were very active. Almost 21% of participants (n=230) indicated that they were not active.

Barriers to Physical Activity

Participants were asked a series of questions designed to identify barriers to physical activity/exercise. Response options ranged from "strongly disagree" to "strongly agree". Participants responded to the following items:

- "*My daily schedule makes it hard for me to exercise and be physically active*" [schedule]
- "*I am able to find ways to exercise and be physically active within my limits*" [limited ability]
- "*It's hard to find ways to exercise and be physically active that I can afford*" [cost]
- "*There are safe places to exercise and be physically active near my home*" [Safety]
- "*There are safe places where I can exercise and be physically active in all types of weather*" [Weather]
- "*People I spend the most time with usually exercise and are physically active* [social norms]

Table 21 provides an overview of responses ranked by frequency for either affirmative or negative responses. Responses in the affirmative (i.e., strongly agree/agree) were collapsed into "agree" and responses in the negative (i.e., strongly disagree/disagree) were collapsed into "disagree." Neutral indicates that respondents neither agreed nor disagreed with a statement.

The most common barrier to physically activity was cost (n=1,011) with 31% of respondents agreeing that it was hard to find ways to exercise and be physically active that they could afford. The next most common was schedule (n=1,011) such that 29.5% agreed that their daily schedule made it hard for them to exercise and be physically active. The third most commonly reported barrier was social norms (n=1,008) such that 28.7% of respondents disagreed that the people they spent the most time with usually exercised and were physically active. The fourth most commonly reported barrier was weather (n=1,009) with 23.5% of participants disagreeing that there are safe places to exercise and be physically active in all types of weather. Safety was the next most common barrier (n=1,008) such that 18.5% of respondents disagreed that there were safe places to exercise and be physically active near the home. The last barrier was limited ability with 16% of respondents disagreeing that they are able to find ways to exercise and be

physically active within their abilities.

Table 21. Barriers to physical activity/exercise - ranked

	Agree		Neutral		Disagree	
	N	%	N	%	N	%
Cost	329	31.07	166	15.98	515	52.95
Schedule	304	29.52	192	18.58	515	51.90
Social Norms	460	44.91	253	26.38	295	28.71
Weather	592	61.27	153	15.27	264	23.47
Safety	692	69.23	119	12.25	197	18.51
Limited ability	738	71.43	127	12.62	149	15.95

Additionally, we examined barriers among those who perceived that they were physically inactive (n=230). Table 22 summarizes these responses. The most common barrier among those that reported being physically inactive were social norms such that 44.8% of respondents disagreed that the people they spent the most time with usually exercised and were physically active. The next most common barrier was cost (n=227) with 44.5% of respondents agreeing that it was hard to find ways to exercise and be physically active that they could afford. The third most common barrier was schedule (n=228) such that 39% agreed that their daily schedule made it hard for them to exercise and be physically active. The fourth most commonly reported barrier was weather (n=229) with 37% of participants disagreeing that there are safe places to exercise and be physically active in all types of weather. Limited ability was the next most common barrier with 34.4% of respondents disagreeing that they are able to find ways to exercise and be physically active within their abilities. Safety was the last barrier (n=228) such that 29% of physically inactive respondents disagreed that there were safe places to exercise and be physically active near the home.

Table 22. Barriers to physical activity/exercise among physically inactive participants- ranked

	Agree		Neutral		Disagree	
	N	%	N	%	N	%
Social Norms	82	35.65	45	19.57	103	44.78
Cost	101	44.49	39	17.18	87	38.33
Schedule	89	39.04	36	15.79	89	39.04
Weather	118	51.53	26	11.35	85	37.12
Limited ability	113	49.13	38	16.52	79	34.35
Safety	135	59.21	27	11.84	66	28.95

Number of Barriers to Physical Activity

In addition to identifying barriers to physical activity by the sample as a whole and those who perceived themselves to be physically inactive, we were also interested in seeing whether the number of barriers reported might differ across sociodemographic variables. Table 24 summarizes the mean number of barriers by sociodemographic variables and associated subgroups. According to significance tests, there was a statistically significant difference between educational groups such that individuals whose education equated to less than high school were more likely to report a significantly greater number of barriers than individuals who finished high school or those with college/post grad experience. Additionally, although the statistical significant difference did meet the $p < .05$ threshold, the statistical difference between the number of barriers to physical activity between households with children in the home (M=1.29) and those without (M=1.46) approached statistical significant, $p = .058$. To supplement these findings, we also conducted regression analyses with sex, age, race, marital status, education, household size, and household gross income as independent variables and the mean number of barriers as the dependent (outcome) variable. According to these results, education was a significant predictor of the mean number of barriers such that for every 1 unit increase in educational level, the mean number of barriers decreased by .19.

In addition to the above, we also examined significant differences in the mean number of barriers reported by county and disability (see Table 23). Although the mean number of barriers did not appear to statistically significantly differ by region, there was a significant difference in the mean number of barriers reported by disability (n=1,008) whereby individuals who indicated that they had a mental, physical, or emotional condition that impacted their daily reported a significantly greater number of barriers to physical activity than individuals who did not report a mental, physical, or emotional disability.

Table 23. Mean number of barriers by county and disability

	N	M	SD
County			
Clark	443	2.00	1.63
Washoe	366	2.01	1.67
All others	197	2.05	1.70
Disability			
Yes	473	1.67[a]	1.35
No	535	1.10[b]	1.20

Note: M = mean number of barriers. SD = standard deviation. SD is a measure used to quantify the amount of variation or dispersion from the mean. Values with differing superscripts statistically significantly differ at the $p < .05$ level.

Table 24. Mean number of barriers to physical activity by sociodemographic group

	N	M	SD
Sex			
Female	723	1.37	1.29
Male	291	1.38	1.32
Age			
< 25	49	1.63	1.16
25-39	360	1.31	1.26
40-54	269	1.39	1.36
55-69	242	1.42	1.34
70+	86	1.55	1.25
Race/Ethnicity			
White	597	1.38	1.32
African American	146	1.48	1.33
Hispanic	191	1.32	1.23
Other/Multiple	72	1.17	1.31
Marital Status			
Married	182	1.37	1.39
Never married	483	1.31	1.28
Divorced/Separated	292	1.41	1.29
Widowed	49	1.71	1.29
Education*			
< High School	224	1.61[a]	1.32
High School	509	1.32[b]	1.27
Post Grad/College	273	1.26[b]	1.32
Income			
$0	697	1.41	1.32
$1 - $1000	112	1.18	1.20
$1000+	197	1.32	1.28
Household Size			
1 person	515	1.43	1.71
2-3 people	327	1.32	1.30
4+ people	1.64	1.25	1.28
Children in Home**			
No	531	1.46	1.35
Yes	357	1.29	1.28

Note: M = mean number of barriers. SD = standard deviation. SD is a measure used to quantify the amount of variation or dispersion from the mean. Values with differing superscripts statistically significantly differ at the $p < .05$ level. *n=1,006; **n=888.

Physical Activity Education

In regard to physical activity, participants were asked to express their interest in 5 educational topics related to physical activity. The topics included learning more about (1) how to fit exercise and physical activity into the day, (2) how to exercise without hurting yourself, (3) ways to improve overall fitness, (4) ways to exercise at home without equipment, and (5) free activity trackers or fitness apps. Response options included "yes" and "no." Table 25 summarizes the frequency of "yes" responses for each topic. Participants also had the option of selecting "other" and writing in their topic. Responses to this item can be found in Appendix E, pages 147 and 148. Three topics received majority endorsement including: ways to improve overall fitness (59.5%), ways to exercise at home without equipment (59%), and how to exercise without hurting yourself (51.4%). Although receiving less than majority endorsement, information about free activity trackers or fitness apps (49%) and how to fit physical activity into the day (43%) did receive widespread support.

Table 25. Physical activity education topic preference

Topic	N	%
How to fit physical activity into the day	453	42.96
How to exercise without hurting yourself	527	51.35
Ways to improve overall fitness	600	59.47
Ways to exercise at home without equipment	604	58.98
Free activity trackers or fitness apps	501	48.96

We also examined the frequency of "yes" responses per topic by age, gender, race/ethnicity, county, and whether there were children in the home or not. Table 26 summarizes these responses. Across each sociodemographic category, a majority of respondents (> 50%) expressed interest in each topic with the exception of fitting physical activity into the day which did not receive majority endorsement in any sociodemographic category.

Table 26. Physical activity education topic interest by sociodemographic group

	Fit Physical Activity in Daily		Exercise without hurting yourself		Improve overall fitness	
	N	%	N	%	N	%
Sex						
Female	320	44.51	370	51.46	413	57.44
Male	133	45.70	157	53.95	187	64.26
Age						
< 25	24	48.98	25	51.02	30	61.22
25-39	154	42.78	181	50.28	210	58.33
40-54	125	46.13	151	55.72	160	59.04
55-69	113	46.50	123	50.62	148	60.91
70+	37	42.53	47	54.02	52	59.77
Race/Ethnicity						
White	267	44.65	311	52.01	357	59.70
Hispanic	85	44.27	106	55.21	114	59.38
Other/Multiple/AA	101	45.91	110	50.00	129	58.64
County						
Clark	189	42.28	225	50.34	262	58.61
Washoe	175	47.55	194	52.72	219	59.51
All others	89	45.64	108	55.38	119	61.03
Children in Home						
No	256	48.39	287	54.25	324	61.25
Yes	145	40.73	180	50.56	204	57.30

Table 26. Continued.

	Exercise at Home		Free activity apps/trackers	
	N	%	N	%
Sex				
Female	418	58.14	360	50.07
Male	186	63.92	141	48.45
Age				
< 25	37	75.51	25	51.02
25-39	154	42.78	181	50.28
40-54	165	60.89	129	47.60
55-69	147	60.49	135	55.56
70+	57	65.52	42	48.28
Race/Ethnicity				
White	359	60.03	301	50.33
Hispanic	119	61.98	94	48.96
Other/Multiple/AA	126	57.27	106	48.18
County				
Clark	260	58.17	210	46.98
Washoe	225	61.14	194	52.72
All others	119	61.03	97	49.74
Children in Home				
No	327	61.81	276	52.17
Yes	202	56.74	164	46.07

Finally, participants were asked how they preferred to receive information about nutrition and/or physical activity (i.e., format and location). We report these responses separated by county in Table 27. Overall, there were few differences in preferences by county. The most preferred format was mail (64.2%) followed by the internet or a website (41.5%). The least preferred format was by telephone (22.1%). The most preferred location to receive information related to nutrition and physical material was a welfare or SNAP office (54.9%) followed by a medical or dental office/clinic (48.0%) and a grocery store (47.1%). The least preferred location to receive information was at Church or a faith organization (31.0%). See Table 27 for a summary of responses.

Table 27. Preferred format/location for receiving nutrition/physical activity information

	Clark		Washoe		All others		Total	%
	N	%	N	%	N	%	N	Yes
Format								
Mail	283	63.31	238	64.67	122	61.93	643	64.21
Internet/Website	193	43.27	160	44.20	97	49.24	450	41.46
Television	161	36.18	120	33.15	62	31.63	343	35.78
Telephone	93	20.90	92	25.34	34	17.35	219	22.09
Text message	154	34.61	129	35.25	69	35.03	352	33.75
In person	145	32.58	125	34.53	61	31.12	331	32.07
Location								
Grocery store	217	48.65	171	46.47	83	42.13	471	47.13
Community or senior center	160	35.87	139	37.98	63	31.98	362	36.18
School	160	35.96	139	37.87	72	36.73	371	37.30
Church or faith organization	138	31.08	118	32.24	53	26.90	309	31.01
Medical or dental clinic	218	48.88	174	47.54	91	46.43	483	47.96
Parks and recreation center	164	36.85	139	37.98	77	39.29	380	36.49
Welfare or SNAP office	247	55.38	196	53.41	97	49.49	540	54.94

PART IV: DISABILITY

Disability by Sociodemographic Group and Region

Table 28 summarizes the frequency of self-reported disability by age, gender, race/ethnicity, and county. A greater proportion of males (52.6%) than females (44.5%) reported having a physical, emotional, or mental condition that impacted their life daily. In terms of age and disability, the greatest proportion of individuals who reported a disability were those between the ages of 55-69 (57.9%) followed closely by individuals aged 70+ (56.8%) and individuals between the ages of 40-54 (54.8%). A greater proportion of White participants (54.8%) reported having a disability compared to African American and/or "other/multiple" participants (43.2%) and Hispanic participants (26.9%). Finally, Washoe residents reported the greatest proportion of individuals with a disability (50.8%) followed by all other counties (other than Clark) (46.7%) and Clark County residents (43.8%).

Table 28. Self-reported disability by gender, age, race/ethnicity, and county

	N	%
Sex		
Female	320	44.51
Male	153	52.58
Age		
< 25	15	30.61
25-39	120	33.43
40-54	148	54.81
55-69	140	57.85
70+	50	56.82
Race/Ethnicity		
White	326	54.79
Hispanic	52	26.94
Other/Multiple/AA	95	43.18
County		
Clark	194	43.79
Washoe	187	50.82
All others	92	46.70

Participants with a disability were asked several questions about how the disability impacted their diet and ability to exercise and be physically active. Response options for all questions ranged from "strongly disagree" to "strongly agree." A summary of responses can be found in Table 29. All responses were collapsed into "agree," "neither agree nor disagree" ("neutral"), and "disagree." A majority of individuals with a disability agreed that their condition made it difficult to shop for food (50.7%) and prevented them from exercising and being physically active (58.9%). Approximately 40% of individuals with a disability agreed that the condition

made it difficult to prepare food and just over one-quarter agreed that the condition made it difficult to eat or drink.

Table 29. Disability impact on diet and exercise

	Agree		Neutral		Disagree	
	N	%	N	%	N	%
My physical, mental, or emotional condition makes it difficult to shop for food.	241	50.74	104	21.89	130	27.37
My physical, mental, or emotional condition makes it difficult to prepare food.	188	39.50	103	21.64	185	38.87
My physical, mental, or emotional condition makes it difficult to eat or drink.	127	26.68	98	20.59	251	52.73
My physical, mental, or emotional condition prevents me from exercising and being physically active.	281	58.91	88	18.45	108	22.64

PART V: NEEDS AMONG VULNERABLE POPULATIONS

Vulnerable Populations in the Sample

Vulnerable populations were defined as individuals aged 70 years old or older, individuals with a self-reported physical, mental, or emotional condition, households with children, and individuals with health-related dietary needs. Dietary needs (special diets) considered vulnerable included: type I and II diabetes, pre-diabetes, diets for cardiovascular disease, low sodium diets, renal diets, autoimmune diets (i.e., celiac disease, lupus, IBD, Crohn's, MS), gastric-related diets (i.e., colitis, gastric ulcers, gastritis, gastroparesis, GI surgeries, and intestinal disorders), modified texture diets, hepatic disease diets, cancer-related diets, and food allergies. Table 30 provides an overview of vulnerable populations in the sample.

Table 30. Frequency of vulnerable population categories

	N	%
Age 70+	88	7.75
Children in the home	357	31.43
Physical, emotional, or mental condition	473	41.64
Special dietary need	218	19.18
Total	1,136	100

To describe the vulnerable population in the sample across a variety of variables, participants who selected any of the categories above (Table 30) were counted only once for a total vulnerable sample of n=793. The majority of individuals characterized as vulnerable reported that they were generally in good or excellent health (53%) though almost as many reported that they were in fair/poor health (47%). Sixty-three percent of vulnerable individuals reported that they were moderately active and just under one-quarter reported that they were not active. Almost three-quarters also reported that they were moderately healthy and only approximately 7% reported that they were not healthy (see Table 31).

Table 31. Health status, diet quality, and level of physical activity among the vulnerable

	N	%
Health Status		
Excellent/Good	399	53.14
Fair/Poor	394	46.86
Physical Activity		
Very active	112	14.08
Moderately Active	481	63.11
Not Active	199	22.81
Perceived health		
Very healthy	139	19.71
Moderately healthy	599	73.98
Not healthy	73	6.65

Food Security and Access among the Vulnerable

Regarding food security, almost three-quarters of participants defined as vulnerable could be characterized as having low or very low food security with the greatest proportion of respondents falling into the very low food security category. See Table 32 for an overview and for responses to individual food security questions.

Table 32. Food security among the vulnerable

	N	%
Food Security Questions		
Not enough money for more food	634	80.99
Can't afford balanced meals	562	70.46
Cut/skip meals	419	52.12
Ate less	445	55.76
How often did this happen?	354	43.46
Went hungry	436	56.34
Received food assistance	327	38.90
Food Security Scale		
High/marginal food security	202	24.79
Low food security	260	33.97
Very low food security	331	41.23

For food access, grocery shopping without a personal vehicle and shopping for groceries less than 3 times a month constituted the top two most commonly reported threats to access followed by a lack of access to reliable or affordable transportation. See Table 33.

Table 33. Food access threats among the vulnerable population - Ranked

	Total N	N	%
Grocery shopping without personal vehicle	792	232	33.04
Grocery shopping less than 3-4 times/month	781	240	30.13
No reliable/affordable transportation*	553	93	10.64
No full-service grocery store nearby*	553	61	6.65
No working stove	793	30	2.53
Convenience store for primary grocery shopping	792	25	2.16
No working refrigerator	793	11	1.32

*As mentioned on page 24 an error resulted in a smaller sample for these two questions.

Healthy Diet and Physical Activity/Exercise Barriers among the Vulnerable

The vulnerable population was also assessed for barriers to a healthy diet and physical activity. The most common barrier to a healthy diet was cost with 55% of respondents agreeing that healthy foods and drinks cost too much (n=790). The next most common barrier was convenience such that 37% of respondents agreed that they purchased unhealthy foods and drinks because they were more convenient than healthy foods and drinks. The third most commonly reported barrier was the belief that healthy foods and drinks spoil too quickly with 34% of participants in agreement (n=786). The fourth most commonly reported barrier was that it was hard to get to a store that sells healthy foods and drinks with 24.4% of the vulnerable sample in agreement. The next barrier was social norms such that 23% of respondents disagreed that the people they spent the most time with made healthy food and drink selections (n=790). Time was also a common barrier with 20.4% of vulnerable respondents agreeing that it took too much time prepare healthy foods and drinks (n=790). Planning (n=792), taste (n=792), and knowledge (n=791) were selected by less than 10% of the sample as barriers to a healthy diet.

Table 34. Barriers to a healthy diet among the vulnerable population - ranked

	Agree		Neutral		Disagree	
	N	%	N	%	N	%
Cost	444	55.19	118	13.52	228	31.29
Convenience	290	37.06	143	17.64	360	45.29
Spoils too quickly	261	34.11	196	25.47	329	40.42
Hard to get to store	187	24.40	129	15.93	477	59.67
Social Norms	394	48.30	212	28.52	184	23.18
Time	169	20.40	160	20.04	461	59.56
Taste	647	81.44	98	12.47	47	6.09
Planning	674	85.17	66	8.89	52	5.94
Knowledge	705	87.26	58	8.26	28	4.48

The most common barrier to physical activity/exercise for the vulnerable population was cost (n=789) with 34.5% of respondents agreeing that it was hard to find ways to exercise and be physically active that they could afford. The next most common barrier was schedule (n=791) such that 33% agreed that their daily schedule made it hard for them to exercise and be physically active. The third most common barrier was social norms (n=788) such that 30.7% of respondents disagreed that the people they spent the most time with usually exercised and were physically active. The fourth most commonly reported barrier was weather (n=788) with 26.3% of vulnerable participants disagreeing that there are safe places to exercise and be physically active in all types of weather. Safety was the next most common barrier (n=787) with 21% of respondents disagreeing that they are able to find ways to exercise and be physically active within their abilities. Limited ability was the last barrier such that 18% of vulnerable respondents disagreed that there were safe places to exercise and be physically active near the home. Table 35 summarizes these responses.

Table 35. Barriers to physical activity/exercise among the vulnerable population- ranked

	Agree		Neutral		Disagree	
	N	%	N	%	N	%
Cost	277	34.48	136	16.97	376	48.55
Schedule	259	33.06	146	17.85	386	49.09
Social Norms	355	43.35	197	25.96	236	30.70
Weather	453	58.11	120	15.56	215	26.33
Safety	524	66.28	93	12.63	170	21.09
Limited ability	562	69.02	105	12.89	126	18.10

Educational Topics among the Vulnerable

Tables 36 and 37 provide an overview of education topic interest for nutrition and physical activity. A majority of individuals who were considered vulnerable expressed interest in all topics across the board except for information on fitting physical activity in daily (42.4%).

Table 36. Nutritional education topic interest among the vulnerable population

	N	%
Prep meals on a budget	521	68.28
Food preparation safety	364	51.72
Make food last all month	548	70.94
Preparing quick healthy meals	545	71.79

Table 37. Physical activity education topic interest among the vulnerable population

	N	%
Fit physical activity in daily	356	42.44
Exercise without hurting yourself	417	49.98
Improve overall fitness	473	58.27
Exercise at home without equipment	474	57.79
Free activity apps/trackers	401	48.31

APPENDIX A: SURVEY INSTRUMENT

language pref

In which language would you prefer to take this survey?

¿En qué idioma preferirías tomar esta encuesta?

- ◯ English
- ◯ Español

confirm language

You selected English. Is this correct?

Usted seleccionó Inglés, ¿Es esto correcto?

- ◯ Yes
- ◯ No

INTRO

This survey asks questions about food, nutrition, and physical activity.

As a way of saying thank you for your time, we will email you a **$10 gift card** that can be used at places like Amazon, Target, and Best Buy. At the end of the survey you will be asked to enter an email address where you would like the gift card to be sent.

Your participation in this survey is completely voluntary and will have **no impact on your SNAP benefits** now or in future. You may skip any survey questions you do not want to answer and may quit the survey at any time. Your survey responses will be kept confidential and your name will never be included in any reports.

If you have questions about the study please call Dr. Jamie Benedict at (775)-784-6445. To report survey errors or technical difficulties call Dr. Veronica Dahir at 1-(800)-929-9079 (Mon.-Fri. 9am-9pm; Sat., Sun., and holidays 9am-5pm). If you have any concerns about the conduct of the study call the Research Integrity Office at (775)-327-2368.

To ensure and maintain your confidentiality, please complete the survey in one sitting and make sure to submit your responses. You will receive a message once the survey is complete informing you that your responses have been submitted.

If you do not complete the survey in one sitting, please know that anyone with a link to the survey using the same computer can view your responses. You can clear your browser's cookies to avoid this problem but you will not be able to go back and complete the survey where you left off if you do.

If you are 18 years or older and wish to participate in the study, please indicate that you agree to participate by clicking the button below.

- ◯ I agree to participate
- ◯ I do not agree to participate

Per health/beh

In general, how would you describe your health? Would you say your health is...

- ◯ Excellent
- ◯ Good
- ◯ Fair
- ◯ Poor

In general, how would you describe your level of physical activity? Physical activity includes any body movement, other than your regular job duties, that works muscles and requires energy.

Would you say you are…

- ◯ Very Active
- ◯ Moderately Active
- ◯ Not Active

In general, how would you describe the foods and drinks you consume? Healthy foods and drinks include those that contain little or no saturated fat, sugar, or salt and are high in nutrients. Examples of healthy foods include fruits, vegetables, whole grains, low-fat dairy, and lean meats. Examples of unhealthy foods include cookies, chips, soda, candy and fried foods.

Would you say the foods and drinks you consume are...

- ◯ Very Healthy
- ◯ Moderately Healthy
- ◯ Not Healthy

Food shopping

Please answer the following questions about food shopping for your household. We define "household" as anyone who lives in your home and shares most meals or food.

WHO usually does the grocery shopping in your household?

- ◯ You
- ◯ Your spouse or partner
- ◯ Your housemate or roommate
- ◯ Someone else (specify) [ ]

From what KIND of store does your household get most of their groceries? Would you say….

- ◯ A grocery store (like Safeway, Raley's, Vons or WinCo)
- ◯ A convenience store, corner store or dollar store (like 7-Eleven, Terribles or Dollar Tree)
- ◯ A super store or wholesale club (like Wal-Mart, Target or Costco)
- ◯ Or some other kind of store (specify) [ ]

What form of transportation is most often used to get groceries for your household?

- ◯ Personal vehicle
- ◯ Taxi or ride-sharing services
- ◯ Public transportation
- ◯ Walking
- ◯ Biking
- ◯ Other (specify) [ ]

Please indicate which statement best describes how often your household shops for groceries.

- ◯ At least once a week
- ◯ Less than once a week but at least once a month
- ◯ Less than once a month
- ◯ Never

How many times per week does your household shop for groceries?

▾

How many times per month does your household shop for groceries?

▾

Do you have a working stove available where you live?

- ◯ Yes
- ◯ No

Do you have a working refrigerator available where you live?

- ◯ Yes
- ◯ No

Food security

These next questions are about the food eaten in your household in the last 12 months, since DECEMBER of last year and whether you were able to afford the food you need.

Please read the following statements that people have made about their food situation. For these statements, please indicate whether the statement was often true, sometimes true, or never true for you in the last 12 months---that is, since last DECEMBER.

The food that I bought just didn't last, and I didn't have money to get more.

Was this often true, sometimes true or never true for you in the last 12 months?

- ◯ Often true
- ◯ Sometimes true
- ◯ Never true

I couldn't afford to eat balanced meals.

Was this often true, sometimes true or never true for you in the last 12 months?

- ◯ Often true
- ◯ Sometimes true

- ◯ Never true

In the last 12 months, since last DECEMBER did you or other ADULTS in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?

- ◯ Yes
- ◯ No

How often did this happen--- almost every month, some months but not every month, or in only 1 or 2 months?

- ◯ Almost every month
- ◯ Some months but not every month
- ◯ Only 1 or 2 months

In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?

- ◯ Yes
- ◯ No

In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?

- ◯ Yes
- ◯ No

In the last 12 months, has anyone in your household received a meal or food assistance from a food bank, food pantry or community kitchen? This includes at a senior center, adult daycare or religious charity.

- ◯ Yes
- ◯ No

Is anyone in your household on a special diet for health-related reasons?

- ◯ Yes
- ◯ No

What is the special diet?

On a scale from 1 = Strongly agree to 5 = Strongly disagree indicate the extent to which you agree or disagree with each statement about the food and drinks required or recommended for special diets.

The foods and drinks for the special diet are too expensive.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

It's difficult to get to a store that has the special foods and drinks that are needed for the diet.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

I have access to reliable and/or affordable transportation to get to the grocery store

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

There is a full-service grocery store near my home that sells uncooked meats, fresh fruits, vegetables, AND baked goods.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree

- ◯ 4-Disagree
- ◯ 5-Strongly disagree

Do you have a physical, mental or emotional condition that impacts your daily life?

- ◯ Yes
- ◯ No

On a scale from 1 = Strongly agree to 5 = Strongly disagree please indicate the extent to which you agree or disagree with each of the following statements about physical, mental, and emotional conditions.

My physical, mental or emotional condition makes it difficult to shop for food.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

My physical, mental or emotional condition makes it difficult to prepare food.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree

- ◯ 4-Disagree
- ◯ 5-Strongly disagree

My physical, mental or emotional condition makes it difficult to eat or drink.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

My physical, mental or emotional condition prevents me from exercising and being physically active.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

Barriers to healthy

On a scale from 1 = Strongly agree to 5 = Strongly disagree please indicate the extent to which you agree or disagree with each of the following statements about healthy foods and drinks.

Healthy foods and drinks are those that contain little or no saturated fat, sugar, or salt and are high in nutrients. Examples of healthy foods include fruits, vegetables, whole grains, low-fat dairy, and lean meats. Examples of unhealthy foods include cookies, chips, soda, candy and fried foods.

It is important to me to choose healthy foods and drinks.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

It's hard for me to get to a store that sells healthy foods and drinks.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

It costs too much for me to eat healthy foods and drinks.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4 Disagree
- ◯ 5-Strongly disagree

Healthy foods and drinks taste good.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

I know what foods and drinks at the grocery store are healthy.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

I buy unhealthy foods more often BECAUSE they are more convenient than healthy foods.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

I know how to plan meals that include healthy foods and drinks.

- ◯ 1-Strongly agree

- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

It takes too much time to prepare healthy foods and drinks.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

Healthy foods and drinks spoil too quickly.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

People I spend the most time with usually make healthy food and drink choices.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

barriers act

On a scale from 1 = Strongly agree to 5 = Strongly disagree please indicate the extent to which you agree or disagree with each of the following statements about exercises and physical activity.

For our purposes, exercise and physical activity mean the same thing. Physical activity and exercise includes any body movement, OTHER THAN YOUR REGULAR JOB DUTIES, that work muscles and requires energy other than resting.

My daily schedule makes it hard for me to exercise and be physically active.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

I am able to find ways to exercise and be physically active within my abilities.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

It's hard to find ways to exercise and be physically active that I can afford.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

There are safe places to exercise and be physically active near my home.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

There are safe places where I can exercise and be physically active in all types of weather.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

People I spend time with usually exercise and are physically active.

- ◯ 1-Strongly agree

- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

It is important to me to exercise and be physically active.

- ◯ 1-Strongly agree
- ◯ 2-Agree
- ◯ 3-Neither agree nor disagree
- ◯ 4-Disagree
- ◯ 5-Strongly disagree

education

The last set of questions pertains to nutrition and physical activity education. Please read the list of educational TOPICS. For each topic, please select YES if it interests you and NO if it doesn't interest you.

Would you be interested in learning more about...

	Yes	No
How to prepare healthy meals on a budget	◯	◯
Safe food preparation and handling	◯	◯
Ways to make groceries last all month	◯	◯
Ways to prepare healthy meals in little time	◯	◯

	Yes	No
Is there anything else you would be interested in learning about (please specify)?		

Would you be interested in learning more about...

	Yes	No
How to fit exercise and physical activity into the day		
How to exercises without hurting myself		
Ways to improve overall fitness		
Ways to exercise at home without equipment		
Free activity trackers and fitness apps		
Is there anything else you would be interested in learning about (please specify)?		

Modes

Indicate yes or no, would you be interested in receiving nutrition and physical activity information...

	Yes	No
...in the mail		
...from the Internet or a website		

	Yes	No
...on television	○	○
...by telephone	○	○
...by text messages	○	○
...in-person	○	○
Is there any other way you would be interested in receiving information (please specify)?	○	○

Indicate yes or no, would you be interested in receiving information at a…

	Yes	No
Grocery store	○	○
Community or senior center	○	○
School	○	○
Church or faith organization	○	○
Medical or dental clinic	○	○
Parks and recreation center	○	○
The welfare office or SNAP office	○	○
Is there anywhere else you would like to receive information (please specify)?	○	○

gift card

Thank you for your participation in this study! Your responses are very important to us.

As a way of saying thank you for your time, we will email you a $10 Tango gift card that can be used at retailors such as Amazon and Target.

Do you have an email address that we can send the $10 gift card to?

- ◯ Yes, I have an email address
- ◯ No, I do not have an email address

Please provide an email address you would like the $10 gift card emailed to:

Please provide a mailing address you would like information about how to obtain the $10 gift card to be sent to:

INTRO - Spanish

Esta encuesta es sobre su alimentación, nutrición, y actividad física. También le haremos preguntas sobre que clase de información le seria importante a usted.

Como agradecimiento por su tiempo, le mandaremos por correo una **tarjeta de regalo con valor de $10**, que puede ser usada en lugares como Amazon, Target, y Best Buy. Al final de la encuesta le pediremos una dirección de correo electrónico (email) donde pueda usted recibir la tarjeta de regalo que le mandaremos. La dirección de correo electrónico que nos de no estará conectada a las respuestas de la encuesta que usted nos de.

Su participation en esta encuesta es completamente voluntaria y **no tendrá ningún impacto en los beneficios de SNAP** que usted recibe o recibirá en el futuro. Usted puede ignorar cualquier pregunta en la encuesta que usted no quiera responder, y usted también tiene el derecho de terminar su participación en la encuesta cuando usted quiera. Sus respuestas se mantendrán de forma confidencial y su nombre nunca sera incluido en ningún reporte.

Si usted tiene preguntas sobre esta encuesta, por favor llame a Dr. Jamie Benedict al (775) 784 6445. Para reportar errores en la encuesta o dificultades técnicas, por favor llame a Dr. Veronica Dahir al 1 (800) 929 9079 (Lunes a Viernes: 9am a 9pm; Sábados, Domingos, y días féstivos: 9am a 5pm). Si tiene comentarios sobre la forma en la que la encuesta fue administrada, por favor llame al Research of Integrity Office al (775) 327 2368.

Para asegurar y mantener su confidencialidad, por favor complete la encuesta en una sola sesión y asegúrese de enviar sus respuestas. Usted va a recibir un mensaje una vez que la encuesta esté completa informándole que sus respuestas han sido enviadas. Si usted no completa la encuesta en una sola sesión, sepa usted que cualquier persona que tenga la direccion electrónica de la encuesta y acceso a la misma computadora que usted está usando podrá ver sus respuestas. Usted puede borrar las cookies de su navegador para evitar este problema, pero no podrá regresar a la parte de la encuesta que no completó si decide hacer esto.

Si usted tiene mas de 18 años y desea participar en la encuesta, por favor indique que esta usted de acuerdo para participar haciendo click en el botón aquí abajo.

- ◯ Quiero participar
- ◯ No quiero participar

Per health/beh - Spanish

En general, ¿Como describiría su salud? Considera usted que su salud es...

- ◯ Excelente
- ◯ Buena
- ◯ Regular

- ◯ Mala

En general ¿Como describiría su nivel de actividad física? Actividad física include cualquier tipo de movimiento corporal, sin incluir responsabilidades típicas de su trabajo, que trabaja músculos y requiere energia.

Diria que usted es...

- ◯ Muy Activo(a)
- ◯ Moderadamente Activo(a)
- ◯ No Activo(a)

En general, ¿como describiría los alimentos y bebidas que usted consume? Alimentos y bebidas saludables incluyen aquellas que contienen poca o nada de grasa, azúcar, sal, y son altos en nutrientes. Ejemplos de alimentos saludables incluyen frutas, verduras, granos integrales, lácteos bajos en grasa, y carnes sin grasa. Ejemplos de comidas no saludables incluyen galletas, papas fritas, soda, dulces, y comida frita.

Diría usted que las comidas y bebidas que usted consume son...

- ◯ Muy Nutritivas
- ◯ Moderadamente Nutritivas
- ◯ No Nutritivas

Food shopping - Spanish

Por favor conteste las siguientes preguntas sobre la compra de alimentos en su domicilio. "Domicilio" incluye a todas las personas que viven en su casa y comparten la mayoría de las comidas o alimentos con usted.

¿QUIEN es usualmente la persona que va a comprar alimentos en su domicilio?

- ◯ Usted
- ◯ Su esposo(a) o pareja
- ◯ Su compañero de casa o habitacion (roomamte)
- ◯ Alguien mas (especifique) [ ]

¿De que TIPO de tienda su domicilio obtiene la mayoría de sus alimentos?

- ◯ Tienda de comestibles (como Safeway, Raley's, Vons, o WinCo)
- ◯ Tienda de conveniencia, tienda de la esquina, o tienda de dolar (como 7-Eleven, Terribles, o el Dollar Tree)
- ◯ Supermercado o tienda de mayoreo (como Walmart, Target, o Costco)
- ◯ Otro tipo de tienda (especifique) [ ]

¿Que modo de transporte es el mas usado para ir a comprar alimentos en su dor

- ◯ Vehiculo personal
- ◯ Taxi o servicios de vehiculos de transporte con conductor (Uber, Lyft)
- ◯ Transporte publico

- ◯ A pie
- ◯ Bicicleta
- ◯ Otro (especifique) [ ]

Por favor seleccione la declaracion que mejor describe que tan seguido se hacen compras de alimentos en su domicilio.

- ◯ Al menos una vez por semana
- ◯ Menos de una vez por semana pero al menos una vez al mes
- ◯ Menos de una vez al mes
- ◯ Nunca

¿Cuantas veces a la semana se hacen compras de alimentos en su domicilio?

[▾]

¿Cuantas veces al mes se hacen compras de alimentos en su domicilio?

[▾]

¿Tiene usted disponible una estufa que funciona en su vivienda?

- ◯ Si
- ◯ No

¿Tiene usted disponible un refrigerador que funciona en su vivienda?

- ◯ Si
- ◯ No

Food security - Spanish

Las siguientes preguntas son sobre los alimentos que se han consumido en su domicilio en los ultimos 12 meses, desde OCTUBRE del año pasado, y sobre si usted pudo costear los alimentos que necesita.

Por favor lea las siguientes declaraciones que personas han hecho sobre sus situaciones alimenticias. En estas declaraciones, por favor indique si la declaración es "a menudo", "a veces", o "nunca" en los últimos 12 meses---es decir, desde OCTUBRE pasado.

La comida que compre simplemente no alcanzo, y no tuve dinero para comprar mas.

¿Fue esto a menudo, a veces, o nunca en los últimos 12 meses?

- ◯ A menudo
- ◯ A veces
- ◯ Nunca

No me alcanzo para comprar comidas balanceadas.

¿Fue esto a menudo, a veces, o nunca en los últimos 12 meses?

- ◯ A menudo
- ◯ A veces
- ◯ Nunca

¿En los últimos 12 meses, desde OCTUBRE pasado, tuvo usted u otros ADULTOS en su domicilio que reducir la cantidad de sus comidas o saltarse comidas por que no había suficiente dinero para alimentos?

- ◯ Si
- ◯ No

¿Que tan seguido paso esto---casi cada mes, algunos meses pero no todos los n

- ◯ Casi cada mes
- ◯ Algunos meses pero no todos los meses
- ◯ Solo 1 o 2 meses

En los últimos 12 meses ¿Tuvo usted que comer una cantidad menor de lo que usted necesitaba por que no había suficiente dinero para comida?

- ◯ Si
- ◯ No

En los últimos 12 meses ¿Tuvo usted hambre pero no pudo comer por que no había suficiente dinero para comida?

- ◯ Si
- ◯ No

En los últimos 12 meses ¿Ha habido alguien en su domicilio que ha recibido una comida o asistencia alimenticia de un banco de comida, despensa de alimentos, o cocina de comunidad, incluyendo centros para adultos mayores, guarderías para adultos, y organizaciones religiosas.

- ◯ Si
- ◯ No

¿Alguien en su domicilio necesita una dieta especial por razones de salud?

- ◯ Si
- ◯ No

¿Cual es la dieta especial?

En una escala del 1 (completamente de a cuerdo) al 5 (completamente en desacuerdo), por favor indique que tanto esta usted de acuerdo o en

desacuerdo con las siguientes declaraciones sobre comida y bebidas necesarias para dietas especiales.

La comida y bebidas para la dieta especial son muy costosas.

- ◯ Completamente de acuerdo
- ◯ De acuerdo
- ◯ Ni de acuerdo ni en desacuerdo
- ◯ En desacuerdo
- ◯ Completamente en desacuerdo

Es difícil ir a la tienda que tiene la comida y bebidas especiales que se necesitan para la dieta.

- ◯ Completamente de acuerdo
- ◯ De acuerdo
- ◯ Ni de acuerdo ni en desacuerdo
- ◯ En desacuerdo
- ◯ Completamente en desacuerdo

Tengo acceso a transporte que es confiable y/o accesible para ir a la tienda de abarrotes

- ◯ Completamente de acuerdo
- ◯ De acuerdo
- ◯ Ni de acuerdo ni en desacuerdo
- ◯ En desacuerdo
- ◯ Completamente en desacuerdo

Hay una tienda de abarrotes completa cerca de mi domicilio, que tiene carne fresca, frutas, verduras, y panadería.

- ◯ Completamente de acuerdo
- ◯ De acuerdo
- ◯ Ni de acuerdo ni en desacuerdo
- ◯ En desacuerdo
- ◯ Completamente en desacuerdo

¿Tiene usted una condición física, mental, o emocional que afecta su vida diaria?

- ◯ Si
- ◯ No

En una escala del 1 (completamente de acuerdo) al 5 (completamente en desacuerdo), pro favor indique que tanto esta de acuerdo o en desacuerdo con las siguientes declaraciones sobre condiciones físicas, mentales, y emocionales.

Mi condición física, mental, o emocional me hace difícil ir a comprar alimentos.

- ◯ Completamente de acuerdo
- ◯ De acuerdo
- ◯ Ni de acuerdo ni en desacuerdo
- ◯ En desacuerdo

- ◯ Completamente en desacuerdo

Mi condición física, mental, o emocional me hace difícil preparar alimentos.

- ◯ Completamente de acuerdo
- ◯ De acuerdo
- ◯ Ni de acuerdo ni en desacuerdo
- ◯ En desacuerdo
- ◯ Completamente en desacuerdo

Mi condición física, mental, o emocional me hace difícil comer o tomar líquidos.

- ◯ Completamente de acuerdo
- ◯ De acuerdo
- ◯ Ni de acuerdo ni en desacuerdo
- ◯ En desacuerdo
- ◯ Completamente en desacuerdo

Mi condición física, mental, o emocional me hace difícil hacer ejercicio y mantenerme activo(a) físicamente.

- ◯ Completamente de acuerdo
- ◯ De acuerdo
- ◯ Ni de acuerdo ni en desacuerdo
- ◯ En desacuerdo
- ◯ Completamente en desacuerdo

Barriers to healthy - Spanish

En una escala del 1 (completamente de acuerdo) al 5 (completamente en desacuerdo), por favor indique que tan de acuerdo o en desacuerdo con las siguientes declaraciones sobre alimentos y bebidas saludables.

Alimentos y bebidas saludables son aquellas que contienen poca o nada de grasa, azúcar, o sal, y son altas en nutrientes. Ejemplos de alimentos saludables incluyen frutas, verduras, granos integrales, lácteos bajos en grasa, y carnes sin grasa. Ejemplos de alimentos no saludables incluyen galletas, papas fritas, dulces, y comida frita.

Para mi, es importante elejir comidas y bebidas saludables.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Para mi, es difícil ir a una tienda que vende alimentos y bebidas saludables.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Para mi, es muy costoso comer alimentos y bebidas saludables.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Los alimentos y bebidas saludables son deliciosas.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Yo se cuales alimentos y bebidas en el supermercado son saludables.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Yo compro alimentos poco saludables POR QUE son mas convenientes que los alimentos saludables.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Yo se como planear comidas que incluyen alimentos y bebidas saludables.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Preparar alimentos y bebidas saludables toma demasiado tiempo.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Los alimentos y bebidas saludables se echan a perder muy rápido.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Las personas con la que paso mas tiempo usualmente preparan alimentos y bebidas saludables.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

barriers act - Spanish

En una escala del 1 (completamente de acuerdo) al 5 (completamente en desacuerdo), por favor indique que tan de acuerdo o en desacuerdo esta con las siguientes declaraciones sobre ejercicio y actividades físicas.

Para nuestros propósitos, ejercicio y actividad física significan lo mismo. Actividad física y ejercicio incluyen cualquier movimiento corporal que trabaja músculos y requiere energía, EXCLUYENDO ACTIVIDADES REGULARES DE SU TRABAJO o actividades de descanso.

Mi horario regular me hace difícil poder ejercitar y mantenerme activo(a) físicamente.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5-Completamente en desacuerdo

Soy capaz de encontrar maneras de ejercitarme y mantenerme físicamente activo(a) dentro de mis abilidades.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Es difícil encontrar formas de ejercitarme y mantenerme físicamente activo(a) que sean baratas.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Hay lugares seguros donde puedo ejercitarme y mantenerme físicamente activo(a) cerca de mi domicilio.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Hay lugares seguros donde puedo ejercitarme y mantenerme físicamente activo(o) sin importar el clima.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Las personas con las que convivo usualmente se ejercitan y se mantienen físicamente activos.

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente en desacuerdo

Para mi, es importante ejercitarme y mantenerme físicamente activo(a).

- ◯ 1- Completamente de acuerdo
- ◯ 2- De acuerdo
- ◯ 3- Ni de acuerdo ni en desacuerdo
- ◯ 4- En desacuerdo
- ◯ 5- Completamente de acuerdo

education - Spanish

La última sección de preguntas son sobre nutrición y educación de actividad física. Por favor lea la lista de temas de educación. Por cada tema, por favor seleccione SI si le interesa, y NO si no le interesa.

Estaría usted interesado(a) en información acerca de...

	Si	No
Como preparar comidas saludables dentro de un presupuesto.	○	○
Manejo y preparación segura de alimentos.	○	○
Como hacer que los alimentos duren todo el mes.	○	○
Como preparar comidas saludables en poco tiempo.	○	○
Otro tipo de información (por favor especifique)	○	○

Estaría usted interesado(a) en información acerca de...

	Si	No
Como hacer tiempo en el día para ejercicio y actividad física.	○	○
Como ejercitarse sin lastimarse.	○	○
Formas de mejorar la condición física.	○	○
Como ejercitarse en casa sin máquinas de ejercicio.	○	○

	Si	No
Como obtener seguidores de actividad y aplicaciones web para actividad física de forma gratuita.	○	○
Otro tip de información (por favor especifique)	○	○

Modes - Spanish

Indique "si" o "no", ¿estaría usted interesado(a) en recibir información acerca de nutrición y actividad física...

	Si	No
... por correo?	○	○
... por internet o página web?	○	○
... en televisión?	○	○
... por teléfono?	○	○
... por mensaje de texto?	○	○
... en persona?	○	○
De otra forma (por favor especifique)?	○	○

Indique "si" o "no", ¿estaría usted interesado(a) en recibir información en un(a)...

	Si	No

	Si	No
... tienda de abarrotes?	◯	◯
... centro o comunidad para personas mayores?	◯	◯
... escuela?	◯	◯
... iglesia u organizacion de fé?	◯	◯
... clínica médica o dental?	◯	◯
... parque o centro de recreación?	◯	◯
... oficina de asistencia social (welfare) o SNAP?	◯	◯
Otro tipo de información (por favor especifique)?	◯	◯

gift card-spanish

Gracias por su participación en este estudio. Sus respuestas son muy importantes para nosotros.

Como forma de agradecimiento por su tiempo, le mandaremos por email una tarjeta de regale de Tango con valor de $10, que puede ser usada en establecimientos como Amazon y Target.

Tiene una dirección de correo electrónico que podemos enviar la tarjeta de regalo de $10?

- ◯ Sí, tengo una dirección de correo electrónico
- ◯ No, no tengo una dirección de correo electrónico

Por favor proporcione una dirección de correo electrónico donde gusta que le envíen la tarjeta de $10:

Por favor proporcione una dirección postal que le gustaría información sobre cómo obtener la tarjeta de regalo $10 para ser enviada a:

confirm lang - spanish

You selected Spanish. Is this correct?

Usted seleccionó Español. ¿Es esto correcto?

- ◯ Si
- ◯ No

APPENDIX B: INVITATION LETTER

.

Mr. Smith

1234 Road

Reno, NV 89523

Dear _____:

We are writing to invite you to participate in a nutrition study. The purpose of the study is to gain your viewpoints about food, nutrition and physical activity to help improve the health of Nevada's residents. Everyone who participates will receive a **$10 gift card that can be used at places such as Amazon, Target and Best Buy**.

Your name was randomly chosen from a list of households enrolled in Nevada's Supplemental Nutrition Assistance Program (SNAP). Participating in this study is completely voluntary and will **have no impact on your SNAP benefits** now or in the future. This study is being conducted by the University of Nevada on behalf of the Division of Welfare and Supportive Services (DWSS) and your responses will come directly to the University, *not* to the DWSS. Your responses will be kept confidential and will not be connected to any personal information.

Because only a small number of households were selected, your participation is very important to us. The survey will take 10-15 minutes to complete. To make it easy for you, the survey can be completed two different ways:

1) Online: To complete the survey online, please enter the website URL shown below into a web browser. At the beginning of the survey, you will be prompted to enter the access code. Please be sure to type in the website URL exactly as it appears below. The website URL is case sensitive.
   Website URL: https://tiny.cc/nvfood
   Access Code:

2) By phone: If you do not complete the survey online within two weeks, one of our interviewers will call you.

If you have questions about the study please call Dr. Jamie Benedict at 775-784-6445. To report survey errors or technical difficulties call Dr. Veronica Dahir at 800-929-9079 (Mon.-Fri. 9am-9pm; Sat., Sun., and holidays 9am-5pm). Please reference the study name, "NV Food", when calling. If you have any concerns about the conduct of the study call the Research Integrity Office at 775-327-2368.

Thank you for considering this opportunity to improve Nevada's programs and services.

Sincerely,

Jamie Benedict, Ph.D., R.D.
Associate Professor
Department of Nutrition

Veronica Dahir, Ph.D.
Director, Survey Operations
Nevada Center for Surveys, Evaluation and Statistics

Sr. Smith

1234 Road

Reno, NV 89523

Estimado(a) _____:

Le escribimos para invitarle a participar en un estudio de nutrición. El propósito del estudio es obtener sus puntos de vista sobre alimentos, nutrición, y actividad física para ayudar a mejorar la salud de los residentes de Nevada. Todos los participantes recivirán una tarjeta de regalo de $10 que puede ser usada en establecimientos como Amazon, Target y Best Buy.

Su nombre fue seleccionado al azar de una lista de hogares enlistados en el Nevada's Supplemental Nutrition Assistance Program (SNAP). Participación en este estudio es completamente voluntaria y no tendrá ningun impacto en sus beneficios de SNAP, ni ahora ni en el futuro. Este estudio es conducido por la University of Nevada en nombre de la Division of Welfare and Supportive Services (DWSS) y sus respuestas vendrán directamente a la Universidad, *no* a las oficinas del DWSS. Sus respuestas serán confidenciales y no estarán conectadas a ningun tipo de información personal.

Debido a que solo un número pequeño de hogares fueron seleccionados, su participación es muy importante para nosotros. La encuesta le tomará 10-15 minutos. Para su conveniencia, puede participar en la encuesta en dos formas diferentes:

1) Por internet: Para completear la encuesta, por favor entre la siguiente dirección de sitio web en un navegador de internet. Al principio de la encuesta, le pediremos que ingrese el código de accesso. Por favor asegúrese de escribir la dirección del sitio web como esta escrita aquí.
   Dirección de sitio web: https://tiny.cc/nvfood
   Código de accesso:

2) Por teléfono: Si no completa la encuesta por internet en dos semanas, uno de nuestros entrevistadores le llamará por teléfono.

Si tiene preguntas sobre el estudio, por favor llame a la Dra. Jamie Benedict al 775-784-6445. Para reportar errores o dificultades técnicas, llame a la Dra. Veronica Dahir al 800-929-9079 (Lunes a Viernes 9am-9pm; Sábados, Domingos y días féstivos 9am-5pm). Por favor, haga referencia al nombre del estudio, "NV Food", cuando llame. Si tiene dudas sobre como el estudio es conducido, llame al Research Integrity Office at 775-327-2368.

Gracias por considerar esta oportunidad para mejorar los programas y servicios de Nevada.

Sinceramente,

Jamie Benedict, Ph.D., R.D.
Profesora Asociada
Department of Nutrition

Veronica Dahir, Ph.D.
Directora, Operaciones de Encuestas
Nevada Center for Surveys, Evaluation and Statistics

APPENDIX C: FREQUENTLY ASKED QUESTIONS

Nutrition Survey

Frequently Asked Questions

FAQ

Who is sponsoring this study?

This study is a joint effort by the Department of Nutrition and the Nevada Center for Surveys, Evaluation, and Statistics at the University of Nevada. The study is being conducted for the Nevada Division of Welfare and Supportive Services. This state agency administers the Supplemental Nutrition Assistance Program (SNAP) in Nevada.

How was I selected?

Your household was randomly chosen from a list of all those enrolled in SNAP according to the Nevada Division of Welfare and Supportive Services. Only a small number of households from this list was selected making your participation very important.

What is this study about?

Our goal is to improve the health of Nevadans. We are conducting a survey about buying and preparing food; exercise and physical activity; and your interest in educational programs.

How does this benefit me?

Participating in this study poses no more risk than what we experience in our everyday routines. Your participation in this study is completely voluntary and will **have no impact on your SNAP benefits** now or in the future. There may be no direct benefit to you or your family. By answering the survey questions, you will help to improve programs and services for SNAP households in Nevada.

Will I be paid?

Everyone who completes the survey will get a **$10 gift card**. The gift card will be sent to the email address you provide us. The gift card can be used online at Amazon, or at many other stores including Target and Kohl's. For the names of other retailers, please go to https://www.tangocard.com/the-rewards-catalog/.

How do I take part in this survey?

Participation involves taking 10-15 minutes to complete the survey. The survey may be completed online or by telephone. Both survey modes have the same questions.

If you choose to complete the survey online, you can access the survey using the unique code that was mailed to you in a letter. Completing the survey online will take about 10 minutes.

If you choose to complete the survey by phone, it will take about 15 minutes. An interviewer will call to confirm your willingness to participate in the survey. If you agree, they will ask the survey questions.

How will you keep my information secure?

We are committed to protecting your privacy. Personal information, such as your name, address and phone number, will be separated from your

survey answers and immediately destroyed. Your name will never be included in any reports that result from this survey. No more than five years after the study is over, all remaining information will be destroyed.

How will my information be used?

Your survey answers will be combined with all others who complete the survey. A report of the results will then be provided to the Nevada Division of Welfare and Supportive Services and ultimately used to improve education programs.

Who can I contact if I have questions?

If you have questions, you can contact Dr. Jamie Benedict at 775-784-6445 or Dr. Veronica Dahir at 800-929-9079. If you have questions about your rights as a research survey participant, you can call the UNR Research Integrity Office at 775-327-2368. If no one answers, please leave a message including your name and phone number. Your call will be returned as soon as possible.

Encuesta de Nutrición

Pregunats Frecuentes

FAQ

¿Quién está patrocinando este estudio?

Este estudio es un esfuerzo colectivo de el Department of Nutrition y el Nevada Center for Surveys, Evaluation, and Statistics en University of Nevada. El estudio está siendo conducido por el Nevada Division of Welfare and Supportive Services. Esta agencia estatal administra el Supplemental Nutrition Assistance Program (SNAP) en Nevada.

¿Cómo fuí seleccionado(a)?

Su domicilio fue seleccionado al azar de una lista que contiene a todas las personas enlistadas en SNAP, de acuerdo con el Nevada Division of Welfare and Supportive Services. Solo un número muy pequeño de domicilios en esta lista fueron seleccionados, por lo que su participación es muy importante.

¿De qué se trata este estudio?

Nuestro gol es mejorar la salud de los residentes del estado de Nevada. Estamos conduciendo una encuesta sobre la compra y preparación de alimentos; ejercicio y actividad física; y su interés en programas educacionales.

¿Cómo me beneficio de esta encuesta?

Su participación en este estudio no constituye un riesgo mayor que las experiencias de la vida cotidiana. Su participación en este estudio es completamente voluntaria y no va a tener ningún impacto en sus beneficios de SNAP ni hoy ni en el futuro. Esta encuesta no tendrá ningún beneficio inmediato para usted o su familia. Responder estas preguntas ayudará a mejorar los programas y servicios para otras personas.

¿Seré recompensado(a)?

Todas las personas que completen la encuesta recivirán una tarjeta de regalo con valor de $10. La tarjeta de regalo será enviada a la dirección de correo electrónico que usted nos dé. La tarjeta de regalo puede ser usadaen línea en Amazon, o en muchas otras tiendas incluyendo Target y Kohl's. Para ver en que otros establecimientos puede usar esta tarjeta de regalo, por favor visite https://www.tangocard.com/the-rewards-catalog/.

¿Cómo puedo participar en esta encuesta?

Participación require 10-15 minutos para completar la encuesta. La encuesta puede ser completada en līnea o por teléfono. Ambos modos de la encuesta tienen las mismas preguntas..

Si usted decide completer la encuesta en línea, puede accesar la encuesta usando el código único que se le envió por correo. Completar la encuesta en línea le tomará aproximádamente 10 minutos.

Si usted decide completer la encuesta por teléfono, le tomará aproximádamente 15

minutos. Un entrevistador(a) le llamará para confirmar si desea participar. Si usted está de acuerdo, el entrevistador(a) le hará las preguntas de la encuesta.

¿Cómo se mantendrá segura mi información?

Estamos comprometidos a proteger su privacidad. Información personal, como su nombre, dirección, y número de teléfono, estará separada de las respuestas de la encuesta, y esta información será borrada inmediatamente. Su nombre nunca será incluido en reports que resulten de esta encuesta. Toda la información será destruida en menos de 5 años.

¿Cómo será usada mi información?

Sus respuestas serán combinadas con las respuestas de todos los demás participantes. Un reporte de los resultados será proveído al Nevada Division of Welfare and Supportive Services y será ultimádamente usado para mejorar programas de educación.

¿A quién puedo contactar si tengo preguntas?

Si tiene pregruntas, puede contactar a la Dra. Jamie Benedict al 775-784-6445 o a la Dra. Veronica Dahir al 800-929-9079. Si tiene preguntas sobre sus derechos como particpante de estudio de investigación, puede llamar al UNR Research Integrity Office al 775-327-2368. Si nadie responde, puede dejar un mensaje incluyendo su nombre y número de teléfono. Su llamada será repondida lo antes possible.

APPENDIX D: REMINDER LETTER

Mr. Smith

1234 Road

Reno, NV 89523

Dear _____:

About a week ago, we sent you a letter inviting you to participate in a nutrition study for a $10 gift card that can be used online at Amazon or at other stores such as Target and Best Buy. If you have already completed this survey, thank you, and please disregard this friendly reminder.

We are writing again because your survey is important to us, since only a small number of households were chosen for this study. Hearing from as many people as possible will help us improve the health of Nevada's residents. If you have not yet completed this survey, we hope you will do so today.

Your name was randomly chosen from a list of households enrolled in Nevada's Supplemental Nutrition Assistance Program (SNAP). Your participation in this study is completely voluntary and will have no impact on your SNAP benefits now or in the future. Your responses will be kept confidential and will not be connected to any personal information.

The survey can be completed two different ways.

1) Online: To complete the survey online, please enter the website URL shown below into a web browser. At the beginning of the survey, you will be prompted to enter the access code. Please be sure to type in the website URL exactly as it appears below. The website URL is case sensitive.

   Website URL: https://tiny.cc/nvfood

   Access Code:

2) By phone: If you do not complete the survey online within two weeks, one of our interviewers will call you.

If you have questions about the study please call Dr. Jamie Benedict at 775-784-6445. To report survey errors or technical difficulties call Dr. Veronica Dahir at 800-929-9079 (Mon.-Fri. 9am-9pm; Sat., Sun., and holidays 9am-5pm). Please reference the study name, "NV Food", when calling. If you have any concerns about the conduct of the study call the Research Integrity Office at 775-327-

2368.

Thank you for considering this opportunity to improve Nevada's programs and services.

Sincerely,

Jamie Benedict, Ph.D., R.D.
Associate Professor
Department of Nutrition

Veronica Dahir, Ph.D.
Director, Survey Operations
Nevada Center for Surveys, Evaluation and Statistics

Sr. Smith
1234 Road
Reno, NV 89523

Estimado(a): _____:

Hace una semana, le mandamos una carta invitándole a participar en un estudio de nutrición por una **tarjeta de regalo de $10 que puede ser usada en línea en Amazon o en tiendas como Target y Best Buy.** Si usted ya completó esta encuesta, gracias, y por favor ignore este recordatorio sencillo.

Le escribimos de Nuevo por que sus opiniones son importantes para nosotros por que solo un número pequeño de hogares fueron elegidos para este estudio. Escuchar a la mayor cantidad de personas posible nos ayudará a mejorar la salud de los residentes de Nevada. Si no ha completado la encuesta, esperamos que pueda hacerlo hoy.

Su nombre fué elegido al azar de una lista de hogares enlistados en Nevada's Supplemental Nutrition Assistance Program (SNAP). Participación en este estudio es completamente voluntaria y **no tendrá ningun impacto en sus beneficios de SNAP,** ni ahora ni en el futuro. Sus respuestas serán confidenciales y no estarán conectadas a ningun tipo de información personal.

Puede completar la encuesta de dos formas diferentes:
Por internet: Para completear la encuesta, por favor entre la siguiente dirección de sitio web en un navegador de internet. Al principio de la encuesta, le pediremos que ingrese el código de accesso. Por favor asegúrese de escribir la dirección del sitio web como esta escrita aquí.
Dirección de sitio web: https://tiny.cc/nvfood
Código de accesso:

2) Por teléfono: Si no completa la encuesta por internet en dos semanas, uno de nuestros entrevistadores le llamará por teléfono.

Si tiene preguntas sobre el estudio, por favor llame a la Dra. Jamie Benedict al 775-784-6445. Para reportar errores o dificultades técnicas, llame a la Dra. Veronica Dahir al 800-929-9079 (Lunes a Viernes 9am-9pm; Sábados, Domingos y días féstivos 9am-5pm). Por favor, haga referencia al nombre del estudio, "NV Food", cuando llame. Si tiene dudas sobre como el estudio es conducido, llame al Research Integrity Office at 775-327-2368.

Gracias por considerar esta oportunidad para mejorar los programas y servicios de Nevada.
Sinceramente,

Jamie Benedict, Ph.D., R.D.
Profesora Asociada
Department of Nutrition

Veronica Dahir, Ph.D.
Directora, Operaciones de Encuestas
Nevada Center for Surveys, Evaluation and Statistics

APPENDIX E: RESPONSES TO INDIVIDUAL ITEMS

Part I: Perceptions of Health and Behavior

Figure 1. In general, how would you describe your health?

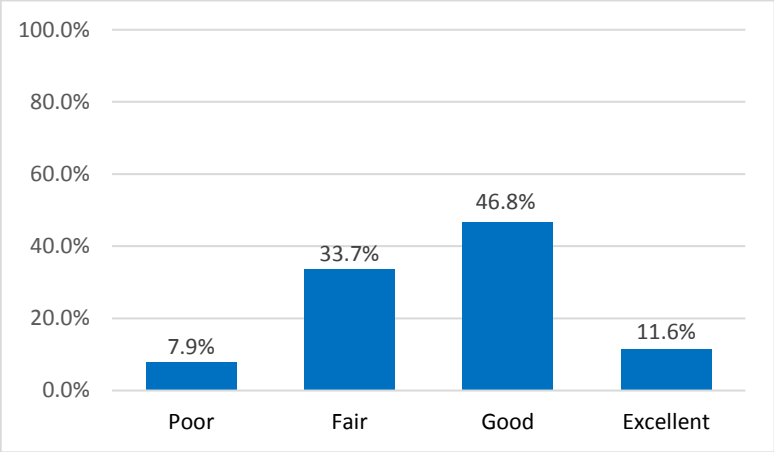


Figure 2. In general, how would you describe your level of physical activity?

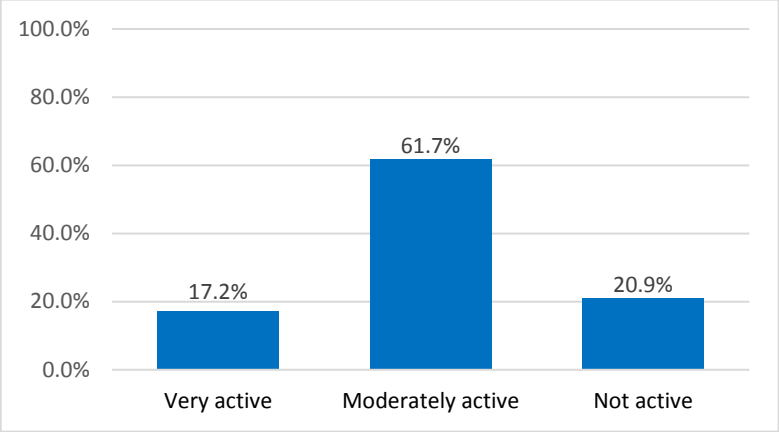
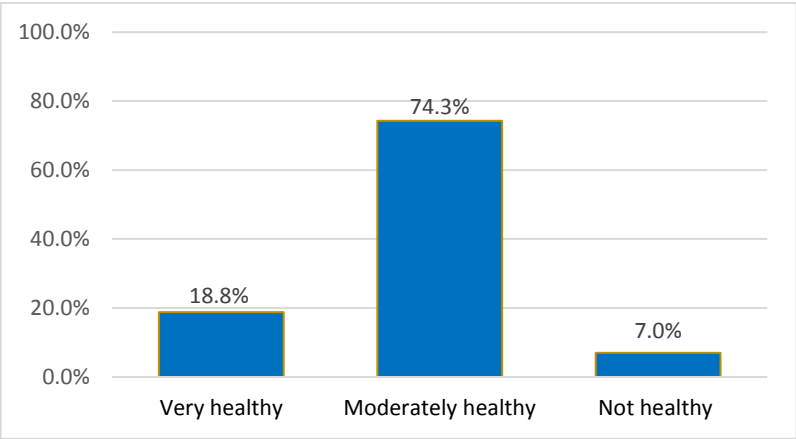


Figure 3. In general, how would you describe the foods and drinks you consume?



Part II: Food Shopping Patterns

Figure 4. Who usually does the grocery shopping in your household?

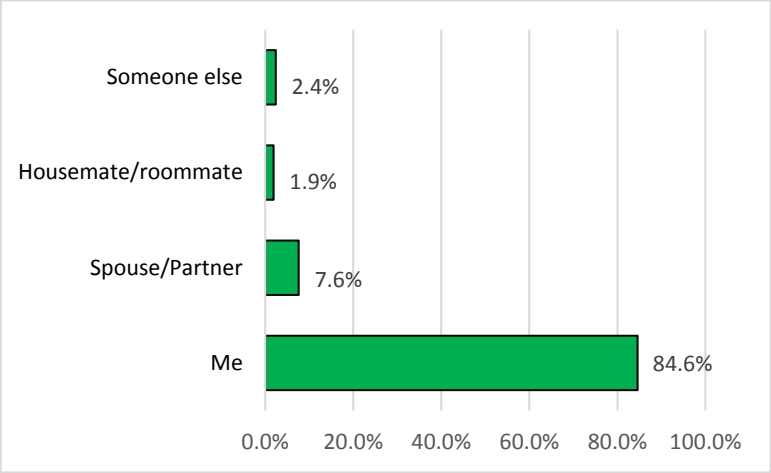


Figure 5. From what kind of store does your household get most of their groceries?

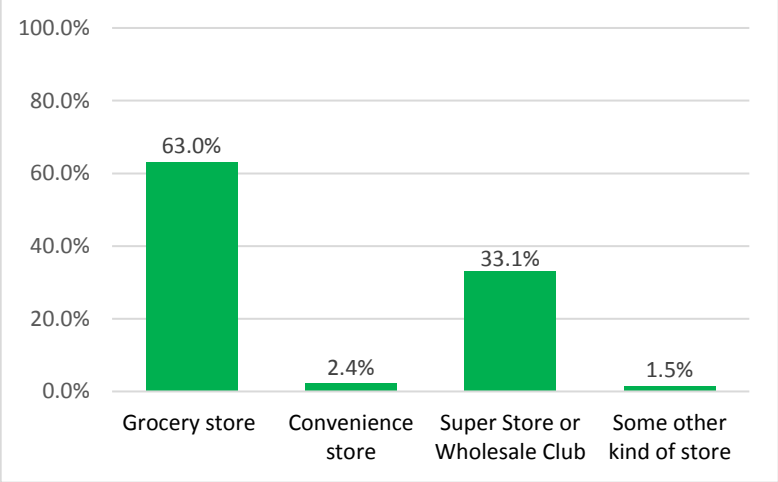


Figure 6. What form of transportation is most often used to get groceries for your household?

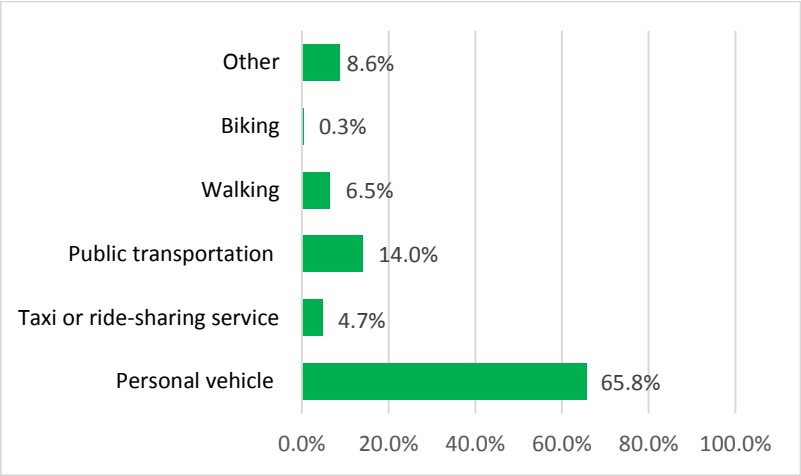


Figure 7. How many times per month does your household shop for groceries?

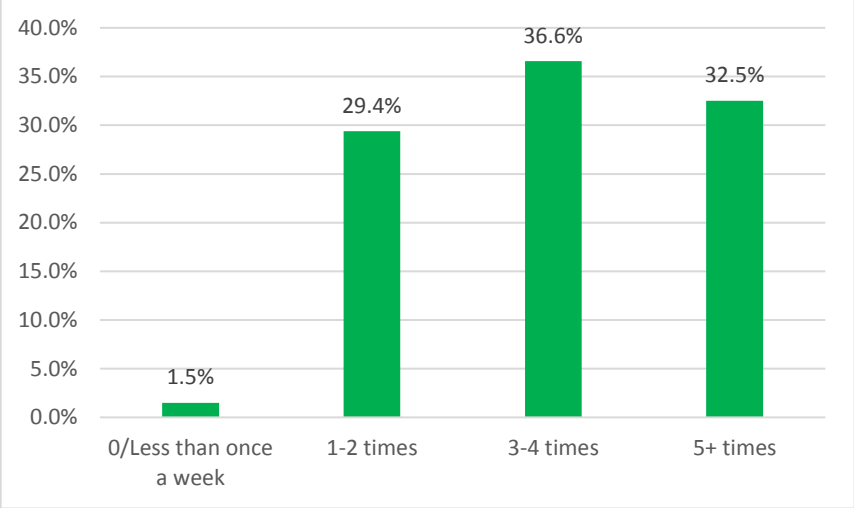


Figure 8. Do you have a working stove available where you live?

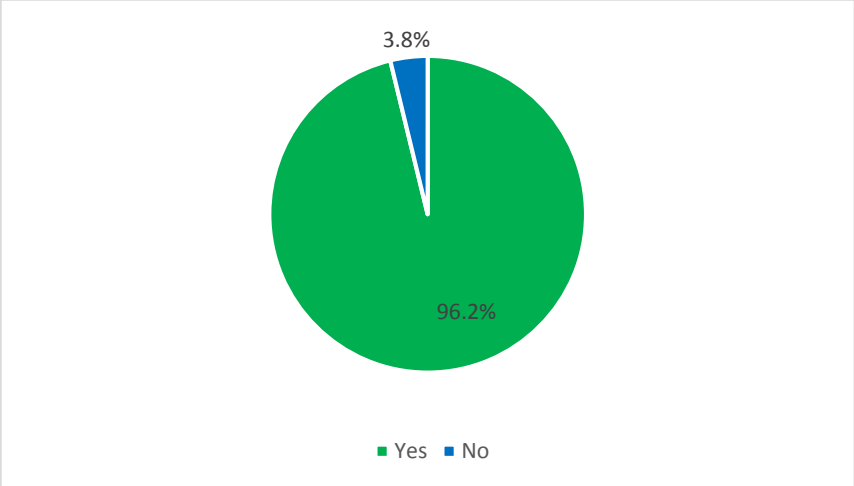
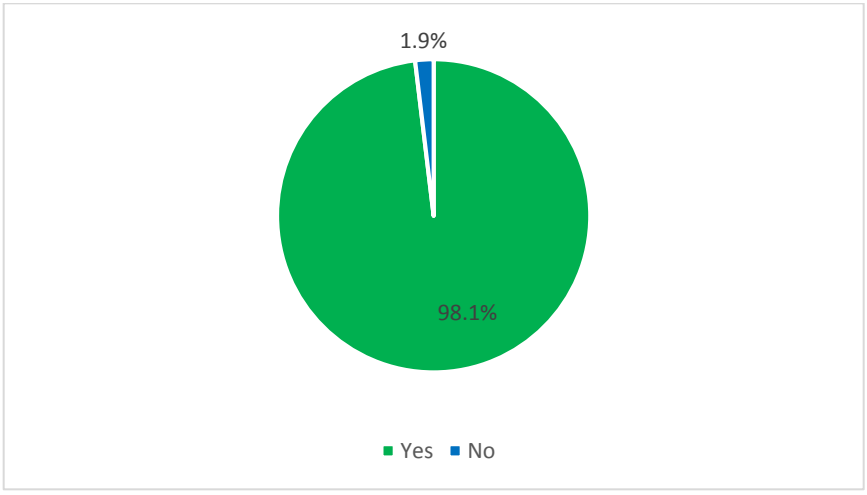


Figure 9. Do you have a working refrigerator available where you live?



Part III: Food Security

Figure 10. Total number of affirmative responses to the six food security questions

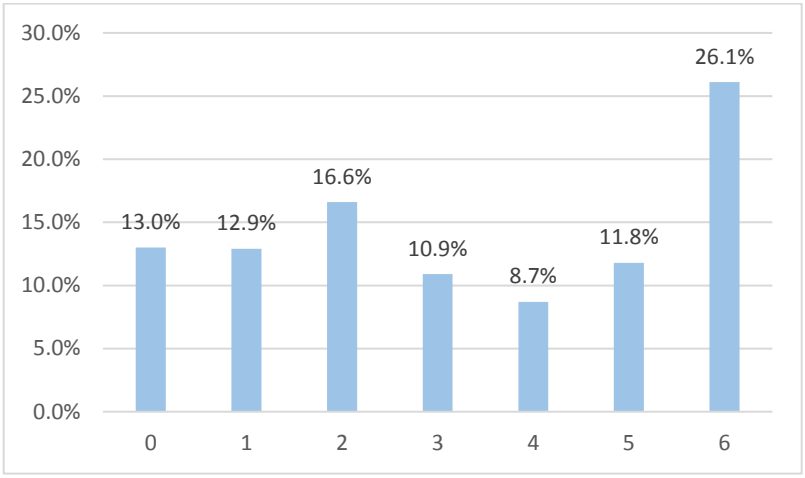


Figure 11. Food security categorizations

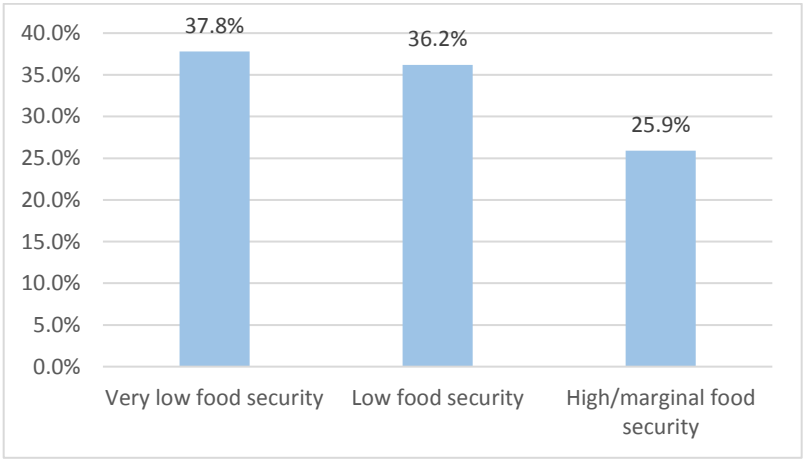


Figure 12. In the last 12 months, has anyone received a meal or food assistance from a food bank, food pantry, or community kitchen?

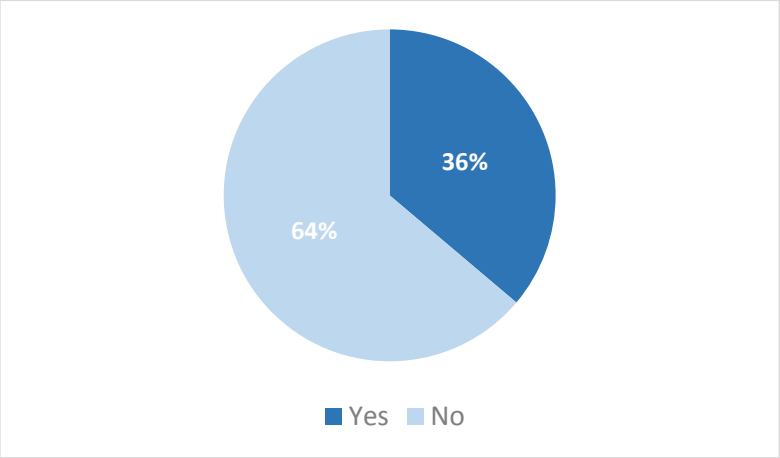


Figure 13. Is anyone in your household on a special diet for health-related reasons?

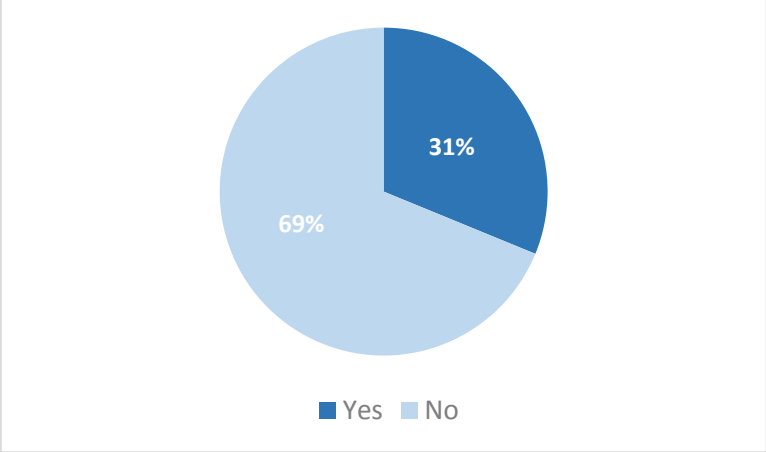


Figure 14. What is the special diet?

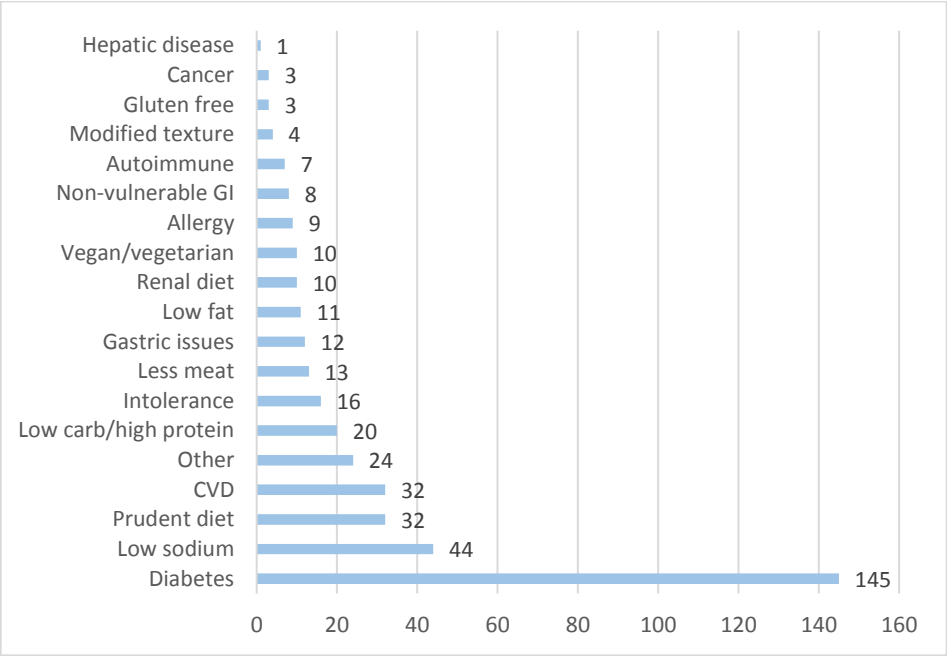


Figure 15. The foods and drinks for the special diet are too expensive

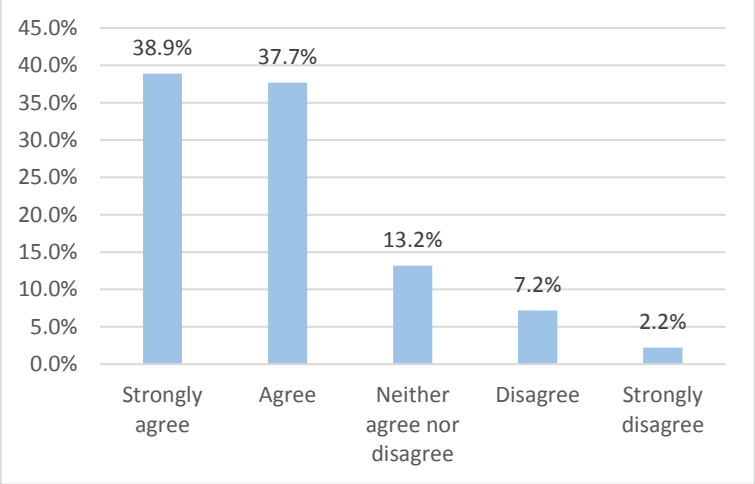


Figure 16. It is difficult to get to a store that has the special foods and drinks that are needed for the diet

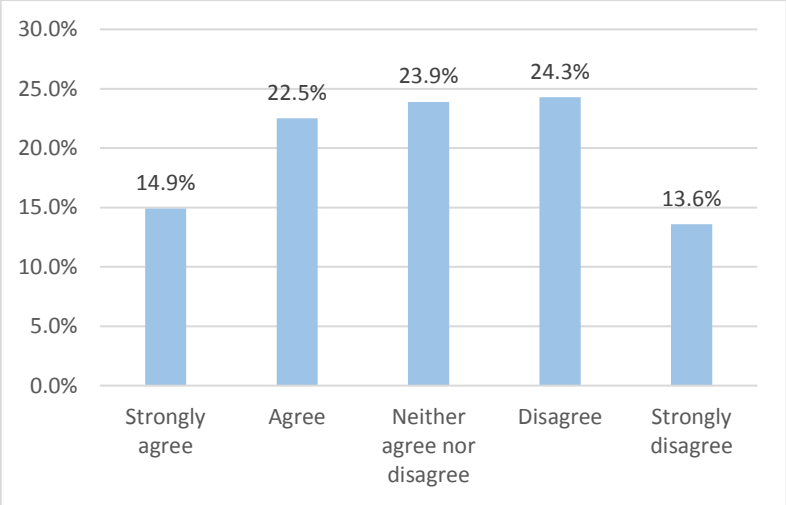


Figure 17. I have access to reliable and/or affordable transportation to get to the grocery store

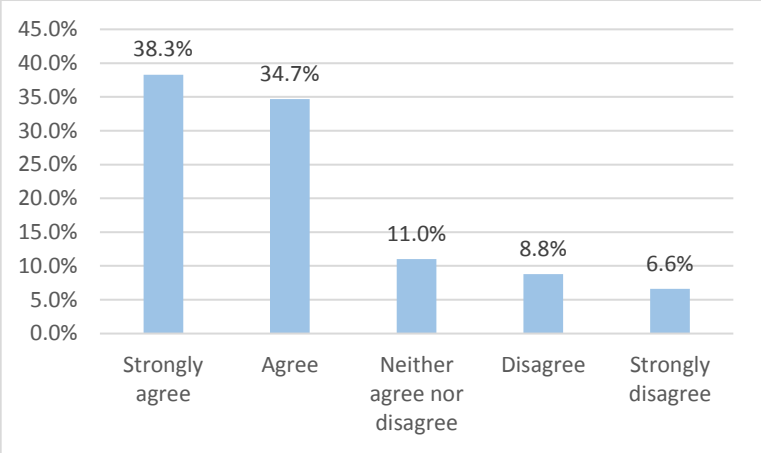


Figure 18. There is a full-service grocery store near my home that sells uncooked meats, fresh fruits, vegetables, and baked goods

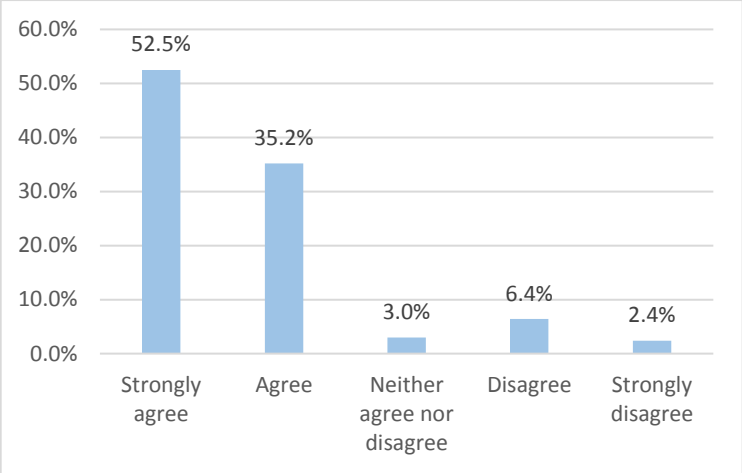


Figure 19. Do you have a physical, mental, or emotional condition that impacts your daily life?

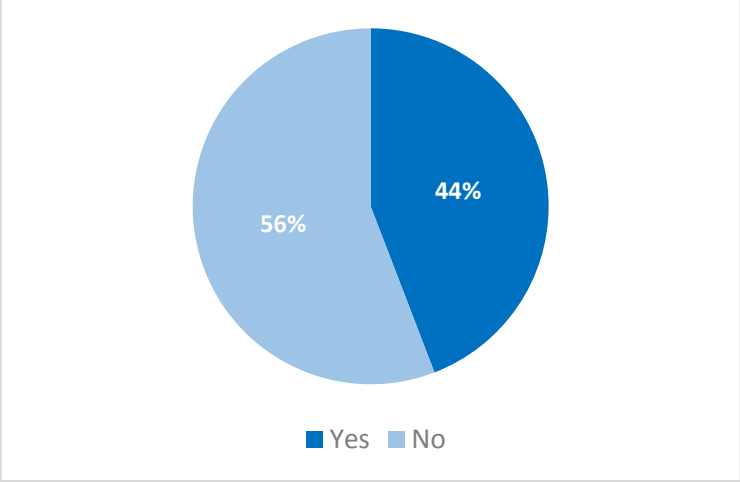


Figure 20. My physical, mental, or emotional condition makes it difficult to shop for food

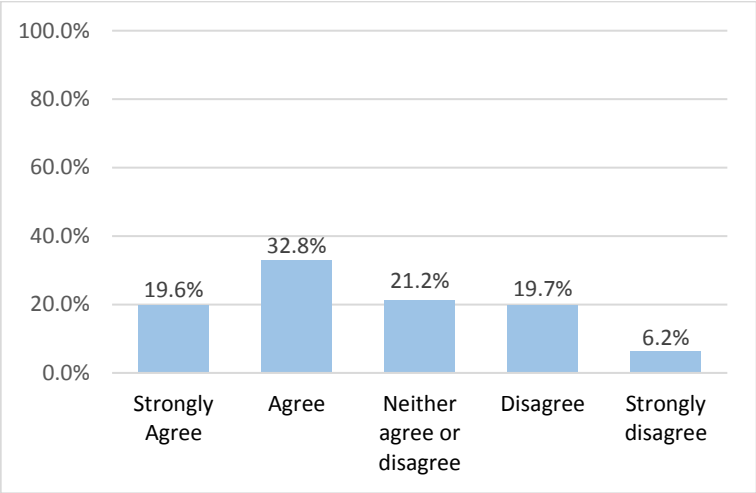


Figure 21. My physical, mental, or emotional condition makes it difficult to prepare food

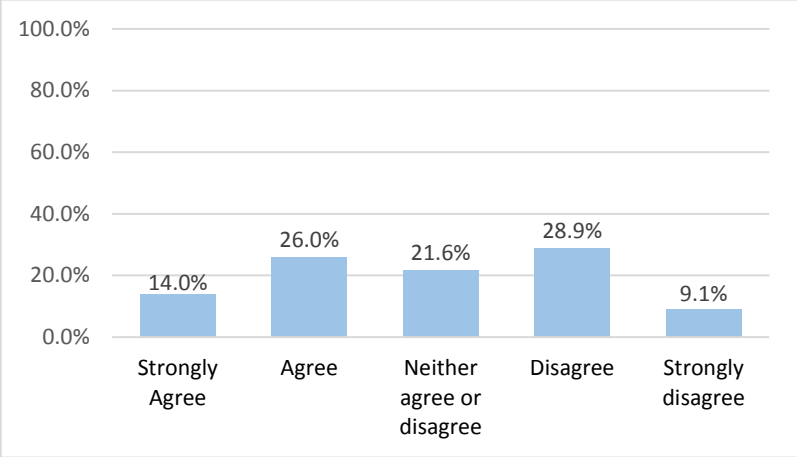


Figure 22. My physical, mental, or emotional condition makes it difficult to eat or drink

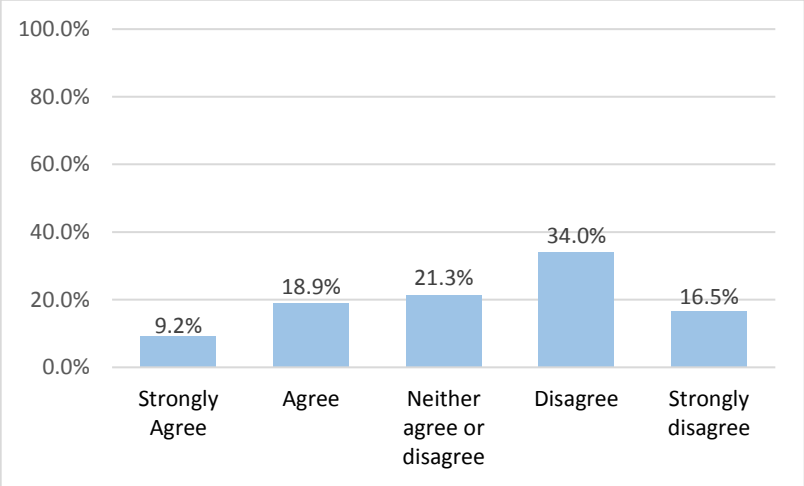
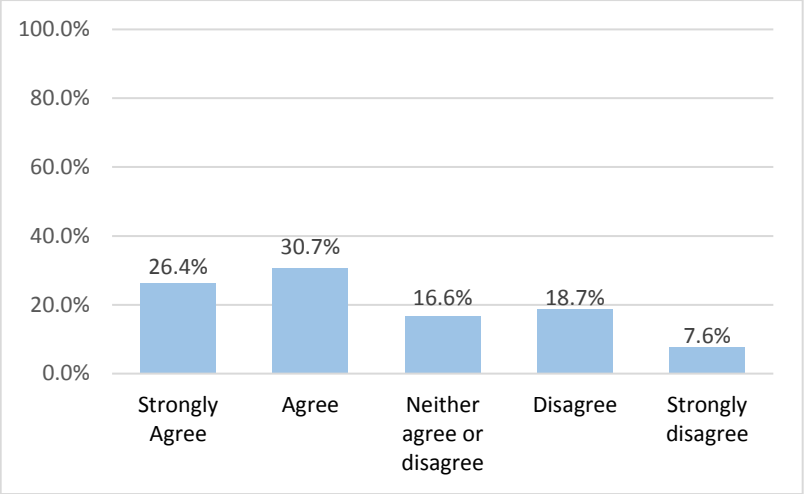


Figure 23. My physical, mental, or emotional condition prevents me from exercising and being physically active



Part IV: Barriers to Healthy Eating

Figure 24. It is important for me to choose healthy food and drinks

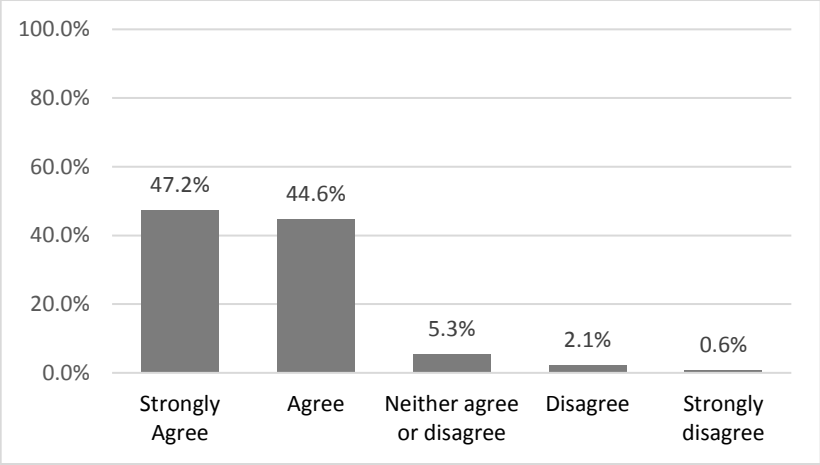


Figure 25. It is hard for me to get to a store that sells health food and drinks

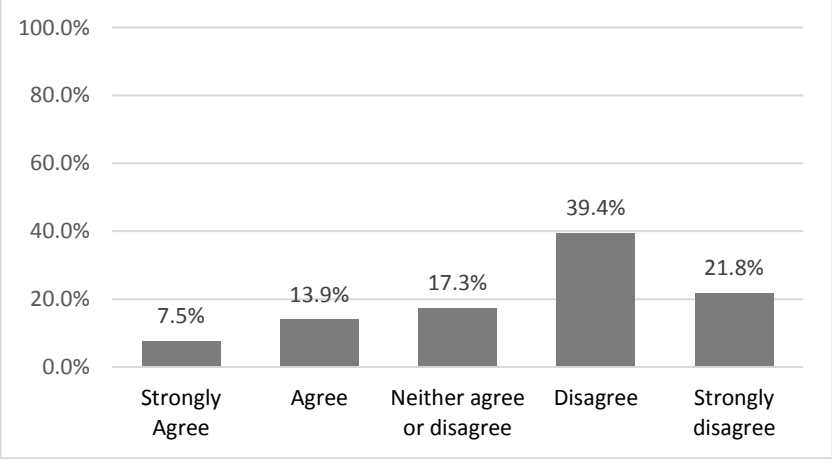


Figure 26. It costs too much for me to eat healthy food and drinks

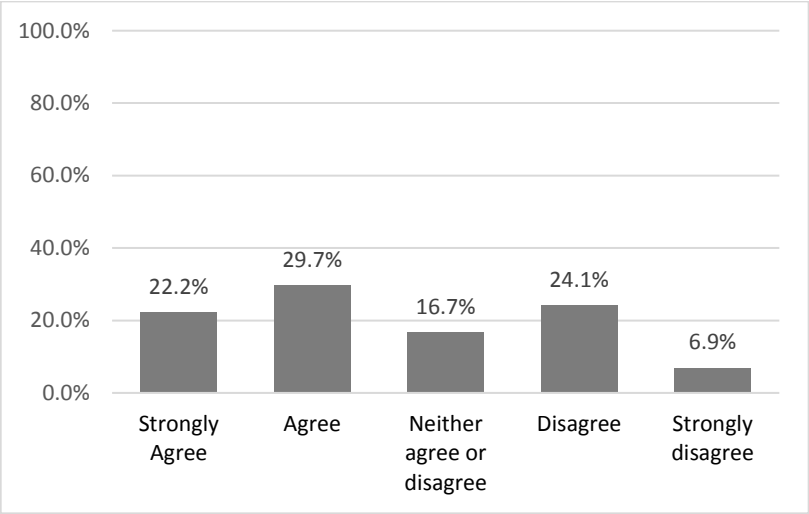


Figure 27. Healthy foods and drinks taste good

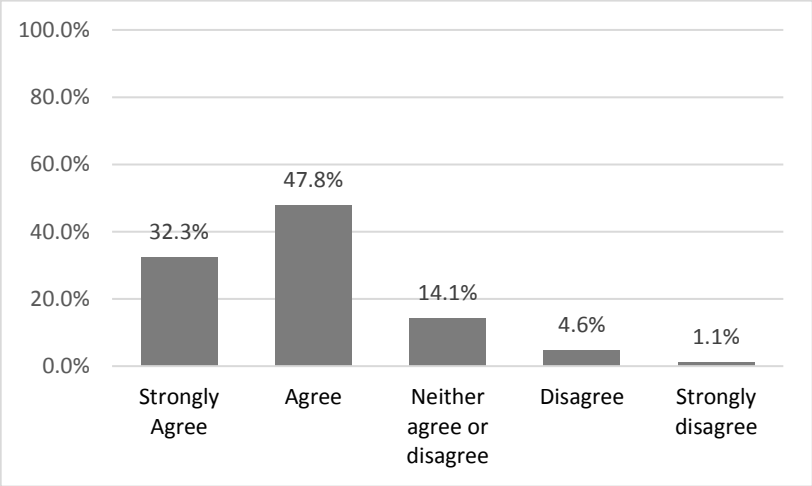


Figure 28. I know what foods and drinks at the grocery store are healthy

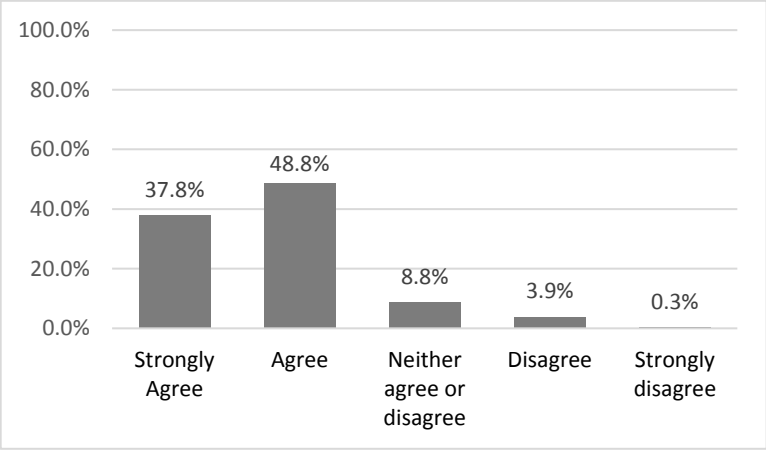


Figure 29. I buy unhealthy foods more often because they are more convenient than healthy foods

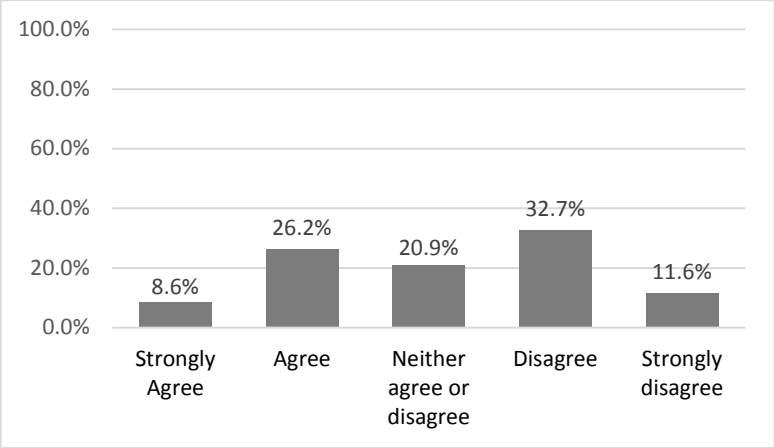


Figure 30. I know how to plan meals that include healthy foods and drinks

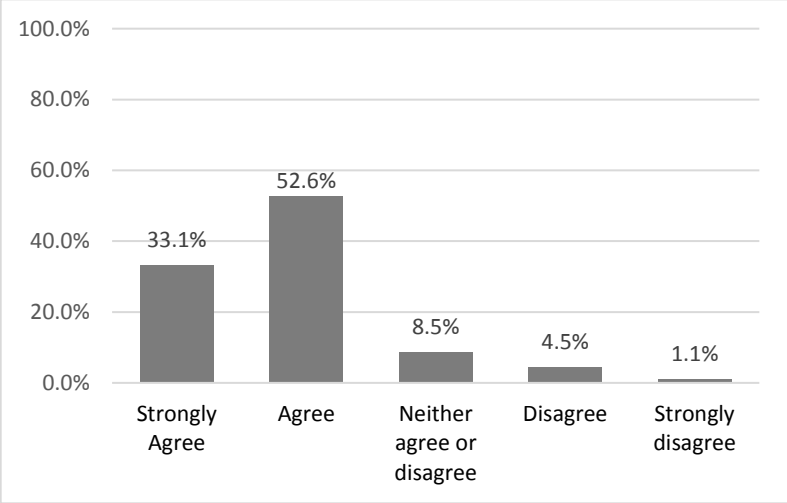


Figure 31. It takes too much time to prepare healthy food and drinks

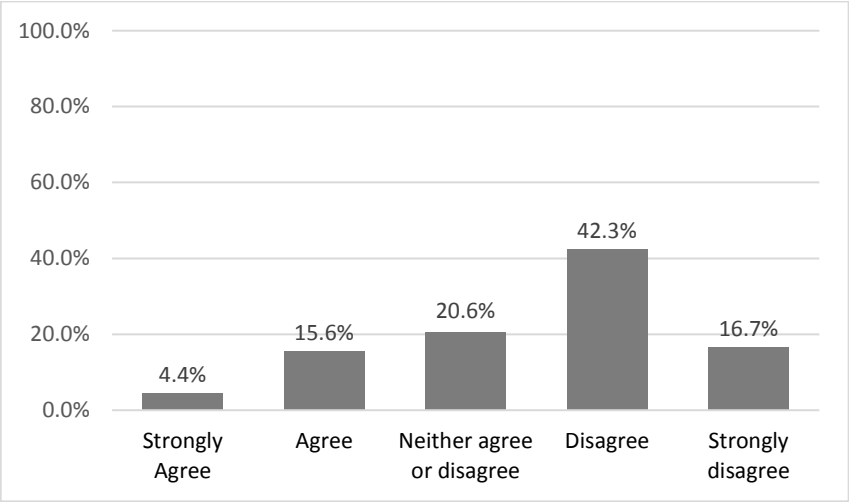


Figure 32. Healthy food and drinks spoil too quickly

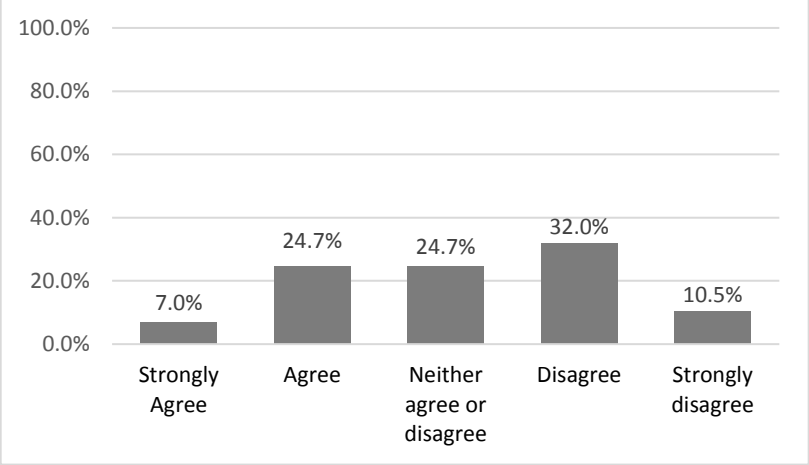
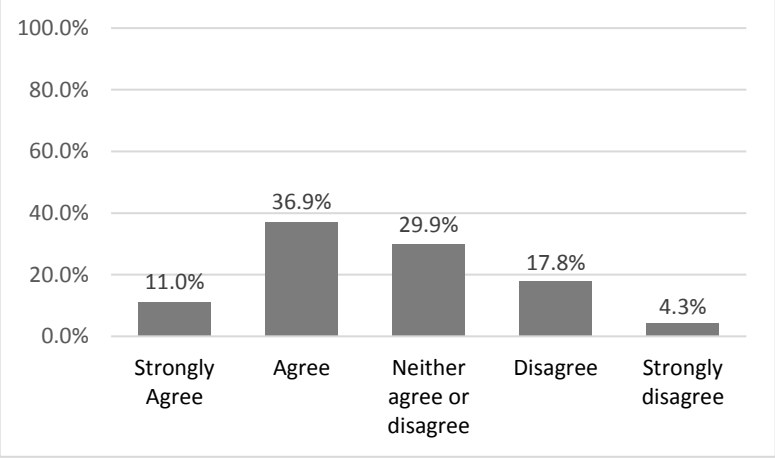


Figure 33. People I spend the most time with usually make healthy food and drink choices



Part V. Barriers to Physical Activity

Figure 34. My daily schedule makes it hard for me to exercise and be physically active

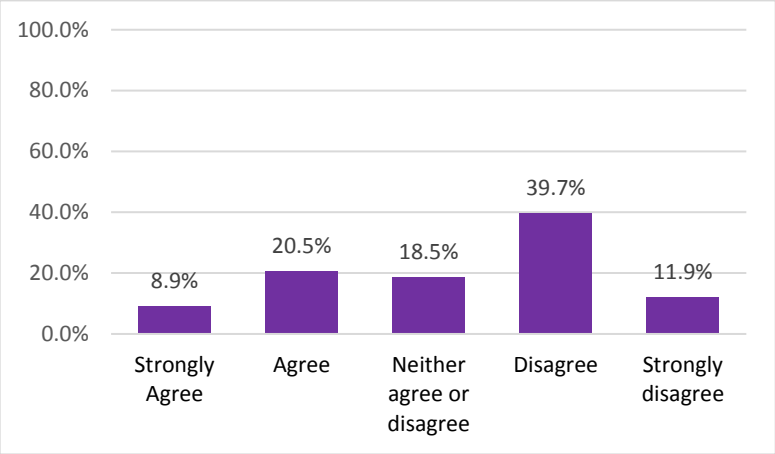


Figure 35. I am able to find ways to exercise and be physically active within my abilities

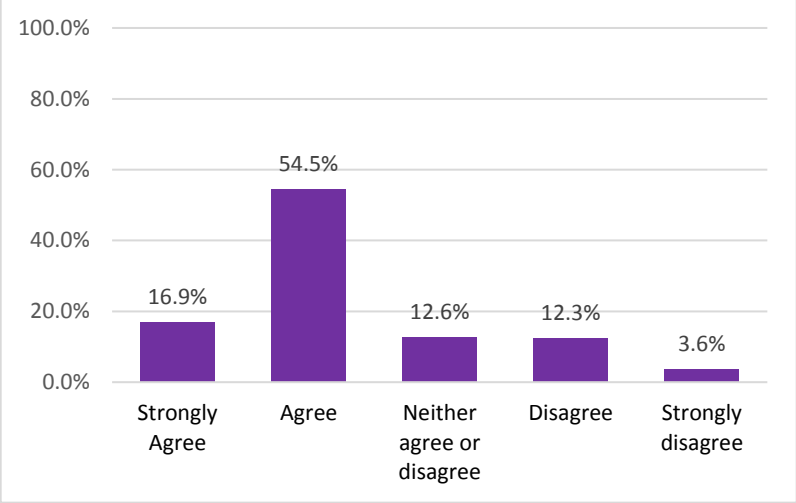


Figure 36. It is hard to find ways to exercise and be physically active that I can afford

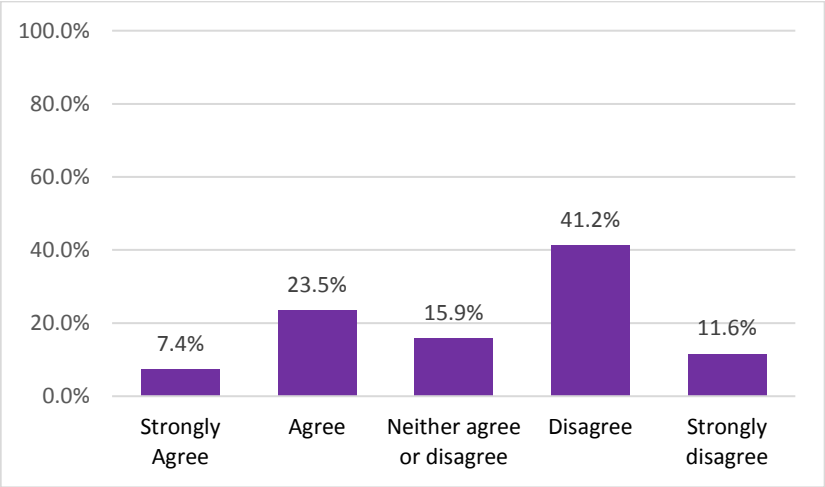


Figure 37. There are safe places to exercise and be physically active near my home

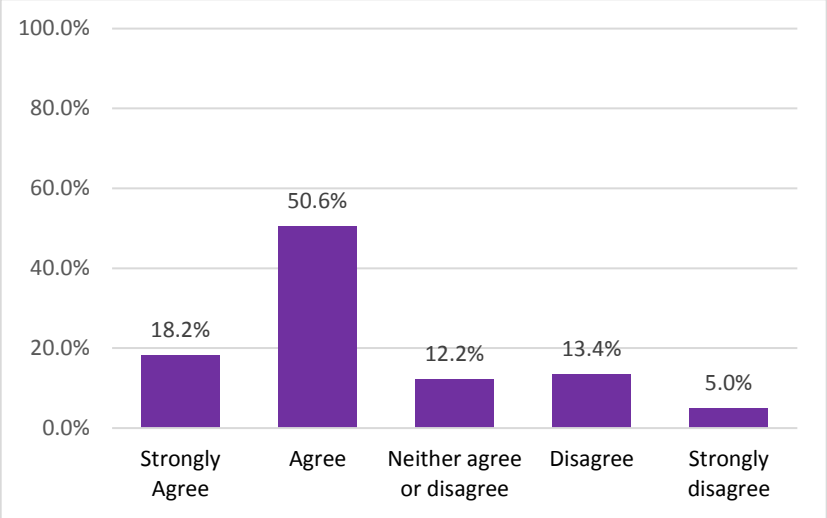


Figure 38. There are safe places to exercise and be physically active near my home

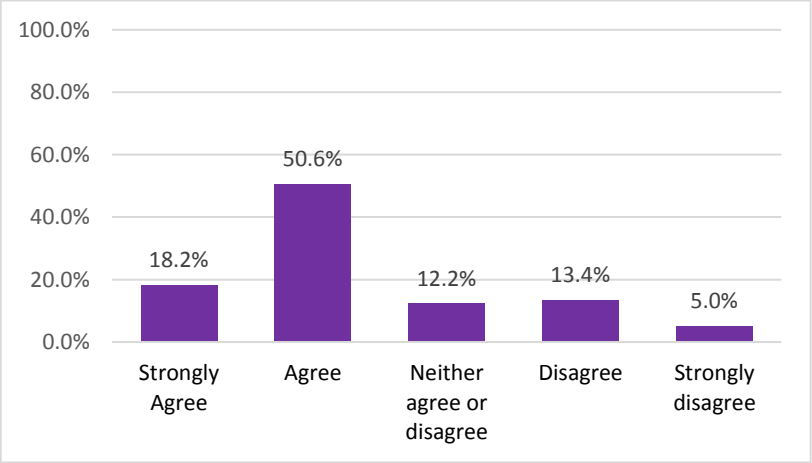
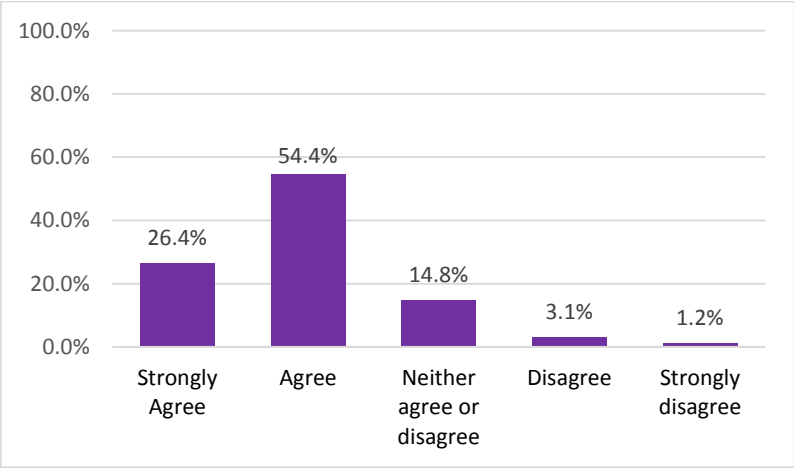


Figure 39. It is important to me to exercise and be physically active



Part VI. Nutrition and Physical Activity Education

Figure 40. Would you be interested in learning more about…

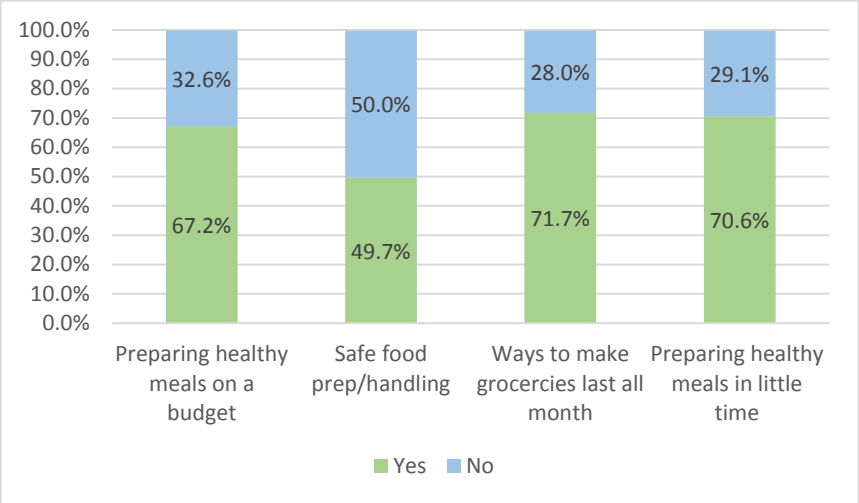


Table 1. Nutrition Education – Broad Topics (other)

Topic	N
Location to purchase food	10
Shopping for food	29
Planning/preparing food and meals	29
Special dietary needs and preferences	33
General nutrition	18
Assistance	17
Physical activity	14
Other	15
Total	165

Table 2. Nutrition Education - Subtopics (other)

Topic	N
Location to purchase food	
Healthy food	5
Inexpensive food	3
Farmer's market	1
Shopping for food	
Managing food resources/budget	6
Food selection for health/nutrition	5
Inexpensive/healthy	6
Foods that will last	6
Coupons	5
Organic	1
Planning/preparing food and meals	
Nutritious/balanced foods/meals	3
Children's needs and preferences	7
Cooking	7
Healthy and/or inexpensive recipes	5
Food portions	1
Cooking with minimal kitchen facilities	1
Cooking for one	2
Quick meals	2
Meals that will last	1
Special dietary needs and preferences	
Vegan/vegetarian	3
Diabetes	12
General (not specified)	2
Digestive condition	2
Weight loss/management	7
Pregnancy	1
Mechanical soft	2
Allergies	1
Other	2
General nutrition	
Accurate sources of information	1
Nutritional composition and food attributes	15
Food Safety	2

Table 2. Nutrition Education - Subtopics (other) continued.

Topic	N
Assistance	
Food assistance programs	7
Legal	1
Financial	2
Child Care	1
Education	1
Transportation	2
Assistance for seniors	1
Emotional Disorders	1
Other	
Healthy lifestyle	2
Growing food/gardening	2
Stress management	3
Physical Activity	
Locations to exercise	3
Activities for kids	7
Activities for older adults	7
Activities for special conditions (e.g., wounds)	5
Activities you can do at home	1
General	1

Figure 41. Would you be interested in learning more about…

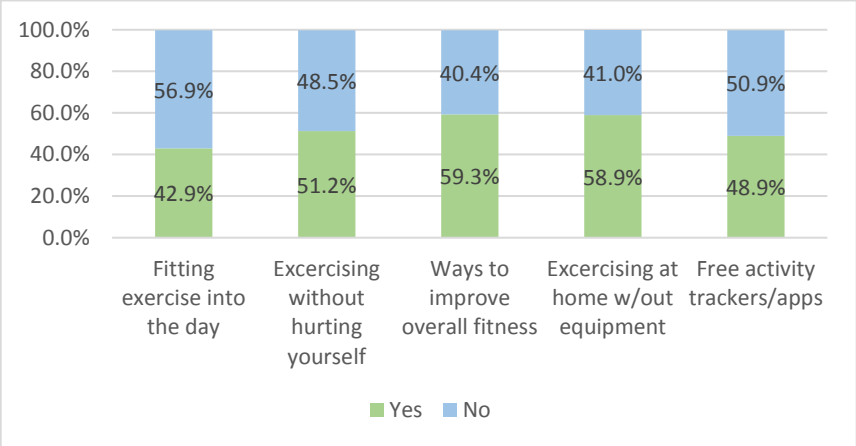


Table 3. Physical Activity/Exercise – Broad Topics (other)

Topic	N
Location to exercise	10
Instruction on exercise	7
Exercise options	18
General exercise	7
Assistance	7
Nutrition	9
Other	10
Total	165

Table 4. Physical Activity/Exercise – Subtopics (other)

Topic	N
Location to exercise	
Inexpensive programs/classes	5
Programs for senior	3
Safe places	1
Transportation	
Instruction on exercise	
Sit-ups	1
Breathing	2
Build muscle/lose fat	1
Weight loss	1
Other	1
Exercise Options	
Indoors/home	4
For health conditions	11
With kids	2
Other	1
General Exercise	
Motivations/discipline	1
Using equipment	2
Organizing buddy system	2
General	1
Other	
Assistance	
Food assistance programs	3
Legal	12
Financial	2
Child Care	2
Education	7
Transportation	1
Social Services	2
Other	2

Part VII. Modes

Figure 42. Would you be interested in receiving nutrition and physical activity information via…

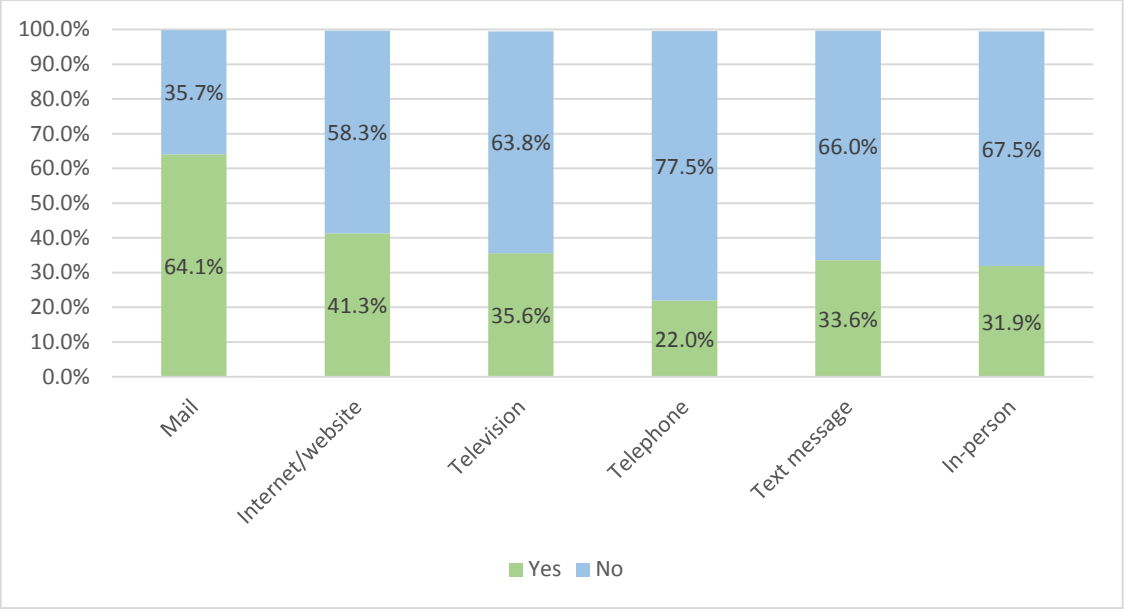


Figure 43. Would you be interested in receiving nutrition and physical activity information at a…